

**THE IMPORTANCE OF THE CONCEPT OF “FUNCTIONAL  
EQUIVALENCE” FOR THE SOUTH AFRICAN APPROACH TO FORM  
AND WRITING**

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## **DIE BELANG VAN DIE KONSEP VAN “FUNKSIONELE GELYKHEID” VIR DIE SUID-AFRIKAANSE BENADERING TOT VORMVEREISTES EN OPSKRIFSTELLING**

Elektroniese kommunikasie en handel is 'n verskynsel wat eksponensieel toegeneem het oor die laaste dekade saammet die ontwikkeling en uitbreiding van die Internet. Ten einde kompetend te wees in die internasionale arena is dit belangrik dat Suid-Afrika 'n klimaat skep waarin elektroniese handel kan floreer.

Daar bestaan egter die perspie dat die huidige regsbedeling onvanpas en onvoldoende is om die kwessies wat ontstaan as gevolg van elektroniese handel te kan hanteer. In 1996 het die kommissie van die Verenigde Nasies gemoeid met internasionale handel, UNCITRAL die *Modelwet oor Elektroniese Handel* gefinaliseer. Sederdien is die Modelwet opgeneem in wetgewing of het wetgewing beïnvloed in verskeie lande.

Een van die onderliggende beginsels waarop die *Modelwet* gebaseer is, is “funksionele gelykheid” ten einde met snel veranderende tegnologie tred te hou. Hierdie beginsel behels dat in ons soektog na regsoplossings, papier-gebaseerde oplossings nie netso nageboots moet word nie maar dat daar eerder gestreef word na ekwivalente regsoplossings binne die tegnologies raamwerk.

Die *Wet op Elektroniese Kommunikasie en Transaksies* is die Suid-Afrikaanse antwoord op hierdie internasionale verwickelinge. Die oogmerk van hierdie skripsie is om artikels 11 tot 13, 18 en 19 van die *Wet* te bestudeer en te vergelyk met die *Modelwet*. Verder om te ondersoek tot watter mate die doelwitte van die Groenskrif behaal is en in welke mate die *Wet* die behoeftes van die breër gemeenskap aanspreek, soos dit blyk uit die kommentaar op die Groenskrif. Die Suid-Afrikaanse benadering is

gebaseer op internasionale voorbeelde en afwykings daarvan word ook bespreek.

Hoewel die persepsie bestaan dat die Suid-Afrikaanse reg nie toegerus is om die veranderings te kan hanteer nie, is dit meerendeels net 'n persepsie. Suid-Afrika beskik oor 'n inherent aanpasbare gemenereg. In my opinie, sou opskrifstelling in 'n elektroniese omgewing nie 'n probleem geskep het binne die gemenereg nie. Dit blyk dat meer onsekerheid oor die aard van handtekeninge bestaan. Dit is waarskynlik dat gevorderde elektroniese handtekeninge (soos in die *Wet* bespreek) in ieder geval erken sou word. Die nuwe Suid-Afrikaanse *Wet* oor elektroniese handel ruim egter enige onsekerheid uit die weg.

Die Suid-Afrikaanse *Wet* maak gebruik van verskeie internasionale bronne maar die UNCITRAL Modelwet dien as vertrekpunt. Daar blyk eenstemmigheid in Amerika, die Europese Unie en Australië te wees dat "funksionele gelykheid" die beste manier is om veranderende tegnologie te hanteer.

Die beginsel van "funksionele gelykheid" is die goue draad wat deur nie alleen die UNCITRAL *Modelwet* maar ook deur die Suid-Afrikaanse wetgewing geweef is. Die Suid-Afrikaanse wetgewing voeg verskeie beskermingsmeganismes ten einde verbruikers te beskerm teen die gevare van 'gesiglose handel'.

Elektroniese skrif word as die ekwivalent van skrif op papier erken. Suid-Afrikaanse wetgewing identifiseer die volgende basiese funksies van handtekeninge, naamlik:

- Om die persoon te identifiseer; en
- Om die persoon se goedkeuring van die inligting te kommunikeer.

'n Addisionele vereiste dat elektroniese handtekeninge so betroubaar as wat gepas was onder die omstandighede moet wees, word bygevoeg.

Suid-Afrikaanse wetgewing spreek ook die kwessies van notariële praktyk, oorspronklikke, sertifisering en geregistreerde pos aan.

In geheel behoort die bepalings rakende vormvereistes positief ontvang te word in die mark aangesien "funksionele gelykheid" behoorlik geïmplementeer word en 'n juiste basis is.

