CUSTOM AS A SOURCE OF SUPRANATIONAL INTERNET COMMERCE LAW

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Abstract

The Internet has changed the world. Its impact on the global society has been enormous, redefining almost every aspect of our life. It has also added a new quality to traditional commerce that in many instances has drastically transformed the way companies and individuals trade. However, electronic commerce is not a legally safe environment, as there exists a regulatory gap that introduces uncertainty surrounding rights and obligations in cyberspace. This may result in unexpected outcomes for e-commerce participants involved in litigation.

Contrary to common beliefs, the Internet does not function in a legal vacuum. The perceived lack of regulation is due to a lack of written and supranationally binding Internet law. However, the Internet community has already developed a set of norms that guide their behaviour. Some of them, because of their legal importance, could be regarded as Internet customary law. But their content needs to be "uncovered."

The major objective of this thesis is to analyse the concept of custom in the context of international electronic commerce. This work introduces the concept of electronic commerce custom (e-custom) as a potential remedy in removing legal uncertainty in the electronic environment. The thesis sets out the issues associated with the concept of electronic commerce custom and analyses them using developments from neighbouring fields of legal knowledge, mainly international public law.

One of the most important issues associated with making use of the idea of e-custom is its proof. This thesis proposes a new way of evidencing customary practices in electronic commerce using the capabilities of the Internet and the environment used to build it to track behaviour of the participants. The new methodology is based on three tests that assess the extent to which a given norm is practiced by the Internet community.

Finally, the thesis tests the methodology in two hypothetical case studies involving the confirmation of order and the support for strong encryption in the banking industry. These two case studies are referred to throughout the whole thesis to illustrate problems with the existing Internet law framework and the potential of electronic commerce custom in addressing them.

Declaration

This is to certify that

(i) the thesis comprises only my original work towards the PhD except where indicated in the Preface,

(ii) due acknowledgment has been made in the text to all other material used,

(iii) the thesis is less than 100,000 words in length, exclusive of tables, maps, bibliographies and appendices.

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Chapter 1. Introduction

1.1 Context

Is there law on the Internet? Taking into account the lack of written globally binding laws the answer to a typical Internet user is obvious – there is no law on the Internet. And this answer is correct if we assume that all law may only come from a written source of law such as an international convention or a domestic statute. But this view, so common nowadays in the Western world, is dominated by the modern understanding of law, which is based on a top-down, "rational" regulation of social life in the form of written statutes prescribing rights and obligations to its addressees.

This approach ignores the existence of the oldest source of law - the foundation of any legal system on earth – the concept of custom as a basis of regulatory norms between humans. Before any centralised system of legislation had emerged, humans relied on their past conduct in relation to one another. This knowledge gave them the basis for settling disputes.

Nowadays, in modern domestic legal systems, this empirical basis has been almost completely eradicated by the written law. In consequence, modern legislators search for regulation of the Internet utilising a tool that is best known to them – a domestic statute. The resort to national regulation of the Internet is a natural choice as law making on a national level is much easier than on an international forum.

But the Internet is a truly global phenomenon, which does not recognise geo-political borders and which can deliver information from the other side of the earth in less than a second. Regulating the Internet via domestic means ignores the architecture of the medium that was created to enable global, decentralised and fast exchange of information. This national approach to regulating the Internet may end up creating islands of regulation, where Internet users will not know their rights and obligations, thus increasing uncertainty rather than building it. Domestic regulation may help to solve some Internet-related legal disputes but only if it reflects true expectations of Internet users. Nevertheless, its influence will necessarily be limited by the concept of sovereignty.

The solution could be to develop an international agreement governing the rights and obligations in cyberspace, but at this stage it seems unattainable. The Internet is global, decentralised, too technical and changing too fast to be subjected to a meaningful international agreement. Even if such a convention were to be drafted and accepted, it would contain many gaps, be vague and difficult to modernise. Besides, the Internet community may not be prepared for any top-down regulation of its behaviour and hence reject implementation of such a convention, rendering its enforceability virtually impossible.

Hence the international legal community has turned to the idea of harmonisation of domestic Internet laws through the process of adoption and implementation of Model laws developed under the auspices of the United Nations. But even this idea has not produced a global legal framework for the Internet. The majority of states have not enacted any laws dealing with the Internet. Those states that have adopted Model laws have changed them slightly creating potential for different interpretations and ultimately disputes in this regard. Besides, the content of Model laws is too general to provide real assurance of one's rights and obligations in cyberspace.

As a result, the Internet community functions to a large extent in a legal vacuum. Unless Internet users agree on their rights and obligations in contracts, their legal standing will be uncertain. The

problem becomes clear in the context of Internet commerce. Since there are no top-down written laws that govern electronic commerce, a party to the transaction has to rely on its own intuition when dealing with an electronic supplier of goods and services. Even a party that has signed a contract cannot feel safe, because a contract may and probably will contain many gaps. Moreover, the questions of law governing a contract or law of forum may turn out to be difficult to answer.

However, custom could provide a viable solution to the lack of globally binding norms on the Internet. Internet customary practices are formed without regard for geo-political borders or sovereign authorities. Lack of central authority on the Net inhibits promulgation of globally binding laws, which at this stage can be formed only in a bottom-up manner.

The idea of custom has additional advantages. It is a very flexible source of norms, as it reflects changes in the practices of participants and it does it as soon as a change takes place. Its norms are not enacted, they are simply there. It can be said that it is a source of already enforced norms in a given community, since it reflects what a majority does anyway. Moreover, those practices are known to the majority of the community. Its advantages over statutory regulation are clearly visible in this respect, since a promulgation of a given law by a national agency is rarely known by the citizens of a given state, and it takes a long time before the citizens will learn what is expected of them and conform their behaviours to what the statute says. As a result of a flood of written regulations, most written statutory laws will remain unknown to the average citizen of a modern state.

From the legal perspective, the concept of custom plays a very important role in the interpretation and filling gaps in statutory and conventional laws. Custom can also provide an invaluable tool in the interpretation and filling in gaps left by parties to a contract. Furthermore, customary norms can override contrary statutory or conventional norms, which are no longer adhered to through the process of disuse (*desuetude*).

Custom in the context of the Internet offers an additional profound advantage. The Internet enables a revolutionary way of establishing regularities in the behaviour of the participants of electronic commerce transactions. In consequence, electronic commerce practices can be established much easier than in the traditional paper-based world. Both a human expert as well as software could be used for the purpose of identifying and tracking electronic commerce practices. Traditional custom has not possessed qualities that could be so easily identified and recorded.

Custom also has some disadvantages. From the perspective of the regulatory power of custom, it seems to possess very limited proactive power. It is a very modest instrument of social engineering. By reflecting what is already happening in a society, it is not a good candidate tool for promoting certain behaviour. Written law seems to fulfil this role much better.

The mechanism of custom formation is very poorly understood. Existing theories of international custom have not so far successfully explained this very complex phenomenon. There is also a great deal of dispute on what constitutes a custom. Legal theory and practice is divided in understanding of this problem. Moreover, traditional customary practice is very difficult to evidence. No legal work has attempted to prescribe a methodology for evidencing customary norms. For example, most customary norms discussed in cases of the International Court of Justice cases are declared rather than induced from the empirical observation. Those that are allegedly induced are insufficiently supported by material evidence.

But the Internet enables us to overcome some of these traditional issues associated with the concept of custom as a source of law. The unique features of the Internet enable a new approach to the concept of common practices and their legal value. This change in the perspective on

custom can give us new insights into the traditional concept of custom and lead us to a better understanding of this fascinating social phenomenon.

1.2 Aim of the study

The aim of this study is to propose the concept of custom as a potential source of supranational Internet law in order to provide future Internet dispute adjudicators with a source of norms on which to settle a dispute. In addition, this dissertation aims to provide a methodology that an adjudicator or a researcher could follow in order to test whether a given web practice is of a customary nature or not. Finally, this study has a goal of validating the proposed theoretical concept of electronic commerce custom and the methodology for its establishment through the use of hypothetical case studies.

The concept of custom or a widespread and legally relevant practice of trading on the Internet analysed from the global perspective, rather than from the domestic one will be the main focus of the study. It is argued that Internet commerce participants have developed and widely followed certain practices and some of those practices might have considerable legal importance. In other words, it is argued that there is already a law on the Internet but it is an unwritten, constantly changing law, one that needs to be discovered rather than enacted. It is the law of Internet commerce participants, created by them through conscious or unconscious following of certain online practices on the Internet. Those practices are unwritten and often unarticulated laws of the Internet. One of the aims of this study is to articulate them and make the Internet community aware of them.

The research will be based on theoretical and practical resources provided by legal science as well as information systems science. In order to examine customary electronic commerce practices, several questions will need to be answered. The section below will present them and the sections that follow will present a method of answering those questions. The following section will discuss implications of the multidisciplinary approach. Then the scope of the study will be demarcated. Finally, the last section of this chapter will present the hypothetical cases.

1.3 Research questions

The main question this study attempts to answer is:

1. Does custom offer a solution to supranational Internet commerce disputes?

In order to answer this question the following sub questions will need to be answered:

2. What are the current issues in international electronic commerce and how are they addressed by the legal community?

3. What is custom? What was its role in the past and what is its status as a source of law in modern legal systems?

4. What is international custom? What are the theoretical and practical disadvantages of the existing theories of international custom?

5. What are the theoretical and practical requirements to make the proposed theory of electronic commerce custom practically viable?

6. What would be the theoretical and practical requirements for evidencing electronic commerce custom?

7. Are there any already existing customary norms on the Internet?

The above questions will be answered in different parts of the thesis.

1.4 Research activities

This research, being a multidisciplinary endeavour, will propose the concept of electronic commerce custom using developments from legal science as well as from information systems science. Two research methods will be utilised:

The first research method will be theoretical in nature. A legal analysis of the concept of international custom will lead to the development of a theoretical model of Internet commerce custom. At this stage of the research project, diverse theories of international custom will be examined, followed by a study of the application of the concept of international custom in legal cases rendered by the International Court of Justice. The common features of international custom established by the analysis will then serve as a template for its application in electronic commerce. After necessary modifications, the theory of electronic commerce custom will be proposed.

Also, based on the requirements of Internet custom established above, a methodology for evidencing customary practices will be devised. Since the guidelines offered by the legal science are unsatisfactory, an entirely new technique of evidencing customary norms, taking into account unique features of the Internet, will be presented.

The second research method will be empirical in nature. Since there are almost no relevant Internet cases reported yet, hypothetical legal cases will be constructed and analysed in the following chapters to prove the usefulness of the concept of electronic commerce custom. The first case will be concerned with the practice of confirming digital transaction. In this scenario, an alleged supranational practice of instantly confirming purchase orders on the website and its effect on online contract formation will be examined. The second hypothetical case will be concerned with security of transactions in the Internet environment. In this scenario, the alleged widespread practice of providing strong encryption in online banking environment and its effect on the content of an online contract will be analysed. This method will test the theory of electronic custom and explore the practical problems of applying it to real life examples, namely the problems associated with evidencing traditional customary practices.

Furthermore, the empirical proof of the existence of practice of immediate order confirmation is offered to provide a basis on which an adjudicator of Internet disputes can solve hypothetical case studies. Similarly, an empirical analysis of provision of strong encryption by 100 online banks around the world is presented as a proof of existence of Internet custom. This activity will test the strength of the proposed model for evidencing customary norms on the Internet.

1.5 Methodology

The proposed dissertation is a multidisciplinary undertaking. In order to achieve its goal this study has to link two divergent and somewhat incompatible subjects: legal science and information systems science. It is not an easy task. These two fields of knowledge have not only different subject matters but also different research methodologies, different ways of presenting arguments and citing works of other authors.

Law has traditionally relied on a deductive methodology. Information systems science has favoured an inductive methodology. These different approaches to gaining knowledge have had considerable impact on the organisation of the research, data collection process, and the presentation of the results.

Part of the thesis dealing with the Internet based commerce and its legal implications will be based on the literature analysis. The Internet, electronic commerce and their implications will be analysed based on information systems literature and vast amounts of material available on the Internet. Legal developments in electronic commerce will be analysed on the basis of literature and works of UNCITRAL and the European Union. A primary focus will be on international legal developments attempting to impose some restrictions on Internet based commerce.

The analysis of the concept of custom as a potential source of electronic commerce law will be based on both theoretical works as well as empirical data. The theoretical foundation of this part of the research will be the legal literature and case law. The primary focus will be on legal literature on international law as well as relevant cases of the International Court of Justice and domestic case law. In addition, international trade law literature as well as legal anthropology and legal history books will be examined when needed.

The concept of custom in international electronic commerce will be examined from the legal perspective focusing on the developments in international public law despite the fact that the concept of custom has been a matter of interest to many other fields of knowledge including history, anthropology, sociology, psychology, linguistics, economy, law and natural sciences. The reason for the choice of international public law is that this is the only one universally recognised international system of law, existing independently of domestic legal systems. As will be shown later, international commercial law or *lex mercatoria*, although thematically more related to the concept of online commerce, has not yet achieved a status of universally accepted international regime of law independent of national legal system. Moreover, there is no single and deeply analysed theory of commercial custom as a source of law that transcends national boundaries. The concept of custom has been much more deeply analysed in the international law doctrine and for this reason it is a much richer source of ideas to draw from. For these reasons, the concept of international custom as defined in international public law will be used.

The practical basis of this work will be examples of established web practices identified on the Internet based on an empirical observation of a number of websites and reports of practices provided by some Internet companies specialising in web analysis. Also capabilities of certain software packages will be examined. These practices will serve as the building blocks for the development of methodology for evidencing Internet commerce custom. The proposal will aim at the development of a set of methods that are practical and consistent with the theory of electronic commerce custom.

Throughout the whole dissertation two hypothetical case studies will be used to examine the usefulness of current developments in international Internet law and to test the theory of electronic commerce custom as well as the methodology for evidencing it.

1.6 Implications of the multidisciplinary approach

The multidisciplinary approach to writing this thesis has had important implications on citation practices, presentation of material and terminology.

1.6.1 Citation practices

The fact that this study attempts to link legal and information systems sciences has influenced the way references are cited. The traditional way of citing materials in the law field relies on an extensive use of footnotes thus allowing for more detailed citations and comments, but often at the cost of clarity of the presentation of the arguments. Another drawback of this method is that quite often important information is placed in a footnote. This way of citing has been abandoned

by the information systems community that prefers references based on simplified endnotes thus achieving much clearer presentation of the arguments but at the cost of detailed citations.

In this study, a compromise had to be struck. The choice was made to use the traditional way of citing documents that a legal audience feels comfortable with. The advantage of this choice is that this method is familiar to both audiences, since it was used in the social sciences previously. However, in order to avoid the common pitfalls of a traditional method, this study will try to avoid remarks in the footnotes unless there is an important reason to do otherwise. Instead, various technical and legal terms will be explained in the Glossary. Footnotes will present references in a variant of author-date style used in the social sciences. Books and journals will have (Author, Date of Publication, page number) format, Legal cases will be cited in (Case title, Date) format. Web pages will be cited in (URL, Date last visited).

1.6.2 Organisation of material

Technical and legal audience is also used to different ways of organising material. Information Systems dissertations usually follow a rigid structure where after introduction the second chapter is a literature review. Legal dissertations are usually less rigid, in a sense, that a literature (statutes, case law and opinions of legal writers) is reviewed throughout the whole thesis.

This thesis combines both approaches. Although there is no chapter titled "Literature Review", Chapter 2 presents the approaches of governments and commentators of governmental actions in respect to Internet commerce. However, since legal commentators invariably discuss Internet law from national law perspective no detailed examination of the views of legal writers will be presented. Conversely, a very detailed literature review will be found in Chapters 3 and 4, which will examine the concept of custom. Finally, a brief literature review regarding social science methodology will be found in Chapter 6.

1.6.3 Glossary and Definitions

To familiarise legal and technical audience with terminology the glossary of the most important legal and technical terms has been appended at the end of the thesis. Also, definitions of the most important terms have been provided below. A reader is encouraged to consult the Glossary and the Definitions sections whenever he or she encounters an unfamiliar term. However, it was impossible to explain all the terms that might be unknown to the reader.

1.7 Scope of the study

From the technical perspective the scope of this work will be limited to international web-based commerce. The research will primarily relate to the commercial sphere of the Internet, despite its potential applicability in non-commercial areas. There are three reasons for the choice of commercial sphere of the Internet. Firstly, contrary to the non-commercial Internet, there are important international legal developments in this field. Secondly, from the technical perspective, electronic commerce is more standardised than the non-commercial Internet, which as will be shown, greatly facilitates evidencing e-commerce customary practices. Thirdly, the practical importance of e-commerce disputes is usually greater than in non-commercial Internet. On the other hand, the choice of international e-commerce was made to exemplify better problems of transnational Internet trade and inadequacy of national approach to regulate it.

The study will focus on the Web based commerce. In other words, the dissertation will investigate only commercial websites utilising HyperText Transfer Protocol (HTTP) or HTTP

over Secure Sockets Layer (HTTP/S) protocols to exchange data. Other forms of electronic commerce such as instant messaging, mobile devices (m-commerce), old Electronic Data Interchange private networks, Automatic Teller Machine (ATM) networks etc will not be covered in this research, although many of the findings of this study could potentially find application in these fields. These technologies were excluded because web commerce is the most important example of Internet commerce and other technologies are both too old and publicly inaccessible (e.g. EDI), or still too young (e.g. m-commerce) or they are used primarily in non-commercial settings (e.g. instant messaging). Thus, the research will be limited to publicly accessible websites, thus excluding private networks such as intranets or extranets, virtual marketplaces, etc.

From the perspective of actors engaged in electronic commerce this study will focus on business-to-business (B2B) and business-to-consumer (B2C) transactions. A distinction between treatment of businesses and consumers is important in national legal systems and international commercial law because consumers are given much greater level of mandatory protection than professional traders. However, the distinction between B2B and B2C e-commerce is often difficult to make because businesses and consumers frequently buy goods and services from the same websites. Furthermore, both professionals and consumers should have a right to demand a conformance of a given website to a common practice of trading. For this reason, the study will take into account both B2B as well as B2C international e-commerce, although the primary focus will be on the former, because of the weaker legal protection of professional parties.

This study will focus on goods and services, both in a tangible as well as in an intangible form. The concept of intellectual property introduces additional complications and will be mentioned in the text only by explicit reference.

From the legal perspective, the research will embrace developments in the field of electronic commerce and Internet law from the international perspective. This approach is consistent with the aim of the dissertation to study Internet commerce law from a global rather than national perspective. Resort to national legislation or case law involving Internet or electronic commerce will be an exception made to illustrate some important point.

The main focus of this study will be the concept of custom as a potential source of Internet commerce law. In this respect various theories of international custom will be discussed with a special attention paid to the traditional concept of international custom. Again, this study will present concepts of international custom rather than numerous domestic interpretations of custom. The idea is to describe transnational phenomenon using theories of transnational phenomenon and not those of local or regional origin. Furthermore, other potential sources of supranational electronic commerce law will be excluded from the scope of the study.

The concept of custom as a source of law will be discussed primarily in the context of contracts for the sale of goods and services. However, the role of contract and interrelation between custom and contract or custom and statute will not be the subject of analysis in this dissertation. The concept of the enforcement of customary norms, although crucial to the effective functioning of this source of law, will remain outside the interests of this study. Similarly, the process of adjudication of Internet related disputes will not be covered in this study.

1.8 Definitions

Internet

The Federal Networking Council (FNC) proposed the following definition of the Internet in its resolution passed unanimously on 24 October 1995:

"Internet" refers to the global information system that -- (i) is logically linked together by a globally unique address space based on the Internet Protocol (IP) or its subsequent extensions/follow-ons; (ii) is able to support communications using the Transmission Control Protocol/Internet Protocol (TCP/IP) suite or its subsequent extensions/follow-ons, and/or other IP-compatible protocols; and (iii) provides, uses or makes accessible, either publicly or privately, high level services layered on the communications and related infrastructure described herein."[1]

Electronic Commerce:

"…technology-mediated exchanges between parties (individuals or organization) as well as the electronically based intra- or interorganizational activities that facilitate such exchanges."[2]

Custom

The Oxford English Dictionary provides the following two meanings of the term custom:

"1. A habitual or usual practice; common way of acting; usage, fashion, habit (either of an individual or of a community)

2. Law. An established usage which by long continuance has acquired the force of a law or right esp. the established usage of a particular locality, trade, society, or the like."[3]

International custom

Article 38 of the Statute of International Court of Justice defines international custom as:

"(…) evidence of general practice accepted as law." [4]

Electronic commerce custom

Electronic commerce custom (e-custom) will be defined as the legally relevant practice of trading on the Internet, which is sufficiently widespread as to justify the expectation that it will be observed. This term will be used interchangeably with terms like Internet commerce custom, e-custom, Internet custom, common practice, widespread practice, online custom, digital usage etc unless the context dictates different interpretation of a given term. Note that the justification of this definition is a major part of the thesis.

Methodology

Methodology will be defined as the structured set of directives designed to solve a particular problem.

1.9 Organisation of the thesis

The thesis will be divided into three parts. The first part will present a brief introduction to the opportunities and problems that the Internet commerce has created and will discuss international developments in global electronic commerce law. To remedy these problems the second part will present the concept of custom as a potential solution to the lack of global e-commerce law. Part three will conclude with the development of a framework for evidencing customary practices on

[1] Resolution passed by FNC on 24/10/1995, see also Leiner, B. M.*, et al.*
[2] Rayport, J. F. and Jaworski, B. J. (2002) p. 4.
[3] Simpson, J. A. and Weiner, E. S. C. (eds.) (1989).
[4] United Nations Conference on International Organization at San Francisco (26 June 1945).

the Internet. Together, the three parts will provide an answer to the main research question of this dissertation.

The first part will answer research sub question 2. It will discuss the basic concepts behind the Internet and electronic commerce. After a brief introduction to the Internet and electronic commerce, an overview of problems posed by the Internet will be discussed in depth, followed by the analysis of current developments in international e-commerce law. The discussion will focus on the analysis of the UNCITRAL model laws, European e-commerce directives and the proposed UNCITRAL Convention on Electronic Contracting. Hypothetical case studies will show the inadequacy of the current approach.

The second part will answer research sub questions 3, 4 and 5. In this part, the general concept of custom as well as the concept of international custom will be discussed. Chapter 3 will include a brief presentation of the history and importance of the concept of custom from ancient to modern times, followed by a concise analysis of the role of custom in Western and non-Western legal tradition etc. The process of custom codification and its marginalisation will be outlined. The importance of custom in modern international commercial law will then be presented. In Chapter 4 the analysis will turn to the notion of international custom. Various definitions and approaches to capture the meaning of international custom will be presented. This part will then discuss at length the most important issues associated with international custom and present solutions offered in the literature and cases of the International Court of Justice. Finally, three recent cases will be presented to illustrate the practice of evidencing international custom by the International Court of Justice. Then Chapter 5 will propose the concept of electronic commerce custom based on the previous analysis of international custom and its issues. It will explain why the concept of international custom cannot be directly applied to electronic commerce. A novel approach to understanding characteristics of Internet custom such as rejection of time factor and subjective element will follow. The new concept will be discussed using the hypothetical case studies.

Part three of the thesis will attempt to address research sub questions 6 and 7. This part will succinctly outline problems with evidencing custom in jurisprudential practice of the courts. Then the new methodology for evidencing customary practices on the Internet will be offered. Firstly, the general question of sampling a large population will be studied. Then, the new ways of establishing web custom using manual and automated data collection methods will be presented. A three-step framework for evidencing Internet customary norms will be presented and applied in the hypothetical case studies. Part three will conclude with the summary of the whole thesis.

1.10 Hypothetical case studies

This section will present two hypothetical case studies that will be used throughout the study to illustrate weaknesses of current approaches to regulating electronic commerce and to show how web-based customary practices could be used to solve these problems. The two examples below will provide an example of how custom can affect both the norms governing the formation of a contract as well as the content of a contract. The first example will show how the web customary practice of immediate confirmation of practice has changed the idea of electronic contract formation. The second example will show how common practice among financial institutions of provision of high encryption might affect the content of the contract.

Part one of the thesis will search for solutions to the above hypothetical cases offered by current developments in international electronic commerce law. Part two will present a solution to these cases using the concept of Internet commerce custom as a source of law. The last part of the thesis will show how to prove customary norms used to solve the above cases.

1.10.1 Transaction confirmation case

A Web site operator does not include an order confirmation screen in his Web system. An international client intends to purchase a number of items from this site. He uses a credit card to make this payment. After filling in all the necessary details, the client clicks an "order" button. However, an order confirmation screen does not appear. Instead, the international supplier homepage appears. The client also does not receive any email confirmation. The client, being unsure about the status of the transaction, then purchases the desired items from another website. He also requests his credit card issuer to cancel the unconfirmed transaction. Two weeks later the ordered but unconfirmed items from the first supplier are delivered. The client refuses to accept them and pay for the delivery. He claims that it is now customary to provide immediately an order confirmation screen after ordering the goods; otherwise he does not consider himself to be bound by the transaction. Is his claim justified?

1.10.2 Strong encryption case

A software development company produces an electronic system for sending sensitive trading data and transactions between a large international bank and its global clients. It uses client-server technology and uses the Internet as the message transport medium. The issue of message encryption was not explicitly discussed in the system specification stage between the bank and the developer. Also, the software licence agreement between the client and the bank does not address the issue of transaction encryption. In this product, the messages are unencrypted or weakly encrypted due to the bank's web server inability to support strong encryption. The client's web browser supports strong encryption. As a consequence, a message from the international client is intercepted and a loss of business value occurs due to this breach of security. Negotiations with the bank do not give results and the client initiates arbitral proceedings. Can the client successfully sue the bank for damages based on the breach of custom of provision of strong encryption in financial transactions?

PART I

INTERNET COMMERCE

Chapter 2. Issues and developments in international Internet commerce law

2.1 Introduction

This chapter will present some of the most profound issues the Internet has brought and how the international community has approached them. Legal issues will be presented in a more general manner, covering both the Internet and electronic commerce. The lack of Internet governance and the lack of globally binding Internet laws will be analysed in detail. The latter problem will be considered using developments in international electronic commerce law. Finally, the inadequacy of current developments will be shown in the hypothetical case studies.

2.1.1 Internet

In 2003 the Internet had its 20th anniversary. On January 1 1983 the ARPANET network, the predecessor of today's Internet, started to speak one language that enabled the connection of heterogeneous networks of computers in such a way that they could exchange information and resources.[5]

In December 1969 the Advanced Research Projects Agency network (ARPANET)[6] - an inter-state network of computers linking four research centres in California and Utah - was born.[7] Two years later it linked 23 computers located on both coasts and in 1973 ARPANET became an international computer network giving access to its resources to computers located in England and Norway.[8] ARPANET originated as a tool for researchers to enable them to share knowledge for military purposes.[9] Its development was a result of intense research funded by ARPA shortly after Russia's successful launching of Sputnik in 1957.[10] It allowed researchers located in geographically dispersed locations to remotely login and transfer files between computers.[11] In 1971 Ray Tomlinson invented email[12] that two years later was to account for 75% of the traffic on the ARPANET and that was to play the most important role in the popularisation of the Internet.

However, ARPANET was no more than a private, architecturally closed international computer network. Soon many other similar networks emerged.[13] The problem was connecting these emerging networks, which all had incompatible protocols, software and hardware. This made the idea of inter-network resource sharing difficult to achieve. The breakthrough came in 1974 when two American engineers, Vinton Cerf and Robert Kahn, proposed

[5] See e.g., Leiner, B. M., *et al.*; Zakon H'obbes', R.
[6] Roberts, L. G. (October 1967).
[7] Ibid. See especially Robert's design of ARPANET.
[8] University College of London in England and Royal Radar Establishment in Norway.
[9] In particular, it enabled execution of programs on remote computers. Abbate, J. (2000) p.2.
[10] See e.g. Gillies, J. and Cailliau, R. (2000) pp.11-18; Rheingold, H. (2000) p.58.
[11] Leiner, B. M., *et al.*; Leiner, B. M., *et al.* (February 1997) p.104; Poke (1996)
[12] Griffiths, R. T.
[13] e.g. AlohaNet created at University of Hawaii in 1970, CYCLADES in France in 1972, Telenet in USA in 1974 etc, see e.g. Zakon H'obbes', R.

> "(…) a protocol design and philosophy that supports the sharing of resources that exist in different packet switching networks".[14]

This protocol, known today as Transmission Control Protocol/Internet Protocol (TCP/IP), became the technological foundation of the Internet. The central idea was based on Kahn's four ground rules:

> "Each distinct network would have to stand on its own and no internal changes could be required to any such network to connect it to the Internet.
>
> Communications would be on a best effort basis. If a packet didn't make it to the final destination, it would shortly be retransmitted from the source.
>
> Black boxes would be used to connect the networks; these would later be called gateways and routers. There would be no information retained by the gateways about the individual flows of packets passing through them, thereby keeping them simple and avoiding complicated adaptation and recovery from various failure modes.
>
> There would be no global control at the operations level."[15]

The concept of architectural decentralisation of control over the message routing mechanisms in TCP/IP became the cornerstone of the Internet architecture and is the primary reason why there is no central body that can govern the Net, enact laws and enforce them.

In the 1980s the idea of a web of pages or domain addresses was unknown. The Internet was used for email communication, file transfer, and later to access USENET – a network of newsgroups.[16] In 1984 Paul Mockapetris announced the concept of Domain Name System (DNS)[17], laying the foundations for the modern system of Internet addressing. Modern DNS is an automatic system of translating human-readable Internet domain names like Amazon.com into computer-readable IP addresses like 207.171.181.16.

Arguably, the most important event in the Internet history was the invention of the World Wide Web (WWW).[18] The concept of web pages connected to one another via links was developed in 1989 and publicly released to the physics community in 1991 by Tim Berners-Lee[19], working at CERN, the European Laboratory for Particle Physics in Geneva.[20] Berners-Lee developed three crucial components of the World Wide Web: the Uniform Resource Identifier (URI) to uniquely identify documents on the Internet[21], the HTML language for creating websites and the HTTP protocol to enable transfer of such websites from one computer to another.[22] It is important to distinguish between the concepts of the Internet and the World Wide Web since the former is much broader than the latter.

> "The Web is an abstract (imaginary) space of information. On the Net, you find computers -- on the Web, you find document, sounds, videos,.... information. On the Net, the connections are cables between computers; on the Web, connections are hypertext links. The Web exists because of programs which communicate between computers on the Net. The Web could not be without the Net."[23]

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[14] Cerf, V. G. and Kahn, R. E. (May 1974) p. 637.
[15] Leiner, B. M., *et al.*; Leiner, B. M., *et al.* (February 1997) pp.103-104.
[16] created by Tom Truscott, Jim Ellis, and Steve Bellovin in 1976, see e.g. Zakon H'obbes', R. See also Rheingold, H. (2000) pp.109-148.
[17] Griffiths, R. T.; Leiner, B. M., *et al.*
[18] See e.g. Gillies, J. and Cailliau, R. (2000).
[19] Berners-Lee, T., CERN (March 1989) pp.35-45.
[20] http://user.web.cern.ch/user/cern/CERNName.html, last visited: 06/06/2003
[21] Berners-Lee, T. and Mark Fischetti (1999) p.2.
[22] Ibid. p.38.
[23] Berners-Lee, T.

The World Wide Web did not really take off until 1993, when the first graphical, multimedia-enabled, user-friendly web browser Mosaic X was launched[24], followed by the introduction of Netscape 1.0 the following year.

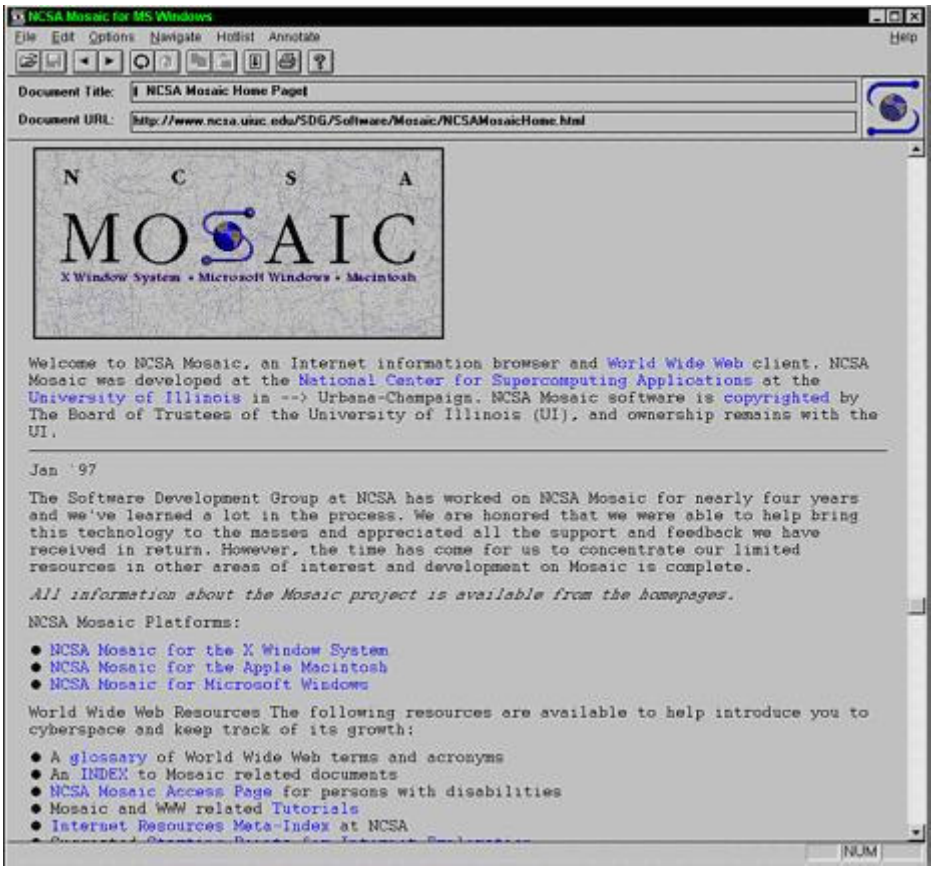

Figure 1 Mosaic X browser in 1993[25]

The appearance of freely available, graphically advanced web browsers was the key factor in the popularisation of the WWW and the Internet. In April 1995 the World Wide Web became the most popular service offered by the Internet, surpassing FTP, email, Usenet and other Internet services.[26] It took the Web less than ten years to revolutionise social life.

The Internet would not be what it is now without the influence of many other important factors including open discussion about network standards in the scientific community, the invention of time-sharing operating systems, the emergence of cheap personal computers (PCs)[27], the increase of bandwidth of the backbone networks, the commercialisation of the Internet and the active support of governments that have promoted its development. More importantly, however, the Internet would not be where it is now without active engagement of the Internet community through an open and active participation in standardisation forums.[28] It is the Internet community that is the author of the Internet.

The Internet is probably the most important social, cultural and economic development of the second half of the twentieth century. The growth of the network of computer networks, originally

[24] See Griffiths, R. T.
[25] http://archive.ncsa.uiuc.edu/alliance/press-images/mosaic.1.0.tif, last visited: 10/06/2003
[26] See e.g. Zakon H'obbes', R.
[27] See e.g. Rheingold, H. (2000) pp.59-60.. On the role of Xerox PARC in this respect see pp.70-71
[28] See below.

for American military and research purposes, spread quickly in geographical coverage as well as purpose of use. Within a few years, nearly the whole world embraced the Internet. In addition, it ceased to be just a research tool built for the military; it started to be used for a number of reasons, including informational, commercial, educational, medical, entertainment and religious purposes.

2.1.2 Electronic Commerce

One of the most important changes that the Internet brought was the transformation of domestic and international commerce. Electronic commerce means many different things that can be put under one heading – commercial activities enabled via digital networking.[29] Although electronic commerce existed long before the Internet, it was limited to inter-business trade, with transactions sent over relatively secure private networks between trading partners who were well-known to each other and with terms of trade set out in detailed written agreements. An example of such computer networking is Electronic Data Interchange (EDI) which can be defined as the electronic transfer from computer to computer of business documents using an agreed standard to structure the information.[30] From the 1960s, some large manufacturing and retail companies[31] adopted EDI and related technologies like barcode scanners[32] to enable more efficient supply of goods and services. Another example of proprietary electronic commerce was a collaborative technology enabling joint design, production and product maintenance called Computer Aided Logistics Support (CALS) adopted widely in the defence and heavy manufacturing industries.[33] It was from this relatively benign electronic environment that many electronic commerce law attempts began.

The emergence of the World Wide Web brought a crucial change. The Web gave birth to widely accessible Internet commerce,[34] where anyone with access to the Internet could easily set up a commercial website, publish it and start trading online. This has had three consequences.

Firstly, by enabling trade with small-to-medium enterprises (SMEs) and ordinary consumers located anywhere on the globe, the customer base became considerably enlarged to include entities that could not afford to participate in proprietary e-commerce. Furthermore, the Internet enabled commercial interactions between these groups in all possible manners. This in turn, has led to an intuitive classification of electronic commerce as Business-to-Business (B2B), Business-to-Consumer (B2C) or Consumer-to-Consumer (C2C) and so on. However, it is important to realise that the traditional distinction between commercial and consumer transactions has to some extent lost its significance in the Internet environment.[35] For instance, both consumers and businesses purchase goods from sites such as Amazon.com. The convenient categorisations of electronic commerce as B2B or B2C are no longer distinct but as Rayport and Jaworski put it "they are linked in a broader network of supply and demand."[36] This will have an important impact on national laws as consumers are usually granted much stronger protection comparing to professional traders.

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[29] See definition in Chapter 1
[30] UNCITRAL (1996) art. 2(b). Other authors define EDI as "the electronic exchange of business documents in a standard, computer-processable, universally accepted format between trading partners." Bajaj, K. K. and Nag, D. (2000) p.117.
[31] Bajaj, K. K. and Nag, D. (2000) p.120.
[32] Clark, R. (December 1998)
[33] Also called Computer Assisted Lifecycle Support Timmers, P. (1999) p.3.
[34] Although Rheingold stated in the context of virtual communities that in the 1996 "e-commerce wasn't even a cloud on the horizon" Rheingold, H. (2000) p.334.
[35] Rayport, J. F. and Jaworski, B. J. (2002) p.5.
[36] Ibid.

Secondly, electronic commerce has become internationalised enabling trading with businesses and consumers located in different jurisdictions. Although some earlier EDI-based electronic networks like SWIFT[37] enabled international transactions, these were limited to banks only and secured by legal agreements. On the other hand, Web based commerce has enabled purchase of goods from sites such as Amazon.com by almost any consumer or business in the world. This in turn, has led uncertainty as to which legal regime would govern a transaction.

Thirdly, e-business became anonymous. Unlike earlier forms of electronic commerce, Web commerce facilitates ongoing but also one-off or infrequent transactions between parties who do not know each other. They no longer have a history of previous dealings, which may provide valuable information about reliability of a party. Web dealings are not secured by extensive contractual arrangements as was the case with, for example, EDI. Web agreements are less detailed, very rarely read as they are usually hidden on a separate page and very likely contain provisions, which inadequately regulate a given matter. These factors in turn, contribute to creation of even greater legal uncertainty on the Internet, further exacerbated by lack of globally binding written electronic commerce laws.

Nevertheless, the web commerce continues to flourish. The typical web transaction is often based on the shopping cart technology that emulates the traditional way of purchasing goods in the supermarkets.[38] Customers first find a product in the electronic catalogue, put it in a shopping basket and then take it to the check-out, where they provide their personal information and financial details, which are customarily secured. The transaction takes place once the buyer clicks order button and the vendor confirms it.[39] However, the Web has given new impetus to the traditional modes of establishing the price for goods, services or information. Apart from electronic catalogue pricing, traditional auction pricing, reverse-auction pricing, demand-aggregation pricing and haggle pricing mechanisms are being used.[40] Unlike the traditional auction where the buyer with the highest price wins, in a reverse auction the winner is the seller with the lowest price.[41] Demand aggregation sites like MobShop[42] enable multiple buyers to join together in order to negotiate a better price with the supplier. Haggle pricing enables negotiation of prices over the web although the sales representative is a computer program.[43] Also, the emergence of artificial agents[44] that could bid on behalf of a party has changed the way commercial agreements were entered into.

The growth of web commerce was fuelled by rapid advancements in electronic commerce technologies. The area that required special attention was security of transactions as the web infrastructure transmits information in plain text. With advances in security of transactions, especially the development of encryption[45] mechanisms such as Public Key Encryption (PKE)[46] and the Secure Sockets Layer (SSL) protocol[47], the Web trade became more secure. Online traders began to encipher credit card transactions using SSL and perform real-time settlements of accounts. Banks rapidly invested in online banking giving their customers the ability to access accounts, transfer money, pay bills, repay loans or check a history of the transactions. Large

[37] See Glossary.
[38] See Glossary.
[39] See Chapter 5 and Glossary.
[40] See e.g. Rayport, J. F. and Jaworski, B. J. (2002) pp.229-231.
[41] See also Emiliani, M. L. (2000) p.177; Lucking-Reiley, D. (September 2000).
[42] See e.g. http://www.mobshop.com, last visited: 25/10/2002.
[43] See e.g. http://www.hagglezone.com, last visited: 25/10/2002.
[44] See Glossary.
[45] See Glossary.
[46] See Glossary.
[47] See Chapter 6 and Glossary.

manufacturing and retails companies that had large amounts of money tied to the EDI could connect smaller suppliers to their networks via secure Internet connection.

Other technological innovations such as eXtensible Markup Language (XML) enabled formal structuring of web documents and in consequence, exchange of business data in a fully portable format, thus making possible complete integration of resources of online companies.[48] Intranets have been built to enable access to electronic resources inside a company, whereas extranets enabled employees to connect to electronic resources of a company from outside the office.[49] E-procurement solutions[50] enabled business to purchase goods from their suppliers using their online catalogues. The growing popularity of mobile phones and other wireless technologies led to the emergence of mobile Internet commerce (m-commerce) that enabled participation in global trade without a computer.

The technological innovation inspired businesspeople. Merchants developed innovative business models to fully utilise opportunities created by the Internet commerce.[51] Companies like Dell, Cisco or General Electric have utilised the Web to connect their suppliers in order to streamline their operations. Merchants have started to organise themselves into various forms of electronic marketplaces for more efficient trading of large volume of products, inaccessible to the rest of the users of the Internet.[52] Vertical marketplaces gathering companies from the same industry such as VerticalNet or ChemConnect and horizontal marketplaces such as Ariba or Commerce One providing products and services across all industries have appeared. On the other hand, virtual companies such as Yahoo or Amazon have used the Internet to specialise in online Business-to-Consumer (B2C) trade. Other companies such as eBay have provided third party services in Consumer-to-Consumer (C2C) trade. All the above examples show the impact of the Internet technology on the way commerce is conducted in the Information Age.

2.2 Legal issues raised by the Internet

The worldwide nature of the Internet has, to a greater or lesser extent, affected every branch of domestic legal systems. Numerous national commissions[53] were set up to analyse its impact on national laws. The Internet has been christened a lawless phenomenon, and the World Wide Web has been compared to the Wild West[54] or recast as The Wild Wild Web.[55] The aim of this section is to provide a brief survey of the most important issues posed by the Internet in order to show how deeply various branches of national legal systems have been affected.

2.2.1 Intellectual Property law

To many researchers the traditional concept of intellectual property (IP)[56] ceased to exist in the era of the Internet.[57] Particularly a copyright protection which has a territorial scope[58] with

[48] http://www.w3.org/XML/, last visited: 06/06/2003. See Glossary.
[49] See Glossary.
[50] See Glossary.
[51] See e.g. Lucking-Reiley, D. and Spulber, D. F. (Winter 2001); Rappa, M. (2002); Timmers, P. (1999) pp.35-41.
[52] See e.g. Kaplan, S. and Sawhney, M. (May-June 2000), Rayport, J. F. and Jaworski, B. J. (2002) p.373.
[53] See e.g. Australia Electronic Commerce Expert Group (31 March 1998); European Commission (15 April 1997); New Zealand Law Commission (October 1998); New Zealand Law Commission (November 1999); New Zealand Law Commission (December 2000); White House (1 July 1997).
[54] Hamdani, A. (May 2002) p.902.
[55] Goodwin, M. (1998); Shipchandler, S. (2000).
[56] Intellectual Property law provides many forms of protection including copyright, trademark, patents, trade secrets etc. See e.g. WIPO (May 2000).
[57] See e.g. Barlow, J. P. (March 1994); Weber, R. H. (2001).

significant variations across legal cultures is entirely ignored by the architecture of the Internet. Web technology is inherently based upon the concept of copying information. Web servers store a website as files containing strings of characters and numbers that may be sent or copied to any requesting web browser. As a result, limiting copying of information is made impossible by the very construction of the Internet.

The ease, speed, quality and lack of expense of copying and distributing IP worldwide has rendered protection and enforcement of infringed IP moral[59] and economic rights practically impossible. The decentralised character of the Internet augmented by the use of file-sharing software like Kazaa where each participant gives public access to music or video files renders persecution of copyright violators a practically impossible task. Copyright offenders are practically untraceable if they use anonymisers, which allow them to hide personal details[60] and encipher the transfer of protected materials via encryption.[61] The situation has been further complicated with the emergence of freely available software code by means of Open Source initiative.[62] Even technological innovations like trusted systems and usage rights languages[63] and existing international IP treaty framework[64] have not managed to change thinking about the Net as a copyright-free environment[65], where the free use of works is a rule, rather than an exception.

One of the branches of IP law – the law of trademarks, has also been greatly affected by the Internet, especially in relation to problems posed by a user-friendly address of a website known as a domain name[66] (e.g. Amazon.com, Rossetta.net, w3c.org, theage.com.au). Domain name registration has customarily been based on "first in, first out" principle and some early Internet users have reserved domain names of famous companies in order to sell later these domains to them for a substantial amount of money – the practice referred to as cybersquatting.[67] Trademark law being territorial in nature was suddenly confronted with phenomenon that ignores borders and in effect introduces tens of competing trademark regimes and trademark name holders. Disputes arising out of domain name assignments are very difficult and are being dealt with on a global level by ICANN dispute resolution system.[68]

Patent law has also been affected as a result of flood of patent claims for almost any invention on the Internet.[69] Some patent claims may have serious consequences for the Internet. Recently, British Telecom lost a case to establish their patent on the hyperlink,[70] which is a fundament of the World Wide Web. Here again, because of the territorial scope of patent laws, the only way to protect them is to patent them in every country where the Internet is being used, which is exceptionally ineffective, expensive and time-consuming.

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[58] See e.g. Art.3 of WIPO (1971).
[59] Art.6 bis in Ibid., Art 5 in WIPO (1996).
[60] See e.g. http://www.safeweb.com or http://www.anonymizer.com, last visited: 06/03/2003.
[61] See Chapter 5, 6 and Glossary.
[62] See e.g. http://www.opensource.org, last visited: 06/03/2003.
[63] See e.g. Stefik (1997).
[64] See e.g. WIPO (1996); WIPO (1971); WIPO (1996); WTO (15 April 1994).
[65] See e.g. ISOC (15 August 2002).
[66] See Glossary
[67] See e.g. Harris, A. (10 September 2002).
[68] See e.g. ICANN (2001); ICANN (25 November 1998); ICANN (1999); ICANN (26 August 1999).
[69] Datz, T. (2002). See also Lessig, L. (2001) in which he argues among other things that companies through IP protection will stifle the growth of the Internet.
[70] See Memorandum And Order Granting Summary Judgment (22 August 2002). See also e.g. Delio, M. (23 August 2002).

2.2.2 Contract law

Traditional law of contract was confronted with difficult issues of online contract formation and acceptability of electronic form and content. In the context of contract formation many questions were raised as to whether a website constitutes an offer.[71] It was argued that a basic website (static website) that only advertises products but does not display information about their availability should not be treated as a definitive offer but as an invitation to treat.[72] This is a logical contention because such websites do not enable an immediate or automatic conclusion of a transaction. However, there is a debate concerning the status of the so called interactive website which contains detailed product catalogues and enables an immediate conclusion of a contract by software without involvement of a human operator. Authors supporting the view that interactive websites should not be treated as offers claim that similarly to displays in shop windows, the seller should not be held bound to an unforeseeable number of acceptances[73], web vendor may not want to trade with certain jurisdictions[74] or may want to create price differentials for customers from different regions.[75] Unfortunately, arguments like these indicate a large degree of ignorance of electronic commerce capabilities and online mercantile practices because online merchants already have the relevant technology at their disposal. It is customary that trading websites provide real-time access to information about product availability and prices, shipping charges, taxes, packaging etc. Some web vendors also restrict availability of certain products or use different pricing policies dependant upon where a consumer comes from. For instance, Amazon.com and its trading partners sell both new and second hand items. However, second hand items are generally available to customers located in the U.S. only, which is easy to establish as only buyers with a ship-to address in the U.S will be accepted by the system. In summary, it is submitted that an interactive website should be regarded as constituting an offer.

Two recent incidents show the importance of treatment of a mistake during the contract formation. In March 2003, on the basis of a contractual mistake Amazon.com has declined to honour online contracts for handheld Ipaq computers valued at £300 that were sold for £7.32.[76] Soon afterwards, Thai Airlines refused to honour purchases of first class flights from London to Bangkok for a price equal to that of airport taxes.[77] Although the answer to the problem of treatment of mistake is not straightforward, it should be noted that many customers consider the Web as a bargain place.[78] Given the nature of the commercial Internet, it is much more difficult to distinguish between bargains and mistakes than in the traditional world. Moreover, the payment is usually immediate, and is confirmed by email and website, which proves that a transaction took place. It could be then argued that mistakes should in general be treated with a greater degree of scepticism than in paper-based transactions. Again, time will show in which direction the practice will go.

There are many other issues associated with contract formation that will not be analysed at length. They include: the capacity and intention to form a contract, common law consideration or civil law cause, time and place of contract formation, problems of classification of Internet

[71] See e.g. Hance, O. (1996) p.154. Hance supports view that a website constitutes offer. For the opposite view see e.g. Perdue, E. S. (1996) p.82. Other authors do not give a definitive answer; see e.g. Glatt, C. (Spring 1998) p.51. The question of contract formation via email and other Internet technologies resembles traditional contract formation and is outside the scope of this thesis.
[72] See e.g. Glatt, C. (Spring 1998) p.50.
[73] Gringras, C. (1997) p.16.
[74] Smith, G. J. H. (1996) p.97.
[75] Gringras, C. (1997) p.14.
[76] See e.g. Sturgeon, W. (19 March 2003); Sturgeon, W. (20 March 2003)
[77] Sturgeon, W. (28 April 2003)
[78] Ibid.

technologies as instantaneous or non-instantaneous[79], enabling a communication between present people[80] etc. This situation is further complicated by the emergence of intelligent agent-mediated contract formation mechanisms[81] that do not merely act as static pre-programmed software devices but can learn from their past experiences and modify their behaviour accordingly, thus having their own autonomy.[82]

The form of online documents has also created problems of their validity and enforceability. All modern national legal systems rely on the importance of handwriting, original documentation, and signatures to identify and prove unique features of a given transaction. These terms however, have lost their meaning in electronic context where there is no tangible document to which they can be related. Electronic writing no longer uniquely distinguishes a writer. A word-processor signature cannot uniquely identify a will. Any electronic document can be considered as an original as the copies are non-distinguishable. To remedy this situation digital signatures have been introduced, which quickly turned out to be a better method of guaranteeing the authenticity of a document than its paper-based counterpart.[83] Digital signatures enable not only verification of a signer of the document thus achieving sender non-repudiation, but also ensure that a document has not been altered during transmission.[84] Questions related to electronic signatures and electronic contracts in regard to their legal effect, validity, enforceability, admissibility in court proceedings have been addressed in many countries mainly as a result of Model Laws developed by UNCITRAL[85], although, as will be pointed out later, no harmonised solution has been developed to date.

The content of electronic contract has also introduced some problems. A difficult matter is a localisation of parties because a geographical location of a particular website may be difficult to pinpoint. Similarly cumbersome might be a distinction between goods, services and information.[86] Other problems include protection of consumers as the Internet blurs the distinction between a professional and a consumer. Finally, one of the most important issues is how to evidence electronic contracts.

2.2.3 Crime and offence law

Like other national legal branches, criminal law and the law of minor offences (or torts) has a territorial scope. However, it has to address supranational issues arising from a negligent or criminal act committed by an intruder in cyberspace that has an adverse effect in a country in question. Of great concern is the so called malicious hacking which is breaking into the information system in order to steal, delete or change important data. Another serious concern is computer viruses or Trojan horses.[87] A virus self-executes and self-replicates to cause harm to a computer e.g. deleting files, formatting hard drives or simply displaying annoying messages. Trojan horses do not replicate themselves and are usually executed by opening an email

[79] See e.g. *Adams v. Lindsell,* (1818) 1 B&Ald 681; *Brinkibon Ltd v. Stahag Stahlwarenhandelsgesellschaft mbH* (1983) 2 AC 34; *Entores v. Miles Far East Corporation* (1955) 2 QB 327.
[80] This distinction is known in civil law systems. Telephone conversation although technically is between people that are not present, from a legal perspective is treated as being between present.
[81] See e.g. Allen, T. and Widdison, R. (Winter 1996); Weitzenboeck, E. M. (2001).
[82] See e.g. Russell, S. J. and Norvig, P. (1995) Woodlridge, M. and Jennings, N. R. (June 1995). See also e.g. Allen, T. and Widdison, R. (Winter 1996); Gonzalo, S. (2001).
[83] See e.g. Schneier, B. (1997).
[84] Koops, B.-J. (1999); Schneier, B. (1997).
[85] See below.
[86] See e.g. Kessedjian, C. (August 2000) pp.5-6.
[87] See Glossary. Also see e.g. Symantec (9 September 2002).

attachment or downloading a program.[88] Another serious problem is the so called Denial of Service attacks (DoS) which aim at blocking access to a given website by overloading Internet servers with requests. One of the most dangerous DoS attacks took place in October 2002 targeting thirteen Domain Names Servers with a high degree of risk of making the Internet malfunctioning for some time.[89]

An interesting fact is the decreasing age of cyber offenders. A famous DoS attack on Yahoo portal in February 2000 was instigated by a fifteen year old Mafia Boy.[90] It is not surprising that the Internet is considered insecure, especially given the difficulty of tracking down offenders, more powerful and freely-available security-breaching programs, new security bugs and a common lack of awareness about potential risks associated with security breaches.[91] A perceived lack of Internet security gave birth to the discussion of self-help or even hacking as a way of fighting online theft.[92] In this respect one should mention the controversial action of the FBI who hacked into Russian computer systems to obtain the first "extra-territorial seizure of digital evidence"[93] and then catch two hackers under the pretext of a job interview in the U.S.[94] To counter the cybercrime problems, the Council of Europe has adopted a controversial[95] Convention on Cybercrime[96], which has not yet come into force.

Another challenging issue on the Internet is a protection of individuals from defamatory actions or criminal threats referred to as cyberstalking.[97] Another important problem is the amount of websites displaying content that is usually prohibited by national legal systems such as child pornography, websites presenting instructions how to harm others[98] or soliciting the use of force or being used by terrorists.[99]

National policymakers have engaged in tough policies aiming at elimination of this phenomenon, introducing surveillance systems like Echelon and Carnivore.[100] China blocked access to some search engines including the very popular Google.[101] On the other hand, the Platform for Internet Content Selection (PICS) has been proposed as a technological solution for classification and filtering of website content. The PICS is a specification developed by the World Wide Web Consortium that enables labels (metadata) to be associated with the Internet content to help parents and teachers control what children access on the Internet.[102] Another way of approaching the problem of illegal content was a highly controversial attempt to assign liability to the Internet Service Providers (ISPs).[103] For instance, the Spanish government forced ISPs to block access to the Batasuna[104] website of separatist Basques.[105] However, ISPs provide community access to the

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[88] Ibid.
[89] ComputerWire (23/10/2002); McGuire, D. and Krebs, B. (22/10/2002); Orlowski, A. (22/10/2002).
[90] See e.g. Barabási, A.-L. (2002) pp.1-3.
[91] See e.g. Tovey, M. (2001).
[92] Berman, H. ; Sinrod, E. J. (13 September 2002).
[93] Reuters (5 October 2002).
[94] See e.g. timothy (05 October 2002)
[95] See American Civil Liberties Union.
[96] Council of Europe (23 November 2001).
[97] For a recent trial in America see Costlow, T. (03 September 2002).
[98] See e.g. Akdeniz, Y. (2001).
[99] See e.g. EPIC and PI (2002).
[100] See e.g. Broersma, M. (11 April 2001).
[101] See e.g. BBC News (02 September 2002).
[102] http://www.w3.org/PICS/, last visited: 06/03/2003.
[103] See below art.12-15 of Official Journal of the European Communities (2000); see also e.g. Hamdani, A. (May 2002); Shipchandler, S. (2000).
[104] http://www.batasuna.org, last visited: 10/10/2002.
[105] See e.g. timothy (7 October 2002).

Internet and usually also host websites on their servers, but customarily do not check the content of a site. As a result they have no easy way of finding out what content has been posted on their information system. The side effect of these activities has been raising concerns about freedom of speech.[106]

2.2.4 Privacy law

Similarly, privacy laws have been deeply affected by the Internet.[107] One of the problems is created by the ease of automatic sending of thousands of emails to predetermined addressees without consent of recipients (spamming).[108] This is exacerbated by the fact that the sender's address is changed every time messages are sent, making simple blocking of one address an unfeasible solution.

Moreover, the ease of collection of personal data by means of cookies has raised privacy concerns. Cookie is a file that most major websites store on a user's computer for the purpose of tracking information about his browsing preferences like addresses of visited websites, length of time spent at each of them etc.[109] The potential for worldwide dissemination of information gathered in this way without the knowledge of its owners has created severe tensions between jurisdictions. For instance, the European Union implements tough data protection policies whereas the United States has a much more liberal attitude towards regulating privacy. In this field some local agreements like the U.S.-EU Safe Harbour agreements became necessary in order to provide a safe legal framework for a conduct of international trade.[110] Also some technological solutions such as Platform for Privacy Preferences Project (P3P)[111] have been developed by the Internet community.[112]

Similar controversies have been created about some employers who were reading their employees' email correspondence. There is a growing concern associated with actions of the U.S. and other governments aimed at an invigilation of electronic records in response to 11 September attack.[113] For many, a battle for privacy in this area seems to be lost already.[114]

2.2.5 Jurisdictional problems

The Internet and electronic commerce has also posed the number of other issues that will not be discussed at length. For instance, there are serious issues with collection of taxes and customs[115], enforcement of licences required to conduct certain forms of business on virtual organisations[116] or affecting functioning of traditional financial instruments and institutions.[117]

All of the above problems are further complicated by a number of national jurisdictions the Internet spans. Numerous cases could exemplify tensions between different jurisdictions. For

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[106] See e.g. activities of Electronic Frontier Foundation, at: http://www.eff.org, last visited: 06/03/2003.
[107] See e.g. http://www.epic.org, last visited: 06/03/2003 or http://www.privacyinternational.org, last visited: 06/03/2003.
[108] See e.g. Branscomb, A. W. (May 1995) pp.1657-1660.
[109] See e.g. http://www.cookiecentral.com, last visited: 04/06/2003 and Glossary.
[110] See http://www.export.gov/safeharbor/, last visited: 06/06/2003.
[111] W3C (2001).
[112] See also Open Profiling System (OPS) developed by Netscape, Firefly and Verisign in 1997.
[113] See e.g. The Associated Press (30 March 2003)
[114] Ibid.
[115] See e.g. a Model Tax Convention: OECD (29 April 2000).
[116] See e.g. Reuters (1 October 2002); The New Zealand Herald (10 September 2002) Keller, B. P. (1999).
[117] See e.g. Muller, J. D. (November 1998); Winn, J. K. (November 1998)

instance, American courts continue to struggle with the file-sharing system Kazaa where the company distributing is incorporated in Vanuatu, managed in Australia, programmed in the Netherlands, hosted in Denmark and the program source code was last seen in Estonia.[118] In a famous French suit against Yahoo for offering Nazi materials on their website, the American company ignored the ruling of the French court ordering blocking of access to these materials to French citizens.[119] Recently, in a libel case of Gutnick against Dow Jones for publication of defamatory materials, the Australian court has allowed Gutnick to sue the American company in the Australian state of Victoria.[120] In another case, the Australian court declared the U.S. Skybiz.com was in breach of the pyramid selling prohibition of Australian consumer law.[121]

Jurisprudence has not managed to develop an effective system of solving conflict of laws issues, which at the moment is essentially rooted in a national legislature, which prescribes which system of law should be used in case of a dispute. Taking into account tens of such systems, each prescribing their own rules and realising that parties or perpetrators on the Internet are difficult to localise, it is clear that something new has to be done to enable global adjudication of electronic commerce disputes.

The international community has realised that one way to solve jurisdictional issues is to promote online dispute settlement[122] to which Internet users could submit complaints, but so far no agreement has been reached.[123] Such methods of resolving conflicts promise to be more flexible in applying legal norms to adjudicate Internet disputes than national courts. Arbitrators can more openly rely on supranational sources of norms e.g. customs of online merchants and perhaps even accept a set of such norms as a future supranational Internet legal system governing any disputes arising on the Internet.

2.2.6 Summary

Legal issues posed by the Internet are numerous and the above section briefly summarised the most important of them together with some proposed solutions to overcome them. National laws are a product of the pre-Internet era, which cannot be adapted easily to the Information Age. All the affected fields of law have a territorial scope, which stems from sovereign rights of states to regulate their internal matters. However, the Internet ignores territoriality. Hence, the constant conflicts of laws, which produce serious legal uncertainty.

The territorial approach to regulating the Internet is further exacerbated by the lack of a "transnational" approach to regulating the Internet. Virtually all legal textbooks on the Internet law discuss it from the perspective of a given national legal system[124], although many principles of such systems have a local character and are unknown elsewhere. Such "nationalisation" of the Internet has adverse effects as it does not attempt to build a supranational legal framework that would reflect the global nature of the Internet.[125]

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[118] See e.g. Harmon, A. (07 October 2002)
[119] See e.g. Akdeniz, Y. (2001)
[120] *Gutnick v. Dow Jones & Co Inc* (28 August 2001) VSC 305 and subsequent judgments at Clark, R. (29 June 2002); Vangelowa, L. (19 June 2002).
[121] See e.g. FindLaw Australia (1 October 2002).
[122] See work of UNCITRAL described below. See e.g. UNCITRAL Working Group IV (Electronic Commerce) (2001).
[123] See e.g. Kessedjian, C. (August 2000) pp.7-8.
[124] See e.g. Akindemowo, O. (1998); Bainbridge, D. I. (2000); Chissick, M. and Kelman, A. (1999); Edwards, L. and Waelde, C. (eds.) (2000); Forder, J. and Quirk, P. (2001); Gringras, C. (1997); Lessig, L. (1999); Lessig, L. (2001); Lloyd, I. (1997).
[125] For a more detailed discussion see Polanski, P. P. (2002).

The two most important problems that actually underlie all the concerns described above are a lack of central authority that could govern the Internet and as a partial result of it, a lack of globally binding written Internet laws. Understanding these two fundamental issues is necessary before the discussion of the concept of custom as a source of Internet commerce law as a remedy to this situation will be presented.

2.3 Lack of Internet governance

The Internet does not possess any central form of government because, as was explained above, it was built around the concept of architectural decentralisation of control. However, there are a number of organisations that are sometimes considered to be some form of Internet government where in fact they only ensure its technological growth or smooth technical functioning. It is important to understand what role various organisations perform in order to appreciate better a decentralised character of the Internet and hence enormous problems with regulating it using traditional top-down measures. The discussion of these organisations is also important in the context of Internet custom to be presented next, as some of these organisations may play an important role in initiating prospective customary practices.

2.3.1 Technical organisations

There are various bodies interested in the development of standards on the Internet including private and public sector organisations. Within the private sector standards are developed in two communities: non-commercial communities represented by organisations like the Internet Engineering Task Force and commercial organisations like Microsoft or Netscape. Both types of organisations are important to the development of standards on the Internet and both have an enormous influence on how companies actually behave on the Internet. But none of these organisations can be treated as the Internet government.

For instance, the Internet Society (ISOC) cannot be considered as a government of the Internet. ISOC's mission is to:

> "(…) assure the open development, evolution and use of the Internet for the benefit of all people throughout the world." [126]

Internet Society ISOC was founded in 1992 as a non-profit, professional organisation of international character, with more than 150 organizational and 11,000 individual members in over 180 nations worldwide.[127] The primary role of ISOC is to provide institutional home and financial support to the Internet standardisation process led primarily by the Internet Engineering Task Force (IETF).[128]

IETF is the principal organisation engaged in the formal development of new Internet standard specifications. Areas of interest have ranged from security to data transport to routing to operations and management to standard processes to policy formulation.[129] It is:

> "(…) a large open international community of network designers, operators, vendors, and researchers concerned with the evolution of the Internet architecture and the smooth operation of the Internet." [130]

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[126] See http://www.isoc.org/isoc/mission/, last visited: 06/03/2003.
[127] http://www.isoc.org, last visited: 06/03/2003.
[128] Cerf, V. G. (1995).
[129] http://www.ietf.org, last visited: 06/03/2003.
[130] http://www.ietf.org/overview.html, last visited: 06/03/2003.

IETF is not a governmental organisation, but an open, virtual community that performs its job in several working groups classified into areas of interest. In the early days, IETF was financed by the US government[131] but now for a decade it has been financially supported by the Internet Society (ISOC).

On the other hand, Internet Research Task Force (IRTF) is not concerned with the formal development of Internet standards. Instead, its work has less formalistic character and is concerned more with a futuristic vision of the Internet. IRTF areas of interest include Interplanetary Internet or Internet Digital Rights Management. IETF and IRTF now form the Internet Architecture Board (IAB) .[132]

Another important Internet organisation is Internet Corporation for Assigned Names and Numbers (ICANN).

> "(ICANN) is a non-profit, private-sector corporation formed by a broad coalition of the Internet's business, technical, academic, and user communities." [133]

Its objective is to:

> "(…) operate as an open, transparent, and consensus-based body that is broadly representative of the diverse stakeholder communities of the global Internet."[134]

ICANN has been recognized by the international community as the global consensus entity[135] to coordinate the technical management of the Internet's Domain Name System (DNS), the allocation of Internet Protocol (IP)[136] address space, the assignment of protocol parameters, and the management of the root server system. From the legal perspective the most important activity of ICANN is coordination of DNS policing. DNS is a global database of domain names.[137] It is maintained at several locations called Regional Internet Registrars (RIR).

ICANN has developed a global policy[138] and rules[139] for resolving conflicts in the domain name registration that is administered by a number of organisations including World Intellectual Property Organisation (WIPO). Although Hagen recently argued that "the norms embedded in the DNS architecture cannot be ignored as mere technical"[140], it is difficult to conclude that ICANN could be considered as a form of Internet governance, capable of issuing globally binding laws.

On the other hand, the World Wide Web Consortium (W3C)[141] is the organisation responsible for developments of the most important Internet technology – the World Wide Web.[142] In October 1994, Tim Berners-Lee, founded W3C at the Massachusetts Institute of Technology.[143] The mission of W3C is to:

> "(…) lead the World Wide Web to its full potential by developing common protocols that promote its evolution and ensure its interoperability."[144]

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[131] Cerf, V. G. (1995).
[132] IAB (2002).
[133] ICANN (2001).
[134] See earlier.
[135] However, Hagen argues that the current structure of the DNS is controlled by the U.S. Government. Hagen, G. R. (2003) p.39.
[136] See Glossary.
[137] See Glossary.
[138] ICANN (26 August 1999).
[139] ICANN (1999).
[140] Hagen, G. R. (2003) p.39.
[141] See W3C (2000); W3C (2001).
[142] See earlier.
[143] W3C (2000).
[144] Ibid.

W3C concentrates its efforts on vision, design and standardisation of web protocols.[145] W3C's long term goals are:

> "1. Universal Access: To make the Web accessible to all by promoting technologies that take into account the vast differences in culture, languages, education, ability, material resources, and physical limitations of users on all continents;
>
> 2. Semantic Web: To develop a software environment that permits each user to make the best use of the resources available on the Web;
>
> 3. Web of Trust: To guide the Web's development with careful consideration for the novel legal, commercial, and social issues raised by this technology."[146]

W3C activities are generally organized into several types of groups. W3C has developed specifications for, among other things: HTML (used to build websites), XML (a new generation language used to create content on the Web and technological fundament of the future World Wide Web), Cascading Style Sheets (CCS) technology to provide rich, content independent formatting of documents, Scalable Vector Graphics (SVG) to provide efficient vector based graphics on the Web, Platform for Internet Content Selection (PICS) to help rate websites content, Platform for Privacy Preferences (P3P) to better protect private information on the Web and many others.[147]

There are other important technological organisations but none of them can be considered as a form of the Internet governance, capable of issuing and enforcing all-encompassing, globally binding laws. Most of the above organisations deal with the process of standardisation of the Internet protocols. Other organisations like ICANN focus on particular aspects of the Internet technology, sustaining its growth, operation and providing important dispute resolution mechanisms. All of these organisations, however, have a decisive role in shaping architectural constraints in which Internet merchants operate.

2.3.2 Commercial companies and their proprietary standards

The Internet is largely dependant upon technological innovations and practices developed by hi-tech giants like Microsoft, IBM, Sun Microsystems, Cisco, America Online, Macromedia and Adobe, to name just a few. Although these organisations will not be discussed in detail, it is important to realise their role in coordinating participants' behaviour on the Internet. Through the provision of software that has such widespread use, they promote certain behaviours and disallow or inhibit others. These companies have developed private standards that have been reigning in cyberspace for a very long time. Despite the open standardisation movement[148], the private sector's influence is undoubtedly still very strong today.

For instance, Microsoft is the provider of the most widely used web browser[149] and second most widely used web server[150], not to mention its primacy in the field of operating systems, office software and a host of other software products. With such a dominant position in the market, Microsoft enforces its own private standards that provide technological frameworks. The global impact of companies like Microsoft has been noticed by the international community and recently

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[145] W3C (2001).
[146] W3C (2000).
[147] See Glossary.
[148] See e.g. Open Source Initiative mentioned earlier.
[149] As of September 2002 the Internet Explorer has won around 95% of the market, see e.g. http://www.onestat.com/html/aboutus_pressbox7.html, last visited: 08/06/2003.
[150] Netcraft (2002).

the World Trade Organisation (WTO) has in fact penalised the American government for supporting the monopolistic position of such software giants.[151]

Similarly, Internet Service Providers (ISPs) may play an important role in regulating the Internet. The biggest intermediaries like America Online (AOL)[152] may actually enforce their own standards of behaviour by disallowing certain forms of activities. AOL for instance provides anti-spamming facilities, parental control features and can even limit time children spend online.[153] This situation has led some governments to impose or limit liability on ISPs for illegal traffic that passes through their computers.[154]

The impact of the private sector on the development of the Internet has been so great that it has led Lessig to conclude that the development of standards to fit the goals of the private sector will change the nature of the Internet from a free and open environment to a highly "regulable" and controlled network.[155] However, the future is difficult to predict. The emergence of freely available and user-friendly software supported by the open source code and open standards initiatives may seriously undermine the future position of today's modern technological giants.

