Papua New Guinea

CONSTITUTIONAL & LAW REFORM COMMISSION

Review of Proof of Business and Electronic Records

ISSUES PAPER

You are invited to provide a submission or comment on this Issues Paper

ISSUES PAPER 4
June 2009

Terms of Reference

CLRC Reference No 4: Proof of Business & Electronic Records.

I, Bire Kimisopa, Minister for Justice, by virtue of the power conferred on me by Section 12 of the *Constitutional and Law Reform Commission Act* 2004 (the Act) refer and direct as follows.

(1) I refer to the Constitutional and Law Reform Commission (the Commission) for enquiry and report on their systematic development and reform, in accordance with s. 12 of the Act whether and how the laws of evidence can or should be modified to permit the proof of:

(a) business records; and

(b) electronic records and electronic communications (email); and

(c) to the extent necessary to achieve the reforms proposed in relation to (a) and (b), whether and how any relevant associated laws and practices should also be modified.

(2) I direct that in undertaking the investigation and report, the Commission shall:

(a) consider any relevant research or developments, whether in this or other jurisdictions on the matter for inquiry; and

(b) consult widely within the community, particularly the business community, and the legal profession, and also within the Government, particularly the courts, the Ombudsman Commission and the Department of Justice and Attorney General.

(3) The Commission shall report to me within 8 months of the date of publication of this reference in the Government Gazette.

(4) This reference shall be referred to as: *CLRC Reference No 4: Proof of Business* & *Electronic Records.*

Dated this ***2nd*** day of ***November*** 2006**.**

Hon Bire Kimisopa, MP
Minister for Justice

Making a submission

The CLRC is seeking any form of submission from a broad cross-section of the community, as well as those with a special interest in the inquiry.

Submissions are usually written, but there is no set format and they need not be formal documents. Where possible, submissions in electronic format are preferred.

It would be helpful if comments addressed specific proposals or numbered paragraphs in this Issues Paper.

Open inquiry policy

In the interests of informed public debate, the CLRC is committed to open access to information. As submissions provide important evidence to each inquiry, the CLRC may draw upon the contents of submission and quote from them or refer to them in publications.

Submissions should be sent to:

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The closing date for submissions in response to IP 4 is Friday, 28th August, 2009

Participants

The Commissioners of the Constitutional and Law Reform Commission (CLRC) are:

- Hon. Joe Mek Teine MP — Chairman
- Mr. Gerhard Linge, — Deputy Chairman
- Prof. Betty Lovai
- Mr. Tom Anayabere
- Hon. Malakai Tabar MP
- Hon. Puri Ruing MP
- Professor John Luluaki

The Commissioners appointed Hon. Joe Mek Teine LLB MP to supervise this reference. The CLRC then established a Working Committee comprising representatives from key organizations to guide and supervise the work in this reference on Business and Electronic Records. The Working Committee thus comprises:

- Mr. Vergil Narakobi, Law Society Nominee - Narakobi Lawyers - Chairman
- Mr. Molean Kilepak Executive Branch, Department of Justice & Attorney General
- Mr. Alex Tongayu Deputy Registrar of Companies, IPA & Securities Commission of PNG
- Ms. Amanda Nambau Lawyer, Posman Kua Aisi Lawyers
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1. Introduction to the Inquiry

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1.1 The Constitutional and Law Reform Commission

The Constitutional and Law Reform Commission (CLRC) is an amalgam of the former Constitutional Development Commission (CDC) and the Law Reform Commission (LRC). It came into being on March, 4, 2005. It is established under the *Constitutional and Law Reform Commission Act* 2004. As stipulated under Section 12 of its enabling legislation, the CLRC:

- receives reference from the Minister for Justice to conduct its review and propose legislative change where appropriate concerning laws other than constitutional laws; or
- receives reference from the Head of State acting on advice from the executive government to conduct its enquiry and review into any parts of the Constitution and the Organic Laws and then propose appropriate constitutional law reform where and when considered appropriate.

1.2 Objectives of this Reference: CLRC Reference No. 4: Proof of Business & Electronic Records.

The primary objective of this Reference is to inquire into and review the laws of evidence so as to assess and determine:

- whether and how the laws of evidence can or should be modified to permit the proof of business records; in the form of electronic records and electronic communications (email); and
- if the laws of evidence are to be modified, what should be done and how best should that be achieved;

- if the laws of evidence are to be amended, propose and recommend appropriate legislative amendments to relevant legislation or even the new provisions or if not, propose and recommend the enactment of new legislation; and
- to the extent necessary to achieve the reforms proposed above, whether and how any relevant associated laws and practices should also be modified or amended.

1.3 Purpose and Scope of this Reference

The purpose and scope of this Reference is as stated in the Reference itself – being to review and propose how best the laws of evidence can or should be modified to allow for the proof of:

- business records;
- electronic records and electronic communications (email);
- and to give effect to any of the above, propose and recommend further reforms to related or associated laws.

In particular, the scope of this reference is to:

- review the relevant provisions of the *Evidence Act* Chapter 48 and related legislation and to allow for the proof of business records, electronically generated communication including emails; and
- identify any gaps, if any, in our current laws and to recommend appropriate reform measures to fill in those gaps particularly relating to the proof of electronic records and electronic communications (email).

It may be a much longer bow to draw to attempt to include in this Reference the crimes committed on the internet (cybercrime) such as tampering with another person's computer and obtaining information from it; interfering with another's computer data or computer system; trafficking in illegal computer devices; various fraudulent activities on the internet;[1] etc. It is our view that since these are crimes, such should be dealt with separately by

[1] Such was done in the *Computer Crimes Act* 2003 of the Kingdom of Tonga discussed in Blythe S. "South Pacific Computer Law: Promoting E-Commerce in Vanuatu and Fighting Cyber-Crime in Tonga" (2006) 10(1) *Journal of South Pacific Law* http://www.paclii.org/journals FJAPL/vol 10/2.shtml viewed on 8 September 2008

a review of the relevant parts of the *Criminal Code* or such other crimes legislation. We should not be attempting to venture into this area of the law in this Reference as such is clearly outside the scope of this Reference.

1.4 Consultations

For purposes of achieving the above objectives, the CLRC has been directed to consult widely within the community, particularly the business community, and the legal profession, and also within the Government, particularly the courts, the Ombudsman Commission and the Department of Justice and Attorney General. Outside of the country, we have been directed to consider any relevant research or developments of comparative value to this inquiry.

For purposes of identifying the issues and producing this Issues Paper, the CLRC has conducted initial consultations within the National Capital District with relevant stakeholders. Those consulted are Global Internet Ltd, Masalai Communications, Interpol, National Intelligence Organization, Post PNG Ltd, Port Moresby General Hospital, Steamships Ltd, City Pharmacy Ltd (CPL), Bank South Pacific, UPNG Law School, National Research Institute, National Statistics Office, National Executive Council and Westpac Bank.

After the release of this Issues Paper, we will then engage in a much broader consultation with other major stakeholders. The CLRC will consider all matters arising in response to this Issues Paper and produce and release a Draft Report for further discussion. The CLRC will then invite further comments and submissions based on the proposals made in the Draft Report earlier and will then proceed to issue its final report on the CLRC Reference No. 4.

Our timetable for the conduct of this review is as follows:

Deliverables	Deadlines
Release of Issues Paper	Friday, 26th June, 2009
Release of Draft Report	Friday, 2nd October, 2009
Presentation of Report to Minister	Friday, 18th December, 2009

1.5 Purposes of this Issues Paper

The primary purpose of this Issues Paper is to provide background information and context on the subject matter of the Reference and then to focus and state the issues which, at the outset are envisaged. As indicated above, the Issues Paper also state the time frame for this review and then invites submissions on any aspects or issues pertinent to this Reference. This Issues Paper will endeavour to raise a series of questions designed to stimulate discussion and response from stakeholders and the general public. We caution that these questions should not be seen as dictating the issues and indicative of the final outcome of this Reference. Accordingly, the CLRC welcomes submissions on other issues or matters which stakeholders believe should be addressed.

1.6 Structure of this Report

This paper is structured as follows:

- Chapter 2 provides a brief outline on the nature of the Proof of Business and Electronic Records.
- Chapter 3 provides an overview of existing law on the Reference;
- Chapter 4 presents and analyses the comparative material concerning the utilization and regulation of electronic transactions and electronic records; and
- Chapter 5 presents the main issues for consideration in this Reference.

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2.1 Introduction

In this part we begin by introducing and stating what "business records"; "electronic records" and "electronic communications (email)" are . After which we shall attempt to explain their nature respectively for the information of the public.

This is done in the hope that the public can then be better informed and may in turn make relevant input, comments, suggestions and recommendations to the issues raised in this Paper.

2.2 What are "Business Records"; "Electronic Records" and "Electronic Communication" (email).

(a) Business Records

The current *Evidence Act* does not have a definition of the term "Business Record" but does contain a definition of 'businesses. Hence, for purposes of the *Evidence Act*, "business" is broadly defined to include public administration and a business, profession, occupation, trade, undertaking or calling of any kind.[1] We can therefore infer from this definition of "business" that "Business Records" for purposes of the *Evidence Act* may refer to any records concerning the conduct of public administration, the conduct of business in commerce and trade, or the conduct of business in

[1] *Evidence Act* 1975 Chapter 48 s 1,

any profession, occupation, trade or any calling. In simplified terms, we can say that business records are records which are created in the conduct of business and communicated between parties to that business.[2] Typically the following are examples of business records: books of account; accounting records of all kinds; employment records; production, job and work records of all kinds; stock records; dispatch, delivery or receipt of goods records; postage books; surveyors' field books; transport drivers' logs; hospital records; medical records of a doctor in private practice; interoffice memoranda; office diaries; files of correspondence.[3]

(b) Electronic Records and Electronic Communications (email).

Owing to its time, the *Evidence Act* does not specifically define "electronic records". For our purposes we adopt the following definition: as records created in the conduct of business and communicated between parties to that business through any medium of electronic communication. It has been suggested by some archivists that records must be set aside in the course of business to be considered as "record". Others argue that, the fact of being transacted in a particular business context is crucial to record, thus an adequate record will contain evidence of the context of its creation. As such electronic records are evidence of transactions (relationships of acts), means of action and information about acts.[4]

What then are electronic communication?

There are a number of sources we have consulted for a working definition for our purpose. The Commonwealth of Australia *Electronic Transaction Act* 1999 offers the following definition for the term "electronic communication":.

> (a) a communication of information in the form of data, text or images by means of guided and/or unguided electromagnetic energy; or

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[2] David Bearman and Jennifer Trant, "Electronic Records Research" (1997) http://www.dlib/july97/07beraman.html at April 14, 2008.

[3] Meares C.L.D. & T.W.Waddell, "Report 17 (1973) – Evidence (Business Records)" (1973) http://www.lawlink.nsw.gov.au/lrc.nsf/pagesr17toc at April 14, 2008.

[4] David Bearman and Jennifer Trant, "Electronic Records Research" (1997) http://www.dlib/july97/07beraman.html at April 14, 2008

(b) a communication of information in the form of speech by means of guided and/or unguided electromagnetic energy, where the speech is processed at its destination by an automated voice recognition system.[5]

Email means electronic mail; a data message (information generated, sent, received or stored by electronic, optical or similar means including, but not limited to, electronic data interchange, electronic mail, telegram, telex or telecopy) used or intended to be used as a mail message between the originator and addressee in an electronic communication.[6]

With respect, the above definition may seem too technical and complicated to some of our readers. We therefore prefer and adopt the approach taken and definition adopted by in the United Nations Commission on International Trade Law (UNICTRAL), Working Group IV (Electronic Commerce)[7] where they first define "electronic communication" to mean "any communication that the parties make by means of data messages" and then go onto define "data message" as:

> "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".