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# THE IMPORTANCE OF THE CONCEPT OF “FUNCTIONAL EQUIVALENCE” FOR THE SOUTH AFRICAN APPROACH TO FORM AND WRITING

## 1. Introduction

Electronic communications and commerce is a phenomenon that has grown exponentially over the past decade with the development and expansion of the Internet. It is generally recognised that electronic trade will play an ever increasing role in national and international trade, not only in South Africa, but world-wide.

In order to remain competitive in international markets, it is important that South Africa create an economic and legal climate within which electronic communications and trade can flourish. The South African legal development and policy on e-commerce will, therefore, be of vital importance to ensure an increase in international trade and sustained economic growth.

However, there is a perception that the current legal position is inadequate and inappropriate to deal with the legal issues raised by electronic commerce and communications. This perception does not exist only locally, but also internationally. As a result numerous projects have been undertaken since about 1990 to make provision for these developments.

In 1996, the United Nations Commission on International Trade Law (UNCITRAL) finalised the *Model Law on Electronic Commerce*. Since then, the *Model Law* has substantially influenced the legislation of, or has been adopted in, amongst others, Australia, Bermuda, Columbia, France, Hong Kong Special Administrative Region of China, Ireland, the Philippines, the Republic of Korea and South Africa. Furthermore, uniform legislation,

influenced by the *Model Law* and the principles on which it is based, has been adopted in Canada and the United States of America (USA). It has been enacted as law within a number of jurisdictions within those countries.

One of the core principles on which the *Model Law* is based, is the concept of “functional equivalence” as a means of dealing with changing technology<sup>1</sup>. This entails that, in the search for legal solutions for the issues caused by electronic trade and communications, paper-based solutions should not be imitated, but solutions that create the equivalent legal solutions for electronic communications should rather be favoured. Furthermore, these solutions need to be technologically neutral in order to cater for the ever-changing face of technology<sup>2</sup>.

The *South African Electronic Communications and Transactions Act* (ECTA) 25 of 2002 was promulgated by the President on 2 August 2002. The Act is substantially based on the UNCITRAL Model Electronic Law, although it goes much wider than the *Model Law* in dealing with issues not covered by the *Model Law* such as consumer protection, electronic governance and computer crime.

The concept of “functional equivalence”, as introduced by the UNCITRAL *Model Law*, has formed the basis of several pieces of legislation internationally. “Functional equivalence” may prove to be a powerful tool for the future of electronic commerce and as such should be considered seriously. The manner in which the concept of “functional equivalence” is to be utilised in the ECTA, will be investigated and it will be established to what extent that principle has successfully been embodied in the ECTA.

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<sup>1</sup> Guide to Enactment, s1, par16.

<sup>2</sup> Edward Nathan & Friedland 2001 HYPERLINK <http://www.ecomm-debate.co.za/docs/report.html> 4 February.

In order to narrow the scope of this thesis, sections 11 to 13, 18 and 19 of the ECTA Electronic Commerce and Transactions Act will be analysed and compared with the corresponding provisions of the *UNCITRAL Model Law on Electronic Commerce*. These sections have been selected because they deal with the legal recognition of electronic messages, writing, signatures, originals, notarisation, acknowledgement and certification. These sections will also be analysed to establish to what extent the goals set in the Green Paper have been attained. Furthermore, consideration will be given to the manner in which the Act responds to the issues raised by the broader community in their submissions in response to the Green Paper. Finally, it is important to establish to what extent South African legislation relies on and follows international practice, such as the example set by the *UNCITRAL Model Law on Electronic Commerce*. Deviations from international trends will be discussed.

## **2. Factual background**

### **2.1 *Development of e-commerce and e-commerce legislation***

From the submissions received in response to the Green Paper, Stavrou draws the following definition of e-commerce, which will be used as a working definition in the thesis<sup>3</sup>:

Electronic commerce covers any form of business or administrative transaction or information exchange that is executed using any information and communications technology.

The Internet has evolved as one of the most powerful electronic commerce instruments of our time. In 1962, the US Air Force commissioned the Rand Corporation to do a study on how the USA could maintain its command and

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<sup>3</sup> Stavrou & Jackson "Overview of Submissions Received on the South African e-Commerce Green Paper" 7.

control over missiles and bombers during and after a nuclear attack. As a result a nation-wide computer network, ARPANET was created. This network would keep functioning, even if a large portion of it were to be destroyed. Initially, mostly academic institutions, scientists and the US government used the network. Only in 1992, when the US government did not manage the network any longer and commercial entities offered Internet access to the public, was the World Wide Web (WWW) proposed by the European Laboratory for Particle Physics (CERN) in Geneva, Switzerland.