In summary, commercial software and hardware producers as well as Internet Service Providers play an important role in supporting the Internet and driving its further development. However, these companies do not govern the Internet or electronic commerce as the disappearance of any of these companies or even all of them will not stop the functioning of the Internet.

2.3.3 Non-technical organisations

There are organisations that have contributed to the discussion or to the development of legal instruments facilitating the Internet and electronic commerce. They have very diverse aims and come from both public and private sectors. Some of these organisations like Electronic Frontier Foundation, TRUSTe, Law and Policy Forum exist primarily on the Internet, whereas others like UNCITRAL, ICC, OECD, WIPO and WTO are important international organisations whose primary goal is the coordination of activities such as international trade or intellectual property. The latter organisations deal with the Internet only as a sideline as their scope of activities is much larger than that of specialised Internet regulation forums.

For instance, the United Nations Commission on International Trade Law (UNCITRAL) performs a very important role in drafting global electronic commerce laws. It established Working Group IV to deal with legal aspects of electronic commerce and EDI.[156] As will be discussed later, this working group has produced several ground-breaking documents including the Model Law on Electronic Commerce and the Model Law on Electronic Signatures and is currently working on a draft convention on electronic contracting.[157]

In turn, the World Intellectual Property Organization (WIPO)[158] is heavily engaged in dispute resolution processes concerning the improper assignment of Internet domain names. It has developed the Uniform Domain Name Dispute Resolution Policy[159] for resolving such disputes

[151] WTO allowed EU to seek punitive duties on $4 billion of U.S. exports to Europe - unless the U.S. law is changed. Blustein, P. (15 January 2002).
[152] http://www.aol.com, last visited: 28/08/2002.
[153] http://www.corp.aol.com/whoweare.html?, last visited: 28/08/2002.
[154] See earlier.
[155] See e.g. Lessig, L. (1999) p.30. See also e.g. Lessig, L. (2001) p.263.
[156] See http://www.uncitral.org, last visited: 06/06/2003.
[157] See below.
[158] See WIPO (May 2000).
[159] ICANN (26 August 1999). See also ICANN (1999).

that was later adopted by ICANN as the global policy binding all its accredited domain name registrars. WIPO is the leading ICANN-accredited domain name dispute resolution service provider, resolving more than 50% of all domain name disputes.[160] It has also developed very important conventions dealing with intellectual property rights in the digital age[161] and published several interesting documents about electronic commerce law.[162]

On the other hand, the Electronic Frontier Foundation (EFF) was established in 1990 in San Francisco to defend freedom of speech. It is a donor-supported membership organisation working to protect fundamental rights regardless of technology, to educate the press, policymakers and the general public about civil liberties issues related to technology and to act as a defender of those liberties. EFF opposes misguided legislation, initiates and defends court cases, launches global public campaigns, introduces innovative proposals and papers, hosts frequent education events, engages the press regularly, and publishes a comprehensive archive of digital civil liberties information at its website.[163]

Another important Internet organisation is TRUSTe, established in 1996 to build privacy online and support the Internet self-governance.[164] The core of TRUSTe initiative is the TRUSTe Privacy Seal, a visual symbol that could be displayed by Web sites that met the program's requirements for data gathering and dissemination practices, and agreed to participate in its dispute resolution process. From the legal perspective, the fundament of the TRUSTe program is a contract that is signed between TRUSTe and a website. This contract gives TRUSTe the ability to address users' privacy concerns regardless of their citizenship or the location of the TRUSTe licensee.[165] Websites displaying the TRUSTe logo must inform users what data is gathered and with whom it is going to be shared. Users must be given an option to disallow dissemination of their data; they must also be given the opportunity to correct any inaccuracies. Websites must provide reasonable security to protect users' data. TRUSTe's alternative dispute resolution system allows any of its users, regardless of their geographical localization, to submit complaints to the TRUSTe Watchdog. It might then take various measures ranging from policy change recommendation to informing relevant government bodies of improper business practices.

2.3.4 Summary

The Internet does not have a central governing body and it is highly unlikely that it will have a central government in the future. In consequence, there seems to be no way to impose effectively restrictions in a top-down manner on all participants. No jury-like collective decision making body has been established.[166] The Internet also does not belong to anyone[167], although certain parts of the network have owners. Electronic traffic that flows through these networks however, does not recognize any proprietary rights or legal jurisdictions.

There are many organisations that are actively interested in doing something about the governance on the Internet, but none of them can effectively control it. The majority of the organisations presented above are Internet standard organisations or commercial entities that

[160] See http://arbiter.wipo.int/domains, last visited: 06/03/2003.
[161] See e.g. WIPO (1996); WIPO (1996) and other important treaties dealing with patents, trademarks etc.
[162] See e.g. WIPO (May 2000).
[163] http://www.eff.org/abouteff.html, last visited: 06/03/2003.
[164] See TRUSTe.
[165] Ibid.
[166] "I've described a different ideal, it seems quite alien. I've promised that something different could be done, but not by any institution of government that I know. I've spoken as if there could be hope. But Hope was just a television commercial." Lessig, L. (1999) p.233.
[167] See e.g. Loshin, P., *et al.* (2001) pp.55-56.

develop technical specifications, or are organisations of a legal character interested in the development of a coherent regulatory framework for the Internet.

Some of the technical organisations described above such as the Internet Society, are sometimes treated like the Internet quasi-government but in fact they only support its functioning by financing, developing and documenting technical standards on which it is based. ICANN has an important role in administering domain name assignment and supporting a global network of domain name servers, but its role is too limited to consider it an Internet government. On the other hand, legal organisations like UNCITRAL only prepare international conventions and do not participate in the Internet development or governance at all. Similarly, virtual organisations such as TRUSTe promote privacy and self-governance by adherence to certain self-imposed standards and do not try to control it in top-down manner.

However, the above organisations have a great influence over how Internet participants behave and trade. Technical organisations and commercial companies promote technological standards that often become implemented in software used by Internet participants. In this sense, software shapes the Internet and electronic commerce practices. Also, non-technical organisations influence the behaviour of the Internet community by promoting or criticising certain standards of behaviour. The above organisations play an important role in developing practices that might become customary if adopted by the Internet community.

It is important to note, however, that some organisations like ICANN or TRUSTe provide Internet based alternative dispute resolution (ADR) mechanisms. Both ICANN and TRUSTe have reported hundreds of cases resolved so far based upon their own rules of procedure and evidence. As will be argued later, electronic adjudication mechanisms might signal the emergence of a supranational legal framework for the Internet and electronic commerce.

In summary, lack of global authority that could centrally administer the Internet is one of the reasons why it is generally perceived to be a free environment. The following section will present another crucial consequence of the architecture of this medium.

2.4 Lack of globally binding written Internet laws

The second important issue, which is to some extent a consequence of the lack of a centralised Internet government, is the lack of globally binding written laws. This gap is especially visible in international electronic commerce, where as will be shown below, Model laws and European directives do not provide globally binding norms. The consequence of this is submission of the Internet and electronic commerce to a number of national laws. These laws either have no provisions related to the Internet and electronic commerce or, even if they have, are often not harmonised. The international community has developed strategies to tackle this problem. They are centred on two opposing ideas: Internet self-regulation, and Internet regulation by means of harmonisation of national laws. The first section will present the two approaches, followed by a detailed examination of developments in international electronic commerce law.

2.4.1 Self-regulation versus harmonisation

In his famous "A Declaration of the Independence of Cyberspace"[168], Barlow, the founder of the Electronic Frontier Foundation expressed the self-regulatory character of the Internet:

[168] Barlow, J. P. (8 February 1996).

> "You have no moral right to rule us nor do you possess any methods of enforcement we have true reason to fear. (…)We will create **a** civilization of the Mind in Cyberspace. May it be more humane and fair than the world your governments have made before."[169]

In his emotional address, Barlow expressed the feelings of perhaps the majority of the Internet users, who were afraid that governments may take their Internet freedom away.

Although the idea of self-regulation[170] seems to be self-explanatory, this term has different meanings or at least different scopes of meaning to different authors.[171] Some authors limit its scope to self-regulation by means of a contract, which is supposed to set out all matters among parties in question.[172] Codes of conduct and by-laws of Internet organisations are often included in this category. Other authors extend the meaning of the term to include self-help. There are also authors who, under the heading of self-regulation, seem to include general law-making mechanisms like custom.[173] The problem with the latter approach is that contrary to contractual obligation cases, custom may create legal rights and obligations for all subjects and not only for parties to an agreement. Furthermore, these rules may emerge spontaneously and unconsciously, thus escaping the "rational" way of forming mutual obligations. In this respect, custom belongs to another category of potential sources of Internet and e-commerce law.[174]

However, a majority of authors seem to associate the idea of self-regulation with a conscious act of forming mutual relationships in a form of agreements. Hence self-regulation of the Internet by means of leaving everything for parties to set out in a contract is contrasted with a top-down approach of regulating the Internet behaviour by means of harmonised statutes. In this study, the term self-regulation will be understood as consisting of regulating rights and obligations in agreements including codes of conduct and organisation by-laws.

Self-regulation of electronic trade has certainly been facilitated by the emergence of Model Agreements promulgated by various organisations mentioned above. For instance, in pre-World Wide Web based commerce, parties often formulated their agreements based on the Model Interchange Agreement for the International Commercial use of Electronic Data Interchange[175] or the European Model EDI Agreement. Drafters of web contracts may draw on the UN/CEFACT Electronic Commerce Agreement[176] or the ICC Model clauses for use in contracts involving transborder data flows.[177] Self-regulation is also fuelled by numerous private initiatives on a national and global level aimed at the development of commonly accepted rules of conduct on the Internet, like the previously mentioned privacy initiatives TRUSTe and P3P.[178]

The advantage of self-regulation is that it allows for an unconstrained growth of electronic commerce, free from imposed acts that outdate quicker than Internet technology. Moreover, it also offers more legal security, as parties may specify in their agreements not only mutual rights

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[169] Ibid.
[170] See e.g. Barlow, J. P. (8 February 1996); Delacourt, J. T. (Winter 1997) p.208; Hardy, I. T. (Summer 1994) p.1054; Johnson, D. R. and Post, D. (May 1996) p.1390; Perritt, H. H., Jr. (1997). Contra see e.g. Netanel, N. W. (March 2000) See also Perritt, H. H., Jr. (2001).
[171] Hardy, I. T. (Summer 1994); Johnson, D. R. and Post, D. (May 1996); Post, D. G. (October 1996); Post, D. G. (2000).
[172] See e.g. Boss, A. H. (1992) p.304. Perritt, H. H., Jr. (1997) pp.433-437.
[173] Hardy, I. T. (Summer 1994).
[174] Polanski, P. P. (2002).
[175] UN/CEFACT reproduced in Bajaj, K. K. and Nag, D. (2000), Appendix 6.
[176] UN/CEFACT (May 2000).
[177] ICC (23 September 1998). See also ICC (July 2002).
[178] See e.g. Electronic Commerce Platform Netherlands (October 2001). For a very good exposition of these initiatives see ICC (July 2002) pp.49-83.

and obligations, but also, in case of a disagreement, which law will govern their dispute or which court or arbitration tribunal will hear their dispute.

However, the disadvantage of this approach is that it does not create binding rights and obligations to non-parties to such agreements and in effect, this approach does not contribute to the development of globally binding Internet and electronic commerce law. Lessig argues that self-regulation fails to respect deeply held local or national values usually embodied in a constitution.[179] Other disadvantages include: the impossibility of removal of legal and administrative requirements such as writing and signature requirements, difficulty with forming such agreements among parties not known to each other[180], almost certainty of non-inclusion of some important terms and conditions into the agreement, problems with potential validity of contract and enforceability of certain terms, and so on.

On the other hand, the idea of top-down regulation is a reflection of states' desire to regulate the Internet in a similar way in which ordinary life is regulated. This approach has obvious advantages as it brings greater certainty as to one's rights and obligations, removes important hurdles like status of electronic documents or signatures, and forces states to devote resources to the enforcement of its regulations, which in turn may boost consumers trust in the electronic commerce, etc.

There are also serious disadvantages of such approach. First, it can only work if similar laws are enacted in all Internet connected states, or at least in the most important states in terms of Internet usage. Without fulfilling this requirement, national regulation of the Net will not bring a significant change to the behaviour of the online users. Moreover, harmonised laws would have to be updated regularly and by all participating states, which is unrealistic given the speed of Internet evolution and the current practice of legislatures around the world.

In this respect, the adoption of a global Internet convention could potentially help to solve this problem. But such a convention would have to be prepared and accepted by every country interested in the use of the Internet, which seems unachievable in the near future. It would also have to be revised to reflect changes in technology, which is also a very difficult task. Furthermore, it could provide only a general framework, leaving detailed norms outside its scope, thus providing only a limited legal certainty.

There is also a trend that marries both approaches to create a hybrid regulation of the Internet through the combination of general public law frameworks within which private regulatory regimes can work out the details.[181] Some authors argued that self-regulation is insufficient and should be supplemented by a selective legislation[182] or by a more general public law framework.[183] This approach will probably win in time. However, none of these approaches stress the need to research customary practices of Internet users. This is a serious flaw of all these approaches, as neither detailed agreement nor a statute can provide as detailed norms as current common practices can.

2.4.2 Global Internet commerce law developments

The top-down regulation of the Internet can be classified into three categories: an individual state-based regulation of electronic commerce; state-based regulation of electronic commerce based

[179] Lessig, L. (1999).
[180] Boss, A. H. (1992) p.304.
[181] See e.g. Perritt, H. H., Jr. (2001).
[182] See e.g. Netanel, N. W. (March 2000).
[183] See e.g. Perritt, H. H., Jr. (2001).

upon Model laws in order to harmonise the laws; and international treaty regulation governing the Internet commerce.

The first category was clearly visible in the early stage of the development of the Internet, but was superseded by a more harmonised approach as soon as important Model laws were developed by the international community. The harmonisation of Internet law promises equal treatment of Internet participants based on similar principles established upon a commonly accepted framework. A similar goal lies behind the Internet commerce treaty that is currently underway. Both the harmonisation approach as well as the treaty approach are important developments in international electronic commerce law and will be examined below in more depth.

A. Model Law on Electronic Commerce

The first important development in international electronic commerce law was The Model Law on Electronic Commerce adopted by United Nations' General Assembly in December 1996.[184] The Model Law resolution written in Arabic, Chinese, English, French, Russian and Spanish is a global framework for electronic commerce, which aims at facilitation of electronic trade in countries with different legal, social and economic systems.[185]

The Model Law resolution is based on two principles: functional equivalence[186], which means that electronic documents are functionally equivalent to paper documents, and technology neutrality[187], which means that all the provisions of the model law are expressed in technology neutral language in order to remain applicable irrespective of technological progress.

The Model Law is divided into two parts. The first part consists of fifteen articles and contains provisions of general character related to legal recognition of data messages, writing, signature, original, retention and evidence of data messages as well as formation, validity, time and place of contract formation and acknowledgment of receipt. This part also includes provisions related to the sphere of application and interpretation of the Model Law and allows the Model Law to be varied by agreement. The second part is confined to two articles only, which are specific to a contract of carriage of goods and equate transport documents issued in electronic format with paper-based equivalents.

The Model Law is not a statute in the sense that it does not specify all the provisions to govern a specific matter but leaves room for states to specify exceptions to some articles. For instance, states may list exceptions to provisions on electronic writing[188], signature[189], original of message[190], formation and validity of contracts[191], recognition by parties of data messages[192], time and place of dispatch and receipt of data messages[193] and transport documents.[194] The Model Law allows states to limit its applicability to international data messages, although the Model Law

[184] UNCITRAL (1996).
[185] See preamble.
[186] UNCITRAL (1996) para. 15-18.
[187] Ibid. para. 6.
[188] Art.6(3).
[189] Art.7(3).
[190] Art.8(4).
[191] Art.11(2).
[192] Art.12(2).
[193] Art.15(5).
[194] Art.17(7).

itself does not contain such a limitation and applies to "any kind of information in the form of a data message used in the context of commercial activities."[195]

In summary, the importance of the Model Law is that it offers recognition of electronic writing and signatures and supports admission of computer evidence in court as well as recognises the validity and enforceability of contracts formed through electronic means. The issue of electronic signatures was further discussed by UNCITRAL and led to the adoption of Model Law on Electronic Signatures in 2001.[196]

The Model Law has been the most important trigger of regulation of electronic commerce that followed its release. The Model Law and its Guide to Enactment has gained a worldwide recognition as a good "start to defining an international set of uniform commercial principles for electronic commerce"[197] and its provisions have already been voluntarily implemented in a number of states throughout America[198], Australia[199], Europe[200], and Asia.[201]

However, the Model Law does not target a development of a global legal framework for electronic commerce. Instead, the Model Law provides the national legislators with a template, a non-binding blueprint that is aimed at helping them with the enactment of domestic Internet laws, thus hoping to achieve harmonisation of electronic commerce law. Moreover, the Model Law contains only very general norms and explicitly declares that it is not intended to cover all aspects of electronic commerce. It encourages states to enact detailed technical regulation[202] of such matters, thus promoting a top-down and state-origin regulation of electronic commerce instead of supporting Internet participants in the development of technical regulatory norms. Furthermore, the Model Law was drafted in the era of Electronic Data Interchange (EDI) and many of its provisions do not reflect the current practice of Internet based commerce. Although EDI is still important, the Internet commerce is primarily based on web transactions. As the hypothetical case study will show, the Model Law is in some respects outdated.

Although all countries enacting laws dealing with Internet commerce have been to a great extent influenced by the Model Law, there is a discrepancy between national Internet law legislations as well as implementations of the Model Law. As a result no full harmonisation has been achieved. This is a direct consequence of, among other things, the fact that the Model Law allows for various exceptions to its provisions, does not intend to cover all the matters related to electronic commerce and that some of its provisions have not achieved a global consensus.

B. European Union Directives

Other important international developments include two European Union directives: the Electronic Commerce Directive[203] and the Digital Signature Directive.[204]

The Electronic Commerce Directive (the Directive) is a comprehensive framework for electronic commerce that establishes a set of rules aiming at harmonisation of European Union members' laws. It includes provisions regarding establishment of service providers, commercial

[195] See Art.1 and comments to it.
[196] UNCITRAL (2001).
[197] See section 3 in White House (1 July 1997).
[198] See e.g. Hultmark, C. (1999); Poggi, C. T. (2000).
[199] See e.g. Backhouse, B. (2000); Forder, J. and Quirk, P. (2001).
[200] See e.g. Dickie, J. (1999) Ramberg, C. H. (2001).
[201] See e.g. Ahmad, F. (2001); Anil, S. (2001).
[202] UNCITRAL (1996) para. 13.
[203] Official Journal of the European Communities (2000).
[204] Official Journal of the European Communities (1999).

communication, and liability of intermediaries, electronic contracts, and out-of-court dispute settlement.[205] In regard to establishment and information requirements, the Electronic Commerce Directive promotes freedom of commencing electronic commerce activity without authorisation[206] and establishes the obligation of e-companies to provide electronic information about its name, geographic and email address, information about any registrars in which it may function or about supervisory authority if present[207], as well as clear indication of prices including delivery cost and tax information.

In relation to electronic commerce communication, the Directive sets informational requirements for online advertising and unsolicited emails, in the latter case establishing a formal requirement of provision of opt-out registrars[208] for participants who do not want to receive such emails. It attempts to encourage self-regulation of licensed professions through codes of conduct in order to determine the types of information that can be given for the purpose of commercial communication.[209]

In regard to liability of intermediaries, The Directive generally exempts them from liability. This is the case with information that passes through their computers (so called *mere conduit*)[210], "caching", which is a common practice of automatic and temporary storage of information requested by other users for the purpose of faster onward transmission[211] and "hosting", which is storage of information at the request of a user, e.g. hosting of a website.[212] Each of these activities is exempted from liability under certain conditions that must be fulfilled by an intermediary.[213] Consequently, The Directive exempts intermediaries from the general obligation to monitor the information they store or transfer and obligation to actively seek facts indicating illegal activity.[214] However, somewhat contradictorily, it allows member states to establish obligation of prompt informing of public authorities about alleged illegal activities of recipients of their service and their details.[215]

In regard to electronic contracts, the Electronic Commerce Directive employs The Model Law functional equivalent approach requiring fifteen EU Member States to implement legislation to remove current requirements, including the requirements of form, which are likely to curb the use of contracts by electronic means.[216] In this respect, The Directive establishes freedom of electronic contracting, specifically listed types of contracts that may be excluded from its scope.[217]

Furthermore, the Directive puts an additional burden on e-businesses to provide certain pre- and post-contractual information on a website but not necessarily in email communication[218] that is compulsory in Business-to-Consumer trade and may be waived by contrary agreement in

[205] See art. 1.2 of The Electronic Commerce Directive.
[206] See art. 4 above.
[207] See art. 5 above.
[208] See art. 6 and 7 above.
[209] See art. 8.2 above.
[210] See art. 14 above.
[211] See art.15 above and Glossary.
[212] See art.16 above and Glossary.
[213] See art. 14.1 (a-c), art 15.1.(a-e), art.16.1.(a-b).
[214] See art 17.1 above.
[215] See art. 17.2 above.
[216] See recital 34 and art.9.1 above. See also e.g. Murray, A. D. (2000) pp.27-28.
[217] EU countries may disallow electronic contracts that create or transfer rights in real estate, contracts requiring by law involvement of public authorities etc. See art. 9.2 and 9.3 above.
[218] The directive excludes email and equivalent individual communications from the burden of including the information specified above.

Business-to-Business commerce. Information that should be provided prior to the conclusion of the contract include the different technical steps that follow to conclude the contract[219] that is customarily provided by trading websites, whether the contract will be filed and accessible[220] for subsequent reference, the ways of identifying and correcting input errors[221], languages offered for the conclusion of the contract[222], codes of conduct to which e-business subscribes and how they can be consulted electronically[223] and links to downloadable general terms and conditions or other ways of enabling the recipient to store and reproduce them.[224] In addition, The Directive requires prior to the conclusion of the contract a provision of not only information enabling identification and correction of input errors but also technical ways of doing it.[225] More importantly, however, the Directive requires e-business to acknowledge the receipt of the recipient's order without undue delay and by electronic means[226], thus as will be argued later, codifying customary web-commerce practice. The Directive stipulates that such an acknowledgement is deemed to be received when the party to whom it is addressed can access it.[227] Unfortunately, the Directive does not provide any legal consequences for non-provision of such acknowledgement, delegating this task to national legislatures.[228]

The Directive also deals with various issues regarding its implementation.[229] In this respect, the Directive encourages drafting of codes of conduct on all levels of professional activity and their impact "upon practices, habits or customs relating to electronic commerce".[230] Moreover, the Directive encourages alternative dispute resolution systems, including electronic ones[231] and dissemination of knowledge about them, their decisions and practices and customs of electronic commerce.[232]

The importance of the Electronic Commerce Directive is that this is the first mandatory, transnational recognition of electronic commerce linking both Civil and Anglo-Saxon legal traditions. It recognises many already practiced e-commerce habits, promotes electronic alternative dispute resolution systems and seems to be aware of the significance of customary Internet practices. Moreover, the regulation not only affects European Union countries but is also likely to be adopted by ten candidate states to the European Union, thus promoting a uniform e-commerce law across all of Europe.

However, the Directive is also somewhat limited, regulating contractual electronic commerce in only three articles, therefore raising many controversies within the EU community itself.[233] Moreover, the Directive does not regulate issues of jurisdictional issues, taxation, cartel law and

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[219] See art.10.1.(a) above.
[220] See art.10.1.(b) above.
[221] See art.10.1.(c) above.
[222] See art.10.1.(d) above.
[223] See art.10.2 above.
[224] See art.10.3 above. Provision of general terms and conditions prior to the conclusion of the contract in such a way that they can be stored and reproduced later is also a requirement in email and equivalent individual communication. See art.10.4
[225] See art.11.2 above.
[226] See art.11.1 first indent, above.
[227] See art.11.1 second indent above.
[228] See art.20 above.
[229] See Chapter 3 of the Directive.
[230] See art. 16.1.(d).
[231] See art. 17.1.
[232] See art.17.3. Quite oddly, these are Member States that are supposed to encourage out-of-court dispute settlement systems to inform Commissions about their decisions and electronic commerce customs.
[233] See e.g. London Investment Banking Association (17 February 2000); Poggi, C. T. (2000). See also ICC (27 July 1999).

other areas excluded from its scope.[234] Furthermore, the Directive had not been implemented by even a majority of EU member states by January 17, 2002.[235] A recent protest by Spanish web operators clearly indicates a degree of disagreement in relation to the European regulation of electronic commerce.[236]

More importantly however, the Electronic Commerce Directive is restricted in its application to Europe. Therefore, it does not aim at or guarantee a uniform set of rules for global, intercontinental Internet based trade.[237] Similar remarks can be made in relation to the Digital Signature Directive that establishes the requirements for electronic signature certificates and certification services throughout the EU and includes mechanisms for co-operation with third countries based on mutual recognition of certificates, bilateral and multilateral agreements.

C. Future Convention on Electronic Contracting

One of the most important institutions in the development of an international electronic commerce law is UNCITRAL. It has already commenced preparation of a draft convention on electronic contracting[238] considered from the perspective of 1980 Vienna Convention on International Sale of Goods (CISG)[239] and heavily relying on the Model Law on Electronic Commerce developed earlier. The draft convention is focused on the formation of electronic contracts for the supply of goods and services by commercial parties,[240] although, as was noted earlier, the distinction between consumers and businesses has been blurred in electronic trade. The draft convention will probably exclude from its application intellectual property issues.

This important work prepared in conjunction with International Chamber of Commerce[241] is in its preliminary stage, so it is difficult to extensively comment on its content and its likely significance at the moment. However, it should be noted that the draft convention seems to rely too much on the Model Law on Electronic Commerce. UNCITRAL work was adopted seven years ago - a long time given the pace of technological revolution. As was mentioned above, it was primarily concerned with Electronic Data Interchange rather than with Web based trade. However, Article 5(a) of the preliminary draft convention incorporates Article 2 (a) of the Model Law and states:

> "Data message" means information generated, sent, received or stored by electronic, optical or similar means including, but not limited to, electronic data interchange (EDI), electronic mail, telegram, telex or telecopy;[242]

Although this definition does not limit the potential meaning of "data message", however, in the first place it mentions EDI and email, followed by even older technologies. The World Wide Web and other new Internet based technologies are not even mentioned. This approach should change, as the World Wide Web is the most important Internet commerce technology in use today.

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[234] See Chapter 1.
[235] See art.22 above, see also e.g. McGuire, D. and Krebs, B. (22/10/2002).
[236] See e.g. Avanova (29 October 2002).
[237] However Council of Europe has started work aiming at making certain directives available to non-EU members. See e.g. Council of Europe (2 October 2001).
[238] UNCITRAL Working Group IV (Electronic Commerce) (2002).
[239] UNCITRAL (1980).
[240] See art.3 and art.2 respectively in UNCITRAL Working Group IV (Electronic Commerce) (2002).
[241] UNCITRAL Working Group IV (Electronic Commerce) (2002).
[242] UNCITRAL Working Group IV (Electronic Commerce) (2002) p.25.

2.4.3 Summary

There are already some important developments in international electronic commerce law but so far no globally binding written norms have emerged. The Model Law is a non-binding template that has to be adopted unchanged by all or a majority of states to create a harmonised framework. Furthermore, it contains only very general provisions that will not be helpful in solving many Internet disputes. Furthermore, it has been drafted in the pre-web era, which does not make it a good candidate to regulate modern electronic commerce. On the other hand, the European Directive has a greater thematic scope but pertains only to European countries. This is a very severe limitation of this otherwise important development. Similarly to the Model Law, it is rather broad and contains provisions not reflecting the current state of electronic commerce. Finally, the convention on electronic contracting is being drafted, but so far it relies too heavily on the old developments disregarding practice of the Internet merchants. If it continues this way, it may never actually be adopted.

All these developments illustrate the movement towards harmonisation of Internet and electronic commerce laws, adversely affected by haphazard national regulation of the Internet. There is also a trend towards self-regulation, which opposes top-down regulation of the Internet law. This approach relies more on contracts and various normative documents issued by the Internet commerce participants rather than that of governments or governmental bodies. However, this approach also has many shortcomings. The most important one is that it does not target development of globally binding Internet laws. If an agreement will not cover all the issues at hand, parties to the dispute will remain uncertain of the outcome.

Finally, there are advocates of combining the self-regulatory scheme with an official public law arrangement. This approach will probably succeed as it combines certainty of the harmonisation movement with the self-regulation of more detailed matters in agreements. None of these approaches, however, provide globally binding norms that could be used to solve present Internet disputes: the regulatory approach, because there are no global written laws yet; and the self-regulation approach, because by definition, it is supposed to bind only parties to an agreement.

2.5 Attempt to solve hypothetical case studies

Having reviewed the current status of Internet regulation and international electronic commerce law, an attempt will be made to solve the hypothetical case studies introduced at the end of the first chapter. The idea is to apply the relevant provisions of these written laws to assess their usefulness in solving potential Internet commerce disputes.

2.5.1 Transaction confirmation case

In the transaction confirmation case a website designer did not include an order confirmation screen. As a result, one buyer was unsure whether a transaction took place or not and purchased the required items from another website. In this hypothetical case the issue boils down to the question: Is a web vendor obliged to immediately confirm an order? And if so: What are the consequences of not confirming the order? The above questions could be restated as: Is an order confirmation a necessary step in the successful formation of an electronic contract?

As will be shown in chapter 5, immediate transaction confirmation is a very widespread practice associated with electronic contract formation on the World Wide Web. Both the Model Law on Electronic Commerce and the European Union Directive on Electronic Commerce have included provisions dealing with some aspects of this practice.

A. Model Law

Article 14 of the Model Law[243] deals with acknowledgement of receipt of a data message. The Model Law regulates a matter in a dual manner dependant upon an existing agreement (or a request for acknowledgement) or a lack of agreement (or request for an acknowledgement). However, an acknowledgement seems to be given a much wider meaning than order confirmation. Even the TCP/IP protocol[244] provides for acknowledgement of receipt of a data message.[245] In short, acknowledgement of receipt relates to confirmation of receiving of any data message.

Since in our case there was no prior agreement, or request for acknowledgement, not all provisions of the Model Law related to transaction acknowledgement would find application.[246] In fact, the Model law creates only two presumptions. The first presumption is that a receipt of acknowledgement by an originator indicates a previous receipt of a message by an addressee. The second presumption is that:

> "(...) where the received acknowledgement states that the related data message met technical requirements, either agreed upon or set forth in applicable standards, it is presumed that those requirements have been met."

The second presumption will only find application if a data message states that it meets standard or agreed upon technical requirements. However, the Model Law affirms that it does not deal with legal consequences of acknowledgement of receipt of data message.[247] In short, the Model Law creates two non-significant presumptions of a prior receipt of message being acknowledged and of conformance of acknowledgement with technical standards.

In our case, it could mean that an order confirmation would create a presumption that the order acceptance has been received and that order acknowledgement has met some technical standards.

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[243] Article 14. Acknowledgement of receipt
(1) Paragraphs (2) to (4) of this article apply where, on or before sending a data message, or by means of that data message, the originator has requested or has agreed with the addressee that receipt of the data message be acknowledged.
(2) Where the originator has not agreed with the addressee that the acknowledgement be given in a particular form or by a particular method, an acknowledgement may be given by
(a) any communication by the addressee, automated or otherwise, or
(b) any conduct of the addressee,
sufficient to indicate to the originator that the data message has been received.
(3) Where the originator has stated that the data message is conditional on receipt of the acknowledgement, the data message is treated as though it has never been sent, until the acknowledgement is received.
(4) Where the originator has not stated that the data message is conditional on receipt of the acknowledgement, and the acknowledgement has not been received by the originator within the time specified or agreed or, if no time has been specified or agreed, within a reasonable time, the originator:
(a) may give notice to the addressee stating that no acknowledgement has been received and specifying a reasonable time by which the acknowledgement must be received; and
(b) if the acknowledgement is not received within the time specified in subparagraph (a), may, upon notice to the addressee, treat the data message as though it had never been sent, or exercise any other rights it may have.
(5) Where the originator receives the addressee's acknowledgement of receipt, it is presumed that the related data message was received by the addressee. That presumption does not imply that the data message corresponds to the message received.
(6) Where the received acknowledgement states that the related data message met technical requirements, either agreed upon or set forth in applicable standards, it is presumed that those requirements have been met.
(7) Except in so far as it relates to the sending or receipt of the data message, this article is not intended to deal with the legal consequences that may flow either from that data message or from the acknowledgement of its receipt.
[244] See Glossary.
[245] See e.g. Osterloh, H. (2002).
[246] See Art.14 (1) in connection with Art.14(5-7).
[247] See Art.14 (7).

This does not seem to explain much. The Model Law avoids stating whether such practice is obligatory and whether it is necessary to successfully form a contract. Hence it does not help us to solve the hypothetical problem. The Model Law provides more extensive regulation of order confirmation only if both a seller and a buyer had previously agreed that such confirmation would be necessary. In short, the purpose and content of The Model Law provisions relating to acknowledgement of receipt of order acceptance, is unclear and provides no guidance in solving the hypothetical case problem.

It is important to note that provisions of article 14 were drafted at the time when Electronic Data Interchange was a primary means of conducting electronic trade, as it was customary in such trade to conclude EDI agreements that would specify such requirements.[248] However, in the World Wide Web environment which enables one-off transactions between unknown parties, as opposed to closed and predefined EDI communication among trading partners, such contracts are not feasible solutions and are rarely encountered in practice. Parties to a typical web transaction usually do not pre-negotiate contracts. They simply utilise technological means provided by a vendor in the form of a shopping cart, auction mechanism or similar techniques that lead to the conclusion of the contract. As a result the Model Law solution does not reflect the current practice of trading on the Internet and does not provide the answer to problems posed in the hypothetical case study.

B. Electronic Commerce Directive

The European Union Directive on Electronic Commerce contains a specific provision related to order confirmation. Article 11 of the Directive states that:

> "(…) the service provider has to acknowledge the receipt of recipient's order without undue delay and by electronic means".

This requirement does not apply to business-to-business transactions in case of contrary agreement and excludes formation of contract by exchange of emails or "equivalent individual communication."[249] It is of course limited to the E.U. based electronic commerce participants.

Assuming that the hypothetical professional buyer and supplier were located in the European Union and they did not sign any agreement excluding application of the Directive, the solution to the case looks deceptively easy. The seller would have to confirm an order without undue delay. But what does "undue delay" mean? Can it be equated with an immediate confirmation? It seems that this is not the case. Undue means longer than immediately. In our case, however, the buyer who has not immediately received order confirmation simply purchased items from another website. It seems that according to the Directive he would have to wait for a reasonable period of time, probably even up to 14 days to receive the order confirmation. But such a requirement would be against Internet commercial practice, where transactions are confirmed immediately. Moreover, the Directive does not apply to situation where both buyer and supplier do not reside in the European Union so it does not guarantee uniform rules for global electronic commerce.

In summary, both the Model Law and the Directive deal with the issue of message acknowledgement so they both confirm the importance of such practice. The Model Law however, does not specify whether such practice is compulsory although the European Union Directive does. However, the Directive does not require immediate order confirmation, is mandatory only in relations to consumers as businesses can exclude its application and is limited to members of European Union. In short, both instruments although important in the context of

[248] EDI agreements usually consisted of two parts: general conditions and technical annex. See e.g. Bajaj, K. K. and Nag, D. (2000) pp.416-423.
[249] See art.11.3 above.

the electronic commerce, do not provide rules that adequately reflect current electronic commerce practice and that could be used in truly transnational context required by the Internet to solve the order confirmation problem.

2.5.2 Strong encryption case

In this case the problem was associated with lack of provisions in the agreement detailing specific security requirements of the Internet transactions. Because the vendor provided a weakly encrypted channel, important financial information was deciphered, which resulted in financial loss. In this case the question is: does the financial information provider have to encrypt transactions using strong encryption technology?

This hypothetical case is somewhat simplistic in its assumptions about the security of transactions as there may be many more reasons for breach of security and resulting theft, alteration or deletion of information. Chapter 5 will demonstrate that provision of strong encryption by the financial sector is now a very widespread practice. Most web servers provide 128-bit long keys that enable very secure transmission of data across a wire using the de facto standard Secure Sockets Layer (SSL) protocol.[250]

However, this practice has not found recognition in law. Both the Model Law and the Directive are silent on the question of secure transmission of data on the Internet. As a result, one cannot solve this hypothetical case study based on current developments in electronic commerce law.

2.5.3 Summary of hypothetical case studies

Neither of the current developments in international electronic commerce law can provide an adjudicator with legal norms that would enable him or her to settle a dispute in a global Internet context. In the order confirmation case, although both the Model Law and the Directive to some extent recognize the practice of acknowledging receipt of data, only one considers it to be a compulsory practice; albeit with severe limitations. More importantly, however, none of these instruments reflects the actual Internet commerce practice of immediate web-order confirmation and hence cannot serve as a practical solution to the dispute. In the transaction security case the situation is even worse, as there are no transnational provisions relating to the standard of security of web based systems at all. Taking into account the lack of specific provisions in parties' agreements, the arbitrator would find himself in a difficult position in attempting to solve these problems. The following chapters will propose the concept of electronic commerce custom as a potential solution to the problems outlined above.

2.6 Summary

The Internet has affected all fields of legal science. Problems created by the global network are difficult to solve because current systems of laws are territorial in nature and are based upon easily identifiable individuals and legal entities – tenets that do not apply to the Internet. Territorial regulation means that different laws might apply to the same situation, which greatly contributes to legal uncertainty.

The Internet does not have any global government. There are organisations that play important roles in its functioning and ensure further growth but they cannot impose rules upon people using

[250] See e.g. Freier, A. O., *et al.* (1996) and discussion in Chapter 5, 6 and Glossary.

it. These organisations cannot promulgate globally binding Internet laws although they can influence the practice of the Internet participants.

There are no written internationally binding rules that could be used to solve disputes on the Internet. Existing international electronic commerce instruments cannot be considered to constitute transnational electronic commerce law. UNCITRAL Model laws are not binding, of very general nature and largely outdated. European Union directives in turn, have only local scope, general character and also do not reflect the global practice of online trade.

In addition, policymakers and legal advisors tend to ignore the transnational nature of the Internet. Textbook writers present the Internet from a national law perspective, which creates an impression that there is some kind of Internet law. But in fact, it is only a national interpretation of parties' rights and obligations should a dispute arise in a given jurisdiction. Such an approach confuses the picture of Internet law.

In response to nationalisation of electronic commerce laws the process of harmonisation of national laws has commenced, based upon principles agreed upon in the model laws. On the other hand, the proponents of self-regulation continue to fight the idea of regulating the Internet. Both of these approaches, however, result in very general and vague norm sets that do not have general application and often would not be able to answer many detailed problems encountered on the Internet.

As shown in the hypothetical case studies, the current transnational electronic commerce law does not contain specific norms that could solve non-trivial legal problems. There are either no norms to regulate a given matter, or if there are any, they are incomplete and outdated. To solve these case studies and numerous other problems outlined in the beginning of this chapter, the new approach is necessary. The next part of the study will discuss a potential remedy to this problem.

PART II

CUSTOM

Chapter 3. The role of custom

3.1 Introduction

Custom is probably the oldest form of law-making and is a fundament of every legal system.[251] Customary practices guided the behaviour of humans before we learnt how to speak. In this sense, the law existed without words and without a lawgiver, who as Sacco pointed out is only "a recent innovation".[252] It is through the long-lasting process of recognition of certain human behaviours as desirable or mandatory and the observance of those practices by other members of the society that human communities have managed to develop complex legal systems, now totalling more than 10,000 distinct legal orders.[253]

Customary laws were also the fundament of early international trade[254], long before the emergence of great religious systems such as Buddhism, Confucianism, Christianity or Islam. Later domination of Arabs in East-West and West-East trade provide further evidence for the role of mercantile customary practices[255] that were incorporated by Roman law and a millennium later received again by European traders.[256] Custom is still important in modern international commerce and international law, although its role in national legal systems has been considerably diminished.

Customary law, however, can have an even more important role in supplying norms to ascertain legal rights and obligations of Internet commerce participants. Lack of globally binding written laws does not mean that the Internet community has not developed binding rules through widespread, repetitive behaviour. In fact, any community creates binding behavioural norms based on adherence to widespread practices. Norms emanating from these practices could form the foundation of global Internet and electronic commerce law. But the mechanism which generates them and the content of these norms needs first to be established.

The aim of this chapter is to discuss various approaches to custom in different epochs and cultures. This part of the thesis will build a bridge between ancient times and the modern technological age; it will construct a link between primitive societies, Eastern and Western civilisations and international commerce for the purpose of creating a common ground for the understanding of the role of customary practices in human social life in general and legal culture in particular. As will be shown, customary practices govern human's life irrespective of technological advancement or complexity of a society. This multidisciplinary undertaking is to provide a useful background for both legal and technical audiences in understanding custom as a law-making medium. This is important as contemporary Western societies are largely unaware of the significance of repetitive behaviour of humans in the creation of law.

The following sections will explain the historical and present role of custom in various domestic legal cultures and international legal regimes. The distinction between East and West is difficult to make and will be used only to organise better the material. The term "Western legal culture" will refer to the families of laws, European in origin, that embrace continental legal tradition

[251] Maine claims that custom is posterior to that of judgment. See Maine, H. S. (1861 reprinted in 1970) p.5.
[252] Sacco, R. (Summer 1995) p.455.
[253] Rouland, N. (1994) p.1.
[254] see e.g. Garavaglia, M. (1991) p.33. citing J. Reddie.
[255] Bewes, W. A. (1923) p.77.
[256] Ibid. pp.8-9.

based upon Roman law, and Anglo-Saxon tradition based upon English common law. In terms of geographical coverage European law rooted systems cover not only the whole of Europe including Scandinavia and Russia but also Australia, both Americas and some African and Asian countries. The term "non-Western legal cultures" will refer to legal cultures developed independently from the European legal culture; even if there have been recent influences from it. It will cover religious systems of Islam and Hinduism as well as Chinese and Japanese legal cultures. In this section the role of custom in indigenous societies located in various parts of the world will also be analysed. The next part will outline the role of custom in modern international legal regimes, focusing on the role of custom in the modern transnational commercial law, particularly the New Law Merchant. This part will discuss why international commercial law and commercial custom is not the best candidate for the discussion of the characteristic of Internet custom. The chapter will end with the discussion of the potential of the notion of custom in the Internet environment. In particular, the role of custom as a source of Internet law, and custom as a source of knowledge about the Internet will be outlined.

3.2 Historical importance of custom in Western culture

3.2.1 Custom in the Roman Empire

Roman law developed in the philosophical climate of ancient Greece, is the foundation of the continental legal thought that exerted a lesser or greater influence on most of the modern legal traditions including the much younger Anglo-Saxon legal tradition. The original law of Rome is generally recognised to be customary.[257] Famous Law of the Twelve Tables from 6th century B.C. – the foundation of ancient Roman law, were a transcription of ancient customs.[258] According to Rouland, for the next half of the millennium private relations were governed mainly with a reference to the ancestral custom.[259]

However, the Roman law was primarily based upon legislation[260]- custom played an important practical role but did not play a dominant role. Custom was not even always universally recognised as a source of the Roman law. For instance, it was recognised by Cicero[261] but Gaius had not listed it in his famous textbook.[262] Nevertheless, it was officially and unequivocally recognised in the most famous codification of ancient Roman law by the emperor Justinian in the 6th century A.D. known as Corpus Iuris Civilis – which became the foundation of the European continental civil law.[263] Justinian confirmed that Roman law is written or unwritten and that the latter one:

> "(…) is that which usage has confirmed, for customs long observed and sanctioned by the consent of those who employ them, resemble law."[264]

The authority of custom over legislation is well illustrated in the opinion of Paulus:

> "And indeed, a law of this kind has greater authority, for the reason that it has been approved to such an extent that it is not necessary to commit it now writing."[265]

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[257] Allen, C. K. (1964) p.81. See also Smith, M. (June 1903) p.256, who argued that Romans treated custom and legislation as "equal in potency".
[258] Rouland, N. (1994) p.39.
[259] Only 26 out of 800 statutory laws enacted in this period dealt with private law. See Ibid.
[260] Allen, C. K. (1964) p.81.
[261] Robinson, O. F. (1997) pp.28-29.
[262] Ibid.
[263] See e.g. Jolowicz, H. F. (1957) p.21.
[264] See Enactments of Justinian section 3 and 9 in the second volume of Scott, S. P. (1973) pp.6-7.

In general, Romans did recognise custom as an important source of law but had not constructed an explicit theory of custom.[266] Despite the lack of theory, some crucial features of custom were highlighted. As the most famous Roman lawyer Julianus explained it, custom can change or abolish legislation:

> "For as the laws themselves restrain us for no other reason than because they are accepted by the judgment of the people - for it is but proper that what the people have approved without being written should bind all persons - for what difference does it make whether the people have manifested their will by vote, or by acts and deeds? Wherefore the rule has also been most justly adopted that laws shall be abrogated not only the vote of the legislator, but also through disuse by the silent consent of all."[267]

Julianus also argued that a customary practice consisting of acts and deeds and approved by people, should bind all persons. These are the crucial aspects of custom, which are, as will be shown later, generally accepted in modern international law. On the other hand, Hermogenianus required a long practice, resembling a tacit agreement of citizens:

> "Those rules which have been approved by long established custom and have been observed for many years, by, as it were, a tacit agreement of citizens, are no less to be obeyed than laws which have been committed to writing."[268]

Allen argued that the reference to consensus should be understood as a requirement of uniform or unanimous practice.[269] As will be shown in the next chapter, the notion of a tacit agreement and the requirement of a long-lasting, uniform practice also have a significant impact on the modern theories of custom.

Although the practical role of custom in transactions between Roman citizens should not be overemphasised, it played a decisive role in the development of a distinct system of rules used to resolve mercantile disputes between Roman citizens and foreign individuals or between foreigners themselves. The so called *ius gentium* was defined by Gaius as "the law which all nations employ" and it can be considered as a Roman international law.

> "All peoples who are ruled by laws and customs partly make use of their own laws and partly have recourse to those which are common to all men".[270]

Ius gentium was especially important as a body of commercial customs in the ancient trade as it recognised many not known to the Roman law but commercially highly important transactions e.g. informal contracts of sale, agency, bailment or a jointly owned company.[271] Roman *ius gentium* is the evidence of the spread and importance of commercial customs developed earlier by other trading nations like Phoenicians or Arabs. For instance, Romans were under the influence of the great customary Sea Law of Rhodes that for hundreds of years was used in the Mediterranean shipment of goods.[272] Being based upon commercial customary practices of foreign nations it turned out to be much more flexible than the law of Roman citizens and it has greatly influenced further development of that law.[273] *Ius gentium* is a precursor of medieval customary Law Merchant (*lex mercatoria*), modern transnational commercial law and international public law and arguably transnational customary law of the Internet.

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[265] Paulus, On Sabinus, Book VII in Ibid. p.224 para 36.
[266] Allen, C. K. (1964) p.82.
[267] Julianus, Digest, Book XCIV in Scott, S. P. (1973) p.225 para 32.
[268] Hermogenianus, Eptiomes of Law, Book I in Ibid. p.224 para 35. Similarly, see Ulpian: "Mores sunt tacitus consensus populi, longa consuetudine inveteratus".
[269] Allen, C. K. (1964) p.82.
[270] See section 1 of the First Commentary of Gaius in Scott, S. P. (1973) p.81.; also Robinson, O. F. (1997) pp.25-26.
[271] See e.g. Goldman, B. (1983) p.1; Kelly, J. M. (1992) pp.62-63.
[272] Bewes, W. A. (1923) p.9.
[273] See e.g. De Ly, F. (1992) pp.8-15.

3.2.2 Custom in the European legal tradition

The evolution of the post-Roman European law can be characterised as a fifteen centuries long struggle for the primacy between customary law on one hand and statutory law as well as case law on the other. The diagram below illustrates well the juxtaposition of custom in relation to statute in Europe in the last millennium:

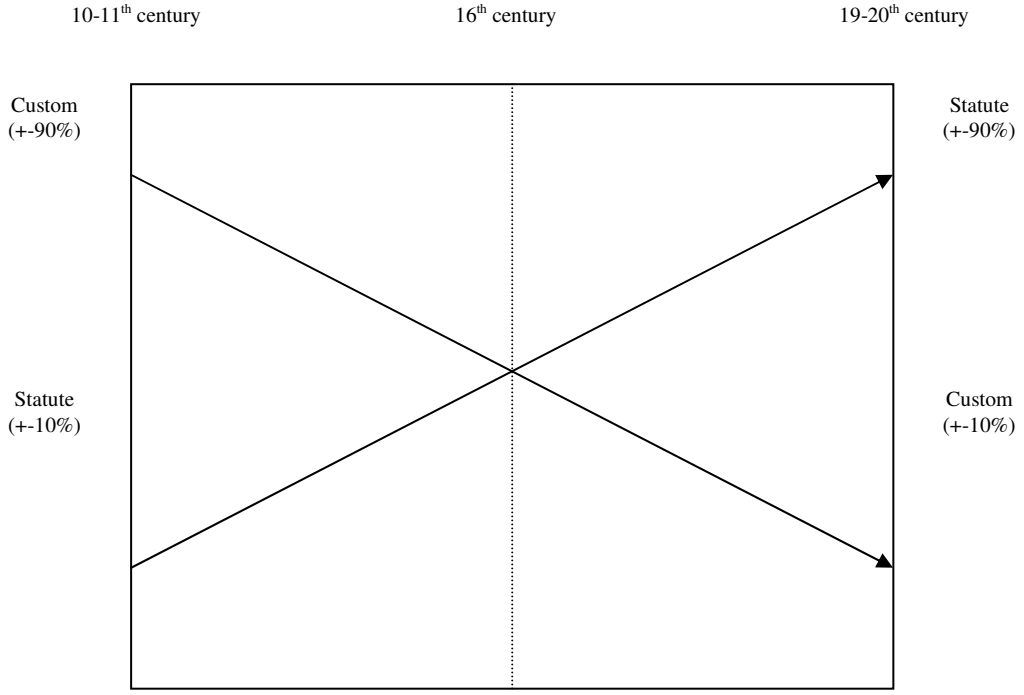

Figure 2. *Custom v. Statute. Translated from: Gilissen, J. (1982) La coutume,. p.14*

After the fall of the western part of the Roman Empire its legal culture remained forgotten for a half of the millennium. During the early Middle Ages Germanic successors of Roman Empire as well as Celtic and Slavic tribes were governed almost exclusively according to their own usually unwritten customs,[274] which also bound the kings.[275] As the Carlyles explained it,

> "The law was primarily custom, legislative acts were not expressions of will, but records or promulgations of that which was recognised as already binding upon men."[276]

Saint Nicephore in 9th century equated written law with codified custom.[277] Therefore, legislation, although existing in these times was primarily confined to what has been established by custom. Even in the newly created kingdom of Crusaders in Jerusalem in the 11th century, the laws were established by collecting customs of the various nations represented in their ranks, which vividly illustrates the primacy of custom over legislation in the early Middle Ages.[278]

The medieval Europe had a large number of customary legal systems, of various scope and origin that cannot be equated with modern national laws as the concept of state emerged only in the 17th century. Various groups of medieval society like nobles, churchmen, bourgeoisie or merchants

[274] Gilissen, J. (1982) p.42.
[275] Kelly, J. M. (1992) p.101.
[276] Carlyle, R. W. and Carlyle, A. J. (1903, 1936) p.40 vol.3.
[277] «Quid alium enim est lex nisi scripta consuetudo? Sicuti vicissim consuetudo est lex non scripta. » cited in Gilissen, J. (1982) p.16. and the literature there.
[278] See Kelly, J. M. (1992) p.102.

developed their own systems of law independent of local laws. Custom was very influential in the law of the then very powerful Catholic Church later codified in the Canon law, which required it to be reasonable, practiced for 40 or 100 years and confirmed by the superior.[279] The nobles had their feudal law also based upon customs and the bourgeoisie had their own city law. Medieval merchants developed their own Law Merchant used to settle commercial disputes in fairs and marketplaces. Different customary laws applied to the peasants and artisans.[280] Smith pointed out that these class customs together with ecclesiastical law had a European character as opposed to numerous customary laws of territorial scope:[281]

> "Decisions made in Lombardy were cited in all feudal courts of Europe; judgments rendered at Pisa, at Barcelona and at Oléron enjoyed an equally wide authority in questions of commercial and maritime law."[282]

From the perspective of territoriality, late medieval Europe was divided between regions of customary law and written law with today's northern France[283], Switzerland, Belgium, Netherlands and Scandinavia being the regions of special influence of customary law. Gillisen points out that Germany[284], Italy, Spain and England were also governed by customary law but the interest of jurisprudence was lesser there.[285]

In England, the mother of Anglo-Saxon family of laws only peripherally influenced by the Roman law[286], custom played a dominant role especially in the early stage of the development of the common law.[287] As a matter of fact, the term common law derives from the fact, that customary law of England was unified and made common to all the people.[288] Blackstone writing in the 18th century clearly underlines the importance of custom as the foundation of the Anglo-Saxon legal system[289], and requires it to be good, by which he understands that it is immemorial, continued, peaceable, not unreasonable, certain, compulsory and consistent.[290] With the emergence of centralised judge made law in the 12-13th century and equity in 15-16th century[291], English jurisprudence focused on these sources of law leaving custom as a source of unwritten feudal, manorial, constitutional and mercantile law.[292] Mercantile disputes were settled according to the transnational Law Merchant administered by the special courts set up in important places of trade, directly applying customs of traders, rather than the common law because of the inflexibility of the latter.[293]

Many transcriptions or codifications of local customs took place in the medieval and later epochs.[294] Recording of customs created greater legal certainty but at the same time were fixing custom and in consequence were the primary reason for its loss of importance over time. An

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[279] See Section 3, codes 25-30 in Bouscaren, L. T. and Ellis, A. C. (1957) pp.37-42.
[280] Smith, M. (June 1903) p.258.
[281] Ibid. pp.258-260. Roman law was added to it as a result of its rediscovery, but it had only a subsidiary force.
[282] Ibid. p.258.
[283] See e.g. Cohen, E. (1993).
[284] Up until the reception of the Roman law. See e.g. Huebner, R. (1918) pp.5-7.; see also Puchta, G. F. (1928); von Savigny, F. K. (1840-49); von Savigny, F. K. (1840).
[285] Gilissen, J. (1982) pp.17-18.
[286] Scotland was exceptional in this regard. See e.g. Zweigert, K. and Kötz, H. (1998) pp.202-204.. On the influence of the Roman law on English custom see e.g. Blackstone, W. (1783 reprinted 1978) p.78 vol.1.
[287] See e.g. Kelly, J. M. (1992) p.139. citing Bracton.
[288] Blackstone, W. (1783 reprinted 1978) pp.66-67 vol.1.
[289] Ibid. p.63 vol.1.
[290] Ibid. pp.76-78 vol.1.
[291] See e.g. Zweigert, K. and Kötz, H. (1998) pp.187-191.
[292] See Gilissen above. But see e.g. Kelly, J. M. (1992) p.185.
[293] See e.g. Mitchell, W. (1904) p.40; Zweigert, K. and Kötz, H. (1998) p.194.
[294] See e.g. Mitchell, W. (1904) p.29.

abundant amount of transcriptions of customary laws took place in France and Netherlands.[295] Of the importance is the work of Beaumanoir and German Mirror of Saxons (Sachsenspiegel).[296] Grand Coutumier de la Normandie or Customs of Normandy transcribed in 13th century are still legally binding in English Channel Islands.[297] 16th century Customs of Paris reigned for centuries in Northern France extending its influence to other parts of the world.[298] Before the epoch of Enlightenment, hundreds of official and private transcriptions of customs was done leading to the emergence of a very complex amalgamate of local customary laws.

A peculiar feature of European medieval customary law was that local customs superseded general laws and customs.[299] As in the Roman Empire, custom was perceived as a source of law that by "disuse by the silent consent of all"[300] could abolish other custom and a written law (*desuetude*). Sometimes legislators in the Middle Ages confirmed the validity of previously enacted written laws by adding a clause "as far as these are still in use."[301] Gratian could then affirm that legislation is valid only insofar as it is approved by custom:

> "(…) laws are instituted when they are promulgated; confirmed when they are approved by the custom of those who observe them."[302]

The following passage from the most famous 13th century philosopher St. Thomas Aquinas well summarises the importance of customary law in medieval Europe:

> "All law originates from the reason and will of a lawmaker, but men can make known their will by deeds as well as by words, for whatever they do they presumably think good to do. So if expressing what we want and mean in words can alter and expound laws, then laws can also be altered and expounded by repeated behaviour setting up customs which acquire the force of law: for what we do over and over again is surely done deliberately. Custom then has the force of law, can abolish law, and is law's interpreter."[303]

However, the rediscovery of Roman law in 11th century and its reception in university teaching marked the beginning of a very slow and gradual loss of significance of custom as a source of law.[304] In the 16th century two radically opposing views on the role of custom versus statute emerged best represented by Jacques Cujas and Jean Bodin. According to Cujas:

> "A custom is based on a better reason, together with the common interest, and the passage of a long time in silent and unwritten agreement among the community, together with the authority of judicial decisions, has the effect of abrogating a statute the reason of which has disappeared, or is less substantial, or is of less benefit to the state (…) The disuse of the statute leaves the custom alone in force, and it acquires thus the same force as a statute (…) And no statute binds us, unless it has received the acceptance of custom.[305]

Bodin as the most famous supporter of king's absolutism has given much greater force to the statute, pointing out that custom cannot establish neither punishments nor rewards and exist only because of the ruler's willingness to tolerate it.[306] The history was going to favour his doctrine.

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[295] See e.g. van Caenegem, R. C. (1992) pp.35-45.
[296] See e.g. David, R. and Brierley, J. E. (1985) p.53.
[297] Zweigert, K. and Kötz, H. (1998) p.76.. At the time when England was conquered by Normans, the Channel Islands belonged to Duchy of Normandy, the fact which leads islanders to joke that England is their oldest colony. See Zweigert, K. and Kötz, H. (1998) pp.201-202.
[298] Especially Quebec, see Zweigert, K. and Kötz, H. (1998) p.117.
[299] Smith, M. (June 1903) pp.257-258.
[300] See Julianus, Digest, Book XCIV in Scott, S. P. (1973) p.225 para 32. cited above
[301] Smith, M. (June 1903) p.258. citing Leyes de Toro (1505) I.
[302] Decretum Gratianum, dist. 4, c. 3 cited in Ibid.
[303] St. Thomas Aquinas (1989) p.293 (Ia 2ae 97.3.).
[304] See e.g. David, R. and Brierley, J. E. (1985) pp.53-54.
[305] Paratitla C. 8. 52 cited in Kelly, J. M. (1992) pp.185-186.
[306] Ibid. p.186.

As Smith pointed out, the hostility towards custom was a result of its association with a particularism and a preservation of class privileges that modern societies wanted to abandon.[307] In effect, custom was subjected to legislation and gradually started to lose its importance as an independent source of law. It could no longer abolish written law and existed, as Hobbes' political doctrine maintained, insofar as the absolute monarch tolerated it.[308]

Similarly in the Anglo-Saxon legal tradition, although generally not codified, custom lost its dominant role. It had been overtaken by the doctrine of precedent and the statute.[309] In Pilans v. van Mierop[310], customary Law Merchant was nationalised as the common law of the land:

> "The law of merchants and the law of the land, is the same: a witness cannot be admitted, to prove the law of merchants. We must consider it as a point of law."[311]

The policy of resentment towards custom has been spread among countries that adopted common law doctrine.[312] In modern common law, the courts have a power to invalidate custom if it is unreasonable[313], and this contention has led some authors to declare the necessity of recognition of custom by courts in order for it to be binding.[314]

But it was not until the Enlightenment's faith in rationality and the period of great codifications of law in the 19th century that have left the custom a marginal role to play. New civil codes, following the ground-braking Code Napoleon, introduced innovative legal rules that often abrogated many older customs. In modern civil law countries, the role of custom is usually delineated by specific provisions of the civil codes, effectively minimising its law-making power.[315] This attitude to custom had been exported to other parts of the world with the process of colonisation and a systematic replacement of local laws with the European developments. However, it is worth remembering that the Code Napoleon was, with the exception of the law of contract and the law of property, primarily based on the customs of Northern France.[316]

In summary, the role of custom in civil law and Anglo-Saxon legal tradition has been marginalised but not entirely eliminated.[317] For instance, contemporary England still does not have a written constitution, and much of the constitutional law is customary in origin.[318] In relation to a contract, the remnants of custom's authority are visible in the Anglo-American doctrine of contractual terms implied by usage. Similar role of custom is delineated in modern civil codes stating that parties are bound by what they have expressly agreed in a contract and what follows from custom.[319] Custom is also helpful in interpreting agreements and measuring parties' performance of the contract. In general, however, custom can be said to have lost its place as an autonomous source of law in modern European legal systems.[320]

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[307] Smith, M. (June 1903) p.264.
[308] Chapter 26 of Hobbes, T. (1996) cited in Smith, M. (June 1903) pp.258-260.
[309] See e.g. de Cruz, P. (1999) pp.103-104.
[310] *Pilans v. van Mierop* 3 Burrr. 1663, 97 Eng. Rep. 1035 (K.B. 1765).
[311] Id. at 1670, 97 Eng. Rep. at 1038.
[312] See e.g.Karsten, P. (2002); Zweigert, K. and Kötz, H. (1998) pp.218-237.
[313] See e.g. *Johnson v. Clark* (1908) I Ch. 303; *Tanistry Case* (1608) Dav. 29 See also discussion in Allen, C. K. (1964) pp.144-146.
[314] See e.g. Excursus A in Allen, C. K. (1964) pp.152-156.
[315] See e.g. David, R. and Brierley, J. E. (1985) pp.130-131.
[316] See e.g. Weber, M. (1967) p.286, citing Ehrlich.
[317] See e.g. David, R. and Brierley, J. E. (1985) pp.130-132.
[318] See e.g. Smith, M. (June 1903) pp.263-264.
[319] See e.g. a brief survey of European civil codes and common law approach in De Ly, F. (1992) pp.134-164.
[320] David, R. and Brierley, J. E. (1985) p.132.

3.2.3 Medieval Law Merchant

Law Merchant deserves special attention because medieval traders had developed an almost universally recognised set of customary norms governing their transactions, which could be an antecedent for global Internet commerce customary law. Medieval merchants had to travel to different trade fairs and cities, each governed by different local laws. The opening of trade with the markets of the East and the rise of autonomous cities in Italy created a favourable ground for the development of a customary mercantile law that soon spread to France, Spain, England and the rest of Europe.[321] Law merchant also referred to as *lex mercatoria*[322] was a set of transnational commercial customs, to a large extent uniform and developed by the mercantile community to avoid application of various local legal systems. The self-regulatory system was administered and enforced by experienced traders themselves at market fairs, harbours and guilds located in various cities across the Mediterranean basin and northern Europe. However, it is important to note that the so called Law Merchant was not European in origin.[323] These customs were probably largely received from the East as the trade conducted mainly by Arabs[324] continuously flourished between East and West. It only became known to the late medieval European traders.

Mitchell characterised *lex mercatoria* as customary law of international character with minor local varieties[325], having equitable and speedy procedure[326] and administered by merchants themselves rather than by professional judges.[327] Among norms originated from mercantile custom that were not known to the formal Roman law[328] were that informal agreements could be legally binding[329], that mere possession of a bearer bill of exchange established a right to payment, that the good faith purchaser even of stolen goods is protected against the original owner when the goods were bought in open market, that the seller has the right to stop goods in transit on default by the buyer, that partners may sue each other for an accounting, and that the rights and obligations of one partner survive the death of the other.[330]

These mercantile customs dealing with maritime and inland trade were frequently codified by the merchants themselves. The ancient Rhodian Sea Law, probably dating from about 300 B.C.[331] was already known among medieval merchants, but soon new compilations were developed. The most famous examples of such commercial customs codifications were maritime customs transcribed in the 11th century Amalphitan Table[332], the Scrolls of Oléron from the 12th century adopted in seaport towns of the Atlantic Ocean and the North Sea, the maritime Law of Wisby

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[321] See e.g. Berman, H. and Kaufman, C. (1978) p.224; Caemmerer, E. v. (1964) p.88. citing Lopez (1971) The commercial revolution of the Middle Ages, 950-1350 and other literature cited there. See also e.g. Robinson, O. F., *et al.* (1985) pp.153-178.
[322] Malynes, G. (1686).
[323] Andersen, C. B. (Fall 1998).
[324] Bewes, W. A. (1923) pp.8-9.
[325] Robinson argued that: "Different customs applied at sea or at land, between the north of Europe and the south, and even between neighbouring cities." In regard to the international character of the Law Merchant he wrote: "Its common feature was community of institutions rather than community of rules; there was no central legislation, no central court, through which uniformity of rules might be achieved." Robinson, O. F., *et al.* (1985) pp.153-154.
[326] Similarly Ibid. pp.154-155.
[327] Mitchell, W. (1904) pp.1-21.
[328] Berman, H. and Kaufman, C. (1978) p.226. However, informal agreements were known and applied in the Roman *ius gentium*. Robinson, O. F., *et al.* (1985) p.155.
[329] See Bewes, W. A. (1923) pp.29-30.
[330] Ibid. pp.28-62, 77-79.
[331] See e.g. Berman, H. and Kaufman, C. (1978) p.224. It provided that if the cargo was jettisoned in order to save a ship and the ship was saved, the loss had to be shared by all who benefited from it including the owner of the ship, so that the whole loss did not fall on the owners of the cargo. Robinson, O. F., *et al.* (1985) p.156.
[332] See e.g. Berman, H. and Kaufman, C. (1978) p.224.

compiled circa 1350 and used in Baltic Sea towns and the 15th century Consolato del mare[333] used in commercial centres of the Mediterranean basin.[334] Other compilations include the judgements of Damme and the laws of Westkapelle.

Rulers aware of the importance of exchange of goods and services to their own wealth[335] allowed merchants to be governed by their own Law Merchant guaranteeing enforcement of its norms. The English Carta Mercatoria of 1303 and Statute of the Staple of 1353 guaranteed that marketplaces could settle disputes according to Law Merchant disregarding feudal law or city law.[336] Carta Mercatoria added that if any dispute of contractual nature should arise, the resort should be held to the customs of the fairs and market towns where the contract had been made.[337]

Soon, as was the case in the Roman Empire, the transnational commercial customs were absorbed into local legal systems to govern disputes between ordinary inhabitants administered by special purpose commercial courts. This process was especially visible in 18th century England under Chief Justice Mansfield, who decided that law merchant is a question of law to be decided by the court rather than a matter of custom to be proved by the parties.[338] Absorption of mercantile customs resulted in a loss of internationality, flexibility and adaptability of the mercantile law to the changing needs of the international trade.[339] A similar process of nationalisation of transnational customary law of commerce took place in continental Europe, the United States[340] and other parts of the world with the introduction of civil and commercial codes in the 19th and 20th century that replaced custom as a source of mercantile law.

3.2.4 Summary

Custom played a very important role in Western legal culture in its history with the exception of last two centuries. Although not a dominant force in the Roman Empire, it was a foundation of Roman *ius gentium* – the predecessor of modern international commercial law. In medieval Europe its supreme dominance was clearly visible, although systematically decreasing after the rediscovery of Roman law and especially after the 18th century Enlightenment. It was during this time that customary Law Merchant has been received and further developed in major European trade centres to assist traders in dispute resolution. However, the modern role of custom in Western legal culture is marginal, mainly as a result of the supreme role of written statutes that tend to establish everything in writing thus petrifying once established practices. Although some traces of the importance of custom can be found in continental modern civil codes or commercial codes, its role seems to be delineated by such codes as if custom did not operate independently. In consequence, the concept of custom as a source of law was and continues to be of no interest to lawyers and legal scholars, accustomed to theoretical analysis of existing written laws rather than to examination of empirical sources of law. Even legal historians, although aware of the historical significance of custom, preferred to examine past written laws rather than unwritten ones. This attitude has led to a serious underdevelopment of this field of knowledge.

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[333] For a short description see Goode, R. (1997) pp.17-18.
[334] See e.g. Berman, H. and Kaufman, C. (1978) p.225.
[335] For economical analysis of this phenomenon see e.g. Greif, A. (June 1993); Greif, A. (1997); Greif, A., *et al.* (August 1994); Milgrom, P. R., *et al.* (March 1990).
[336] See e.g. De Ly, F. (1992) p.16, and the literature cited there.
[337] Mitchell, W. (1904) p.6.
[338] See above. See also e.g. Bane, C. A. (May / September 1983); Berman, H. and Kaufman, C. (1978) p.226.
[339] e.g. Bainbridge, S. (1984) p.625; Berman, H. and Kaufman, C. (1978) pp.227-228.
[340] Section 1-103 of the Uniform Commercial Code states: "Unless displaced by the particular provisions of this Act, the principles of law and equity, including the law merchant (…) shall supplement its provisions."

History gives the foundation for the discussion of customary practices on the Internet. It shows that custom did bind all persons thus justifying the claim that it could also be a source of globally binding Internet law. It gives the basis for contention that Internet customs could abolish or modify obsolete legislation, which will be of great importance in the technological age. Similarly, it allows the conclusion that custom would be the best interpreter of written Internet law. Certain elements of custom identified by Roman lawyers such as its uniformity and duration will change their meaning in the concept of e-custom. The historical importance of local customs will also have its effect on the proposed theory of Internet custom. Finally, the history shows that merchants transacting internationally always referred to customs of trade in order to settle their disputes. Custom gave them more flexible and certain norms than particular written laws that were often not designed to handle mercantile disputes. This allows the conclusion that a similar process will take place on the Internet and online merchants with time will rely on their own widespread practices in settling electronic commerce disputes.

3.3 Custom in other legal traditions

Repeated social conduct has played and continues to play an important role in non-Western legal traditions. Non-western traditions were developed in isolation from western legal thought based upon Greek cosmology shaped by Christianity and rational philosophy of 18th century. Great non-western legal traditions are to an even greater extent based upon religion, sometimes making it difficult for the researcher to distinguish between legal norms and religious precepts. Moreover, in the East it is a far more frequent occurrence for non-official law practiced by people to modify official law or resist its domination.[341]

These differences, however, create serious problems with analysing aspects such as the role of custom as a source of law, as these traditions do not use the same terminology, and often do not identify law as a separate body of norms governing humans' behaviour.

> "We reject the notion held generally in Western legal thought for over 2000 years that law is something universal. The history of various civilizations, their anthropology and their philosophy, however, tell us that civilizations have developed different concepts as their fundamental principles of social organization. Law is only one such principle, which, in Western civilization, is derived from the Greek concept of nomos. The Chinese civilization has its li. African societies have their own particular patterns. And the Hindu civilization has its dharma, whose meaning is broader than law alone."[342]

Taking into account serious difficulties in analysing the role of custom in non-Western normative systems the following part will limit its discussion to Hindu, Muslim, Chinese and Japanese legal traditions, followed by the analysis of custom in primitive societies from the anthropological perspective. Material presented in this section will be necessarily only briefly analysed and should be treated more as a reminder of the importance of custom in the non-Western world rather than as an authoritative discussion of this phenomenon.