2.3 Background to this Reference

The unprecedented technological advances made in information technology (IT) – in particular the evolution of the internet and the world wide web (w.w.w.) has brought new challenges as much as opportunities to everyone in the world including us in Papua New Guinea. In this Reference we focus more on the challenges rather than the opportunities – the challenges in the area of the law of evidence and the law of contract in coming to terms with these advancements which have left the law somewhat stranded.

Never like before, an ever increasing number of Papua New Guineans – from private citizens to business houses, professional men and women to primary school pupils and of course the Government institutions etc., are now accessing information and communicating, through the internet. The electronic mail (email) is now one of the most convenient, flexible and popular mode of communication and conducting business irrespective of

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[5] *Australian Electronic Transactions Act* 1999

[6] *Australian Electronic Communications and Transactions Act* 2002

[7] Fourty-fourth Session Vienna 11-22 October, 2004.

distance and difference in time zones of the global world. Simply through the click of a mouse or a button, communication(s) and transaction(s) are effected instantly.

The challenges for the law of evidence which we are focusing in this Issues Paper arise because when our current *Evidence Act* was enacted back in 1975 or even back still, the internet and w.w.w were never around. Neither the common law of England which now applies in PNG as part of the underlying law is of much assistance owing to the same reasons.

Most countries in the region and the world have made the necessary legislative intervention(s) to address these challenges brought about by the internet and the w.w.w. For example the Commonwealth of Australia has acted in 1999 by enacting their *Electronic Transaction Act* and the Republic of Vanuatu has moved in 2000 to enact their *Electronic Transaction Act*.

With the aim of taking a somewhat uniform approach to law making in this area, the United Nations Commission on International Trade Law (UNCITRAL) has in 1996 issued the *Model Law on Electronic Commerce* and the *Model Law on Electronic Signatures* – and some countries such as Singapore, Canada and Australia have embraced the general framework of these Model Laws to legislate in this area. These model laws attempts to provide national legislative guidelines of some internationally acceptable rules with the aim of creating a more secure legal environment and removing any obstacles for electronic commerce both nationally and globally.

2.4 Business Records, Electronic Records and the Law

Business records, electronic records and electronic communication (email) are the means of communication in electronic commerce. They are important in the modern society because considerable use is made of electronic communication by government and businesses for keeping and producing records. Undoubtedly an increasing number of transactions in international trade and in Papua New Guinea by government and businesses is carried out by means of communication commonly referred to as electronic communications, which involves the use of alternatives to paper-based forms of communication, storage and authentication of information. The United Nations Commission on International Trade Laws (UNCITRAL) has developed a Model Law on Electronic Commerce that adopts a technology neutral approach. The Model Law was conceived to further the progressive harmonization and unification of the law of

international trade and in that respect to bear in mind the interests of all peoples, particularly those of developing countries.[8]

It was recommended by the General Assembly that all states should give favourable consideration to the Model Law when enacting or revising their laws so that the legislation does not prefer one form of electronic technology over any other and that it treats electronic transactions in the same way as paper based transactions.[9]

Generally the ability of the current law of evidence to deal with business and electronic records is very limited in the sense that there are no separate provisions which allow for the proof of business records in electronic form. Meanwhile there are provisions which deals with computerized information or which allow for the proof of statements in documents produced by computers.[10] However, there are limitations. Document produced by a computer may be admissible, but inadmissible if such were produced by other related means, such as electronic transactions using smart phones, flash drives CDs, DVDs, internet, emails, mobile phones, digital cameras, ipod, MP3s or telephone voicemails. To permit the proof of business and electronic records in the laws of evidence, consideration must be given to the modern information and communication technology having regard to electronic commerce and electronic signatures which business and electronic records are a part of.

In fairness, we point out that the *Evidence Act* was enacted in the 1970s and as such it does not capture much of what is happening now when considering the development of modern information and communication technology and the effect of such new modern information. Proof of technology requires the need to develop or revise the existing legislation that must ensure that records kept /produced/accessed electronically through any form of modern devices can be admissible in the court of law. The challenge presented by computer databases is to determine whether free excess to the internet will make freedom of information legislation meaningless, unless we have legislation that regulates access, production and the misuse of personal information in databases.

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[8] Attorney General Department, "UNCITRAL Working Group on Electronic Commerce" (2005) http://www.ag.gov.au/www/agd/agd.nsf/Page/e-commerce at 15 April 2008._

[9] Ibid

[10] *Evidence Act* 1975 Chapter 48 s 64 - 67

2.5 The Nature of Electronic Commerce

With the advent of the internet and the w.w.w an increasingly large volume of electronic commerce is generated. Electronic commerce is of course generated through electronic communication largely by using electronic mail (email) and accessing information and related material posted on the various and respective websites. This type of activity is also known as electronic commerce (e-commerce). In very simple terms, e-commerce is the process of doing business on the internet electronically where transaction(s) may include consumer and business to business transactions where necessary information to effect and conclude the business transaction are conducted/transacted. Such may include online credit card transactions, electronic invoices and purchase order and even e-billing, e-cash and e-cheques!

The evolution of the internet and the World Wide Web has facilitated all manner of e-commerce. The emergence and dominance of the internet in the 21st century has also challenged the traditional legal mechanisms and the general legal infrastructure of doing business throughout the world.

2.5.1 Internet

As the name implies, the internet is a network of computers all over the world connected to each other either by telephone lines, fibre optic cables or satellite network.[11] Wikipedia, the free online encyclopedia defines internet as:

> "… a global system of interconnected computer networks that interchange data by packet switching using the standardised Internet Protocol Suite (TCP/IP). It is a 'network of networks' that consists of millions of private and public, academic, business, and government networks of local to global scope that are linked by copper wires, fibre-optic cables, wireless connections and other technologies."[12]

Wikipedia goes further to explain that:

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[11] See Forder J and Q Patrick (2001) *Electric Commerce and the Law* (John Wiley & Sons Australia Ltd) p.5.

[12] http://en.wikipedia.org/wiki/Internet accessed at 2 October 2008.

> "The internet is a global data communication system. It is a hardware and software infrastructure that provides connectivity between computers."[13]

Wikipedia states that as of 31st March, 2008, 1.407 billion people use the internet. The internet can now be accessed through mobile phones, data cards, and even through handheld game consoles from virtually anywhere in the world.[14] This of course now raises very challenging issues in enforcement of legal rights and attaching liabilities – mainly jurisdictional issues.

2.5.2 World Wide Web

In general conversation, the internet and the World Wide Web are used somewhat interchangeably as if these two are the one and same. They in fact aren't the same. As seen above, the internet is the global communication system that provides the hardware and software infrastructure providing the required connectivity between computers whereas the World Wide Web is just one of the services transmitted via the internet.[15]

For the purposes of this Issues Paper, we adopt the following definition from the online free encyclopedia, Wikipedia:

> "The World Wide Web is a huge set of interlinked documents, images and other resources, linked by hyperlinks and URLs. These hyperlinks and URLs allow the web servers and other machines that store originals and cached copies of these resources to deliver them as required using HTTP (Hypertext Transfer Protocol)."[16]

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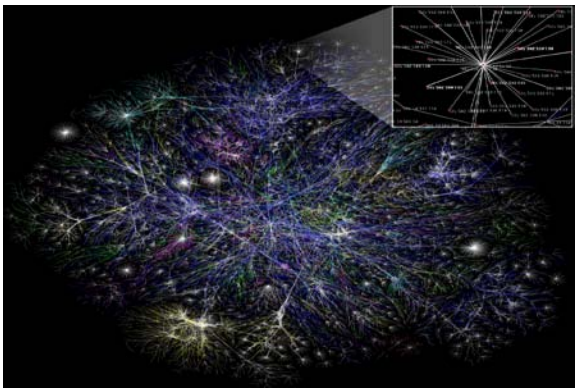
13 Ibid

14 Ibid

15 http://en.wikipedia.org/wiki/Internet accessed at 3 October 2008

16 Ibid

The image below gives an indication of what a fraction of the W.W.W. looks like:



Source: Wikipedia (http://en.wikipedia.org/wiki/Internet).

2.5.3 Electronic Commerce

"Electronic Commerce" or e-commerce for short is now appealing, sexy and trendy. For most small to medium enterprises, it presents a cheaper option of doing business in the sense that significant overhead costs in office and additional labour requirements are eliminated by the use of this mode of doing business – and for many, through this mode, business can be conducted from the comfort of ones home! What then is e-commerce? In very broad terms, e-commence may refer to and include "all commercial activity conducted with the aid of electronic devices" and such a definition may include:

- contracts concluded by telephone, telex or fax machine;
- purchases made using EFTPOS (electronic funds transfer at point of sale); or even
- any transaction involving a card that uses electromagnetic data, such as prepaid phone card.[17]

In a more narrower and somewhat technically acceptable form – and for the purpose of this Issues Paper, the definition we adopt – is that e-commerce

[17] Forder J and P Quirk (2001) *Electronic Commerce and the Law* (Milton: John Wiley & Sons Australia Ltd) p.4

relates to the subset of all transactions conducted using computers connected to each other[18] by utilizing the internet and the world wide web. This definition we adopt recognizes and takes account of the impact of the internet and the world wide web in the manner in which people from very far away places across the globe are now able to do business and transact across countries of the world with sometimes very diverse legal systems – thus creating various legal issues of concern to legislation in the home countries. This is exactly the background against which this Reference was issued to us.

Whilst electronic commerce has not really taken off here in Papua New Guinea, in the region, particularly Australia and New Zealand, in particular buying and selling on internet is very popular. Companies like *e-bay* in Australia are selling virtually anything and everything on the internet. Writing in *The Australian* on 24th November, 2005 at p.29, Michael Richardson predicted that:

> "With internet use growing rapidly across Asia and the Pacific, the region is poised to become a big player in an electronic commerce market expected to be worth $US7 trillion by 2005."[19]

From this same report, the author goes onto note that:

> "In countries such as … Australia and Singapore, well over 40 percent of the population logs on regularly, while in poor APEC countries such as the Phillippines and Papua New Guinea, less than 1 percent uses the web, mainly because of a shortage of equipment."

Indeed we say that this is one of the main reasons today as to why electronic commerce has not been successful in Papua New Guinea and the other Pacific Island countries (PICs) of the region.

Whilst e-commerce has not quite flourished in PNG, there is however little doubt that the volume of business conducted on the internet, mainly through e-mail communication has been strong and is todate growing. Hence the need for law reform resulting in this Reference to us.