The first sustainable e-mail link in South Africa was made in 1988. The first networks were used mostly by academic institutions. In the initial stages South African access to the world-wide Internet was also restricted, due to political conditions. That however is something of the past and over recent years South Africa has shown tremendous growth in the use of Internet communications and e-commerce. By 1999 South Africa was reported to have had in excess of one million users, a number that has escalated ever since<sup>4</sup>.

The growth in e-commerce has necessitated the development of appropriate legislation. For the purposes of this thesis, it is important to identify the different approaches to legislation. The application of the principle of "functional equivalence" to the requirements of writing and signatures must be seen against this background. Le Roux<sup>5</sup> identifies three broad approaches to legislation regarding electronic commerce:

(a) The first is the so-called 'digital signature' or 'prescriptive' approach. The legislation based on this approach recognises digital signatures within a Public Key Infrastructure as the only authentication mechanism. Countries

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<sup>4</sup> Buys R (editor) *Cyberlaw @ SA: the Internet and the Law in South Africa* 33 –34.

<sup>5</sup> Le Roux Sept 2000 *De Rebus* 26.

that have enacted such legislation include Argentina, Germany, Italy and Malaysia.

(b) The second approach may be referred to as the 'two-tier' approach. Legislation based on this approach is technologically neutral in the sense that it grants a minimum level of legal recognition to most authentication techniques. However, it grants further benefits as well as more legal certainty to the authentication methods that it regards as more secure and reliable. Examples of the above are the 1999 *EU Directive on Electronic Signatures*<sup>6</sup> and the *UNCITRAL Model Law on Electronic Signatures*.

(c) Thirdly, the 'minimalist' or 'functional' approach focuses on the way in which the functions of the paper-based transaction may be translated into technological applications. The *UNCITRAL Model Law on Electronic Commerce*<sup>7</sup> has favoured this approach. The *Model Law* relies on "functional equivalents". Once the functions and purpose of paper-based form requirements are identified, criteria for data messages are drafted. Thus, for instance data messages that fulfil the same functions and purpose as corresponding paper-based documents or procedures such as signature should enjoy the same legal recognition<sup>8</sup>.

These approaches differ with regard to the level of involvement of the authorities as well as the limits set by prescriptive rules. The South African legislators struck the happy medium by following the two-tiered approach, as will be elaborated on below.

Since its adoption in 1996, the *UNCITRAL Model Law on Electronic Commerce* has been an influential tool in e-commerce legislation world-

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<sup>6</sup> Le Roux Sept 2000 *De Rebus* 26.

<sup>7</sup> UNCITRAL 1996 [http://www.uncitral.org/english/texts/electscom/ml\\_ecomm.htm](http://www.uncitral.org/english/texts/electscom/ml_ecomm.htm) 14 March. HYPERLINK

<sup>8</sup> Le Roux Sept 2000 *De Rebus* 27.

wide. The *Model Law* aims to supply national legislators with internationally acceptable rules for e-commerce, to remove certain obstacles and to provide the framework for more secure dealings.

## **2.2 Development of South African e-commerce legislation**

In South Africa, a number of different state departments share the responsibility for the various aspects of e-commerce. In May 1998, the Department of Communications received a mandate to establish an Information Technology investment cluster. The aim was to develop coherent legislation for the information society. After research and gathering information, a government task team drafted a discussion document to facilitate the debate on e-commerce<sup>9</sup>. Following the issue of the discussion paper in July 1999, the Green Paper saw the light in October 2000<sup>10</sup>. The Electronic Communications and Transactions Bill<sup>11</sup> was published in the *Government Gazette* on 1 March 2002. The Portfolio Committee on Communications of the National Assembly subsequently amended the Bill<sup>12</sup>. The Act in its final form was promulgated on 2 August 2002.

## **2.3 Perceived legal problems**

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<sup>9</sup> Buys R (editor) *Cyberlaw @ SA: the Internet and the Law in South Africa* 97 – 105.

<sup>10</sup> Department of Communications "Green Paper on E-Commerce - Making it your business" November 2000 12; The Minister of Communications, Dr Ivy Matsepe-Casabouri, wrote in her foreword to the Green Paper that e-commerce has created a marketplace that challenges many of our preconceived notions and practices. The Green Paper raises a number of the questions and issues embedded in the 'new marketplace'. She stated that the Green Paper aimed to throw the discussion open as wide as possible. Chapter 2 sets out the legal foundation and the perceived uncertainties pertaining to e-commerce. The Green Paper was published in October 2000 and submissions were awaited until 31 March 2001. In the overview of the submissions received the legal framework is cited as one of the top five topics and 18 submissions were received on this topic. Stavrou & Jackson "Overview of Submissions Received on the South African e-Commerce Green Paper".