3.3.1 Custom in Islamic tradition

The importance of Arabic traders long before the emergence of Islam is difficult to overestimate. Their influence on trade can best be evidenced by modern commercial terminology, which adopted many Arabic words.[343] Muhammed himself started his career as a caravan merchant,

[341] Rouland, N. (1994) p.61.
[342] Nanda, V. P. and Sinha, S. P. (eds.) (1996).
[343] Bewes, W. A. (1923) p.10. citing Lammens.

which gave a unique flavour to the importance of trade in Islam.[344] Muslim traders played a very active role in the medieval trade[345] as it is probably through them that medieval Europe received customary laws of the trading world. Muslim commercial customs influenced medieval Law Merchant in many ways, laying e.g. foundation for the modern limited company.[346]

For Islamic jurisprudence focused primarily on the analysis of *Quran*, *Sunnah*, *Ijma* and *Quijas*, custom (*ᶜurf*) constitutes only an additional basis for legal decisions that is valid if it is sound and reasonable.[347] Custom's validity is justified on the rule that

> "(…) whatever the people consider to be good for themselves is good in the eyes of God."[348]

Among four schools of Islamic law, one that especially favoured customary practices of Medina was Maliki School.[349]

Custom is defined as

> "(…) recurring practices which are acceptable to people of sound nature."[350]

Custom must posses certain qualities.[351] Custom must represent a common and recurrent phenomenon among a large number of people, must be in existence at the time a transaction is concluded and cannot contravene agreement or the definitive principle of law. Custom can be general or local, verbal or actual. Verbal custom means agreement of the people on the meaning and usage of certain words. Actual custom is based upon recurrent practices other than those associated with meaning of the words. An example of actual custom is the give-and-take sale, which is normally concluded without the declarations of offer and acceptance.

Apart from custom, Islamic tradition has another very similar source of law – *Ijma*. *Ijma* seems to be a custom among jurisprudence as opposed to custom of usual people. *Ijma* is based upon practice of the learned members of the community and it does not depend upon the agreement of the layman. *Ijma* requires an absolute agreement of jurisprudence, whereas in case of custom, a minority may act against a rule in question. Custom can evolve, but *Ijma* once established cannot be changed. Finally custom requires some time to develop whereas *Ijma* may come into existence as soon as learned scholars reach a unanimous agreement, which does not require continuity for its conclusion.[352]

Commercial customs in Islam have still great importance.[353] The validity of this type of custom is illustrated in the maxim:

> "(…) what is known by custom is equal to what is agreed upon as a clause."[354]

In regard to establishment of price for instance, it is a customary practice that authorises how much the merchant can add to the buying price. What practice excludes must be excluded.[355]

> "In the law of sale custom is decisive".[356]

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[344] Mallat, C. (Winter 2000) p.92.
[345] See e.g. Greif, A. (June 1993).
[346] Bewes, W. A. (1923) p.77.
[347] Kamali, M. H. (1991) p.283.
[348] Ahmad bin Mohamed Ibrahim (1965) p.33.
[349] Same could be said about Hanafi school in regard to statement of Abn Yusuf: "'What matters in all things is the 'urf'", cited in Mallat, C. (Winter 2000) p.96, citing Sarakhsi, al-Mabsut.
[350] Kamali, M. H. (1991) p.283.
[351] Ibid. pp.286-287.
[352] Ibid. pp.288-289.
[353] See e.g. chapter 4 in Gerber, H. (1994).
[354] Mallat, C. (Winter 2000) p.96. citing Kasani; see also Kamali, M. H. (1991) p.290.
[355] Mallat, C. (Winter 2000) p.95 citing Udovitch.
[356] Ibid. citing Kasani and Sarakhsi.

British colonial legislators often considered the whole Islamic legal system as customary, despite the fact that custom is a separate source of Islamic law.[357] Nowadays, custom is an important source of law[358] only in some Muslim countries - especially in Morocco.[359] In some countries a special type of Islamic banking law has developed.[360] Custom also plays an essential role in the preservation of the Palestinian customary legal system.[361]

3.3.2 Custom in Hindu tradition

Originally Hindu law was a rationalized and systematized body of customary law and observances.[362] Central to Hindu law is the concept of *Dharma* meaning "preserving", which is not based upon a set of specific commands but describes a way of life e.g. when the individual shall awaken and go to sleep, how should he divide his day, relationship with other people and nature and even a person's diet.[363] The oldest source of Hindu law is *sruti* composed from four *Vedas*. Custom known as *sadachara* meaning "custom of good men"[364] is one of the sources of Hindu law[365] although some English authors question this fact.[366] Legal codes called *Dharmasastras* codified legal principles contained in the *Vedas*, *Dharmasutras*[367] and customary practices of the good people. Customary practices of people trained in *Vedas* have had a great importance and in case of conflict some authors consider them to be more authoritative than written sources.[368] Custom as a source of law is then limited only to people who are permitted to or can study *Vedas*.

England through the process of colonisation has significantly changed traditional Hindu law.[369] At first, the British decided that Hindus should be governed by their own laws in several areas, so *Dharmasastras* began to be used in the courts to resolve family law, property, succession and religious usage. The applicable law was subject to modification by custom, which had various local varieties. This approach had changed, however.[370] Custom is applied as an exception to the statutory law and *Dharmasastras* and its existence is treated as a question of fact and law. Modern Hindu legislation defines custom as follows:

> "The expression "custom" and "usage" signify any rule which, having been continuously and uniformly observed for a long time, has obtained the force of law among Hindus in any local area, tribe, community, group or family: provided that the rule is certain and not unreasonable or opposed to public policy; and provided further that in the case of a rule applicable only to a family it has not been discontinued by the family."[371]

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[357] See e.g. Oba, A. (October 2002).
[358] Serjeant, R. B. (1991).
[359] Ahmad bin Mohamed Ibrahim (1965) pp.33-34.; see also Al-Zwaini, L. (1994).
[360] See e.g. Mallat, C. (Winter 2000) p.90.
[361] See e.g. Zilberman, I. (1996).
[362] See e.g. Derrett, J. D. M. (1963) p.3.
[363] Nanda, V. P. and Sinha, S. P. (eds.) (1996).
[364] Nagpal, R. C. (1983) p.27.
[365] See Nanda, V. P. and Sinha, S. P. (eds.) (1996) p.XIV, referring to Manusmriti II, 6; See also Nagpal, R. C. (1983) p.28.
[366] e.g. Derrett, J. D. M. (1963) p.12.
[367] Foundation of civil and criminal law, see Nanda, V. P. and Sinha, S. P. (eds.) (1996) p.XIV.
[368] See Nagpal, R. C. (1983) p.29 and literature cited there. Similar approach was taken by English jurisprudence, see Ramnad case.
[369] See e.g. Chakravarty-Kaul, M. (1996).
[370] Soon judges reversed the traditional hierarchy and stated that the wording of the commentary overrules that of the Dharmasastra, and the latter that of the Vedas. Gradually judges abandoned consulting Sanskrit texts by making Hindu law into a regular Anglo-Saxon case law. Nanda, V. P. and Sinha, S. P. (eds.) (1996) p.XIV.
[371] Sec. 3(a) of HMA, Sec. 3(d) of HAS, Sec. 3(a) of HAMA cited in Nagpal, R. C. (1983) p.30.

Custom can be evidenced by its official or unofficial record[372] or by the observance of a rule and not by analogy. Custom must be ancient[373], continuous, uniform, certain, reasonable, not against public policy and not abolished by a statute.[374] There are four types of customs: local customs applying to residents of certain locality, group customs prevailing in certain groups or castes, family customs and institutional customs.[375]

3.3.3 Custom in Chinese tradition

Chinese legal tradition[376] is especially difficult to analyse as it has developed very original concepts of social organisation not known in other legal systems. Chinese social organisation is deeply rooted in the thought of Confucius (551-479 BC) which supports the view of the hierarchical order of the society where everyone has his place and should not disturb the balanced harmony of the world expressed in unwritten rules of behaviour called *li*.[377] Ideal man must be the person conscious of natural order of things who represses his subjective interests, remaining willingly obedient and spontaneously and rigorously following precepts of *li*.[378] Confucianism considers legal rules called *Fa* as a necessary evil good only for barbarians and condemns people using court's litigation, stressing the virtue of modesty and the importance of peaceful out-of-court dispute settlement.[379] The rules of alternative dispute settlement were based on conciliator's knowledge of *li* and customary practices of the region.[380]

Although it is difficult to categorise Chinese sources of law in the way Western countries do, it seems that customary practices of people in their normal life have far greater importance in China than in the West. The unwritten rules of *li* that are followed spontaneously resemble customary practices. Preference given to them, even in modern China that only recently introduced some legislation, is also a good evidence of it.

In relation to private commercial transactions, pre-communist China was governed by informal customary rules enforced by the family and guilds organisations without the need for the courts.[381] The recent influence of western legal tradition is visible in a modern approach to custom that is important primarily in regions inhabited by ethnic minorities.[382] With the introduction of the civil code only customs that do not conflict with other regulations have significance as a source of norms of the civil law.[383]

3.3.4 Custom in Japanese tradition

Separated from the Asian mainland, Japanese legal tradition is very difficult to classify as it was for a long time influenced by Chinese thought, Buddhism and only recently totally dominated by Western legal culture. Customary rules of behaviour played a very important role in Japan. The unwritten rules of *giri* that could be equated with custom[384] direct the lives of Japanese. Even in

[372] E.g. customs transcribed by Rattigan in Punjab under the head "Riwaj-i-am". Ibid. p.31.
[373] There is no time limit set for custom like in English law year 1189.
[374] Nagpal, R. C. (1983) pp.32-35.
[375] Ibid. p.36.
[376] See Chapter 2 in Poh-Ling Tan (1997).
[377] See e.g. Zweigert, K. and Kötz, H. (1998) pp.288-292 and literature cited there.
[378] Ibid. p.288.
[379] Rouland, N. (1994) p.39; Zweigert, K. and Kötz, H. (1998) p.289.
[380] Zweigert, K. and Kötz, H. (1998) p.291.
[381] Potter, P. B. (1992) pp.9-11.
[382] Jones, W. C. (ed.) (1989) p.25.
[383] Ibid.
[384] See Noda, Y. (1976) pp.174-183, citing Lévi-Bruhl, H. (1961).

long lasting merchant-customer relationship the customer who buys products from another merchant breaches *giri*.[385] However, these rules are founded on affection and are not demandable and hence, have much wider meaning than the western idea of legal custom.

With the reception of codes in 19th century followed by American influence in 20th century[386], Japanese legal thought became dominated by the Western concept of custom where it plays a marginal role. Custom is now considered a source of law within the meaning of Article 2 of the law of 1875 which states that custom that is not contrary to public order or to morality has the value of law, provided that it is not excluded by legislation and that it deals with matters that have not been provided by statute or regulation.[387] On the other hand, art. 92 of the Japanese civil code states that:

> "If there are customs contrary to the legislation which do not deal with matter of public policy, judgement can be given according to the customs if the parties wish that to be done"[388].

Both of the above rules subject custom to the legislation but this assertion as Noda noticed "does not express the social reality" as:

> "(…) judgments often refer to customary rules which are incompatible with imperative rules of law in order to reach an appropriate solution".[389]

It is interesting to note that Japanese courts seemed to be braver than Western counterparts in safeguarding validity of certain customs against contrary provisions of statutes. The examples of customary norms functioning against express provisions of statutory law include partial recognition of de facto marriage, legal validity of contract in which debtor gives a pledge without disposition of the property, validity of the transferral of registered shares by way of endorsement[390] and validity of issuing blank bills of exchanges.[391]

3.3.5 Custom in tribal societies

Tribal societies depend upon the observance of customary norms to an even greater extent than all the legal cultures mentioned so far. Many anthropologists devoted their efforts to study indigenous[392] systems of social organisations, the most interesting ones produced by researchers who actually immersed in the community in question. The founder of such an approach to study tribal cultures was Malinowski, who describing life of Trobriand islanders pointed out that they have a very efficient set of customary norms not only in criminal law but also in economic and non-economic relations. In regard to economic relations, he pointed out the importance of division of work and products and give-and-take customary principles as the fundament of their social organisation.

Custom continues to play a fundamental role among native tribes. Recent study of indigenous people in the Australasian region reveals the rebirth of customs in the post-colonial era.[393] Customary rules of land ownership are the fundament of the legal system of Australian Aborigines and Torres Islanders that have significantly altered Australian laws.[394] Custom also

[385] Noda, Y. (1976) p.176.
[386] See e.g. von Mehren, A. T. (ed.) (1963).
[387] Noda, Y. (1976) pp.218-219; Oda, H. (1999) p.60.
[388] Law No.10, 1898; On discrepancy of various provisions on custom see Noda, Y. (1976) p.219.
[389] Ibid. pp.219-220.
[390] Taniguchi (1964) pp.575-578. cited by Noda, Y. (1976) pp.220-221.
[391] Judgment of the Supreme Tribunal, October 18, 1926 cited in Oda, H. (1999) p.60.
[392] See criteria for indigenousness described in Rouland, N. (2001) p.17.
[393] de Deckker, P. and Faberon, J. Y. (eds.) (2001)
[394] See e.g. Bartholomew, G. W. (1996); Lokan, A. (1999); Office of Indigenous Affairs (1994); The Law Reform Commission (1986).

played and continues to play a fundamental role among indigenous habitants in both Americas[395]. The relations between Eskimos are also governed primarily by unwritten rules of conduct that could be classified as customary norms. Also African societies, even those being for a long time subjected to Western legal thought are dependant on customs.[396]

3.3.6 Summary

Non-western societies seem to value customary practices higher than Western ones. Cultural and ideological differences are certainly the most important cause of this. The Western way of thinking favouring unrestrained individualism is at odds with more societal life in non-Western cultures.

Custom played and continues to play an important role in great religious systems of Islam and Hinduism. Islam followers developed a very interesting and in-depth concept of binding customary practices different among jurists and normal people. Similar distinctions are evident in the Hindu concept of *sadachara*. Chinese people on the other hand prefer to follow unwritten rules of *li* rather than written precepts of law. Similar observation can be made about Japan, despite its accession to Western legal culture. Finally, customs are fundament of the social organisation of tribal societies.

However, its role is also being diminished with the growing acceptance of Western culture, including reception of civil law and common law legal traditions. Such receptions of foreign laws, however, are very complex phenomenon and may remain for long years on paper only, as societies will continue to live according to their own traditions thus widening the gap between the law in books and law in practice.

The above discussion provides evidence that custom is a source of law known to different cultures, irrespective of their technological advancement. This in turn, allows the conclusion that it would be a perfect tool to settle international disputes on the Internet as all cultures either did or continue to rely on it. However, what is required is an explicit theory of custom acceptable to different nations that could be used as a model for Internet commerce custom. The following section will search for such a model in modern international legal orders.

3.4 Custom in modern international legal orders

Despite the marginal role of custom in modern national legal systems, custom plays a very important role in international legal orders. It is officially recognised as the source of law in international public law which is considered by the international community as a truly supranational legal order. It also plays a crucial role in international trade law, although the status of *lex mercatoria* as an independent system of law from national legislatures is still a subject of hot debate among scholars.

[395] See e.g. Barroso, R. L. (Summer 1995); Joh, E. E. (2000-2001); McNeil, K. (1998).
[396] For a recent very good analysis of various native legal cultures see Scheleff, L. (2000). See also e.g. Berat, L. (1991/1992).

3.4.1 Custom in the New Law Merchant

A. Rebirth of the Law Merchant

In the XX century the idea of independent transnational commercial law similar to that of Roman *ius gentium* or medieval Law Merchant described above was revived. As Berman observed, the commercial world developed universal commercial law because of their history and common problems they confront.

> "It is the mercantile community that has, in the first instance, generated mercantile law. And it is this same community which continues to develop present day mercantile law (…) through their contract practices and the common understandings on which they are based, and also through regulations of self-governing trade associations and through decisions of arbitration tribunals to which their disputes are submitted. These contract practices, understandings, regulations and decisions constitute a body of customary law which is the foundation on which national and international commercial legislation has been and continues to be built."[397]

Customary mercantile practices are still very important in modern trade relations. Organisations such as International Chamber of Commerce (ICC) from 1930's codified certain mercantile practices widely used in international trade. The most important examples include several editions of International Commercial Terms (INCOTERMS)[398], which describe commonly used commercial terms like Free on Board (FOB) or Cost, Insurance, Freight (CIF) clauses which set rights and obligations of the parties, the moment of passing risk to the buyer etc. International banking industry on the other hand developed customary practices regarding financing international trade by means of letters of credit that were also codified by ICC in several versions of Uniform Customs and Practice for Documentary Credits (U.C.P.).[399] The majority of Banker's Associations acceded to various versions of U.C.P. that were also recommended in electronic SWIFT regulations.[400] There are some areas of commerce where custom reigns absolutely and remains largely unwritten as is the case in the insurance market.[401] In other areas like the oil industry, merchants customarily include elaborate and almost uniform in content provisions dealing with various contingencies and especially non-performance terms.[402]

Observing the independence and self-reliance of the international mercantile community, Goldman proposed in the 1960s the idea of autonomous, independent of national legal systems law of international trade that could be used as a law governing the contract.[403] Although the concept was initially met with criticism[404], after Roman *ius gentium* and medieval Law Merchant it was the third revival of *lex mercatoria* in history.[405]

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[397] Berman, H. and Kaufman, C. (1978) pp.222-223.
[398] See e.g. International Chamber of Commerce (1999). Some countries like United States codified their own version of such terms.
[399] See e.g. International Chamber of Commerce (1993).
[400] De Ly, F. (1992) pp.175-182. See also Glossary.
[401] See e.g. Hoffman, W. (1997).
[402] For the rare example of a case study in the oil industry see Trakman, L. E. (1983).
[403] See e.g. Goldman, B. (1983) p.1.
[404] See especially Chapter 4 in De Ly, F. (1992); Mustill, M. (1987).
[405] See Goldman, B. (1983) p.1. Recently see e.g. Bamodu, G. (2001) p.6; Bonell, M. J. (2000). A contrary view was presented by De Ly, F. (1992) pp.8-20; Mustill, M. (1987).

B. Problems with the definition of commercial custom

According to Schmitthoff, international trade law is derived from two sources: international legislation and international custom. Describing international commercial custom, he stated:

> "International custom consists of commercial practices, usages or standards, which are so widely used that businessmen engaged in international trade expect their contracting parties to conform with them and which are formulated by international agencies, such as International Chamber of Commerce, or United Nations Economic Commission for Europe, or international trade associations."[406]

There are three striking elements in this definition of international commercial custom. First, as in the previous definition, custom does not need to have a long tradition in order to be binding. Second, commercial practice needs to be widely used and accepted as a binding norm. Finally, formulation of custom by various international trade associations seems to be a necessary condition of a successful formulation of custom.

Goode argues that *lex mercatoria* consists of uncodified customary commercial law, customary rules of evidence and procedure and general principles of commercial law, including international public policy.[407] He defined unwritten trade usage as:

> "(…) a practice or pattern of behaviour among merchants established by repetition which has in some degree acquired normative force."[408]

This definition accentuates the role of repetitive practice. However, it requires a practice to acquire some degree of normative force – a concept that is not very clear. This definition seems to be a compromise between two theories of unwritten trade usage. One sees trade usage as a particular form of international customary law, which will be analysed in the next chapter. The other, equates it with an implied term into a contract. This approach was adopted in the Vienna Sales Convention.[409]

Bonell argues that the distinction between custom and usage is irrelevant and defined it as:

> " (…) any practice or line of conduct regularly observed within a particular trade sector or at a particular market place, irrespective of whether, according to some national law, it would fall within one or the other of the categories mentioned above."[410]

His definition stresses the necessity of regularly observed conduct without requiring it to be long-standing, confirmed by the court or some legal authorities or accepted as a binding norm. Moreover, this definition does not deal with global customs as it is limited to usages in particular trade sectors or market places. Furthermore, he equated the term usage with custom. In this respect it is important to mention a significant problem created by lawyers who distinguish between custom and usage. Honnold even argued that CISG "trade usages" are different from "usage" or "custom" because the latter one must be long established or even ancient.[411] Some regarded the "custom" as the source of law and "usage" as a factual element, which needs to be known to the parties or expressly referred to in the agreement in order to be binding.[412] The problem is to a large degree a consequence of an abandonment of the term "custom" and replacement of it with "usage" by the influential French jurisprudence after the French Revolution because of programmatic destruction of anything to do with the pre-revolutionary

[406] Schmitthoff, C. M. (1988) pp.148-149.
[407] Goode, R. (1997) p.1.
[408] Ibid.
[409] Ibid.
[410] Bianca, C. M. and Bonell, M. J. (1987) p.111.
[411] Honnold, J. O. (1982) pp.146-147.
[412] De Ly, F. (1992).

regime.[413] However no satisfactory dividing line had been drawn between the two allegedly different concepts. As a result, following Bonell's suggestion, the distinction between custom and usage will be abandoned in this study.

Unfortunately, no international trade law convention or authoritative private compilation of transnational commercial principles has explicitly defined what usage or custom is. The most important private commercial law treaty is 1980 Vienna Convention on the International Sale of Goods (CISG).[414] On the other hand, the most important non-governmental restatement of modern commercial law is the UNIDROIT Principles of International Commercial Contracts (UNIDROIT Principles).[415] The Principles are hoped to become a "world code of international trade law".[416] It is an open-ended set of principles intended to integrate the most important norms relating to international commercial transactions.[417] The UNIDROIT Principles are an important achievement on the way to codify international commercial law, but their status is yet to be confirmed.[418] One should also mention Principles of European Commercial Law (PECL)[419] as similar to UNIDROIT Principles initiative but limited to the European Union. Neither the CISG[420] nor the UNIDROIT Principles nor PECL define usage or deal with the question of proof or validity of usage. These developments only lay down criteria for the interpretation of contracts taking into account the trade usages.

All the above mentioned developments include the same provision describing the effects of express reference to customary practices in the agreement and past dealings between the individual parties:

> The parties are bound by any usage to which they have agreed and by any practices which they have established between themselves.[421]

This paragraph deals with two different situations. In the first case, the custom does not have to fulfil any requirements, not even that of being reasonable. Parties may refer to a local, particular or general custom or set of customary principles. In practice, this usually means a reference to trade terms like F.O.B. in ICC's INCOTERMS.[422] As soon as it is agreed to in the contract, it automatically binds the parties. In the second case, they are bound by any practices which they have established between themselves. Here, a course of dealings between parties will bind them – a situation which might be considered as an extreme instance of local custom.

However, when it comes to the description of usage that has not been mentioned in the contract or one which is not related to parties past dealings, the formulations are different. The Vienna Convention which relates to non-domestic international transactions in the offline world stated in Article 9 (2) that:

> (2) The parties are considered, unless otherwise agreed, to have impliedly made applicable to their contract or its formation a usage of which the parties knew or ought to have known and which in

[413] See Gilissen, J. (1982) p.24.
[414] UNCITRAL (1980).
[415] UNIDROIT (1994).
[416] See e.g. Bonell, M. J. (2001) referring to Schmitthoff. See also e.g. Baron, G.; Bonell, M. J. (1998); Bonell, M. J. (2000); Bonell, M. J. (2000); Bonell, M. J.
[417] Ibid.
[418] See e.g. Baron, G.
[419] Commission on European contract law (1998).
[420] See e.g. Bianca, C. M. and Bonell, M. J. (1987) pp.110-111.
[421] See Art.9(1) in UNCITRAL (1980), Art.1.8 in UNIDROIT (1994) and Art.1:105 in Commission on European contract law (1998).
[422] Honnold, J. O. (1982) pp.145-146.

> international trade is widely known to, and regularly observed by, parties to contracts of the type involved in the particular trade concerned.[423]

According to this paragraph, parties will be presumed to have impliedly made applicable to the contract or its formation a usage that must meet three criteria. Firstly, it must be known to the parties or at least it ought to be known to them. Secondly, it must be widely known in the international trade to parties to contracts of the type involved in the particular trade concerned. Thirdly, it must be regularly observed, by parties to contracts of the type involved in the particular trade concerned. The first two conditions require the knowledge of custom among the parties (either express or implied) and the industry in which the parties operate. The second condition related to the actual observance of a given practice in the industry concerned. This formulation seems to limit the scope of commercial customs to industry wide customs. The question of admissibility of local customs is questionable.[424]

This provision generated a considerable debate concerning the scope of usages. [425] To Farnsworth, developed nations liked usages (e.g. usages in grain trade in London) because they were creating them, whereas developing and socialist countries felt susceptible to them.[426] The final version was a compromise.[427] Bonell argued that the first requirement was intended to reflect the parties intentions, but it may only be said so if they knew of the usage.[428] If they did not know, "it is the law itself which confers the binding force on the usage" which makes the doctrine of implied terms a legal fiction.[429] The second requirement is an objective one.[430] Usage must be regularly observed within the particular trade (e.g. wheat trade) and for the contracts of the type involved (e.g. trade with soft wheat and hard wheat).[431] It must also be widely known in international trade. The purpose of this requirement was to avoid domestic usages, to which Convention gave only "very limited recognition."[432] Also, the Article is silent on how "ancient" the usage should be. Honnold argued that usage must be established on an objective basis and it does not have to be "long standing."[433]

On the other hand, the UNIDROIT Principles in Article 1.8 (2) stated:

> The parties are bound by a usage that is widely known to and regularly observed in international trade by parties in the particular trade concerned except where the application of such a usage would be unreasonable. [434]

Commercial custom can bind parties to a contract given that it is widely known and regularly observed by a majority of traders in the particular industry. However, contrary to CISG, it does not have to be known to the parties, nor parties "ought to have known it." On the other hand, it may not be applied, if it would be unreasonable in a given circumstances. This is a new requirement that has not been mentioned in CISG formulation. These requirements apply to usages of international, national or local scope if used in international trade. However, as it was the case in CISG formulation, local usages can be applied only exceptionally.[435] Both in case of

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[423] UNCITRAL (1980) See also Art.8 on interpretation of contracts in the light of customary practices.
[424] Honnold, J. O. (1982) p.148. Contra see Berman, H. and Kaufman, C. (1978). Bonell also speaks of limited recognition of local usages in the Convention. Bianca, C. M. and Bonell, M. J. (1987) p.109.
[425] Farnsworth, A. E. (1979) pp.465-466.
[426] Ibid. See also Bianca, C. M. and Bonell, M. J. (1987) p.105.
[427] See e.g. Bianca, C. M. and Bonell, M. J. (1987) p.110.
[428] Ibid. p.108.
[429] Ibid.
[430] Ibid.
[431] Ibid. pp.108-109.
[432] Ibid. p.109.
[433] Honnold, J. O. (1982) p.148.
[434] UNIDROIT (1994).
[435] See Comment to Art.1.8 in Ibid.

Vienna Convention and UNIDROIT Principles, the commercial customs prevail over Convention and Principles respectively.[436]

In summary, customary practices play a very important role in international trade. Commercial custom also plays the central role in the revived Law Merchant doctrine. The new *lex mercatoria* has not yet been widely recognised as being independent of national legal systems but such recognition seems to be only a matter of time. However, none of the important written sources of transnational commercial law define it or discuss a methodology of proving it. In consequence, the doctrine of *lex mercatoria* has not developed an explicit theory of commercial custom. The material presented above, suggests only that commercial custom is based on the actual and widespread observance of practice and is confined to particular trade sectors. Furthermore, there seems to be no requirement of acceptance of practice as law. These findings are important for the development of the theory of Internet commerce custom.

3.4.2 Custom in international public law

Custom has been playing a critical role in international public law, which governs the inter-state relations. Article 38 of the Statute of International Court of Justice lists international custom as a source of international law.[437] Its crucial role in international public law of the sea[438], law of outer space[439], law of the treaties[440], law of diplomatic and consular relationships[441], law of human rights[442] or environmental law[443] has been expressed very often in the literature[444] and in judgements of the International Court of Justice.[445]

The concept of international custom has also been very well researched by international jurisprudence that developed very interesting theories of international custom. These analyses of custom in a transnational context are arguably the best available and for that reason the whole next chapter will be devoted to the discussion of this concept.

3.5 Potential role of the custom on the Internet

Custom understood as a source of behavioural norms has enormous potential in providing knowledge about widespread online practices. This knowledge can then be used to solve problems arising out of the lack of written Internet law. Sections below will present the potential role of Internet commerce customary practices from two angles. First, the potential role of custom as a source of Internet law will be discussed. Then, the role of custom in providing knowledge about the Internet environment will be outlined.

[436] See Comment to Art.1.8 in Bianca, C. M. and Bonell, M. J. (1987) p.104; UNIDROIT (1994).
[437] United Nations Conference on International Organization at San Francisco (26 June 1945).
[438] See e.g. Slouka, Z. J. (1969).
[439] See e.g. Cheng, B. (1965).
[440] See e.g. Kontou, N. (1994); Villiger, M. E. (1997).
[441] See e.g. Briggs, H. W. (October 1951).
[442] See e.g. Meron, T. (April 1996); Simma, B. and Alston, P. (1992).
[443] See e.g. Brownlie, I. (1973); Palmer, G. (April 1992).
[444] See e.g. Akehurst, M. (1974-1975); D'Amato, A. A. (1969); Danilenko, G. M. (1983).
[445] See Chapter 4.

3.5.1 Custom as a source of Internet commerce law

The potentially crucial role of custom as a source of law on an international level would be a result of certain essential features of transnational regimes such as the lack of central governance and, relative to modern legislations, underdevelopment. The Internet, with its bottom-up governance and, at this stage, lack of globally binding written laws is an example of such an environment. In consequence, custom as a source of norms could play a similarly important role on the Internet, but this role has not been realised yet.

Custom may turn out to be the most important source of Internet commerce law because, as history shows, it can bind all persons. Neither an agreement, an international convention nor a statute dealing with the Internet is likely to have such a scope of application. Furthermore, custom petrifies and rises to the level of law, commonly recognized and observed practices. In a fast changing digital world, its ability and flexibility in recognizing globally binding e-commerce practices may turn out to be the best if not the only regulatory option available. At the same time, the concept of custom does not contradict other regulatory developments at national and international level, because it can be assumed that custom will be overruled by any contrary treaty, statute, or agreement.

The possible legislative role of a custom appears to be an interesting solution to the lack of written Internet law. Drawing lessons from history, in the next phase of the development of international electronic commerce law, some explicit conventional regulations will codify Internet customs and likely add some new rules. However, customary norms are continuously changing norms and it is crucial to monitor constantly adherence to them. Any codification can only be a snapshot of customary practices within a given timeframe and as a result can be overturned by the proof of subsequent contrary custom.

However, the legal role of a custom is much broader than an interim regulation of some of the aspects of the international electronic commerce. Custom can be viewed as a serious alternative to the idea of harmonisation of Internet law and as a complement to the result of this process. Custom can also widen the scope of applicability of international conventions and national regulations. Further, its capability of modifying existing or future concurrent sources of e-commerce law like conventions, domestic statutes or contracts should be stressed. In particular, custom can abolish written laws that were not adhered to due to e.g. technological change (*desuetude*).[446] Custom can modify both the way agreements come into being as well as content of contracts. Custom continues to play an important role in interpreting contract clauses. In addition, custom will remain the best filler of gaps left by formal e-commerce related legislatorial works. Finally, custom can be viewed as a source of already enforced legal norms, which enables effective functioning of such legal system.

In consequence, electronic commerce custom can give national and international judges, and especially national and international arbitrators, a very rich and powerful source of transnational legal norms that could be used in adjudicating Internet related disputes. This source of law may turn out to be of special importance to future online arbitration and online dispute resolution systems as it can help them in creating a global and unified body of Internet case law that, among other things, overcomes traditional problems of conflicts of national laws.

[446] See Glossary.

Some authors have already suggested that custom is used on the Internet in the form of the Netiquette[447], which is a list of norms of behaviour on the Internet. Status of the Netiquette as a basis for adjudication of disputes has also been confirmed in judicial proceedings where a French court recognised Netiquette as a binding set of Internet customary norms, which prohibit among other things, the practice of spamming.[448] However, one should take these claims with a great degree of caution. First, Netiquette is not a codification of Internet customs, but a list of supposedly good Internet practices. The core rules of Netiquette are very general and resemble more moral or ethical codes, rather than codification of Internet customs. Furthermore, the alleged customary character of the Netiquette has not been confirmed by research studying the level of adherence to its precepts. As of today, one has no basis for treatment of Netiquette as a record of Internet customs.

On the other hand, some authors have observed the similarity of medieval Law Merchant and electronic commerce practices.[449] This comparison should go even further because customary mercantile practices were the cornerstone of the Roman *ius gentium*. The comparison of ancient or medieval commercial customs and modern Internet customs is justified to the extent that it recognises the peculiarities of the electronic medium.

It is submitted then, that the emergence of customary practices on the Internet could be considered as the beginning of the formation of the body of rules independent from national legal systems to be used in international electronic commerce (Internet Law Merchant or Internet commerce law). The proliferation of online dispute resolution mechanisms[450] provides another argument in support of the similarity of traditional Law Merchant and its online counterpart. Online adjudicators have not resorted to Internet customs as a basis for settling e-commerce disputes yet and that is why it is crucial to promote this idea among them. Similar remarks can be made about domestic courts, although they will be less flexible in applying written and unwritten laws other than their own. Taking lessons from history one might anticipate that a body of e-commerce customs once developed will be incorporated into national and international legal systems.

However, the proposal of the detailed framework required for the Internet commerce law is outside the scope of this thesis. Such a framework would require a detailed analysis of the interrelation between custom and other potential general and particular sources of Internet Merchant Law, especially national legislation, treaties, contracts and case law and will be presented elsewhere. It would also need to analyse the practice of online arbitration and domestic courts. This dissertation will only outline some of these interrelations and will focus on the analysis of custom as the most important potential source of the Internet Law Merchant.

3.5.2 Custom as a source of knowledge about the Internet

The study of custom can play a fundamental role in the process of learning about the Internet and electronic commerce. Being the empirical source of behavioural norms, it allows the Internet community to learn about past and current common online practices. This knowledge could then inspire the process of drafting written sources of law and thus greatly contribute to their quality.

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[447] See Netiquette Guidelines in Hambridge, S. (October 1995). See also e.g. Reidenberg, J. R. (Summer 1996) p.920. For opposite view treating Netiquette as rules of online courtesy see Halpern, M. and Mehrotra, A. K. (Fall 2000) p.545.

[448] Tribunal de Grande Instance de Rochefort sur Mer (2001).

[449] Hardy, I. T. (Summer 1994) pp.1019-1021; Johnson, D. R. and Post, D. (May 1996) pp.1389-1390; Perritt, H. H., Jr. (1997) pp.461-463; Post, D. G. (October 1996) p. footnote 15.. See also Branscomb, A. W. (May 1995) p.1667.

[450] But see e.g. IntelliCourt that has been closed at http://www.arbitrationsolutions.com/, last visited: 06/03/2003. See also Chapter 2.

Without a very good knowledge and understanding of current Internet practices, any attempts to regulate the Internet by virtue of abstract statutes or treaties may only produce more harm than good.

Unfortunately, current legislative practices do not recognize the need for analysis and learning about the Internet environment. Rather, legislators in their attachment to the "rational" creation of law by means of statutes and conventions, search for inspiration almost exclusively in logical deductions. This thesis calls for a rapid change of attitude in the process leading to the development of norms that are supposed to regulate the Internet.

But knowledge of customary practices can also help IT and online business communities in learning about what is the most common way of online trading these days. This knowledge might turn out to be of special importance to start-up ventures as well as to small-to-medium enterprises that often do not have enough resources to research current widespread practices. Finally, the whole Internet community can benefit from the knowledge of common practices of not only traders but also non-commercial ventures and adopt what is considered by the majority as the most efficient way of organising online distribution of information.

3.6 Conclusion

Custom is the foundation of all legal systems on Earth. Humans from prehistoric times built whole societies by following customary practices of their fellow people. The role of custom was very important in the early times of the development of modern civil law and common law traditions in the West. However, with the process of its redaction and subsequent emergence of statute, its role has been diminished in Europe and in such a form exported to other parts of the world through the process of colonisation. Nevertheless, Roman lawyers have identified several important aspects of custom, although no explicit theory has been constructed. These constructs will be discussed in the context of proposed concept of electronic commerce custom.

The role of custom, though minimised in Western legal tradition continues to be important in other parts of the world. Both religion based systems of Islam and Hinduism as well as Far East legal systems value the idea of repetitive practice of other people as it provides a very reliable guideline in human life. With the ongoing penetration of Western legal thought in some of these traditions, the official role of custom may diminish with time. Even indigenous societies will probably be affected by this process, but the role of custom as a tool of regulating behaviour will remain profound for a long time. This in turn, allows concluding that custom as a source of binding norms is known to all cultures and hence, is the best candidate for a source of cross-cultural Internet and electronic commerce law.

However, customary practices play a very important role in international legal regimes. Both international law and international commercial law were built upon customs of states and merchants respectively. The importance of custom in regulating relations between states and merchants is clearly visible in history. Modern international legal regimes have important historical predecessors in the Roman *ius gentium* and the medieval Law Merchant. Custom continues to play a very important role in these regimes by being officially recognised as the source of international law. This is a very important finding and implications of it will be further explored in the context of global electronic commerce. However, the New Law Merchant has not proposed an explicit theory of commercial custom and for this reason a search for a better model in international public law will follow.

This leads to the conclusion that custom could play a fundamental role in settling Internet disputes. It is a source of globally binding norms that emanate from constantly changing practices

thus providing the best reflection of the current state of the Internet and electronic commerce. History shows that merchants relied on it in settling their disputes as it always reflected the expectations of the majority of merchants as to their rights and obligations. Internet customary norms could complement bilaterally norms embodied in contracts or multilaterally norms contained in international or domestic written laws. They could interpret unclear provisions of written laws and abolish ones that are obsolete.

In summary, the chapter has shown the importance of custom as a source of law in time and space. This knowledge will be useful in fully appreciating the proposed concept of customary practices as a prospective fundament of the global electronic commerce law because almost every society built their legal system upon custom or relied upon it to some extent. Especially, merchants were and continue to be aware of the significance of customs in international commerce. This gives the basis to conclude that history provides the evidence for the potential of custom in regulating electronic commerce and solving Internet commerce disputes.

Chapter 4. International custom and its proof

The previous chapter discussed the historical and contemporary role of custom in national and international legal regimes and outlined the potential of custom in regulating the Internet. This chapter will discuss the concept of international custom and its proof in order to provide a starting point for the discussion of Internet custom in the next chapter. In the next chapter the requirements for custom identified in this part of the thesis will be analysed from the perspective of its practicality in the borderless electronic commerce.

4.1 Introduction

The aim of this chapter is to characterise the concept of custom in the international law context as well as to outline the methodology of evidencing it in order to provide a basis for the analysis of the Internet custom in the subsequent chapters. The approach, to define Internet custom from the perspective of requirements of international custom, is hoped to be more acceptable to various cultures and legal traditions using the Internet for a number of reasons.

Firstly, the international law jurisprudence has analysed the concept of custom much more deeply than municipal or particularly the Law Merchant doctrine. As was argued in the last chapter, the Law Merchant doctrine is a natural predecessor of transnational electronic commerce law, but the characteristics of mercantile custom has not been the main focus of the doctrine. Goode suggested that *lex mercatoria* doctrine has developed the concept of custom in total isolation from international public law[451], but it has focused more on the general features of the Law Merchant, rather than on the detailed analysis of the requirements of custom as a source of law. In particular, no definition of custom or commercial usage has been included in any commercial treaties or unofficial restatements. For this reason, the notion of international custom is a better candidate for analysing the phenomenon of custom on the Internet.

Secondly, international public law is the only international legal regime that is unquestionably recognised by the international community as being independent from national legal systems. As a result, international custom is a recognised source of law independent of national legislatures. Modern Law Merchant has so far not gained such a widespread recognition[452], although it is firmly approaching in this direction.[453]

Thirdly, international custom as the name suggests has an international character. Its law-making power is accepted by 191 countries[454] that are members of the United Nations. In this sense, international custom as a source of law has a universal scope of application. It is recognised by all countries on the globe despite diverse cultures and legal traditions, although not all of them have had an opportunity to participate in the development of its theory or its norms.

Fourthly, international custom is, next to a treaty, a very important source of international public law. In fact, numerous authors consider it to be the most fundamental source of international public law.[455] Furthermore, international custom has been referred to in a number of cases before the International Court of Justice and generated a very rich literature.

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[451] Goode, R. (1997) p.1.
[452] See e.g. De Ly, F. (1992)
[453] e.g. Andersen, C. B. (Fall 1998); Bonell, M. J. (2001)
[454] Last country that joined United Nations was East Timor on 27th of September 2002. See United Nations (2002)
[455] See e.g. Stern, B. (2001) p.89.

Finally, international customary and treaty law define relations between independent states.[456] Similarly to the Internet, there is no central authority above the states although the international community developed institutional and judicial infrastructure[457] to streamline international cooperation. In summary, international customary law operates in a framework that is most similar to the supranational and decentralised character of the Internet.

This chapter has been arranged as a presentation of issues associated with this source of law. The most important one is the necessity of two elements: the element of practice and the subjective element of feeling bound by it. The discussion will centre on these two notions as they constitute the most fundamental elements of the notion of international custom. The chapter will analyse the views of jurisprudence and the selected International Court of Justice (I.C.J.) case law on the matter. However, as will be shown, it is mainly the doctrine of international law that has developed the concept of international custom during the last four hundreds years or so. The International Court of Justice did not exist prior to the twentieth century and in consequence, its understanding of custom has been based on the earlier doctrinal developments. On the other hand, the I.C.J. has enriched the theoretical developments and applied them in practice. The importance of the I.C.J. case law lies especially in the ways the I.C.J. proved the existence of international custom. It is primarily from this perspective that the judgements of the I.C.J. will be examined.

The presentation has also some limitations. The issue of custom formation, enforcement as well as the philosophical justification for a binding force of custom will not be the main focus of this chapter. Also, the relation of custom to treaty and other sources of international law will be largely ignored. Finally, the interrelation between international customary law and national legal systems will be excluded from the scope of this chapter.

The following sections will discuss the most important issues surrounding the concept of international custom in greater detail. First, the role of international custom will be outlined followed by the outline of issues surrounding its definition. Secondly, the constitutive elements of custom will be studied. The characteristics of practice will be examined, followed by the problems associated with the subjective element of custom. Thirdly, the issue of judicial confirmation of custom will be outlined. Finally, practical problems associated with evidencing international custom will be studied.

4.2 The role of custom in international law

Custom is a fundamental source[458] of international law.[459] As Westlake put it in the beginning of the twentieth century,

> "Custom and reason are the two sources of international law."[460]

The most profound norms of international law of the peace and war such as the freedom of the seas[461], air[462] and cosmos[463], principles relating to treaties[464], status of diplomats and consuls[465]

[456] See art.2.1 in United Nations Conference on International Organization at San Francisco (26 June 1945).
[457] Ibid. see art.7. See Glossary.
[458] The word source has many potential meanings and some authors suggested abandoning it. See e.g. Kelsen, H. (1966) pp.437-438. The expression custom as a source of law will nevertheless be used in this study as an equivalent of the expression custom as the law creating fact.
[459] See also e.g. Bourquin, M. (1931) p.61; Fauchille, P. (1922) p.41; Kunz, J. L. (October 1953) p.663; Oppenheim, L. (1955) pp.25-26; Stern, B. (2001) p.89; Williams, J. F. S. (1939) p.41.
[460] Westlake, J. (1910) p.14.
[461] See e.g. Slouka, Z. J. (1969).
[462] See e.g. Kunz, J. L. (October 1953) p.666.
[463] See e.g. Cheng, B. (1965).
[464] See e.g. Kontou, N. (1994); Villiger, M. E. (1997).

originated from customary practice of states. Similarly, a principle *pacta sunt servanda* requiring contractual promises to be upheld or the rule that harm should be subject to compensation are customary norms of particular importance often referred to as general principles of law.[466] The former principle is the basis of all the international agreements.[467] Recently, international custom is increasingly used to justify the existence of human rights[468] or the necessity of environmental protection.[469]

The customary norms are codified in the treaties, which often add new provisions to fill gaps left by a lack of customary principles governing a given matter.[470] However, the new written norms binding only signatories, can actually give raise to new international customs, therefore binding states that are not parties to a treaty. As the Vienna Convention on the Law of Treaties stipulates in Article 38:

> "Nothing (…) precludes a rule set forth in a treaty from becoming binding upon a third State as a customary rule of international law, recognized as such."[471]

Notwithstanding progressing codification of international customary law, especially in the form of multilateral international treaties, it remains the only source of generally binding international law.

Despite its profound importance in the international relations, the characteristic of international custom remains the subject of a very hot scholarly and juridical debate. There is a great deal of uncertainty as to what constitutes custom, how is it formed and how to evidence it. Tunkin made the observation:

> "The whole concept of international law depends upon whether this problem is solved one way or another."[472]

Unfortunately, the doctrine and I.C.J. decisions are divided on virtually all the issues concerning this concept. This has led some of the authors to question the very existence, necessity or utility of custom as a source of law.[473] Despite these difficulties, several elements of custom have been identified and they form a useful starting point to the discussion of this phenomenon.

4.3 The definition of international custom

Custom in modern international law is invariably defined with reference to the Statute of the International Court of Justice, itself an integral part of the Charter of the United Nations.[474] Article 38 of the Statute states that:

> "The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply: (…) international custom as evidence of general practice accepted as law"[475]

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[465] See e.g. Briggs, H. W. (October 1951); Nussbaum, A. (1954).
[466] According to article 38 of the Statute of the I.C.J., general principles of law are the source of international law next to the treaty and international custom. See e.g. Oppenheim, L. (1955).
[467] See e.g. Kunz, J. L. (October 1953) p.665.
[468] See e.g. Meron, T. (April 1996); Simma, B. and Alston, P. (1992).
[469] See e.g. Brownlie, I. (1973); Palmer, G. (April 1992).
[470] See e.g. de Visscher, C. (1925); Thirlway, H. W. A. (1972); see also e.g. Starke, J. G. (1994).
[471] International Law Comission (22 May 1969).
[472] Tunkin, G. I. (1961) p.419.
[473] See e.g. Kelly, P. (Winter 2000); van Hoof, G. J. H. (1983) p.113.
[474] United Nations Conference on International Organization at San Francisco (26 June 1945).

The definition distinguishes two elements of custom: material element of general practice and the subjective element of its acceptance as law and remains the cornerstone of numerous other definitions proposed in the literature.[476]

Many authors have noticed the poor quality of the Article 38 definition of international custom and criticised it on a number of grounds.[477] First, it is illogical to state that custom is evidence of general practice, as in fact, only the opposite can be true, namely that only general practice can serve as the evidence of custom.[478] Second, the Court cannot apply a custom, but only customary law.[479] In addition, the definition requires practice to be general and eliminates the so called local or particular practices that are of importance in international law.[480] It should be reminded that the customs of local scope were the essential feature of the past European law, before the systems of statutory laws emerged.[481] Furthermore, international custom is not required to be old, moral or reasonable, consistent or universally accepted. The issue of objections to the practice and the role of judiciary in recognising the validity of custom have also not been dealt with.

The International Court of Justice has referred to the international custom in numerous judgements.[482] For instance, in the 1969 *North Sea Continental Shelf* case the Court explained:

> "Not only must the acts concerned amount to a settled practice, but they must also be such, or be carried out in such a way, as to be evidence of a belief that this practice is rendered obligatory by the existence of a rule of law requiring it. The need for such a belief, i.e., the existence of a subjective

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[475] See art.38 para. 1(b) in United Nations Conference on International Organization at San Francisco (26 June 1945). Similar definition was included in the Statute of the Permanent Court of Justice, which was the predecessor of the International Court of Justice in the middle-war period. Both Courts will be referred to as the World Court.

[476] See e.g. Brownlie, I. (1990) pp.4-11; Hudson, M. O. (3 March 1950) p.26; Judge de Castro (1974) p.89.

[477] See e.g. Wolfke, K. (1993) pp.1-8 and the literature cited there. See also e.g. de Visscher, C. (1925) p.352; Sørensen, M. (1960) pp.35-36. citing Kosters, Cheng, B. (1965) p.36.

[478] See Kunz, J. L. (October 1953) p.664; Sørensen, M. (1960) p.35. See also *Fisheries Case (United Kingdom v. Norway)* (1951) para.p.142; Villiger, M. E. (1997) p.15.

[479] See e.g. Villiger, M. E. (1997) p.15.

[480] See e.g. Asylum Case (Columbia / Peru) (1950); Case Concerning Right of Passage Over Indian Territory (Portugal v. India) (1960).

[481] See chapter 3.

[482] See especially Asylum Case (Columbia / Peru) (1950); Case Concerning Delimitation Of The Maritime Boundary In The Gulf Of Maine Area (Canada v. United States of America) (12 October 1984); Case Concerning Kasikili/Sedudu Island (Botswana/Namibia) (13 December 1999); Case Concerning Maritime Delimitation And Territorial Questions Between Qatar And Bahrain (Qatar v. Bahrain) - Merits (16 March 2001); Case Concerning Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. United States of America) (1986); Case Concerning Oil Platforms (Islamic Republic Of Iran v. United States Of America) - Preliminary Objection (12 December 1996); Case Concerning Right of Passage Over Indian Territory (Portugal v. India) (1960); Case Concerning Rights Of Nationals Of The United States Of America In Morocco (France / United States of America) (27 August 1952); Case Concerning The Aerial Incident Of 10 August 1999 (Pakistan v. India) (21 June 2000); Case Concerning The Arrest Warrant Of 11 April 2000 (Democratic Republic Of The Congo v. Belgium) (14 February 2002); Case Concerning The Barcelona Traction, Light And Power Company, Limited (New Application: 1962) (Belgium V. Spain) (5 February 1970); Case concerning the Gabcikovo-Nagymaros project (Hungary/Slovakia) (1997); Case Concerning The Land And Maritime Boundary Between Cameroon And Nigeria (Cameroon v Nigeria: Equatorial Guinea Intervening) (10 October 2002); Case Concerning the Territorial Dispute (Libyan Arab Jamahiriya / Chad) (3 February 1994); Continental Shelf (Libyan Arab Jamahiriya/Malta) (1985); The Corfu Channel Case (Merits) (1949); Fisheries Case (United Kingdom v. Norway) (1951); Fisheries Jurisdiction (Federal Republic of Germany v. Iceland) (25 July 1974); Fisheries Jurisdiction (Federal Republic of Germany v. Iceland) (2 February 1973); Fisheries Jurisdiction (United Kingdom of Great Britain and Northern Ireland v. Iceland) (2 February 1973); Fisheries Jurisdiction (United Kingdom of Great Britain and Northern Ireland v. Iceland) (25 July 1974); Interhandel (Switzerland v. United States of America) (1959); LaGrand Case (Germany v. United States of America) (27 June 2001); Legality Of The Threat Or Use Of Nuclear Weapons (Advisory Opinion) (8 July 1996); North Sea Continental Shelf (Federal Republic of Germany / Denmark; Federal Republic of Germany / Netherlands) cases (1969); Nottebohm Case (Liechtenstein v. Guatemala) (1955); Nuclear Tests (Australia v. France) (20 December 1974); Reservations To The Convention On The Prevention And Punishment Of The Crime Of Genocide (28 May 1951); Western Sahara (Advisory Opinion) (1975); The Case of the S.S. "Lotus" (1927); The S.S. "Wimbledon" (1923).

element, is implicit in the very notion of the opinio juris sive necessitatis. The States concerned must therefore feel that they are conforming to what amounts to a legal obligation. The frequency, or even habitual character of the acts is not in itself enough. There are many international acts, e.g., in the field of ceremonial and protocol, which are performed almost invariably, but which are motivated only by considerations of courtesy, convenience or tradition, and not by any sense of legal duty."[483]

Here, the acceptance as law is equated with the feeling that a practice is required by law. In the 1985 *Continental Shelf case* the Court confirmed that: "the material of customary international law is to be looked for primarily in the actual practice and opinio juris of States".[484] The Court repeated this pronouncement in the *Nuclear Weapons Advisory Opinion* and in the *Nicaragua case*.[485] In the latter case the Court further clarified that:

"Where two States agree to incorporate a particular rule in a treaty, their agreement suffices to make that rule a legal one, binding upon them; but in the field of customary international law, the shared view of the Parties as to the content of what they regard as the rule is not enough. The Court must satisfy itself that the existence of the rule in the opinio juris of States is confirmed by practice."[486]

On the other hand, in the *Asylum case* concerning common practice peculiar to Latin American states the Court examined the concept of regional custom.[487] Referring to contesting Peru and Columbia it stated:

"The Party which relies on a custom of this kind must prove that this custom is established in such a manner that it has become binding on the other Party. The Colombian Government must prove that the rule invoked by it is in accordance with a constant and uniform usage practised by the States in question, and that this usage is the expression of a right appertaining to the State granting asylum and a duty incumbent on the territorial State."[488]

Here the practice does not need to be general as the case discusses the regional custom pertaining to states in Latin America. On the other hand, it has to be constant, meaning that it cannot be interrupted. Moreover, it has to be uniform, meaning that it must be practiced by all states in question.

The discussion of what constitutes international custom continues to be recognised as one of the most difficult problems in international law.[489] In 1936 Basdevant observed that

"(…) the ideas of jurists in regard to the character of custom have attained neither the unity nor the clarity."[490]

The situation has not changed since then. Conversely, one could say that it even got worse, as new interpretations of custom have been proposed that radically changed the traditional association of it with a long lasting and widespread practice of doing something. Legal doctrine favouring the *a priori* analysis of the international customs,[491] greatly contributed to the preservation of endless disputes. Moreover, the discussion is obscured by the fact that many authorities use the terms like custom, practice or the psychological element but attach a different

[483] *North Sea Continental Shelf (Federal Republic of Germany / Denmark; Federal Republic of Germany / Netherlands) cases* (1969) p.44 para.77.
[484] Continental Shelf (Libyan Arab Jamahiriya/Malta) (1985) para.27.
[485] *Case Concerning Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. United States of America)* (1986) p.97 para.183; *Legality Of The Threat Or Use Of Nuclear Weapons (Advisory Opinion)* (8 July 1996).
[486] Case Concerning Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. United States of America) (1986) pp.97-98 para.184.
[487] See also e.g. Briggs, H. W. (October 1951); de Visscher, C. (1957) pp.148-149.
[488] Asylum Case (Columbia / Peru) (1950) p.276; see also Guggenheim, P. (1952) p.70.
[489] See e.g. Sørensen, M. (1960) p.47; van Hoof, G. J. H. (1983) p.85.
[490] "les idées des juristes sur le caractère de la coutume n'ont atteint ni à l'unité ni à la clarté" Basdevant, J. (1936) p.508.
[491] Ibid.

meaning to them. Also, many constituent elements of custom are interrelated which hurdles systematised presentation of them. Furthermore, some analysts refer to both elements only in the context of describing a customary rule and reject them as an explanation of the process of their formation.[492] The analysis is further complicated by the fact that many authorities remain silent on certain aspects of the problem. In consequence, one can observe a rapid proliferation of works that are very difficult to analyse, not to mention the complexity of systematisation of them.

Some patterns, however, can be discerned. In the twentieth century the concept of international custom as consisting of the two elements of practice and its acceptance as law has been widely accepted.[493] However, the dualistic conception quickly turned out to mean different things to different authorities. The jurisprudence is divided as to the meaning of the subjective element. Two different schools of interpretation emerged: one that associates it with a feeling or conviction that the rule embodied in the widespread practice is binding (*opinio iuris*) and the other that interprets it as acquiescence in or acceptance of the practice as law.[494] The latter approach is most often associated with the ancient idea of custom as a tacit treaty (*pactum tacitum*) will be referred to as a consensual or voluntaristic conception of custom. The former approach, much younger than the voluntaristic conception of custom, will be referred to as the "belief" approach (or the "conviction" approach or *opinio iuris* approach). The following sections will discuss these points in greater detail as they constitute "rules on rules"[495] as far as the ascertainment of the existence of customary norms is concerned.

4.4 Practice

Practice is the essence of custom but its characteristic is sometimes troublesome. The question is whose practice contributes to the formation of international customary rule. International law has traditionally been concerned with the relations between states.[496] In this sense, states are the primary subjects of international practice. Also, some international organisations like United Nations are recognised as subjects of international law. Recently also private persons and companies started to be considered in a limited sense as subjects of international law.[497]

4.4.1 The notion of practice

What types of conduct constitute practice is a subject of an argument.[498] The concept of practice is undisputedly taken to refer to actions.[499] The action is traditionally connected with positive activities of organs competent to bind a state internationally (e.g. a head of state, foreign minister, diplomats) although this assumption has been extended to concordant legislation of states and

[492] See e.g. Ago, R. (1956) p.850. See also e.g. Stern, B. (2001) p.93.
[493] See e.g. Akehurst, M. (1974-1975); Akehurst, M. (1987); Bernhardt, R. (1992) p.vol.1; Danilenko, G. M. (1983); Degan, V. D. (1997); Guggenheim, P. (1967); Ways and Means of Making the Evidence of Customary International Law More Readily Available, Preparatory Work within the Purview of Article 24 of the Statute of the International Law Commision, Memorandum submitted by the Secretary-General. (1949); Thirlway, H. W. A. (1972); Tunkin, G. I. (1974); van Hoof, G. J. H. (1983); Villiger, M. E. (1997); Wolfke, K. (1993). See also de Visscher, C. (1957) pp.148-156; Ridruejo, J. A. P. (1998) p.45; Rosenne, S. (2001) p.58; Sørensen, M. (1960) p.36.
[494] See below.
[495] Villiger, M. E. (1997) p.16. citing de Aréchaga.
[496] See e.g. Thirlway, H. W. A. (1972) p.7.
[497] See e.g. Nottebohm Case (Liechtenstein v. Guatemala) (1955); Oppenheim, L. (1955) p.6. But see also e.g. Akehurst, M. (1974-1975) p.11.
[498] See e.g. Barberis, J. (1967).
[499] See e.g. Thirlway, H. W. A. (1972) pp.57-60; Villiger, M. E. (1997) p.5; Wolfke, K. (1993) p.41. van Hoof, G. J. H. (1983) p.107.

decisions of municipal courts.[500] However, there is a dispute whether statements, negotiating positions or unilateral declarations may constitute party's practice. Another difficult question is whether abstentions from actions constitute state practice.

One widely represented view, insisted that only positive actions constitute practice.[501] Judge Read in his often cited dissenting opinion to the *Anglo-Norwegian Fisheries case* said in respect to the practice:

> "This cannot be established by citing cases where coastal States have made extensive claims, but have not maintained their claims by the actual assertion of sovereignty over trespassing foreign ships. Such claims may be important as starting points, which, if not challenged, may ripen into historic title in the course of time. The only convincing evidence of State practice is to be found in seizures, where the coastal State asserts its sovereignty over trespassing foreign ships and by maintaining its position in the course of diplomatic negotiation of international arbitration."[502]

D'Amato has echoed the above statement:

> "(…) a claim is not an act. As a matter of daily practice, international law is largely concerned with conflicting international claims. But the claims themselves, although they may *articulate* a legal norm, cannot constitute the material component of custom."[503]

According to Wolfke:

> "(…) repeated verbal acts are also acts of conduct in their broad meaning and can give rise to international customs, but only to customs of making such declarations, etc., and not to customs of the conduct described in the content of the verbal acts."[504]

On the other hand, Akehurst argues that this is a minority view.[505] He argues that "it is artificial to distinguish between what a State does and what it says"[506] because recognition of one State by another "is no more than a form of words."[507] Moreover, he argues that physical acts can be no more consistent than words, thus refuting D'Amato's claim that the state can act in only one way at one time.[508] Thirlway on the other hand, argues that claims and other statements can be considered as state practice, but only in the context of some concrete situation.[509] Villiger, in turn, adopted the least restrictive view on qualification of concrete and abstract statements as state practice.[510] The judiciary practice of the I.C.J. seems to confirm this view. For instance, in the *Nicaragua case* and *Nuclear Weapons Advisory Opinion* the Court made extensive references to abstract statements as constituting state practice.[511]

In regard to the second problem, there is an ongoing discussion in the literature as to whether abstention or lack of positive acts can be considered as practice and in consequence create prohibitory or permissible customary norms.[512] In the *Lotus case* the Permanent Court of International Justice (P.C.I.J.) acknowledged the possibility of practice consisting of

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[500] See e.g. Degan, V. D. (1997) pp.149-150.
[501] See e.g. D'Amato, A. A. (1971) p.88; van Hoof, G. J. H. (1983) p.107; Villiger, M. E. (1997) p.5; Wolfke, K. (1993) pp.41-42.
[502] *Fisheries Case (United Kingdom v. Norway)* (1951) p.191.
[503] D'Amato, A. A. (1971) p.88.
[504] Wolfke, K. (1993) p.42. citing Judge Radhabinod Pal.
[505] Akehurst, M. (1974-1975) p.2.
[506] Ibid. p.3.
[507] Ibid. citing Parry in Parry, C. (1965) p.65.
[508] Akehurst, M. (1974-1975) p.3; D'Amato, A. A. (1971) p.51.
[509] Thirlway, H. W. A. (1972) p.58., see also Akehurst, M. (1974-1975) pp.4-8.
[510] Villiger, M. E. (1997) p.19.
[511] See e.g. Case Concerning Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. United States of America) (1986) p.100 para.189; Legality Of The Threat Or Use Of Nuclear Weapons (Advisory Opinion) (8 July 1996) para.70.
[512] See e.g. Tunkin, G. I. (1974) p.116.

abstentions.[513] The case dealt with the abstention from initiating criminal proceedings against foreign citizens. Turkish representative and some judges argued that such an abstinence from action cannot create custom. On the other hand, French representative Basdevant argued that:

> "The custom observed by states to refrain from prosecuting foreign citizens charged with causing collisions of vessels in the open sea constitutes a customary norm of international law."[514]

The Court concluded that:

> "(…) only if such abstention were based on their being conscious of a duty to abstain would it be possible to speak of an international custom."

Because such a consciousness was not proved, the Court rejected the claim that such custom had emerged. However, judges Nyholm and Altamira expressly opposed the idea that abstinence from action can create customary law.[515] The argument that absence of action cannot create custom has found recognition in the doctrine[516], but a majority seems to support the opposite view.[517]

In summary, even the relatively simple question of what constitutes "practice" is problematic in the doctrine of international law. There is no dispute as to whether positive acts constitute practice, but the problem arises in the context of abstentions from acting as well as the treatment of statements about act. A majority seems to accept the thesis that abstention can be considered as a practice. Also, a majority seems to accept the claim that statements whether abstract or general should count as state practice.

4.4.2 Duration of practice

The second problem relates to the question how old the custom should be. The ordinary meaning of the term "custom" presupposes the existence of widespread practice for a very long time.[518] Canon law requires 40 or 100 years of practice.[519] Although definition of international custom in the Article 38 of the Statute did not mention the importance of time, it was listed by Hudson in his influential characteristic of international custom.[520] Also Kelsen spoke of custom as a long-established practice of states that creates law.[521] Such a requirement could also be inferred from I.C.J.'s requirement of constant and uniform usage in the Asylum case and fisheries rights "attested by very ancient and peaceful usage" formulation in the *Anglo-Norwegian Fisheries case*.[522]

However, the requirement of longevity of practice seems to have been generally relaxed in the contemporary doctrine of international law.[523] Even before the Second World War authors like Basdevant argued that international custom can be recognized after a short period of time.[524] Kunz argued that customary norm permitting sovereignty over adjacent airspace developed in a

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[513] Villiger argues that the position of the Court is not clear. Villiger, M. E. (1997) p.37.
[514] *The Case of the S.S. "Lotus"* (1927) p.25.
[515] *Dissenting Opinion of Judge Altamira on Lotus Case* (1927) pp.59, 96; *Dissenting Opinion of Judge Altamira on Lotus Case* (1927) p.112.
[516] See e.g. Strupp, K. (1934) p.307. See also Gianni (1931) p.126.
[517] See e.g. Kunz, J. L. (October 1953) p.666; Thirlway, H. W. A. (1972) p.58. Tunkin, G. I. (1961) pp.421-422.
[518] See dictionary definition of custom in chapter 1.
[519] Bouscaren, L. T. and Ellis, A. C. (1957) pp.40-41.
[520] Hudson, M. O. (3 March 1950) p.26.
[521] Kelsen, H. (1966) p.441; Kelsen, H. (1952) p.307.
[522] *Fisheries Case (United Kingdom v. Norway)* (1951) p.142.
[523] See e.g. Baxter, R. R. (1970) p.67; Brownlie, I. (1990) p.5; Kunz, J. L. (October 1953) p.666; Lachs, M. (1972) pp.109-110; Ridruejo, J. A. P. (1998) p.47 para 2.2.4.
[524] Basdevant, J. (1936) p.513.

short timeframe before the First World War.[525] But after the war this contention has been almost universally accepted in international law. Tunkin stated that

> "(…) the element of time does not in itself create presumption in favour of the existence of a customary norm of international law. There is even less ground to think that juridically it is necessary for the customary rule to be "old" or of long standing."[526]

Observing the rapid technological progress in regard to the exploration of cosmos, Cheng formulated his theory of "instant custom".[527] Consequently, some authorities claimed that the "time factor as a separate element in the proof of custom now seems irrelevant."[528]

Similar views were expressed by the I.C.J. in the ground breaking 1969 *North Sea Continental Shelf cases*. Observing the swift technological advances in the exploration of the continental shelf the judges said that

> "(…) the passage of only a short period of time is not necessarily, or of itself, a bar to the formation of a new rule of customary international law".[529]

It should be stressed, however, that this requirement was based upon the assumption of the existence of the previous treaty norm and subsequent extensive and virtually uniform practice of states including those whose interests are specially affected together with the recognition of a practice in question as a law.[530] Some authorities outlined the possible timeframe for the development of custom. As judge Tanaka put it in his dissenting opinion to the above case:

> "(…) the speedy tempo of present international life promoted by highly developed communication (...) had minimized the importance of the time factor and has made possible the acceleration of the formation of customary international law. What required a hundred years in former days now may require less than ten years."[531]

However, as far as the proof of time factor is concerned, it is usually omitted, although there are examples of detailed ascertainment of a timeframe of a given practice. For instance, in the *Right of Passage case* dealing with an alleged regional custom of passage over Indian territory to two Portuguese enclaves, the Court stated that:

> "(…) [the] practice having continued over a period extending beyond a century and a quarter unaffected".[532]

The *North Sea Continental Shelf cases* also had a clearly outlined timeframe, extending from the 1958 as the date of signing the Convention to the date of dispute.[533] And the *Nuclear Weapons Advisory Opinion* examined the non-recourse to nuclear weapons over the past fifty years.[534]

In summary, the requirement of a long lasting practice seems to be generally abandoned in the contemporary doctrine of international law. International custom can develop in a short timeframe and it seems that it does not have to be proved separately.

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[525] Kunz, J. L. (October 1953) p.666.
[526] Tunkin, G. I. (1961) pp.419-420, references omitted; see also Tunkin, G. I. (1974) pp.114-115.
[527] Cheng, B. (1965)
[528] See e.g. Baxter, R. R. (1970) p.67.
[529] See e.g. North Sea Continental Shelf (Federal Republic of Germany / Denmark; Federal Republic of Germany / Netherlands) cases (1969) para.74.
[530] Ibid. para.74.
[531] Judge Tanaka (1969) p.177.
[532] *Case Concerning Right of Passage Over Indian Territory (Portugal v. India)* (1960) p.40.
[533] North Sea Continental Shelf (Federal Republic of Germany / Denmark; Federal Republic of Germany / Netherlands) cases (1969) para.74.
[534] Legality Of The Threat Or Use Of Nuclear Weapons (Advisory Opinion) (8 July 1996) para.67.

4.4.3 Generality of practice

Article 38 of the Statute speaks of the general practice accepted as law. The I.C.J. confirmed in the *Nicaragua case* that

> "(…) the Court may not disregard the essential role played by general practice."[535]

In the 1951 *Fisheries case* the Court repeated the requirement of the generality of practice; lack thereof prohibited it from establishing the customary norm of ten mile rules for bays in this case.[536] In the *North Sea Continental Shelf cases* mentioned above the Court argued that practice must be settled and that custom can be formed quicker given an "extensive and virtually uniform" practice of states, including states that are "specially affected".[537]

Although Article 38 speaks of general practice accepted as law, the I.C.J. and the doctrine generally recognised the local character of custom.[538] This is in line with the nature of custom, which from an historical perspective was primarily source of particular or local law.[539] The locality of custom has also been expressly recognised by the P.C.I.J. in *Asylum case*, the *Rights of US nationals in Morocco case* and the *Right of Passage case*.[540] In the *Right of Passage case* the I.C.J. conceded that the relation between two states could only result in the establishment of local custom. *The Asylum case* on the other hand, supports the claim that custom can exist only in relation to the particular region of the world. In the *Rights of US nationals in Morocco case* the Court repeated this formulation.[541] In all these cases the Court required a uniform usage.[542] This requirement can be justified by the nature of local custom that the latter case dealt with, as it is impossible to have other than a unanimous practice between two states involved. It can also be accepted in case of regional custom.