On October 19 2006, Papua New Guinea conducted its first e-commerce web based transaction in PNG Kina on the website:

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18 Ibid at p.5

19 Cited in Forder J and P Quirk (2001) *Electronic Commerce and the Law* (Milton Qld: John Wiley and Sons Australia Ltd) at p.13

http://www.esishop.com.pg.[20] The internet was however introduced into PNG in May 1977 and there are four (4) internet service providers (ISP) in PNG today and they are all connected to the main internet gateway through Telikom PNG.[21]

2.6 Some Legal Issues Raised By E-Commerce

In thinking about the many legal issues raised by e-commerce which we are required to address in the later part of this Issues Paper, it is important at the outset to differentiate, on the one hand, those possible issues which may arise within the jurisdiction (ie. country, PNG) and on the other hand those many and more complex issues which may arise as a result of engaging in e-commerce outside of the jurisdiction (ie. internationally). The main thrust of this Reference is aimed moreso at the first instance – hence the concern about the proof of business and electronic records within jurisdiction. However, most of the issues do overlap. The following are some of the legal issues and concern that may arise within jurisdiction:

- whether email correspondence between parties in an e-commerce transaction are admissible evidence within the terms of sections 65-67 of the *Evidence Act* Chapter 48;
- whether unsigned contracts and unsigned accompanying emails are admissible evidence within Division 5 of the *Evidence Act* Chapter 48;
- whether the scanned signatures onto emails and contract documents are admissible evidence within the terms of Division 5 of the *Evidence Act* Chapter 48;
- does the current Division 5 of the *Evidence Act* Chapter 48 have the capacity to authenticate and inject integrity and security into the use of scanned signatures on electronic contracts, official communications, emails, etc?

Electronic commerce conducted outside of jurisdictions or between various jurisdictions (ie. internationally) may raise some of the following legal issues:

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[20] See Ramamurthy S (2007) "*E-Commerce Opens Up World of Opportunities*" *2007 Papua New Guinea Year Book* (Port Moresby: Cassowary Books and Pacific Star Ltd) pp 94-97

[21] Ibid

- at what point and in which jurisdiction the business transactions (contracts, etc) are concluded;
- what are the terms of the contract especially concerning payment as to how, when where or in which currency should the payments be made;
- the manner of delivery of the goods and services or the performance of the services;
- the remedies available to the parties if one party fails to fulfill the terms of the contract or the goods or services rendered are defective or unsatisfactory respectively; and
- the ever critical issue of jurisdiction or applicability of which laws or whose laws?[22]

It is of course apparent that the inter-jurisdictional issues raised by the advent of the internet, w.w.w. and electronic commerce venture well beyond the capacity of the current Division 5 of the *Evidence Act* Chapter 48. It is for this reason that we shall have to look to the UNCITRAL *Model Law on Electronic Commerce* and the UNCITRAL *Model Law on Electronic Signatures With Guide to Enactment* 2001 and some comparable legislation within the region such as the Vanuatu *Electronic Transactions Act* 2000.

[22] Adapted from Forder J and Quirk P (2001) *Electronic Commerce and the Law* (Milton, Qld: John Wiley and Sons Ltd) p.p 32-33

3. Current Law and Practice on the Conduct of Business & Electronic Records

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3.1 Introduction

The current law and practice in this area of concern of the law is by and large found in the *Evidence Act*. On the whole, the law of evidence in Papua New Guinea is based on the common law of England which now applies in Papua New Guinea as part of the underlying law.

In the law of evidence generally, business and electronic records fall under the category of real evidence or documentary evidence and are generally subject to the general rule against hearsay evidence which say that:

> "Evidence by any witness of what another person stated (whether verbally, in writing or otherwise) on any prior occasion is inadmissible for the purpose of proving that any fact stated by that other person on that prior occasion is true."[1]

In other words, the rule against hearsay evidence merely prohibits the production of the evidence by another person outside the court only if the purpose of proposing to rely on the evidence is to attest to the truth of the statement made or written but not the fact that such a statement was made or written.

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[1] Murphy P (1980) *A Practical Approach to Evidence* (London; Blackstone Press Ltd) p.165;

3.1.1 Real Evidence

Real Evidence is in a tangible form such as photographs, tape-recordings, readings and other information produced by a mechanical devise such as a computer.[2] To overcome the problems of the rule against hearsay evidence, statute law has intervened in most, if not all, common law jurisdictions by now ensuring that computer generated statements or documents may now be admitted as evidence as an exception to the rule against hearsay evidence.[3]

3.1.2 Documentary Evidence

Documentary Evidence is any evidence that is in the form of document or such other written form. The free on line encyclopedia, Wikipedia explains that "although this term is most widely understood to mean writings on paper (such as an invoice, a contract or a will), the term actually include any media by which information can be preserved. Photographs, tape recordings, films and printed emails are all forms of documentary evidence."[4] The distinction between "real evidence" and "documentary evidence" is not in form of the material evidence but rather in the purpose for and use of which the evidentiary material is made. Documentary evidence is required and relied upon for purposes of proof of the content of the document. However if the appearance or shape of the documentary evidence – for example a blood stained printed email message, is required for proof of the DNA of the assailant (rather than the content of the email message) – then the printed blood stained email message takes the form of real evidence rather than documentary evidence. Generally at common law, documentary evidence are subject to authentication – either by a eyewitness attesting to the execution of the document or to the testimony of a *witness to testify to the identity* of the author.

At the common law, "documentary evidence is also subject to the best evidence rule, which requires that the original document be produced unless there is a good reason not to do so".[5]

Again at common law, there is a distinction between "private documents" on the one hand, and public or official documents. Murphy notes that "a party who wishes to rely on the contents of a private document as direct

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2 See n.1 at p.186;

3 Ibid

4 http://en.wikipedia.org/wiki/Documentary - evidence viewed on 15/10/2008;

5 Ibid;

evidence, must adduce 'primary' (as opposed to 'secondary') evidence of the contents of that document" and goes on to point out that the requirement for 'primary evidence' is a reference to 'original document'.[6] This distinction between "private documents" and "public or official documents" is reflected in our current *Evidence Act* Chapter 47 where the Act does provide for the proof of public and official documents in Part IV of the Act. Public or official documents which can be produced without being subjected to the various common law requirements as stated above in accordance with the relevant provisions of the *Evidence Act* Chapter 46 include the following:

- copies of any legislation or related instruments issued by printed by the Government Printer;[7]
- all documents relating to judicial proceedings;[8]
- votes and proceedings in Parliament;[9]
- Government Gazettee and such other official publications printed by the Government Printer;[10]
- Secondary evidence of registered deed or document;[11]
- probate and letters of administration;[12]
- certificates relating to births, deaths and marriages;[13]
- documents relating to certificate of incorporation of a corporate entity;[14]
- official statistics published by the National Statistician;[15]
- business records;[16]

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6 See no.1 at p.501;
7 See ss.38, 39 & 40 *Evidence Act;*
8 See ss.44-47 *Evidence Act;*
9 See s.48 *Evidence Act;*
10 See ss.52-53 *Evidence Act;*
11 See s.55 *Evidence Act;*
12 See s.56 *Evidence Act;*
13 See s.57 *Evidence Act;*
14 See s.58 *Evidence Act;*
15 See s.59 *Evidence Act;*
16 See s.61 *Evidence Act;*

- computerized information and related computer generated statements;[17]
- various certified copies of public documents issued and signed by the Registrar-General, Registrar of Titles or the National Statistician;[18]

Some overtly private documents have also been somewhat exempted from the best evidence rule by the *Evidence Act* Chapter 47 – thus negating the requirement for the production of the original document of a private document. The *Evidence Act* have however imposed some requirements to be met before such documents can be admitted. Such documents include:

- documents processed by an independent processor;[19]
- prints ore re-prints from the negative of a document;[20]
- photocopies made from approved photocopy machines;[21]
- entries bankers books, accounts, journals, etc.[22]
- business records including a photographic or a photostatic reproduction of a document used in the regular course of business;[23] and
- computerized information [24] or computer generated statements.[25]

3.2 Proof And Admissibility of Other Public or Official Documents

Because of the broad based view we took of the term "business records" at paragraph 2.2 above, officially sanctioned documents may also constitute business records in given circumstances – particularly where members of the public rely on the document to do business. Without having to be exhaustive, such official documents we have in mind in this context include

17 See ss.64-67 *Evidence Act;*
18 See ss.70-72 *Evidence Act;*
19 See s.74 *Evidence Act;*
20 See ss.75-81 *Evidence Act;*
21 See ss.86-88 *Evidence Act;*
22 See ss.91-94 *Evidence Act.*
23 See 5.61 *Evidence Act;*
24 See s.65 *Evidence Act;*
25 See s.66 *Evidence Act.*

officially sanctioned and released government policy documents printed by the Government Printer, statistics or records released by the National Statistician, certificates of incorporation for companies, business groups, incorporated land groups, associations, certificates of title to land or leases, documents concerning shareholding or ownership of companies held by the Registrar of Companies, etc.

Allowance is made for the production and admissibility of reproductions of public documents as certified reproductions with an adequate certification to its truthfulness or verification by a person in authority certifying it to be a reproduction under Section 70 of the *Evidence Act.* Section 70(2) goes onto state that if the reproduction of the document bears a certification signed by a person having authority or custody of the document, then that is sufficient and the reproduction would be admissible without further proof. A "reproduction" is defined under Section 68 of the *Evidence Act* to men – either a machining-copy (photocopy) of the document or a print made from a negative of the document.

3.3 Proof and Admissibility of Business Records

Note that at Paragraph 2.2 above, we took a broad based view of the term "business record" to include not only records of those relating to the conduct of commerce related business but also business relating to public administration. Section 61(2) of the *Evidence Act* is a key provision relating to the proof and admissibility of business records. This provision says that any writing or a photographic or a photostatic reproduction of a document "purporting to be a memorandum or record of an act, matter or event is admissible in evidence in a court as proof of the facts stated in it if it appears to the court that:-

(a) the memorandum or record was made in the regular course of a business at or about the time of the doing or occurrence of the act, matter or event; and

(b) the source of information, and the method and time of the preparation of the memorandum or record, were such as to indicate its trustworthiness."

Section 61(4) then goes onto state that when considering the admissibility of such business records, the court must have regard to all the relevant circumstances, including:

- the source from which the business record is produced; and

- the circumstances of its receipt and custody by the person producing it or by any person from whom it has been obtained for the purpose of producing it in evidence.

If it appears to the court that it would not be in the interest of justice to admit into evidence any business record, then the court would be entitled to refuse admission of such business record.[26] In the exercise of its discretion in deciding whether or not to admit business records into evidence, the court is empowered not only to receive formal testimonial evidence "but may inform itself in anyway that it thinks fit and particularly by the affidavit, oath, affirmation or certificate of a person who professes to have knowledge of any of the matters to which the writing relates or of the circumstances relating to its preparation"[27]

Issues 3.3.1
Is the current s.61 of the *Evidence Act* as reviewed above that allows for the admissibility and proof of business records capable of allowing for the admission and proof of electronic records as business records?

3.4 Admissibility and Proof of Computerised Information

Provisions for the admissibility and proof of computer generated information and statements is made under Division 5 of the *Evidence Act.* For purposes of this Division, "computer" is defined as a device for storing and processing information[28] and any reference to a computer also includes a situation where there are more than one computers used to process and store information,[29]

For purposes of Division 5 of the *Evidence Act*, Section 64(3) goes on to explain that:

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[26] See s.61(3) *Evidence Act*
[27] See s.61(5) *Evidence Act*
[28] See s.64(1) *Evidence Act*
[29] See s.64(2) of the *Evidence Act* that states

- a reference to information being derived from other information is a reference to its being derived from it by calculation, comparison or any other process; and
- information shall be taken to be supplied to a computer if it is supplied in any appropriate form and whether it is applied directly or (with or without human intervention) by means of any appropriate equipment; and
- where, in the course of activities carried on by a person or body, information is supplied with a view to its being stored or processed for the purposes of the activities by a computer operated otherwise than in the course of activities, the information, if duly supplied to the computer, shall be taken to be supplied to it in the course of the activities; and
- a document shall be taken to have been produced by a computer whether it was produced by it directly or (with or without human intervention) by means of any appropriate equipment.