<sup>11</sup> Bill 8 of 2002.

<sup>12</sup> Electronic Communications and Transactions Bill 8b of 2002.

As pointed out by the Green Paper, the current legal framework was founded with paper-based commercial transactions in mind<sup>13</sup>. As a result, there was a perception that it was necessary to formulate a new legal framework to include electronic transactions, in other words, to make provision for the legal recognition of electronic messaging, defining electronic messages as writing and recognising electronic signatures, amongst others.

In legislation, the common law as well as in contracts, words such as "writing" and "signatures" are frequently used. These words are open to interpretation and there have been concerns that they might only be applicable to paper-based transactions. It was feared that non-compliance with these requirements might affect the validity or enforceability of transactions.

### **3. South African position in respect of formalities prior to the *Electronic Communications and Transactions Act (ECTA)***

#### **3.1 Introduction**

In general, the validity of a contract does not depend on any formalities<sup>14</sup>. The contract comes into being when two or more parties agree to be bound to each other<sup>15</sup>. Public policy requires that people should have the freedom of contract to bind themselves in all legitimate matters<sup>16</sup>. Therefore, agreements concluded in earnest will, according to the general principles, be binding, irrespective of the way in which the parties have communicated their respective intentions to each other. This means that, in principle,

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<sup>13</sup> Department of Communications "Green Paper on E-Commerce - Making it your business" November 2000 17.

<sup>14</sup> Joubert W A (ed) *The Law of South Africa* Vol 5 Part 1 219; Christie *The Law of Contract* 27.

<sup>15</sup> *Reid Bros (SA) Ltd v Fischer Bearings Co Ltd* 1943 AD 232 at 241.

<sup>16</sup> *Law Union and Rock Insurance Co Ltd v Carmichael's Executor* 1917 AD 593.

1. mark (letters, words or other symbols) on a surface with a pen, pencil or similar implement...;
2. compose (a text or work) in writing...

In addition, “writing” is defined as follows:

1. The activity or skill of writing;  
written work, esp with regard to its style or quality;  
a sequence of letters or symbols forming coherent words.

From the above definitions, it appears as if writing not only refers to a physical skill with a pen or pencil, but also to composition (in unspecified form).

As with formalities in general, the purpose of writing firstly is to simplify the burden of proof<sup>20</sup>. Christie describes the purpose of writing as follows:

The only justification for prescribing formalities can be to ensure reliable evidence of the contract and so cut out wasteful litigation...<sup>21</sup>

A document is a contract only once it has been established that it is “...a reduction to writing or integration of the contract”<sup>22</sup>.

Where there are no statutory requirements for a contract to be in writing, it is presumed that the parties did not require writing as a prerequisite for the conclusion of the contract<sup>23</sup>. The parties, or one of them, may insist on formalities such as a written and signed document. In that case, no contract

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<sup>20</sup> Christie R H *The Law of Contract in South Africa* 115.

<sup>21</sup> Christie R H *The Law of Contract in South Africa* 119 – 120.

<sup>22</sup> Christie R H *The Law of Contract in South Africa* 214. Where a statute requires that a contract must be in writing any modification of the contract must also be in writing. *Neethling v Klopper* 1967 4 SA 459 (A); *Venter v Birchholtz* 1972 1 SA 276 (A); Joubert W A (ed) *The Law of South Africa* Vol 5 Part 1 223.

<sup>23</sup> Joubert W A (ed) *The Law of South Africa* Vol 5 Part 1 219; Christie *The Law of Contract* 27; Grotius 3 14 26; *Woods v Walters* 1921 AD 303; *Schlinkmann v Van der Walt* 1947 2 SA 900 (EDL).

will come into being unless the formalities are complied with<sup>24</sup>. If the parties included the requirement that the contract or amendments will only be valid if it is in writing and signed, the contract or amendment will be null and void if that requirement is not met<sup>25</sup>. The parties' true intention is a question of fact<sup>26</sup>.

The “parol evidence” rule illustrates the significance attached to written contracts. Corbett JA described the principle of the “parol evidence” rule as follows in *Johnston v Leal*<sup>27</sup>:

It is clear to me that the aim and effect of this rule is to prevent a party to a contract which has been integrated into a single and complete written memorial from seeking to contradict, add to or modify the writing by reference to extrinsic evidence and in that way to redefine the terms of the contract...

Where a document purports to be a comprehensive record of the transaction, it is accepted that the contract is an “exclusive memorial”<sup>28</sup>. Although, even a “non-variation clause” does not exclude the possibility of rectification<sup>29</sup>.