The doctrine remains divided on the question of whether practice should be general or universal in case of non-regional custom. According to Tunkin,

> "(…) customary norms of international law are premised first of all on universal practice."[543]

This view is a consequence of a philosophical stance of the voluntarists, which emphasise the importance of a concordant will of states in the creation of custom that in principle, can only bind these states and not others. However, the minority states can be presumed to accept a custom as a result of their silence and lack of protests.[544]

In the view of a majority of the doctrine however, the practice does not have to be universal or unanimous.[545] But the exact formula of what generality means turned out to be a major problem

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[535] Case Concerning Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. United States of America) (1986) p.98 para.184.
[536] *Fisheries Case (United Kingdom v. Norway)* (1951) p.131.
[537] *North Sea Continental Shelf (Federal Republic of Germany / Denmark; Federal Republic of Germany / Netherlands) cases* (1969) p.43 para.74.
[538] See e.g. Bourquin, M. (1931) p.63; Fauchille, P. (1922) p.43 para 47(1); Ridruejo, J. A. P. (1998) p.49 para 2.2.6.. See especially Barberis, J. (1992).
[539] Smith argues that in continental Europe in Middle Ages the word custom was synonymous with local law, Smith, M. (June 1903) p.261. See chapter 3.
[540] See e.g. Asylum Case (Columbia / Peru) (1950); Case Concerning Right of Passage Over Indian Territory (Portugal v. India) (1960); Case Concerning Rights Of Nationals Of The United States Of America In Morocco (France / United States of America) (27 August 1952).
[541] *Case Concerning Rights Of Nationals Of The United States Of America In Morocco (France / United States of America)* (27 August 1952) p.200.
[542] *Asylum Case (Columbia / Peru)* (1950) p.276; *Case Concerning Right of Passage Over Indian Territory (Portugal v. India)* (1960) p.40.
[543] Tunkin, G. I. (1961) p.422.
[544] Stern, B. (2001) p.98.
[545] See e.g. Kunz, J. L. (October 1953) p.666; Villiger, M. E. (1997) p.29.

for the jurisprudence. Some authors recognising the relative character of this term leave its ascertainment to the discretion of the judge.[546] Others try to present more precise criteria. For instance, Strupp asserted that if more than a half of states adhered to a given norm, then it could be presumed that it applies to the whole community of states.[547] Other authorities made reference to an overwhelming majority:

> "The practice must be "general," not universal; but a mere majority of states is not enough. The practice must have been applied by the overwhelming majority of states which hitherto had an opportunity of applying it."[548]

Villiger asserted that the term general indicates "common and widespread practice among many States".[549] Kelsen maintained that:

> A "long-established practice of a great number of states, including the states which, with respect to their power, their culture, and so on, are of certain importance, is sufficient."[550]

Mejiers drawing similarities to treaty negotiation claimed that where a small number of countries is involved, the custom must be unanimously approved, "but if a larger number of states is involved then two-thirds of them is usually enough."[551]

In this respect one should mention the *North Sea Continental Shelf cases* where the Court argued:

> "With respect to the other elements usually regarded as necessary before a conventional rule can be considered to have become a general rule of international law, it might be that, even without the passage of any considerable period of time, a very widespread and representative participation in the convention might suffice of itself, provided it included that of States whose interests were specially affected."[552]

Therefore, a representative participation in a convention, can, in the Court's view, amount to the formation of a general customary norm. In respect to the representative participation, one should mention opinion of Baxter who argued that "there must be some weighting of the "votes" cast for and against the rule according to the size of the State, the volume of its international relations and, in general, the contribution that it makes to the development of international law."[553]

In summary, practice can be general, particular or local scope. In the case of particular or local practice the uniformity has to be proved. In the case of practice of general scope however, a practice does not have to be uniform but the exact formula of how many states should adhere to a given practice ranges from half of the participants to virtual unanimity of participants.

4.4.4 Consistency of practice

Another problem is created by the question of how consistent over time the practice should be. The P.C.I.J. in the *Wimbledon case* stated that practice should be constant.[554] Similar views were expressed in the already cited *Asylum* and *Right of Passage* cases where the Court required a

[546] See e.g. Sørensen, M. (1960) pp.38-39.
[547] Strupp, K. (1934) p.310.
[548] Kunz, J. L. (October 1953) p.666. citing The Paquete Habana (1900), see also e.g. Oppenheim, L. (1955).
[549] Villiger, M. E. (1997) p.29.
[550] Kelsen, H. (1966) p.445.
[551] Mejiers, H. (1978) p.15.
[552] North Sea Continental Shelf (Federal Republic of Germany / Denmark; Federal Republic of Germany / Netherlands) cases (1969) p.42 para 73. On specially affected states see Sørensen, M. (1960) p.40. Villiger, M. E. (1997) pp.30-33.
[553] Baxter, R. R. (1970) p.66.
[554] *The S.S. "Wimbledon"* (1923) p.25.

consistent usage.[555] Similarly, the Joint Separate opinion of judges to the 1974 *Fisheries jurisdiction case* stated that:

> "contradiction in the practice of States or inconsistent conduct, particularly emanating from these very States which are said to be following or establishing the custom, would prevent the emergence of a rule of customary law."[556]

But the I.C.J. has sometimes relaxed the requirement of absolute consistency of practice. For instance, in the *Nicaragua case* the Court argued that practice has to be "in general (…) consistent" but not absolutely perfect:[557]

> "The Court does not consider that, for a rule to be established as customary, the corresponding practice must be in absolutely rigorous conformity with the rule. In order to deduce the existence of customary rules, the Court deems it sufficient that the conduct of States should, in general, be consistent with such rules, and that instances of State conduct inconsistent with a given rule should generally have been treated as breaches of that rule, not as indications of the recognition of a new rule."[558]

According to some authorities, customary norm in question should be evidenced by consistent practices, because diverging practices cannot contribute to the development of customary norm.[559] A majority, however, seems to accept the possibility of interruption of practice. For Tunkin continuity such as the passage of time does not play decisive role in the formation of a custom.[560] Brownlie argues that substantial uniformity is required although complete uniformity is not necessary.[561]As Akehurst stated referring to the 1951 *Fisheries case*[562]:

> "Major inconsistencies in the practice (that is a large amount of practice which goes against the 'rule' in question) prevent the creation of a customary rule. Minor inconsistencies (that is a small amount of practice which goes against the rule in question) do not prevent the creation of customary rule (…), although in such cases the rule in question probably needs to be supported by a large amount of practice, in order to outweigh the conflicting practice".[563]

In summary, there are various degrees of consistency suggested by the jurisprudence. However, there seems to be a general agreement that the practice should be consistent although small inconsistencies seem to be accepted.

4.4.5 Objections to practice

Another important issue perplexing international lawyers is a problem of the persistent objector to the customary practice.[564] The concept has appeared in the Anglo-Norwegian *Fisheries case* where the Court argued that the "ten miles" appertained to the territorial sea "would appear to be

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[555] See e.g. Asylum Case (Columbia / Peru) (1950); Case Concerning Right of Passage Over Indian Territory (Portugal v. India) (1960); Case Concerning Rights Of Nationals Of The United States Of America In Morocco (France / United States of America) (27 August 1952).
[556] Judges Forster, B., Jimenez De Arechaga, Nagendra Singh and Ruda, (1974) p.50 para.16.
[557] *Case Concerning Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. United States of America)* (1986) p.98 para. 186.
[558] Ibid. p.98 para.186.
[559] See e.g. Cavaglieri, A. (1929) pp.336-337; Kunz, J. L. (October 1953) p.666.
[560] See e.g. Tunkin, G. I. (1961) pp.420-421.
[561] Brownlie, I. (1990) p.5.
[562] *Fisheries Case (United Kingdom v. Norway)* (1951) p.138.
[563] See e.g. Akehurst, M. (1987) p.28.
[564] See e.g. Brownlie, I. (1990) p.10; *Fisheries Case (United Kingdom v. Norway)* (1951) p.131., see also e.g. Wolfke, K. (1993).

inapplicable against Norway inasmuch as she has always opposed any attempt to apply it to the Norwegian coast."[565]

Villiger argues that a state is not bound by the eventual customary norm if it opposes a practice from the early stages and does it consistently.[566] The notion of persistent objector is clearly linked with the voluntaristic conception of customary law, which rests on the grounds that a custom binds a given state only if it has consented to it, either expressly or tacitly.[567] However, voluntarists were not always consistent in their argumentation and admitted that the protest of a state is not valid against mandatory norms of international law or *ius cogens*.[568] Even some authors supporting *opinio iuris* element thus disfavouring voluntaristic conception of customary law agree that the will of state may create an exception in the application of international law.[569] For instance, Kunz argued that protests prevent the emergence of international custom:

> "Protests by other states or declarations that they, even if submitting to this practice, do so only *ex gratia*; protests against the norm on which an international decision is based, even in carrying out this decision, prevent the coming into existence of a new norm of customary general international law."[570]

In short, however, a majority of writers seem to have accepted this concept, which proves the peculiar character of international relations.[571]

In this context, one should mention the potential consequences of lack of objections on the emergence of international custom. Many voluntarists argue that lack of protests may amount to the acceptance of practice through acquiescence.[572] The creation of such a presumption of a universal acceptance of given norm is a voluntaristic way of allowing customary norms to bind generally. For instance Wolfke argues that:

> "(…) toleration of a practice by other states, considering all relevant circumstances, justifies the presumption of its acceptance as law, which in turn leads to the formation of a new customary rule of international law."[573]

Tunkin argues that when an emerging rule affects a state, its absence of objections after a sufficient time, can be regarded as a tacit recognition of a norm.[574] However, as the I.C.J. argued in the *Gulf of Maine case*:

> "while it may be conceded that the United States showed a certain imprudence in maintaining silence after Canada had issued the first permits for exploration on Georges Bank, any attempt to attribute to such silence, a brief silence at that, legal consequences taking the concrete form of an estoppel, seems to be going too far."[575]

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[565] *Fisheries Case (United Kingdom v. Norway)* (1951) p.131.
[566] See e.g. Villiger, M. E. (1997) p.34.
[567] Ibid. p.41.
[568] See art.53 of the Vienna Convention on the Law of Treaties and Glossary, see also e.g. *Case Concerning Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. United States of America)* (1986) pp.100-101 para 190; Mejiers, H. (1978) p.22; Stern, B. (2001) p.99.; contra see e.g. Wolfke, K. (1993) p.14.
[569] See e.g. Brierly, J. L. (1963) pp.59-62; Lauterpacht, H. S. (1958) pp.379-381; MacGibbon, I. C. (1957) pp.125-131; Verdross, A. (1955) p.119. See also Wolfke, K. (1993) p.48.
[570] Kunz, J. L. (October 1953) p.667.
[571] See e.g. Degan, V. D. (1997) p.164; Villiger, M. E. (1997) p.33.
[572] See e.g. Charney, J. I. (October 1993) pp.536-537.
[573] Wolfke, K. (1993) p.48.
[574] Tunkin, G. I. (1974) p.129.
[575] Case Concerning Delimitation Of The Maritime Boundary In The Gulf Of Maine Area (Canada v. United States of America) (12 October 1984) para.308.

Finally, one should mention the issue of states objecting to an already existing customary practice, also known as the subsequent objectors.[576] Such protest would in fact mean the violation of a customary norm in question. As the I.C.J. put it in the 1969 Continental Shelf judgement:

> "customary law rules and obligations which, by their very nature, must have equal force for all members of the international community, (…) cannot therefore be the subject of any right of unilateral exclusion exercisable at will by any one of them in its own favour."[577]

In summary, the issue of the persistent objector seems to be generally accepted by the international jurisprudence despite very difficult theoretical barriers that the explanation of this exception encounters. On the other hand, lack of objections may often be interpreted as acquiescence in the practice of the majority.

4.4.6 Repetition of practice

The concept of custom presupposes existence of a repeated series of actions. However, there are authors like Strupp for whom the element of repetition in custom is irrelevant.[578] Similarly, Cheng argues that there is no need for repeated practice in the establishment of custom providing that *opinio iuris* can be clearly established.[579] For other authors like Tunkin custom can be formed after a single repetition of practice, although as he admits such instances are rare.[580]

On the other hand, a majority of authors argue that practice has to be repeated in order to form a customary norm.[581] The I.C.J. also seems to require the repetition of practice which can be inferred from the references to constant, extensive or settled practice.[582] In summary, despite some views to the contrary, the majority of the jurisprudence seems to require the practice to be repetitive.

4.4.7 Morality and reasonableness of practice

The question of whether the practice that is not morally desirable or reasonable creates customary norms is difficult to answer from the legal point of view. This problem is in essence, the question whether law should be good or at least not bad or unreasonable. On the one hand side, it is difficult to imagine having immoral written statute or bad custom that have to be followed as law. Only extreme positivists would consider harmful norms that were created according to the prescribed procedures as legally binding. On the other hand, if law is to be dependant on reason or morality it is not a fully independent body of norms. Since its existence is subjected to the subsequent proof of subjective morality or reason, its content may not be certain.

Blackstone maintained on the grounds of English law that

> "(…) if it s not a good custom, it ought to be no longer used."[583]

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[576] See e.g. Villiger, M. E. (1997) pp.36-37.
[577] North Sea Continental Shelf (Federal Republic of Germany / Denmark; Federal Republic of Germany / Netherlands) cases (1969) pp.38-39 para.63.
[578] Strupp, K. (1934) p.304.
[579] Cheng, B. (1965) p.36.
[580] Tunkin, G. I. (1961) p.419. citing Rousseau; Tunkin, G. I. (1974) p.114.; See also writing of Klafkowski and Cheng.
[581] See e.g. Fauchille, P. (1922) p.42 para 47; Kunz, J. L. (October 1953) p.666; Mejiers, H. (1978) pp.13-14; Stern, B. (2001) p.90.
[582] See e.g. Asylum Case (Columbia / Peru) (1950) p.276; North Sea Continental Shelf (Federal Republic of Germany / Denmark; Federal Republic of Germany / Netherlands) cases (1969) pp.43-44 para.76.
[583] Blackstone, W. (1783 reprinted 1978) p.76 vol.1.

In his view, custom had to posses certain requisites for it to be good: it had to be immemorial, continued, peaceable, not unreasonable, certain, compulsory and consistent.[584] Reasonableness of custom is also a fundamental requirement of the Canon law.[585]

Some authorities, however, do not require custom to be good. Kunz for example argues that:

> "It is doubtful whether (…) the practice must be "just" or "humane" or must not be in violation of existing treaties or of valid international law. For custom may change a valid treaty norm (…) or a valid norm of general international law."[586]

Such a position is dominant in modern international law which is dominated by legal positivists.

4.4.8 Summary of practice

Practice is the essential element of custom. However, it can be understood in a number of ways. Although all authors agree that positive acts constitute practice, there is disagreement whether promises of such acts and abstentions can constitute practice. An equally troublesome requirement of custom is the time aspect of practice, which can be long-lasting or can be formed instantly. Similarly, the scope of practice can be either general or local, but the troublesome question is what criteria should be used to ascertain generality of practice. Equally diverse answers are given to the question of how consistent the practice should be ranging from uniformity or near uniformity to relative consistency of practice. Even the simple question regarding repeatability of practice has many different answers ranging from lack of repetition through single repetition to unspecified repetition of practice. The picture regarding understanding of the material element of custom is further cluttered by the doctrine of persistent objector, which provides a way for a state to avoid application of customary law. Equally difficult are questions of morality and reasonability of practice which introduce supra-legal sources of norms to the assessment of customary practice.

4.5 Acceptance of practice as law

As was shown above, Article 38 speaks of practice that must be accepted as law. In international law not all uniform practices are considered as amounting to the international custom because as the Court explained in the North Sea Continental Shelf case they are not motivated "by any sense of legal duty."[587] The question is what this subjective element actually means and how it can be evidenced as it is difficult to contend that a state can have psychological sensations. An understanding of the source and the nature of this issue is important before embarking upon the task of defining the concept of custom on the Internet in the next chapter.

[584] Ibid. pp.76-78 vol.1.
[585] See e.g. Bouscaren, L. T. and Ellis, A. C. (1957) pp.37-42.
[586] Kunz, J. L. (October 1953) p.666.
[587] North Sea Continental Shelf (Federal Republic of Germany / Denmark; Federal Republic of Germany / Netherlands) cases (1969) p.45 para.77.

4.5.1 The notion of acceptance as law

A. The "belief" interpretation

François Geny is regarded as the first jurist who introduced the term *opinio iuris sive necessitates* when referring to the psychological element of custom.[588] This view, having at least a century long tradition[589] equates the psychological element with a feeling being bound by a norm embodied in the customary practice in question. This feeling of necessity enables drawing a line between legally binding norms and non-binding social habits.[590] Mendelson argued that the term *opinio iuris* means a belief and not an act of will.[591] He translated the term *opinio iuris sive necessitates* as "a *belief in (or claim as to) the legally permissible or obligatory nature of the conduct in question, or of its necessity.*"[592] Brierly put it this way:

> "Custom in its legal sense means something more than mere habit or usage; it is a usage felt by those who follow it to be an obligatory one. There must be present a feeling that, if the usage is departed from, some form of sanction probably, or at any rate ought to, fall on the transgressor."[593]

Ago points out that *opinio iuris* does not participate in the formation of customary norm which is spontaneous, but is used to describe existing customary rules.[594] On the other hand, MacGibbon suggested that the concept of *opinio iuris* should only be concerned with customary norms expressed as obligations and not rights.[595]

The I.C.J. has in general endorsed the notion of *opinio iuris* in its judgements. For instance, in the North Sea Continental Shelf case it argued that:

> "The need for such a belief, i.e., the existence of a subjective element, is implicit in the very notion of the opinio juris sive necessitatis. The States concerned must therefore feel that they are conforming to what amounts to a legal obligation."[596]

Also in the earlier *Lotus case* the Court referred expressly to the belief approach:

> "(…) for only if such abstention were based on their being conscious of a duty to abstain would it be possible to speak of an international custom".[597]

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[588] See e.g. D'Amato, A. A. (1971) p.49; Mendelson, M. (1995) p.194.
[589] François Geny proposed this idea in 1899 and then in 1919. See Geny, F. (1919 reprinted in 1954).See also D'Amato, A. A. (1969) pp.64-66; Mendelson, M. (1995) p.194. D'Amato, A. A. (1971) pp.48-49.and Degan, V. D. (1997) p.144.Others argue that it was Rivier who first proposed the concept in 1896. Rivier, A. (1896) p.35 vol.1. See Mendelson, M. (1995) p.194. Walden, R. M. (1977) p.358. citing Guggenheim Guggenheim, P. (1958) p.52. A number of authors see in this concept the influence of German historical school represented by von Savigny, Puchta and Glück,.See see Glück (1797) pp.461, vol.1, para 86; Puchta, G. F. (1928); von Savigny, F. K. (1840-49); von Savigny, F. K. (1840) cited in e.g.Guggenheim, P. (1958) p.53 para 11; Kelsen, H. (1952) pp.309-310; Wolfke, K. (1993) p.5.citing Puchta, G. F. (1928) pp.33-39. Kelsen also points to works of French school of social solidarity and works of Duguit (1901) pp.243-245, 364-365. in Kelsen, H. (1966) p.442; Kelsen, H. (1952) p.309. Allen and Parry point to Blackstone, W. (1783 reprinted 1978) p.78 vol.1. in Allen, C. K. (1964) p.137; Parry, C. (1965) p.61. See also Walden, R. M. (1977) p.358.
[590] Geny, F. (1919 reprinted in 1954) para 110.
[591] Mendelson, M. (1995) pp.184-185.
[592] Ibid. p.195. references omitted.
[593] Asylum Case (Columbia / Peru) (1950) para.276., see also e.g. Brierly, J. L. (1963) p.59.
[594] Ago, R. (1956) p.937. Similarly Stern, B. (2001) p.93.
[595] MacGibbon, I. C. (1957) pp.127-128. Contra see e.g. Thirlway, H. W. A. (1972) pp.48-49.
[596] *North Sea Continental Shelf (Federal Republic of Germany / Denmark; Federal Republic of Germany / Netherlands) cases* (1969) p.44 para.77.
[597] The Case of the S.S. "Lotus" (1927) p.26. Repeated in *North Sea Continental Shelf (Federal Republic of Germany / Denmark; Federal Republic of Germany / Netherlands) cases* (1969) p.44 para.78. See also e.g. Stern, B. (2001) p.106.

B. The "tacit agreement" interpretation

The wording of the Article 38 has led some authors to interpret the second element as a tacit recognition of a binding nature of the norm arising out of a practice.[598] The voluntaristic interpretation of the subjective element has a long pedigree, in the view of some as old as the Roman law[599] or at least as the origin of the modern international law in the XVII century.[600] Tunkin argues that:

> "Such recognition or acceptance represents a tacit proposal to other states to regard this rule as a norm of international law. If such a tacit proposition is accepted by other states, i.e., if other states demonstrate by their actions that they recognize the given customary rule as juridically binding, it may be taken that a customary norm of international law has appeared."[601]

Wolfke admits that the distinction between belief approach and will of state approach does not remove all the difficulties. Nevertheless, the latter approach is superior because the will of state "is something "very real in international relations" whereas the legal conviction of state is "too vague and objectively unverifiable"[602] In addition, he claims that:

> "One might speak of a true opinio juris when custom already exists, but not before."[603]

Strupp in turn, mixes the consensual and psychological interpretations of the subjective element by arguing that:

> "(…) the conviction of being internationally bound constitutes (…) a reference to a previous declaration of will, which could be centuries old".[604]

Similarly, Stern maintains that *opinio iuris* is

> "(…) the feeling of being bound by a norm to which one consents, giving it existence through this consent."[605]

The I.C.J. has also given credit to this interpretation. In the *Nicaragua case*, the Court's "recognition of validity" of rules "as customary international law"[606] has been seen by some authors as the acceptance of voluntaristic interpretation of the subjective element.[607] But the Court has also clearly endorsed the "belief" concept of *opinio iuris* by citing the relevant fragments of the *North Sea Continental Shelf cases*.[608] The Court has referred to a "belief in a general kind of right"[609] when discussing the customary norm of non-intervention thus providing a further argument to the contrary. Similarly, in the *North Sea Continental Shelf cases* mentioned

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[598] See e.g. Strupp, K. (1934) pp.302-311; Triepel, H. (1923) p.83. Other supporters include Danilenko, G. M. (1983) p.101; Stern, B. (2001) p.108; Suy, E. (1962) pp.234-235; Tunkin, G. I. (1961) p.423; Villiger, M. E. (1997) p.49; Virally, M. (1968) pp.134-135; Waldock, H. (1962) pp.48-49; Wolfke, K. (1993) p.47.
[599] Walden, R. M. (1977) p.344. Contra see e.g. Allen who argues that the Roman consensus was in fact, a uniform and consistent usage. Allen, C. K. (1964) p.83. citing Brie. See also chapter 3.
[600] Grotius, H. (1646 reprinted 1925) pp. Prolegomena, paras. 1, 11, 17, 40 Book 1. See also Ago, R. (1956) p.936; Guggenheim, P. (1958) p.42 para 7; Mendelson, M. (1995) pp.194-202. Lambert pointed to the doctrine of Canon law in Lambert, E. (1903) pp.111-112, 125., also cited by Bourquin, M. (1931) p.62. See also Walden, R. M. (1977) p.345.
[601] Tunkin, G. I. (1961) p.423.
[602] Wolfke, K. (1993) p.47.
[603] Ibid. p.48. italics omitted.
[604] Strupp, K. (1934) p.302.
[605] Stern, B. (2001) p.94.
[606] *Case Concerning Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. United States of America)* (1986) p.98 para 185.
[607] See e.g. Danilenko, G. M. (1983) pp.100-101.
[608] *Case Concerning Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. United States of America)* (1986) pp.108-109 para.207.
[609] Ibid. p.108 para. 206.

above the contention that state practice should "show a general recognition that a rule of law is involved" gave the arguments to the proponents of *pactum tacitum* interpretation.[610] In consequence, both interpretations of the subjective element of custom could be justified in these judgements.

In effect, some authors being aware of the two different interpretations[611] accept either one or the other. Many, however, do not seem to attach importance to this distinction and speak of the requirement of the psychological element as of conviction or necessity or feeling being bound by the practice.[612] Others argue that this distinction was drawn too sharply.[613] On the other hand, most of the textbooks on international law teach young adepts only one approach, mostly the "belief" or the "conviction" interpretation of the subjective element.[614] This is certainly one of the causes of the confusion surrounding the dualistic conception of international custom.

4.5.2 Generality of acceptance

Article 38 speaks of general practice but leaves open the question whether acceptance of the practice as law must be general or universal. The Court took the former stance in the *Lotus case*:

> "(…) the rules of law binding upon states therefore emanate from their own free will as expressed in conventions or usages generally accepted as expressing principles of law".[615]

This was confirmed in the *North Sea Continental Shelf cases* where the Court spoke of "a general recognition" of a rule of law.[616]

Similarly, Villiger argued that:

> "(…) the basis of the binding character of customary law results from the general consensus of States (…). The essential difference from a contractual obligation derives from the fact that customary law requires general agreement and not unanimity of will."[617]

Stern stressing the importance of the Great Powers maintains that:

> "(…) states which are in the minority should require a unanimous opinio juris and (…) those which have power, or are in the majority, a general opinio juris."[618]

This leads her to the conclusion that:

> "(…) the customary international rule is the one which is considered to be such by the will of those states which are able to impose their point of view."[619]

However, the recent practice of the Court does not seem to fully support this contention. For instance, in the *Nuclear Weapons Advisory Opinion* the Court has not found the sufficient *opinio iuris* to declare the prohibition of the use of nuclear weapons, despite

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[610] North Sea Continental Shelf (Federal Republic of Germany / Denmark; Federal Republic of Germany / Netherlands) cases (1969) p.43 para.74.
[611] See e.g. Basdevant, J. (1936) pp.504-520; Danilenko, G. M. (1983) pp.98-103. Ago, R. (1956) p.936; Cheng, B. (1965) p.36; de Visscher, C. (1957) p.148; Kunz, J. L. (October 1953); Walden, R. M. (1977); Wolfke, K. (1993) pp.44-51.
[612] Recently see e.g. Bernhardt, R. (1992) pp.899-901, vol. 1, points a, c and e; Ridruejo, J. A. P. (1998) p.44; Rosenne, S. (2001) p.58. Earlier see e.g. de Visscher, C. (1925) p.352; Sørensen, M. (1960) pp.47-51.
[613] See e.g. Mendelson, M. (1995) p.183.
[614] See e.g. Akehurst, M. (1987); Shaw, M. N. (1997) p.67. See also e.g. Starke, J. G. (1994) pp.33-34.
[615] *The Case of the S.S. "Lotus"* (1927) p.18.
[616] North Sea Continental Shelf (Federal Republic of Germany / Denmark; Federal Republic of Germany / Netherlands) cases (1969) p.43 para.74.
[617] Villiger, M. E. (1997) p.49.
[618] Stern, B. (2001) p.104.
[619] Ibid. p.108.

> "the desire of a very large section of the international community to take, by a specific and express prohibition of the use of nuclear weapons, a significant step forward along the road to complete nuclear disarmament."[620]

If a desire of a very large group of states evidenced in the resolutions adopted each year by a large majority of states was not sufficient to convince the Court as to the existence of necessary *opinio iuris*, then it means that the Court expected a universal *opinio iuris* on this matter.

4.5.3 Critique of the subjective element

A. Critique of *opinio iuris*

Tomuschat argued in his recent Hague lectures that the formulation of the element of *opinio iuris* "leaves no room for criticism".[621] However, the notion of the psychological element has created two profound theoretical and practical problems:

First, there is a chronological paradox in relation to the custom formation described by Thirlway as "juridical squaring of the circle":

> "The simple equation of the opinio iuris with the intention to conform to what is recognized, at the moment of conforming, as an existing rule of law has been exposed to the objection (…) that it necessarily implies a vicious circle in the logical analysis of the creation of custom."[622]

Kunz argued:

> "On the one hand it is said that usage plus opinio iuris leads to such norm, that, on the other hand, in order to lead to such a norm the states must already practice the first cases with the opinio iuris. Hence, the very coming into existence of such norm would presuppose that the states acted in legal error."

To Kunz, this problem "has not yet found a satisfactory solution."[623] And D'Amato:

> "But if custom creates law, how can a component of custom require that creative acts be in accordance with some prior right or obligation in international law?"[624]

Also judges are aware of these deficiencies of the theory of custom. Judge Lachs stated in his dissenting opinion to *North Sea Continental Shelf cases* that

> "(…) to postulate that all States, even those which initiate a given practice, believe themselves to be acting under a legal obligation is to resort to a fiction - and in fact to deny the possibility of developing such rules."[625]

As a result, the concept of *opinio iuris* created a very serious theoretical problem that is sufficient to render the whole concept unacceptable on the grounds of its internal inconsistency as it is impossible to accept as a theory a set of statements that cannot logically explain their subject matter.

Second, there exist practical difficulties with evidencing the psychological element. Customary practice is formed spontaneously and it is difficult to ascertain a precise attitude to it among states. Nevertheless, Briggs in his often cited opinion argued that the psychological element "has

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[620] Legality Of The Threat Or Use Of Nuclear Weapons (Advisory Opinion) (8 July 1996) para.73.
[621] Tomuschat, C. (1999) p.324.
[622] Thirlway, H. W. A. (1972) p.47.
[623] Kunz, J. L. (October 1953) p.667.
[624] D'Amato, A. A. (1969) p.84.
[625] Judge Lachs (1969) p.231.

created more difficulty in theory than in practice".[626] This is so, because as will be discussed below, judges have ignored the direct proof of *opinio iuris* by either inferring it from a party's practice or entirely abandoning its attestation.[627]

Furthermore, as was mentioned above, Geny introduced the notion of *opinio iuris* in order to distil from the set of already existing customs those that have a legal character.[628] However, this is often a difficult task. For instance, a widely practiced exemption of diplomats' baggage from customs checks was an often cited example of a non-binding social habit.[629] Tunkin argued, that such norms "are not norms of international law."[630] However, somewhat paradoxically this norm was expressly codified in the 1961 Vienna Convention on Diplomatic Relations.[631] Similarly, the I.C.J. in the *Lotus case* refused to acknowledge the emergence of a customary norm of non-prosecution of foreign citizens as a result of maritime collision on the high seas based on the alleged lack of *opinio iuris*.[632] Very soon however, this norm was codified in the article 11 of the 1958 Convention on the High Seas.[633] The question is whether these norms were really non-legal norms. For some writers, such a situation is not a problem as the non-binding usage the *opinio iuris* was added later on.[634] It could be argued, however, that the above examples are a compelling illustration of the development of customary norms without *opinio iuris* until their final codification in the international treaties. It also shows how difficult it might be to categorise social norms as legal or non-legal norms.

B. Critique of *pactum tacitum*

Equally difficult problems are posed by the consensual interpretation of the subjective element of custom.

First, this approach does not correspond to the reality as customary norms are in principium formed in a spontaneous manner and not by an agreement.[635] If one accepts this premise, it is impossible to reconcile the explanation of subjective element as a conscious acceptance of a legal obligation or right with the impulsive character of this social phenomenon. Spontaneous adherence to a practice precludes a calculated acceptance of it as law. However, one should note that a number of authors agree that states closely observe one another's behaviour and either acknowledge or immediately protest against a practice in question, thus weakening this argument to some extent.[636]

Second, as it was the case with *opinio iuris*, the consciousness of an obligation or a right is required as it is impossible to form an agreement – tacit or explicit, without being aware of its terms. Again one faces evidentiary issues associated with proving this attitude. Some authors try to overcome this problem by suggesting that the consent can be presumed if the state does not protest against a practice in question (acquiescence in).[637] But a party may not protest for a

[626] Briggs, H. W. (October 1951) p.730. citing Sorensen, Silving and Guggenheim.
[627] See e.g. Brownlie, I. (1990) p.8; Jenks, C. W. (1964) pp.253-254; Kelsen, H. (1952); Lauterpacht, H. S. (1958) p.380; Wolfke, K. (1993) p.123.
[628] Geny, F. (1919 reprinted in 1954) para 110.
[629] See e.g. Guggenheim, P. (1950) p.71; Tunkin, G. I. (1974) p.115.
[630] Tunkin, G. I. (1974) p.115.
[631] International Law Comission (18 April 1961).
[632] The Case of the S.S. "Lotus" (1927). See also Starke, J. G. (1994) p.35.
[633] International Law Comission (29 April 1958).
[634] See e.g. Kunz, J. L. (October 1953) p.667.
[635] See Puchta, G. F. (1928); von Savigny, F. K. (1840-49); von Savigny, F. K. (1840).
[636] See e.g. Mejiers, H. (1978); Wolfke, K. (1993) p.8.
[637] See e.g. Wolfke, K. (1993) p.48.cited above, Mejiers, H. (1978) p.18; Wolfke, K. (1993) pp.8-9.

number of reasons[638] including lack of interest or knowledge, thus confirming the artificiality of this interpretation.

In addition, if every state should individually agree to a customary norm in question, the custom would cease to be a source of generally binding law[639] or at least its role in the creation of generally binding law would be minimal.[640] This consequence is in conformity with the extreme positivist outlook arguing that a majority of independent states cannot legally bind the minority.[641] However, some supporters of the consensual view contradict the underlying concept of state sovereignty, allowing custom to bind the dissenting minority.[642]

Finally, this doctrine also has not convincingly explained why states new to a given practice should be bound by the existing body of customary international law.[643] If custom emanates only from a free will of states, then it should not bind states which had not taken part in its formation. Some authors argue that new states by seeking admission to the family of states already give evidence of their recognition of general international law.[644] They more or less willingly recognise already existing customary law; otherwise they would encounter problems regarding their admission to the international community.[645] Artificiality of such an explanation is a product of the voluntaristic doctrine of law which assumes that all the rules of international law are the result of deliberate law-making. The above concept was criticised as a "pure and simple fiction"[646] or "a totally fictitious conception".[647] Kunz put it this way:

> "The purely fictitious character of this construction, its open contradiction to the practice of states, the untenable consequences to which it leads, its rejection of the overwhelming majority of writers, makes it superfluous to refute this construction once more."[648]

And further:

> "As to the problem of how widely the usage must have been practiced, international law demands a "general" practice, not a unanimous one. That shows the untenability of the consent theory, of the *pactum tacitum* construction. For, if it is the case of a customary rule of general international law, created by general practice, such norm is valid for new states and for pre-existing states which hitherto had no opportunity of applying it."[649]

4.6 Alternative approaches

The doctrine has developed alternative interpretations of the twin elements theory of custom. These interpretations either reject the element of practice, or reject the *opinio iuris* element or mix all of the approaches in one framework.

[638] D'Amato, A. A. (1971) pp.98-102.
[639] Guggenheim, P. (1953) p.47.
[640] See e.g. Basdevant, J. (1936) p.517; Mendelson, M. (1995) p.185.
[641] See e.g. Wolfke, K. (1993) p.13.
[642] See e.g. Oppenheim, L. (1955) p.11, see also works of judge Fitzmaurice.
[643] See e.g. Basdevant, J. (1936) pp.507, 515; Kelsen, H. (1966) pp.444-445.
[644] See e.g. Wolfke, K. (1993) p.13.
[645] Ibid.
[646] Basdevant, J. (1936) p.515.
[647] de Vischer, C. (1955) p.188; de Visscher, C. (1957) p.188.
[648] Kunz, J. L. (October 1953) pp.663-664. and the literature cited there.
[649] Ibid. p.666. citing The Paquete Habana (1900).

4.6.1 The "practice only" approach

The "practice only" approach rejects the necessity of the subjective element and leaves the material element of practice as the only constituent of the notion of custom. In 1937 Kopelmanas influenced by Hammel[650] argued that

> "(…) the formation of custom does not depend on the presence in the minds of the parties of an opinio juris, but on the contrary the content of the customary rule often plays the principal part." [651]

His motives were dictated by the understanding of the requirements of international trade that often has to function outside the law, the phenomenon that he describes as

> "(…) a "revolt of the facts against the code" – a revolt realized by the concurrent activity of the subjects of law, an activity determined by the requirements of social life."[652]

Two years later Williams rejected *opinio iuris* as an error.

> "The Rubicon which divides custom from law is crossed silently, unconsciously, and without proclamation. There is ordinarily no moment at which persons, corporate bodies, or states, which have been following for a long period a particular course of conduct, say to themselves or to each other, 'what we are doing is not simply following in the path which our predecessors have followed or cleared, but we are actually making it a legal duty as between ourselves to do what for an indefinite period we and our predecessors for a long time (or "from time immemorial") have done'. "[653]

Kelsen also supported the idea of practice as the sufficient element to form custom because it is too difficult to evidence thoughts of national governments.[654] However, his theory is not very clear. Kelsen clearly required two elements in custom:

> "(…) the fact that certain actions or abstentions have repeatedly been performed during a certain period of time"

and,

> "(…) the fact that the individuals must be convinced that they fulfil, by their actions or abstentions, a duty, or that they exercise a right."[655]

In regard to the second element, however, he stated that parties

> "(…) must believe that they apply a norm, but they need not believe that it is a legal norm which they apply. They have to regard their conduct as obligatory or right."[656]

Kelsen emphasises the importance of practice and seems to reject the traditional notion of *opinio iuris* understood as acceptance of practice as law.[657] The problem with his approach is that it requires a belief in the exercise of a subjective right. It will rarely, however, be the case as the customary law develops as he noted subsequently, unconsciously and unintentionally.[658] The requirement of exercise of a right or duty and unconsciousness of acts are impossible to reconcile.

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[650] Hammel, J. (1935) p.205.
[651] Kopelmanas, L. (1937) p.151.
[652] Ibid. p.150. italics omitted.
[653] Williams, J. F. S. (1939) p.44.
[654] Kelsen, H. (1939) p.264., see also Kelsen, H. (1966) p.440; Kelsen, H. (1952) p.307.
[655] Kelsen, H. (1966) p.440; Kelsen, H. (1952) p.307.
[656] Kelsen, H. (1966) p.440; Kelsen, H. (1952) p.307.
[657] D'Amato argues that Kelsen did not reject the psychological component but "he came close by arguing that the determination of this element is a matter for the absolute arbitrary discretion of an international tribunal." D'Amato, A. A. (1971) p.52. citing Kelsen, H. (1939) pp.264-266.
[658] Kelsen, H. (1966) p.441; Kelsen, H. (1952) p.308.

He also avoids the answer if a proof of such subjective feeling of exercising non-legal right or duty is required or not.

Guggenheim argued that the concept of the psychological element makes custom superfluous as an independent source of international law.[659] He was opposing the articulation of art.38 of the Statute which he considered as an acceptance of the theory of the historical school of Savigny, which in turn did not consider customary practice as a source of law, but only as an evidence of a rule developed by the spirit of the nation.[660] Guggenheim maintained that long lasting and constant repetition of acts is the only one constitutive element of custom and that the subjective element should be eliminated.[661] The main reason for the rejection of the subjective element was difficulties with evidencing it.[662]

Among other important writers who continued to support the traditional reliance upon a practice were Gihl who recognised difficulties with proving psychological element without time consuming research[663], Quadri who associated custom with the tradition that does not require recognition to become the norm of law but creates expectation that will be followed[664] and Lissitzyn who considered the psychological element to be an artificial construct.[665] On the other hand, Lauterpacht favoured the element of practice, because *opinio iuris* could be presumed on that basis.[666] The I.C.J. has not explicitly endorsed this approach although, as will be shown later, it has based its decisions on analysis of practice only and disregarded the proof of *opinio iuris*.

In summary, supporters of the importance of practice point to the difficulties with evidencing the subjective element and the artificiality of its theoretical explanatory power. This approach eliminates illogical deficiencies that perplex *opinio iuris* theories. The only objection raised against this way of thinking is that it blurs the line between legally relevant rights and obligations and non-legal norms of comity or morality.[667] The question remains if such a distinction is possible and necessary. As will be shown in the next chapter, the distinction between legal and non-legal norms is rarely clear and what is more important is a relevance of a given practice in solving legal disputes.

4.6.2 The "instant custom" approach

Cheng's "instant custom" approach is on the opposite side of the spectrum and equates the custom with consent to a given norm.[668] Witnessing the emergence of the law of cosmos he proposed the theory of "practice-less" custom developed by a unanimous will of states accepting a resolution:

> "Not only is it unnecessary that the usage should be prolonged, but there need also be no usage at all in the sense of repeated practice, provided that the opinio juris of the States concerned can be clearly established. Consequently, international customary law has in reality only one constitutive element, the opinio juris".[669]

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[659] Guggenheim, P. (1950) pp.275-280.
[660] Guggenheim, P. (1952) pp.69-70.
[661] Guggenheim, P. (1950) p.275; Guggenheim, P. (1953) pp. vol. 1, 44-45.. But see his metamorphosis in Guggenheim, P. (1967) pp.vol. 1, 107.
[662] Guggenheim, P. (1950) p.275; Guggenheim, P. (1953) pp. vol. 1, 44-45.
[663] Gihl, T. (1957) p.83.
[664] Quadri, R. (1963) pp.95-96. cited by Tunkin
[665] Lissitzyn, O. (1965) pp.34-35.
[666] Lauterpacht, H. S. (1958) p.380, see also writings of Jean Haemmerlé.
[667] See e.g. Kunz, J. L. (October 1953) p.665; Thirlway, H. W. A. (1972) p.48; van Hoof, G. J. H. (1983) p.86.
[668] See e.g. Corbett, P. (1925); Strupp, K. (1934) p.304; Triepel, H. (1923) pp.82-83.
[669] Cheng, B. (1965) p.36.

Nonetheless, Cheng is aware of the difficulty of speaking about custom without practice.

> "It is true that in the case of a rule without usage, objection might be taken to the use of the term custom or customary. But whether in such a case one speaks of international customary law or an unwritten rule of international law becomes purely a matter of terminology."[670]

Interestingly though, Cheng requires general and prolonged practice as the constituent element of custom in municipal legal systems.[671] Recently Ridruejo argued that the subjective or spiritual element is nowadays much more important than practice. In his view it is *opinio iuris* element that allows international law to adapt to changing international conditions and values.[672]

However, rejection of practice stretches the notion of custom to the point where it loses its original sense and for this reason this concept will not be further investigated.

4.6.3 Reconciliatory approaches

There are authors who decided to reconcile theories of custom ranging from "practice only" approaches to dual element theories to "practice-less" constructs.[673] Kirgis tolerates using both practice without the psychological element and the psychological element without practice or any combination of the above elements dependant upon the activity in question and reasonableness of potential customary norm.[674] Reasonableness and morality are at the core of his idea of custom on a sliding scale because as he asserts

> "(…) the more destabilising or morally distasteful the activity (…) the more readily the international decision makers will substitute one element for the other".[675]

Interesting theory was proposed by D'Amato who replaced the division on material and subjective elements with quantitative and qualitative elements.[676] The quantitative element is "the act or commitment" which can be equated with the traditional element of practice. The qualitative element is the "articulation" or pronouncement of legality of the quantitative element by states. This way, D'Amato decided to reconcile traditional issues associated with the proof of subjective element[677] with the insistence on the material element of practice.

On the other hand, many supporters of the twin elements theory of custom allow for custom to be based on a practice only. Mendelson argued that:

> "(…) it is not an invariable requirement that the subjective element be present (in one or other of its forms) for a practice to constitute or reflect a rule of customary international law."[678]

Likewise Starke stated that:

> "(…) the *opinio juris* is not an essential element of custom, but if it is present, it is helpful as distinguishing custom from a course of action followed as a matter of arbitrary choice or for other reasons."[679]

In the same way, Bernhardt stressing the necessity of the *opinio iuris* argued that

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[670] Ibid.
[671] Ibid. p.37.
[672] Ridruejo, J. A. P. (1998) p.45 para 2.2.3.
[673] See e.g. Kirgis, F. L. J. (1987) p.149 and supporting him Roberts, A. E. (Oct 2001) p.760; Simma, B. and Alston, P. (1992) p.83.
[674] Kirgis, F. L. J. (1987) pp.149-151.
[675] Ibid. p.149.
[676] D'Amato, A. A. (1971) pp.73-98.
[677] Ibid. p.2.
[678] Mendelson, M. (1995) pp.183-184.
[679] Starke, J. G. (1994) pp.33-34, references omitted

> "(…) in many cases consistent State practice can be considered as sufficient evidence of customary international law".[680]

In summary, none of these approaches has been explicitly endorsed by the I.C.J. yet. Nevertheless, they represent an interesting attempt to explain the phenomenon of emergence and existence of international customary law.

4.7 Judicial confirmation of custom

A controversial issue is who should be vested with the ascertainment of the existence of international customs and what should be the value of such a pronouncement. Kunz argues that the ascertainment of custom is a difficult task that must be carried out by the competent international authority and preliminarily by the science of international law.[681] On the other hand, positivists deny the necessity of judicial pronouncement in the formation of custom because they consider the state as the only entity capable of creating law by its own will. As Kopelmanas pointed out:

> "(…) it is easy to establish by a simple piece of logical reasoning that the judge may be considered as the author par excellence of custom"

but

> "(…) custom can be developed solely by the action of certain subjects of law without the judge".[682]

On the other hand, Basdevant seems to consider judicial decisions as constitutive elements of custom.[683] The doctrine seems to remain divided on this question.

4.8 Evidencing international custom

4.8.1 Methods of evidencing custom

The question of how to evidence international custom is one of the most difficult ones. The literature is not particularly abundant in this respect.[684] In the *Lotus case* the Court has sought for the evidence of custom in the teachings of publicists, decisions of municipal and international tribunals, and especially in conventions.[685] Judge Hudson pointed to the following sources of evidence of custom: texts of international instruments, decisions of international courts, decisions of national courts, national legislation, and diplomatic correspondence, opinions of national legal advisors and practice of international organisations.[686] It might be surprising to find in the above lists international conventions and decisions of courts as primary sources of evidence of custom. Conventions create a law but only for the signatories thereof whereas international custom applies *erga omnes* (to all). Furthermore, treaties may codify customary norm, but a practice might change after the codification so the proof of general custom based on a convention is difficult to accept. Similarly, the search for custom in legal decisions is surprising because judgements solve only a given dispute at hand and often refer to old practices that may no longer apply. Equally

[680] Bernhardt, R. (1992) p.899 vol.1.
[681] Kunz, J. L. (October 1953) p.667.
[682] Kopelmanas, L. (1937) pp.141-142, capital letter and italics omitted.
[683] Basdevant, J. (1936) p.511.
[684] See e.g. Degan, V. D. (1997) pp.174-177.
[685] *The Case of the S.S. "Lotus"* (1927) pp.25-26.
[686] Hudson, M. O. (3 March 1950) pp.26-30.

extraordinary is the search for the proof of custom in the teachings of publicists and legal advisers, which by their very nature will have to be diverse. The analysis of diplomatic correspondence and the examination of practice of international organisations is a potential source of proof of international custom, but their position in the end of the list indicates their relative unimportance in relation to the previous sources of evidence. The most striking element, however, is a complete lack of interest in classic data collection methods like formal surveys[687] of states' actions or governmental opinions regarding the legality of a given practice. None of the Court judgements or books on the subject presents data of the actual states' actions or states' *opinio iuris* gathered by investigating either all or at least a representative sample of states over a specified period of time.

The following sections will analyse recent customary law-rich judgements of the I.C.J. in order to establish how the Court establishes international custom in legal proceedings. The three cases analysed below show slightly different approaches that the Court adopted to prove international custom. The knowledge of the jurisprudential techniques of evidencing custom will be used in the last chapter of the thesis as a starting point for the discussion of ways and means of evidencing Internet custom.

4.8.2 Recent evidentiary practice of the I.C.J.

A. The 1986 Nicaragua case

The 1986 *Case Concerning Military and Paramilitary Activities in and Against Nicaragua* (the *Nicaragua case*)[688] well illustrates this argument. Simplifying the case, the U.S. government was accused by the government of Nicaragua of military and paramilitary intervention and direct and indirect support for the armed opposition (contras).[689] The U.S. government justified its decision on the basis of collective self-defence against an alleged Nicaraguan armed attack on El Salvador, Honduras and Costa Rica[690] and involvement in logistical support for guerrillas in El Salvador.[691] In effect, the Court found the government of U.S. in breach of several customary norms of international law invoked by Nicaragua: the principle of the prohibition of the use of force[692], the principle of non-intervention in the internal affairs of state[693], the principle of respect for territorial sovereignty[694], the principle of freedom of communications and maritime commerce[695], the humanitarian principle of giving notice of the mining of ports.[696] The Court also did not uphold the existence of a right of collective self-defence to acts that do not constitute an armed attack and a prohibition of unfriendly acts towards other states as norms of customary law.[697]

The Court stressed the importance of evidencing practice:

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[687] See chapter 6.
[688] Case Concerning Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. United States of America) (1986).
[689] Ibid. para. 15.
[690] Ibid. para. 229.
[691] Ibid. para. 19.
[692] Ibid. para. 187-200, 227.
[693] Ibid. para. 242, 246.
[694] Ibid. para. 250-252.
[695] Ibid. para. 253.
[696] Ibid. para. 215, 254.
[697] Ibid. para. 211, 238, 246-249, 273.

> "The Court must satisfy itself that the existence of the rule in the opinio juris of States is confirmed by practice."[698]

Therefore, the Court method of proving the custom was first to "appraise the relevant practice" in the light of the subjective element.[699] However, the aforementioned principles were first declared to have customary character before proceeding to the actual proof of them.[700]

The proof of practice regarding the principle of non-use of force has, in fact, turned out to be an examination of opinions of the U.S. government and the Nicaraguan government contained in the submitted documents.[701] The conclusion was that both governments agreed that this principle is enshrined in Article 2 paragraph 4 of the Charter. One should note here, that the above method could at most be treated as the evidence of *opinio iuris* of the parties and not of a practice. Conversely, the existence of *opinio iuris* was

> "(…) deduced from, inter alia, the attitude of the Parties and the attitude of States towards certain General Assembly resolutions", particularly the Declaration on Principles of International Law.[702]

Statements made by state representatives were cited as a further confirmation of validity of this customary norm.[703] In summary, the custom of non-use of force has been established based only on the unanimous view of the parties and the doctrine that such a rule exists, without recourse to an analysis of the actual general practice of states over time.

The existence and the content of the right of self-defence were also evidenced by citing the relevant provisions of treaties and resolutions as well as parties' opinions which allegedly testified to their existence.[704] Special emphasis was placed on the Article 51 of the Charter of the United Nations which partially codified the right of individual and collective self-defence.[705] Based on the parties' opinions the right was found to contain the limitations of proportionality and necessity as "well established in customary international law".[706] Furthermore, the Court "defined"[707] additional conditions for the exercise of this customary right: the necessity of an armed attack (by regular forces and by sending armed bands by a third state on behalf of another state), the obligation of the state for whose benefit the right is used to declare itself to be the victim of an armed attack, the requirement of a request by the State which is the victim of an armed attack.[708] These norms were found in the customary law of States but no proof of the actual state practice has been cited. Instead, the Court found them in the treaties allegedly reflecting the state of the international customary law. Conversely, the Court has not found as belonging to the customary norms the requirement of immediate notification to the Security Council of measures taken in the exercise of the self-defence by a state being attacked as required in the Article 51 of the Charter. The proof of non-customary nature of this norm was based on a logical reasoning that

> "(…) a procedure so closely dependent on the content of a treaty commitment and of the institutions established by it"[709]

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[698] Ibid. para. 184.
[699] Ibid. para. 185.
[700] Ibid. para. 174. citing Judgment of 26 November 1984 (I.C.J. Reports 1984, para. 73).
[701] Ibid. para. 187-188.
[702] Ibid. para. 188.
[703] Ibid. para. 190.
[704] Ibid. para. 176, 193-201.
[705] United Nations Conference on International Organization at San Francisco (26 June 1945)
[706] Case Concerning Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. United States of America) (1986) para. 176, 194.
[707] Ibid. para. 193.
[708] Ibid. para. 194-199, 211.
[709] Ibid. para. 200.

could not belong to the body of international customary law.

It is interesting how the Court approached the evidence of the principle of non-intervention which has not been codified in the Charter.

> "The principle of non-intervention involves the right of every sovereign State to conduct its affairs without outside interference; though examples of trespass against this principle are not infrequent, the Court considers that it is part and parcel of customary international law."[710]

And further:

> "The existence in the opinio juris of States of the principle of non-intervention is backed by established and substantial practice."

Again, a reference is made to the established and substantial practice but no data is presented. On the other hand, *opinio iuris* is found in the Courts' earlier judgements, resolutions, declarations and treaties.[711] Based on it, the Court declares the existence of this norm as an international custom.

On the other hand, the content of the principle is again defined by the Court:

> "(…) the principle forbids all States or groups of States to intervene directly or indirectly in internal or external affairs of other States."[712]

This time, the Court decided to search for the proof of this definition by a reference to a hypothetical contrary custom of the interventions in the internal affairs of states to support the opposition:

> "There have been in recent years a number of instances of foreign intervention for the benefit of forces opposed to the government of another State. The Court is not here concerned with the process of decolonization; this question is not in issue in the present case. It has to consider whether there might be indications of a practice illustrative of belief in a kind of general right for States to intervene, directly or indirectly, with or without armed force, in support of an internal opposition in another State, whose cause appeared particularly worthy by reason of the political and moral values with which it was identified. For such a general right to come into existence would involve a fundamental modification of the customary law principle of non-intervention."[713]

But no detailed examination of the practice followed. Instead the Court declared that:

> "(…) the Court finds that States have not justified their conduct by reference to a new right of intervention or a new exception to the principle of its prohibition."[714]

To support its contention, the Court very generally referred to the practice of the United States:

> "The United States authorities have on some occasions clearly stated their grounds for intervening in the affairs of a foreign State for reasons connected with, for example, the domestic policies of that country, its ideology, the level of its armaments, or the direction of its foreign policy. But these were statements of international policy, and not an assertion of rules of existing international law."[715]

Since the United States made no claim towards Nicaragua supporting "the new right of intervention", no such rule was established.[716] In consequence, the restrictive notion of the customary principle of non-intervention was upheld.

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[710] Ibid. para. 202.
[711] Ibid. para. 202-209.
[712] Ibid. para. 205.
[713] Ibid. para. 206.
[714] Ibid. para. 207.
[715] Ibid.
[716] Ibid. para. 207-209.

It is important to note that the examination of state practice should not be limited to the practice of litigants only, as the practice of all the other states should be taken into account. This flows from the accepted principle of general practice. Furthermore, the examination of state practice should not be reduced to the general observation that certain states adhere to a given practice or not, but should be analysed in more depth, including the statement of how many states have been examined and citing at least the important cases of such an adherence.

The customary principle of respect for state sovereignty is again defined with a reference to specific treaties.[717] No state practice, with the exception of the United States mining of the Nicaraguan ports, is examined. Also no reference to the proof of *opinio iuris* is made, although it can be presumed that the above-mentioned treaties serve this purpose. On this occasion, the Court also mentioned related customary norm of "innocent passage in territorial waters for the purposes of entering or leaving internal waters" as codified by the relevant treaty.[718] In this context, the customary principle of giving notice about mining of the ports has been mentioned but no proof of its existence in states practice has been mentioned. The Court's strategy in relation to establishing humanitarian customary norms is particularly confusing. First, a reference to such a principle is made in connection with the relevant convention expressing it, but the Court did not declare as a rule of customary international law but as a "the principle of humanitarian law." Secondly, a reference to this norm as a norm of customary international law is made only later on in the judgement:

> "Mention has already been made (…) of the violations of customary international law by reason of the failure to give notice of the mining of the Nicaraguan ports".[719]

But in fact, no such mention has been made, and it is unclear whether the Court considered the discussed humanitarian principles as principles of customary law or general principles of law.

The Court has also not established certain norms as customary ones. For instance, in respect to prohibition of unfriendly acts towards other states bound by the treaty of friendship, the Court stated that:

> "(…) as a matter of customary international law, it is not clear that the existence of such a far-reaching rule is evidenced in the practice of States."[720]

However, no such evidence is cited or examined. Also there is no analysis of *opinio iuris* regarding this norm.

In the end of the judgment, the Court has also recalled

> "(…) the principle that the parties to any dispute, particularly any dispute the continuance of which is likely to endanger the maintenance of international peace and security, should seek a solution by peaceful means."[721]

Again, its existence was declared with a reference to the relevant treaty provision. On this occasion however, the Court mentioned the Contadora Process[722], which could be treated as a proof of state practice. However, to prove the existence of this principle more evidence of states practice would be necessary.

In general, the I.C.J. has not provided and analysed a sufficient evidence of state practice in relation to any of the alleged customary norms of international law, thus undermining the theory of custom it subscribed to. No data regarding the actual state practice (with the exception of

[717] Ibid. para. 212-214.
[718] Ibid. para. 214.
[719] Ibid. para. 254.
[720] Ibid. para. 273.
[721] Ibid. para. 290.
[722] Ibid. para. 290-291.

litigants' recent practice) is cited or analysed, leading to the conclusion that in the light of the adopted theory of custom, claims about the existence of a given general state practice and its characteristics are unfounded. This does not mean of course, that such principles do not exist as customary norms, but only that they have not been satisfactorily proven. Instead, in some cases, the presented proof could be argued to satisfactorily evidence the existence and content of general principle of law.

The Court has focused on the proof of *opinio iuris*, often providing an impressive survey of the legal documents enshrining the customary principles. One should note here, that the Court made an implicit and risky assumption that a will of a State expressed in a signature to the agreement or a declaration is a conclusive proof of the feeling that a given norm or set of norms exists and binds it even without such an agreement. However, the proof of *opinio iuris* based on the analysis of treaties, resolutions and case law may not provide the same results as a proper survey of beliefs or convictions among state decision-makers regarding the existence and binding character of a principle in question. In short, it could be argued that the Court has not cited the convincing evidence of the existence and the content of the psychological element of custom. Likewise, the proof of content of a given custom was based on a procedure that favoured the analysis of legal texts referring to a given norm, at the expense of the proof of the actual practice of states. In some cases, the Court simply declared the existence or a content of a given norm.

One should note that the methodology of evidencing custom based on the ascertainment of the existence and the content of a given norm in two separate activities also seem to be a result of the *a priori* method of proving custom. If a given customary norm exists, it exists in a given form or has a given content. It cannot exist without a specific content. The establishment of the existence of a customary norm in the practice of states determines its content – it cannot be defined or modified by the Court. Each characteristic of a customary norm should be found in the actual practice of the majority (or unanimity) of participants amounting to its creation and, in the view of the doctrine accepted by the Court, in their *opinio iuris*. Therefore, the Court's method of first establishing the existence of custom in the legal treaties, resolutions and cases and then the "interpretation" of its content in the same sources cannot be regarded as a reasonable and permissible method of evidencing international custom.

B. The 1996 Nuclear Weapons Advisory Opinion

In the *Advisory Opinion (Nuclear Weapons opinion)* the Court offered its view on the permissibility under international law of the threat or use of nuclear weapons in any circumstances.[723] However, it could not

> "reach a definitive conclusion as to the legality or illegality of the use of nuclear weapons by a State in an extreme circumstance of self-defence, in which its very survival would be at stake."[724]

In this opinion, a reference was made to the following customary norms: the right of self-defence[725], the prohibition of threat or use of force (in the context of nuclear weapons)[726], and the humanitarian principles applicable in the event of a war of the protection of civilian population

[723] Legality Of The Threat Or Use Of Nuclear Weapons (Advisory Opinion) (8 July 1996) para. 3.
[724] Ibid. para. 97, 105.
[725] Ibid. para. 41.
[726] Ibid. para. 64, 52.

and civilian objects and prohibition of causing unnecessary suffering to combatants[727] as well as the principle of neutrality.[728]

In respect to the right of self-defence, the Court stated:

> "The submission of the exercise of the right of self-defence to the conditions of necessity and proportionality is a rule of customary international law."[729]

To prove this assertion however, the Court has referred to the United Nations Charter and to the *Nicaragua case*, where as was shown above, this custom has not been properly established by investigating what the general practice and *opinio iuris* is.

In addition, the Court endeavoured to determine whether a principle of prohibition of threat or use of nuclear weapons flows from the customary international law. The Court took into account a consistent practice of non-utilisation of nuclear weapons since 1945.[730] However, states interpreted this inactivity differently: some argued that it amounted to a formation of custom prohibiting the use such weapons and others that

> "(…) if nuclear weapons have not been used since 1945, it is not on account of an existing or nascent custom but merely because circumstances that might justify their use have fortunately not arisen."[731]

In consequence, the Court has not found the satisfying proof of general practice as

> "(…) a number of States adhered to (…) practice [known as the "policy of deterrence"] during the greater part of the Cold War and continue to adhere to it."

Likewise, the divergent opinions of states as expressed in resolutions have not satisfactorily proven the existence of general *opinio iuris* on this matter despite, as was argued earlier, "the desire of a very large section of the international community".[732] In consequence,

> "The emergence (…) of a customary rule specifically prohibiting the use of nuclear weapons as such is hampered by the continuing tensions between the nascent opinio juris on the one hand, and the still strong adherence to the practice of deterrence on the other."[733]

Noting the relative ease of the proof of the passive practice, the Court has made a reference to the policy of deterrents but has not discussed which states actually adhered to it and in consequence, what percentage of states precluded this norm from coming to existence. However, it is important to note that the Court provided the satisfactory proof of inaction and has delineated the timeframe for the investigated customary norm.

The Court also made a reference to the principles of humanitarian law, including: the prohibition of an attack on civilian populations and civilian objects and the resulting prohibition of the "use of weapons that are incapable of distinguishing between civilian and military targets" and the prohibition of causing unnecessary suffering to the combatants.[734] The Court further stated that:

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[727] Ibid. para. 78.
[728] Ibid. para. 88. The Court has also referred to the principle of good faith but has not expressly recognised it in this judgment as of customary character. Legality Of The Threat Or Use Of Nuclear Weapons (Advisory Opinion) (8 July 1996) para.98-103.
[729] Legality Of The Threat Or Use Of Nuclear Weapons (Advisory Opinion) (8 July 1996) para. 41.
[730] Ibid. para. 64-66, 96.
[731] Ibid. para. 66.
[732] Ibid. para. 67-73.
[733] Ibid. para. 73.
[734] Ibid. para. 78.

> "(…) these fundamental rules are to be observed by all States whether or not they have ratified the conventions that contain them, because they constitute intransgressible principles of international customary law."[735]

To prove the *opinio iuris* the Court argued:

> "The extensive codification of humanitarian law and the extent of the accession to the resultant treaties, as well as the fact that the denunciation clauses that existed in the codification instruments have never been used, have provided the international community with a corpus of treaty rules the great majority of which had already become customary and which reflected the most universally recognized humanitarian principles. These rules indicate the normal conduct and behaviour expected of States."[736]

It is interesting to note in this respect, that norms which are considered to flow from a custom indicate behaviour expected of a party – a contention that will be one of the fundaments of the notion of Internet custom. However, no state practice has been examined in relation to the humanitarian principles. Again its existence was either declared or inferred from a large body of the relevant conventional norms. In the end, the Court attempted to answer the question whether these customary humanitarian principles in fact prohibit the use of nuclear weapons but found (quite surprisingly) the answer to be negative.

Next, the Court referred to the customary principle of neutrality and contended that it is a customary norm reflected in relevant provisions of the international conventions dealing with this matter.[737] However, no proof of state practice or explicit evidence of *opinio iuris* has been presented.

In summary, this judgement demonstrates that it is far easier to prove a passive conduct than an active practice. The Court has evidenced the abstention from using nuclear weapons since 1945, but *opinio iuris* was not convincingly presented. It would be far better to state how many states opposed the alleged customary prohibition and how many did not, so as to have a clear picture that the general *opinio iuris* did not exist. Otherwise, as was stated above, the Court could be argued to require a unanimous *opinio iuris*. However, positive practice was not evidenced in case of the norm of self-defence. On the other hand, principles of humanitarian law and neutrality were declared to have customary character without the proof of the two elements involved. Moreover, principles of humanitarian law were declared as intransgressible thus disregarding the flexible and unpredictable nature of custom.

C. The 2002 Arrest Warrant case

The case concerned the legality of the issue of the arrest warrant and its international circulation by a Belgian judge against a Minister of Foreign Affairs of the Democratic Republic of Congo accused of war crimes and crimes against humanity. The Court concluded that this act constituted violation of a legal obligation of respect for the immunity from criminal jurisdiction and inviolability of the position of Minister of Foreign Affairs.[738] In judgement the Court made a reference to the customary norm of absolute inviolability and immunity from the criminal process

[735] Ibid. para. 79.
[736] Ibid. para. 82.
[737] Ibid. para. 88, 93.
[738] Case Concerning The Arrest Warrant Of 11 April 2000 (Democratic Republic Of The Congo v. Belgium) (14 February 2002) para. 29.

of incumbent foreign ministers[739] and the principle that only a sending state may waive such immunity.[740]

The Court commenced the proof of the general immunity norm with a declaration of the principle that the ambassadors and consuls as well as high ranking state officials enjoy immunities from criminal and civil jurisdiction which is "firmly established" in international law.[741] The Court then discussed conventions embodying this norm and has found that they provide useful guidance but do not deal specifically with the immunities of the Minister of Foreign affairs.[742] On this occasion, the Court declared the customary character of a norm that only a sending state may waive the immunity as reflected in the Article 32 of the Vienna Convention on Consular Relations.[743] No specific proof of the actual practice or *opinio iuris* was presented.

The actual proof of the immunity of foreign ministers was based upon a succinct but useful discussion of the importance of the practice.[744] From the discussion of the functions of a Minister of Foreign Affairs the Court concluded that: "throughout the duration of his or her office, he or she when abroad enjoys full immunity from criminal jurisdiction and inviolability."[745] Again no proof of state practice or *opinio iuris* was discussed.

Then the Court proceeded to the Belgian argument that there is an exception to the rule of immunity when incumbent foreign ministers "are suspected of having committed war crimes or crimes against humanity"[746] The Court cited two divergent interpretations by parties to the dispute in respect to two judgments of French and English courts in Qaddafi and Pinochet cases respectively.[747] As a matter of proof of practice, the I.C.J.

> "(…) has carefully examined State practice, including national legislation and those few decisions of national higher courts, such as the House of Lords or the French Court of Cassation"

and

> "(…) the rules concerning the immunity or criminal responsibility of persons having an official capacity contained in the legal instruments creating international criminal tribunals"

including Nuremberg, Tokyo, former Yugoslavia, Rwanda and the International Criminal Tribunal.[748] In conclusion, the Court found that no such exception exists.[749]

The I.C.J. has not referred to any theory of international custom, in particular the twin elements theory. Two norms were declared have customary character based on a specific treaty provision and examination of the role of the subjects of the custom. In contrast to the earlier practice, however, the Court has examined only the state practice in respect to the exception to the principle of jurisdictional immunity of high ranking state officials when suspected of having committed serious crimes.[750] Although the examination of practice has been limited to only two national judgments submitted by the parties and national and international legislation which in itself may not constitute a strong ground for drawing the conclusion, the judgment indicates a shift in the evidentiary practice of the Court. It marks a departure from the earlier emphasis on the

[739] Ibid. para.51-52.
[740] Ibid. para.52.
[741] Ibid. para.51.
[742] Ibid. para.52.
[743] Ibid.
[744] Ibid. para.53.
[745] Ibid. para.54.
[746] Ibid. para.56.
[747] Ibid. para.56-57.
[748] Ibid. para.58.
[749] Ibid. para.58-59.
[750] Ibid. para.51-57.

element of *opinio iuris* and stresses the importance of the proof of state practice in the process of evidencing international custom.

4.8.3 Two approaches to evidencing custom

Space does not permit analysing all the cases where a particular or general custom was referred to, so only a brief account of the case law will be made. In general, the Court followed a practice of either declaring the existence of custom with a reference to a specific provision of a multilateral treaty or by proving the state practice and inferring from it *opinio iuris* or by simply proving the state practice. The following sections will present a synthesis of the two approaches.

A. The "declarative" approach

The "declarative" approach is most clearly visible in all of the cases discussed above. In this approach state practice is not evidenced and custom is proved either with a reference to the treaty containing the provision reflecting the norm in question or without any reference at all. A number of recent cases related to the norms governing treaties prove this assertion too. In the *LaGrand case*[751], *Oil Platforms case*[752], *Kasiki / Sedudu Island case*[753] and the *Territorial Dispute case*[754] the Court declared the existence of customary norm of good faith in the interpretation of the treaty in accordance with the ordinary meaning to be given to its terms in their context and in the light of the treaty's object and purpose embodied in paragraph 1 of Article 31 of the Vienna Convention on the Law of Treaties.[755] In the *Kasiki / Sedudu Island case*, the Court has specifically declared the customary character of the principle of interpretation of the treaty according to its object and purpose when a comparison of the authentic texts discloses a difference of meaning as reflected in paragraph 4 of Article 33 of the Vienna Convention.[756] In the *Territorial Dispute case* and the *Oil Platforms case* the Court held that the whole Article 31 of the Convention reflects customary practices.[757] In the *Land and Maritime Boundary case* the Court held that based upon a custom a treaty can enter into force either upon a signature or upon a signature and subsequent ratification.[758] In the *Hungarian Dams case* the Court stated that a number of customary norms relating to the termination and suspension of an operation of a treaty (breach of a treaty, impossibility of performance, and fundamental change of circumstances) are set forth in Articles 60-62 of the Vienna Convention mentioned above.[759] Furthermore, it declared that the state of necessity involves the cumulative coexistence of conditions enlisted in Article 33 of the Draft Articles on the International Responsibility of States and "is a ground recognized by customary international law for precluding the wrongfulness of an act not in conformity with an

[751] LaGrand Case (Germany v. United States of America) (27 June 2001) para. 99, 101.
[752] Case Concerning Oil Platforms (Islamic Republic Of Iran v. United States Of America) - Preliminary Objection (12 December 1996) para.23.
[753] Case Concerning Kasikili/Sedudu Island (Botswana/Namibia) (13 December 1999) para.18.
[754] Case Concerning the Territorial Dispute (Libyan Arab Jamahiriya / Chad) (3 February 1994) para.41.
[755] International Law Comission (22 May 1969).
[756] Case Concerning Kasikili/Sedudu Island (Botswana/Namibia) (13 December 1999) para.48.
[757] Case Concerning Oil Platforms (Islamic Republic Of Iran v. United States Of America) - Preliminary Objection (12 December 1996) para.23; Case Concerning the Territorial Dispute (Libyan Arab Jamahiriya / Chad) (3 February 1994) para.41.
[758] Case Concerning The Land And Maritime Boundary Between Cameroon And Nigeria (Cameroon v Nigeria: Equatorial Guinea Intervening) (10 October 2002) para.264-265.
[759] Case concerning the Gabcikovo-Nagymaros project (Hungary/Slovakia) (1997) para.46, 99, 104. See also the cases cited there. The Court has also cited the statements of the parties that art.65-67 if not codify, then generally reflect customary law on procedure regarding termination of a treaty (para.109).

international obligation."[760] In addition, the Court recognised the norm that "rights and obligations of a territorial character established by a treaty are unaffected by a succession of States" is an international custom reflected in Article 12 of the 1978 Vienna Convention.[761]

The approach avoiding the proof of practice is visible in some of the earlier cases.[762] For instance, in the *Corfu Channel case* the Court stated:

> "It is, in the opinion of the Court, generally recognized and in accordance with international custom that States in time of peace have a right to send their warships through straits used for international navigation between two parts of the high seas without the previous authorization of a coastal State, provided that the passage is innocent. Unless otherwise prescribed in an international convention, there is no right for a coastal State to prohibit such passage through straits in time of peace."[763]

Similarly in the *Interhandel* case:

> "The rule that local remedies must be exhausted before international proceedings may be instituted is a well-established rule of customary international law; the rule has been generally observed in cases in which a State has adopted the cause of its national whose rights are claimed to have been disregarded in another State in violation of international law."[764]

In these two cases there is not even a reference to a treaty allegedly codifying a given custom.

The approach of the Court based on the disregard for the actual practice of state and declaring the existence of custom with or without a reference to written sources of international law is sometimes openly defended by its judges. For instance, judge de Castro in his Separate Opinion to 1974 *Fisheries Jurisdiction case* stated that:

> "International customary law does not need to be proved; it is of a general nature and is based on a general conviction of its validity (opinio iuris). The Court must apply it ex officio; it is its duty to know it as quaestio iuris: iura novit curia. Only regional customs or practices, as well as special customs, have to be proved."[765]

Such an approach assumes that general customs do not change – a contention that is difficult to accept given the enormous changes in international life. Also, with such an attitude new general customary norms could not develop.