Concerning the specific matter of admissibility of computerised information, Section 65(1) of the *Evidence Act* says that: "In any legal proceedings a statement contained in a document produced by a computer is admissible as evidence of any fact, stated in the document, of which direct oral evidence would be admissible, if it is shown to the satisfaction of the court that:-

- the document containing the statement was produced by the computer in the course of a period during which the computer was used regularly to store or process information for the purposes of activities regularly carried on over that period, whether for profit or if not; and
- during the period there was regularly supplied to the computer, in the ordinary course of those activities, information of the kind contained in the statement or of the kind from which the information so contained was derived; and
- throughout the material part of the period the computer was operating properly or, if not, that any defect in its operation during that part of the period was not such as to affect the production of the document or the accuracy of its contents; and

- the information contained in the statement reproduces or is derived from information supplied to the computer in the ordinary course of those activities.

One of the main issue for us to consider in this Reference is: are the information obtained from internet or e-commerce transaction generated information through websites capable of being accommodated under Section 65(1) of the *Evidence Act* in its current form as stated above as being computerised information since their source is the computer? It is obvious that when Section 65 of the *Evidence Act* was drafted in 1975, the current websites and e-commerce generated information and email were non-existent and therefore their inclusion within the current Section 65(1) *Evidence Act* was never envisaged. The question then is: is the current Section 65(1) *Evidence Act* broad enough to accommodate the admissibility and proof of email; information and documents relating to e-commerce transactions through websites on the internet?

Issues 3.4.1
In your experience or opinion, is the existing provisions of the *Evidence Act* such as Sections 65 broad enough to accommodate the admissibility and proof of information and documents relating to e-commerce transactions conducted through websites on the interent? If not, how best should we provide for their admissibility and proof?

3.5 Admissibility and Proof of Computer Generated Statements

Section 66 of the *Evidence Act* provides for the admissibility and proof of computer statements. As we saw earlier, under Section 64 (3)(d) of the *Evidence Act* – a document is deemed to have been produced by a computer irrespective of whether the document was produced by a computer with or without human intervention but by the utilization of appropriate and normal equipment. In this regard "normal equipment" in our view is a reference to both hard ware and soft ware associated with servers, networks, all computer parts and accessories, cables and printers, etc.

Section 66 of the *Evidence Act* says as follows:

"66. Proof of Computer Statements:

(1) Where in any legal proceedings a statement contained in a document is proposed to be given in evidence under this Division it may be proved by the production of the document or (whether or not the document is still in existence) by the production of a copy of the document, or of the material part of the document, authenticated in such manner as the court approves.

(2) Where in any legal proceedings it is desired to give a statement in evidence under this Division, a certificate –

- identifying the document containing the statement and describing the manner in which it was produced; or
- giving such particulars of any device involved in the production of the document as are appropriate for the purpose of showing that the document was produced by a computer; or
- dealing with any of the matters referred to in Section 64(3),

and purporting to be signed by a person occupying a responsible position in relation to the operation of the relevant device or the management of the relevant activities (whichever is appropriate), is evidence of any matter stated in the certificate.

(3) For the purposes of Subsection (2) it is sufficient for a matter to be stated to the best of the knowledge and belief of the person stating it.

In essence, the thurst of Section 66 of the *Evidence Act* is concerned with the authentication of the document in the form of a computer statement – such as a print out from a computer via a printer and the issue of authentication is left to the court to settle through whatever method it may wish to adopt. One of the method identified to ensure authentification is through the issuance of a certificate to identify the document containing the statement and describing the manner in which it was produced and signed off by the responsible staff such as the computer manager or IT officer with supervisory oversight over the computer network or the server.

Section 67 of the *Evidence Act* then provides for varying degree of weight to be given by the courts when admitting into evidence computer statements by taking into consideration the following circumstances:

- whether or not the accuracy of the statement is in any doubt;
- whether or not the information contained in the statement reproduces or is derived from was supplied to the computer or was recorded to be supplied to the computer contemporaneously with the occurance or existence of the facts dealt with in the information; and
- whether or not any person concerned with the supply of information to the computer; or the operation of the computer or of equipments by means of which the document containing the statement was produced by it – had any incentive to conceal or misinterpret the facts.

The issue for us to address in this Reference is whether electronic records and electronic communications such as email can be construed as "computer statements" and therefore falling within the ambit of the current Section 66 of the *Evidence Act*. If not, then how best should we provide for the admissibility and proof of electronic records and electronic communications?

Issue 3.5.1
Whether the current Section 66 of the *Evidence Act* as quoted and discussed above is wide enough, in its current terms, to allow for the proof of electronic records and electronic communications such as email? If not, how best should we provide for the admission and proof of electronic records and electronic communications?

4. Electronic Transactions and Electronic Records

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4.1 Introduction

This part discusses electronic communication. Apart from that we focus on the electronic documents that are often referred to as electronic records and how these could be accommodated within the *Evidence Act* or related legislation in PNG. Electronic and digital signatures which present their own peculiar issues and considerations will also be considered. The forms electronic signatures can take and why we should consider legislating signatures.

4.2 Electronic Communication

Electronic communication has been defined in part two of this Issues Paper. The definition of 'electronic communication' is adopted from Australia's Electronic *Transactions Act* 1999, which has derived its basis from the UNCITRAL Model Law on Electronic Commerce. The term "Electronic Communications" therefore embraces the mediums of communication that involve emails, websites, chat rooms, and electronic data interchange

mediums, social networking sites, and virtual worlds are mediums and facilitators of electronic communication.

The email, the list serve and chat-rooms are mediums that facilitate or provide for the transmission of electronic messages between computers, or in more recent times, even to mobile phones that transmit text, photo, and video messages and allow for transfer of such messages to standard computers, as well as personal digital assistants (PDAs) that can copy SMS messages into an email or word processing documents.[1]

In all these mediums, messages created by the user are converted into electrical signals, which are then generated as electromagnetic waves or as a sequence of voltage pulses that travel along a physical path that carries a signal between a signal transmitter and a receiver called the transmission medium, which can be guided (wirings, optical fibre cables) or unguided (earth's environment used as physical parts to carry electronic signals) mediums. The focus of the law of evidence here is the message itself and how that message can be produced as evidence. As we saw in Chapter 3 above, the existing *Evidence Act* provisions only deal with computerized information and computer generated statements but clearly not electronic communications generated by medium other then a computer. There is therefore a gap in our laws in this regard.

4.3 Electronic Records

States that have enacted laws that promote and advance e-commerce have always been faced with one major challenge or more so concern on how to legislate electronic documents, often referred to as "records" or "electronic records" and "signatures" that are created, communicated and stored in electronic form. These signatures may either be electronic signatures or digital signatures.

For this part the description of the manner in which websites and users communicate through text-based, image-based and other forms of electronic

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[1] See for instance, the *Council of Europe Convention on Cyber Crime* 2002, which, rather than defining a 'computer', defines a 'computer system' as a device consisting of hardware and software developed for automatic processing of digital data, and 'computer data' is confined to data kept in such a form that it can be directly processed by the computer system, i.e., the data must be electronic or in some other directly processable form; see Council of Europe, 'Council of Europe Convention on Cyber crime', opened for signature at November 23 2001, Europe. T.S. No. 185 (2002); <*http://conventions.coe.int/Treaty/EN/Projects/FinalCybercrime.htm*> at 17 February 2009. For a discussion of the requirements of the convention pertaining to the preservation of electronic evidence, see for instance, Mike Keyser, 'The Council of Europe Convention on Cyber crime' (2003) 12 *Florida State University Journal of Translational Law and Policy* 287.

communication tools, as well as the storage and interplay of user-generated content that take the form of data, text, sound, or image. The exchange of messages is entirely web based and most web providers and web hosts are required, through appropriate computer programs, to maintain records of the interaction between the subscribers to these websites and the interaction between these websites and a particular subscriber.[2] These electronic records created, communicated and stored in electronic form and electronic records from computer programs such as the Microsoft Office program as well as records created by computers without human input can be made to be subject to either a specific law or the law of evidence in general.

The question then is how best can this be done, given the knowledge that out current *Evidence Act* and related legislations provides nothing or little for this. The advancement of e-commerce in PNG may require the enactment of an appropriate legislation that should take a technology neutral approach and at the same time save individuals, companies, corporations and the Government from unnecessary costs, embarrassment and pitfalls. The need emerge from the changes in technology where national and international transactions are now done online and using emails.

Accordingly, legal recognition to electronic records is the main focus here – and perhaps could also extend to cover the other electronic documents like electronic and digital signatures.

4.3.1 Need for legal recognition of Electronic Records as Evidence

There is a need to ensure that provision is made for the legal recognition of electronic records and to facilitate the admission of such records into evidence in legal proceedings. The current scope of our *Evidence Act* with reference to document produced by a computer as discussed in Chapter 3 does not adequately provide for the use of the term electronic records and electronic communication. Tape recording of evidence, although in many places is not admissible as evidence are categorized as electronic record. New generation mobile phones that have an email/internet capacity can also be used to create electronic record, as well as through text messaging. There are many voice recording devices as well as telephone voice mail that can

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[2] See for instance, s 11 of the New South Wales *Electronic Transactions Act* **2000**, s 12 of Australia's *Electronic Transactions Act* **1999** (Cth), Article 10(3) of the European Union's *Electronic Commerce Directive* **2000**, s 146 of the *Uniform Electronic Transactions Act* **1999** (United States) and s 147 of the *Electronic Signatures in Global and National Commerce Act* **1999** (United States).

produce electronic record. It is presumed that electronic record can be written or printed out as video tapes, CD ROMS, DVD and hard copy. Sound recordings can also be "edited" and reproduced, as can composite devised images on the computer. Scanned and photocopied documents can become electronic records. New telephone equipment that has an internet facility does likewise. Video cameras and electronic surveillance cameras/equipment produce digital evidence.

Most of the persons we interviewed to form this Issues Paper stressed that our legislation has not kept up with modern technology and software systems. However, current law practice incorporates modern process and therefore there is a need for specific treatment of electronic records.

Most people we interviewed in our Port Moresby based survey for this Issues Paper stated that the process of interpretation, statutory writing requirement, delivery requirement, original document requirement, retention requirement and admissibility/proof and weighting need to be adjusted to reflect technological changes. The processes attached to accuracy, authenticity and weight of evidence is paramount as they are and should be fully locked into admissibility of evidence.

Also there is a need to define what devices – computers, videos, DVDs, CDs, mobile phones etc, that would be considered as acceptable ones for presenting acceptable (by laws) evidence that is considered legally reliable. Most businesses have access to such equipment and could provide records electronically. There may be the need to authenticate a scanned original document on occasion to avoid concealment or misrepresentation of facts. Changes to acceptance of a wider range of electronic record would avoid massive print files in court presentations.

In relation to photographic and machine reproductions or electronic images, changes to the law must reflect current technologies such as colour photocopies, scanners, video cameras, digital cameras, and other equipment capable of high resolution images and copies.