Chissick & Kelman are of the opinion that English courts will probably, in keeping with international trends, deem on-line and other digital contracts

<sup>24</sup> *Goldblatt v Freemantle* 1920 AED 123 at 126 - 128; *R v Christie* 1959 2 SA 515 (A) at 518H - 519A; Edward Nathan & Friedland 2001 HYPERLINK <http://www.ecomm-debate.co.za/docs/report.html> 4 February.

<sup>25</sup> *Du Plessis v Nel* 1952 1 SA 513 (A); *Neethling v Klopper* 1967 4 SA 459 (A) 464; *Brisley v Drotsky* 2002 4 SA 1 (SCA); Kerr *The principles of the law of contract* (1989) 119. In *Golden Fried Chicken (Pty) Ltd v Sirad Fast Foods CC and Others* 2002 1 SA 822 (SCA) it was held that, with regard to the tacit relocation of a franchise agreement, non-variation and non-waiver clauses in the original agreement was not applicable as there was nothing left to waiver after the initial agreement came to an end.

<sup>26</sup> Joubert W A (ed) *The Law of South Africa* Vol 5 Part 1 219; *Electric Process Engraving and Stereo Co v Irwin* 1940 AD 220.

<sup>27</sup> 1980 3 SA 927 (A) 943B.

<sup>28</sup> *Avis v Verseput* 1943 AD 331 363; *Reilly v Seligson & Clare Ltd* 1977 1 SA 626 (A) 628.

<sup>29</sup> *Leyland (SA) (Pty) Ltd v Rex Evans Motors (Pty) Ltd* 1980 4 SA 271 (T).

as “writing”<sup>30</sup>, an example that might well have been followed in South Africa, if necessary.

Whether the letters are written by hand or typed on a computer, the fact remains that the document is in writing. The parties have the freedom to contract, as they deem fit, including giving preference to technology rather than paper. The functions of writing will be fulfilled whether the written words are saved on a computer or printed on paper. It must be concluded that the South African law, apart from the ECTA, should, in any event, regard an electronic document as being in writing.

### **3.3 Signatures**

Before the ECTA the South African law had not defined or expressly recognised “electronic signatures”. In order to evaluate the concept of an electronic signature, it firstly is necessary to consider the meaning of “signature” in the traditional sense of the word, as well as the purpose of signatures.

#### *3.3.1 What constitutes a signature?*

Van der Merwe<sup>31</sup> is of the opinion that a signature in the South African law is a “mark” created by a person intending it to be considered as a binding signature. Dictionaries give the following meaning to “sign”:

...to write one's name as a signature to a document in attestation, confirmation, ratification<sup>32</sup>.

According to Christie<sup>33</sup>,

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<sup>30</sup> Chissick M & Kelman A *Electronic Commerce Law and Practice* 95.

<sup>31</sup> Buys R (editor) *Cyberlaw @ SA: the Internet and the Law in South Africa* 170.

<sup>32</sup> Alberts *ao Cyberlaw (2000)* 131.

<sup>33</sup> Christie R H *The Law of Contract in South Africa* 118.

...unless parties contemplate some particular form of signature, any sign or mark made with the intention of signifying assent to the document will suffice.

In the law of succession a number of pertinent cases, as discussed below, were heard on what constitutes a signature. Only in 1992 did the *Law of Succession Amendment Act*<sup>34</sup> introduce a definition of a signature to include the making of initials and, only in the case of the testator, the making of a mark<sup>35</sup>.

A liberal approach<sup>36</sup> was followed in *Jhajbhai v The Master*<sup>37</sup>, where the emphasis was on the mental element, i.e. whether the witness had the intention to sign his name. In this case names written in print were accepted<sup>38</sup>. Muller J held the following view<sup>39</sup>:

The intention of the witness in writing or signing his name is the criterion. If he intends his mode of writing or signing his name to represent his signature, it is effective as such.

In *Ex Parte Singh*<sup>40</sup>, it was held that it was sufficient for a witness to only initial the will as long as he had the intention to sign it. The words of Lord Chelmsford in *Hindmarsh v Charlton*<sup>41</sup> were cited:

The subscription must mean such a signature as is descriptive of the witness, whether by a mark or by initials, or by writing the full name.

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<sup>34</sup> Act 43 of 1992.

<sup>35</sup> S 2(e) of Act 43 of 1992.

<sup>36</sup> See also *Ex Parte Goldman and Kalmer NNO* 1965 1 SA 464 (W).

<sup>37</sup> 1971 2 SA 370 (D).