The "declarative" approach might resemble presented in the last chapter Islamic concept of *'ijma'* according to which the unanimity of opinion of lawyers on a question of law creates a fundamental and unchallengeable principle of law.[766] One could then adopt this concept as an alternative to proving unanimously recognized customary norms and to treat them as a kind of international *ijma* (or general principles of law). Most of the principles declared as customary in the jurisprudence of the I.C.J. would probably fall into this category. This approach would relieve a judge from a cumbersome proof of well known principles of international law thus strengthening the justification of applicable norms in the actual judgment, weakened by a reference to non-proven customary norm. However, this approach seems to be of little use in evidencing practices on the Internet, as most of them are novel and have to be ascertained unquestionably.

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[760] Ibid. para.51-52. See also Article 25 in International Law Comission (2001)
[761] Case concerning the Gabcikovo-Nagymaros project (Hungary/Slovakia) (1997) para.109.
[762] See e.g.Sørensen, M. (1960) p.39.
[763] The Corfu Channel Case (Merits) (1949) p.28.
[764] Interhandel (Switzerland v. United States of America) (1959) p.27.
[765] Judge de Castro (1974) p.79. References omitted.
[766] See Chapter 3.

B. The "inferential" approach

The "inferential" approach is based on the establishment of a norm in the practice of states and an inference from it *opinio iuris* thus disregarding the necessity for a separate proof of the second element. As Akehurst put it,

> "(…) the modern tendency is not to look for direct evidence of a state's psychological convictions, but to infer opinio iuris indirectly from the actual behaviour of states."[767]

This approach is clearly visible in the Right of Passage case:

> "The Court, therefore, concludes that, with regard to private persons, civil officials and goods in general there existed during the British and post- British periods a constant and uniform practice allowing free passage between Daman and the enclaves. This practice having continued over a period extending beyond a century and a quarter unaffected by the change of regime in respect of the intervening territory which occurred when India became independent, the Court is, in view of all the circumstances of the case, satisfied that that practice was accepted as law by the Parties and has given rise to a right and a correlative obligation."[768]

Similarly, in the S.S. Wimbledon case[769], Nottebohm case[770] and Fisheries Jurisdiction case[771] the psychological element has not been proven.

The following passage from the dissenting opinion of Judge Sorensen to *North Sea Continental Shelf cases* is self-explanatory:

> "I do not find it necessary to go into the question of the opinio juris. This is a problem of legal doctrine which may cause great difficulties in international adjudication. In view of the manner in which international relations are conducted, there may be numerous cases in which it is practically impossible for one government to produce conclusive evidence of the motives which have prompted the action and policy of other governments."[772]

And further:

> "(…) the practice of States (…) may be taken as sufficient evidence of the existence of any necessary opinio juris."[773]

Also judge Lachs argued in his dissenting opinion the same case that

> "(…) the general practice of States should be recognized as prima facie evidence that it is accepted as law."[774]

Such an evidentiary practice is inconsistent with the endorsed twin elements theory of custom and clearly shows its impracticality.

But the problem is not only with the approach to evidencing psychological element but also the way the practice is proven. In general, the Court has not investigated practices of any significant number of states across a defined period of time. The proof was limited to the statements of litigants about their own practice or contained in judgments of national courts or in national

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[767] Akehurst, M. (1987) pp.29-30. See also e.g. Virally, M. (1968) pp.133-134.
[768] *Case Concerning Right of Passage Over Indian Territory (Portugal v. India)* (1960) p.40.
[769] *The S.S. "Wimbledon"* (1923) p.25, also noted by Kirgis, F. L. J. (1987) p.149.
[770] *Nottebohm Case (Liechtenstein v. Guatemala)* (1955) pp.22-23. also noted by Akehurst, M. (1974-1975) p.32; Kirgis, F. L. J. (1987) p.149, citing Jenks, C. W. (1964) pp.253-258.
[771] Fisheries Jurisdiction (United Kingdom of Great Britain and Northern Ireland v. Iceland) (2 February 1973) para.24-26, also noted by Akehurst, M. (1974-1975) p.32.
[772] Judge Sorensen (1969) p.246.
[773] Ibid. p.247.
[774] Judge Lachs Ibid. p.231. .

legislation. Some authorities have complained about the lack of materials that could be used to research state practice.[775] According to Harris, at present only the practice of the United States is available in a comprehensive form, although there are some less extensive digests of British, French, Italian and Swiss and some other states practice available in the national Yearbooks and international law reviews.[776] As Mendelson noticed, however, they often fail to distinguish between the trivial and the important state behaviour[777], which only reinforces the claim about the difficulty of distinguishing between legal custom and non-legal usage. However, the problems with accessing state practice can be mitigated by establishing an Internet based database of state practice.[778]

It is submitted that alleged customary norms that are not widely recognized or known ought to be proved with all the diligence required. In particular, the actual practice of states within a specified timeframe should be evidenced. A proof should embrace all or at least a representative sample of states. In the latter case, the sample should contain a reasonable proportion of the population of states (i.e. the activity of twenty states over a specified period of time). The analysis of states' practice based upon a recent practice of litigants does not provide sufficient grounds for a generalisation about the generality of practice. Furthermore, any inconsistencies in practice of chosen states should be analysed and presented in relation to the periods of consistent adherence to it in order to get a picture of relative consistency of practice. Such an analysis would require a great deal of knowledge, especially of an historical and socio-political nature. But there seems to be no alternative to proving the existence of general practice. The Court's approach is an idealistic one, built on premises that whatever is agreed on paper does actually happen in reality. But this may not be the case, and therefore, has to be proven. The existence of a custom in question cannot simply be inferred or deduced from what judges or writers think is the general custom.

4.8.4 Summary of evidencing

Judges of the International Court of Justice have fully endorsed the dualistic conception of custom, but have never convincingly applied it in practice. The proof of practice was often sought in the treaties, resolutions or judgements and rarely in the actual state behaviours. The proof of practice, if present, was almost invariably limited to the practice of litigants and did not allow for a generalisation. The situation is especially paradoxical in regard to the subjective element of custom, which has never been independently and satisfactorily proven in practice. Never was any form of survey or similar technique used to collect information about the acceptance of a given practice as law by the international community. As was shown above, the proof of *opinio iuris* was either entirely omitted or its existence was inferred from the practice of states or the agreements or resolutions they accepted. In short, the necessity of evidence of the subjective element has only been visible in the Court's words, but not in the practice.

4.9 Summary

International jurisprudence has succeeded in the development of a general twin elements framework for the concept of custom but has not managed to produce one firmly accepted theory

[775] see e.g. Goralczyk, W. (1989) p.103; Harris, D. J. (1998) pp.26-27.
[776] Harris has also pointed to parliamentary papers, law reports and newspapers as potential sources of knowledge about practice. Harris, D. J. (1998) pp.26-27.
[777] Mendelson, M. (1995) p.186.
[778] See a reference to such a database in commercial litigation in *MCC Marble Ceramic v. Ceramica Nuova D'agostino, S.p.A.,* (29 June 1998) 144 F.3d 1384 (1lth Cir.) See also, Andersen, C. B. (Fall 1998) pp.405-406.

of customary law that would adequately explain this phenomenon. The abundance of material reveals an astonishing division of views and opinions on what international custom is, which results in the lack of one acceptable theory of international custom. The majority of scholars require the element of practice and its acceptance as law. The dispute concerns the degrees of continuity, repeatability and longevity of practice, the value of statements and passivity, permissibility of objections to practice, morality and reasonability of practice as well as judicial confirmation of custom. Deep controversies surround even the interpretation of the subjective element of custom, in particular its interpretation and ways of evidencing it.

The work of the International Court of Justice has clarified certain issues but in general has not contributed much to the resolution of the problems surrounding the notion of customary law. The I.C.J. has endorsed various interpretations of the twin elements conception of custom but has never convincingly applied them in practice. The proof of general and positive state practice was either entirely omitted or reduced to a very short and vague discussion. The subjective element was either entirely omitted or inferred from the proof of state practice or deduced from written sources of law. In a majority of cases, the Court has not evidenced custom at all but only declared its existence.

Nevertheless, the doctrine of international custom has produced a very rich literature and case law which provide an excellent basis to draw upon in the analysis of customary practices on the Internet. Several useful concepts identified by international jurisprudence will be utilised in the discussion that follows. However, the methodology of evidencing custom used by the Court discloses so much informality and inconsistency with the adopted theory of custom that it cannot serve as a good model for evidencing practices on the Internet. For this reason, the new methodology for evidencing customary practices on the Internet will be proposed.

Chapter 5. Internet Commerce Custom

In previous chapters, the importance of custom in national and international legal systems was outlined. In particular, the significance of this mode of regulation in historical times and in present day legal cultures was presented. Then, the concept of international custom as developed in international public law was studied. However, the theory of international custom cannot be directly applied to electronic commerce. This chapter will explain the reasons for the inapplicability of international custom to the Internet environment. It will also propose a concept of custom tailored to Internet commerce and discuss issues associated with it. The most significant practical problem is how to evidence customary practices on the Web, which will be discussed in the next part of the thesis.

5.1 Introduction

Internet commerce does not function in a regulatory vacuum. Since it is a medium used by people to interact with one another, behavioural patterns similar to those observed in traditional social life emerge. For instance, merchants in both traditional as well as the electronic world aim at finding, negotiating and executing a financial deal. To achieve this goal all the merchants would try to find the best supplier and customer. In this sense, as was introduced in chapter 2, electronic commerce has not changed the basic paradigm of trade. What has changed is that transactions can now be executed and monitored more efficiently, on a global scale and 24 hours a day.

In their interactions, online trade participants adhere to certain standards of conduct on the Web thus consciously or unwittingly supporting certain behaviours and deterring others. In other words, Internet participants apply norms of behaviour that have spontaneously arisen between them at some point in time. These online interactions can be subjected to research that promises to understand and predict human behaviour better.

As was outlined in chapter 3, norms embodying certain widespread Internet practices could be used to solve many legal disputes on the web in the absence of written law. In fact, it will be argued that Internet participants have already created a set of electronic commerce customary practices that are specific to this medium and do not find an equivalent in the offline world. For instance, the first-in first-served rule of domain name registration has been customarily applied by the Internet community. Similarly, freedom of linking to any site via hyperlink without the permission of a site being linked to, has also been a widely followed customary practice peculiar to the web. Similarly, many security practices as well as transaction related routines are customarily followed by the Internet community.

The key idea offered in this thesis is that custom is a source of unwritten legal norms that could be used by judges to solve Internet related problems, especially those in the field of Internet commerce. The aim of this part of the thesis is to discuss the requirements of Internet commerce custom from a practical perspective. International custom discussed in the last chapter, provides an excellent starting point for understanding customary practices on the Internet. It has been used for a long time in international law and has generated rich and thoughtful literature and a number of judgements of international courts that based their decisions upon it. Moreover, contrary to the status of customary Law Merchant, international law enjoys the status of the only universally accepted system of supranational law in which custom plays the key role.

International custom, however, cannot be used directly in electronic commerce because international law governs inter-state relations which possess certain peculiarities that do not exist

on the Internet. On the other hand, electronic commerce possesses certain features not encountered in the inter-state relations. Moreover, the concept of international custom has several deficiencies already described, that should be resolved in order to create a practical tool for Internet adjudicators. For the above reasons a separate notion of electronic commerce custom will be developed.

In order to achieve this goal, the concept of electronic commerce custom will be studied based upon the previously described concept of international custom. First, the justification for the development of a new concept of international e-commerce custom instead of reusing the existing theory of international custom to the Internet commerce will be outlined. Then a definition of electronic commerce custom will be proposed, followed by an in-depth discussion of its elements. Finally, the role of a judge in establishing custom will be outlined followed by an illustration of how to solve the hypothetical cases.

5.2 Problems with applicability of international custom to Internet commerce.

There are at least nine reasons why the concept of international custom cannot be directly applied to the Internet commerce:

First, as was reiterated a number of times, international custom applies to states and some international organisations, whereas on the Internet common routines are entered into by individuals and companies. Moreover, on the Internet interactions might take place only between the pre-programmed computers, which do not happen in the world of classical international relations. In other words, there is a fundamental difference in regard to who generates customary practices in traditional international relations and on the Internet.

Second, international custom can be particular or local, meaning that it is confined to a larger or smaller geographical area. In this sense, the scope of custom is determined by the geographical adherence to a given practice. The Internet, however, does not recognise geo-political borders. The geographical ties of Internet websites can only be established by reference to its domain name.[779] However, this is not a perfect indication because there are many sites which use global top-level domain names like .com or .net. Moreover, even country-level domain names like .au or .pl are not perfect indicators of the origin or location of a given site because they can be purchased by anyone from anywhere. In this sense, the Internet custom has none or at most very weak ties with geographical location. Any reference in this thesis to geography in the context of the Internet custom should be understood as a reference to the domain name convention.

Third, the population of states (191) and international organisations is small, slightly exceeding 200. On the other hand, population of electronic commerce participants is much larger, to be expressed in millions rather than hundreds. Despite the fact that a large number of participants might use the same information system to manage access to their websites[780], the concept of international custom applies to a much smaller population of subjects than is the case of the Internet.

Fourth, states are bound by a large number of bilateral and multilateral treaties, resolutions of international organisations and customary practices recognised by international courts. On the other hand, Internet participants are rarely bound by any formal relationships with one another

[779] See Chapter 2.
[780] See Netcraft reports on the popularity of hosting providers. Available at http://www.netcraft.com, last visited: 07/05/2003.

unless a transaction takes place. Even then, the level of convolution of relationships between Internet participants is much lower than that of states. In other words, the level of complexity of relations between states and between the Internet commerce participants is different.

Fifth, states are very complex structures with many organs being responsible for actions that are of significance on the international arena, whereas the Internet participants usually represent themselves. Even large online organisations that structurally present a complex entity would usually act only in one way in a given time on the Internet. However, in the case of a state, one organ may say different things on TV, radio and the Internet, or the statement of one organ may be contradicted by a statement or an action of another organ. In other words, the structural complexity of international law subjects is far greater than one of the Internet participants.

Sixth, states in international law developed a peculiar attitude to practices of other states, quickly protesting or affirming their actions. The reasons behind this behaviour of states is to make sure that the practice in question will not develop into a customary norm based on the absence of protest on the side of other states (acquiescence).[781] Such a peculiarity of international law does not exist on the Internet. Internet users are not aware at this stage of existence of customary Internet law and its potential consequences. In other words, international custom is applied more consciously these days by the international community of states, which is not the case with the Internet.

Seventh, international custom deals with complex entities that are nevertheless directed by groups of humans. On the Internet, however, a lot of behaviour is being programmed once and left to the software components to execute it infinitely. Moreover, some software components can even learn through experience about the environment in which they function, adjusting their behaviour accordingly, thus making predictions about their future behaviour even less certain. In other words, international law custom relates to humans' behaviour, whereas the Internet participants also have to deal with pre-programmed behaviour of software components that may turn out to be very unpredictable.

Eighth, customary practices in the international arena are reflected in the actions of state officials, which are often recorded in legal documents and writings, international agreements, resolutions and case law. In this sense, they are visible, although e.g. it may not be that easy to get access to diplomatic correspondence between states in question. On the other hand, practices on the Internet are not being officially recorded yet. They can be learnt by examination of website content or the behaviour of the web browser. They can also be learnt by studying invisible behaviour of the Internet infrastructure. In other words, there are different modes of manifestation of customary practices in the international arena and on the Internet.

Ninth, customary practices in international law relate to physical processes in the tangible world. On the other hand, customary practices on the Internet exist only in the electronic format. The former are cognisable only insofar as social structures and relationships between them can be deciphered and interpreted. On the Internet, learning about processes can be automated and left to intelligent agents to be discovered and reinterpreted. Internet practices can be easily recorded on a daily basis in relation to a far greater number of subjects than is practical in the traditional world. In this sense, the Internet has potential for use of automated intelligence in the discovery of routine behaviours of a large number of participants. The table below summarises all the key differences:

[781] See e.g. Charney, J. I. (October 1993) pp.536-537; Goralczyk, W. (1989) pp.100-101; Wolfke, K. (1993) p.48. See Chapter 4.

	International law	Internet
Who creates custom?	States, organisations	Individuals, companies, computers
The role of geography	High	Low-to-none
Population size	Small, around 200	Large, couple of millions
Complexity of relations	High	Low
Complexity of subjects	High	Low-medium
Community awareness of custom	Very high	Low
Presence of artificial agents	No	Yes
Manifestation of custom	Actions of state officials	Website content, behaviour and source code, infrastructure setup
Visibility of customs	Physical world	Electronic world
Potential for automation	Low	Mid-High

Figure 3. *The differences between international custom and the Internet custom.*

The above differences between the traditional world and the digital one necessitate development of a new concept of custom that would take into account specific features of the Internet and electronic commerce. But they are not the only reasons. As was discussed in the previous chapter, the notion of international custom involves presence of both the material element of practice and the subjective attitude to it, which is even more difficult to prove in the largely anonymous and automated world of the Internet. On the other hand, if this subjective element will be equated with an express or tacit recognition of a practice as law then the scope of the application of Internet custom and hence its effectiveness as a source of global Internet law would be limited to the highest degree. In other words, long-lasting theoretical controversies regarding the characteristics of the international custom as well as practical problems associated with evidencing it provide another argument for searching for a better explanation of this phenomenon.

5.3 Objectives of the new concept of custom

The proposed model of electronic commerce custom will have to achieve three objectives:

1. To facilitate practical application of custom in solving Internet related disputes

2. To develop the concept of custom independent of national legal systems and tailored to the needs of the Internet

3. To provide a consistent theoretical explanation of custom as a potential source of Internet law, taking into account the peculiar features of the Internet.

The first objective stresses the practical importance of the new theory of custom. As was shown in the case of international law that the theory accepted there is not practical, because it is difficult to apply. As was shown, the International Court of Justice has never successfully applied it in practice. Practical viability is a very important feature of the proposed concept of Internet commerce custom.

The second objective stresses the importance of adopting a global perspective on the Internet. The proposed concept of Internet custom is constructed taking into account the unique features of the Internet, in particular its global scope and lack of control. It disregards particular national values that could be embedded in domestic theories of custom.

The third objective is to provide a consistent explanation of the phenomenon of legal custom on the Internet. As was shown in Chapter 4, the concept of international custom relies on the presence of psychological element, which cannot satisfactorily explain the phenomenon. The proposed model will reject any elements that might cause illogical consequences on an abstract level. Furthermore, to make the proposed concept tailored to the needs of the Internet it will take into account the unique features of the Internet.

The proposed concept of electronic commerce custom will rest on the following principles:

1. Computers and humans are equally important actors in online transactions

2. Only actions of actors or their results are identifiable and not their psychological attitudes

3. Widespread Internet practice creates global rights and obligations for everyone involved

The first principle stresses the importance of automation of online commerce. Software plays a preponderant role on the Internet as it is a medium through which humans execute their deeds. However, software components do not have "psychology", although intelligent software agents have a limited decision-making autonomy and can adapt their behaviour based on experience. As a consequence, according to the second principle, the concept of custom should not be analysed using human characteristics. In consequence, the psychological element of custom will be rejected. Instead, customary practices should be assessed only from the perspective of their widespread adoption. The third principle assumes a globally binding nature of custom. Without this assumption the power of custom as a source of law would be severely limited. However, this principle is, as was shown, generally accepted in domestic and international legal systems.

5.4 Proposed definition of Electronic Commerce Custom

There is no single accepted understanding of what international custom is. Taking this into account as well as the differences between the traditional world and the Internet, the new notion of Internet commerce custom will be proposed. In order to structure better discussion of Internet commerce custom, its definition will be proposed first. Then each of the elements of the definition will be further analysed.

An international electronic commerce custom (e-custom) can be defined as a legally relevant practice of trading on the Internet, which is sufficiently widespread within a given timeframe as to justify the expectation that it should be observed.[782]

This concise definition hides some important issues that should now be expanded upon. The mercantile practice must be of legal importance. For example, an Internet practice of using a certain type of font can be presumed to be legally unimportant and hence non-binding. Unless of course there is a dispute involving the usage of certain fonts e.g. in the context of readability of web documents where such practices may turn out to be legally relevant. Further, the practice must be repetitive – a single instance of a practice is insufficient to form a custom. In addition, this definition does not require e-custom to be a long lasting practice, meaning practice extending over a considerable time. As will be argued below, custom can develop nowadays within a couple

[782] see Chapter 1, see also Polanski, P. P. and Johnston, R. B. (7-10 January 2002) p.4.

of days or even hours because of the intensity of transactions in so dynamic an environment as electronic commerce and the ability to trace them.

What is important is that a practice must be widespread, meaning that it must be followed by the majority of web companies in one or more industry or geographical region or the whole world and intensive in terms of number of transactions within a given time period. Intensiveness of practice is a result of multiple repetition of a given practice within a defined timeframe. In other words, the term widespread is used here to mean the practice is extensive geographically (or industrially) as well intensive in time. Only sufficiently widespread practice may generate the expectation that it should be followed. The concept of expectation as to the observance of the practice means that other Internet traders in the same set of circumstances have a legal prospect of being treated in the same manner. Expectation means that parties willing to deviate from it must have a very good reason to do so. Finally, the notion of expectation implies that the practice is not followed from the feeling of legal necessity or because the practice was tacitly accepted as law.

The next two sections are devoted to justifying all aspects of this definition in the context of the theory of international custom. Particular emphasis will be put on analysis of the material element of practice and the subjective element of the concept of custom in the context of Internet commerce.

5.5 Practice

Practice is the essence of the concept of custom in general. This gives rise to the question of whose practice contributes to the development of practice. Since we are dealing with international e-commerce transactions, the major players in the development of customary rules are companies and physical persons, but possibly also international organisations and states acting as a party in e-trade environment. However, one should mention here that acts of persons might often be replaced by acts of computers.

5.5.1 The notion of practice

What should be understood as practice in the context of the Internet? Is an electronic statement an action? If so, what if a website promises one thing but does not implement their assertions in practice? The following sections will discuss the concept of practice from the perspective of positive actions, promises to act and conscious abstentions from actions.

A. Actions

The concept of practice is generally taken to refer to positive actions.[783] However, what is an action on the Internet? For instance, provision of encryption by a web server could be regarded as an action. Similarly, inclusion of a link to other websites without the consent of the web designer is a physical action. Registration of a domain name is an action of a person. In short, the term action will be used here as a synonym for a positive activity directed towards achieving some goal.

There are two types of positive actions on the Internet. Some actions are not pre-determined, can be changed and are carried out in an *ad hoc* manner by human beings. For instance, linking to a website without seeking permission of this website to include a link is a positive action. However, a programmer might in some circumstances change this practice and ask for permission or delete

[783] See chapter 4.

a link if he is afraid of unknown legal consequences. Similarly, copying information from the Web is a physical action. In principle, it will be carried out by a human on an as-needed basis. These types of actions are not pre-determined although they have potential for automation. They may also not provide uniform results under the same circumstances. These types of actions will be referred to as simple actions or actions for short.

However, the unique element in the majority of Internet actions is the fact that they are often pre-programmed and respond in a uniform manner to the event triggering them. For instance, strong encryption has to be enabled first, before any transaction will be secured in this manner. Similarly, registration of a domain based on first-in first-out principle, requires coding of this functionality in the first place. In the same vein, provision of order summary or order confirmation requires pre-programming of this functionality in a web system. These types of actions will provide the same behaviour in the same set of circumstances. For this reason, the discovery of the actual functionality is more important than learning about how many times a given functionality was used. This finding will find its application in the context of evidencing Internet customs outlined in the next chapter. These types of actions will be referred to as pre-programmed or predetermined actions.

In summary, there is no doubt that positive actions constitute a practice. In consequence, the same action performed by a majority of web systems over some time may lead to the formation of custom. To be more precise, it may lead to the formation of an expectation that such actions will be performed in similar circumstances by other websites.

B. Promises to act

However, it is far more difficult to say whether a general or concrete statement or a promise to act can be considered as a practice capable of creating Internet custom. For instance, if all e-shops assure their visitors that they provide a secure environment does it mean that there is a customary practice of providing a secure Internet environment? Or, if a majority of web systems assure their clients that their private data will not be transferred to third parties, does it mean that there is a custom of not transferring such information?

From the logical perspective, the answer is negative. A promise to act or claim about actions that e-businesses make, no matter how solemn or official it is, cannot be equated with the action itself. Consequently, a promise to act in a given way announced by a majority of websites cannot, by itself, constitute evidence of a customary character of action described in such statements. For example, if most commercial websites claim that they provide secure 128-bit encryption, this information should not be used as the only evidence of existence of custom of providing such a level of encryption. In order to test the validity of such a claim, one would have to check if these businesses actually implement this level of encryption in practice.

However, statements about actions are not without significance. Promises to act may lead to the emergence of a common practice of providing such a promise. In other words, written assurance of encrypted communication can lead to the emergence of a customary norm requiring provision of such information to all website visitors. This can be important when it comes to the provision of highly technical or detailed legal information regarding e.g. security and privacy of information or common legal clauses. For example, since most commercial websites contain assurance as to the treatment of private data, one can legitimately expect provision of such information from all commercial sites. Furthermore, statements about actions that are concordant with a practice they promise to implement provide additional confirmation of an adherence to a practice in question.

However, a distinction between actions and statements about them is often more difficult to make. This is a result of the fact that the Internet is centred on the provision of information. Is the display of a transaction confirmation webpage a positive action or simply an electronic statement? In this case, it is important both that the purchase order will be confirmed and that order confirmation will contain specific information. In this scenario, the physical act and the statement are inseparable.

It is submitted then, that the term practice refers primarily to positive actions and not to general or concrete statements about them. However, statements about acts can also be viewed as actions, but only as actions that may lead to the formation of custom of making such statements.

C. Abstention from action

One of the most challenging questions regarding the concept of electronic commerce custom deals with the treatment of lack of action. Can lack of positive actions be considered as a practice? If so, can a common inaction amount to a custom prohibiting contrary positive action or give a right to act?

To exemplify the above questions the phenomenon of spamming[784] will be analysed. It may be assumed that the majority of Internet participants do not send spam or unsolicited emails. In addition, the latest research clearly shows that the vast majority of the Internet population does not like spamming.[785] Some authorities realising the potentially disruptive nature of this type of communication have decided to regulate it.[786] Taking into account the above remarks, would it be rational to argue that spamming is prohibited by Internet custom because most of the Internet population does not send spam and expresses a negative attitude to spamming?

The answer is not simple. Rather, it prompts further questions opening a challenging research area. It could be argued that the majority of Internet users may not send spam because they do not know what spamming is or are not interested in it. Can such unconscious abstention from action be considered as a practice? If it is not a practice then what is it? Can such inaction amount to the formation of customary law prohibiting given behaviour in the future?

There are several important issues here. The problem of legal value of common inaction cannot be separated from the motives driving it. However, it is going to be very difficult if not impossible to realise what are the motives behind widespread social abstention from action on the Internet. The problem is whether the inaction is a conscious activity on the side of Internet participants aiming at avoiding or minimising certain negative consequences of contrary positive action. Or, whether inaction is a result of unconscious activity being itself a result of lack of awareness regarding existence of such activity or for a similar reason. In contrast to custom based on widespread positive actions where motives behind following a given norm are not important because actions are "visible" and as a result, quantifiable, here one has to ascertain if there are any motives at all because there is no ascertainable activity in the physical space. The whole process takes place only in the psychological sphere of the Internet participants. In order to ascertain whether inaction is a conscious act or just unconscious inactivity, one should delve into the psychological sphere of the subjects taking part in it.

However, there are serious evidentiary problems. The nature of custom implies a sequence of positive acts, because only those are objectively identifiable and quantifiable. In the case of absence from action, it would be necessary to prove the consciousness of non-participation in a given set of circumstances in a representative sample of those not involved. One would also need

[784] See Glossary.
[785] Cieslak, D. (31 march 2003).
[786] See e.g. Art.7 in Official Journal of the European Communities (2000).

to address the tricky issue of the repetitiveness of such a practice. Finally, the questions of legal relevance or morality of inaction should be addressed. In this scenario, the evidentiary requirements addressed above could possibly bring us back to the traditional dual requirements of the concept of custom and the problems associated with them. Moreover, allowing creation of law based on lack of practice is very risky, since lack of certain activities may imply prohibition to act in this way in the future. Such an argument would be very difficult to accept, since in the future no positive custom could develop without first breaking the existing customary norm.

On the other hand, a prohibitory norm emanating from widespread abstention from action could be inferred, in certain situations, from the proof of a positive practice that is an exception to the alleged customary norm in question. For instance, the principle of non-use of force could be deduced from the proof of positive actions of self-defence in the event of the use of force. This proposition is very controversial and might be difficult to apply in practice, due to potential difficulties with agreeing which positive practice is a legitimate exception to the alleged prohibitory custom inferred from a common inaction. This matter will be further researched.

In summary, the consideration of practice as consisting of both positive action as well as abstention from positive action introduces new complexities. Without ruling out the possibility of treating abstention from action as a material for Internet custom, this study will use the term practice in the context of positive actions and in a limited sense, promises to act. This matter requires further research.

5.5.2 The notion of legally relevant practice

Not all common Internet practices could amount to legal norms, because some of them in the most typical transactions have no legal relevance.[787] The legal relevance of practice means that a norm emanating from a practice in question could be helpful in adjudicating a dispute, or in short, is important to law. Being important to law means that it can solve a dispute at hand, for which there are no written norms, written norms are in conflict or there are some other problems.[788] Hence, there is a need for a judgement of a reasonable person - a judge, arbitrator, researcher or the international community - whether a given practice is legally important or not.

The view taken here is that not all practices even if generally followed will automatically create legally binding norms. As an example, the practice of sending e-mails written using Times New Roman font will never create a customary norm stating: "All e-mails should be written using Times New Roman font". It is common sense that will allow judges or arbitrators to ascertain whether a particular practice is legally relevant or not. A common practice of displaying advertising banners in the form of a long rectangle is not legally important but a common routine of providing encryption of transactions is. Judgement is unavoidable but it eliminates the need for the establishment of a subjective attitude to a practice among parties following it.

Some widespread practices may not have an apparent legal character. For instance, it is a common practice to write agreements on white paper or in case of the Internet using Times New Roman font in e-mail communication. However, these apparently non-legal customs may attain, in rare cases, a legal status. For instance, one can imagine a case where the Internet website contained certain obligations written a font very difficult to read and a very rarely used font. Would such a written statement create binding legal obligations? The answer could be negative,

[787] Polanski, P. P. (2002).

[788] As the I.C.J. put it referring to international law, the questions "framed in terms of law and rais[ing] problems of international law (…) are by their very nature susceptible of a reply based on law (…) [and] appear (…) to be questions of a legal character. "Western cited in the above format in *Legality Of The Threat Or Use Of Nuclear Weapons (Advisory Opinion)* (8 July 1996) para.13.

because it is customary to provide legal information on the website in a more readable format. Therefore, although some popular practices may not have apparent legal relevance, in some cases they may turn out to be useful.

In summary, the concept of electronic commerce custom deals with positive actions as well as statements about acts that must have legal significance. Nevertheless, in some rare cases, a practice considered hitherto as legally irrelevant might turn out to be helpful in solving a legal problem and for this reason acquire status of legal relevance. To distinguish between legally relevant and irrelevant practices, the judgement of a reasonable person is necessary.

5.5.3 The notion of sufficiently widespread practice

The definition of electronic commerce custom proposed above, defines it as a sufficiently widespread practice. The term widespread embraces three distinct issues:

1. The question of what is the scope of adherence to a given practice (practice widespread in space).

2. The question of what constitutes a majority of e-commerce participants engaged in a given practice for the purpose of establishing e-custom (the notion of majority).

3. The question of how many occurrences of a given practice should be recorded (practice widespread in time).

The concept of widespread practice is the most important element of the definition of electronic commerce custom and for this reason, it will be analysed below.

A. Practice widespread in space

Custom may be general, particular or local.[789] In consequence, even a practice of two e-companies would be sufficient to form a local custom that would bind them. In such a scenario, the customary norm would not extend its force onto other companies. Of course, if other companies then follow the electronic practice of these two companies, this could lead to enlargement of the scope of application of a local customary rule, or maybe even to the formation of a general customary rule. In the latter scenario, the customary norm would be binding upon all companies engaged in electronic commerce in a given industry or across all industries.

Electronic commerce practice can have global or general scope meaning that it is observed by companies of all sizes across all or a majority of industries and across the world. A given practice has particular scope if it is peculiar to a number of companies exhibiting some commonality e.g. are confined to one or several industries or to one or several geographical regions as indicated by the country-level domain names. A practice has local scope if it occurs between two or only a few trading participants.

To be more precise, however, one should look at practices from the perspective of geographical and industrial coverage. As was stated earlier, the Internet has weak connections with geography and for this reason one can speak about geography only to the extent a domain name and language allows such an inference. One could replace geographical scope with cultural scope or use of similar software. In short, the Internet world can be segmented by any relevant variable. For instance, a practice that is widespread in a geographical sense can be confined to only one or several industries. An example of such a practice is provision of strong encryption of transactions. Such a practice is geographically global as it pertains to all the countries whose banks provide

[789] See Chapter 4.

online banking facilities. At the same time, such a practice is limited to industries dependant upon a safe completion of transactions such as the banking industry. On the other hand, a practice can be both geographically global and found in all or a large number of industries. For instance, Internet transactions are traditionally instantly confirmed. This is visible in all geographical areas engaged in electronic commerce and applies to a number of industries including e-shops, e-marketplaces, online banking etc.[790] One can also imagine a practice of all major industries of a given region but not known in other parts of the world due to e.g. language or cultural common heritage.

A practice can be considered widespread for the purpose of custom even if it applies only to one geographical region or industry. In such a case, serious problems might arise when parties in dispute rely on two conflicting customary practices having local or regional scope. Such cases would probably be very rare. Nevertheless, there is no easy way to solve this problem, and it would have to be addressed on a case-by-case basis.

	Geographically global	**Geographically particular**	**Geographically local**
All or majority of industries	Global custom	Particular custom	Local custom
Minority of industries	Particular custom	Particular custom	Local custom
One industry	Local custom	Particular custom	Local custom

Figure 4. *The table illustrating potential combinations of geographical and industrial coverage of a given practice and their scope of application.*

In summary, a practice can be considered widespread in a physical sense looking from different angles. The table above illustrates possible combinations of geographical and industrial comprehensiveness of adherence to a given practice. Both geography and industrial criteria can be replaced with other determinants. For instance, a practice can be analysed from the perspective cultural unanimity of traders, common software use among traders in a given industry etc. As can be seen, a practice can be considered widespread even if it is adhered to in one industry located in one region of the world. In such a case, however, a potential customary norm arising out of such practice would not have a globally binding effect. This thesis, however, will focus on practices that are adhered to in geographically dispersed locations and are recognised by many industries.

B. The notion of majority

How many e-companies must adhere to a given practice in order to consider it widespread? Is an ordinary majority of participants a sufficient indicator of widespread character of practice? Should bigger companies be given greater power than Small and Medium Enterprises (SMEs)? The questions are debatable.

A given practice can be adhered to by all, a majority or a minority of Internet traders. In the simplest case scenario, a practice will have 100% adherence to it. The case of unanimity provides the strongest evidence of customary character of a given practice. However, in most of the cases, the answer will not be that straightforward.

If adherence to a given practice is not unanimous, then there must exist one or more competing practices. One could argue that if 51% of Internet trade participants follow a given practice it is a sufficient argument in favour of the widespread character of this practice However, a simple

[790] Classification of industries might turn out to be a problem in some instances, but this aspect of the proposed classification will be omitted from the scope of the thesis.

majority is not sufficient if a competing practice or competing practices are popular. For instance, if an alleged customary practice has 60% of adherence and a competing practice has 40% adherence then one should not be able to argue that an alleged customary practice is sufficiently widespread because the competing practice is too popular. Instead, such a practice could be regarded as a custom in formation.

This leads to the question of how prevalent a non-unanimous practice must be in relation to competing practices in order to consider it sufficiently widespread. Any answer will have a degree of arbitrariness. However, this arbitrariness can be minimised by clearly stating the principles on which the answer is based. The notion of majority will be based on the following principles:

1. The practice must have a clear dominance over competing practices.

2. A reasonable person ascertains whether a given practice is clearly dominant.

Clear dominance can be established quantitatively or qualitatively. To establish the dominance quantitatively statistical analysis must be performed. Ability to generalise to the population is ensured by standard techniques from sampling theory. To establish dominance qualitatively, an analytical or inductive generalisation must be performed. As Chapter 6 will show, the quantitative answer can be given by probability sampling, whereas a qualitative generalisation may employ certain types of non-probability sampling.

a. Quantitative majority

As far as quantitative dominance is concerned, it is proposed that a practice is clearly dominant if the difference between adherence to such a practice and adherence to the second most widespread practice is greater than 50%. The principle of clear dominance can be summarised in the following equation:

$$\mathbf{D >= C+ 50\%}$$

where D = adherence to dominant practice and C = adherence to the second most important competing practice. In case there is only one competing practice, this quantitative principle means that a competing practice should not have more 25% adherence. When there is more than one competing practice, this formula ensures that the dominant practice must represent no less than 50% of all practice. Thus this approach appears to capture all the essential elements of the notion of a clear majority.

Figure 5 below illustrates this problem well. By March 2002, around 150,000 web servers out of the total number of 160,000 researched by Netcraft offered strong encryption. In other words, the data suggests that in March 2002 93% of web servers offered strong encryption of transactions and only 7% of servers offered exclusively old ciphers. Since the difference between the practice in question and a competing practice is greater than 50%, the practice of offering strong encryption of transactions is a dominant practice. This seems to be very strong evidence of the customary character of a norm requiring web servers to provide capability to transact using strong encryption. One should also note, however, that such a practice started to become distinctly popular only from the period of March to July 2000. It is only from the end of this period that one could start considering a given norm as having customary character.

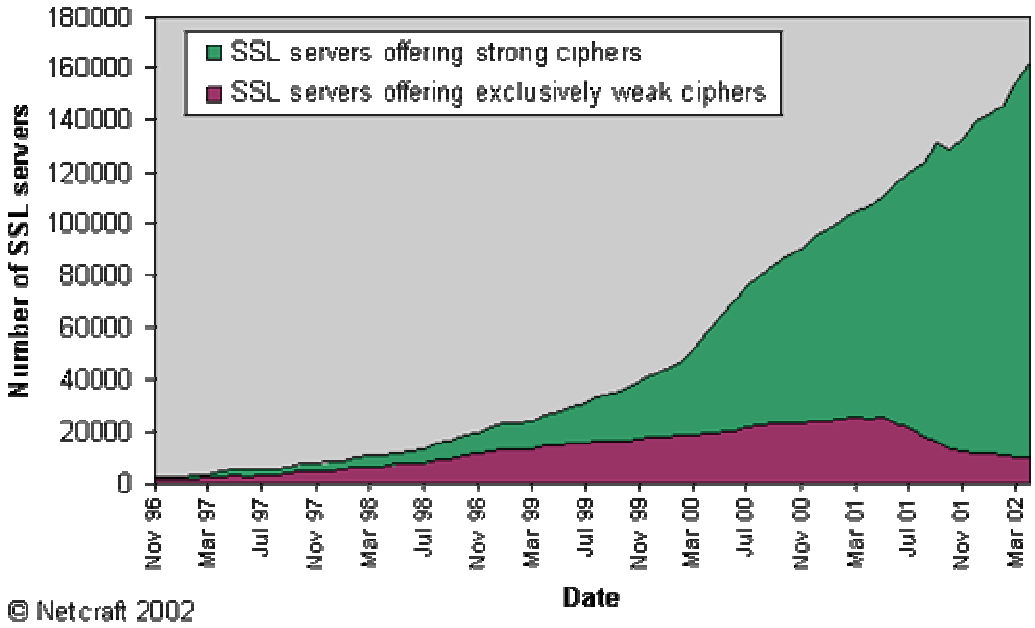

Figure 5. *The notion of majority. Source: Netcraft April 2002 Web Survey*

The principle of clear dominance is to serve more as a guide rather than a formula that should be strictly adhered to. This is in line with the principle of ascertainment of clear dominance by a reasonable person. The second principle implies that borderline cases should be interpreted in favour of existence of customary practice. For instance, in a case where there is only one competing practice, the quantitative principle of clear dominance means that a competing practice should not exceed 25% of adherence. If, however, a practice in question has 74% adherence and a competing practice has 26% adherence a reasonable person could decide that a given practice is sufficiently widespread.

Practices that could be presumed to be customary would have around 75%-100% adherence to it. A practice that is 75%-100% popular will be referred to as a common practice. Uniformity of practice suggests that action in conformity with a norm arising out of such practice is expected by all-size participants in electronic commerce. Only a high level of adherence to a given practice provides a strong presumption in favour of customary character of a given routine. The reason is that such practice can much more easily create the presumption of longevity (or time intensiveness), repeatability and consistency thus greatly simplifying the proof of e-custom.

b. Qualitative majority

It may not always be possible to establish in numerical terms what the dominant practice is. In such a case the dominance of a given practice must be inferred from other indicators such as the practice of influential companies or other factors that that can indirectly indicate the nature of majority practice. It is important to note here that smaller companies usually follow what big enterprises do, but until this actually happens, one cannot speak of a widespread practice or e-custom. A practice can be considered dominant if it is adhered to by important Internet companies such as e.g. Amazon.com or Dell.com as well as small and medium e-commerce companies.

Qualitative analysis requires very strong methodological tools that would allow such generalisations. As chapter 6 will show, very powerful generalisations can be drawn from analysis of software tools used to build Internet commerce websites because of the constraints they place on possible variation of practice. This matter will be taken up more fully in Chapter 6

where a definite methodology for combining statistical and analytical evidence for the dominance of a practice will be presented.

C. Practice widespread in time

Internet practice can be widespread not only in a physical sense but also in time. The section below will discuss the element of time in detail.

5.5.4 Duration of Internet practice

The concept of custom has traditionally been associated with a long lasting practice of doing something.[791] Since the digital economy relies on fast dissemination of information, practices of companies in the era of the Internet are formed much faster than in the past. Sections below will present the traditional horizontal perception of time and the arguably more important vertical element of time in the context of the development of electronic commerce custom.

A. Horizontal element of time

The ordinary meaning of the term custom presupposes the existence of a widespread practice for a very long time. This notion of the term has changed in international law where it has been accepted that international custom can be recognized after a short time period, since developments in society, particularly in commercial or technology law, take place at a quicker pace.[792]

Those findings are of paramount importance to the concept of electronic commerce custom. Certain e-mercantile practices can become binding within a very short time frame. If thirty years ago, it could take less than ten years[793] in international public law to develop binding practices it can also take less than ten years to develop binding e-commerce practices nowadays. In fact, given the enormous tempo of the digital revolution, one could argue that binding e-commerce practices could develop in a much shorter time frame, arguably within a couple of weeks, days or even hours.

A good illustration of this point is provided by the practice of automatic update of software over the Internet, which has become more and more popular. Thanks to this very powerful capability of the Net, which allows unconscious downloading of patches and updates for any kind of software, millions of computers may be upgraded simultaneously with new features often rapidly changing established patterns of software execution. In consequence, new Internet customs could develop instantly with the widespread adoption of this practice. This calls for a new interpretation of the concept of longevity of customary practices.

B. Vertical element of time - Volume of transactions

The traditional understanding of the concept of custom implies longevity of practice as the necessary condition of its existence. This one-dimensional, "horizontal" approach does not take into account other potential measures for assessing the practical importance of a given routine like the intensity of certain practices within a given period ("vertical" measure). Using a simple

[791] See Chapter 3, 4 and definition of custom in Chapter 1.
[792] See Polanski, P. P. (2002); Polanski, P. P. and Johnston, R. B. (7-10 January 2002); Polanski, P. P. and Johnston, R. B. (2002)
[793] See Judge Tanaka (1969) p.177 discussed in chapter 4.

analogy, two hundred years ago there could be 100 instances of adherence to one commercial practice within one year. Nowadays there can be 100 instances of adherence to one commercial practice within one day. In other words, one day nowadays can be as important as one year in the past as far as formation of a custom is concerned.

This study challenges the traditional understanding of the concept of custom as it is argued that, in the case of electronic commerce custom, it is also the volume of the transactions that can contribute to the faster formation of international Internet customary norms. Traditional custom used duration as a measure of significance because intensity was not easily measurable. The electronic commerce environment provides a unique opportunity to measure the number and type of transactions that took place in a given timeframe, thus providing an excellent proof of mercantile adherence to certain practices. For instance, transaction logs or intelligent software agents might gather information about the intensity of certain types of transactions that might contribute to the faster formation of e-custom. This in turn leads to the conclusion that the number of transactions within a given unit of time, rather than some fixed number of time units, is more important when assessing longevity of Internet customs.

The difficult question is how many adherences to a given practice within a given unit of time would justify considering it as having customary character. Rather than providing some arbitrary figure, more important is the realisation of how popular a given practice is over some period, taking into account its growth trend. Instant practice could be considered customary if it is very widespread and has an indication of the growth in the early stages of its adoption. Proof of custom then, could completely disregard the time factor, although information about when the practice started to occur and when it started to become popular could become very useful.

C. New meaning of time factor

Electronic commerce custom does not need to have long continuance if adherence to the practice in question provided it could be evidenced using electronic means that it was very intensive within a given timeframe. It is quite realistic to assume that new e-customs could be developed in just couple of hours. Assuming that in some time in the future most Internet users will have broadband Internet connection, software updates will be performed instantly and without the consciousness of the user. For instance, it is possible to imagine a sudden shift in some security practices because of one update that is instantly disseminated to millions of computers around the world in just a couple of minutes. It is not difficult to imagine that within just a couple of hours, the majority of the commercial web servers and browsers might start to use e.g. 168-bit encryption of e-commerce transactions. The sites that did not respond quickly to this new standard of transacting would in effect create a less secure environment. If there is a breach of security, the adjudicator could base his or her decision on the customary practice of using higher encryption that was formed within just couple of hours. This new customary practice would follow from another practice that could already be considered as customary and requiring all software to be updated as soon as possible and when there is a direct connection to the Internet – automatically.

The time factor then is still important as far as the nature of custom is concerned but it has changed its meaning. The passage of time is no longer of sole decisive importance, as today most web practices cannot be older than ten years anyway, because web browsers were introduced less than a decade ago. Nevertheless, they could be considered customary based on their very intensive application. As a result, a proof of passage of time would not be necessary, given an indication of popularity of practice.

What is interesting to note is the fact that custom could become a faster mode of development of both domestic and international Internet and electronic commerce law than statutory laws or case

law. Since, as it is argued, a customary practice could be developed very rapidly, the new unwritten laws could be established in a much shorter time-frame than traditional laws. This introduces new interesting challenges that will need to be further investigated.

5.5.5 Consistency of practice

Consistency of Internet practice should be understood as a steady adherence to a given practice over the timeframe in question. From the practical perspective, this boils down to the question of the characteristic of a trend that a given practice exhibits. Steady growth patterns of adoption of a given practice would certainly fuel the argument that such practice is of customary character. Conversely, inconsistent tendencies could provide arguments against the customary character of a given Internet practice.

The trend analysis should be performed especially when a practice in question cannot be regarded as a common practice. If a given practice has 75%-100% of adherence, the question of consistency of this practice seems to be unnecessary, as in a given time it fulfils the most important requirement for establishing electronic commerce custom, which is its widespread character. In case of practices that are popular but are not common, a trend analysis seems to be necessary. This type of analysis may turn out to be very important in judicial hearings that always deal with a situation that occurred some time ago. Without being able to see the propensity of a practice within a given timeframe, it may be impossible to argue for the existence of a customary norm in a given moment in the past.

An analysis of consistency of practice from the perspective of the passage of time could reveal major or minor inconsistencies in the tendency of given practice. Major inconsistencies should always lead to the conclusion that a practice in question has not reached a maturity expected from the customary norm. Minor inconsistencies could be tolerated, although in case of electronic commerce, one should expect more linear trends of adoption of a given practice.

However, to establish the trend of a practice may prove to be difficult in practice. If a question regarding the existence of Internet customary norm refers to one or more years back, one may have to gather information about a given practice over this period. One way of approaching this problem is to analyse the current popularity and growth trend of a practice in question taking the last couple of months and then attempt to draw a line back in time. Such a method of establishing consistency of practice is far from ideal and may provide false information for practices that are a couple of years old. For this reason, it is also important to gather information about the time the practice was born and how quickly it was adopted in the industry. In the case of non-common practices, the trend analysis may prove to be difficult to conduct and for this reason should be discouraged.

5.5.6 Objections to practice

The question of consistency of practice is related to another important issue – that of treatment of conscious objectors to the practice in question. Uniformity of practice suggests that action in conformity with the norm arising out of such practice is expected by other participants in electronic commerce. Practice of an electronic commerce participant, which does not conform to what the majority does, but achieves the same goal as the practice of the majority should not be viewed as an inconsistent practice, but rather should be treated as practice contributing to the uniformity of practice. For if a company does not use strong SSL encryption, but achieves a goal of equally secure data transmission using other methods, then such a practice should be considered as consistent with the practice of the majority.

Transplanting this concept from international law would lead to the result that an e-commerce participant who objects to a given practice from the beginning will not be subjected to the norm arising out of the practice of majority.[794] There are two issues here. First, as was discussed in the beginning of this chapter, international law has only around two hundred participants whereas in global electronic commerce there are hundreds of thousands of entities. As a result, in international law objection to a prevailing practice is made public and is easily noticeable, and other states usually react very quickly to such a behaviour, either approving it or not. In the case of electronic commerce, there are many more participants who are not aware of the role of custom as a potential source of law and do not make their objections publicly.

Moreover, in international law, the goal of a state objecting to a given practice is to disturb eventual formation of a custom. The objecting state has to react if it does not want to be considered as acquiescing in the practice of the majority, by virtue of silence, interpreted as an unvoiced compliance. Contrary to international law, many conducts that do not conform to the practice of the majority are unconscious. Frequent reasons for non-conformance would possibly be an ignorance or lack of funds or willingness to implement a given technology. If allowed, such behaviours, could actually lead to a justification of non-conformance with any Internet customary practice thus yielding customary law irrelevant. In short, allowing simple non-conformance with a practice of the majority, for whatever reason, could undermine the sensibleness of custom as a source of Internet law.

However, does this mean that any practice consciously and openly objecting to a practice of a majority should be denied legal validity in the case of a dispute? The answer is no. As was noted above, the practice of the minority which is different yet achieves the same goal as the practice of the majority should be considered as a valid exception. Obviously, if the objector follows a practice that is better than an industry standard the same rule should apply. Again, a judgement of a reasonable person (or an expert) will be necessary to assess whether a given practice serves the same purpose as the practice of the majority.

If a competing practice does not achieve the same goal as the practice of the majority, it should be treated as a breach of the norm arising out of the practice of the majority. One should note here, that such a practice should also be assessed from the perspective of its reasonableness or morality of its goal. Similar remarks could be made in the context of the doctrine of a subsequent objector, which could be an e-company that objects to e-custom after it has been established. Again, such an objection would be permissible but only if the practice that it follows is better than the industry standard or at least achieves the same goal as the practice of the majority. In general, however, such behaviours should be interpreted with a great degree of caution.

5.5.7 Repetition of practice

Repetition of practice over time can result in the formation of custom, which has the force of law.[795] This apparently obvious statement has been undermined by some international lawyers who argued that international custom could be formed after a single instance of practice.[796] Although this matter is of little practical importance, it is argued that Internet custom can be formed only through the repetition of acts over some time, even if it is a very short period. Without such a repetition, the notion of custom would be stretched too far from its original meaning. Repetition can be presumed in the case of predetermined actions and non-predetermined actions, given that a practice in question is widespread.

[794] See e.g. Villiger, M. E. (1997) pp.33-37.
[795] See definition in chapter 1.
[796] See chapter 4.

5.5.8 Morality and reasonableness of practice

The question of whether a practice that is not morally desirable or reasonable creates customary norms is difficult to answer for many lawyers.[797] As was argued in the previous chapter, allowing such tests introduces uncertainty to the body of legal norms. On the other hand, written law is certain – even if it is bad, it will usually bind until changed. In contrast, custom is in many legal traditions subjected to the test of reasonableness or morality, which can deny its legal value.[798] Should Internet practice be subjected to the test of morality and reasonability as a precondition for the establishment of e-custom?

It could be argued that an undesirable practice even if widely followed (for example, spam constitutes 42% of e-mail traffic in the U.K.[799]) should not create legally binding rules. This argument introduces an uneasy degree of subjectivity in ascertaining e-custom. Nevertheless, customary law should not be harmful in order to create desired effects in the society. One cannot imagine incorporation into a body of laws norms that are morally undesirable, illogical or unreasonable. If one assumes that even harmful or unreasonable common practice can amount to a legally binding norm then the system of law is endangered. This could lead to the justification of e.g. child porn on the Internet on the ground that it is a widespread practice in the Internet porn industry to give access to such materials to people above the age of 18.

One should note however, that in most of cases this verification would not stop the development of customary norms on the Internet. One can safely assume that most of the practices are morally indifferent and not harmful to the Information Society as are the norms in traditional commercial settings. As a result, it is argued that it can be presumed that all norms arising in international Internet commerce are morally desirable and reasonable. If one wants to rebut this presumption, then it would have to be proved to the adjudicator that a given practice violates some widely accepted morals or global standards. This matter requires further research.

5.5.9 Summary of the notion of practice

Practice is the cornerstone of the concept of custom. Internet practice consists of positive practice and statements about these practices, although in the latter case, e-custom can amount only to the norm requiring making such statements. An Internet practice is one that is adhered to by Internet companies, individuals as well as international organisations and governments in the course of electronic trading. Such a practice should posses certain qualities in order to consider it as a material for electronic commerce custom. It should be widespread, meaning that it is practiced by the dominant majority of all-size e-commerce participants either globally or locally, across all or some industries and is intensive in terms of number of transactions. The last requirement leads to the conclusion that the traditional element of longevity of practice can be replaced by the vertical element of time. Not every Internet practice could amount to custom but only one that is helpful in solving legal problems. Moreover, a practice should be repetitive, as a single instance of practice cannot lead to the formation of e-custom. Furthermore, it should be consistent over time, although minor inconsistencies should not affect the development of custom. Finally, it should not be harmful or unreasonable in order to create the desired effects in the global society.

[797] Although morality and reasonability are different concepts, they will be discussed as equivalent terms below.
[798] See chapter 3 and 4
[799] See e.g. Cieslak, D. (31 march 2003)

5.6 The subjective element

According to the majority of international law scholars, practice alone is not a sufficient element to form a legal rule. What is also required is a special psychological attitude towards the practice that could be described as a feeling of being bound by the norm that could be inferred from this practice or that it is accepted by the international community. As a logical consequence, a person violating the custom should be aware of the fact that he/she is breaking the rule of law that is binding him/her.

As was shown in the previous chapter, this approach has been severely criticised in the literature. It was pointed out that it is very difficult to evidence this element in practice as it relates to capturing the intangible state of mind of all the participants. In addition, the formation of new norms or change of existing ones is impossible to explain by the psychological theory. Similarly, the reasons for mandatory adoption of all customary norms by new participants could not be successfully explained by the acceptance theory.

5.6.1 Rejection of subjective element in e-custom

The idea of a psychological attitude of feeling bound by some practice as a constituent of the definition of custom is extremely problematic, especially when the parties are not people as may indeed be the case in electronic commerce. In the electronic commerce environment, where all transactions may be automated, very fast, and deeply hidden from an end-user, it would be even more difficult to prove the existence of psychological attitude towards some norm especially in the case where machines rather than humans respond to predetermined events.

Consequently, this study challenges the need for the subjective element in the definition of electronic commerce custom. Extreme practical problems with evidencing a psychological attitude toward some norm combined with an unacceptable theoretical explanation of the concept of *opinio iuris* has led to the rejection of the "two elements" theories of custom. Instead, it is argued that the notion of the expectation that a given practice will be observed explains better the formation of customary norms in general and Internet customs in particular.

On the other hand, some theories of custom presented in the last chapter argued that only the element of practice is necessary for the formation of international custom. Such an approach eliminated deficiencies of *opinio iuris* element in the theory of custom. The main objection against this approach was an argument that the lack of *opinio iuris* eliminates the distinction between custom as a source of law and norms of international comity and morality. The proposed concept of Internet custom eliminates this deficiency by introducing the concept of legally relevant practice, introduced above. Only practice that can help solve legal problems can be considered as having legal applicability. Such practice must also be sufficiently widespread to justify the expectation that it should be observed. Now any practice of trading on the Net that fulfils these requirements shall be considered as a customary right or obligation of the Internet commerce. The section below will further elaborate on the meaning of expectation that a given practice should be observed.

5.6.2 Expectation of practice observance

It is argued, that rather than searching for the subjective conviction that a given norm is a law or that it has been tacitly accepted by the community, it is sufficient to prove that a given practice is sufficiently widespread. The reason is that if a given routine were really well known and practiced, then such a habit would create a natural expectation that it should be followed by other

members of the community. Internet trade participants will simply expect such behaviour from the rest of the trading partners. This is the reason why non-conforming parties should adhere to it.

The concept of expectation as to the observance of the practice assumes that Internet traders in the same set of circumstances have a legal prospect of being treated in the same manner in the same set of circumstances. If a party does not live up to the expectation, then it does not necessarily mean that it has breached customary law of the Internet. However, the party must have a very good reason to do so. Such a reason could be a better routine practiced by this participant. However, if a party expecting an adherence to a widespread practice suffered a loss, or his or her right was in any way adversely affected by non-conformation with the widespread practice, then it is highly likely that an adjudicator will conclude that customary practice has been breached.

The expectation then, is a consequence of a widespread adherence to a given practice. This is an expectation of a reasonable person rather than the actual practitioner in any instance of the practice and, in principle, it does not have to be proved. But if it has to be it can be. If a practice is followed by a majority of web trade participants then the expectation that it should be followed could be presumed. For if 80% or 90% of web participants trade in a particular way, it is obvious that such a behaviour will be expected. However, in less clear-cut cases the proof of expectation might be required. The concept of expectation is of the psychological nature but if the need arises, it is certainly easier to prove than the feeling of being bound by a norm in question. The reason is that it should be less cumbersome to gather evidence in favour of existence of expectation that a given practice should be followed as opposed to proving feeling bound by the practice. Humans have a tendency of rejecting new norms limiting their freedom, thus making the proof of psychological feeling doomed to fail. In this case, however, it should be much easier to gather information about expectation to act in a given manner because it is the expectation of an outsider rather than that of every single practitioner.

In summary, the concept of e-custom stresses the dominant role of the widespread practice that can solve legal problems. The two elements theory of international custom should not be applied to electronic commerce because of practical and theoretical problems with making use of this idea. Instead, the subjective element should be replaced with the concept of expectation that a given practice will be followed because of routine that is sufficiently widespread to create such anticipation in a reasonable man.

5.7 Summary of the concept of e-custom

In summary, the concept of electronic commerce custom is based on the idea of a legally relevant practice of trading on the Internet that is so widespread that it can justify the expectation that it will be followed. The research has challenged the need for the traditional subjective element of custom, claiming that practice is the only constituent element of e-custom. It does not need to be supported by a feeling of being bound by the practice, due to the impossibility of evidencing this feeling as well as the theoretical chronological paradox created by the “two elements” theory of custom. Similarly, the consensual interpretation of the subjective element is rejected, on the basis that new participants in Internet commerce could argue that since they have not participated in the creation of the customary norms then they are not bound by them.

In order to overcome practical and theoretical problems associated with subjective element of custom it was replaced with the idea of an expectation of following a norm created by a widespread adherence to a given practice. The expectation can be presumed only given a very widespread adherence to a given practice. In order to distinguish between customary law and some conventional habit of doing something, the concept of legally relevant practice has been

introduced. The judge will have to use common sense to make a distinction between legally relevant and legally irrelevant practices of trading on the Internet.

The practice must possess certain qualities. It must be repetitive and widespread in terms of space and time. The practice must also be widespread, meaning that it must be followed by a clear majority of subjects across one Internet industry, some industries or all industries globally or regionally. Local custom however, can also exist, although it binds only the parties in question. The practice does not need to be long-lasting meaning that it can be established within a short period, arguably even in couple of hours if there is a high frequency of adherence to a given practice within a specified period of time. Practice changes with time, meaning that it may not be consistent. Nevertheless, consistency of practice automatically creates a presumption that the observation of it is expected. Repetitive practice means repetitive positive behaviour, consisting of both positive physical acts as well as declarations to do something, although in the latter case the scope of custom is limited. Repetition must take place a number of times in order to create an impression that it is a widely followed practice – a single occurrence of a practice cannot give birth to electronic commerce custom. If a practice is followed by 75% or more participants, the presumption can be made that it created an expectation that it should be followed.

Summing up, an electronic commerce custom can be objectively established by researching the adherence in space and in time of Internet companies to a routine in question. This is the primary task of researchers. However, a judge may reject a given practice as being legally irrelevant, "bad" or unreasonable.

5.8 The role of an adjudicator

Before explaining the role of an adjudicator in establishing customary norms, it is important to realise how different customary law is compared to statutory law. Only then, the role of a judge in adjudicating disputes involving Internet commerce custom can be tackled.

It is submitted that customary norms in general and e-customary norms in particular, are formed unconsciously. In other words, customary rights or obligations come into being whenever there is a community of interacting people or programmed devices, whose majority adheres to certain legally relevant norms irrespective of those norms being known to everyone or established by some official body. Standards organisations or important software companies have a very influential role in shaping dominant practices, but their standards in order to become customary have to be actually adopted by a community, which cannot be presumed. The reason is that companies or individuals usually follow what their competitors or people close to them do, which may be far from what the standard requires. As a result, the extensive adherence to certain practices may create express or unconscious expectations on the part of the majority engaged in the practice in question, that others would either follow it or an equally good or better way of trading.

Consequently, custom as a source of regulatory norms continues to exist without any convention, constitution, or statute enlisting it as a source of law or confirming its binding normative character. Similarly, customary norms continue to exist without official recognition of their existence and their legal character by lawyers, parliaments, or international organisations. In particular, customary norms do not require any judicial confirmation in order to become binding or valid. They simply exist and continue to be adhered to by the members of a given community. In this sense, custom is an autonomous source of norms, as it continues to produce them and influence participant's behaviour "on its own".

If custom does not require any official confirmation, then what is the role of judicial apparatus in establishing and applying it? First, it should be noted that it is the task of Internet researchers to

try to find and monitor potential global and particular Internet customary practices. It is difficult to imagine judges being versed with such a complicated and time-consuming challenge. In other words, first of all researchers should deal with questions such as which Internet practices are widespread within a given timeframe, are they consistent over time, are there objections to them etc. Judges would then have a much easier task of stating whether a given practice is moral or reasonable and whether it could be used to solve a given problem at hand.

Having said that, it is clear that judicial declaration as to the existence of a given norm as customary is important. The importance of confirmation lies in the fact that it may lead to widespread acceptance of a given customary norm by the legal community. This seems to be the best way to promote the potential of custom in other communities. This remark applies especially to IT and the business community that is in general unaware of the potential role of custom as a source of rights and obligations. However, such confirmation of the customary character of a given norm would only have a declaratory power in respect to the customary practice in question. It has to be stressed that a judicial confirmation would only be valid temporarily - in respect to a given practice within a given timeframe. Practices change and new research could prove that existing custom is no longer adhered to by the Internet participants. Such a research should be continued in the Information Systems discipline as well as the legal community in order to find current ways of dealing in the online world.

In summary, the view taken here is that custom exists independently of any other sources of law and it does not require judicial confirmation in order to become binding. The effect of such confirmation may only be declaratory as to the existence of such custom. However, a judge should be able to deny legal effect to a customary practice that is evidently bad or legally irrelevant in a given circumstances. A judge or arbitrator should gain knowledge about custom from researching what companies actually do on the Internet by using various forms of measuring electronic practices such as intelligent agents, software logs etc.

5.9 Hypothetical examples

The two examples below will demonstrate how custom can affect both the norms governing formation as well as content of a contract. The first example will show how the web customary practice of immediate transaction confirmation has potentially modified the formation of an electronic contract. The second example will show how common practice among financial institutions to support high encryption of transactions might affect the content of a contract.

5.9.1 Transaction Confirmation Practice

A transaction can take place on the Internet in several ways. The most common method is through a website with a shopping cart facility or an auction mechanism. There is of course a possibility of forming a contract via an exchange of emails or using proprietary systems such as EDI or electronic marketplaces, but the discussion below will be restricted to publicly available websites.

Web-based transactions usually require several steps to conclude a contract. In the case of purchasing goods, it usually starts with placing a selected item in a shopping cart, which is followed by a screen that requires personal details, then information regarding quantity of the purchased items and packaging, then shipping address details and payment details. After clicking an order button, the order is often not considered to be placed yet, but a purchaser is shown another screen, an order review screen (often misleadingly called an order confirmation or payment confirmation screen), that summarises all the personal, shipping and financial purchaser

data. It is at this point that a purchaser may or may not click an order button that will trigger the performance of a transaction. After clicking the order button now, the parties enter into a contract, the transaction will be recorded, and a purchaser will be presented with an order confirmation screen as well as an email being sent confirming the transaction.

It is important to distinguish two distinct customary practices in relation to the conclusion of the web transaction: transaction summary and transaction confirmation. The first practice aims to provide an order summary prior to the final placement of the order. The second practice aims to provide an immediate order confirmation after placement of the order, as proof of the formation of the contract.

Order summary practice either takes the form of a separate order summary screen or is a part of the payment details step. In either case, the transaction is summarised, meaning that all important transaction details are provided on one screen to allow a purchaser to review the transaction prior to the final placement of an order. There are very good reasons for such a practice. Since a purchaser has to provide his information on several screens, he or she may want to see it in one piece to review it before a final commitment. Also, a purchaser is given a last chance to recheck the purchase and to correct input errors or withdraw from the transaction, had he or she changed his or her mind.

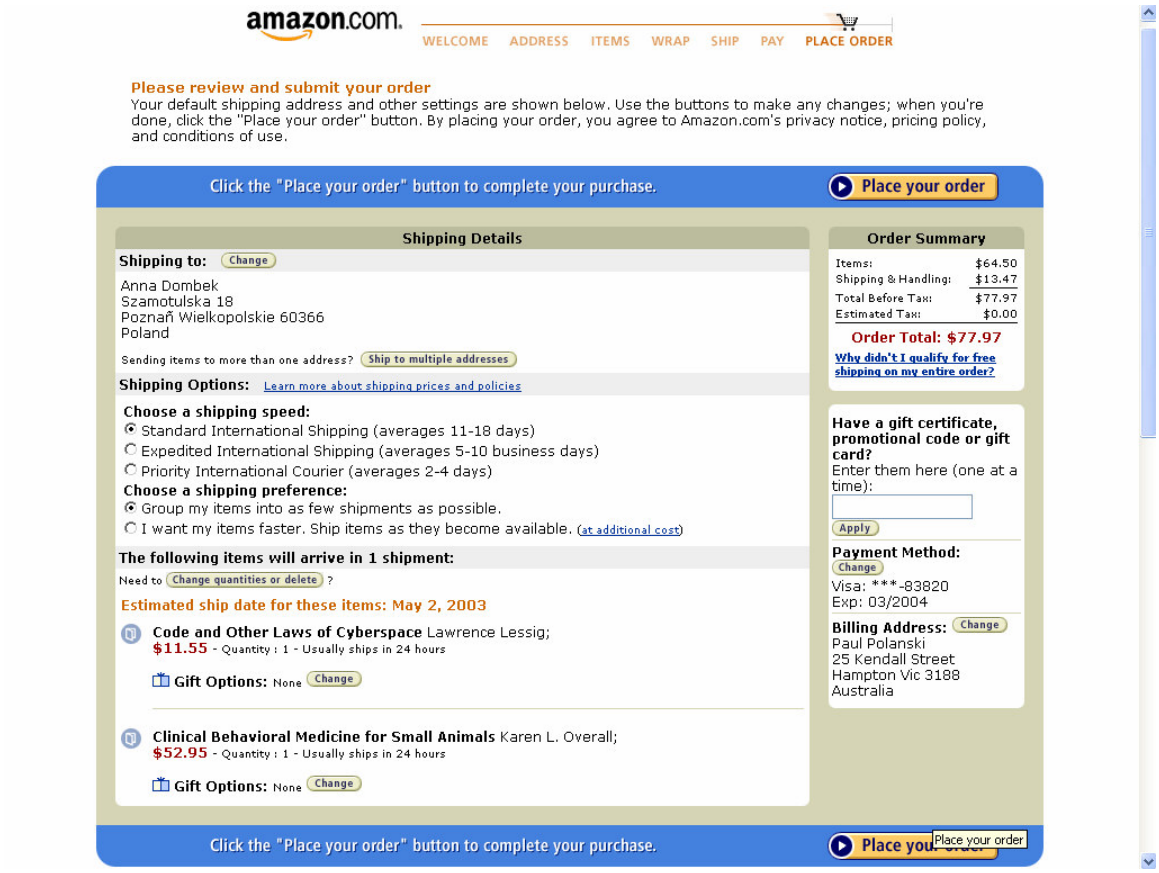

Figure 6. *Amazon.com transaction summarisation practice.*

The non-provision of such a screen could justify avoidance of a contract by a purchaser based on a contractual mistake, although this matter requires further research. In consequence, it is argued that a customary norm has emerged that states: 'All web-based transactions should be summarised by the Internet merchant prior to the acceptance of an order.' A proof of widespread character of this practice will be presented elsewhere.

On the other hand, an analysis of a number of commercial websites shows that an order confirmation practice usually takes the form of a screen that immediately follows an order placement screen. It usually provides all the details of the transaction and a transaction reference number, so the customer can actually track the progress of their order. Immediate transaction confirmation is usually also followed by email confirmation that has the advantage of allowing the customer to easily access the purchase information after the transaction. The necessity of transaction confirmation is recognised by both software product specialists[800] as well as web design experts.[801]

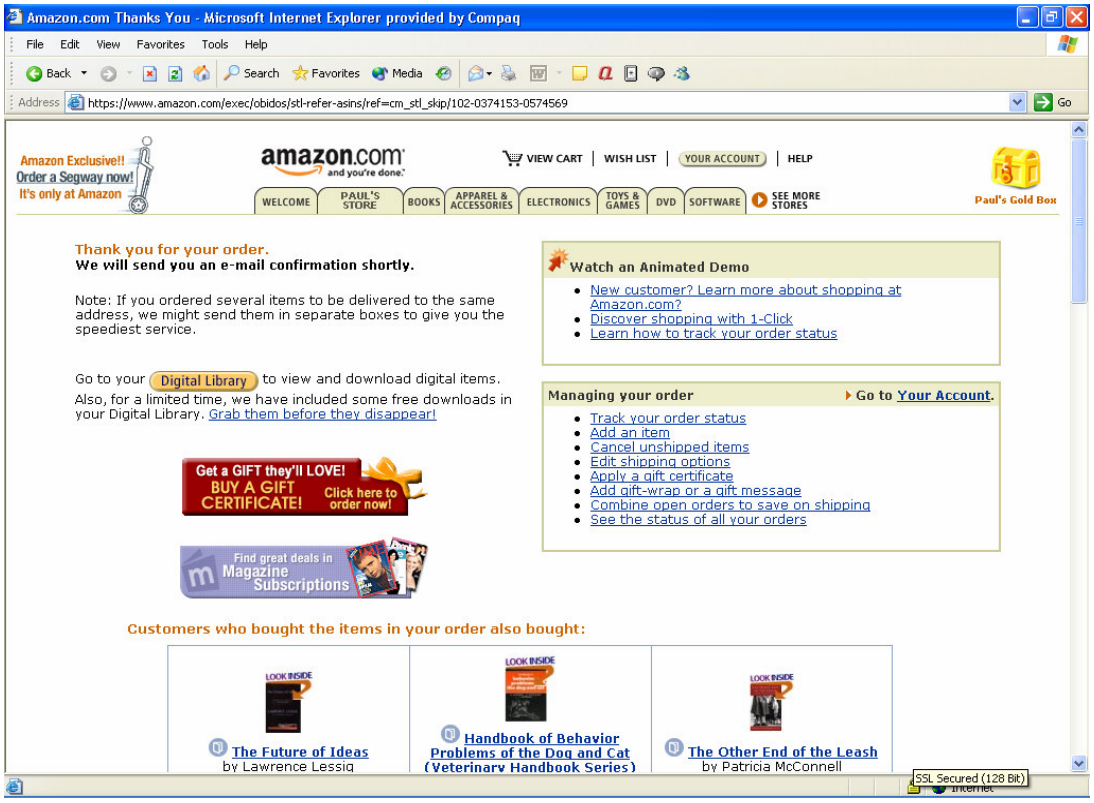

Figure 7. *Amazon.com confirmation page without order tracking number which is sent in the email.*

[800] See e.g. Libertone, D. and Scoppa, A. (2000) p.3.
[801] See e.g. Nielsen, J. (2000) p.188.