The issue of data security and penalties for falsification, illegal copying, or alteration of original electronic documentation needs to be addressed. In considering these issues we should look at comparable legislation such as the Vanuatu *Electronic Transaction Act*[3] (2000) to see how they have

[3] Steven E. Blythe, "South Pacific Computer Law: Promoting E-Commerce in Vanuatu and Fighting Cyber-Crime in Tonga" 2006 <http://www.paclii.org/journals/fJSPL/vol10/2.shtml#fn71> at 18 April 2009

legally addressed and accommodated electronic records under their legislation. The Vanuatu legislation is based on the UNCITRAL Model Law on Electronic Commerce.

4.3.2 The requirements for Electronic Transactions and records under the UNCITRAL Model Law

Under the UNCITRAL Model Law on Electronic Commerce the following are key considerations or requirements for electronic records:

a) Mere fact of electronic form must not deny recognition

Legal recognition, accuracy, 'admissibility or enforceability' must not be denied by law simply because:

- the information is in electronic form; or
- is referenced in an electronic record which purportedly results in such legal effect.[4]

b) Electronic records deemed to comply with requirement to be 'in writing'

Where a law or statute requires information to be in writing in order to be recognized, or characterizes information as mandated to be in written form, the electronic form will suffice if:

- it is "accessible;" and
- it can be retained for use at a later time.[5]

c) Electronic records deemed to comply with delivery requirement

Where a law states that information must be delivered to a person, that requirement will be deemed met if the information is in the form of an electronic record, and:

- the sender of the electronic record requires the receiver to acknowledge it; and
- the receiver acknowledges the receipt of the electronic record. This will hold regardless whether the law creates an affirmative obligation for delivery, or the law warns of resulting effects if the delivery is not made.[6]

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[4] Ibid
[5] Ibid
[6] Blythe, above n 3

d) Electronic records to comply with signature requirement

Where a law states the affixation of a person's signature on a paper document, this will be met by an electronic record provided:

- some means is employed to identify the person and to show that she 'intended to sign or otherwise adopt' the electronic record's information; and
- the means used is reliable, in consideration of the reason for creation of the electronic record or the communication of it, or any 'relevant agreement.' This will be the case regardless of whether there is an affirmative duty to sign, or the law provides deleterious results if a person fail to sign.[7]

Electronic signatures which are supported by a certificate issued by an accredited Certifying Authority (CA) will definitely comply with a law's requirement for a signature on a paper document. However, an electronic record meeting these requirements will not be refused 'legal effect, validity, and enforceability' merely because:

- it is not an E-signature; or
- it is not supported by a Certificate.[8]

e) Electronic records deemed to comply with original requirement

Where a law states that an original paper document must be presented in order to meet a legal requirement, or if the law requires that a paper document must be stored in its original form, that requirement is met if:

- there is a 'reliable assurance' that the electronic document, from the time of its creation until the present, has not been altered; and
- if required to be presented, the information contained in the electronic record will be an accurate representation of the original. This rule holds regardless of whether there is an affirmative duty for presentation or retention in the original form, or the law dictates consequences if the original is not retained or presented.[9]

f) Electronic records deemed to comply with retention requirement

[7] Ibid
[8] Ibid
[9] Ibid

If electronic records are required by law to be stored, that requirement will be complied with by the storage of records in electronic form, provided:

- the information is accessible and can be stored for reference at a later date;
- the format used in the electronic form is identical to the one in which it was 'generated, sent or received,' or the format is a correct depiction of that information; and
- the location and date of the transmission and reception is also stored.[10]

g) Admissibility of Electronic Records and Evidential Weight Granted

The rules of evidence must not be interpreted in such a manner that the courts would refuse to admit an electronic record into evidence:

- merely because of its electronic form; or
- merely because it is not in its original form.

Factors to consider in the determination of the evidential weight to be given when deciding on the admission of an electronic record include:

- the degree of trust and reliance that can be given to the electronic record, taking into account the means of generation, storage and communication;
- whether the electronic record's integrity has been maintained since it was created, i.e., the trustworthiness of the record and whether there is assurance that it has not been altered;
- the means of identification of the sender; and
- other relevant factors.

4.4 Electronic Signature

This part begins with an overview on the nature and form of electronic signatures, its history and issues relating to electronic signatures evidence generally.

It is our view that legislating for the use of electronic signatures is likely to serve as a vehicle for advancing e- commerce. However, if we fail in legislating for the legal recognition of electronic signature in our jurisdiction, then such failure on our part may lead to unnecessary costs in the event of a dispute. Electronic signatures are increasingly being used and

[10] Ibid 6

as such their validity is bound to be an issue for consideration in the near future.

Every person that uses an email account, electronic banking card, (kundu or save card), debit card or credit card and do online transactions uses a form of electronic signature.[11]

Many countries throughout the world have enacted legislation to facilitate commerce by the use of electronic records or signatures in interstate and international commerce. Normally the intent is to ensure the validity and legal effect of contracts and other transactions entered into online and or electronically.[12] A signature, whether electronic or on paper is first and foremost a symbol that signifies intent. The main focus now is of course, on the intention to authenticate which distinguishes a signature from an autograph.[13]

We point out that currently our laws in Papua New Guinea do not provide for electronic signatures and their effect in law. The question then is should we enact one?

4.4.1 Brief Historical Background

Since well before the American Civil War began in 1861, Morse Code was used to send messages electronically by telegraphy. Some of these messages were agreements to terms that were intended as enforceable contracts. An early acceptance of the enforceability of telegraphic messages as electronic signatures came from the New Hampshire Supreme Court in 1869.[14]

In the 1980s, many companies and even some individuals began using fax machines for high-priority or time-sensitive delivery of documents. Although the original signature on the original document was on paper, the image of the signature and its transmission was electronic.

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[11] Steven Mason, "Electronic Signatures in Law" (Tottel, 2nd Edition, 2007) <http://www.stephenmason.eu/books/electronic-signatures-in-law/ > at 18 December 2008

[12] From Wikipedia, the free encyclopedia "Electronic Signature"<http://en.wikipedia.org/wiki/Electronic_signatures> at 18 December 2008

[13] Ibid

[14] Ibid

Courts in various jurisdictions have decided that enforceable electronic signatures can include agreements made by email, entering a personal identification number (PIN) into a bank ATM, signing a credit or debit slip with a digital pen pad device (an application of graphics tablet technology) at a point of sale, installing software with a click wrap software license agreement on the package, and signing electronic documents online.[15] These electronic signatures therefore can take the various forms as discussed below.

4.4.2 What Constitutes an Electronic Signature

The main concern of electronic signature legislation is the authenticity of electronic documents, often referred to as "records" or "electronic records" and "signatures" which are created, communicated and stored in electronic form. These signatures are referred to as either electronic signatures or digital signatures.

The term 'electronic signature' is a generic, technology-neutral term that refers to the universal methods by which one can "sign" an electronic record. Although all electronic signatures are represented digitally (i.e., as a series of ones and zeros), they can take many forms and can be created by many different technologies. Examples of electronic signatures include : a name typed at the end of an e-mail message by the sender; a digitized image of a handwritten signature that is attached to an electronic document (sometimes created via a biometrics-based technology called signature dynamics); a secret code or PIN (such as that used with ATM cards and credit cards) to identify the sender to the recipient; a code or handle that the sender of a message uses to identify himself; a unique biometrics-based identifier, such as a fingerprint or a retinal scan; and a digital signature (created through the use of public key cryptography). [16]

4.4.3 Forms Electronic Signatures Can Take

The use of electronic signatures pre-dates any form of legislation, and towards the end of the twentieth century, adjudicators found themselves applying well established legal principles to new technologies when presented in the form of electronic signatures, just as judges in the nineteenth century were confronted with the increasing use of printing, typewriting and telegrams. There were no special legislation enacted to

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[15] Ibid

[16] Thomas J. Smedinghoff and Ruth Hill Bro, "Electronic Signature Legislation" 1999 <http://libraryfindlaw.com/1999/Jan/1/241481.html> at 14 April 2009

accommodate those changes. Nevertheless, discussed below are different forms of electronic signature and the area of law where the particular form of signature has been held as an enforceable form of signature to prove the validity and legal effect of the nature of transaction entered into electronically.[17]

1. Typing a name into an electronic document

When a person types his or her name on to a file in electronic format, such as an e-mail, the text added can amount to a form of electronic signature. Clicking the 'I accept' or 'I agree' icon when buying goods or services on-line, or when installing software on a computer for the first time, the buyer is invariably required to click on the 'I accept' icon. This action has the effect of satisfying the function of a signature. Even if the act of clicking on an icon to order goods or services is deemed to be less secure than that provided by a manuscript signature, it does not follow that the reliability of the signature will affect its validity.[18]

2. The 'click wrap' method of indicating intent

Click wrap signatures did not require any form of legislation, yet this particular form of signature remains a form of electronic signature, despite the imposition of a highly technical response by way of legislation to what is a relatively simple legal issue. For lawyers, the central issue will be how to prove the nexus between the applications of the signature, whatever forms it takes, and the person whose signature it purports to be.[19]

Clicking the 'I accept' or 'I agree' icon to confirm the intention to enter a contract when buying goods or services electronically has for a long time been a very popular method of demonstrating intent. In itself, the action of clicking the icon has the effect of satisfying the function of a signature. There have not been many cases relating to this very early form of electronic signature. In Germany there were three contract cases which serve to illustrate the problem of proving if it was the person who was

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[17] Steven Mason, "Electronic Signatures in Law" (Tottel, 2nd Edition, 2007) <http://www.stephenmason.eu/books/electronic-signatures-in-law/ > at 18 December 2008

[18] S.W.Mason, "Approaches to Electronic Signature" **<http://www.pravo.by/leginform/pdf/0105/mason.pdf. >at 29th May 2009**

[19] Ibid

alleged to have entered into the contract was the person that clicked the 'I Agree' icon. [20]

3. Personal Identification Number (PIN)

The PIN has become a very widely used form of authentication, especially to obtain access to a bank account through the use of an ATM (automated teller machine or automatic teller machine or automated banking machine or cash machine), or to confirm a transaction with a credit card or debit card. Invariably, a claim by the user that one or more transactions conducted on the account were not authorized by them will require the relying party to prove the transaction was authorized by the account holder. The fact a withdrawal or other form of transaction took place may not be in issue, and in any event, the bank can adduce the evidence under the relevant business records or the Bankers' Books exemptions.[21] The issue is essentially one of consent and authorization by the account holder.

In this regard, we cite a District Court matter in *Roni v. Kagure* DC No. 84 of 2004 where his Worship, Seneka found and held that the Defendants were negligent in failing to effect a stop to transactions to the complainant's account from being fraudulently made by a person who found the complainant's EFTPOS card over one weekend. His Worship further held that they failed to act on specific and unequivocal instructions from the complainant to effect stop payments and as a result of their negligence or even deliberate inaction, the complainant lost K5, 911.50 from withdrawals. Accordingly the defendants were liable to the Complainant.