<sup>38</sup> Van der Merwe & Rowland *Die Suid-Afrikaanse Erfreg* 152.

<sup>39</sup> 1971 2 SA 370 (D) 372.

<sup>40</sup> 1981 1 SA 793 (W).

<sup>41</sup> (1861) 8 HL Cas 160 171.

In *Melville v The Master*<sup>42</sup> this approach was rejected by Friedman J, who pointed out that an intention cannot make a signature of something which is not. An objective approach was preferred<sup>43</sup>. It was held that “sign” and “initial” were two distinctly different actions<sup>44</sup>. It was also pointed out that the purpose of requiring the signature of a testator to a will, was not only to identify the testator, but also to indicate that the document was the will of the testator himself. This approach is open to criticism, because it takes a very literal view of signatures and initials. It may convincingly be argued that a signature and initials fulfil the same functions.

Signatures have been defined further, as follows in our case law:

In *Putter v Provincial Insurance Co. Ltd. and another*<sup>45</sup>, Colman AJ stated that:

Ordinarily a signature takes the form of a person's name written by him on the document. But this, the authorities show, is not the only way in which a document can be signed.

Colman AJ found that our law is the same as English law and that any mark on a document made with the purpose of attesting the document or identifying it as his act, may constitute a signature<sup>46</sup>.

Murray J in *Van Niekerk v Smit*<sup>47</sup> refers to authority that pencil signatures, signatures by initials or by means of a stamp, or by mark or by a party's writing below a printed heading, are all sufficient under the British Statute of Frauds. He concludes that signature in the South African law does not

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<sup>42</sup> 1984 3 SA 387 (C).

<sup>43</sup> See also *Dempers v The Master (1)* 1977 4 SA 444 (SWA) where it was held that a will was invalid where the witnesses only initialled each page and signed the last.

<sup>44</sup> Joubert W A (ed) *The Law of South Africa* Vol 31 par 231.

<sup>45</sup> 1963 3 SA 145 (W) 148.

<sup>46</sup> Kerr A J *The Principles of the Law of Contract* 85.

<sup>47</sup> 1952 3 SA 17 (T) 25.

necessarily mean that a person must write his Christian name and surname, but "...any mark which identifies it as an act of the party".

A thumbprint is held to be a signature<sup>48</sup>. Initials<sup>49</sup>, as well as a properly authenticated mark by an illiterate person<sup>50</sup>, is also held to be sufficient. Furthermore, it is suggested that, when one places one's name on a telegraph form to indicate who is sending the message, one "signs" the message<sup>51</sup>. A rubber stamp bearing a company's name is a sufficient signature to bind the company to the contract<sup>52</sup>.

In the English case *Goodman v J Eban Ltd*<sup>53</sup>, the court stated that:

The essential requirement of signing is the affixing in some way, whether by writing with a pen or pencil or by otherwise impressing upon the document, one's name or 'signature' so as personally to authenticate the document.

In *Re a Debtor*<sup>54</sup>, the English court held that a faxed copy of a signature satisfies the relevant statutory requirement. Laddie J state the following:

Once it is accepted that the close physical linkage of hand, pen and paper is not necessary for the form to be signed, it is difficult to see why some forms of non-human agency for impressing the mark on the paper should be acceptable while others not.

The conclusion drawn by Chissick and Kelman is that English courts attach value to the authentication that a signature symbolises rather than its

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<sup>48</sup> Kerr A J *The Principles of the Law of Contract* 85; *Putter v Provincial Insurance Co Ltd and another* 1963 3 SA 145 (W) 148.

<sup>49</sup> *Ariefdien v Soeker* 1982 2 SA 570 (C) 578A – E.

<sup>50</sup> *Matanda v R* 1923 AD 435; *Van Niekerk v Smit* 1952 3 SA 17 (T) 25.

<sup>51</sup> Kerr A J *The Principles of the Law of Contract* 85.

<sup>52</sup> *Associated Engineers Co Ltd v Goldblatt* 1938 WLD 139; *Jones v John Barr & Co (Pty) Ltd* 1967 3 SA 292 (W); Christie R H *The Law of Contract in South Africa* 224.

<sup>53</sup> [1954] 1 Q.B. 550 557.

<sup>54</sup> (No.2021 of 1995) [1996] 2 All ER 345 351.

physical manifestation<sup>55</sup>. This approach by the English may have some influence on the South African law.

It emerges that in South Africa in the past there have been differences in legal circles as to what should constitute a signature. It would, however, appear that a more liberal approach has emerged and is generally favoured.