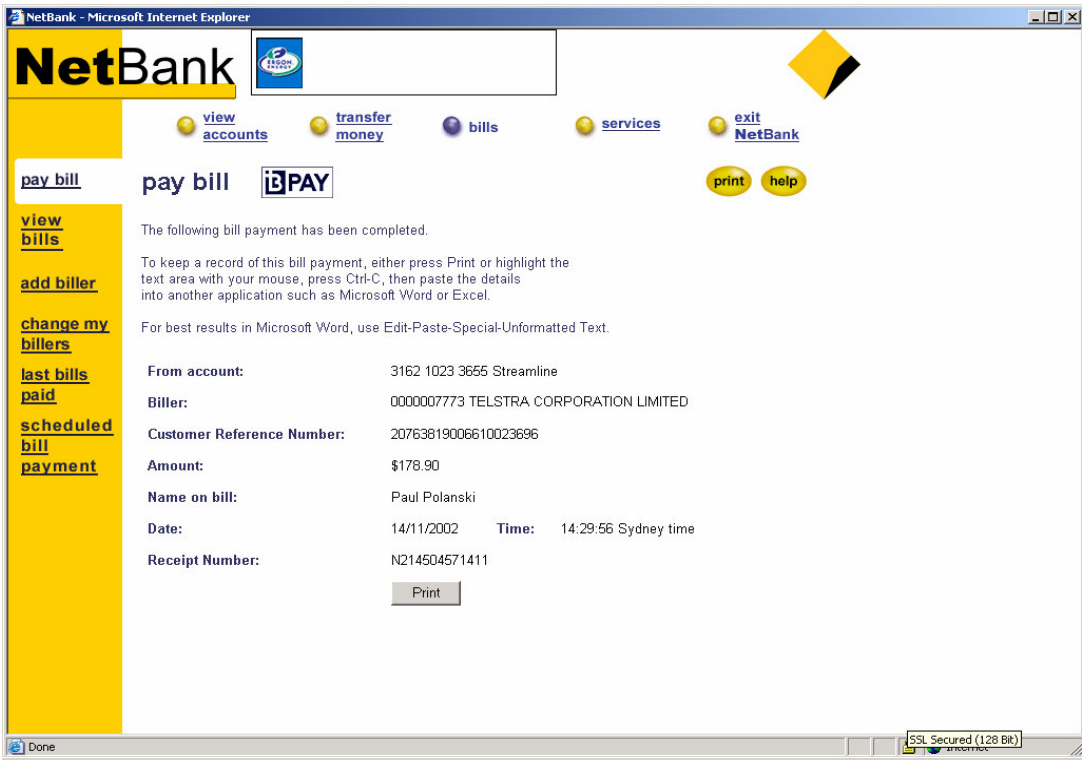

Figure 8. *Web based transaction confirmation by Commonwealth Bank of Australia without email confirmation.*

The two screen shots show that the transaction confirmation practice might take different forms. In the first case scenario, Amazon.com confirms transaction on the Web, informing a purchaser that a confirmation has been sent in the e-mail. Interestingly, Amazon.com did not provided an order tracking number on the Web, but sent it in the email. However, the sole use of an email as a confirmation medium may not be sufficient, since it is relatively easy to mistype one's email address, which would mean an order would not be confirmed. On the other hand, CBA's banking software did provide immediate online confirmation that included the transaction reference number together with the summarisation of the transaction, but did not confirm it in the email. Email confirmation of banking transaction rarely takes place, however. Usually both a detailed web based transaction confirmation as well as email confirmation takes place. This is certainly the best practice.

An Internet mercantile community has developed an order confirmation practice that has gained universal recognition. It seems to be a global custom, a common practice across all industries and countries, irrespective of the fact that it is business-to-business, business-to-consumer, business-to-administration, or any other possible form of transaction. Even some web development products have incorporated an order summary screen as a mandatory functionality, thus forcing web developers to include it in their final product.

There are very good reasons for such a practice. First, it is the best way to provide evidence of the conclusion of the contract. The transaction confirmation screen and/or confirmation email repeat the essential terms of the contract and provide a transaction reference number that would otherwise be unavailable. Second, the order acceptance notification provides an immediate proof of the transaction. Sending the confirmation by post causes delay and provides an unacceptable uncertainty as to whether the order has been accepted or not. Immediate knowledge of that fact would allow a customer to wait calmly for the delivery instead of looking for other options. Third, it enables the tracking of the status of the order.

The practice of providing transaction confirmation is now so common that it justifies the expectation that any Internet merchant will adhere to it. As a result, it is claimed that an international electronic commerce custom has emerged. It states that: "All web-based transactions should be electronically confirmed immediately after the placement of an order."

Transaction confirmation practice is a custom concerning the formation of the contract, not a custom as to the content of an agreement. It is argued that it is an essential step in the formation of a web contract, akin to exchange of contracts. An Internet merchant who does not immediately provide an order confirmation could be in breach of an e-commerce custom. In such case, it could be argued that a business customer has a right to refrain from a contract, although he may not want to exercise it.

Furthermore, it is argued that this global custom has been partially "codified" in article 11 of the European Union Directive on Electronic Commerce, which require electronic acknowledgement of recipient's order without "undue delay". Problems may arise in connection with the term "undue delay" employed to set the timeframe for order confirmation. Nevertheless, the directive does not provide for sanctions in case of non-compliance with a required rule. Also, as was mentioned earlier, the directive does not have global scope, so only European Union companies and customers will benefit from it. However, because of the customary nature of a transaction confirmation norm, the rule requiring merchants to confirm immediately orders that were placed via the web binds all Internet merchants across the whole globe. It could also be argued that European "unconscious" codification of this global practice is an important evidence (although an indirect one) of the existence of an international electronic commerce custom.

In order to illustrate better the concept of custom in the formation of the agreement, consider the hypothetical case below. The hypothetical case will be limited to transaction confirmation customary practice.

5.9.2 Hypothetical Transaction Confirmation Case

In this case a website manager did not include an order confirmation screen in his Web system and in consequence, an international client refused to pay for the delivery, arguing that it is customary nowadays to immediately confirm the ordering of goods. As was shown in chapter 2, existing international regulations of electronic commerce do not provide adequate means to solve the problem in question. There is a legal vacuum as far as written international electronic law is concerned. However, in order to solve this case we can make use of the idea of custom. The first thing to do is to evidence an existence of an alleged order confirmation practice. This can be done by visiting a specified sample of business websites and checking if all of them provide an order confirmation screen. The other possibility could be automation of this procedure by the use of a software component that would do this for us. Outcomes of surveys and e-business opinions of experts could further strengthen the claim that there is a global Internet customary practice of providing an order confirmation immediately following the submission of an order. Finally, additional evidence could be found in the written laws, which codify, often "unconsciously" an already existing customary norm. In the next chapter, more detailed ways of evidencing this custom will be presented.

Assuming convincing proof of a widespread character of transaction confirmation practice, one can conclude that it could be expected by a web client. Furthermore, as was explained above, this practice is reasonable and moral as it introduces greater reliability and legal certainty as to the existence of an agreement. In consequence, such a practice is of legal relevance, as it can be used in adjudicating disputes involving formation of e-commerce contracts.

As a result, successfully evidencing the alleged customary norm would relieve a customer from paying for the delivery due to non-observance by a first supplier of a global Internet custom, which requires an immediate provision of an order confirmation screen. Consequently, a contract has not been formed and the client's claim would be considered justified.

5.9.3 Transaction Encryption Practice

It is now common practice that nearly all banking transactions on the Internet are secured, mainly using cryptography. The permanent presence of computer hackers who browse the Internet in order to intercept valuable financial data have made e-commerce a highly risky and vulnerable environment. The recent "Global Security Survey 2003" by Deloitte Touche Tohmatsu reported that 39% of financial institutions

> "(…) acknowledged that their systems had been compromised in some way within the last year".

16% reported attacks came from external sources, 10% from internal sources and 13% from both sources. [802]

On the other hand, there is no international regulation that forces IT developers to use cryptography or other security techniques in order to protect the flow of information over the Internet channel. Although this study does not attempt to provide a detailed analysis of online banking, it simply observes that a new banking custom has emerged that states: "All Internet banks should support strong encryption of transactions." This translates to observing current practice of at least using the Secure Sockets Layer (SSL) version 3.0 protocol (or higher)[803] with 128-bit encryption. The discussion of the SSL protocol will be greatly simplified in order to make it easier for a non-technical audience to comprehend it.

The Secure Sockets Layer protocol (SSL) developed by Netscape Communications[804] is by far the most popular way of encrypting transactions on the Web.[805] Encryption is the process of scrambling or ciphering information by applying a mathematical function in such a way that it is extremely difficult for anyone other that an intended recipient to obtain the original information.[806] Central to this process is the mathematical value or a key, which is used by the mathematical function to cipher the message. The longer the key the more secure the transaction is.[807]

> "The SSL protocol uses a combination of public-key and symmetric key encryption. Symmetric key encryption is much faster than public-key encryption, but public-key encryption provides better authentication techniques."[808]

In symmetric key encryption, which SSL uses as the primary encryption technique, the same key (called the session key) is used for encryption of transaction by the sender and decryption by the receiver so the challenge is to secure the transmission of the key between the two parties. In order to secure a transmission of the session key, SSL uses public key encryption (also known as asymmetric key encryption), which requires two keys mathematically related and independent of each other: the public key (which can be known to everyone) and private key (which should be kept secret). The public key is embedded in a digital certificate, which is required for all web

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[802] Deloitte Touche Tohmatsu (2003) pp.10, 16.
[803] The term Secure Sockets Layer will be used to refer to TLS protocol. For an introduction to SSL and TSL see e.g. Rescorla, E. (2000).
[804] See e.g. Freier, A. O., *et al.* (1996); Netscape Communications Corporation (1998); RSA Security
[805] See e.g. Burnett, S. and Paine, S. (2001) p.242., Rescorla, E. (2000).
[806] See Microsoft.
[807] Ibid.
[808] Netscape Communications Corporation (1998).

servers attempting to use the SSL protocol. The server's digital certificate is a digital identification containing information about the web server and the organisation sponsoring the server's web content[809] and has to be separately acquired from the certificate authorities like Verisign[810], Geotrust[811], Comodo[812], Entrust[813] or Globalsign.[814] In SSL, only the web server has to authenticate itself to the client's web browser[815], so the client's browser does not need the digital certificate.

After exchanging the session key using asymmetric key encryption, this key will be used to encrypt and decrypt information by the server and the client for the rest of the Internet session. It is therefore crucial that the session key will be long enough to encrypt the messages adequately. Typically, it comes in two lengths: the default 40-bit and 128-bit. The 40-bit key has a little over 1 trillion possible combinations and it is commonly considered insecure.[816] An RSA sponsored competition in January 1999 had shown that 40-bit key could be broken in less than 8 hours and a 56-bit key in 22 hours and 15 minutes.[817] On the other hand, the use of 128-bit keys requires 309,485,009,821,345,068,724,781,056 times more computations, which given the same resources as in the previous test, would take 2 trillion years to complete.[818]

According to a Netcraft March 2002 study, 18% of SSL servers worldwide use vulnerable key lengths, with more than 40% of them located in France.[819] The report argues that the uneven result of adoption of strong encryption is due to the American export ban on strong cryptography products.[820] In its later report, Netcraft claims that:

> "(…) the percentage of servers internet-wide offering exclusively weak ciphers has fallen from around 40% in December 1997, to below 6% in the April 2002".[821]

It should be noted, however, that the spread of 128-bit encryption was initially severely limited due to the American ban on the export of strong encryption software that seems to be the main reason behind the non-uniform adoption of it in a number of countries.[822] However, the Internet community has developed several ways to walk around American restrictions. The famous SSLeay[823] implementation of the SSL protocol developed by Australian Eric Young enabling 128-bit encryption in Apache web servers was used subsequently in the Stronghold server sold outside America.[824]After the lifting of export restrictions by the U.S. government on 14 January 2000 regarding the selling overseas of 128-bit encryption, the IDs can be acquired by commercial entities around the world with the exception of Afghanistan (Taliban-controlled areas), Cuba, Iran, Iraq, Libya, North Korea, Sudan and Syria.[825] Also some e-companies offer products that

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[809] See Microsoft.
[810] http://www.verisign.com, last visited: 29/04/2003.
[811] http://www.geotrust.com/index_flash.htm, last visited: 3/11/2002.
[812] http://www.comodogroup.com, last visited: 3/11/2002.
[813] http://www.entrust.com/index.cfm, last visited: 3/11/2002.
[814] http://www.globalsign.com, last visited: 3/11/2002.
[815] Netscape Communications Corporation (1998).
[816] Ibid, see also RSA Security (14 February 1997); Verisign (18 May 1998).
[817] See RSA Security (19 January 1999).
[818] See RSA Security; Verisign (18 May 1998), see also e.g. http://www.fortisbank.com.pl, last accessed: 01/05/2003.
[819] Netcraft (2002). See also chapter 2.
[820] See above.
[821] Netcraft (2002).
[822] See e.g. Koops, B.-J. (1999) pp.98-99... See also Netcraft (2002); Netscape Communications Corporation (1998).
[823] See e.g. Hudson, T. J. and Young, E. A. (24 September 1998), SSLeay is now known as OpenSSL, see e.g. Netcraft.
[824] See Netcraft.
[825] See e.g. http://support.microsoft.com/support, last visited: 28/04/2003, Verisign see also U.S. Export Administration Regulations (EAR), 15 C.F.R. Parts 730-774.

enable strong encryption over weakly secured links by means of special "enhancements" to SSL protocol.[826]

Therefore, a professional party acting on the Internet should support strongly encrypted messages. This is especially so in the case of financial or medical institutions who keep and transfer highly sensitive information about their customers. Consequently, a party to the Internet transaction should have the right to expect that its corresponding partner, for instance, an international bank, will provide strong cryptography (or a similarly secure technology) in order to safeguard their transactions. As a result, if a professional party were to break this rule, the other could expect compensation. According to the case being made here, this e-custom would become the implied term that could be incorporated in any e-commerce software license agreement. Therefore, even if a contract would be silent in respect to the obligatory nature of this practice, it would be appended to this agreement by virtue of customary norm requiring it.

5.9.4 Hypothetical Banking Case

In this case, a software developer produced a web-based system for a bank that did not provide strong encryption and as a result a loss occurred to an international client. The issue of strength of encryption was not explicitly addressed in a contract. As was shown in the previous chapters, there exists legal uncertainty as far as security of transactions is concerned. There are no international instruments that require it, not to mention legal treaties detailing cryptographic requirements or other forms of securing a transaction channel. Here the legal vacuum is the most evident. Again, in order to solve this problem we can again make use of the idea of custom. What is required is evidence that there exists a customary rule stating: "All Internet banks should support strong encryption of transactions." In order to do this one should evidence the general and worldwide practice of using state-of-the-art Internet security precautions by online banks. Visiting banking web pages could be one way to gather the necessary information. There is usually information available online regarding security features that their software provides. If a product uses encryption, it can then be verified by running the software and checking in the browser's status bar as to what level of encryption it provides. Outcomes of electronic surveys and opinions of banking security experts could also strengthen the evidence of widespread current practice that nowadays, online banks provide 128-bit encrypted sessions. In the next chapter, a more detailed proof of this practice will be presented.

Given proof of widespread adherence to a given practice, one can conclude that a web client could expect that his transactions will be secured appropriately. Furthermore, this practice is not immoral or unreasonable as it allows the Internet community to secure exchange of valuable information. It is also legally relevant as it can be very helpful in establishing the legal responsibility of online banks, their clients and possibly e-commerce systems developers.

[826]See e.g. http://www.globalsign.net/digital_certificate/hypersign/index.cfm, last visited: 3/11/2002 and HyperSign certificate. Also Microsoft Server-Gated Cryptography, offered financial institutions the solution for worldwide secure financial transactions using 128-bit encryption during the US strong encryption export ban, but these days what is necessary is a 128-bit digital certificate.

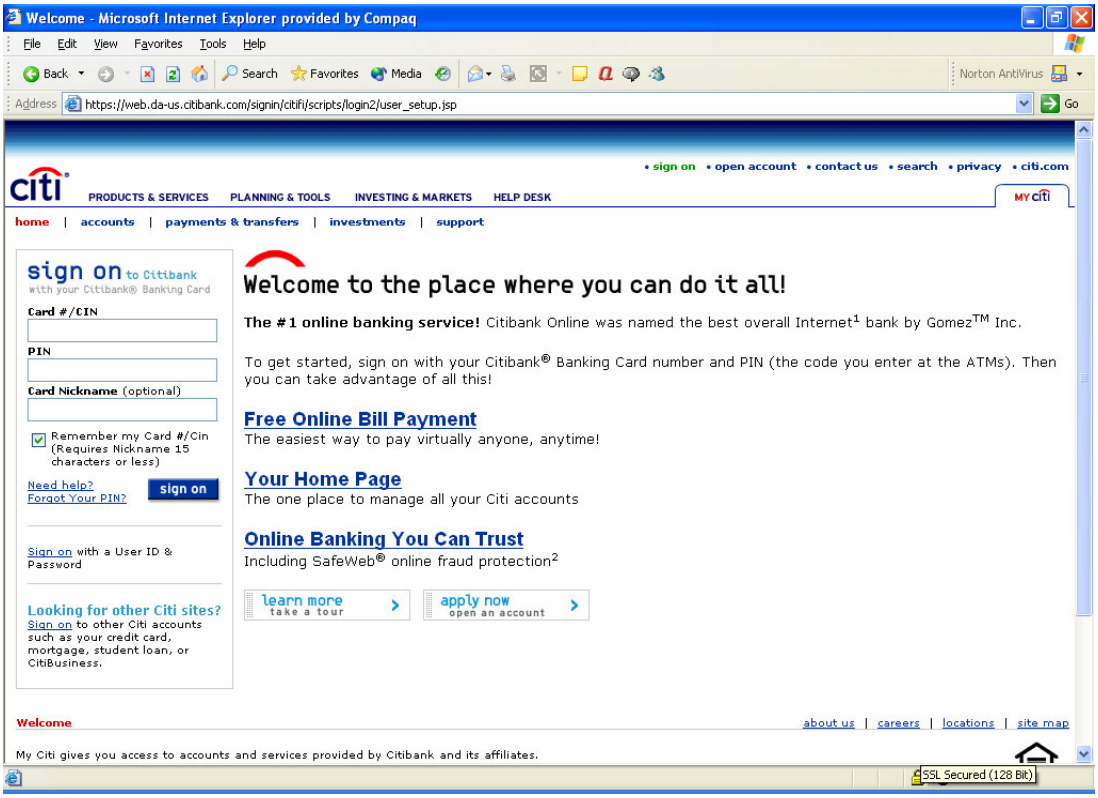

Figure 9. *Citibank's encryption. Note the tool tip over the padlock in the lower right hand corner of the browser indicating 128-bit encrypted session between the user's web browser and Citibank's web server.*

As a result, successfully evidencing the alleged customary rule would in consequence imply a term in the online banking software license agreement stating that the transaction session should be secured using state-of-the art technological precautions. Consequently, the claim of the international client would be considered justified.

5.10 Consequences for the IT Industry

As can be seen from these examples, Internet commerce customs could play a very significant role in Internet development. Since this role is based on adding legal value to certain practices, it can force IT companies to design their products and processes carefully, use state-of-the-art technology, and constantly upgrade their knowledge. It puts a greater burden on the users of technology. The basic premise is: if you do not know how to use it, do not use it for commercial purposes. In a sense, this is not different to traditional commerce.

Best practices have the greatest influence on custom formation, and it is arguably mainly larger companies engaged in the Internet that create these practices. The influence of technology providers like IBM or Microsoft, or best practice originators like E-bay or Dell is clearly visible on the Net. These practices are being developed quickly but at the same time are also followed by the vast majority of e-commerce companies.

The consequence is that IT companies may, through adherence to certain practices and standards, directly influence the development of international and national law in this area. This is a very important privilege. But it also means a greater responsibility for IT companies as far as the development of the Internet is concerned.

PART III

EVIDENCING CUSTOM

Chapter 6. Evidencing custom on the Web

6.1 Introduction

The Internet itself, although apparently chaotic and irregular in its growth and functioning, is actually governed by regularities. Individuals and enterprises engage in similar activities on the Internet thus creating a truly social phenomenon. Some of those habits are similar to those in the offline world, but some are peculiar to the Internet. Discovery of these behavioural patterns could give us a set of norms, some of which could be used as the adjudicatory basis in Internet related disputes. But a key issue is how to learn about these Internet customs.

The aim of this part of the thesis is to propose a methodology that could be used to learn about customary behaviours of Internet participants. The proposed methodology should be consistent with the theory of custom proposed in the previous chapter. In this respect, it will focus on evidencing the actual practice of Internet participants rather than on opinions about them in the literature. This chapter will be limited to potential ways and means of evidencing custom in the electronic environment. The focus will be placed on unobtrusive methods of gathering information. In other words, methods of gathering data in ways that do not require the user's participation will be the preferred method of investigation (unobtrusive research). This approach promises to introduce less bias than traditional data gathering methods. In this respect, the study will not investigate potential ethical issues involved in the conduct of such study. However, the potential for recognition of this methodology in legal proceedings will be signalled in this study.

6.2 Problems with traditional methodology

Conscious knowledge of the existence of behavioural patterns of Net participants could provide a surrogate written Internet law that could be used to resolve many legal problems on the Internet. The problem is that the law making power of customary norms is not widely known. Its legal relevance is absent in the minds of Internet entrepreneurs and other Net users who consider it to be a lawless sphere. Unfortunately, it is also not widely known in the legal profession.

Judges who are supposed to know the law and apply it in legal proceedings do not know customary law because they are educated only in the written law. In order to professionally apply the unwritten law they have to be educated in the nature and content of customary law. Moreover, judges also have to be educated as to how to find customary law. For instance, in the Anglo-Saxon tradition the existence of custom is considered to be a question of fact and not a question of law. Consequently, custom has to be proved to judges. One could add that it is a rather paradoxical situation that a judge is at the same time a student of customary law and a decision-maker as to its existence.

However, there is no methodology for evidencing traditional custom. Legal doctrine has totally failed in this respect and the case of international law custom is the best evidence for this claim. As was shown in chapter 4, evidence of a custom is not sought in the practice of states but in legal opinions. In this sense, the methodology applied by the legal community is inconsistent with the prevailing theory to which it is supposed to apply. The situation is better in the science of anthropology where a lot of research has been carried out in the field of indigenous customary

law.[827] However, even in this field no stringent methodology for conducting research of custom seems to have been developed.[828] Paradoxically, the most "scientific" method of proving custom known as the group inquest or *enquête par turbe* can be found in the history of medieval Western Europe where the custom was established by the unanimous claim of ten virtuous men from a given territory.[829] This institution, originated in the early Middle Ages, later evolved into the jury in the Anglo-Saxon system.[830] Here we find a simple example of the use of a representative sample of the population, which provides the highest possible assurance of the existence of a customary norm in question.

The lack of methodology for evidencing customary practices must have had an enormous impact on the usefulness of custom as a source of legal norms that could be used to solve disputes at hand. If one does not know how to prove rights or obligations following from common practice, the obvious approach is to avoid it. Professor Berman observed in regard to commercial custom "hostility toward proof of mercantile custom", which impedes the adaptation of law to new economic circumstances.[831] In consequence, all the potential advantages of custom, such as its flexibility, adaptability and reflectivity of what the majority of people do, are lost.

In short, evidencing customary practices is the most difficult part of making use of the idea of custom. It requires a long lasting and cumbersome research into how a society behaves. Taking into account lack of methodology for the conduct of such research, lawyer's lack of empirical background but also lack of agreement as to what constitutes custom and what its role is in a modern legal system, the impracticality of such source of law must be rather obvious. It is probably the most important reason for non-use of it in modern legal proceedings. However, the Internet offers new exciting possibilities for learning about widespread practices of e-commerce participants. The next section will outline the proposed solution.

6.3 Overview of the proposed methodology

In order to remedy these problems, this part of the research is going to propose new methodology for evidencing customary practices that will be consistent with the proposed conception of custom and tailored to the needs of the electronic environment. As the following sections will demonstrate, the Internet has created entirely new possibilities for evidencing custom. The traditional role of the human expert researching patterns of behaviour can be greatly enriched by the use of software agents that could automatically and on a daily basis gather information. Tasks that cannot be fully automated may be facilitated by the use of software components to perform part of the job in an automated fashion. Moreover, time-consuming data collection processes based on sampling a representative number of websites may not even take place, as knowledge of the environment used to create websites may turn out to be a sufficient tool, to answer the question of existence of a given Internet custom.

The proposed framework will draw upon social science methodology. However, the main resemblance will be the fact that sampling a large population is still the easiest method of getting insight into its characteristics. However, many aspects of traditional issues associated with sampling large populations will obtain a new dimension. For instance, the Internet enables very large samples, in fact, measuring whole populations. On the other hand, drawing conclusions about the customary norm in question from the analysis of software used to implement web

[827] See chapter 3.
[828] On the proof of native customs see e.g. Scheleff, L. (2000) pp.377-409. On the proof of Aboriginal customs see especially The Law Reform Commission (1986) pp.453-478.
[829] See especially Dawson, J. P. (1968) p.269. and Gilissen, J. (1982) pp.65-68 and the literature cited there.
[830] Gilissen, J. (1982) p.66; Robinson, O. F., *et al.* (1985) p.195.
[831] Berman, H. and Kaufman, C. (1978) p.228.

systems promises to introduce data free of bias. In short, the potential intelligence of the Internet forces us to consider it as an entirely new environment that demands a separate methodology.

The proposed methodology will be only a starting point in the discussion of what should be done to prove customary norms on the Internet and how to go about it. It is hoped that this work will be further refined by other researchers leading to a more stringent framework. The idea is that this methodology will remain open so that anyone can test its usefulness and further improve it. Only a methodology that allows verification of results by other researchers may offer a solution to the lack of clear and unambiguous ways of evidencing custom in judicial proceedings.

The proposed methodology will be presented in three sections. The first section will analyse the issues associated with sampling large populations on the Internet that is of special importance to the proposed methodology. The second section will present some Internet-specific methods that could be employed in the search for the Internet customary norms. This part will also discuss the role of humans and software in establishing widespread practices. The third section will be devoted to analysis of a concrete three-test methodological framework for evidencing Internet customary norms. The last section of the chapter, will apply this framework to prove the existence of customary norms in the hypothetical case studies.

6.4 Sampling the Internet

This discussion of sampling forms the first part of the proposed methodological framework for evidencing Internet customary norms. Because of its importance in the whole framework, it will be examined in detail before the final framework in section 6.6.

The cornerstone of proving a web custom is to establish that a given practice is widely followed. In order to achieve certainty one should analyse the whole e-commerce population in order to see if a given routine is adhered to by a majority of web participants. But examination of the whole population would be very time and money consuming, unless automated methods of data collection could be used.

As a matter of fact, in some cases, the Internet offers the possibility of investigating a whole or nearly whole population. For instance, it should be relatively easy to research a population of software tools used to build websites as there are a finite number of them, probably fewer than 100. It is also not impossible to try to build a list of all web servers used in a given industry, although such an endeavour would certainly ruin the budget of an average researcher. For instance, Netcraft (an Internet research company) polls hundreds of thousands of web servers on a daily basis, which might constitute a large proportion of the web servers on the Internet.[832] A study embracing the whole or nearly whole population would undoubtedly provide the most reliable answers as to the nature of an Internet practice in question.

But in most cases, it is unfeasible to conduct research on a very large population. This is especially so when its size is not known or difficult to estimate. To overcome this problem, researchers from many disciplines analyse samples of a population in order to generalise from them the characteristics of the whole population. Generalisation can be statistical or analytical. Statistical generalisation is based on numerical data gathered during the data collection process such as the Netcraft surveys. For instance, if data shows that in March 2002 93% out of 160,000 web servers supported strong encryption that allows generalising that such practice was a customary practice on the Internet at that time. However, it is not always possible to gather numerical data. In such a case one may examine non-quantitative factors, such as a software environment or opinions to be able to generalise about the existence of a given Internet custom.

[832] http://www.netcraft.com, last accessed: 11/04/2003.

Knowledge of sound non-statistical factors that shape e-commerce practices may allow strong analytical generalisations. For instance, as will be shown below, knowledge of software tools that automatically generate websites provides a very strong ground for analytical generalisations about the dominant practices encoded in products of such tools. On the other hand, opinions of writers about dominant practices, unless supported by numerical data, provide a weak basis for analytical generalisations. In general, however, the use of sampling does not provide 100% accurate answers but if used properly can provide a close approximation of the actual numerical usage of a practice. The important matter is to apply a reliable procedure to produce a sample that accurately represents the population.

There are several methods of sampling a population that fall into two broad categories: probability or random sampling and non-probability or purposive sampling.[833] Both approaches are extensively used in the social sciences and they could be utilised in researching Internet customary practices. In general, probability sampling aims to generate a representative sample by randomly selecting elements from the population (or more precisely from an appropriate listing also known as a sample frame).[834] On the other hand, non-probability sampling does not randomly select elements but obtains a sample by choosing elements using various research criteria in order to e.g. maximise variance. The two techniques have their advantages and disadvantages and the choice depends on the scientific goals of the researcher. The problems associated with sampling are not specific to the Internet environment but are universal problems encountered by researchers in the social sciences who cannot afford to study the whole population.

Often researchers mix both approaches in order to answer a research question.[835] As was recently argued:

> "Nearly any complex research question requires more than one sampling technique and often involves both probability (i.e., representative) and purposive sampling techniques."[836]

The proposed methodology for evidencing customary practices also combines both approaches. As a matter of principle, the researcher should choose probability sampling to provide a statistical answer to the question of dominant character of a given practice. On the other hand, non-probability sampling should be chosen if access to statistical data is not possible but equally convincing generalisations could be drawn from non-numerical data.

The section below is going to provide only a very limited discussion of both techniques in the context of establishing the Internet commerce customs. In order to broaden this topic, one would have to consult a number of books on social sciences research methods.[837]

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[833] See e.g. Kemper, E. A., *et al.* (2003) p.277; Neuman, W. L. (2000) pp.195-196.
[834] See Glossary.
[835] See e.g. Kemper, E. A., *et al.* (2003); Neuman, W. L. (2000) pp.214-216.
[836] Kemper, E. A., *et al.* (2003) p.273.
[837] See e.g. Abranovic, W. A. (1997); Alreck, P. L. and Settle, R. B. (1995.); American Association for Public Opinion Research (1997); Bock, T. and Sergeant, J. (Second Quarter 2002); Bouma, G. D. (1993); Bryman, A. (2001); Crano, W. D. and Brewer, M. B. (2002); Frankfort-Nachmias, C. and Nachmias, D. (1996); Freedman, D., *et al.* (1978); Gay, L. R. and Diehl, P. L. (1992); Harrison, S. R. and Tamaschke, R. H. U. (1993); Henry, G. T. (1997); Hill, R. (1998); Ilieva, J., *et al.* (Third Quarter 2002); Judd, C., *et al.* (1991); Kellehear, A. (1993); Kemper, E. A., *et al.* (2003); Kish, L. (1995 (1965)); Kumar, R. (1996); McLaughlin, M., *et al.* (1999); Moser, C. A. and Kalton, G. (1971 (reprinted 1985)); Nachmias, D. and Nachmias, C. (1976); Neuman, W. L. (2000); Roscoe, J. T. (1975); Rosnow, R. L. and Rosenthal, R. (1996)

6.4.1 Random sampling

It is commonly asserted, that random sampling provides greater assurance that a sample will be representative.[838] For many social science researchers it is the proper way of investigation into the characteristics of a population[839], because it is based on statistical analysis and thus allows rigorous statistical generalisation. There are at least three important questions that the Internet researcher would need to answer using random sampling. First, what is the target population and how to obtain a list of all the elements in it? Second, which random selection method to use? And third, what is the desired sample size. This section will attempt to outline issues involved in answering the first two questions.

In order to be able to sample a population one has to have access to a listing of all the elements in the population. In most of cases it is practically impossible to have such a list, especially when one takes into account movements in a population. In order to overcome this problem, researchers usually establish what is called a sampling frame in probability sampling jargon. A sampling frame is a close approximation of all the elements in the population.[840]

> "It includes physical lists and also procedures that can account for all the sampling units without the physical effort of actually listing them."[841]

Examples of sampling frame include telephone directories, city directories, membership lists of organisations[842], tax records, driver's license records etc.[843] or maps[844] although often a researcher has to compile his own substitute list.[845] The correspondence between the actual population and sample frame is the most crucial factor in providing assurance that the selected sample will be representative.[846] Without a proper sample frame, the greatest advantage of random sampling would be lost.

Having a sampling frame, the researcher could then randomly select participants from it. In order to do this he or she could simply employ random selection process by using e.g. a table of random digits or simply throwing a dice. Alternatively, a researcher could choose every nth element of the sample frame (systematic random sampling) although he or she should be certain that the elements are not ordered in some way. However, in the case of customary practices it would be very important to make sure that participants are chosen based on various criteria including their popularity on the web, size, main specialisation or location. For this purpose, proportional or non-proportional stratified sampling methods[847] could be used. In stratified sampling, the web businesses would first be divided into several groups or strata based upon e.g. industry criteria before being randomly sampled. The proportions between groups could be proportional or disproportional in relation to the population dependant upon the goal of the researcher. These two methods could be useful in establishing global Internet customary norms. There are more

[838] See e.g. Bock, T. and Sergeant, J. (Second Quarter 2002); Neuman, W. L. (2000) p.203; Rosnow, R. L. and Rosenthal, R. (1996) p.189.
[839] Nachmias, D. and Nachmias, C. (1976) p.254.
[840] See e.g. Kumar, R. (1996) p.149; Neuman, W. L. (2000) p.201.
[841] Kish, L. (1995 (1965)) p.53.
[842] Frankfort-Nachmias, C. and Nachmias, D. (1996) p.181.
[843] Neuman, W. L. (2000) p.201.
[844] Kish, L. (1995 (1965)) p.53.
[845] Frankfort-Nachmias, C. and Nachmias, D. (1996) p.181.
[846] See e.g. Kish, L. (1995 (1965)) pp.53-59.
[847] See e.g. Kemper, E. A., *et al.* (2003) pp.277-279; Rosnow, R. L. and Rosenthal, R. (1996) pp.192-201.

complicated variants of these techniques but more detailed coverage is outside the scope of this thesis.[848]

The greatest benefit of random sampling techniques is that they provide greater assurance than non-random sampling techniques that a sample will be representative and hence enable a researcher to generalise on the basis of that sample.[849] However, there are some problems as well. The problem for electronic commerce is that there is no readily available listing of all or at least major participants engaged in online trade. It is going to be one of the most challenging tasks to actually develop publicly available large sampling frames that would be helpful in analysing the Internet. In many cases however, it may not be that hard to create a relatively small listing of elements of a target population and select a sample from it using either probability or non-probability sampling methods. Many such lists are compiled by various organisations, e.g. The Fortune 2002 Global 500 largest companies by the revenue[850] or Quazell, which claims to list the largest number of banks having a website.[851]

One should also note that the Internet commerce population consists of companies, international organisations, governments and individuals engaged in digital commerce. Dependant upon the customary norm sought, the population will comprise of all participants engaged in a trade, or will be a subset of it e.g. when an alleged customary norm pertains to one or few industries. One should note however, that in the case of the Internet, often the object of the research would not be a company or an individual, but an information system that it uses to manage web site content delivery. This introduces another level of complexity as e.g. many small and medium size companies do not have their own web servers but rent a space on such a computer from firms specialising in providing hosting services. On the other hand, many large companies have a number of web servers in order to streamline access to their web sites. In summary then, whenever a reference is made to a company or individual participating in electronic commerce, it will often mean that the discussion refers to their information system.

6.4.2 Non-random sampling

Non-random sampling techniques do not establish a rigorous scheme for drawing a sample. There is no need to establish a sampling frame, because selection of sampling units will not be random. Non-probability sampling embraces several popular sample selection methods[852] of which the following could be of interest to the Internet researcher: convenience sampling, quota sampling, judgemental sampling and sequential sampling. Convenience sampling involves drawing elements which are easily accessible to researchers and for this reason is often dismissed as producing non-representative results.[853] In quota sampling, the researcher first identifies relevant groups and assigns a number of sampling units to each group before selecting as many units as possible to each group.[854] In judgemental sampling, the researcher chooses samples with a specific purpose in mind in order to: select unique, especially informative cases or to sample a

[848] Cluster sampling - a variant of stratified sampling, is designed for situation where there is a geographical listing of the population and for this reason may not be appropriate in the context of the Internet. Multistage sampling is a more complex variant of this technique. For more information see the literature listed in the footnote above.
[849] Kemper, E. A., *et al.* (2003) p.277.
[850] http://www.fortune.com/fortune/global500/industry/0,15130,,00.html, last accessed: 22/04/2003
[851] http://www.quazell.com/bank/default.html, last accessed: 03/05/2003, see also e.g. Online Banking (2002)
[852] See e.g. Neuman, W. L. (2000) pp.196-203.
[853] See e.g. Kemper, E. A., *et al.* (2003) p.280.
[854] See e.g. Neuman, W. L. (2000) p.197.

difficult-to-reach population or where cases are to be deeply investigated.[855] In sequential sampling, new cases are gathered "until the diversity of information or cases is filled."[856]

Non-random sampling allows analytical rather than statistical generalisation. It is usually chosen where the relevance of cases to the topic is more important than simply their representativeness. There are many other non-random sampling methods but what all of them have in common is that units are not randomly selected using a sample frame but instead are selected on some other theoretically-driven basis e.g. to maximise variance. The advantage of non-random sampling is that it is usually faster as no sampling frame has to be built and frequently smaller sample sizes suffice. Non-random selection methods are often criticised that they do not guarantee the representativeness of the sample.[857]

In summary, both types of sampling have a role in evidencing Internet customary norms. Probability sampling is the preferred technique for establishing the dominance of a practice quantitatively. To do this it must be possible to access a sampling frame. In cases where access to such information may be difficult or economically unfeasible, non-random sampling can be used establish dominance on qualitative criteria provided an analytical generalisation from the sample to the population can be made. The three-step framework that will be described in section 6.6 below will make use of both methodologies.

6.4.3 Sample size

In regard to the issue of sample size, it has been a subject of debate among social scientists[858] although some experienced researchers tend to minimise the importance of this topic, considering it to be over-rated.[859] There are two methods of determining sample size used in practice: one based on the application of a rule of thumb and the other based on the application of a statistical formula. The first method produces the sample size that is relative to the size of the population. The second one produces the absolute size of the sample, irrespective of the population size.[860]

Neuman argues that the more frequently used method of calculating sample sizes is application of rules of thumb, which:

> "(…) are not arbitrary but are based on past experience with samples that have met the requirements of the statistical method."[861]

One such rule is that larger populations permit smaller sampling ratios. He proposes 30% for populations under 1000, 10% for 10.000, 1% for over 150.000 down to 0.025% for populations over 10 million.[862] Alreck and Settle suggest examination of 10% of the population as a rule of thumb and place 1000 sample size as the upper limit.[863] This technique, however, is useful only when the population size is known, which will often not be the case with the Internet. On the other hand, Roscoe argues that in behavioural sciences there is seldom justification for sample sizes below 30 and above 500.[864] However, whenever sub-samples or some form of stratification

[855] Ibid. p.198.
[856] Ibid. p.200.
[857] Ibid. p.196. citing Flick.
[858] Some authors associate researchers using smaller samples as qualitative researchers as opposed to quantitative, which are supposed to use larger samples. See e.g. Bock, T. and Sergeant, J. (Second Quarter 2002); Kemper, E. A., *et al.* (2003) p.277.
[859] See e.g. Moser, C. A. and Kalton, G. (1971 (reprinted 1985)) p.146.
[860] Crano, W. D. and Brewer, M. B. (2002) p.189.
[861] Neuman, W. L. (2000) p.217.
[862] Ibid.
[863] Alreck, P. L. and Settle, R. B. (1995).
[864] Roscoe, J. T. (1975) p.168.

is used, the above rule of thumb should apply to all the sub-samples.[865] Similar guidelines are offered by other researchers.[866] Finally, some authors recommend a sample size should be "large enough"[867] despite the obvious uncertainty of this proposal.

On the other hand, other authors tend to prefer the use of absolute sample sizes based on sampling theory.[868] Nachmias for instance, claims that percentage based or fixed number based rules of thumb are not adequate.[869] Similarly, the rule stating that any increase in the sample size will increase the precision of the sample results is rejected.

> "The size of the sample is properly estimated by deciding what level of accuracy is required and, hence, how large a standard error is acceptable."[870]

The following equation[871] is used for calculating the sample size in the simple random sampling:

$$\textbf{\textit{Sample size} = p * (1 – p) / (S.E.)}^{2}$$

where: p = estimated proportion of the population following a given practice and S.E. = the standard error of the sample proportion that a researcher can tolerate (also known as sampling error). Disregarding the effect of smaller populations[872], as soon as a researcher estimates the proportion of the population adhering to a given Internet practice and chooses the tolerable error, the following sample sizes can be calculated:

Standard Error	Estimated adherence level to the Internet practice in question (p)					
	50%	**60%**	**70%**	**80%**	**90%**	**99%**
5%	100	96	84	64	36	4
2%	625	600	525	400	225	25
1%	2500	2400	2100	1600	900	99

Figure 10. *The absolute sample sizes given various degrees of estimated adherence to a given practice (p) and the accepted sampling error (S.E).*

The statistical method to be used in simple random sampling recommends sample sizes that range from 4 to 2500. 5% error is usually considered sufficient in social science unless the issue is either controversial or related to life and death issues. Given the fact that most customary practices are expected to present a very high level of homogeneity, the application of the formula would probably lead to the choice of sample sizes between 36 and 100 sampling units. However, as soon as the proportionate stratification of the sample is chosen the proportions for each stratum must be assessed first and the weighted average of the proportions calculated before they can be used in the formula.[873] A similar operation must be performed for disproportionate stratified sampling[874], although detailed coverage of these techniques is outside the scope of this chapter.

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[865] Ibid.
[866] Bouma, G. D. (1993) p.128; Hill, R. (1998).
[867] See e.g. Bouma, G. D. (1993) p.128; Gay, L. R. and Diehl, P. L. (1992).
[868] See e.g. Crano, W. D. and Brewer, M. B. (2002) p.189; Nachmias, D. and Nachmias, C. (1976) p.254; Rosnow, R. L. and Rosenthal, R. (1996) p.189.
[869] Nachmias, D. and Nachmias, C. (1976) p.254.
[870] Ibid.
[871] Crano, W. D. and Brewer, M. B. (2002) p.189; Moser, C. A. and Kalton, G. (1971 (reprinted 1985)) p.147. See also Kish, L. (1995 (1965)) p.50.
[872] For simplicity reasons, this equation does not take into account the so called finite population correction or FPC, which would generally lead to a decrease of the sample size. See e.g. Kish, L. (1995 (1965)) p.50.
[873] See e.g. Moser, C. A. and Kalton, G. (1971 (reprinted 1985)) p.88.
[874] See e.g. Ibid. pp.93-99.

The choice of either relative or absolute sample size calculation methods should be left to the researcher. The first method is quite arbitrary and sometimes requires knowledge of the population size. On the other hand, the absolute sample size method relies upon the previous knowledge of the characteristics of the Internet population, which in many cases might not be available. Then, proportions in a population would have to be guessed, based on proportions in a sample, which may be simply incorrect.[875] In this case scenario "a reasonable guess will be adequate", because moderate errors in estimating proportion will have a small effect on the calculation of the sample size.[876] However, such a guess can be strengthened by a pilot study.

Finally, it is certainly true that the larger the sample size the more compelling the evidence will be for the adjudicator. It may turn out however, that larger sample sizes may not always be necessary in the case of proving Internet customary practices. There are at least three reasons for this. First, as was already mentioned several times, customary practices should display a very high degree of uniformity or homogeneity. In situations where the sample results are homogenous or "all (or none)"[877], a generally accepted practice of drawing conclusions from smaller samples[878] could be accepted. Another argument could be that large sample sizes may not be necessary because what is important is to establish what is done by the top companies in terms of number of participants in the online commerce. Companies like Amazon.com or eBay.com are such important Internet brands that the majority of other websites to a large degree try to emulate their practices. Finally, a "large sample size (…) is not sufficient to guarantee the accuracy of the results" but can only give a greater precision of the sample results.[879] Nevertheless, if a researcher can afford it, he or she should use as large a sample size as possible.

6.4.4 Representativeness of the sample

The pure number of queried respondents is not going to provide the correct results, if the sample is not representative. Hill points out that apart from problems with identifying population size on the Internet, it is difficult to establish a representative sample size when one conducts research only "with computers", and the choice of the timeframe for the research creates difficulty.[880] The famous story of American presidential elections in 1930's illustrates it well.[881] Simplifying the story, a large sample of 2.4 millions respondents was chosen based upon randomly selected names from sources such as a phonebook. But the election results turned out to be drastically different to the ones suggested by the polls and only then it was realised that the sample data was unrepresentative. Because at that time most poor Americans did not have a telephone and hence only wealthy respondents were chosen, thus skewing the true trend in the population. As a result of a choice of an improper sampling frame, the sample turned out to be not representative. In short, a large sample size does not guarantee accurate results if both well-known and less-known subjects are not properly represented.

Researchers of Internet practices using both random and non-random sampling must make sure that their samples are representative of the whole target population in question. In case of random sampling, it is of paramount importance to assure that the sampling frame is representative. Similarly, in the case of non-probability sampling, it is important that a sample will be

[875] Henry, G. T. (1997) p.123.
[876] Moser, C. A. and Kalton, G. (1971 (reprinted 1985)) p.149.
[877] Bock, T. and Sergeant, J. (Second Quarter 2002).
[878] See e.g. Bouma, G. D. (1993); Rosnow, R. L. and Rosenthal, R. (1996) p.191.@127Kish, L. (1995 (1965)).
[879] Moser, C. A. and Kalton, G. (1971 (reprinted 1985)) p.146.
[880] Hill, R. (1998).
[881] Story described in e.g. Crano, W. D. and Brewer, M. B. (2002) p.191; Frankfort-Nachmias, C. and Nachmias, D. (1996) pp.182-183; Freedman, D.*, et al.* (1978) pp.302-307; Moser, C. A. and Kalton, G. (1971 (reprinted 1985)) pp.79-80; Rosnow, R. L. and Rosenthal, R. (1996).

categorised and will include both large and smaller ventures, companies using different country-level domain names or coming from different industries in the proportions that reflect that of the population. For this reason, it is advisable to use some form of stratification in order to create as representative a sample of Internet traders as possible.

Stratification may, in some cases, turn out to be a difficult task. For instance, if one decides to create a sample that would consists of all the industries on the Internet the question is how many industries there are and whether all of them are necessary. The problem may be with simple classification of industries especially when some of them do not benefit from the Internet, and some others only partially benefit from it, relying on it more as an advertising channel rather than the core activities medium. The Fortune 500 lists 51 different industries based upon the list of the 500 largest companies in the world[882], but this listing applies to brick-and-mortar companies not necessarily heavily dependant upon the Internet commerce. It could be argued that a sample of general customary practices is representative when it takes into account all industries where the Internet plays an important role. Such industries include: advertising, printing, manufacturing, banking, insurance, government etc. If one wants to test for the existence of a certain practice in the market segment that sells goods, it should look at all major representatives of sale markets on the Net. This matter, however, requires further research.

6.4.5 Summary

The above section analysed the issue of designing samples in the context of the Internet. Although the Internet potentially enables the examination of the whole Internet population (e.g. all web servers) it is unlikely that such research will be often carried out due to time and money constraints. Instead, a sample of the population will have to be researched. This framework proposes to adapt the social sciences sampling techniques to measure customary practices on the Internet. There are various sampling methods available, each having advantages and disadvantages. Of particular importance is the question of sample size and its representativeness, which have to be carefully considered by a researcher. A researcher should use probability sampling techniques to formulate statistical generalisations about dominant practices. On the other hand, a researcher should choose the non-random sampling technique to formulate analytical generalisations about Internet customs.

6.5 Overview of means of evidencing Internet custom

The Internet presents a unique opportunity to measure behaviour of its participants in an automated fashion. Its digital nature enables construction of software agents that could gather necessary information without human intervention. This is such a significant feature of this environment that it actually demands an entirely new level of analysis. Moreover, custom can not only be established in an automated manner but also observed and recorded on an everyday basis – something that is not possible in the traditional world.

In law, even if custom is established in the court's proceedings, it states what custom is on a given date or actually on the day the incident in question had occurred. Despite the reliance of probably all lawyers on the establishment of custom in a previous court decision, it should be kept in mind that custom can change and as a result, the court's earlier judgement should never be treated as a proof of subsequent custom. New research needs to be carried out, which is rarely if ever done because it is so difficult, time-consuming and expensive in the traditional environment.

[882] http://www.fortune.com/fortune/global500/industry/0,15130,,00.html, last visited: 22/04/2003.

On the Internet this can be easily done. Consequently, one can expect floating adherence to a given practice over time and as such, a floating nature of the Internet law. For instance, one can imagine software gathering information about daily adherence to some security practices based on the analysis of the inclusion of certain software components in the web servers hosting a given website. Such activities are already carried out on the Net. For instance, Netcraft gathers information and publishes it regularly about the usage of web servers of different brands as well as tests for certain security features of the web servers.[883] Others already automatically gather information about the usage of the most popular web browsers or, like DoubleClick[884] collect data about website use in order to create a profile of a customer. Gartner and Forrester Research also provide extensive research in the area of technology. Rather than doing research, an alternative is to purchase evidence from companies like those mentioned above.

The following methods could be used to evidence customary practices on the Net:

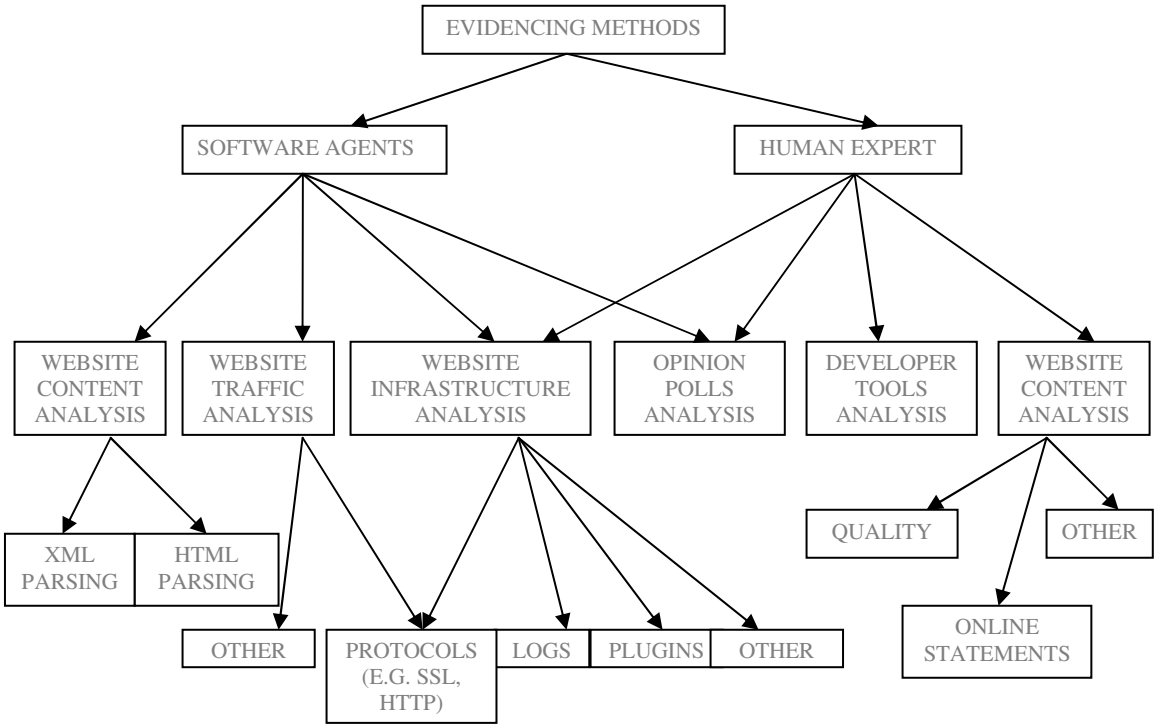

Figure 11. *Summary of potential evidencing methods of customary web practices.*

6.5.1 Human versus Automation

In the online world data collection can be performed either by a human expert or by a software component. The potential of automation and intelligence offered by the Internet does not mean that the human role is marginal. Both "tools" are important, and each is better for certain types of activities over the other. Apart from the obvious fact, that someone has to program software

[883] See e.g. Netcraft (2002).
[884] See http://www.doubleclick.com, last visited: 09/10/2002

components and then analyse data gathered by them, the human being is still superior in many respects to digital technology.

Some tasks such as analysis of the quality of the website or even a task such as a search for particular content on the website will for a long time have to be done by human experts. It is difficult at this stage to design software that can interpret the content of a website with the same degree of flawlessness that a human being can. Also, a human expert is irreplaceable when it comes to the appraisal of functionality of a software package used to create websites. Moreover, even relatively simple tasks such as finding certain information on the website will have to be done by humans as the current search engines mechanisms cannot meaningfully locate textual data. This is due to the unstructured nature of the HTML language, which until replaced by semantically structured languages like XML[885], will hinder the development of reliable tools enabling automatic analysis of website content. In other words, all the qualitative, interpretative or evaluative work has to be done by humans.

On the other hand, many quantitative, repeatable and invisible tasks can be allocated to computers. For instance, analysis of protocols for certain kind of information can be best performed by a software component. Also software can much better test for support of certain plug-ins by the web browser or web server or for tracking user behaviour in the form of cookies.

The greatest promise of automation for establishing customary norms is that the whole process can be repeated infinitely. This in turn can provide very valuable historical data depicting the rise and fall of a given customary norm in question. Moreover, automation of data gathering can be especially helpful when combined with the analysis of invisible information exchange on the protocol level or as far as configuration of web software is concerned. In addition, automation can lead to automatic detection of new web entities, thus enlarging the population under investigation. This in turn can lead to outcomes scientifically close to error free.

Finally, there are tasks, which can be completed by using both human expert and software. For instance, analysis of browser or web server capabilities can be performed by a human expert and confirmed by the software agent. Similarly, surveys can be done automatically by web software or done in the traditional way. From the perspective of evidencing Internet custom the tasks to be performed by the human expert and software agent can be divided into five categories: analysis of website content, website traffic, web server/ browser configuration, analysis of tools used to create websites and web participants opinion poll. Not all of these areas of investigation will be necessary to examine in the context of the Internet custom in question. Figure 12 below shows in which of these tasks software is better than a human, and vice versa.

	Human Expert (=Manual)	Software Component (=Automatic or Semi-automatic)
Website Content Analysis	Yes	Soon
Website Traffic Analysis	No	Yes
Web Server/Browser Analysis	Yes	Yes
Developer Tools Analysis	Yes	No
Web Participants Opinion Poll	Yes	Yes

Figure 12. *Usefulness of human expert v. software in gathering data about web customs*

[885] See Glossary.

Website Content Analysis refers to establishment of habits of providing certain kind of visible information on the site. Website Traffic Analysis refers to establishment of habit of providing invisible information by the web system. Web Server / Browser Analysis (Web Infrastructure Analysis) aims at establishment of common configuration and operation patterns of the Net communication channel. Developer Tools Analysis aims at establishing common functionalities inside the design software that will "force" a designer to accommodate given function on a website. Finally, Web Participants Opinion Poll aims at the gathering of information about the humans' perception in regard to some aspects of customary practice in question. The following section will discuss each of these tasks in greater detail.

6.5.2 Website Content Analysis

The aim of Website Content Analysis is to collect evidence of common provision of certain kinds of information visible to the user. For instance, it may be required to confirm that it is customary to provide order summary or confirmation screen. It may be necessary to confirm that it is a common practice to provide certain precautions to the Internet participants or include certain clauses in a web contract. It may even be necessary to establish a common look and feel of certain websites e.g. display of steps to follow to conclude a contract.

This aspect of establishing customary practice shows the superiority of human beings. There are enormous problems with automating search for common content on websites because web software has trouble dealing with context. For instance, for a search engine the word "order confirmation" will have the same value if used on a mercantile site or when used in a novel published on the website. This is due to the design of the HTML language[886], which is not structured in the sense that it mixes content and display of data. As a result, although HTML documents can be easily parsed (analysed), the outcome will contain a lot of accidental and unwanted data. If one adds to it synonyms that are used on the websites, the task of reliably establishing common content in an automated fashion seems unreachable.

However, there is a chance that in the near future at least part of this difficult task will be automatically examinable. The new generation Internet languages especially the XML-family languages that are now being deployed on the Net, will allow for a separation of content and its display characteristics. Once coupled with libraries of business terms such as ebXML, it will be possible to search for common content of commercial websites. Nevertheless, as was indicated above, certain aspects of content analysis e.g. assessment of the quality of the website or content of company policies, statements seem to remain the domain of humans.

6.5.3 Website Traffic Analysis

The aim of Website Traffic Analysis is to establish common content of invisible information exchanged during the web session. For instance, one may want to establish that the majority of websites use the SSL protocol with 128-bit long keys to secure sessions. It may also turn out to be necessary to establish common content of the non-displayable part of HTML documents called metatags.[887] In addition, one may want to analyse references to other sites e.g. references to Certification Authorities or subscription to peculiar service providers like TRUSTe or PICS.

In this respect, the potential of software agents should be clearly visible. For a human being, establishment of these things would be difficult. For instance, the existence and level of encryption can be ascertained by looking at the padlock icon on the status bar of a browser, but

[886] See chapter 2.
[887] See chapter 2 and Glossary.

information displayed in a tool-tip may not necessarily be correct.[888] Moreover, analysis of this aspect of web behaviour would force a researcher to repeat the same operation every day.

Software components could provide a solution in this respect. First, the number of web servers to be analysed needs to be established. Then, the software can repeatedly poll them in order to initiate a "conversation". Then, the software could simply record the exchange of protocol messages, until it reaches the desired one. Knowledge of Internet protocols like HTTP, SSL or TCP/IP is the essential requirement for this type of analysis. This simplified procedure could be used on a daily basis in order to record historical adherence to a practice in question.

6.5.4 Web Infrastructure Analysis

Web infrastructure analysis focuses on gathering data regarding common configuration and operation of web servers, and, if necessary, web browsers, routers etc. This information can be accessed via direct "conversation" with a given tool in an automated fashion, manual analysis of configuration and operation of it, or manual analysis of outputs from it. The first task will often overlap with website traffic analysis. The second and the third will usually require access to the computers examined. It may involve analysis of options chosen by the administrator, installation of certain plug-ins, analysis of cookies, etc.

On the other hand, analysis of web server logs can provide important data regarding the use of a given website. Logs can keep track of who has visited the site based on unique IP addresses, when the visitors came, what they requested, how much time they spent on each page, where they were before they came to this site, what country they were from, what browser they were using and other things.[889] Analysis of the so called referrer logs can provide information whether users arrived at a given page from a search engine or a net guide, what keywords they used to find a given website etc.[890] This information can be analysed by a human expert or by specialised data extraction software e.g. Webtrends.[891] It is important to be aware of problems connected with validity of information about the number of unique visitors to the site. The results are most likely only a rough estimate of the actual site usage because of dynamic IP allocation used by many ISPs as well as caching of web pages both by visitor's web browser and ISP's proxy servers.[892] Dynamic IP allocation means that the same user visiting a given site during different times will appear to a log as if there were many unique visitors to the site thus leading to gross overestimation of the real number of unique visitors. On the other hand, visits to web pages cached by a proxy server or a web browser will not be recorded by the web server log leading to the underestimation of the number of actual visits to a website. However, because server logs are not accessible from the outside their usefulness in establishing customary practices is limited. For this reason this aspect will not be further referred to in this study.

6.5.5 Developer Tools Analysis

This analysis aims to establish common functionality provided by the software used to construct websites. It can be performed only by humans. However, it offers unusual benefits to the problems of establishing customary norms and for this reason will be analysed in-depth below under the heading: E-commerce development tools capability test.

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[888] See below.
[889] See e.g. McLaughlin, M., *et al.* (1999) p.167.
[890] Ibid. pp.169-170.
[891] See http://www.webtrends.com, last visited: 1/11/2002.
[892] See Glossary.

6.5.6 Web Participants Opinion Poll

This analysis aims to survey opinions of e-commerce participants in regard to a given customary practice in question. For instance, a survey could establish whether Internet participants feel free to provide a link to any site they want. It could ascertain whether they consider the first-in first-out principle of domain name registration as the customary norm on the Web etc.

A survey can be performed manually and semi-automatically. The most important difference between semi-automatic examination and a fully automated one is the fact that in the latter data gathering depends on the user's input. It is impossible to gather this type of information without asking a user some specific questions. Semi-automatic methods may include provision of forms to be filled by the users. However, the most important form of gathering data both online and offline is a survey of opinions.

The Internet has given a new impetus to well-known data gathering methods such as survey. Online surveys are used extensively by companies and are heavily recommended by marketing specialists. They can overcome traditional problems associated with paper-based surveys by mail such as the poor and slow response rate, the non-response issue and the necessity to manually copy data from questionnaire to a statistical program which may result in additional data entry errors.[893] Moreover, the low cost of online surveys enables designation of a much greater sample size than is practical or economically feasible in the traditional world. For instance, McKinsey has recently announced an online survey in Germany, which was addressed to 170,000 of respondents and supplemented by an off-line survey of 2700 respondents to filter out biases. It has been declared the largest in-depth online survey ever done in Europe.[894] One of the most important issues is to make sure that the analysed sample is representative of the whole population.[895]

6.5.7 Summary

The above section presented an overview of possible methods that could be used to evidence the existence of Internet customary norms. It was argued that the Internet offers potential for automation of the data gathering process, but the involvement of human experts is often a necessity. Various activities could be performed to establish Internet customary practices that range from website content analysis to survey of opinions.

6.6 Proposed three-step methodology

The following section will propose three-step methodology for evidencing Internet customary norms as a series of steps that should be performed in order to prove the existence of a web custom. These steps include: the e-commerce development tools capability test, practice examination test and literature review test. The two first steps allow both analytical and statistical generalisations about dominant character of a given practice. The e-commerce development tools capability test allows primarily analytical conclusions but it can be strengthened statistically by studies of most widely used software tools. The literature review test allows only analytical generalisations. These tests will draw on the methods for evidencing customary practices outlined above.

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[893] See e.g. Ilieva, J., *et al.* (Third Quarter 2002).
[894] Fassbender, H., *et al.* (2002).
[895] See e.g. Ilieva, J., *et al.* (Third Quarter 2002).

6.6.1 E-commerce development tools capability test

This test is concerned with measuring the software tools that are used to create Internet commerce solutions rather than examining their products. The basic idea is that if one manages to establish that a searched functionality is automatically generated by the most popular software tools used to build commercial websites, then there is no need to perform a traditional study of actual adherence to a given practice. Internet commerce software development tools not only crystallise acceptable practices but also enforce them mechanically. As a result, electronic commerce websites contain similar functionality and in consequence, are more standardised than non-commercial websites. In other words, if the most popular website development tools add certain functionality to each web system they produce, then one can generalise analytically that a majority of websites created with these tools contain such functionality. This argument provides further evidence that Internet customary practices are formed without any psychological element.

It is envisaged that software development tools will be limited to the so called rapid development tools and web server software. E-commerce rapid development software suits provide a lot of wizard[896] based functionality that generates core aspects of the e-business on the fly, which is very important from the time-to-market perspective. In addition, this approach ensures that thoroughly tested components will be included in the web application. However, a website designer may choose to implement a site using either a popular e-commerce software package or a basic or advanced HTML editor. A basic HTML editor can be any text editor like Windows Notepad. Important advanced HTML editors include Macromedia Dreamweaver and Homesite, Adobe GoLive!, NetObjects Fusion or Microsoft FrontPage.[897] Advanced HTML editors are often used to customise or enhance the raw sites generated by e-commerce rapid development tools. But experience suggests that many e-commerce projects, especially large and medium ones, are done using rapid development tools.[898] From the perspective of evidencing customary practices, only wizard-tools[899] are worth consideration, as it is impossible to discern any functionality patterns in using plain text editors. Apart from e-commerce development packages, one may also have to examine the functionality provided by web software particularly web servers. This might be necessary as some functionality, such as SSL encryption of transaction, can only be enabled on the server side.

There are several steps that need to be performed in this test. First, a category of required software tools should be established. The search may include general e-commerce development tools or may be more specific. In the former category there may be software tools that are used to enable B2B or B2C communication over the Net or are suited only to content management etc. Second, a representative sample of rapid e-commerce tools should be selected. The sample will be representative if it includes the most widely used software to build large websites. But it should also contain small-to-medium size category software products. It may be advisable to conduct a small pilot study in order to establish which software development tools are most popular among companies developing e-commerce tools. Such a pilot study can also add a power of statistical generalisation. Since the population of development tools is not large, dependant upon the budget, it should be possible to research all or a large proportion of them. Third, the required software should be acquired and installed. Since the Internet is independent of an operating system run on computers connected to it, usually one operating system version of the software should be sufficient. Fourth, the sample should be thoroughly examined from the

[896] See Glossary.
[897] For a list of other HTML code editors see e.g. http://builder.cnet.com/webbuilding/0-3881-6-7255.html?tag=more, last visited: 4/11/2002.
[898] Remark made by Milutinovic at the Hawaian Conference in January 2002. See Milutinovic, V. (2002).
[899] See Glossary.

perspective of a practice in question. One would have to check whether a given functionality is always included in a given system or whether it can be opted-out during the design phase. Production of sample websites may turn out to be necessary. In order to do this, software wizards should be thoroughly explored. Likewise, sample websites delivered with the software should be explored. Similarly, software manuals should be thoroughly investigated. Also, official websites of such software tools often offer free demonstration and multimedia information that should be thoroughly investigated for the sought after functionality. Fifth, a conclusion should be formulated. It should include information about whether a practice in question is compulsorily included in the production process or whether the designer can turn it off or exclude it.

The software development tools test has many important advantages. First, the test has great potential for saving time. It is highly likely that it will take less time to investigate the most widely used software tools from a perspective of a given functionality rather than to probe all the websites produced by them. There are obviously fewer e-commerce sites building tools than websites created by them. Second, the scope of applicability of results is potentially much greater than in the case of traditional practice adherence examination. From a smaller sample of tools used to build websites one can be more certain about the spread of a given practice. Third, the test can be performed at the computer desk, without the need for engaging in the potentially biased interaction with respondents. The only exception may be the survey of the most popular e-commerce solutions among website development firms and in-house computer departments of larger brick-and-mortar companies. Fourth, a great number of e-commerce development tools are freely available on the Net. More expensive software is available for a trial period, which should be sufficient to perform the test.

However it also has some disadvantages. First, it is a test that in principle has to be performed by a human expert and not by a computer. It is impossible to automate checking the capabilities of the most popular e-commerce solutions. The exception is a check of the type of web server that a given site is running, which can be automated and from which it can be inferred what capabilities a given server possesses. The process that has potential for automation is checking which software was used to create a given website in order to build a picture of relative popularity of various development tools. Second, the test requires possession of software that sometimes can be very expensive. This problem is alleviated by the fact, that most expensive software is available in trial versions. But the expensive part of the research may be to setup the software taking into account various platform and operating system requirements. Third, one may have to learn the functionality provided by the software. Fourth, a website designer may still alter the code generated by the development tools.

In short, this test offers a number of very important advantages. If the results of this test show a uniformity of practice there is no need for further investigation as to the existence of the customary practice in question. For these reasons it should be performed before the actual practice examination test. If, however, this test fails or it is not be possible to use it, then a researcher should turn to the practice examination test described below.

6.6.2 Practice examination test

The second type of test is the application of the classic technique for establishing patterns in a given population using examination of a representative sample of commercial websites, software or users. The aim of this test is to establish how common the practice is. If possible, this research should establish some timeframe for a given practice. Examination of this could show if a practice was continuous or not. The questions of reasonability or morality of practice should not be examined at this stage.

There are many conditions that need to be met before the research can be conducted. Most of these conditions will be similar to those encountered in the social sciences. The most important one is establishing the sample frame and sample size. Others may include searching for software capable of automatic discovery of patterns on the Web or design and implementation of customised software. Finally, the researcher will have to spend some time on researching the characteristics of the technology in question.

A. Automatic analysis of practice

As was argued above, web traffic, web infrastructure and to some extent opinion polls can be examined automatically. The most interesting aspect of automatic analysis of practice is the examination of web traffic and web infrastructure. This usually means the examination of underlying Internet protocols such as HyperText Transfer Protocol (HTTP) or Secure Sockets Layer (SSL).[900] The construction of such software should not be very difficult as the Internet protocols are widely known and standardised. Such software can operate on the basis of polling a sample of web servers on which the websites sought reside in order to examine exchange of messages establishing client-server communication.

As was argued earlier, it is much more difficult at this stage to design software to analyse content of websites automatically. This is due to the unstructured character of HTML language, which mixes content and display. This problem is easily illustrated by problems Internet users face when searching information on the Web using any of the popular search engines. These websites, despite their high level of sophistication, list results that are often taken out of context and hence of no use. The same problems will face any automatic HTML document analyser (parser). For this reason, the human expert will still play a very important role in the establishment of e-customary practices.

The power of an automated survey of web practice lies in the fact that it can be performed on a daily basis and hence can provide historical data crucial to the analysis of the formation of customary practices.[901] Trends can be analysed using days, weeks, months or years as time units. This is a very important advantage of automation of data collection as it can provide historical context to the data, which in legal proceedings is very rarely known and usually either guessed or not proved. However, as was stated in the previous chapters, the time factor is no longer important in the proof of custom but can be helpful is solving a particular case.