4. The name in an e-mail address[22]

The name in an e-mail address is capable of identifying a person, especially where an e-mail address is in an organization. This is because an email address is allocated by setting out the name of the person followed by the domain name of the organization. There are other variations that can be used, such as when an e-mail address describes the office or function of the person, rather than their name. However, even this, if allocated to a single person, can be used to identify a particular person. The link between the prefix of the e-mail address and the person responsible for sending the e-

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[20] Steven Mason, "Electronic Signatures in Law" (Tottel, 2nd Edition, 2007) <http://www.stephenmason.eu/books/electronic-signatures-in-law/ > at 18 December 2008

[21] Ibid

[22] Steven Mason, "Electronic Signatures in Law" (Tottel, 2nd Edition, 2007) <http://www.stephenmason.eu/books/electronic-signatures-in-law/ > at 18 December 2008

mail can be problematic: for instance, the sender may be able to choose the first part, and may decide to adopt letters or numbers or a combination of letters and numbers with a view to obfuscating their identity and the true e-mail address might be hidden by the sender. If it is not obvious who the sender was, and if correspondence ensues and a dispute occurs, it will be a matter of establishing what, if any, evidence there is pertaining to the source of the relevant e-mails as a preliminary point. It has been held in a number of jurisdictions that the name in an e-mail address or the combination of the name and the domain name in an e-mail address can be a form of electronic signature.

5. Scanned manuscript signature[23]

A variation of the biodynamic version of a manuscript signature is where a manuscript signature is scanned from the paper carrier and transformed into digital format. The files containing the representation of the signature can then be attached to a document. This version of a signature is used widely in commerce, especially when marketing, materials are sent through the postal system and addressed to hundreds of thousands, if not millions, of addresses. The aim here is to link a person to a document, and the person creating or adopting the document in electronic format must have the requisite intent, and their intent must be associated to the document in some way.[24]

6. Biodynamic version of a manuscript signature[25]

This method involves obtaining a digital version of a manuscript signature where a person writes his or her manuscript signature by using a special pen and pad. The signature is reproduced on the computer screen and a series of measurements record the behaviour of the person as they perform the action. The measurements include the speed, rhythm, pattern, habit, stroke sequence and dynamics that are unique to the individual at the time they write their signature. The subsequent electronic file can then be attached to any document in electronic format to provide a measurement of a signature represented in graphic form on the screen.

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[23] Ibid

[24] S.W.Mason, "Approaches to Electronic Signature"
<**http://www.pravo.by/leginform/pdf/0105/mason.pdf**. >**at 29th May 2009**

[25] Ibid

7. Digital signature

A digital signature is a term for one technology – specific type of electronic signature. It involves the use of public key cryptography to sign a message, and perhaps is the one type of electronic signature that has generated the most business and technical efforts, as well as legislative responses.[26] A "digital signature" is an electronic identifier that utilizes an information security measure, most commonly cryptography, to ensure the integrity, authenticity, and non-repudiation of the information to which it corresponds. Cryptography refers to a field of applied mathematics in which digital information may be transformed into unintelligible code and subsequently translated back into its original form. In public key cryptography or asymmetric cryptography, an algorithmic function is used to create two mathematically related or complementary "keys." One key is used to code the information while the other is used to decode it. Cryptography can be used to ensure the confidentiality of data (i.e., encryption) and to verify the authenticity and integrity of transmitted data. The advantage of public key cryptography is that it allows the confidential transmission of information in open networks where parties do not know one another in advance or share secret key information.[27]

A very simple explanation which may serve to illustrate how a digital signature works is that a digital signature can comprise two, key pair (a private key and a public key) and a certificate, which is usually issued by a third party such as a certification authority. When an electronic message is signed with a digital signature, the private key is used to associate a value with the message using an algorithm. The computer undertakes this task. The value, the message and a certificate, linking the key to the named person or entity, is then sent to the recipient. The recipient uses the public key to check the value is correct by 'unlocking' the value created by the algorithm. A computer undertakes the entire operation. The only action required of the human being (in theory) is to cause the computer to associate the digital signature to the message.[28]

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[26] Thomas J. Smeddinghoff and Ruth Hill Bro of Baker & Mckenzie LLP, Electronic Signature Legislation, http://library.findlaw.com/1999/Jan/1/241481.html >at 28th May 2009.

[27] Albert Gidari, John P. Morgan and Perkins Coie, "Survey of Electronic and Digital Signature Legislative Initiatives in the United States, September 12, 1997, <http://www.ilpf.org/groups/digrep.pdf >at 28th May 2009

[28] S.W.Mason, "Approaches to Electronic Signature" **<http://www.pravo.by/leginform/pdf/0105/mason.pdf. >at 29th May 2009.**

4.4.4 Evidential Issues Relating to Electronic Signature.

It can be stated that the form of an electronic signature will have a bearing on its legal and evidential effect. However, it should also be noted that the elements that make up the definition of an electronic signature, and the presumptions that apply, will also affect its legal acceptance in a given jurisdiction. The elements that make up the definition of an electronic signature can demonstrate difficulties for the international acceptance of a particular form of signature.[29] To ease these difficulties the following have been designed to ensure the requirements for trustworthiness and security concerns. It may apply both to electronic and digital signatures hence it is generally considered that an electronic signature is legally effective as a signature only if it is:

- unique to the person using it;
- capable of verification;
- under the sole control of the person using it; and
- linked to the data in such a manner that if the data is changed, the signature is invalidated.[30]

The UNCITRAL Model Law on Electronic Signatures imposes the following requirements:

- an electronic signature must include a method to identify the signer,
- an electronic signature must include a method to indicate the signer's approval of the information contained in the message; and
- the method used must be as reliable as was appropriate for the purpose for which the message was generated or communicated.

For purposes of ensuring reliability and integrity in the utilization of electronic records or electronic signatures in e-commerce transactions, it is important that we set out in law the specific requirements to give legal validity to electronic documents and electronic signatures or as acceptable

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[29] Ibid
[30] Ibid

substitutes for paper based documents and ink signatures. It may also be important that we specify statutory writing requirement, delivery requirement, original document requirement and retention requirement.[31]

4.5 UNCITRAL Model Law on Electronic Commerce

The UNCITRAL Model Law on Electronic Commerce (herein after referred to as the "Model Law") was developed to assist and guide governments to achieve uniformity in the promulgation of national legislation in this area. It offers nation states a set of internationally acceptable rules as to how a number of legal obstacles may be removed, and how a more secure legal environment may be created for electronic commerce.

4.5.1 Objectives of Model Law

The use of modern means of communication such as electronic mail and electronic data interchange (EDI) for the conduct of international trade transactions has been increasing rapidly and is expected to develop further as the use of the internet become more widely accessible. However, the communication of legally significant information in the form of paperless messages may be hindered by legal obstacles to the use of such messages, or by uncertainty as to their legal effect or validity.[32] As such the objective of the Model Law is to overcome these legal obstacles that have resulted from the increased use of electronic commerce by enabling and facilitating the use of electronic commerce.

Amongst other things, the Model Law was adopted to remove uncertainty as to the legal nature and validity of information presented in a form other than traditional paper document by providing equal treatment to users of paper based documentation and to users of computer based information.[33]

The practical objectives of the Model Law are summarized as follows:

- To enable or facilitate the use of electronic commerce.

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[31] Steven E. Blythe, "South Pacific Computer Law: Promoting E-Commerce in Vanuatu and Fighting Cyber-Crime in Tonga" 2006 Volume 10 2006 – Issue 1 *Journal of South Pacific Law* 19

[32]UNCITRAL Model law on Electronic Commerce with Guide to Enactment 1996 with additional article 5 bis as adopted in 1998, United Nations, < http://www.uncitral.org/pdf/english/texts/electcom/05-89450_Ebook.pdf> at 20 April 2009

[33] Ibid

- To provide equal treatment to users of paper based documentation and to users of computer based information.
- To help remedy disadvantages that stem from inadequate legislation at the national level, which creates obstacles to international trade.
- To act as a tool for interpreting existing international conventions and other international instruments that create legal obstacles to the use of electronic commerce.

4.5.2 The Scope and Structure of Model Law

The Model Law does not give a specific meaning to the word 'electronic commerce' but instead attributes a broad reference related to the means of communication. Thus, among the means of communication encompassed in the notion of electronic commerce are the following modes of transmission based on the use of electronic techniques:

- communication by means of EDI defined narrowly as the computer to computer;
- transmission of data in a standardized format; transmission of electronic messages involving the use of either publicly available standards of proprietary standards;
- transmission of free-formatted text by electronic means for example through the internet.

The Model Law was drafted with reference to the more modern communication techniques. However, the principles on which the Model Law is based, as well as its provisions apply also to less advance communication techniques like telecopy and telex.[34]

A characteristic of electronic commerce is that it covers programmable messages, the computer programming of which is the essential difference between such messages and traditional paper based documents. As a matter of principle, no communication technique is excluded from the scope of the Model Law including future technical developments. Thus the objectives of the Model Law are best served by the widest possible application of its scope.[35]

[34] Ibid
[35] Ibid 18

The Model Law is divided into two parts, one, dealing with general electronic commerce and the other one dealing with specific areas of electronic commerce.

4.5.3 Specific Parts of Model Law Relevant for Our Purpose

Part One of the Model Law covers three chapters.

Chapter one of the Model Law deals with the general provisions including sphere of application, definitions, interpretation and variation by agreement.

The sphere of application of the Model Law covers all factual situations where information is generated, stored or communicated, irrespective of the medium on which such information may be affixed.

Chapter two deals with application of legal requirements to data messages covering legal recognition of data messages, incorporation by reference, writing, signature, originality admissibility and evidential weight of data messages and retention of data messages.

Countries like Vanuatu and Australia have incorporated this part into their respective legislation. This part is extremely relevant for our purpose.

Generally legal recognition of data messages embodies the principle that there should be no disparity of treatment between data messages and paper documents. Incorporation by reference is intended to provide guidance as to how a legislation should aim at facilitating the use of electronic commerce considering situations where certain terms and conditions, although not stated in full but merely referred to in a data message, may be recognized as having the same degree of legal effectiveness as if they had been fully stated in the data message. *Writing* is intended to define the basic standard to be met by a data message in order to be considered as meeting a requirement that information may be retained or presented in writing or that information be contained in a document or other paper based instrument.

Signature is considered along side its main functions that are to:

- identify a person
- provide certainty as to the personal involvement of that person in the act of signing; and
- associate that person with the content of a document

In addition to the above, a signature can also be utilized for the following purposes depending on the nature of the document that was signed:

- the intent of a party to be bound by the content of a signed contract;
- the intent of a person to endorse authorship of a text;
- the intent of a person to associate herself with the content of a document written by someone else; and
- the fact of the time when a person had been at a given place.

Originality is a nearly universal requirement for documents of title and negotiable instruments, in which the notion of uniqueness of an original is particularly relevant. There are also others like trade documents such as:

- weight certificates
- agricultural certificates
- quality or quantity certificates
- inspection reports
- insurance certificates

- but these documents are not negotiable instruments or used to transfer rights or title. It may however, be essential that they be transmitted in their original form, so that other parties in international commerce may have confidence in their contents. Original is regarded as stating the minimum acceptable form requirement to be met by a data message for it to be regarded as the functional equivalent of an original.

Admissibility and evidential weight of data messages generally provides for both the admissibility of data messages as evidence in legal proceedings and their evidential value. It establishes that data messages should not be denied admissibility as evidence in legal proceedings solely on the ground that they are in electronic form. In relation to the evidential weight of a data message, provision is made as to how the evidential value of data messages should be assessed.

Finally retention of data messages establishes a set of alternative rules for existing requirements regarding the storage of information. It is intended to set out the conditions under which the obligations to store data messages might exist in a law.