### 3.3.2 *The purpose of traditional signatures*

A physical document of paper that is signed, may be regarded as important evidence, as it can be physically examined for authenticity, in order to connect it to the specific signatories of the contract. As pointed out by Homes JA in *Clements v Simpson*<sup>56</sup> with regard to the formalities required by the *Alienation of Land Act*<sup>57</sup>, "...this section is directed against uncertainty, disputes and possible malpractices".

As in the case of credit agreements, there are instances where the legislature intervened to protect consumers or purchasers. In such instances the purpose of the parties' signatures are to ensure that the consumer has the terms of the agreement in black and white before him and knows what he is concerning himself with<sup>58</sup>.

In general terms, signatures are used to identify the parties, authenticate documents and symbolise an intention to be legally bound<sup>59</sup>. The purpose of a signature, however, is dependent on the subjective intention of the signatory. Was his intention to authenticate a document, or bind himself to

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<sup>55</sup> Chissick M & Kelman A *Electronic Commerce Law and Practice* 96.

<sup>56</sup> 1971 3 SA 1 (A) 7.

<sup>57</sup> Act 68 of 1981.

<sup>58</sup> *Van Rooyen v Hume Melville Motors (Edms) Bpk* 1964 2 SA 68 (C); <sup>58</sup> Christie R H *The Law of Contract in South Africa* 141

<sup>59</sup> York S & Chia K (eds) *Hammond Suddards e-commerce* 51.

its contents, or to attest or witness the document, or simply signifying receipt?

### 3.3.3 *Electronic signatures*

Prior to the ECTA, Van der Merwe<sup>60</sup>, in considering electronic signatures, concluded that clicking on an icon in certain circumstances may be regarded as a signature, but pointed out that considerable evidentiary problems might arise. He was of the view that in

...dispensing with paper, we have also abandoned almost all guarantees of authenticity and reliability and [that] substitutes have to be found<sup>61</sup>.

Christianson and Mostert<sup>62</sup>, on the other hand, believe that electronic signatures would be accepted and submitted that:

...in the absence of specific statutory requirements with regard to 'signature', 'original' and/or 'writing'... the law will have regard to substance rather than the form of a signature.

In addition they argue that digital signatures provided by respectable certification authorities contain all the common law indicia required to serve the same purpose. As a result, they believe that such digital signatures should enjoy the same recognition and evidential weight as a paper-based signature<sup>63</sup>.

Here are a number of examples to illustrate how important it is that electronic signatures be accepted by our courts as binding:

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<sup>60</sup> Buys R (editor) *Cyberlaw @ SA: the Internet and the Law in South Africa* 170.

<sup>61</sup> Buys R (editor) *Cyberlaw @ SA: the Internet and the Law in South Africa* 172.

<sup>62</sup> Christianson & Mostert May 2000 *De Rebus* 26.

<sup>63</sup> Christianson & Mostert May 2000 *De Rebus* 26.

### 3.3.3.1 *Alienation of Land Act*<sup>64</sup>

Subject to the conditions laid down in section 28 of the Act<sup>65</sup>, no alienation of land shall be valid unless it is contained in a deed of alienation and signed by the parties or by their agents acting on written authority.

### 3.3.3.2 *Credit Agreements Act*<sup>66</sup>

The Act requires that every credit agreement must be in writing and signed by all parties. A failure to comply, does not render the document invalid, but bear other might other consequences such as rendering the parties liable to fines.

### 3.3.3.3 *Formalities in Respect of Leases of Land Act*<sup>67</sup>

The Act provides that a lease shall not be invalid merely because it is not in writing. However, a long lease (either a lease for a period of ten years or longer, or a lease belonging to one of the categories of long leases identified in the Act) shall not be valid against a creditor or successor under onerous title of the lessor for a period of longer than ten years, unless the lease is registered against the title deed of the property concerned. If the creditor or lessor had knowledge of the lease at the time of becoming the creditor or lessor, the afore-mentioned provision will not apply<sup>68</sup>.

### 3.3.3.4 *General Law Amendment Act*<sup>69</sup>

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<sup>64</sup> S2(1) of Act 68 of 1981.

<sup>65</sup> S28 provides for the case where the informal contract is partly or fully performed.

<sup>66</sup> S5(1)(a) of Act 75 of 1980.

<sup>67</sup> Act 18 of 1969.

<sup>68</sup> Joubert W A (ed) *The Law of South Africa* Vol 5 Part 1 220.

<sup>69</sup> S5 of Act 50 of 1956.

The *General Law Amendment Act* provides that a donation that is not completed by delivery at the time it is entered into, will be null and void unless it is in writing and signed by the donor. An agent of the donor may sign the document if he has a written authority of the donor signed in the presence of two witnesses<sup>70</sup>. The *General Law Amendment Act*<sup>71</sup> also requires that a contract of suretyship must be in writing and signed by the surety<sup>72</sup>.