[900] See Glossary.
[901] See Netcraft surveys described below.

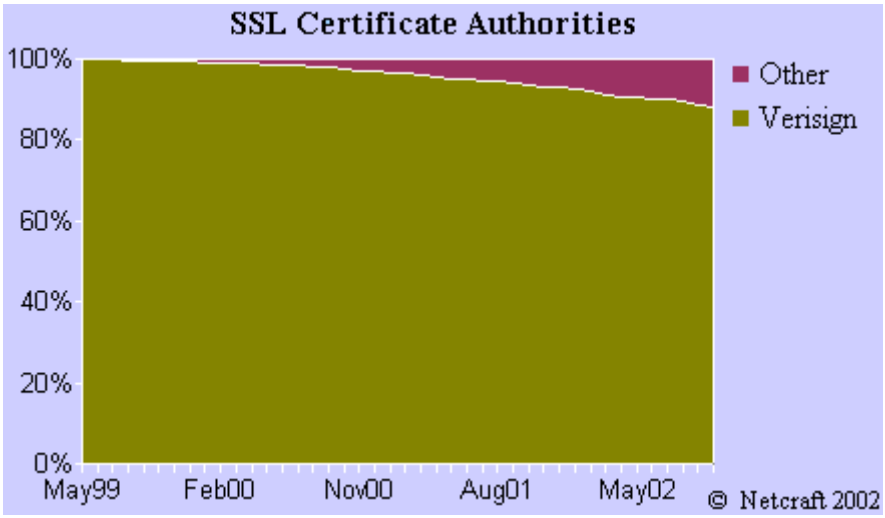

Figure 13. *SSL Certificate Authorities. The graph illustrates the gradual win of share from Verisign by other SSL Certificate Authorities. Source: Netcraft October 2002 Report.*

Another important advantage of automatic analysis of web practice is the ability to survey a large number of participants, which is impossible using traditional survey techniques. Netcraft surveys for instance, examine between 35,000,000 to 42,000,000 web servers every month (see Figure 14). This aspect of automation of data collection means that issues associated with sampling are no longer relevant. Such a method is certainly preferable although it involves establishment of a special purpose data collection organisation. In addition, one can envisage proliferation of various software components or web services capable of tracking user's behaviour on the Net. Reuse of these web services may speed up the establishment of customary practices to the degree not possible before.

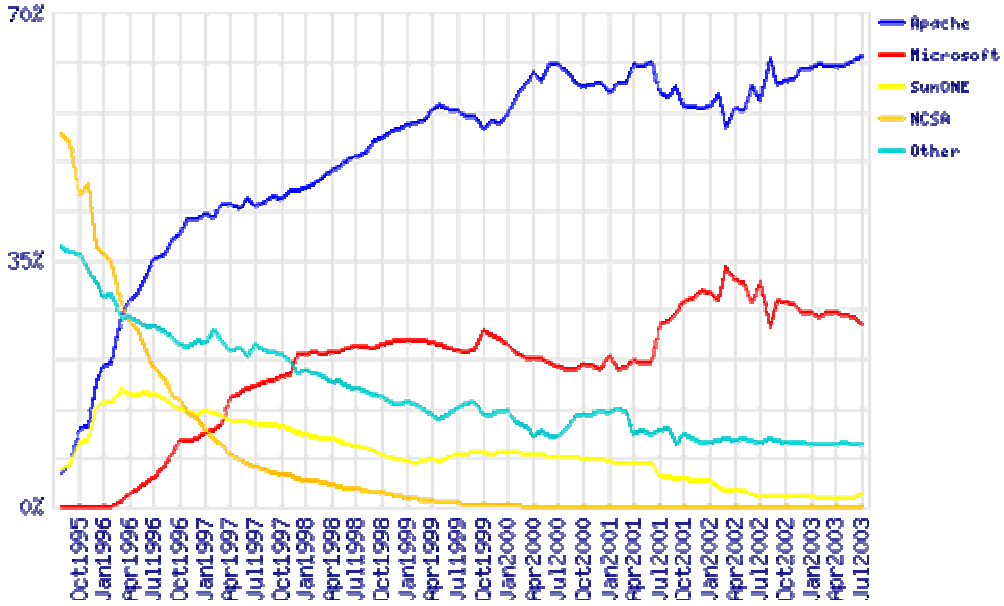

Figure 14. *Market Share for Top Servers Across All Domains August 1995 - July 2003. Response was received from 42,298,371 sites. Source: Netcraft July 2003 Report.*

There are also some disadvantages of automatic analysis of practice. First, it may be time-consuming to develop software to collect required information automatically. It is necessary to possess very good programming skills as well as a very deep knowledge of the Internet

functionality. This may turn out to be a very expensive skill to acquire. Second, it is difficult to forecast if every single practice in question will be examinable in the automatic fashion. Apart from content related customs, there may be problems with the establishment of some traffic or infrastructure related information.

B. Manual analysis of practice

Manual analysis of practice is especially relevant in the context of website content analysis, web infrastructure analysis and survey of the Internet participants' opinions. Manual analysis of websites is in reality the only option when it comes to examining their content. As was indicated earlier, software components cannot easily interpret required text information on the website. A human expert is also necessary when it comes to the analysis of provision of common information e.g. common practice of providing security related information, or common content of legal agreements on commercial websites. Similarly, a human expert can much more effectively analyse any promises, demonstrations and instructions provided by e-commerce businesses.

Manual analysis of practice may also include examination of web infrastructure. Here the actual configuration of web browsers, web servers, routers, interpreters and the like could be tested. The problem with this type of analysis is that access to a given software or hardware is required thus making this task very difficult to resolve. Remote examination is possible, but it would require permission from the company being subjected to such an analysis. Once such permission is granted, the practice analyst could investigate content of log files, supported third party components etc.

In addition, manual analysis will be commonly used in online and offline surveys of opinions. A human expert has to prepare a survey first and other humans have to respond to it. There may be important problems with the preparation of questions and trustworthiness of responses received from the participants. Issues surrounding surveys are commonly known and will not be reiterated in this work.[902]

The simplified process of analysis could be as follows. First, dependant upon sampling strategy, the sampling frame should be defined. Then, a sample of websites, participants or elements of web infrastructure should be selected. Websites have to be thoroughly investigated for the required functionality. This may include recording of browser behaviour (e.g. appearance of various icons on status bar in the web browser, check of website properties) or website content (e.g. searching for required information). Internal search engines and site maps can be used to speed up the search. This analysis should lead to a detailed list of researched subjects and their sought after behaviour. From this data one should be able to conclude whether or not a majority of sites, software or participants adhered to a given practice.

This test has advantages and disadvantages similar to any social science research project. For this reason, more detailed analysis of them will be excluded from the scope of this chapter. However, one should mention one particular advantage of this test in the Internet context. A human expert there can make use of third-party software that will analyse one site at a time, thus providing a semi-automatic examination of a web system. A major disadvantage of manual analysis, apart from time and money aspects, is that historical analysis of adherence to a given practice is much more difficult to carry on. As a result, it may turn out to be impossible to ascertain whether at a given point in time, the practice in question was observed by a majority of Internet users or not. But as was argued in chapter 5, the question of time will rarely be important given the widespread adherence to a practice in space.

[902] See e.g. Moser, C. A. and Kalton, G. (1971 (reprinted 1985)).

In summary, the manual or automatic examination of web infrastructure, traffic and opinion polls may provide invaluable opportunities for establishing customary norms in question. If results of the practice examination test show unanimous adherence to a given practice, the custom can be considered to be established. If not all sites adhere to a given practice, but a number of sites adhering to it exceeds 75% the custom can also be considered established. On the other hand, if access to a sampling frame is not be possible but the data suggests that all major websites adhere to a given practice it can be compelling evidence of its high frequency of observance. In such a case, one might be able to analytically generalise that a given practice is customary, although there may be a need for the examination of the timeframe of such practice.

6.6.3 Literature review test

A reference to the literature could be very helpful in evidencing Internet custom. The outcome of this test may reinforce findings from the previous tests. If done properly, it may also provide valuable confirmation of the legitimacy of certain practices. In principle, however, it does not have to be done, if the results of previous tests clearly indicate the existence or non-existence of a customary norm in question.

If used, a literature review test should never be treated as an independent way of proving custom, however. It cannot be used as the only method of proving custom because customary practices change over time and for this reason what is written on paper may not reflect reality. In this sense, one cannot strongly generalise about the customary character of a given Internet practice based on the literature review test. It is essential that new evidence of custom be produced whenever a litigant refers to it. It is only when certain customary practices become so widespread and widely known that almost everyone will be aware of them that the empirical proof of custom may not be required.

A literature review test is based upon searching for evidence of custom in legal and technical writings. Legal writing includes treaties, statutes, judgements, books and other publications dealing with Internet practices. Technical writing includes apart from books and articles, standards, formal recommendations etc. From the legal perspective especially important are treaties or agreements referring to the customary norm in question, statutory law codifying the custom, judgments of the courts establishing the custom, books, articles and other publications discussing it etc.[903] Books or articles, could be written both by lawyers or by technical authors. Technical writers may suggest for instance certain uses of technology, web design or various aspects of Internet activities. Technical standards and recommendations are of importance, especially if they come from trusted sources such as Internet Engineering Task Force or the World Wide Web Consortium. A great number of very important sources of information about web design and practices are available on the Web itself.

During legal disputes, the analysis of legal literature will usually be performed by practising lawyers, especially judges. Conversely, technical writing will be the domain of an expert who will usually be called by the Court. Since this type of activity is familiar to lawyers and does not introduce anything novel to the technical audience, more detailed analysis of this form of searching a proof of custom will be omitted.

One should mention here, that this test might resemble evidence of *opinio iuris* proposed by D'Amato, who equated the subjective element with statements about the legality of a practice in question.[904] However, the concept of e-custom proposed here disregards the *opinio iuris* element. In consequence, even having such a tolerant interpretation of the subjective element would be of

[903] See e.g. Hudson, M. O. (3 March 1950).
[904] See e.g. D'Amato, A. A. (1971) pp.2, 89-90; Roberts, A. E. (Oct 2001) pp.757-758. See also Chapter 5.

little help in evidencing custom, if the actual practice did not conform to what has been agreed to in the literature. Furthermore, the subjective element equated with legal writings, either in the form of treaties or resolutions, or non-binding but authoritative case law and literature is useful to the extent that such material exists about the Internet practice in question. However, at this stage, such materials are very scarce, thus making it impossible to prove custom solely on this basis.

In summary, this test is based upon searching the proof of custom in legal and technical writing. Because of the flexible nature of custom as a source of law this test should always be used in conjunction with empirical tests outlined above. It should never be used as the only method of proving custom and it may be disregarded entirely, if previous tests succeeded or failed or an adjudicator wishes so or if there are no technical publications or laws dealing with a matter in question.

6.7 Hypothetical case studies

Throughout this study reference has been made to the two hypothetical case studies introduced in the end of chapter 1. In chapter 2 it was shown that it is impossible or very difficult to solve those cases using current developments from international electronic commerce law. In chapter 5 the concept of electronic commerce custom was used to show how it can resolve the cases in question using references to the notion of common Internet practices. This solution assumed that the customary practices were properly evidenced.

In this section, it will be shown how these practices could be evidenced using the methodology proposed above. However, because of the limitations of this study, the empirical work will not be presented below in a comprehensive manner. In consequence, the cases below will be evidenced using small samples relying primarily on non-random sampling techniques. The aim of the examples presented below is not to prove definitely the existence of web customs in question but to exemplify how the evidence supporting the existence of these custom could be gathered using the proposed methodology.

6.7.1 Transaction confirmation case

In this case the website operator did not include an order confirmation screen. The buyer, unsure about the successfulness of his transaction, decided to purchase items another website. He argued that it is customary nowadays to provide an order confirmation screen and he expected it. How can we prove the customary character of the order confirmation practice?

As was proposed above, one has to make sure that the majority of websites actually employs the order confirmation screen. Because there are a vast number of commercial websites on the Net and their number is growing, the proposed solution to the problem was based on establishing such a practice by looking either at the functionality of a representative sample of the most popular web building software or the observance of functionality provided by a representative sample of websites.

A. E-commerce development tools capability test

The idea is to employ the E-commerce development tools capability test first because if one manages to establish that the most popular software used to construct commercial websites includes an order confirmation screen automatically then it will be obvious that the majority of websites will contain such functionality. Of course, it is possible to build a commercial website using just an HTML editor, but experience shows that commercial websites are constructed using

packages that deliver certain functionality not available in HTML editors.[905] Top e-commerce solutions provide among other things user profiling, content personalisation, catalogue management, order processing, languages and currencies and advanced online business analytics.

So the first step is to look at how many web development tools there are on the market and select a representative sample of them. Here a small pilot study would be the best way to ascertain which software tools are used and which ones are most popular. In the absence of this, one has to study available sources on the Web and in bookshops in order to learn what is currently being used on the market.

In order to ensure representative design of the sample, website software could be split into two categories: large-website software and small-to-medium e-business software. In the first category one should mention Microsoft Site Server 3.0 Commerce Edition[906], replaced by Commerce Server 2002.[907] Together with Microsoft Biz Talk Server used for B2B electronic commerce integration, both products make up the Microsoft Solution for Internet Business.[908] According to some technical experts at this stage it seems to be the only all-in-one solution for large e-commerce sites.[909] Other big players have also developed e-commerce solutions although the functionality in respect to e-commerce site building could not be easily asserted. IBM developed several products in the WebSphere package including IBM WebSphere Commerce editions and IBM WebSphere Studio HomePage Builder for Windows.[910] Allaire developed ColdFusion, which was recently purchased by Macromedia.[911] But the rapid development of e-commerce sites is not easily ascertainable in relation to these packages.

In the second category, there are a number of products available. A good way to obtain a sampling frame of small e-commerce development tools is to visit payment gateway providers like WorldPay[912], CardService[913] or Authorize.Net[914]. For instance, WorldPay integrates its secure payment gateway with the following software solutions[915]:

[905] See Milutinovic, V. (2002) mentioned earlier. This matter, however, requires a separate study.
[906] See e.g. Libertone, D. and Scoppa, A. (2000).
[907] See Commerce Server 2002 FAQ.
[908] See Rosoff, M. (18 February 2002).
[909] See Kaufman, S. J. (14 May 2002).
[910] http://www.ibm.com, last accessed: 4/11/2002.
[911] http://www.macromedia.com, last accessed: 4/11/2002.
[912] http://www.worldpay.com, last accessed: 22/04/03.
[913] http://www.cardservice.com, last accessed: 22/04/03.
[914] http://www.authorize.net, last accessed: 22/04/2003.
[915] http://www.worldpay.com/aus/index.html, last accessed: 4/11/2002.

WorldPay.com Catalogue and Shopping Cart partners				
1ShoppingCart	Accounts Online	AceFlex 4.0	Actinic	ActivShopping
AliGrafix	Apoogee	Ardeo	B-Com	Beans Cappuccino
Cactushop	Click and Build	ClickCart Pro	ComAdvance	Cows
CybershopUK	Dansie Cart	ecBuilder	EMerchantPro	EROL
Evolve 2000 Store	Expocentric	Extropia	EzStore	Get Trolleyed
IBM WebSphere	iDomainCart/iHostingCart	IGrapeVine	iHTML/Inline	INEX
InstanteStore.com, Internet Treasure Chest	Internolix	Intershop	Intershop ePages	JShop Professional
Mamut	M Cart	Mercantec	Miva Merchant	Netc./Net-Store
PDG Software	PERL Shop	Pulse 2000	QDCat	Qhost
RealCart	Sage	shop@home.pro	Shop@ssistant	ShopCreator
ShopFactory	ShopFitter	ShopMaster	Shopping Cart	Shopping Cart 2000
StoreSense	TKPoint	Transaction 2000	VIPCart.com	VirtualShop
VP-ASP	WebContactPro	WebGenie	WebLogic	Web Widgets
WS4D	(Integra Europe)			

Figure 15. *WorldPay.com Catalogue and Shopping Cart partners.*

On the other hand, Card Service International provides the following list of software integrated with its LinkPoint Secure Payment Gateway:[916]

[916]http://www.cardservice.com/partnerships/p_catalog_a_thru_f.aspx, and linked sites, last accessed: 22/04/2003.

Card Service International Catalogue and Shopping Cart software producers				
Merchant Helper	Shop Factory	EZShopper	AbleCommerce	Americart
Bcentral	Beacon	Beanbasket	Bigstep.com	Breakthrough
Commerce.cgi	Cart32	Cartit	Cart Manager	Catalogue Builder Cart
Ccedwards.com	CheckItOut	CoolCart	Dansie Shopping Cart	DesignCart
DreamCommerce	EasyCart	ECSI	CartComplete	Express Shopper
iHTML Merchant	Marketplace Manager	iLM	iTool	LinkPointCart
Make-a-Store	MaxEngine.com	Customised Shopping Cart	Mercantec SoftCart	Miva Merchant
moonSlice	Hazel	PDG Shopping Cart	Platinum Cart	EZ Cart
Quick Cart	Quick Store	@Retail	SecureNetShop	Shop Factory
Shop Site	Store Front	StoresOnline.com	uShop	uStoreKeeper
VirtualCart	VisualTrends OnlineStoreBuilder	Web.site.express		

Figure 16. *Card Service International catalogue and shopping cart software producers.*

One should also mention NetObjects Matrix Builder[917], Yahoo!Store[918], Main Street Store (FedEx Store)[919], ShopFactory[920] or ecBuilder.[921]

The distinction between small-to-medium and large e-commerce web solutions is sometimes not easy to make because large software products usually come in several editions providing varying degrees of functionality. For instance Microsoft Commerce Server 2002 comes in Evaluation Edition, Developer Edition, Standard Edition, and Enterprise Edition. And so:

> "Standard Edition is ideal for medium-sized businesses that have a need for basic e-commerce functions and basic reporting."

whereas

> "Enterprise Edition has been designed for high-traffic, global sites that need advanced functionality and advanced analysis options."[922]

Examination of the widely used Microsoft Site Server 3.0 Commerce Edition shows that it automatically generates an order confirmation. The order confirmation is included in the file titled confirmation.asp which includes an order tracking number.[923] The order confirmation is included

[917] http://matrix.netobjects.com/destinations/netobjects/login.html, last accessed: 4/11/2002.
[918] http://store.yahoo.com/, last accessed: 26/10/2002.
[919] http://mybiz.mainstreet-stores.com/apps/smb/clients/FedEx/ , last accessed: 26/10/2002.
[920] http://www.shopfactory.com/, last accessed: 27/10/2002
[921] http://www.ecbuilder.com, last accessed: 27/10/2002. See the presentation of Milutinovic, V. on a very similar topic presented as a tutorial at the 35th International Conference on Systems Sciences in Hawaii in January 2002. See Milutinovic, V. (2002)
[922] There are also differences as to the number of processors, web servers and applications supported. See Commerce Server 2002 FAQ.
[923] See e.g. Libertone, D. and Scoppa, A. (2000) pp.46-47.See also receipt_view.asp file on pp.47-52 above. On commerce interchange pipeline facility that "ensures the secure data exchange of business data objects such as purchase orders and order confirmations" see p.112

in illustrative websites contained in the system.[924] More importantly, it is also automatically generated by the Site Builder Wizard, which in 14 steps can create a site that is tailored to the e-business needs.[925] The designer can modify these automatically generated files as they are nothing more than a set of text files. Libertone and Scoppa for instance, show how to display shorter order tracking numbers on the order confirmation as well as how to send an order confirmation by email.[926] The same functionality is embedded in the file Receipt.aspx in Microsoft Commerce Server 2002[927] and in ColdFusion 4.0 and later versions.[928] As June 2002 Netcraft report argues:

> "There are around 36,000 sites using Commerce Server [or Site Server, its predecessor] including a significant number of ecommerce sites and banks."[929]

Easier to check are e-commerce sites generation software packages freely available on the Internet. Their common feature is that they use shopping cart technology to handle online purchases that is supposed to imitate purchases in offline supermarkets.[930] However, the main limitation of this software is that it cannot handle a large amount of data. As a result of its very limited functionality it is probably used only for the development of small websites, although it also has potential to be used by medium sites. The point is that although this type of software is probably rarely used in practice, it provides evidence of what functionality small-to-medium sized e-commerce sites must provide.

Examination of software tools in the second category clearly shows that order confirmation is a built-in capability that cannot be opted-out by a site designer during the production stage. For instance, Yahoo!Store or ecBuilder and other products are, similarly to Microsoft Site Server, based upon wizards, which automatically generate order confirmation functionality.

[924] See e.g. Volcano Coffee Company default web page.
[925] See especially step 13 titled Order History. See also p.70 above
[926] Libertone, D. and Scoppa, A. (2000) pp.101-103.
[927] See Help file for Microsoft Commerce 2002 Enterprise Edition. See e.g. Commerce Server Tutorials/Commerce Server Developer Tutorials/Exploring the International Retail Site/Shopping the Adventure Works Catalogue.
[928] See e.g. Hoffer, J. A., *et al.* (2002) pp.373-383.
[929] Netcraft (2002).
[930] See Chapter 2 and Glossary.

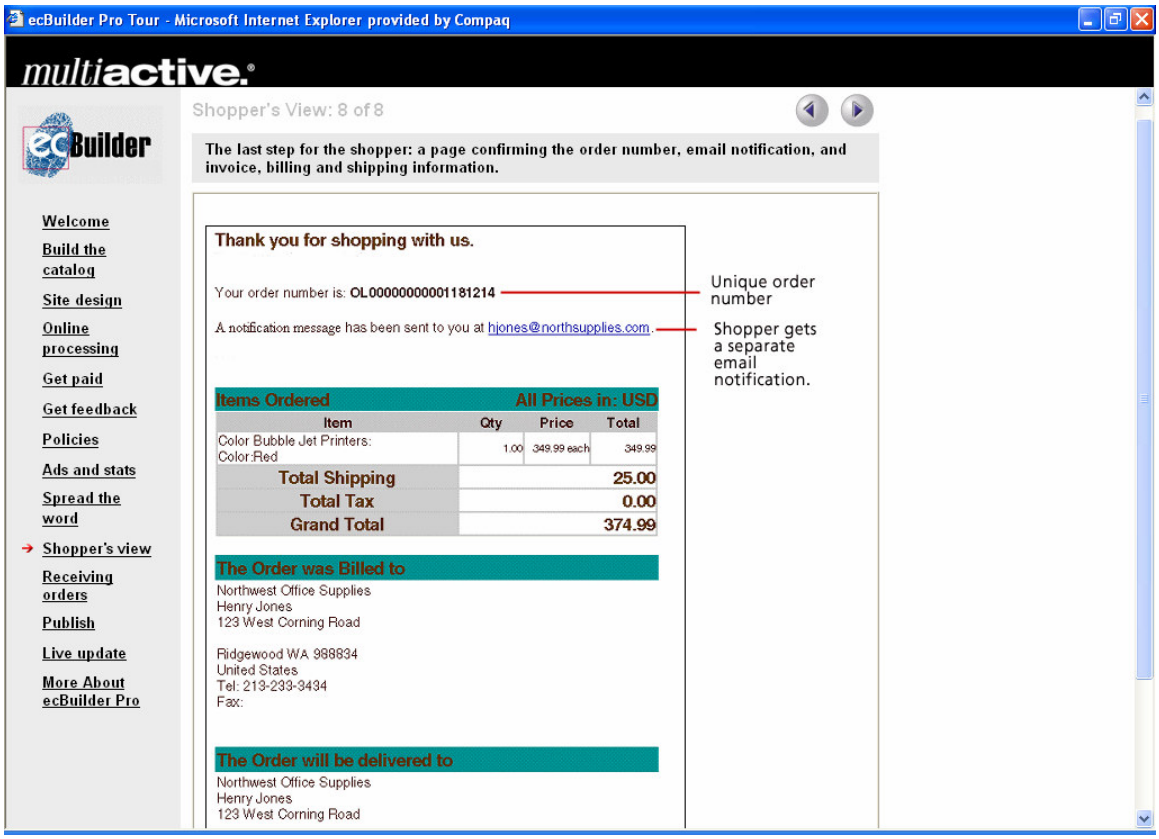

Figure 17. *An order confirmation screen automatically generated by ecBuilder.*

One should also mention that payment gateways such as Authorize.Net are pre-configured to send email confirmations to e-commerce sites and can also be configured to email automatic transaction confirmation directly to the customers.[931] In this case, the confirmation of a transaction would not come from the merchant, but from the middleman between the e-merchant and a bank. It is interesting to note that for some payment gateways, emails "are a courtesy function and should be treated as a 'useful but not vital' facility."[932]

In summary, both large and small-to-medium e-commerce software development tools provide automatic generation of order confirmation screens. This functionality is considered to be standard. From this one could infer that since the majority of rapid e-commerce development tools provide such functionality, then the majority of commercial websites must posses such functionality. This in turn proves existence of a customary norm that requires provision of such functionality to the end-user. Since rapid development tools are globally accessible, this means that a given functionality must be provided by international merchants across different industries.

This conclusion has two important limitations, however. First, this approach assumes that sites created by rapid development tools will not be altered in such a manner that will delete order confirmation functionality. This is a minor drawback, since it can be presumed that designers who use such development tools will conform to what designers of their creation tools considered to be the most optimal approach to a given problem. The second problem is more serious. Some website designers do not use rapid e-commerce software development tools but create sites using just code editors. It is not possible to state how many commercial websites are created in this way without doing some form of a pilot study. Only such a survey could confirm that code editors are

[931] See e.g. Authorize.Net (2003) p.32; Authorize.Net (2003) p.33.
[932] See SECPay.

rarely used to build e-shopping sites from scratch and serve more as a handy tool to enhance rough sites generated by the e-commerce development tools. Since the code editors do not impose any restrictions on what a designer might include in the web system, it is impossible to state whether e-business sites created in such a way, possess order confirmation capability. This introduces a degree of uncertainty, which might actually force the researcher to check if the alleged custom is really implemented in practice by means of the practice examination test.

B. Practice examination test

The practice examination test should be used only if the e-commerce development tools capability test cannot be performed or if its results are inconclusive. To many adjudicators the arguments presented above about the widespread inclusion of order confirmation generation mechanisms would be sufficient to establish the customary norm in question. However, for those who would not regard this evidence as conclusive, one would have to examine actual practice.

Automatic analysis

This is the only test that can be performed automatically. However in respect of order confirmation one faces a serious problem. As was discussed earlier, it is impractical to design a software component that would track the presence and the content of the order confirmation screen because of the unstructured character of HTML language. The problem is best illustrated with the reference to search engines that return any website that contains a searched keyword irrespective of the context in which a given keyword was used (see Figure 18).

Figure 18. *The results of search of "order confirmation" keyword using Yahoo search engine and displayed in HTML format using Microsoft FrontPage editor.*

Moreover, without common terms used to describe a particular moment of a transaction, it is difficult to establish in a given context, the meaning of words such as "order confirmation" or

"transaction confirmation" or "purchase confirmation" or any combination thereof. This problem may be overcome when one separates content and display of data and builds a common library of unique keywords that could be searched on all websites. This is already happening with respect to XML language which is going to be the successor of HTML. Common libraries of keywords are already being developed similarly to the electronic business terms used by Electronic Data Interchange EDIFACT and ANSI X.12 libraries. Examples of e-business keyword libraries include ebXML, RosettaNet and others. Until these developments become widespread and change the way commercial websites are designed, a search for content specific information in an automated fashion for the purpose of establishing an e-custom will not be possible.

Manual analysis

Thus one is forced to visit a representative number of websites manually and test if they provide an order confirmation. In order to do this one should choose a random or non-random sampling technique. Irrespective of the method chosen, it is very important when establishing a sample to include well-known and often-visited commercial websites such as Amazon.com. Sites like Amazon.com account for a large percentage of commercial traffic on the Web and also serve as the benchmark for other commercial sites.

There are some problems with manual analysis of transaction confirmation practices. First, it may be very time consuming to define a sampling frame and for this reason the convenience sampling method will be used as an example. Since it may turn out to be an expensive enterprise to actually purchase products to see if an order confirmation is included, it may be necessary to actually make fake orders, with the permission of a website administrator if possible. Another problem that can be encountered is that some websites will not allow the tester to purchase products from it unless the person testing it has a business or belongs to a business association. In such a case, such a website can either be replaced by one that is publicly available or a special request may be sent to website operator with a kind request to test the website for a given functionality.

One should also note that a transaction confirmation is often linked with the shopping cart facility of which it is the last step. It is therefore advisable to take notice of whether or not a given site provides this functionality and displays the number of steps that it takes to complete a given transaction. When it does, one could also infer from it that a given site includes instant order confirmation capability.

Figure 19. *The example of Amazon.com shopping cart facility indicating various stages of a transaction.*

Nevertheless, a review of a convenient sample of several more and less popular commercial sites clearly shows that instant order confirmation is a widespread customary practice of global scope. It is used by electronic shops, online banks and financial institutions, and government agencies. One can encounter this practice across all industries that rely on the Internet while selling goods or services. For instance, the domain name registrars like GoDaddy.com, online bookshops like Dymocks, travel agencies like Greyhound Pioneer, online lotteries like Tattslotto or banking institutions like Westpac, all provide instant order confirmation containing a receipt number. The following 5 screen shots show various ways of implementing this functionality.

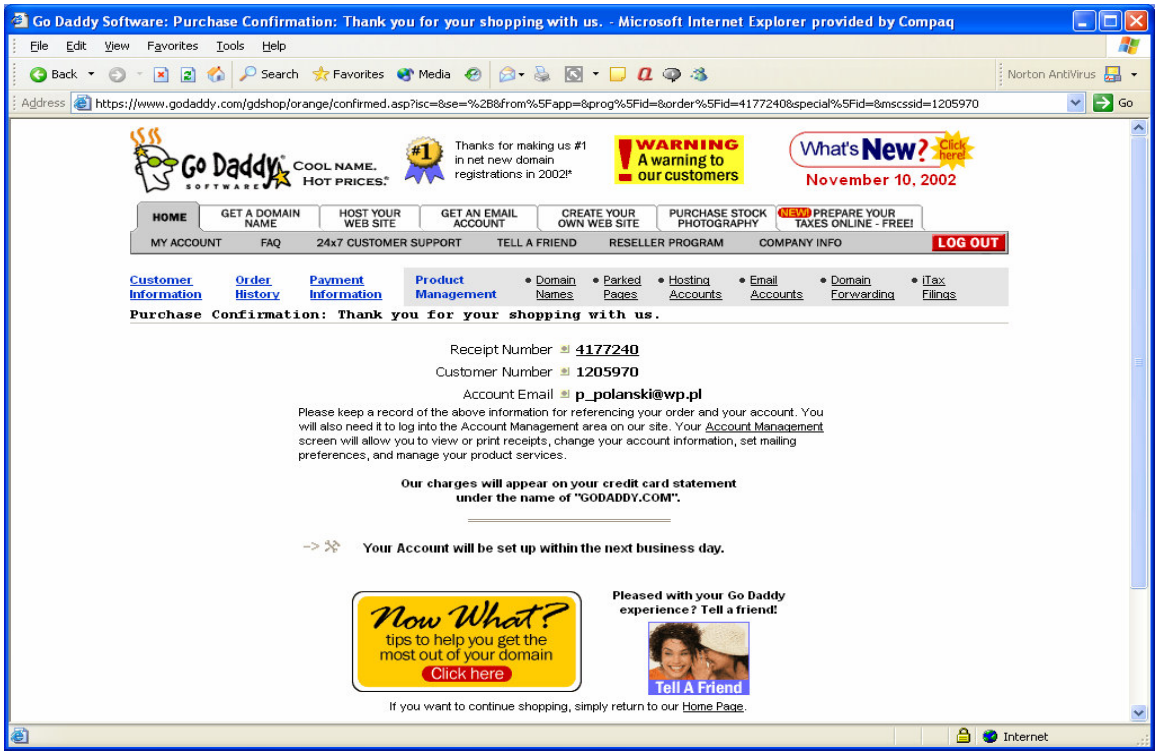

Figure 20. *GoDaddy.com registrar purchase confirmation of the domain name with the receipt number.*

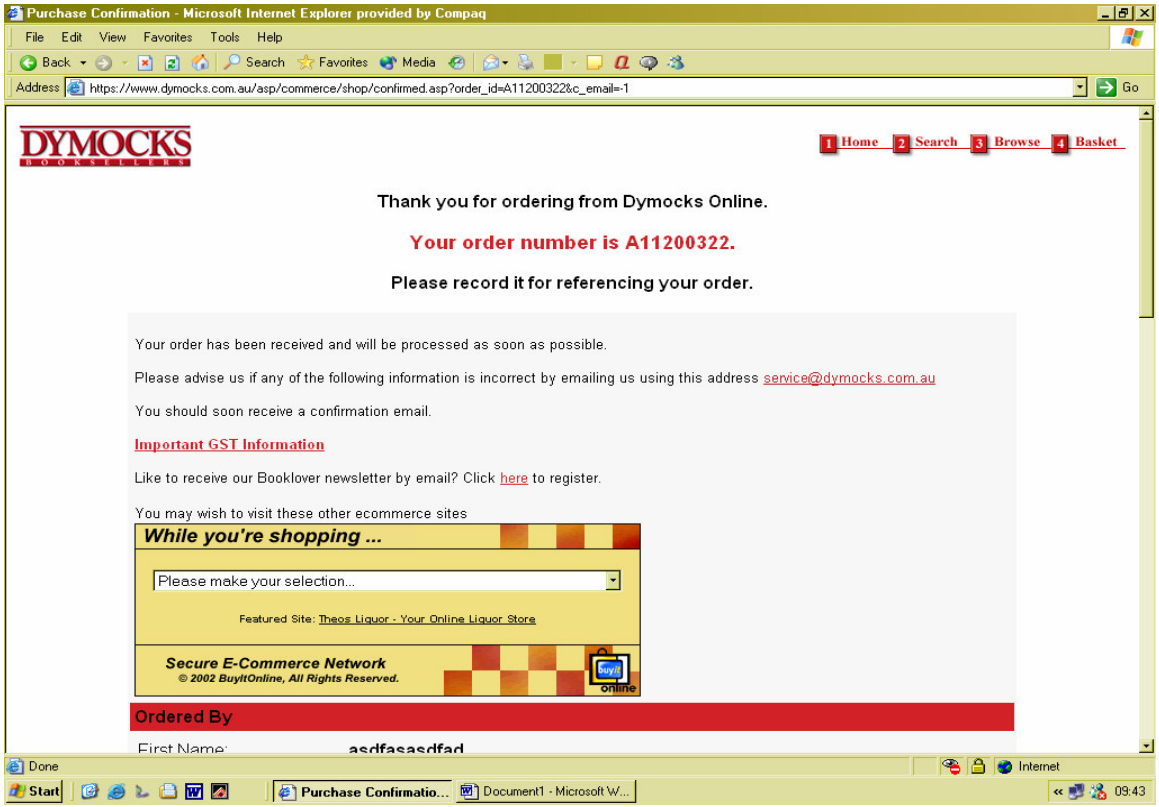

Figure 21. *Dymocks Online purchase confirmation screen containing transaction number.*

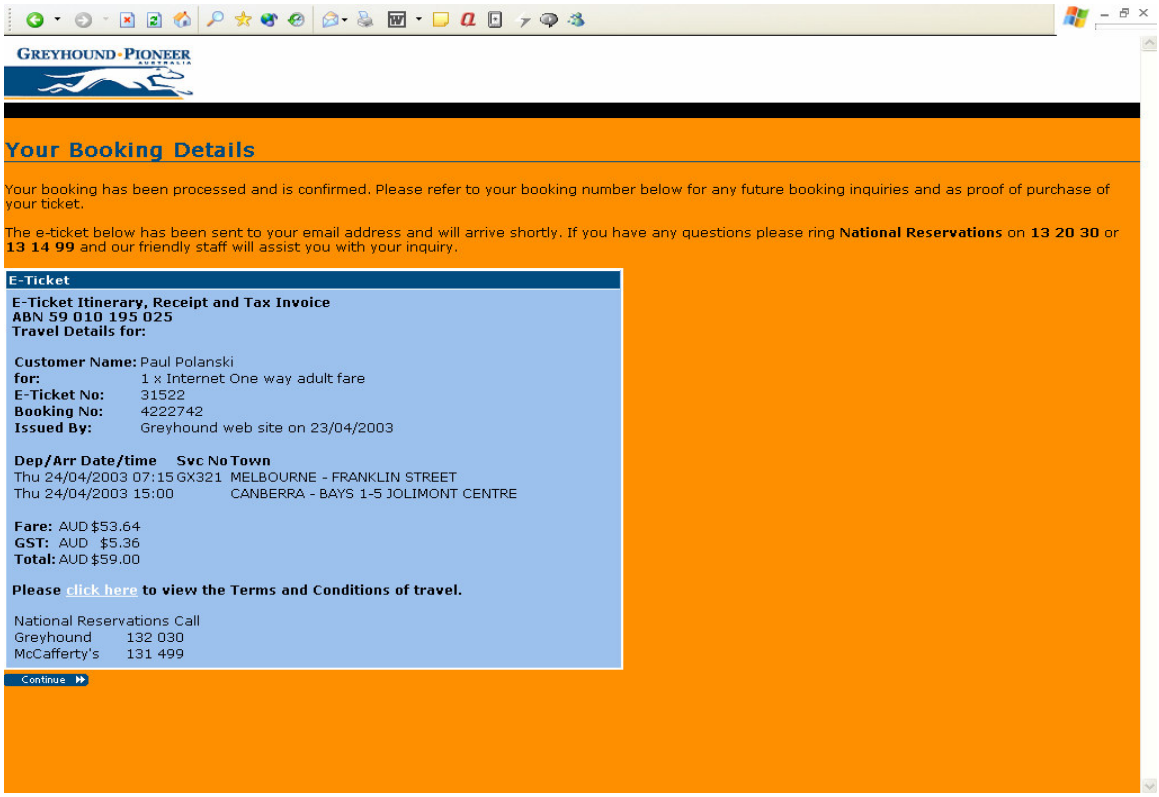

Figure 22. *Greyhound Pioneer coach service confirmation screen with the e-ticket and booking number.*

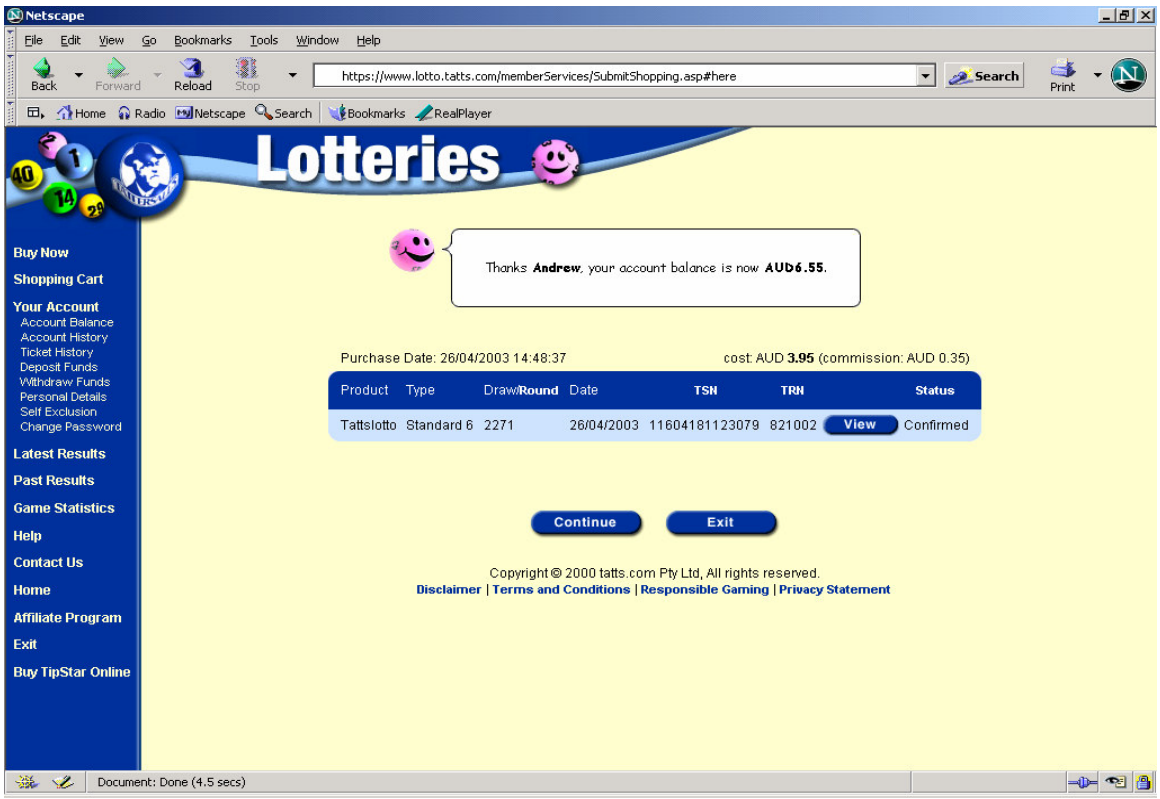

Figure 23. *Tatslotto lottery transaction confirmation screen on Netscape 7.0 web browser.*

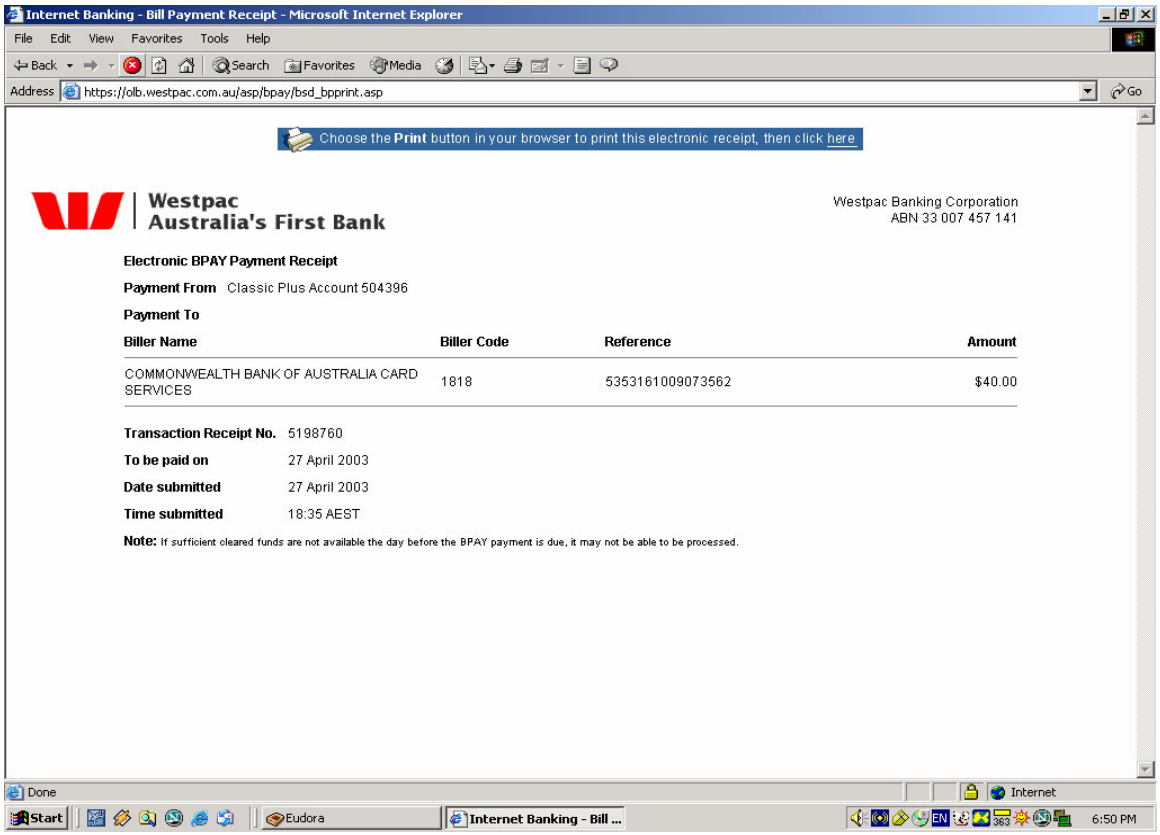

Figure 24. *Transaction confirmation page of Westpac bank with a reference number.*

It is also very common to confirm simultaneously the order in an email. Email confirmation is important because it is almost as fast as a Web-based confirmation but is more persistent proof of a transaction. However, email transaction confirmation, although very common and very useful, should not be used as the only mean of confirming transactions, as serious problems might arise if a purchaser misspelled his or her email address. The email confirmation usually contains not only a receipt number together with all the transaction details but also a link to the purchased products so that buyer can track progress of his order, or as in the case of digital product, e.g. edit its features. A combination of both Web-based and email transaction confirmation is the most common and the best way of communicating the deal.

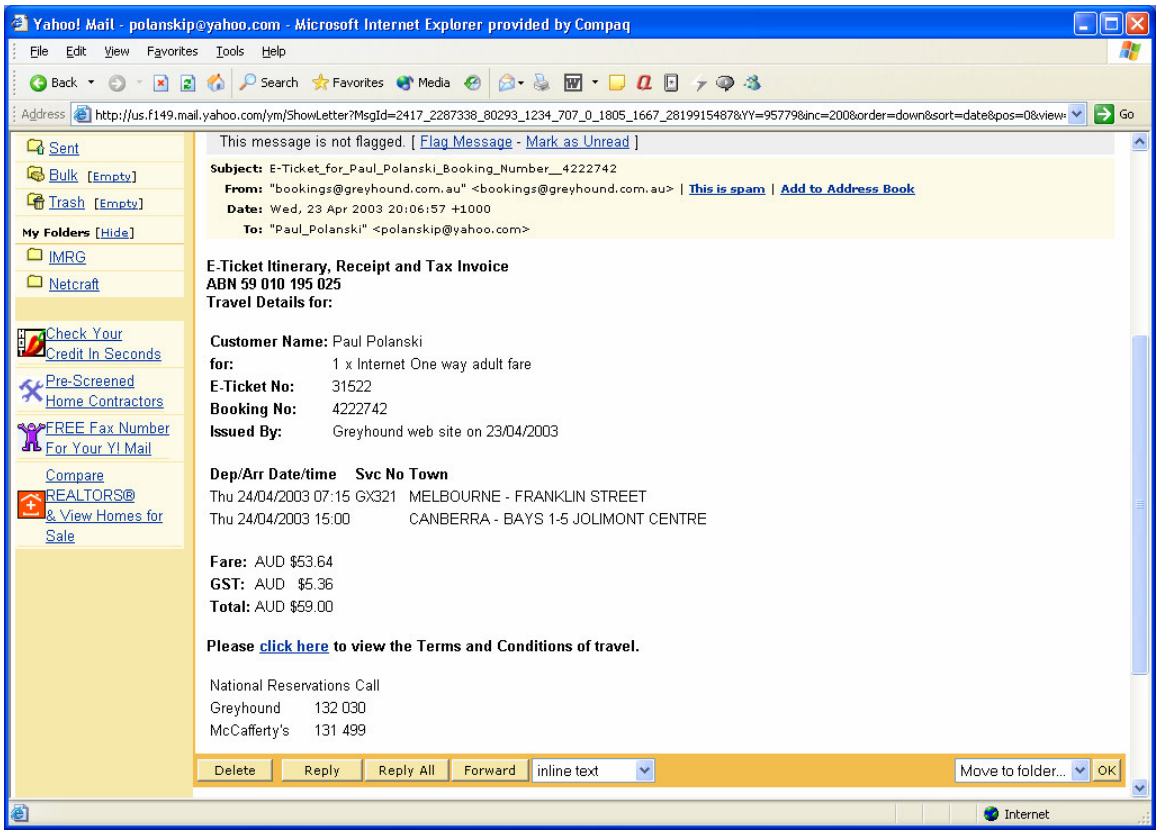

Figure 25. *Email confirmation sent by Greyhound pioneer coach service website.*

The above survey clearly indicates that there is a common practice across all of industries, which requires online sellers to confirm immediately purchase orders placed via the Web. This practice is so widespread that it justifies the expectation that it should be provided by all of e-commerce vendors as a natural step in the formation of electronic contract. This expectation is compounded as so far, no sites have been found that do not provide this functionality, although with more resources and space, a more stringent survey could be done.

C. Literature review test

The emergence of the new practice of immediate transaction confirmation is visible both in technical as well as in legal writings. As far as technical books are concerned, the importance of order confirmation can be deduced from the references to related concepts like shopping cart or tracking order or tracking order number. One finds such references in the writing of the web usability expert Jakob Nielsen in the context of the shopping cart:

> "Shopping carts are now so common on e-commerce sites that they have morphed from metaphor to interface standard. When users encounter a web shopping cart these days, they don't think of a physical supermarket as the reference system. Instead, they think of all the other websites where they have seen shopping carts. Once something becomes sufficiently widely used, it becomes an interface convention and people simply know what to expect."

And further:

> "The standardisation of shopping carts is good and bad. The benefits come from consistency, which is even stronger than metaphor as a learning tool. In fact, the user doesn't have to learn *anything* as long as an interface element behaves exactly like the user is accustomed to. At the same time,

> shopping carts are an inappropriate interface for many applications, and yet designs are forced to use a shopping cart because that is what users expect."[933]

It is remarkable that Nielsen speaks about designers who are forced to provide certain functionality because users expect it. Although his remarks are directed towards creation of a Web that is easier to use, they provide an interesting confirmation of the role of customary practices in the electronic commerce.

Similarly, authors writing guides about software solutions to e-commerce websites confirm the necessity of an order confirmation practice. Liberton suggested that:

> "(…) to make it easy for a customer to track an order, the E-commerce system should generate a tracking number that can be displayed and, possibly, e-mailed to the customer."[934]

The order confirmation customarily contains an order tracking number. So from this suggestion, one can deduce that an order should be confirmed instantly by a display of a separate website and confirmed optionally in an email, thus reinforcing earlier findings.

On the other hand, web design expert Jeffrey Veen, while discussing top customers complaints cites BizTalk.com March 2000 report which showed that 25% of customers complaints were due to their inability to track orders.[935] Orders can be tracked only thanks to an order number that must have been supplied either immediately after the transaction took place or in the email confirmation. This clearly shows that there is still a large percentage of commercial websites which does not conform to the Internet standards, thus creating a major source of problems to online customers, be it consumers or businesses.

By contrast with technical writing, legal writing is generally silent on the matter of the necessity of an instant order confirmation in the e-commerce transactions. Practical matters like Internet practices are of no interest to the legal community. This is in line with the attitude of the legal community to the notion of custom as a source of law, which is considered as irrelevant by the modern legal culture, and focuses on the interpretation of existing statutes or cases. In consequence, modern literature on electronic commerce law deals only with the interpretation of local and international statutes and case law pertaining to this phenomenon.[936]

However, it is mandatory to recall that the European Union Directive on Electronic Commerce obliges online businesses to acknowledge the receipt of recipient's order without undue delay and by electronic means.[937] In consequence, as was argued earlier, Article 11 of the Directive "unconsciously" codified the customary practice, because there is no single reference to the existence of such practice in the text. It is important to remember, however, that such an order did not have to be confirmed immediately and that businesses-to-business transactions could exclude its application by a contrary agreement.[938] Nevertheless, it is a very important confirmation of the legal relevance of the order confirmation practice.

In summary, the technical literature review test clearly shows that the practice of confirming orders is expected from the e-commerce systems. Although the authors do not explicitly mention that the order must be confirmed immediately, it can be inferred from the fact that they refer to the shopping cart facility or to website confirmation, which can only provide such feedback in an instantaneous manner. On the other hand, legal writing was generally silent on this matter,

[933] Nielsen, J. (2000) p.188.
[934] Libertone, D. and Scoppa, A. (2000) p.3.
[935] Veen, J. (2001) p.172.
[936] For more on this matter see Polanski, P. P. (2002).
[937] See art. 11.1 first indent. See also discussion in chapter 2.
[938] See chapter 2 and 5.

although as this practice was "unconsciously" and partially codified in the European Union Directive on Electronic Commerce.

D. Case summary

The transaction confirmation practice is global and pertains to web commerce, although it has its predecessor in Electronic Data Interchange. Both empirical tests as well as literature tests provided strong evidence for the existence of the common practice of immediate order confirmation in electronic commerce. E-commerce development tools test has clearly shown that a convenient sample of big and small-to-medium software packages automatically generate order confirmation capability. These findings were confirmed in the test of actual adherence to such a practice, which has shown that in a convenience sample of large and small online vendors, all of them confirmed immediately purchase orders with a page containing an order reference number and by email. The literature review test has provided further evidence that such practice is known, recommended and legally relevant thus reinforcing the expectation that it should be observed. The only limitation of this proof were restrictions that had to be put on the number of visited sites and its discussion, which were due to the scope of this thesis. In the real life case scenario, more formal application of the outlined methodology could be made.

The results of all of the above tests indicate that there is a widespread practice of instantly confirming online orders and that it is widespread enough to create a justified expectation that it should be provided by every Internet merchant. The above proof of the Internet custom should convince an adjudicator as to the existence of a global customary norm that states: "All web-based transactions should be electronically confirmed immediately after the placement of an order." This norm could then be used to solve the dispute outlined in the hypothetical case study in favour of the buyer.

6.7.2 Banking case

In this case the designer of a banking site did not provide 128-bit encryption of the web-based banking system because the agreement did not require it. One of the bank's business clients suffered a financial loss while using the system, despite the fact that his browser could support strong encryption. As was argued in chapter 5, the client sued the bank on the basis of breach of a customary norm arguing that it should be implied in the contract. This customary norm required the bank to provide state-of-the-art technological security which is the provision of a 128-bit encryption channel nowadays.

The proof of the case is not going to assess all the potential security practices that are necessary for the safe electronic commerce.[939] Instead, it will focus on one particular aspect of this very complex subject matter - the analysis of the Secure Sockets Layer (SSL).[940] As was shown in the previous chapter, SSL is the most important security standard on the Web. Analysis of the SSL protocol, being a combination of fast symmetric key and the more secure asymmetric key encryption[941], will be restricted to the symmetric key encryption, which typically uses the session keys of 40-bit or 128-bit length these days.[942]

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[939] See e.g. Tovey, M. (2001).

[940] See e.g. Burnett, S. and Paine, S. (2001); Diffie, W. and Hellman, M. E. (November 1976); Freier, A. O., *et al.* (1996); Hudson, T. J. and Young, E. A. (24 September 1998); Joshi, B. D. J., *et al.* (2001); Koops, B.-J. (1999); Netscape Communications Corporation (1998); Schneier, B. (1996); Schneier, B. (1997); Tovey, M. (2001); Verisign; Verisign (2002); Wells Fargo (2002); Wells Fargo (2002); Wells Fargo (2002).

[941] See e.g. Netscape Communications Corporation (1998) and Glossary.

[942] It is possible to use other key lengths e.g. 56-bit or 168-bit, See e.g. Schneier, B. (1996); Schneier, B. (1997).

A. E-commerce development tools capability test

This test deals with the examination of the tools used to build websites. In this case, one would need to examine e-commerce development software capability of providing ciphering mechanisms. However, e-commerce production tools are not designed to handle the setup of client-server transaction encryption. Although some more advanced products like Microsoft Commerce 2002 Enterprise Edition provide some basic security features, they are related mainly to integrating web system login with Windows authentication.[943] Similarly, low-to-medium end e-commerce software does not posses capabilities that would enable an inference as to the automatic inclusion of the SSL protocol. In short, existing e-commerce rapid development tools do not cater for automatic inclusion of the SSL based data transmission in the client-server environment.

Instead, encryption is provided by the Web infrastructure. The most important elements of a secure web infrastructure are: the web server, the web browser and the possession of permission to use 128-bit technology by means of a server digital certificate or Global Server ID.[944] Both the web browser and the web server have to possess 128-bit encryption capabilities in order to create a strong encryption environment.

The browser that completely dominates the market nowadays is Microsoft Internet Explorer in several versions.[945] Microsoft Internet Explorer and other browsers have built-in support for SSL protocol in various versions.

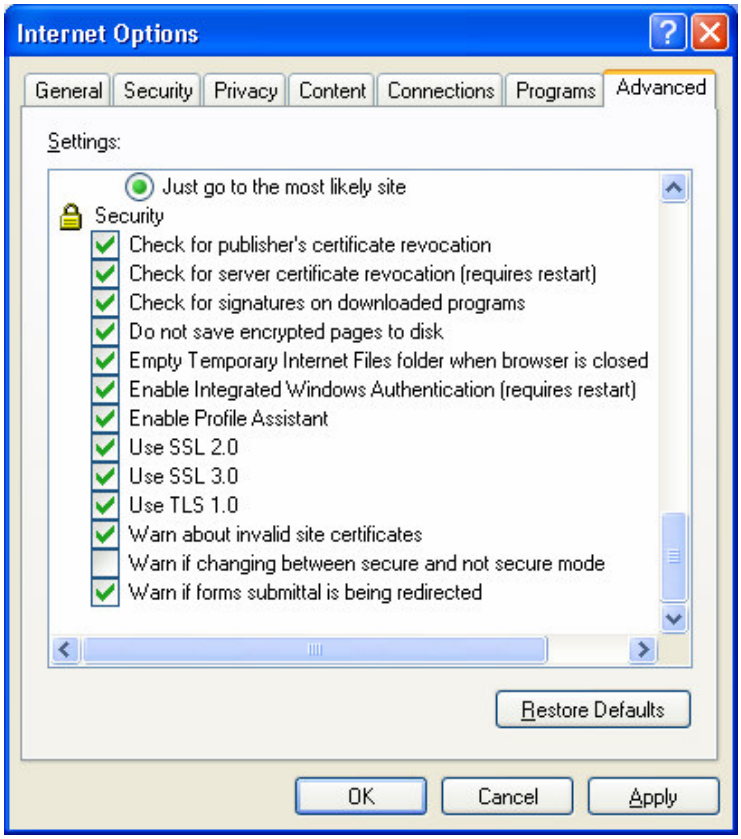

Figure 26. *Microsoft Internet Explorer 6.0 supports SSL 2.0, SSL 3.0 and TLS 1.0.*

[943] See Help file for Microsoft Commerce 2002 Enterprise Edition. See especially section: Securing Your Site.
[944] Netscape Communications Corporation (1998). See Glossary.
[945] See various Netcraft reports e.g. Netcraft (2002); Netcraft (2002); Netcraft (2002); Netcraft (2002); Netcraft (2002).

However, not all browsers enable strong encryption automatically. The recent version 6.0 includes automatic support for 128-bit encryption, but previous versions (still popular today) have not supported it, unless a High Encryption Pack was separately downloaded and installed.[946] This is an important finding, because it is likely that in such a case, it might be the client who will be held responsible for weak encryption of the transaction and in consequence, a legal challenge.

On the other hand, as Figure 14 above shows, the two most important web servers are Apache and Microsoft Internet Information Server (IIS), also in several versions.[947] These web servers have the ability to encrypt transactions using SSL. However, as Figure 27 shows, SSL has to be activated by the special purpose digital certificate.

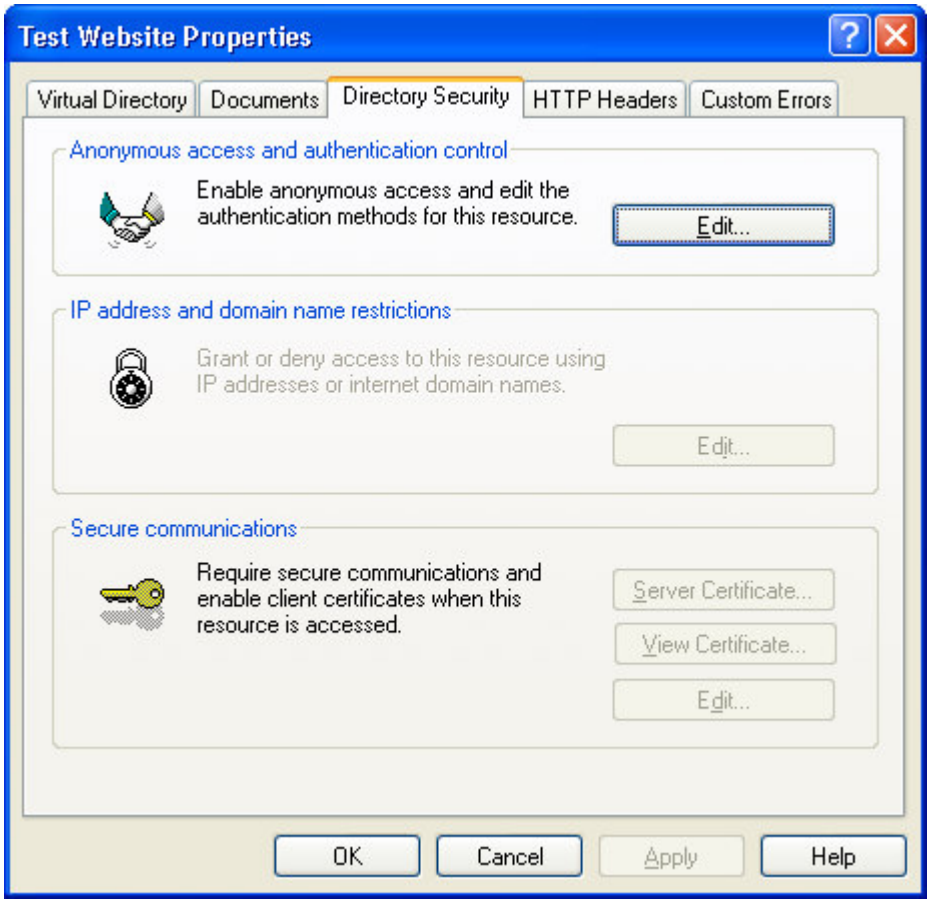

Figure 27. *IIS Web Server Directory Security dialog box. Note the secure communications section, which requires server certificate to enable SSL communication.*

The most popular one is Verisign's 128-bit Global Server ID, which, the company claims, is used by the "top 40 e-commerce sites, all of the 500 Fortune companies with a Web presence, and thousands of other leading sites."[948] Other players that only recently[949] emerged on the digital certificate market to compete with Verisign include: Geotrust[950], Comodo[951], Entrust[952] and

[946] See http://support.microsoft.com, last accessed: 28/04/2003, http://www.microsoft.com/windows/ie/downloads/recommended/128bit/default.asp, last accessed: 28/04/2003.
[947] See Figure 14 above and Netcraft reports e.g. Netcraft (2002).
[948] Verisign (2002) p.1.
[949] Netcraft (2002).
[950] http://www.geotrust.com/index_flash.htm, last visited: 3/11/2002.
[951] http://www.comodogroup.com, last visited: 3/11/2002.
[952] http://www.entrust.com/index.cfm, last visited: 3/11/2002.

Globalsign.[953] Some banks, however, have assured their customers that they provide strong encryption even when client's browser supports only 40-bit or 56-bit encryption, but this seems to be related to banking inter-server communication only. [954] In this respect, one should mention that a link between a merchant and a bank is usually secured using third-party payment gateways that act as a middleman between an e-commerce site and a bank that processes credit card transactions. [955] In principle, however, strong encryption on the web server side can be enabled only by having the 128-bit digital certificate which has to be acquired separately. For this reason, the level of encryption cannot be established by analysing the web server software functionality.

In summary, the e-commerce development tools test has not established that developers are "forced" to provide strong encryption of Web transactions as rapid e-commerce development tools cannot automatically embed strong encryption. However, this test has demonstrated that SSL is the most widely used secure protocol on the Web as it is embedded in the most popular web browsers and web servers. Nevertheless, SSL can use keys of various lengths thus providing different levels of security. As a result, the practice examination test will be performed next to establish whether banking servers actually enable 128-bit SSL encryption of online transactions.

B. Practice examination test

The aim of this test is to check what level of data encryption of Internet transactions online financial institutions actually support. In order to do this, one should establish a conceptual population of all online banks and select a random sample of online banking websites (random sampling) or create a sample based on non-random selection process (non-random sampling). Then, automatic or manual investigation of each site included in the sample should be performed. In this case, the random sampling methodology will be applied.

Automatic analysis

In order to perform the practice examination test in an automated fashion one has to build software that will enable this operation. Since it is outside the scope of this thesis, only a general overview of such a software design will be presented. The feasibility of such an endeavour can be illustrated by the Netcraft web software[956], which performs similar tasks.

The main object of investigation for the practice of provision of strong encryption should be the web server. It is this software that enables an online bank to provide its services over a secure or insecure channel. In other words, if one manages to establish that the majority of web servers run by online banks support 128-bit encryption then a claim that it is a customary obligation of the bank to provide strong encryption would be justified. It is important to stress, however, that the above statement does not mean that the majority of transactions will be performed using strong encryption because, as was discussed earlier, it is also dependant upon the client web browser's ability to support strong encryption.

The software to be useful should poll a number of selected banking web servers in the sample and examine underlying SSL protocol on port 443 for supported ciphers (port 443 is a default port for SSL). It should be relatively easy to make the software scalable in order to poll automatically new websites.

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[953] http://www.globalsign.com, last visited: 3/11/2002.
[954] Wells Fargo (2002) See also Wells Fargo (2002)
[955] See e.g. Authorize.Net (2003) p.4.
[956] See http://www.netcraft.com/sslwhats, last accessed 22/04/2003 discussed later

The aim of the software is to record encryption algorithms supported by the web server also known as the cipher suite. The exchange of basic information about supported security algorithms takes place in the so called handshake phase of the communication.[957] The software should establish communication with a web server and extract the information about algorithms supported by the web server. The information at this stage is unencrypted as parties have to agree on the cipher algorithms to be used before they can use them. SSL supports 31 various cipher suits, not all of them providing security in today's world.[958] In the classical working of the SSL protocol, the client sends a hello message to the server together with among other things, a list of supported ciphers in the order of importance.[959] Below is the typical list of supported ciphers:

- RC4 with MD5
- RC4 with MD5 (export version restricted to 40-bit key)
- RC2 with MD5
- RC2 with MD5 (export version restricted to 40-bit key)
- IDEA with MD5
- DES with MD5
- Triple DES with MD5

The server responds with the "Hello" message and among other parameters chooses the cipher suite to be used in the communication. This is the value of interest to our software. The most widely used are RC4 and RC2 symmetric key algorithms[960] which come in two versions: 40-bit (marked as export version) and the plain one indicating support for 128-bit transactions. IDEA also uses 128-bit long keys.[961] On the other hand, DES is an old standard supporting 56-bit communication which is also too weak taking into account state-of-the-art technology because 56-bit keys are vulnerable to exhaustive search.[962] Triple DES in turn, provides strong encryption and for this reason will be treated as an equivalent of 128-bit ciphers. If a company lists only 40-bit or 56-bit ciphers it means that it cannot provide a strongly encrypted communication channel and is vulnerable to the brute force attack.[963] If it lists 128-bit ciphers together with weaker ones, it means that it can, in principle, provide strong encryption, unless a client cannot support it – in this case it will use a weaker one.

In summary, construction of such software should not create major difficulties but the benefits of it would be enormous to the case. It could not only ascertain the customary practice of providing strong encryption but also provide historical data as far as changes in the supported ciphers are concerned. If the development of automatic scanning of web servers proved to be too difficult the same analysis could be performed using a manual approach.

Manual analysis

The aim of this test is to investigate manually a selected number of online banking websites in order to ascertain whether or not they support 128-bit encryption. The first important task is to define the sampling frame of online banks from which a sample should be drawn. In this case, the

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[957] See e.g. Freier, A. O., *et al.* (1996); Netscape Communications Corporation (1998) See also TLS specification (also known as SSL 3.1) which replaced current version of SSL 3.0 in Burnett, S. and Paine, S. (2001) pp.233-242; Dierks, T. and Allen, C. (January 1999).
[958] Burnett, S. and Paine, S. (2001) pp.240-241.
[959] Ibid. p.236.
[960] Ibid. See Glossary.
[961] See Glossary and Netcraft's Glossary.
[962] See e.g. http://www.rsasecurity.com/rsalabs/faq/3-2-2.html, last visited: 08/07/2003.
[963] See Burnett, S. and Paine, S. (2001) p.236.

sampling frame was built by joining two groups of online banking sites: one containing the largest banks with e-banking capabilities and one the other containing smaller ones. The first category was represented by the listing of largest banks in the list of 500 largest companies by revenue in Fortune 500 magazine. The 2002 edition lists the 62 largest banks in the world 2002.[964] To fill in a second category, Quazell[965] and Qualisteam[966] websites were visited. Both sites contain links to a large number of banking websites throughout the world, categorised by continent, country or some other criteria. Qualisteam contains links to 2819 banking websites, whereas Quazell claims that it has the largest collection of banking sites online. Websites from each major category were chosen on a random basis from each continent as well as major and minor countries. 5 online banks were added based on references to these banks on other websites.

Having established the sampling frame, the next issue was determination of the sample size. In this example a probability sampling technique was used. Taking into account that common practice should have 75% or more of adherence to it, 80% was chosen as an estimate of adherence to encryption practice in question among online banks (p). As far as accepted error (S.E.) is concerned, 5% error was selected. Applying it to the formula presented earlier, 64 sampling units would be necessary. Taking into account large banks – smaller banks stratification, 128 banks should be visited. In order to balance the potential problem arising from the fact that not all banks with the online presence will have online banking capabilities, the sample size was increased to 146 units.

66 selected banks based on Fortune 500 global banks listing				
Deutsche Bank	Credit Suisse	BNP Paribas	Bank of America Corp.	J.P. Morgan Chase
UBS	HSBC Holding PLC	Mizuho Holdings	Fortis	ABN AMRO Holding
HypoVereinsbank	Crédit Agricole	Royal Bank of Scotland	Santander Central Hispano Group	Sumitomo Mitsui Banking
HBOS	Barclays	Wells Fargo	Mitsubishi Tokyo Financial Group	DZ Bank
UFJ Holdings	Bank One Corp.	Société Générale	Banco Bilbao Vizcaya Argentaria	Commerzbank
Westdeutsche Landesbank	Lloyds TSB Group	Wachovia Corp.	Rabobank	IntesaBci
Industrial & Commercial Bank of China	FleetBoston	Dexia Group	Crédit Lyonnais	Almanij
Bank Of China	Abbey National	Washington Mutual	Landesbank Baden-Wurttemberg	Groupe Caisse d'Épargne
Royal Bank of Canada	National Australia Bank	U.S. Bancorp	Bayerische Landesbank	UniCredito Italiano
Banco Bradesco	Canadian Imperial Bank of Commerce	Bank of Nova Scotia	Toronto-Dominion Bank	China Construction Bank
Norinchukin Bank	Nordea	Banco Do Brasil	Bank of Montreal	Danske Bank Group
Fokus bank	Östgöta Enskilda Bank	Daiwa Bank Holdings	Agricultural Bank of China	Bankgesellschaft Berlin
Berliner Bank	Berliner Sparkasse	Norddeutsche Landesb.	Kreditanstalt für Wiederaufbau	Itaæsa-Investimentos Itaæ
MBNA				

Figure 28. *The 66 selected banks based on Fortune 500 global banks listing.*

[964] http://www.fortune.com/fortune/global500/industrysnapshot/0,15133,10,00.html, last accessed: 22/04/2003.
[965] http://www.quazell.com/bank/default.html, last accessed: 22/04/2003.
[966] http://www.qualisteam.com/Banks/index.html, last visited: 05/05/2003.