Chapter three of the Model Law deals with communication of data messages including formation and validity of contracts, recognition by

parties of data messages, attribution of data messages, acknowledgment of receipt and time and place of dispatch and receipt of data messages.

Part two of the Model Law contains a more specific set of rules dealing with specific uses of electronic commerce. It covers the carriage of goods including actions related to contracts of carriage of goods and transport documents.

The *carriage of goods* was the context in which electronic communications were most likely to be used. This provision applies equally to non negotiable transport documents and to transfer of rights in goods by way of transferable bills of lading. It does not only apply to maritime transport but also to transport of goods by other means.

Actions related to contracts of carriage of goods establish the scope that would encompass a wide variety of documents used in the context of the carriage of goods. It covers all transport documents, whether negotiable or non negotiable, without excluding any specific document.

Transport documents establish not only written information about the actions referred to above but also for the performance of such actions through the use of paper documents. They are specifically needed for the transfer of rights and obligations by transfer of written documents. The provision is intended to ensure that a right can be conveyed to one person only, and that it would not be possible for more than one person at any point in time to lay claim to it.

The full text of the Model Law is annexed here to as **Appendix 1** to enable our readers to make easy reference to all the provisions of the Model Law and inform themselves better for purposes of these consultations.

Issues 4.1
Should we adopt the Model Law with appropriate adaptations to enact a new law to regulate electronic transactions outside or away from the *Evidence Act?*

5. Issues

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5.1 Introduction

Essentially in this Reference, the CLRC has been directed to review the current *Evidence Act* Chapter 48 and determine how best this Act can be amended to provide for the admission and proof of business records and electronic records. Furthermore, the CLRC has been directed to identify any gaps in our laws on evidence generally and purposes appropriate legislative reform to address such gaps. We have reviewed the current law on evidence relating to the admissibility and proof of "business records" and "electronic records" under the current *Evidence Act* in Chapter 3 of this Issues Paper at paragraphs 3.1; 3.2; 3.3; 3.4 and 3.5 above. From this review, it is our view that:

- the current Division 5 of the *Evidence Act* in its current form is inadequate to effectively provide for the admission and proof of "electronic records" in particular;
- there is no definition of the term "business record" but a definition of the word "business" only and for purposes of the application of Section 62 of the *Evidence Act* (provision dealing with "Business Records") it has been quite unclear and unsatisfactory to stretch the term to include all types and forms of electronic records to fall within the ambit of Section 62 and be admitted as "business records";
- the current Section 65 of the *Evidence Act* that provides for the admissibility and proof of *a statement contained in a document produced by a computer* (emphasis added) (i.e. computerised information) may not be extended to include the admissibility and proof of all types of electronic transactions generated communication – particularly so when such electronic transaction and communication is not generated by a computer

but through other mediums such as new generation smart mobile phones, flash drives, CDs, DVDs, internet, emails or digital cameras. The point of contention here is – if the statement is contained in a document that was initially drafted on a medium other than a computer but was eventually converted into a computer through an appropriate software application and was then printed from a computer – does that qualify such a statement to be *document produced by a computer* and therefore admissible within the existing Section 65 provision?;

- just as with the difficulty that we have with any attempts to stretch the application of Section 65 to accommodate electronic transactions generated electronic communications as expressed immediately above, we also have the same issues and difficulties with attempts to stretch Section 66 of the *Evidence Act* (proof of computer statements) to include all types of electronic communications. Obviously if the electronic communication related to an electronic transaction is not printed as a computer statement, but remains in its electronic form either on the internet or on a website, than it is clear that such would be clearly outside of the scope of the current Section 66 provision;

- electronic communications and electronic records as generally discussed in Chapter 4 of this Issues Paper (above) do present intrinsically separate and specific issues, concerns and complexities to the law of evidence concerning their admissibility and proof – away from the paper and ink generated documents and records. Therefore we are of the opinion that a separate legal regime may have to be contemplated based on the various UNCITRAL Model Laws and laws of the other countries of similar legal systems; and

- as a consequence of this point made immediately above, we propose that a separate legal regime may have to be established through these reforms to facilitate for the recognition and acceptance of electronic signatures based on the various UNCITRAL Model Laws as discussed at Chapter 4 paragraph 4.4 of the Issues Paper.

5.2 NCD Preliminary Consultations and Views and Comments

For purposes of framing this Issues Paper we conducted preliminary consultations within the National Capital District (NCD) in May 2008. At the NCD consultations with relevant stakeholders, the issue of reforms to the *Evidence Act* to cater for these new developments was raised. Most expressed the view that it is about time our country revised its current *Evidence Act* to permit the proof of Business and Electronic Records. The following are some of the arguments put forward:

(1) to cover new computer and digital technology;

(2) the aspects of admissibility of electronic records as evidence must be addressed, as electronic images can be altered and/or edited to reflect incorrect statements and images. Where there is hard copy as (secure) back up, this would begin to counter changes to otherwise solely electronic record. Reference to the use of firewalls and data security programs should be included to ensure that data are unadulterated. Secure data back – up systems in several locations should occur;

(3) in this day and age electronic revolution is taking place at a faster pace and therefore the laws of evidence needed to reviewed and amended to cater for such;

(4) Model laws from other jurisdictions need to be looked at closely and also what type of technologies are being introduced to be defined as business records, Electronic Records and Electronic Communications;

(5) In the past there was no email. Today we have email. The question then is does evidence constitute password as admissible in court of law. Secondly, bank card pin number which is only known to one person and the fact that no one knows about it, question is whether it is admissible in the court of law; and

(6) If other countries have done it, we will obviously come to use electronic records as evidence.

Issues 5.1 - 5.4
The CLRC now seeks your views, comments or detailed written submissions on:

5.1 whether and how the laws of evidence can or should be modified to permit the proof of:
- **(a) business records; and**
- **(b) electronic records and electronic communications (email)**

5.2 if the laws of evidence are to be modified, what should be done and how best should that be achieved;

5.3 if the laws of evidence are to be amended, propose and recommend the new provisions;

5.4 whether and how any relevant associated laws and practices should also be modified to achieve the reforms that may be proposed.

There is a need to ensure that provision is made for the legal recognition of electronic records and to facilitate the admission of such records into evidence in legal proceedings. As stated above, we are of the view that the provisions in the current *Evidence Act* – Sections 65 and 66 which provide for the admission and proof of computer generated statements and information – do not adequately provide for the admission and proof of the electronic records and electronic communication. Tape recording of evidence, may also be categorized as electronic record. New generation mobile phones that have an email/internet capacity can also be used to create electronic record, as well as through text messaging. There are many voice recording devices as well as telephone voice mail that can produce electronic record. It is presumed that electronic record can be written or printed out as video tapes, CD ROMS, DVD and hard copy. Sound recordings can also be "edited" and reproduced, as can composite devised images on the computer. Scanned and photocopied documents can become electronic records. New telephone equipment that has an internet facility may likewise too. Video cameras and electronic surveillance cameras/equipment produce digital evidence and are also in electronic form.

Most of the stakeholders we interviewed in our preliminary NCD Consultations to inform this Issues Paper in May 2008 stressed that our

legislation has not kept up with modern technology and software systems. However, current law practice incorporates modern process as far as associated legislation allows relating to aspects of copyright, intellectual property rights, ownership of legal rights or title. They further argued that there is a need for legal recognition of electronic records because:

(1) The process of interpretation, admissibility proof and weighting need to be adjusted to reflect technological changes. The processes of establishing authenticity and of the electronic record for purposes of admission as evidence with regard to accuracy and weight of evidence is paramount.

(2) there is a need to define what devices – computers, videos, DVDs, CDs, mobile phones etc, that would be considered as acceptable mediums for presenting acceptable (by laws) evidence that is considered legally reliable. Most businesses have access to such equipment and could provide records electronically. There may be the need to authenticate a scanned original document on occasion to avoid concealment on misrepresentation of facts. Changes to acceptance of a wider range of electronic record would avoid massive print files in court presentations.

(3) in relation to photographic and machine reproductions or electronic images, our *Evidence Act* must reflect current technologies such as colour photocopies, scanners, video cameras, digital cameras, and other equipment capable of high resolution images and copies.

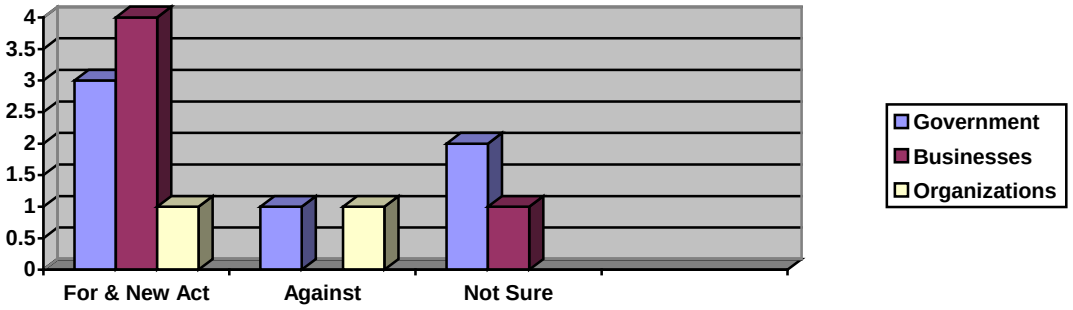
(4) The aspect of data security is not addressed, including penalties for falsifying documents illegal alteration of altering original electronic documentation.

Issues 5.5
The CLRC is seeking your views and comments on what should be done to address the issue of legal recognition of Electronic Records as Evidence. Should a new legislation based on the UNCITRAL Model Law on Electronic Commerce be enacted or should we amend the *Evidence Act* Chapter 48 and insert these new requirement under Division 5 of the Act

5.4 The Evidence Act and Model Laws

In our preliminary National Capital District consultation in May 2008, there were a lot of opinion expressed on whether or not the *Evidence Act* should be amended to address the issue of legal recognition of Electronic Records as evidence. Most of those consulted were of the view that we already have so many laws and there is no need to introduce another law again. All we have to do is revise the existing *Evidence Act* and other associated legislation and incorporate the relevant provisions relating to the proof of business and electronic records. Others however stated that apart from amending the Evidence Act, a new Act should also be enacted to cater for all issues relating to emerging information and communication technology and digital technology.

Below is a graph that demonstrates the different opinions expressed by organizations/business/department in relation to this issue:



The graph shows the number of stakeholders consulted during our National Capital District consultation and their opinions in regard to whether or not the *Evidence Act* needs to be modified. Out of the 13 consulted 8 were of the view that they wanted the *Evidence Act* to be amended to cater for the admissibility of Business and Electronic Records. They also stressed that there has to be a new Act enacted to cater for all other issues relating to advance information and communication technology.

The other 2 stated otherwise because of the reason that as it is the *Evidence Act* already provides for the proof of Business and Electronic Records and it is just a matter of extending these provisions to electronic records by inserting the necessary amendments to Sections 64, 65 and 66 of the *Evidence Act* to cater for electronic records as well.. The other 3 were just not sure whether we need to amend the Evidence Act or enact a new legislation.

Issues 5.6
Do you think we should amend the existing *Evidence Act* only and address the gaps only or enact a new Act that will incorporate provisions of all relevant model laws?

Appendices

Appendix 1 UNCITRAL Model Law on Electronic Commerce

UNCITRAL Mode Law on Electronic Commerce

PART ONE. ELECTRONIC COMMERCE IN GENERAL

CHAPTER I. GENERAL PROVISIONS

Article 1. Sphere of application

This law applies to any kind of information in the form of a data message used in the context of commercial activities.

Article 2. Definitions

For the purpose of this Law:

- "Date 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:
- "Electronic data interchange (EDI) means the electronic transfer from computer to computer of information using an agreed standard to structure the information.
- "Originator" of a data message means a person by whom, or on whose behalf, the data message purports to have been sent or generated prior to storage , if any, but it does not include a person acting as an intermediary with respect to that data message;

- "Addressee" of a data message means a person who is intended by the originator or receive that data message, but does not include a person acting as an intermediary with respect to that data message;
- "Intermediary" with respect to a particular date message, means a person who , on behalf of another person, sends, receives or stores that data ,message provides other services with respect to that date message.
- "Information system" means a system for generating, sending, receiving, storing or otherwise processing data messages.

Article 3. Interpretation

- In the interpretation of this Law, regard is to be had to its international origin and to the need to promote uniformity in its application and the observance of good faith.
- Questions concerning matters governed by this Law which are not expressly settled in it are to be settled in conformity with the general principles on which this law is based.

Article 4. Variation by agreement

(1) As between parties involved in generating, sending, receiving, storing or otherwise processing data messages, and except as otherwise provided, the provisions of chapter III may be varied agreement.

(2) Paragraph (1) does not affect any right that may exist to modify by agreement any rule of law referred to in chapter II0

CHAPTER II. APPLICATION OF LEGAL REQUIREMENTS TO DATA MESSAGES

Article 5. Legal recognition of data message

Information shall not be denied legal effect, validity or enforceability solely on the grounds that it is in the form of a data message.

Article 5 bis. Incorporation by reference

(as adopted by the Commission at its thirty-first session, in June 1998)

Information shall not be denied legal effect, validity or enforceability solely on the grounds that it is not contained in the data message purporting to give rise to such legal effect, but is merely referred to in that data message.

Article 6. Writing

(1) Where the law requires information to be in writing, that requirement is met by a data message if the information contained therein is accessible so as to be usable for subsequent reference.

(2) Paragraph (1) applies whether the requirement therein is in the form of an obligation not being in writing.

(3) The provision of this article do not apply to the following:

Article 7 Signature

(1) Where the law requires a signature of a person, that requirement is met in relation to a data message if:

(a) a method is used to identify that person and to indicate that person's approval of the information contained in the data message; and

(b) that method is a reliable as was appropriate for the purpose for which the data message was generated or communicated, in the light of all the circumstances, including any relevant agreement.

(2) Paragraph (1) applies whether the requirement therein is in the form of an obligation or whether the law simply provides consequences for the absence of a signature.

(3) The provisions of this article do not apply to the following:

Article 8 Original

(1) Where the law requires information to be presented or retained in its original form, that requirement is met by a data message if:

(a) there exists a reliable assurance as to the integrity of the information from the time when it was first generated in its final form, as a data message or otherwise; and

(b) where it is required that information be presented, that information is capable of being displayed to the person to whom it is to be presented.

(2) Paragraph (1) applies whether the requirement therein is in the form of an obligation or whether the law simply provides consequences for the information not being presented or retained in its original form.

(3) For the purpose of subparagraph (a) of paragraph (1) :

(a) the criteria for assessing integrity shall be whether the information has remained complete and unaltered, apart from the addition of any endorsement and any change which arise in the normal course of communication, storage and display; and

(b) the standard of reliability required shall be assessed in the light of the purpose for which the information was generated and in the light of all the relevant circumstances.

(4) The provisions of this article do not apply to the following: […]

Article 9. Admissibility and evident weight of data messages

(1) In any legal proceedings, nothing in the application of the rules of evidence shall apply so as to deny the admissibility of a data message in evidence:

(a) on the sole ground that it is data message; or

(b) if it is the best evidence that the person adducing it could reasonably be expected to obtain, on the grounds that it is not in its original form.

(2) Information in the form of a data message shall be given due evidential weight. In assessing the evidential weight of a data message, regard shall be had to the reliability of the manner in which the integrity of the information was maintained, to the manner in which its originator was identified, and to any other relevant factor.

Article 10. Retention of data messages

(1) Where the law requires that certain documents, records or information be retained, that requirement is met by retaining data messages, provided that the following conditions are satisfied:

(a) the information contain therein is accessible so as to be usable for subsequent reference; and

(b) the data message is retained in the format in which it was generated, sent or received, or in a format which can be demonstrated to represent accurately the information generated, sent or received; and

(c) such information, if any, is retained as enables the identification of the origin and destination of a data message and the date and time when it was sent or received.

(2) An obligation to retain documents, records or information in accordance with paragraph (1) does not extend to any information

the sole purpose of which is to enable the message to be sent or received.

(3) A person may satisfy the requirement referred to in paragraph (1) by using the services of any other person, provided that the conditions set forth in subparagraphs (a), (b) and (c) of paragraph (1) are met.

CHAPTER III. COMMUNICATION OF DATA MESSAGES

Article 11. Formation and validity of contracts

(1) In the context of contract formation, unless otherwise agreed by the parties, an

offer and the acceptance of an offer may be expressed by the means of data messages. Where a data messages is used in the formation of a contract, that contract shall not be denied validity or enforceability on the sole ground that a data message was used for that purpose.

(2) The provision of this article do not apply to the following.

Article 12. Recognition by parties of data messages

(1) As between the originator and the addressee of a data message, a declaration of will or other statement shall not be denied legal effect, validity or enforceability solely on the grounds that it is in the form of a data message.

(2) The provisions of this article do not apply to the following:

Article 13. Attribution of data messages

(1) A data message is that of the originator if it was sent by the originator itself.

(2) As between the originator and the addressee, a data message is deemed to be that of the originator if it was sent:

(a) by a person who had the authority to act on behalf of the originator in respect of that data message; or

(b) by an information system programmed by, or on behalf of, the originator to operate automatically.

(3) As between the originator and the addressee, an addressee is entitled to regard a data message as being that of the originator, and to act on that assumption, if:

(a) in order to ascertain whether the data message was that of the originator, the addressee properly applied a procedure previously agreed to by the originator for that purpose; or

(b) the data message as received by the addressee resulted from the actions of a person whose relationship with the originator or with any agent of the originator enable that person to gain access to a method used by the originator to identify data messages as its own.

(4) Paragraph (3) does not apply;

(a) as of the time when the addressee has both received notice from the originator that the data message is not that of the originator, and had reasonable time to act accordingly; or

(b) in a case within paragraph (3) (b), at any time when the addressee know or should have known, had it exercised reasonable care or used any agreed procedure, that the data message was not that of the originator.

(5) Where a data message is that of the originator or is deemed to be that of the originator, or the addressee is entitled to act on the assumption, then, as between the originator and the addressee is entitled to regard the data message as received as being what the originator intended to send, and to act on that assumption. The addressee is not so entitled when it knew or should have know, had it exercised reasonable care or used any agreed procedure, that the transmission resulted in any error in the data message as received.

(6) The addressee is entitled to regard each data message received as a separate data message and to act on that assumption. Except to the extent that it duplicates another data message and the addressee knew or should have known, had it exercised reasonable care or used any agreed procedure, that the message was a duplicate.

Article 14. Acknowledgement of receipt

(1) Paragraphs (2) and (4) of this article apply where, on or before sending a data message, or by means of that date 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 acknowledge, the data message is treated as though it has never been sent, until the acknowledgment 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 acknowledge 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 acknowledge states that the related 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 form the data message or from the acknowledge of its receipt.

Article 15. Time and place of dispatch and receipt of data message

(1) Unless otherwise agreed between the originator and the addressee, the dispatch of a data message occurs when it enters and information system outside the control of the originator or of the person who sent the data message on behalf of the originator.

(2) Unless otherwise agreed between the originator and the addressee, the time of receipt of a data message is determined as follows;

(a) if the addressee has designated an information system for the purpose of receiving data messages, receipt occurs:

(i) at the time when the data message enters the designated information system; or

(ii) if the data message is sent to an information system of the addressee that is not the designated information system, at the time when the data message is retrieved by the addressee.

(b) if the addressee has not designated an information system, receipt occurs when the data message enters an information system of the addressee.

(3) Paragraph (2) applies notwithstanding that the place where the information system is located may be different from the place where the data message is deemed to be received under paragraph (4).

(4) Unless otherwise agreed between the originator and the addressee, a data message is deemed to be dispatched at the place where the originator has its place of business, and is deemed to be received at the place where the addressee has its place of business. For the purpose of this paragraph :

(a) if the originator or the addressee has more than one place of business, the place of business is that which has the closest relationship to the underlying transaction or, where there is no underlying transaction, the principal place of business

(b) If the originator or the addressee does not have a place of business, reference is to be made to its habitual residence.

(5) The provision of this article do not apply to the following: […]

PART TWO. ELECTRONIC COMMERCE IN SPECIFIC AREAS.

CHAPTER I. CARRIAGE OF GOODS

Article 16. Actions related to contracts of carriage of goods

Without derogating from the provisions of part one of this Law, this chapter applies to any action in connection with, or in pursuance of, a contract of carriage of goods, including but not limited to;

(a) (i) furnishing the marks, number, quantity or weight of goods;
(ii) stating or declaring the nature of value of goods
(iii) Issuing a receipt for goods
(iv) confirming that goods have been loaded

(b) (i) notifying a person of terms and conditions of the contract;
(ii) giving instructions to a carrier;

(c) (i) claiming delivery of goods;
(ii)authorizing release of goods;
(iii)giving notice of loss of, or damage to, goods;

(d) giving any other notice of statement in connection with the performance of the contract;

(e) under-taking to deliver goods to a named person or a person authorized to claim delivery;

(f) granting, acquiring, renouncing, surrendering, transferring or negotiating rights in goods;

(a) acquiring or transferring rights and obligations under the contract.

Article 17. Transport documents

(1) Subject to paragraph (3), where the law requires that any action referred to in article 16 be carried out in writing or by using a paper document, that requirement is met if the action is carried our by using one or more data messages.

(2) Paragraph (1) applies whether the requirement therein is in the form of an obligation or whether the law simply provides consequences for failing either to carry out the action in writing or to use a paper document.

(3) If a right is to be granted to, or an obligation is to be acquired by, one person and no other person, and if the law requires that, in order to effect this, the right or obligation must be conveyed to that person by the transfer, or use of, a paper document, that requirement is met if the right or obligation is conveyed by using one or more data messages, provided that a reliable method is used to render such data message or messages unique.

(4) For the purpose of paragraph (3), the standard of reliability required shall be assessed in the light of the purpose for which the right or obligation was conveyed and in the light of all the circumstances, including any relevant agreement.

(5) Where one or more data messages are used to effect any action in subparagraphs (f) and (g) of article 16, no paper document used to effect any such action is valid unless the use of data message has been terminated and replaced by the use of paper documents. A paper document issued in these circumstances shall contain a statement of such termination. The replacement of data messages by paper documents shall not affect the rights or obligations of the parties involved.

(6) If a rule of law is compulsorily applicable to a contract of carriage of goods which is in , or is evidenced by, a paper document, that rule shall not be inapplicable to such a contract of carriage of goods which is evidenced by one or

more data messages or messages instead of by a paper document .

(7) The provision of this article do not apply to the following: […].