80 selected banks based on Qualisteam and Quazell listings				
WBK	Kredyt Bank	ING BankOnline Polska	Mbank	Inteligo
Yemen Commerial Bank	National Bank of Abu Dhabi	ABN Amro	Canara Bank	Allahabadbank
Dena Bank	UTI Bank	ING Vysya Bank	Corporation Bank	Baroda Bank
IBA	Bank of East Asia	Bank BNI	Bank Mandiri	Lippo Bank
OCBC Bank	United Overseas Bank	Union National Bank	Arab Bank	Groupe Saradar
Banque Audi	Fransa Bank	Korea First Bank	KorAm Bank	Cairo Amman Bank
Investec Bank	Hapoalim Bank	First Bank	Republic Bank	Banco de la Nacion Argentina
Banco Patagonia	Diamond Bank	First Bank of Nigeria	Continental Trust Bank Limited	Union Bank of Nigeria
Indo-Nigerian Merchant Bank	Magnum Bank	National Bank of Nigeria	NBM Bank	Egyptian American Bank
National Societe General Bank	MISR Exterior Bank	National Bank of Egypt	Banque Al Baraka d'Algérie	Banque Nationale d'Algerie
Banque extérieure d'Algérie	Union Bank	Banque Belgolaise	The Trust Bank	Biao
Akiba Bank	Kenya Commercial Bank Group	Standard Bank of South Africa	Griffon Bank	Banco Santos
Banco Real ABN Amro	Banco Itau	Interbank	Bank Leumi Le Israel	Bank Otsar Ha Hayal
First International Bank of Israel	Israel Discount Bank	Mercantile Discount Bank	Mizrahi Bank	The Maritime Bank of Israel
Union Bank of Israel	Emirates Bank Group	Middle East Bank	Bank of Ikeda	Chugoku Bank
Secure Trust Bank	Salem Five direct banking	Fleet	Hapo's Internet Teller	Virtual Bank

Figure 29. *The 80 selected banks based on Qualisteam and Quazell listings.*

The first category comprised 66 banks, the second 80 banks. The smaller number of banks in the second category was due to the fact that the Fortune list included only 62 banks all of which were investigated. However, online banking facility could not be found or accessed on some of them because they were either brick-and-mortar banks without online banking facilities, or represented a holding, or required digital certificate to be installed or for other reasons like language barriers or temporary inaccessibility of a web server. In the case of some banking holdings, sometimes banks belonging to this holding were identified and examined. In consequence, 4 additional banking sites were added to the Fortune 500 global banks list. In the category of major banks, out of 66 visited, 15 could not be used in the study. In the second category, which embraced the whole globe, 31 out of visited 80 banks had to be dropped for similar reasons as in the first category. In effect, out of 146 visited websites 100 of them possessed online banking capabilities that were further investigated.

The final sample of online banking sites selected from Fortune 500 magazine				
Deutsche Bank	Credit Suisse	BNP Paribas	Bank of America Corp.	J.P. Morgan Chase
UBS	HSBC Holding PLC	ABN AMRO Holding	HypoVereinsbank	Royal Bank of Scotland
Santander Central Hispano Group	HBOS	Barclays	Wells Fargo	Bank One Corp.
Société Générale	Banco Bilbao Vizcaya Argentaria	Commerzbank	Westdeutsche Landesbank	Lloyds TSB Group
Wachovia Corp.	Rabobank	IntesaBci	Industrial & Commercial Bank of China	FleetBoston
Dexia Group	Crédit Lyonnais	Bank Of China	Abbey National	Washington Mutual
Landesbank Baden-Wurttemberg	Groupe Caisse d'Épargne	Royal Bank of Canada	National Australia Bank	U.S. Bancorp
Bayerische Landesbank	UniCredito Italiano	Banco Bradesco	Canadian Imperial Bank of Commerce	Bank of Nova Scotia
Toronto-Dominion Bank	China Construction Bank	Nordea	Banco Do Brasil	Bank of Montreal
Fokus bank	Östgöta Enskilda Bank	Berliner Bank	Berliner Sparkasse	Norddeutsche Landesb.
MBNA				

Figure 30. *The final sample of 51 online banking sites selected from Fortune 500 magazine.*

The final sample of online banking sites banks selected from Qualisteam and Quazell listings				
WBK	Kredyt Bank	ING BankOnline Polska	Mbank	Inteligo
National Bank of Abu Dhabi	Allahabadbank	UTI Bank	ING Vysya Bank	Corporation Bank
IBA	Bank of East Asia	Bank Mandiri	Lippo Bank	OCBC Bank
United Overseas Bank	Union National Bank	Arab Bank	Groupe Saradar	Banque Audi
Investec Bank	Hapoalim Bank	Banco de la Nacion Argentina	Banco Patagonia	First Bank of Nigeria
Banque Belgolaise	Standard Bank of South Africa	Griffon Bank	Banco Santos	Banco Real ABN Amro
Banco Itau	Interbank	Bank Leumi Le Israel	Bank Otsar Ha Hayal	First International Bank of Israel
Israel Discount Bank	Mercantile Discount Bank	Mizrahi Bank	The Maritime Bank of Israel	Union Bank of Israel
Emirates Bank Group	Middle East Bank	Bank of Ikeda	Chugoku Bank	Secure Trust Bank
SalemFive direct banking	Fleet	Hapo's Internet Teller	Virtual Bank	

Figure 31. *The final sample of 49 online banking sites banks based on Qualisteam and Quazell listings.*

To reflect geographical, technological and cultural diversity of the globe the sample included banks from Western and Eastern Europe, Northern and Southern America, Asia, Middle East and Australia. The first group included online banks from the following 16 countries: Australia, Belgium, Brazil, Canada, China, England, France, Germany, Italy, Netherlands, Norway, Spain, Sweden, Switzerland and USA. The second group included online banks from the following 18 countries: Abu Dabi, Argentina, Belgium, Brazil, China/Hong Kong, Dominica, India, Indonesia, Israel, Japan, Jordan, Lebanon, Nigeria, Peru, Poland, Singapore, South Africa and United Arab Emirates. In this category 7 cyber banks were included. To reflect diversity in the financial power

of the banks, the 51 banks selected from the Fortune magazine list could be regarded as representing the most powerful online banks on the globe. The less powerful banks were randomly selected from the references in the websites cited above.

From the technical perspective, the analysis was performed using Internet Explorer v. 6.0 or earlier versions with enabled 128-bit client-side encryption on Windows XP Home Edition, Windows 2000 Professional Edition and Windows 98 operating systems. The support for strong encryption was also tested using Netcraft Query SSL engine.[967] Online banking was tested using both business and home banking websites because it was assumed that the bank will apply the same security policy towards business and non-business transactions.

As far as the investigation method is concerned, the websites were investigated by manually accessing online home or business banking links in order to invoke secure login screens. In this type of unobtrusive, manual analysis, the strength of the session key was established based on information contained in the tool-tip above the padlock icon in the web browser. In order to invoke it, one should find a website where a user can enter login and password details. Usually then web system designers activate transaction encryption. If such an icon does not appear by that time, the investigator will have to enter a fake login and password in order to trigger encryption of the transaction.

Figure 32. *The padlock icon in the Internet Explorer symbolising encryption of the communication.*

The following five screen shots show the diversity of online banking login screens all secured using 128-bit encryption:

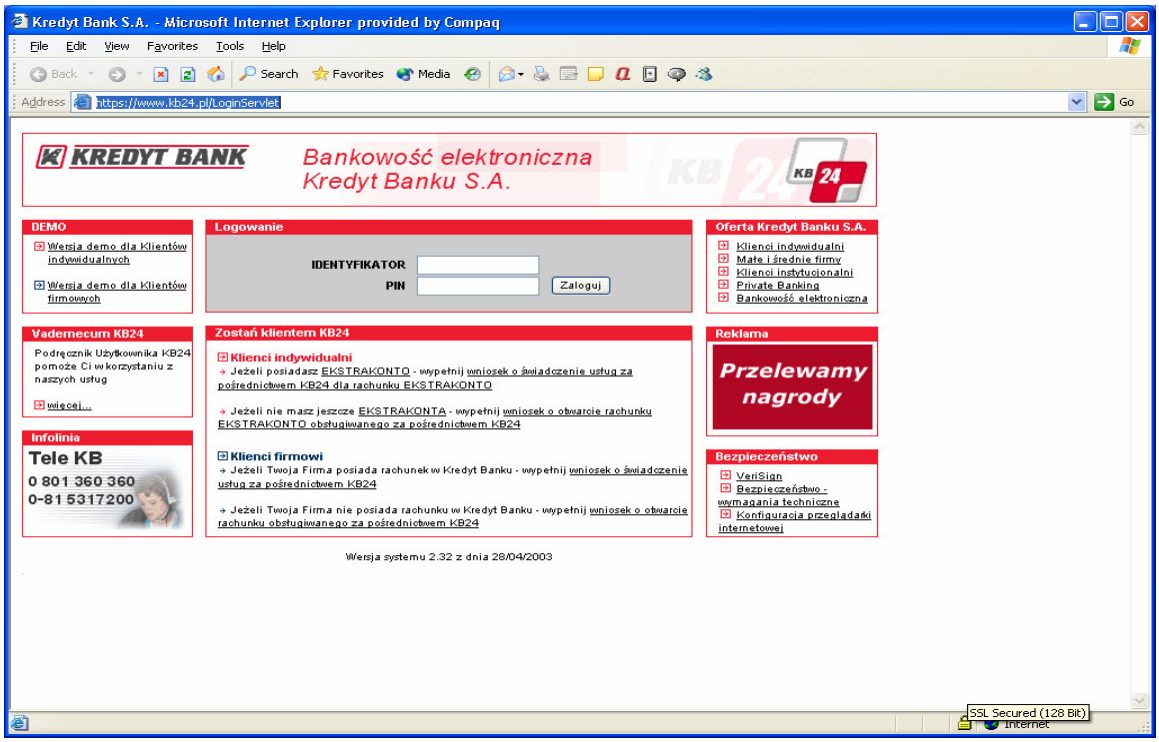

Figure 33. *Kredyt Bank. 128-bit encrypted SSL session.*

[967] See http://www.netcraft.com/sslwhats, last accessed: 05/05/2003.

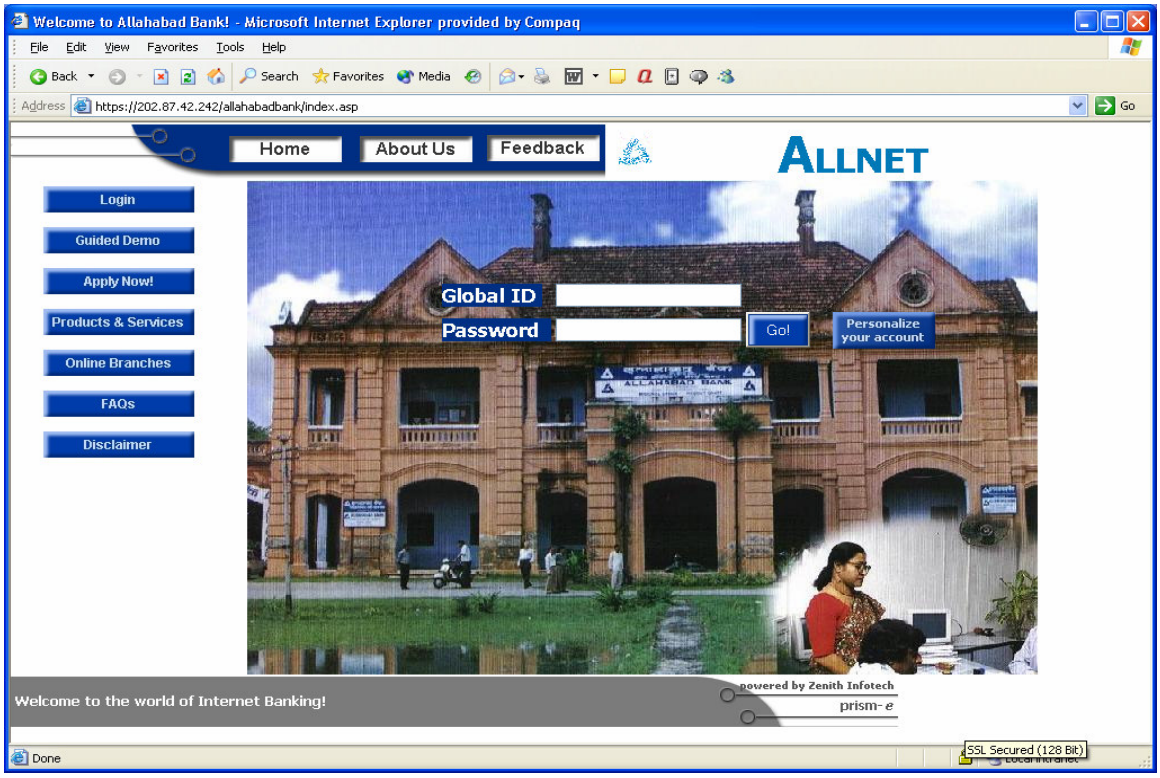

Figure 34. *128-bit encryption supported by Indian Allahabadbank.*

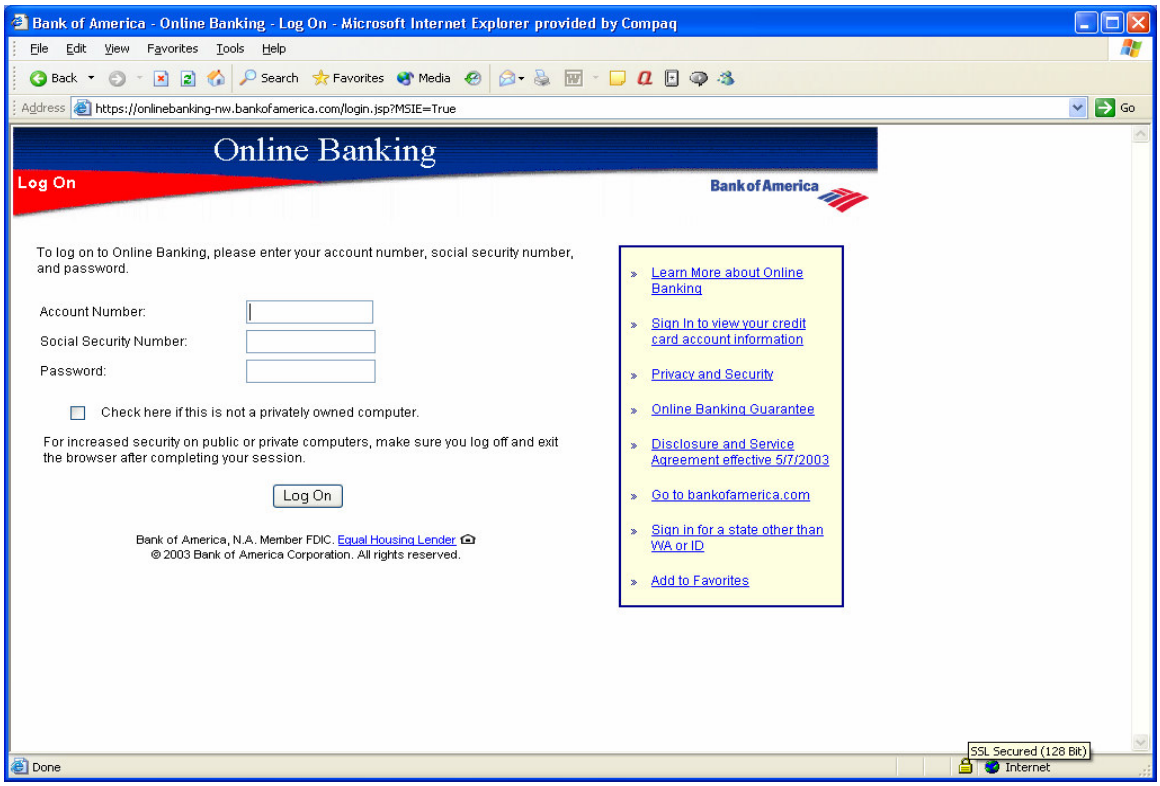

Figure 35. *Bank of America 128-bit transaction security padlock.*

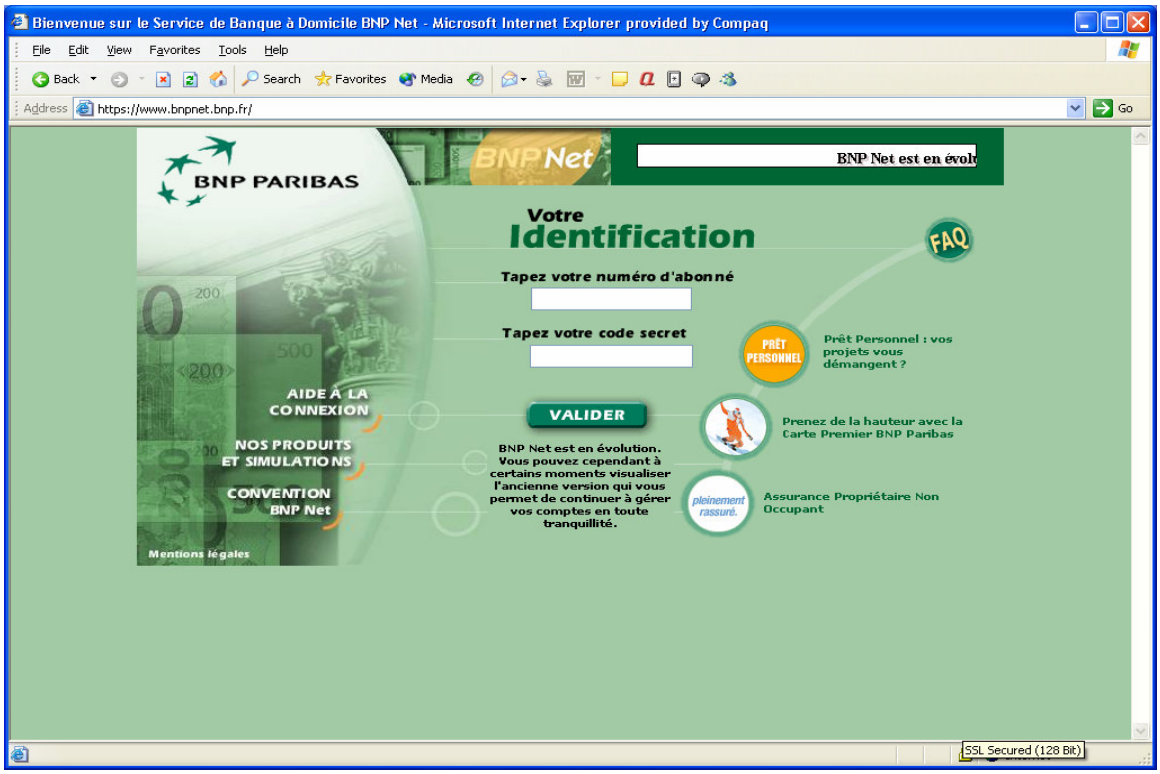

Figure 36. *French BNP Paribas also uses 128-bit encryption.*

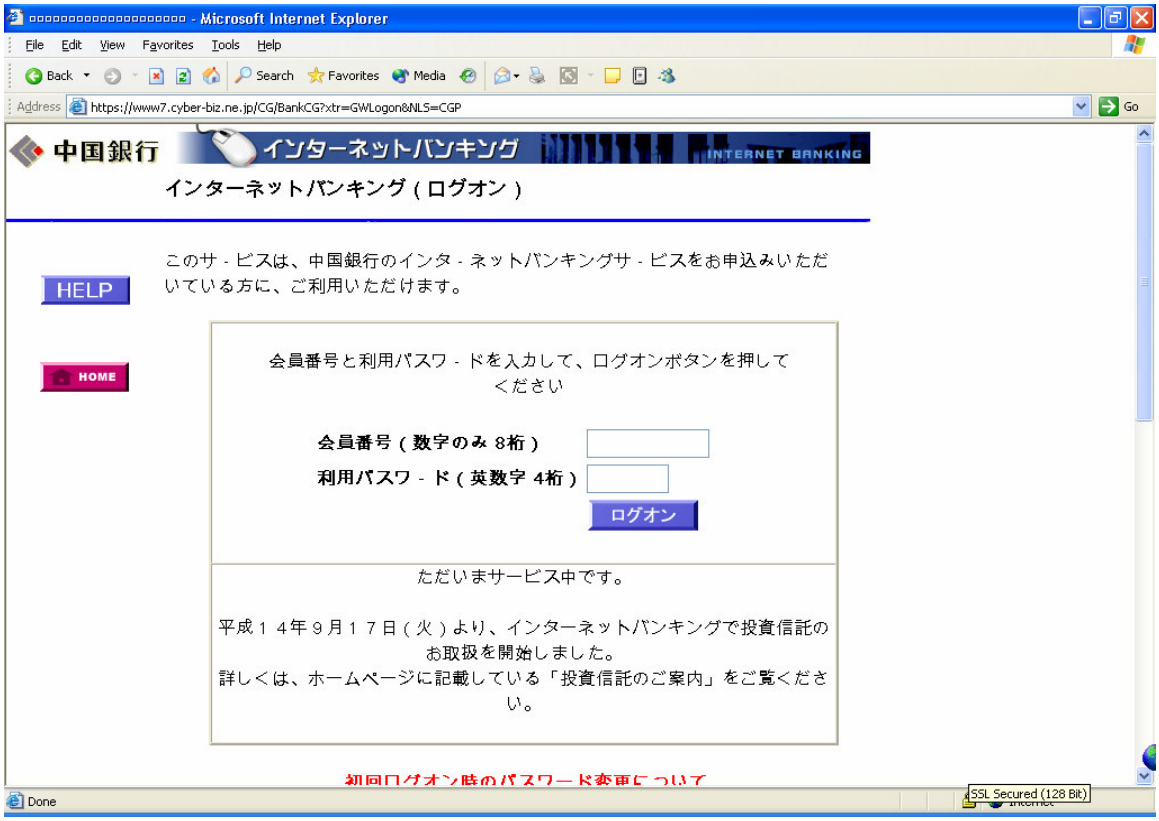

Figure 37. *Japanese Chugoku bank supports strong 128-bit encryption.*

The approach of relying on the information contained in the tool-tip, however, had one disadvantage. Information gathered in this manner was not always reliable when e.g. a secured website was divided using invisible frames, each with different levels of security. In such a case, the tooltip did not appear as only a portion of the document was secure and the padlock appears only when the whole visible screen is secure.[968] In order to mitigate this problem the properties of the web document containing login boxes were invoked in order to test for supported protocol.

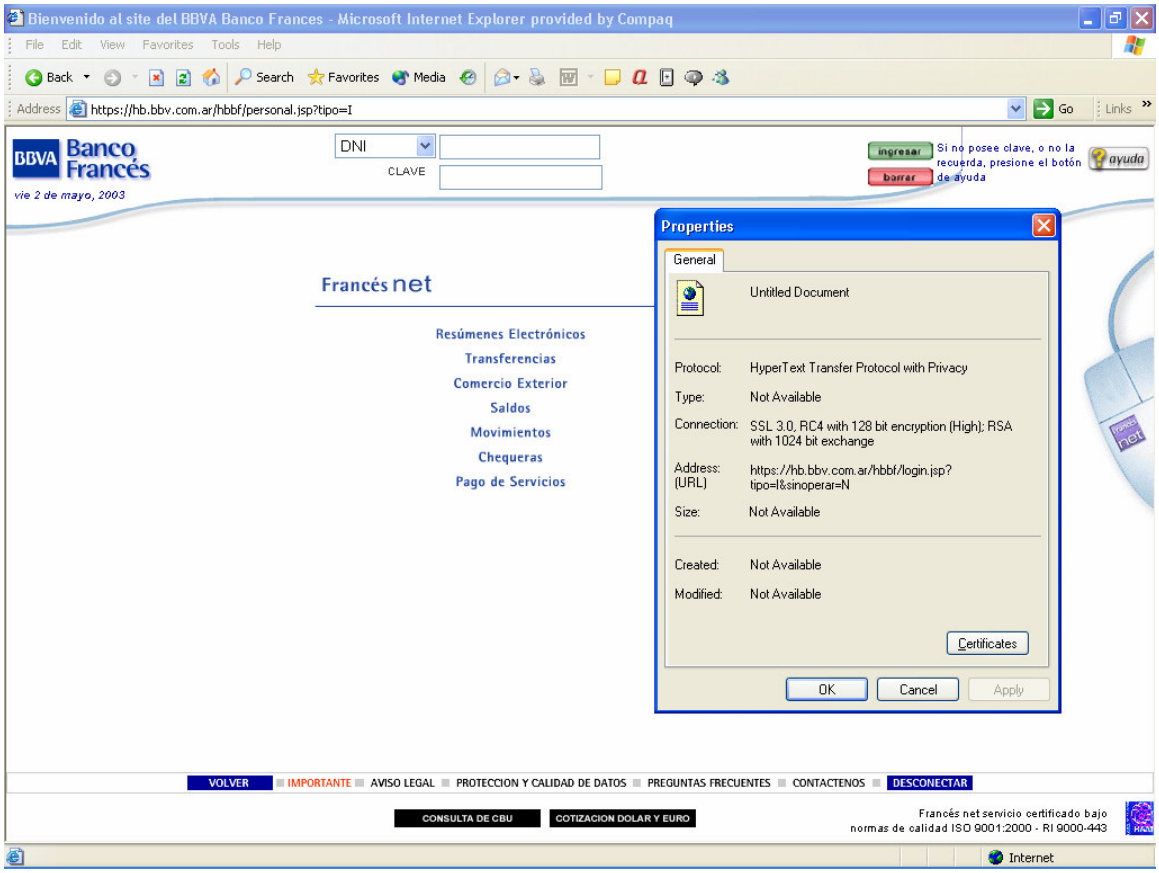

Figure 38. *Banco Bilbao Vizcaya Argentaria (Argentina Branch) site supported 128-bit encryption although the tooltip over padlock is not visible. However, as the site property page indicates in the Connection part, this site is secured using SSL 3.0 RC4 algorithm with 128-bit encryption.*

However, in some online banking systems, web administrators disabled access to property pages. To overcome this problem, the Netcraft SSL web server analyser was employed. This software offers a reliable test of web server capabilities in regard to supported strength of encryption. In particular, the results of the query engine contain information about cipher suits supported by the web server. If a given site supported RC4 and RC2 ciphers in the non-restricted versions as well as Triple DES and IDEA ciphers, then it was assumed that this site supported 128-bit encryption.

[968] See SECPay.

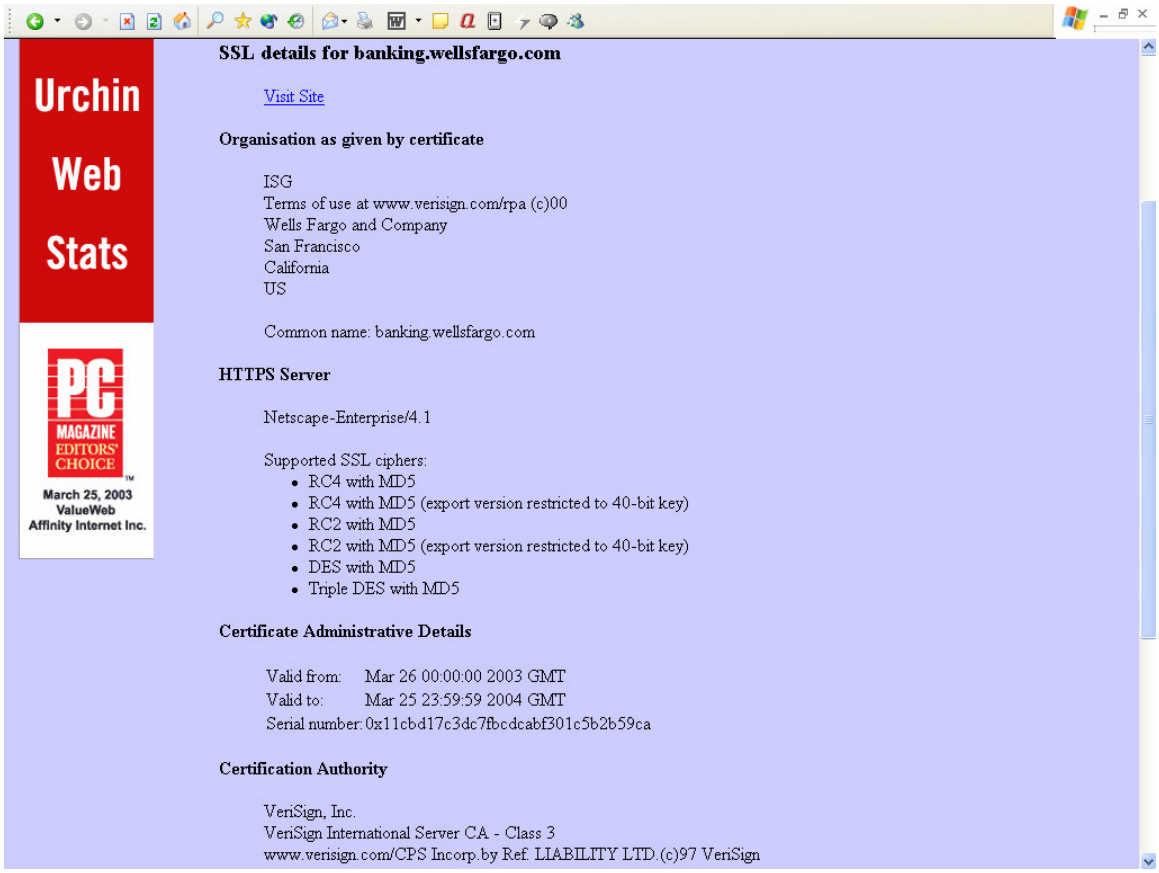

Figure 39. *The result of query of Wells Fargo Bank web server using Netcraft software.*

As a result, based on the analysis of the sample of 100 online banks using both manual the unobtrusive tool-tip check as well as the semi-automatic Netcraft software test, it was established that all supported 128-bit encryption. Having such uniform results in a representative sample of online banking sites one can conclude that the support for strong encryption is universal in the electronic banking community and could legitimately be expected of all the Internet participants. In consequence, one can firmly state that the customary norm stating: "All Internet banks should support strong encryption of transactions" has emerged.

C. Literature review test

It is natural to search for support for widespread adoption of strong cryptography in technical rather than legal literature.[969] Technical literature clearly indicates the widespread adoption of SSL protocol developed in 1994 by Netscape. As Burnett and Paine noted:

> "SSL is by far the most widely distributed security protocol when it comes to e-commerce. One reason for SSL's widespread use is that it is incorporated in every copy of Netscape and Internet Explorer available today. SSL is also found within the operating system of various platforms."[970]

However, these comments remain silent about the strength of SSL encryption keys in use nowadays.

[969] The legal work that came close to this topic was work by Koops that surveyed various cryptography related laws. See especially Chapter 5 of his book. Koops, B.-J. (1999). For updated information see Koops, B.-J. (October 2002); van der Hoff, S. (5 July 2002).
[970] Burnett, S. and Paine, S. (2001) p.242.

Schneier suggested in 1996 that the choice of a key length is dependant upon the situation. He suggested answering three questions:

> "How much is your data worth? How long does it need to be secure? What are your adversaries' resources?"[971]

Taking into account that banking and financial services are in possession of data worth billions of dollars that need to remain secure for a long time and adversaries' resources remain unknown it is not surprising that it is expected that these institutions will provide the highest security possible. Although Schneier suggested relative usage of key lengths, the longest symmetric key discussed was the 128-bit long key.[972]

On the other hand, surveys conducted by Netcraft provide very useful information about current trends in the utilisation of strong encryption in general. In the March 2002 Survey already cited Netcraft found that:

> "Internet-wide, around 18% of SSL Servers use potentially vulnerable key lengths. However, these tend to be concentrated in geographical areas outside the United States and its close trading partners. In the US, where over 60% of SSL sites are situated, and Canada only around 15% of sites are using short keys. In most European countries over 25% are still using short keys, and in France, which had laws restricting the use of cryptography until relatively recently, over 40% of sites are using short keys."[973]

This survey clearly shows that from the global perspective in March 2002 82% of web servers worldwide were supporting 128-bit encryption or higher.

In the April 2002 survey Netcraft stated:

> "Looking at data collected since the SSL survey first started in 1996 serves to illustrate the progress being made in eliminating servers that do not support strong encryption. Not only has the percentage of servers internet-wide offering exclusively weak ciphers fallen from around 40% in December 1997, to below 6% in the April 2002 survey, but also in absolute numbers from 25,000 a year ago, to 9,595 now."[974]

The figure below also provides very clear indication of the development of a customary norm in question over time. Similar graphs could be of enormous value to adjudicators resolving Internet related disputes.

[971] Schneier, B. (1996) pp.165-167.
[972] Ibid.
[973] Netcraft (2002).
[974] Netcraft (2002).

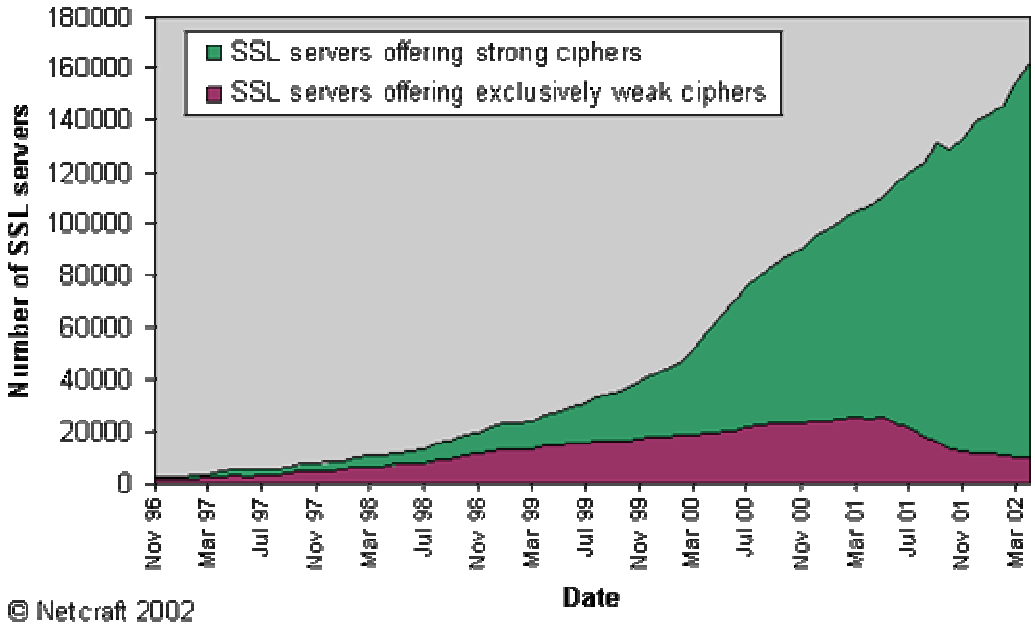

Figure 40. *SSL Servers over time. Source: Netcraft April 2002 Web Survey.*

From this graph one can infer that probably the same or higher percentage of web servers used a high level of encryption in the banking environment as it is logical to expect a higher level of awareness in the financial industry. It is important to realise, however, that these figures may vary locally and one can expect higher percentage of non-use of strong encryption in e.g. France or Taiwan.[975]

Nevertheless, the data provided by Netcraft clearly proves a very widespread adherence to strong encryption practice both in space and time. The space aspect is clearly indicated by the fact that around 150,000 web servers offer strong ciphers. The time aspect is clearly indicated by the fact that in April 2002 94 percent level of web servers provided support for strong encryption. Furthermore, the curve clearly indicates a consistent adherence to a given practice over the last 5 years. A strong growth tendency exhibited by the curve further reinforces the argument about very widespread character of this practice.

In summary, although the literature does not speak about security of online banking transactions, it is clear that strong encryption is potentially enabled by the majority of web servers on the Net. Taking into account the specific nature of the financial industry, one can expect the adherence to a given practice by all the online banks thus reinforcing earlier findings.

D. Case summary

The first empirical test based on the analysis of the sample of the web design products turned out to be of little help in the context of establishing encryption of online banking transactions because such capabilities are usually not provided by such software. However, this test has confirmed that SSL is the most widely used Web encryption technology as it is implemented by all major web servers and web browsers. But, SSL can use encryption keys of various lengths and for this reason, a practice examination test had to be carried out. The second empirical test established that a practice of securing transaction using 128-bit keys is customary in the online banking industry based on the analysis of 100 online banks randomly selected from around the world.

[975] Netcraft (2002). Also see Chapter 5.

Also, a very promising automatic method of polling web servers and analysis of the underlying Secure Sockets Layer handshake protocol using software similar to that of Netcraft was described. Finally, the literature test also confirmed that the practice of providing secure connection using 128-bit encryption is common nowadays in the security industry. In summary, it can be concluded that the existence of the following customary norm has been proven: "All Internet banks should support strong encryption of transactions." This norm could then be used to solve the dispute outlined in the hypothetical case study in favour of the purchaser.

In future, it would be interesting to see how the practice of supporting 128-bit encryption by online banks will change over time, given the new developments in the IT industry. Having more resources available larger sample sizes could be used as the Internet offers the potential for tracking encryption practice of all the online banks. Moreover, similar studies could be performed in other industries including the whole financial industry, insurance industry, medical industry as it is expected that such practices are also very common there. It would be especially interesting to see if such customary practices apply to the retail and wholesale Internet industries. Such studies would also give better insight into which countries still lag behind in the adoption of the Internet. This research has shown that e-banking is not widely available yet as Africa and Asia in general lag behind the Internet developments and online banking is slowly being implemented there, thus reinforcing the argument about existence of the digital divide.

The same approach could be taken to analyse the customary practice of securing transmission of the session key using the asymmetric key encryption (both public and private keys are typically of 1024-bits long).[976] Furthermore, similar analysis could prove that not only banking transactions but also all web-based transactions are secured using 128-bit encryption. In addition, it would be interesting to learn if the custom of actually enforcing the use of 128-bit encryption by banks or online businesses has emerged, leading to the denial of service if the client's web browser did not support a strong encryption. This practice is especially important, given the popularity of "weak" web browsers. In a similar vein, it would be interesting to see if there is a custom of requiring client-side certificates in order to transact online.

6.8 Summary

The concept of customary practices is not currently used in solving legal disputes in either the offline or online world. The main reason for this is that it is very difficult to establish custom. This part of the thesis discussed potential methods that could be employed in ascertaining customary practices on the Internet. These methods could be used to examine web content, traffic, and infrastructure. They could also be used to survey human participants and examine software tools.

This chapter proposed a methodology for evidencing such practices taking into account unique features of the Internet, especially its potential for automation of data gathering. Three-step methodology was proposed. The first step is to research software that is used to build websites as very often certain capabilities of websites are automatically included by such software. Establishment of this capability among a representative sample of web design software could prove that such functionality is a common practice in the Internet commerce. The second step is to investigate manually or automatically a representative sample of websites to test the capability of a given site. Automatic test is especially useful when it comes to the examination of the underlying protocol messages. This, however, does not apply to the analysis of HTML language because of its unstructured nature. In all other cases, manual analysis of website content will be

[976] Schneier suggested for 128-bit private key, equivalent of 2304-bits for the public key. The criterion for this suggestion was similar resistance to brute force attacks. See Schneier, B. (1996) pp.165-166.

necessary. Very valuable information can be found in server logs, but outside access to it is not possible. The final step of the methodology is related to the analysis of legal and technical literature dealing with a given practice. Legal literature may already contain some commentaries on interpretation of a given practice in statutory or case law. Technical literature may provide better insights as far as industry adoption of a given practice or technical functioning of a given piece of software is concerned. However, the literature test should only be used to confirm the results of the empirical tests, and should never be used as the only means of proving the existence of the customary norm in question.

In order to prove alleged e-customs the above methodology was applied using both probability and non-probability sampling techniques. Non-probability sampling was used to evidence transaction confirmation practice. Convenience sampling was applied both to e-commerce development tools test as well as the practice examination test. The choice of a very small sample size was dictated by the fact that first test has already established a wide range of potential e-commerce sites that would use order confirmation. For this reason, only a very small, conveniently selected sample of actual sites employing this practice was deployed. On the other hand, the transaction confirmation development tools test could not be used to establish the existence of such practice. For this reason, the probability sampling technique was used to select a larger sample of online banking sites. In both cases, the samples were stratified to reflect diversity of the population as much as possible.

The results of the tests clearly indicated the existence of two customary norms in global electronic commerce. The first one states that: “All web-based transactions should be electronically confirmed immediately after the placement of an order.” The second one states that: “All Internet banks should support strong encryption of transactions.” In the course of the analysis, other potential customary norms were identified, including the norm requiring the online seller to summarise the transaction prior to the acceptance of an order and the norm requiring the use of 1024-bits public and private keys in the exchange of the session key in the SSL protocol. More elaborate proof of the above norms, as well as others not mentioned in this work, will be presented elsewhere.

It is important to stress that various new methods for proving customary practices need to be developed. The application of the above framework will be dependant upon the practice in question. In time, unobtrusive research of practices may prove to be insufficient to establish custom. It may be necessary to actually visit companies that create websites in order to obtain more valuable information. Similarly, traditional surveys may have to be used to obtain data about the feelings of users and developers in regard to the practice in question. This, however, needs to be further researched and remains outside the scope of this study.

Conclusion

The topic of this dissertation might at first seem self-contradictory. To connect the largely forgotten phenomenon of custom with modern Internet technology has to bring some disorientation. One evokes tradition, conservative values, inflexibility and slowness. The other evokes innovation, an enormous pace of change and disregard for old ways of thinking. The two ideas just do not seem to hold together. But this is only a first impression.

The Internet has brought a revolution. But this revolution, which enables instantaneous, transnational presence and communication, has been the child of humanity. And humans are social creatures, Aristotelian "political animals" living and acting in accordance with a prevailing trend. The "life" of the Internet is therefore no different. It is subject to norms arising out of dominant practices, and standards of behaviour which dictate what is good and expected, or bad and unwelcome. But the fact that the Internet is deprived of a central authority, global written laws, traditional enforcing mechanisms and a way of identifying its users does not necessarily make it a lawless phenomenon. It only makes a phenomenon more difficult to govern. This, in turn, does not mean that disputes arising on the Net cannot be solved according to some principles, developed by a community in accordance with the nature of the Internet. To learn these principles one has to study how the Internet community actually does behave.

To enable a just adjudication of an Internet related dispute, the notion of custom as a source of law has been presented. Custom is the oldest source of law, known to all legal orders across space and time. It still continues to govern our relationships unconsciously despite the apparent codification of law in written instruments. This is the most important reason why it still should be respected as a source of general binding law. Its nature teaches us this.

Although custom has been marginalised by written law in modern western domestic legal systems, it remains a very important source of legal norms in numerous indigenous legal cultures, non-western traditions and supranational legal orders. In particular, ancient and medieval merchants developed their own transnational and flexible customary Law Merchant, independent of formalistic laws of the land and applicable only to mercantile disputes. The notion of international customary law of merchants has been revived in the modern doctrine of *lex mercatoria*. The emergence of the Internet commerce and customs of online merchants was argued to constitute a venue for the development of a new *lex mercatoria* – the Internet Law Merchant.

Custom is also a fundamental source of international law and it is there where it was most deeply analysed. The doctrine of international custom provides the best starting point to discuss what transnational custom as a source of law really is. However, the approach of international lawyers is not flawless. The widely accepted theory of international custom requires not only a general practice but also its acceptance as law. The last requirement, as was shown, creates logical contradictions that are impossible to resolve. On the other hand, the International Court of Justice has often referred to it, but has never successfully proven it.

Custom has a very important role to play in adjudicating Internet disputes, given the lack of supranationally binding written laws. Internet customary practices evolve in a borderless space that spans the whole world enabling rapid communication. They are created unconsciously by the community itself and enforced by software, which mechanically imposes certain practices. Internet norms can develop very quickly, even within a couple of hours because of widespread and fast access to instant download facilities. Their growth can be subjected to research that can be performed manually or automatically by software agents.

In consequence, a new theory of Internet commerce custom was proposed. It eliminated theoretical deficiencies of international custom by rejecting the need for a psychological element in its definition. Custom should be understood as a widespread practice of doing something. It was argued that any custom can become a legal one, if it can help to solve a dispute at hand. It was also argued that custom no longer needs to be ancient or immemorial.

To overcome the practical limitations of the notion of custom as a source of law, so clearly visible in international law, the new methodology for evidencing has been offered. The proposed framework is a major achievement as lawyers have not been interested in the development of a coherent empirical framework for evidencing customary practices. As the case law of the International Court of Justice clearly shows, they would rather declare or infer the existence of a given customary norm from an amount of practice that does not permit any generalisation.

The new methodology takes into account the peculiar features of the Internet, in particular, its digital character, where the role of a human is equal to that of a machine, its global nature and decentralised, uncontrollable character. Having a practical application in mind, the methodology provides new ways of establishing customs using software components and human experts. A three-test framework has been proposed, based on examination of production tools used to build the digital environment, the products of these tools and opinions of legal and technical experts on the practice in question.

As was shown in the hypothetical case studies, the new methodology can be used to prove successfully the existence of the different Internet customary practices. In particular, the analysis of software packages used to build websites together with the analysis of a sample of commercial websites has clearly shown the existence of widespread practice of immediate order confirmation via the Web and email. Similarly, the analysis of one hundred randomly chosen online banking websites has clearly established the custom of supporting strong encryption on banking web servers. The norms arising out of these facts were used to solve the hypothetical case studies, which could not be adjudicated on the basis of generally binding international law or a contract agreement between the parties. Thus, custom was used to provide norms in the absence of globally as well as between parties binding law.

In summary, custom does offer a solution to international electronic disputes. Internet custom can provide a source of supranational electronic commerce norms on which an adjudicator could settle a dispute. Similarly to how merchants traded in the past, by being subject to differing customs of various fairs and marketplaces, modern Internet merchants have to comply with what is generally done on the Web. Internet custom, as in the ancient times, can create new laws, abolish existing written laws and be the best interpreter of written law. This thesis has demonstrated that there is a “bridge” that links customs of various cultures, across different epochs, with those observed on the Internet.

Having both the theory as well as a methodology with which to apply it in practice, this study makes a call to undertake a broader research into the customary practices on the Internet. It is to be hoped that this exploration will open a new area of research. Its thorough investigation is vital for the development of a solid legal framework for global Internet commerce and for the further development of the Internet. The task of researching this field rests not only on the legal community accustomed to written sources of law, but also on the role of the Information Systems community. The latter community should be able to understand more deeply the need for practical solutions to Internet problems. It should also be much better equipped with the knowledge necessary to conduct research using manual and automatic methods of discovering practices. Finally, it should be prepared to recognise the importance of common practices in avoiding costly litigation and achieving a solid, predictable Internet environment.

Contributions

The dissertation makes several important contributions to both information systems and legal science.

In regard to the information systems discipline, this study discusses the potential of widely known and accepted Internet community practices as a new way of overcoming the legal uncertainty of the Internet environment. In addition, this study provides a methodology that could be used to uncover electronic commerce customs. This study has also demonstrated the potential impact of a lack of awareness and observance of established Internet community practices on potential business disputes that may arise. An ignorance of widely followed e-commerce customs may lead to potentially substantial financial losses.

In regard to legal science, this study provides the first treatment of international Internet law from the customary law perspective. The concept of custom as a source of law, although known in legal studies, has not previously been discussed in the context of electronic commerce. Also, this work contributes extensively to the established theory of international custom as known in international law by pointing to the weaknesses of the existing customary law theory and practice and proposes solutions appropriate to the electronic commerce environment.

In addition, this dissertation offers a methodology for establishing customary practices based on a social science foundation that could be used by information systems researchers as well as legal experts or judges. The research promotes the notion that the establishment of a practice should be automated via the use of software agents whenever it is possible. In addition, the study discusses a set of customary norms that have already been developed on the Internet and provides a detailed explanation of how those regularities were established.

The dissertation made the following major contributions to the knowledge:

1) The first in-depth proposal to use the concept of custom as a source of Internet Law Merchant to solve e-commerce disputes. No other existing work has presented a solution to the problem of lack of regulatory norms on the Internet using the concept of custom. The existing proposals focus on either the harmonisation of Internet law based on adoption of similar legal statutes or self-regulation, leaving the legal norms to be specified by the parties involved in a transaction. None of these proposals however, provide a general and supranational framework for Internet law with custom as a central source of law, akin to ancient *ius gentium* and medieval Law Merchant. Despite problems associated with proving custom, the idea of repetitive practice as a potential source of legal obligations provides a new dimension to regulation of the Internet, due to the peculiar features of this phenomenon.

2) The first proposal of the theory of electronic commerce custom as a source of Internet commerce law based on the notion of international custom tailored to the needs of the Internet commerce. The role of custom in ancient and modern Law Merchant has been analysed by jurisprudence, but the study of the characteristics of this phenomenon has not been nearly as deep as in international law doctrine. However, the notion of international custom could not be directly applied to the Internet because of the specific characteristics of the Internet and the theoretical and practical issues associated with this concept. To overcome these problems the theory of e-custom was proposed that allows better explanation of and utilisation of emerging common practices on the Internet. The viability of the concept was tested in the hypothetical case studies.

3) The first proposal of a methodology for evidencing customary practices on the Web. One of the most difficult issues associated with the notion of custom as a source of law is its proof. To overcome this problem, new methods of proving customary practices were presented that involved novel automatic and manual data collection methods. Furthermore, the model of

evidencing customary practices was developed that consisted of three tests of widespread character of Internet practice. The validity of the proposed methodology was tested against the hypothetical case studies.

4) The first identification of two customary practices on the Internet: order confirmation and security of transactions. The dissertation proved the widespread character of the instant order confirmation practice via web screen and / or email by means of analysis of website generation software tests and the actual adherence tests. In addition, an important practice of enabling strong encryption on banking web servers was evidenced by means of a survey of one hundred online banking websites. The thesis has also identified several other potential customary practices.

5) The opening of a new research field. To fully utilise the power of the idea of electronic commerce custom new customary practices should be identified, evidenced and constantly monitored. The outcome of such a research should give the international community a rich set of norms that could be used in adjudicating Internet related disputes. In addition, the set of customary practices could be used as a material for drafting better international and domestic Internet laws.

Limitations of the study and future directions

This study also has some limitations that should be the focus of future research. Of particular importance to the success of custom as a source of supranational Internet law is the identification and exploration of new Internet and electronic commerce customs. These should be sought out on a global level as well as in local settings. Similarly to what Middle Ages transcribers of local customs did in relation to their local laws, so should the researcher of Internet practices repeat in relation to the online world. New customs should be identified, evidenced and knowledge about them should be disseminated to the Internet community. The system of electronic commerce law certainly needs more well evidenced examples of customary norms before their impact can become more visible. Similarly, the Internet community must be given more examples of potential impacts of conformance and ignorance of common practices before the knowledge of them becomes obligatory.

Furthermore, the discussion of the Internet commerce custom was limited to positive actions only. Future work should take into account the difficult matter of abstentions from action as they might amount to important freedoms or prohibitions of certain acts in the Internet environment. In particular, one might have to investigate the feasibility of employing the rejected concept of *opinio iuris* in this context.

Since the scope of this work was limited to electronic commerce, future study should enlarge the scope to non-commercial customs of the Internet. Certainly, most of the findings of this study would directly apply to non-commercial life. Furthermore, it was limited mainly to business-to-business and business-to-consumer e-commerce although, as was stated in the very beginning, this classification does not always hold on the Internet. For this reason, the implications of Internet custom for consumer protection should be further studied. Also, mobile Internet practices were not embraced by this study because of the technological gap between “traditional” desktop and portable computers and mobile devices. However, as this gap shrinks, more and more customary practices will find common application. This field certainly requires more attention.

What also needs further study is the relation of custom as a source of Internet commerce law (Internet Law Merchant) to other norm-creating phenomena like agreements, treaties, and general principles of law or morality. Better knowledge of the interrelationships between these sources would certainly ease the job of an adjudicator of Internet disputes and introduce much greater predictability of Internet law. In addition, one of the most interesting areas would be the study of

a formation of customary norms from the psychological, sociological and cultural perspective to enrich our understanding of commonalities in our daily life.

Finally, this study will be used in the development of a more general theory of law based on the central role of custom as a source of dispute regulatory norms, interpretational norms and meaning norms (customary theory of law). It is sufficient to mention here that custom can not only be viewed as a source of unwritten law but also as a source of norms that control the written sources of law like statutes, treaties, cases or agreements. Custom controls the meaning of words and expressions and adapts them to our changing social environment. Written word, without meaning ascribed by custom would be nothing more than a heliograph. Similarly, the norms of interpretation of texts are norms of customary character, without which an inference of a meaning of passages of words in relation to one another would not be possible. This theory will be presented elsewhere.

Knowledge of Internet customs or any customs will enable a sound administration of justice. The role of a judge is to settle a dispute wisely. But can one be considered as an astute adjudicator if he one does not know the reality and common practices of people? Justice must be based both on sound normative principles as well as detailed knowledge of the area in which a dispute arises. If the last element is missing, it will still be possible to deliver a just verdict. But chances of such a result are much smaller.

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Glossary of legal and technical terms

Alternative Dispute Resolution (ADR) – a way of settling disputes outside the court system. The most important form of ADR is Arbitration.

Arbitration – an informal way of resolving legal disputes. A party to a dispute usually chooses one arbitrator and both of them choose a third arbitrator. Arbitrators are not bound by specific rules of a particular legal system, unless an agreement states to the contrary. Arbitrators can also devise their own procedure of settling a dispute, which usually is less formal than one applied by national courts. National courts usually uphold arbitration awards.

Arbitrator – a person that adjudicates disputes. Arbitrators are chosen by the parties and do not (necessarily have) a legal background.

Artificial agent – or intelligent agent - a software program that possesses a degree of autonomy and can communicate with other agents. Artificial agents can have goals, which they can realise without explicit control of a user. Unlike normal software programs that perform a set of operations in given circumstances (reactive behaviour), some artificial agents can learn and modify their behaviour accordingly (proactive behaviour).

Brute force attack – a way of breaking a secret code by trying all the possible combinations.

Caching – a technology that allows storing a copy of a website in a browser's memory or other computer's memory to speed up the process of retrieving a website. Once a website is cached, a browser will not need to request a website from a web server, but will fetch it directly from the cache memory, thus reducing network traffic and improving performance of a system.

Cascading Style Sheets (CCS) – a language of the Web that is concerned with presentation of a web page, which enriches HTML. It allows setting different fonts, colours, borders etc.

Certificate – a digital ID, equivalent to offline identification documents such as a passport or a driver licence. It is granted by the Certification Authority after presenting the required number of documents. It contains the Certificate Authority's name, the Subject's name, the Public Key of the subject and some time stamps. The certificate is signed with the Certificate's Authority private key. The certificate is valid for a certain period of time and has to be renewed. Certificates can be issued to different subjects including persons, businesses or servers. See also Certificate Authority, Public Key, Private Key, Public Key Encryption, SSL.

Certificate Authority – an organisation, usually a respected public institution such as a bank or post office that issues digital certificates. Certificate Authorities are linked in a hierarchy, in which Certificate Authorities below are certified by authorities above in the chain. Such a structure allows recognition of certificates issued by other Certificate Authorities. See Certificate, SSL.

Cipher – an encryption algorithm e.g. RC2, RC4, IDEA, DES, Triple DES. See Symmetric Encryption, Asymmetric Encryption, Public Key Encryption, SSL, RC2, RC4, IDEA, DES, Triple DES.

Client-Server technology – a technology based on an exchange of messages between two computers in which one plays the role of a client requesting the services from a server, which provides them. Servers usually provide services to many clients. On the Web, the server software is called a Web server and the client software is called a Web browser. A web browser requests a web page from a web server that stores it.

Computer Aided Logistics Support (CALS) – an early form of collaborative electronic commerce adopted by the heavy manufacturing and defence industries. CALS enabled joint design, production and product maintenance. The WWW enabled a new level of collaborative e-commerce sometimes referred to as collaborative commerce (c-commerce).

Cookie – a small text file that keeps information about user's activity between HTTP sessions. Since HTTP is a stateless protocol, meaning that it does not keep any information between sessions, cookies were developed to store some necessary temporary information e.g. login information, financial data, user's profile etc, without the need to enter them every time.

Cryptography – the study of secret (or coded) communication. See Encryption.

Cybersquatting – reserving well known domain names in order to resell them.

Cyberstalking - threatening victims using Internet technology.

Denial of Service (DoS) attack – an attack based on overloading the web server with requests for web pages. The attack is more dangerous in its mutated form called Distributed Denial of Service (DDoS) attack, where the requests come from a number of different computers on the Web. This type of attack will usually block access to a given website but is often used to enable hacking into the overloaded system. See Web Server, WWW.

DES - an acronym for the Data Encryption Standard. DES is a symmetric cipher developed by IBM and adopted as a federal standard in 1975 in the U.S. It uses 56-bit key to encrypt blocks of data, which is considered insecure. See Cipher, Symmetric Encryption, Encryption, SSL.

Desuetude – literally means disuse. It is a mechanism of abolishing certain provisions of statutes and other sources of written law through a long disuse.

Digital Signature – see Electronic Signature

DNS (Domain Name System) – a global database of domain names maintained by domain name servers located throughout the Internet. This database is maintained at several locations called Regional Internet Registrars (RIR). ICANN coordinates the Domain Name System policing. DNS is important because a web browser before requesting a given web document has to find a numeric address of a computer on which this document is stored and for this reason, it first contacts domain name servers. See Domain Name, HTTP, Web browser, Web Server, WWW.

Domain name – a reader-friendly address of an electronic document. A domain name has a unique numeric equivalent, which is stored in the Domain Name System database. There are two types of top-level domains, global and country code top level domains, plus a special top-level domain (.arpa) for the Internet infrastructure. The root of system is unnamed. Top level domain names (TLDs) consist of global TLDs (gTLDs) (EDU, COM, NET, ORG, GOV, MIL, and INT), and two letter country codes (ccTLDs) based on the ISO-3166 standard. Global top level domains (gTLDs) were created for use by the Internet public, while country code domains (ccTLDs) were created to be used by individual countries as they deemed necessary. An example of a gTLD domain name is Amazon.com and ccTLD domain name is theage.com.au. See Domain Name System.

Dynamic IP address allocation – a service performed by a network server which allocates IP addresses for each session or dynamically. IP addresses can also be allocated statically and then each computer on a network will have only one possible IP address.

EDI (Electronic Data Interchange) - the electronic transfer from computer to computer of business documents using an agreed standard to structure the information. EDI was an early (pre-Internet) form of electronic commerce between businesses.

Electronic Signature – a secure way of signing documents that utilises Public Key Encryption. A sender signs a hash of the document with a public key. See Public Key Encryption, Public Key, Private Key, Hash.

E-mail – an electronic mail.

Encryption – a process of scrambling or ciphering data in order to make it unreadable.

E-procurement - a complex of sourcing, ordering, category management, design and logistics collaboration with suppliers enabled by the Internet.

E-tailer – an online vendor.

Extranet – a corporate inter-organisational network using the Internet which is inaccessible to general Internet users.

File Transfer Protocol (FTP) – one of the most important services enabled by the Internet which allows transferring files between computers connected to the Internet.

File sharing systems – Internet-based computer networks that enable sharing files, especially music and video files. In such systems, each user gives access to part of his or her hard drive, where files to be shared are stored, to the public. In such systems there is no central control over exchanges of files e.g. Kazaa, Audio Galaxy etc.

Form – a type of a website where a user can type in information e.g. financial information are entered on a payment form that is usually composed of several text boxes.

Global Server ID – a server digital certificate that enables 128-bit or 40-bit SSL encryption of transactions. See also digital certificate.

Hacker – originally this term meant a very good computer programmer or specialist. These days it is usually associated with person who breaks into a computer over the Internet or any network.

Handshake protocol – a first phase of the SSL protocol that aims to establish a secure communication channel between an SSL-enabled web browser and an SSL-enabled web server.

Hash – a number derived from the characters contained in a document. Any change in a document would change the hash number and for this reason, hashing is used as a document integrity check. See also Electronic Signature.

Historical School – in law, a doctrine developed by F. Savigny. According to this school, legal norms including customary norms are only the evidence of the spirit of the nation.

Hosting – a service offered by Internet Service Providers (ISPs) that enables storage of a website on a web server for a fee. This service takes the burden of a web author associated with purchasing a computer and dedicated connection to the Internet as well as installation and configuration of web server.

HTML (HyperText Markup Language) – an unstructured language used to build websites.

HTTP (HyperText Transfer Protocol) – a language used by web browsers and web servers to communicate between each other.

HTTPS – A version of the HTTP protocol secured by Secure Sockets Layer (SSL) protocol. See SSL.

Intellectual Property (IP) law – a branch of a national law that provides protection of products of intellect. In general, IP law protects an expression of an idea rather than an idea itself. IP law protection includes copyright, trademark, patents and trade secrets.

International Court of Justice (I.C.J.) – an international court set up in 1945 to settle disputes between states. I.C.J. sits in Hague, Netherlands.

Internet Service Provider (ISP) – a company that allows public to connect to the Internet.

Intranet – a private network of computers that uses Internet protocols to enable sharing information within a company.

IDEA - Symmetric cipher developed in 1991 that uses 128-bit keys to encrypt blocks of data. See Encryption, Symmetric Encryption, SSL, RC2, RC4.

IP (Internet Protocol) – See TCP/IP

IP address – a unique 32-bit address of any computer on the Internet.

Ius cogens – in Latin means mandatory law. According to Article 53 of Vienna Convention on the Law of Treaties "a peremptory norm of general international law is a norm accepted and recognized by the international community of States as a whole as a norm from which no derogation is permitted and which can be modified only by a subsequent norm of general international law having the same character."

Log – a file that contain information about a given activity of a computer – e.g. information about access to a given computer over time.

Metatags – non-visible parts of a website that contain information such as expiration time.

Newsgroups – a popular service on the Internet that allows users to publish information to users in a given group. USENET is a collection of newsgroups.

Opinio iuris – *opinio juris* or *opinio juris sive necessitatis* – a belief in the legally permissible or obligatory nature of the conduct in question, or of its necessity. The term was introduced by F. Geny in 1899 in French law and subsequently adopted by international law theorists.

Open Source Initiative – an initiative of the Internet community that stresses the importance of freely available source code of software in order to enable open discussion and improvement of it. The most prominent examples of open source programs are the Apache web server, the Perl language, and recently the Netscape web browser.

Operating system – software that enables functioning of any computer. Without an operating system a computer would not be able to perform its most basic functions such as running programs or copying information. Windows 98 or Linux are examples of operating systems.

Packet – a small sub part of the electronic message the user wants to send. See Packet-switching network.

Packet-switching network – a network of computers whose task is to disassemble a message at one end into a number of equal size packets each including addresses of an addressor and an addressee; send these packets across potentially different routes if some of these routes were busy or destroyed, resending missing packets as necessary; and then assemble the packets back into the original message at the destination node. See packet.

Pacta sunt servanda – In law, a Latin phrase meaning agreements should be honoured.

Pactum tacitum – In law, a Latin phrase meaning a silent agreement.

Permanent Court of International Justice (P.C.I.J.) – a middle-war predecessor of the International Court of Justice.

Persistent objector – a doctrine peculiar to international law, which asserts that if a state has persistently objected a given customary practice, it would not be bound by it.

Platform for Privacy Preferences Project (P3P) – a standard developed by the World Wide Web Consortium that helps setting the privacy levels on the browser.

Platform for Internet Content Selection (PICS) – a standard developed by the World Wide Web Consortium (W3C) that helps rating the content of web pages.

Plug-in – a software program that performs a special job such as playing video files or music that is attached to a web browser e.g. Flash plug-in, Shockwave plug-in etc.

Population – all the elements in a group that are the subjects of research.

Positivism – in law, a very influential doctrine that equates law with norms promulgated by a sovereign. Legal positivists are in opposition to the thesis that law should be moral to be binding.

Private key – a key that is mathematically related to a public key. It should be kept secret. A message encrypted with a private key can only be decrypted with a corresponding public key. This ensures authentication and non-repudiation of a document as only the possessor of a private key could sign it.

Proxy server – a computer that "represents" a computer network to the outside world. It checks whether a given person will be allowed to enter the private network.

Public key – a publicly available key that is mathematically linked to the private key in Public Key Encryption (PKE). Knowledge of a public key does not allow inferring a private key. Only the possessor of the related private key can read a message encrypted with a public key, thus ensuring confidentiality.

Public Key Encryption (PKE) - also known as Asymmetric Key Encryption (AKE), is an encryption technique that uses a pair of asymmetric keys for encryption and decryption. Each pair of keys consists of a public key and a private key. Data encrypted with a public key can only be decrypted with a corresponding private key and vice versa. In other words, different or asymmetrical keys are used to encrypt and decrypt information. See public key, private key, encryption, SSL.

Rapid development tools – software packages used to quickly develop software applications e.g. certain types of websites, financial software etc.

RC4 – a widely used symmetric cipher that encrypts a stream of data using 128-bit key. RC2 was developed by RSA Data Security. See Cipher, IDEA, Symmetric Encryption, Encryption, SSL.

RC2 - a widely used symmetric cipher that encrypts blocks of data using 128-bit key. RC2 was developed by RSA Data Security. See Cipher, IDEA, Symmetric Encryption, Encryption, SSL.

Sample – the subgroup of a population to which a survey is administered

Sampling frame – a listing or a method of obtaining a close approximation of all the elements in the population e.g. a telephone directory.

Session key – a key used by a web browser and a web server to encrypt data in SSL protocol. Typically, it comes in two lengths: 40 bit key and 128-bit key. Data encrypted using a 40-bit key is relatively easy to break by a brute force attack, whereas data encrypted using a 128-bit key guarantees immunity against a brute force attack. A session key is used only within one session between a web browser and a web server. It is discarded after the session ends. Since the same key is used by both a web browser and a web server the crucial thing is to securely agree on a given key. The session key is transmitted between a web browser and a web server in a Handshake phase of SSL protocol using Public Key Encryption.

Shopping carts – a widely used technology in web based commerce to facilitate purchasing of goods over the Internet. It is the software equivalent of the shopping process in offline

supermarkets where the goods first have to be put in a basket, then taken to a cash register, paid for and confirmed by a receipt. Different stages in an online purchase are indicated on a shopping cart graphic display.

Spamming – sending unsolicited e-mails.

SSL (Secure Sockets Layer) – a protocol developed by Netscape to provide security over the Internet. SSL is an open, non-proprietary protocol that provides data encryption, server authentication, message integrity, and optional client authentication. It is primarily used to secure web based financial and credit card transactions between a web browser and a web server in conjunction with the HTTP protocol (HTTP/S), although it can be used with other protocols such as Telnet or FTP. When SSL is used the URL begins with https:// and a padlock on the status bar of the web browser indicates the strength of the encryption. Its latest version is SSL 3.0, which became the basis for the proposed TLS (Transport Layer Security) standard. SSL requires both a SSL enabled web browser and SSL enabled web server to establish a secure channel. A web server must have a valid digital certificate. A web browser does not have to have a digital certificate. SSL uses PKE to secure transmission of a session key that is used throughout a given web session to encrypt transactions. After the session ends, the session key is discarded.

Symmetric Encryption – in symmetric encryption the same key is used for encryption and decryption of transactions. See Session Key, Encryption, SSL.

Asymmetric Encryption – in asymmetric encryption two different but related keys are used for encryption and decryption. See Public Key Encryption, Public Key, Private Key, SSL.

SWIFT – an international proprietary network of computers used to settle international banking transactions.

TCP/IP – Transmission Control Protocol / Internet Protocol – a language of the Internet that allows different computer networks to be interconnected. Internet Protocol (IP) allows computers located in different networks to communicate with each other based on a 32-bit IP address. Transmission Control Protocol (TCP) ensures that data transmitted between these computers will not be altered and will arrive in sequence.

TLS (Transport Layer Security) – a security transaction protocol based on SSL 3.0 proposed by IETF (Internet Engineering Task Force). See SSL.

Triple DES – a block cipher that encrypts data three times using DES cipher and at least two different keys. In SSL, three separate keys are used, and the middle step is a decryption. It is considered much safer than DES. See DES, Encryption, Block Cipher, SSL.

Trojan horse – software program that installs itself on a client machine and then sends any important information over the network to the hacker's computer.

UNCITRAL (United Nations Commission on International Trade Law) - established by the United Nations General Assembly in 1966 with the mandate to further progressive harmonisation and unification of the law of international trade. UNCITRAL performs its work in 6 Working Groups that work on the following legal matters: privately-financed infrastructure projects, international arbitration and conciliation, transport law, electronic commerce, insolvency law and security interests.

United Nations – The most important international organisation established in 1945 on an international conference at San Francisco. The UN replaced the between-wars predecessor the League of Nations. As of July 2003 there are 191 countries that are part of the United Nations. The principal organs of the United Nations are: a General Assembly, a Security Council, an Economic and Social Council, a Trusteeship Council, an International Court of Justice, and a Secretariat.

URL (Uniform Resource Locater) – the most widely used form of URI (Uniform Resource Identifier) to address websites. An example of a URL is http://www.amazon.com. See Domain Name, DNS.

Web browser – a program that is used to browse web pages. A web browser requests a web page from a web server. A request is sent whenever a user clicks a hyperlink or enters a URL. Modern web browsers also give access to e-mails, newsgroups, files using FTP, streaming audio and video and instant messaging. The most popular web browsers are Microsoft Internet Explorer and Netscape Communicator in different versions.

Web server – a computer program running on a computer on the Internet that stores a website identified by a URL. A given web server may host only one web site or may host hundreds of websites identified by hundreds different URLs. A web server sends a copy of a web page in response to a request from a web browser. A web page can be sent as a plain text or as an encrypted page. Popular web servers include the Apache web server and the Microsoft Internet Information Server (IIS) in different versions.

Wizard – in software, a quick way of obtaining results by following a number of steps. Wizards are used in popular software such as Windows to e.g. connect a user to the Internet. They are also used in development software such as Visual Basic 6.0 to e.g. connect to a database without actually programming this functionality. The advantage of using wizards is time-saving.

World Wide Web – a web of pages connected by hyperlinks, written in the HTML language, identified by URLs and accessed using HTTP or HTTP/S protocol. It is the most important service over the Internet, which accounts for 75% of Internet traffic. It is also the fundament of Internet commerce.

Virus – a small program that self-replicates causing damage ranging from displaying annoying messages to the deletion of all information on a computer.

Voluntarists – or consensualists, the doctrine of international law that assumes that all law originates from states' will the will of states. In consequence, a state might be bound by a legal rule only if it has agreed to it, either expressly or implicitly.

XML (eXtensible Markup Language) – a new generation language for the Web that allows structuring of the content of documents. It enables separation of content from presentation and deals only with the structuring the content of a website. A very important standard used by many online businesses to exchange data in standardised form among themselves.