Some statutes refer to the signature of documents but, although others only refer to written documents, there is authority to support the supposition that in these cases signature might be required as well<sup>73</sup>.

The South African legal system does not prescribe a specific way in which a contract should be signed. In light of the above discussion, it is possible to sign a document using your name, surname, a rubber stamp or even a cross. Therefore, from a legal point of view, there is no reason why new types of signatures may not be introduced. The law attaches a value to the intent behind the symbol<sup>74</sup>.

According to Pretorius<sup>75</sup>:

In this framework, natural persons can decide to conclude their contracts using only computers, either in the negotiation or in the conclusion phase. Contractors can mutually accept the digital signature instead of the hand-written one, simply inserting a clause that gives to digital signature the same powers and functions as hand-written signature.

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<sup>70</sup> Joubert W A (ed) *The Law of South Africa* Vol 5 Part 1 219.

<sup>71</sup> S6 of Act 50 of 1956.

<sup>72</sup> Joubert W A (ed) *The Law of South Africa* Vol 5 Part 1 219; cf *Orkin Lingerie Co (Pty) Ltd v Melamed and Hurwitz* 1963 1 SA 324 (W); *Jurgens v Volkskas Bank Ltd* 1993 1 SA 214 (A).

<sup>73</sup> *R v Christie* 1955 2 SA 515 (A); Kerr A J *Principles of the Law of Contract* 117.

<sup>74</sup> Alberts ao *Cyberlaw (2000)* 132.

<sup>75</sup> Alberts ao *Cyberlaw (2000)* 133.

Although on interpretation the argument could be made that an electronic signature identifies the person and links the person to the document in the same way as a hand-written signature, there was no legal certainty prior to the ECTA. Before the ECTA, parties could include a clause in their contracts permitting the use of digital signatures which would deal with the inter partes issues but it would not address the question whether the law would recognise an electronic signature as such, where required by statute.

### **3.4 Conclusion**

The report by Edward Nathan & Friedland Inc. on the South African law prior to the ECTA concludes that:

South Africa is blessed with an inherently flexible and dynamic common law (non-statutory) dispensation.

According to their report the South African law of contract appears to be “inherently capable” of addressing most of the current legal issues surrounding e-commerce<sup>76</sup>.

Even in the absence of the ECTA I believe that our courts would have accepted written electronic messages. However, the acceptance of electronic signatures would have been a far more complex issue and our courts might not have upheld these signatures.

## **4 UNCITRAL Model Law on Electronic Commerce**

### **4.1 Background and purpose**

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<sup>76</sup> Edward Nathan & Friedland 2001 HYPERLINK <http://www.ecomm-debate.co.za/docs/report.html> 4 February.

In 1990, a report by UNCITRAL identified four reasons that had prompted the requirement that contracts be in writing, namely, the desire to reduce disputes, to make parties aware of the consequences of their agreements, to provide evidence upon which third parties may rely upon the agreement, as well as to facilitate tax, accounting and regulatory processes<sup>77</sup>. As a result, the *Model Law on Electronic Commerce* was adopted by UNCITRAL in 1996<sup>78</sup>.

The General Assembly emphasised the need for uniformity and stated that it was:

Convinced that the establishment of a *Model Law* facilitating the use of electronic commerce that is acceptable to States with different legal, social and economic systems, could contribute significantly to the development of harmonious international economic relations.

States are under no obligation to make the *Model Law* part of their national law, but the resolution recommends that all states, in the interest of international uniformity, give favourable consideration to the *Model Law* when enacting or revising their national legislation<sup>79</sup>. As pointed out above, the *Model Law* has proven to be an influential document. Although South Africa is free to legislate, as it deems fit, section 233 of the Constitution<sup>80</sup> illustrates the importance which the *Constitution* attaches to the harmonisation of international law<sup>81</sup>.

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<sup>77</sup> Lloyd I *Legal Barriers to Electronic Contract* 137.

<sup>78</sup> The *Model Law on Electronic Commerce* was adopted by UNCITRAL and in resolution (51/162) adopted by the General Assembly on 16 December 1996.

<sup>79</sup> Buys R (editor) *Cyberlaw @ SA: the Internet and the Law in South Africa* 182.

<sup>80</sup> Act 108 of 1996.

<sup>81</sup> Buys R (editor) *Cyberlaw @ SA: the Internet and the Law in South Africa* 186.

From the submissions in response to the Green Paper, it appears that the *Model Law* was considered to be a sound benchmark<sup>82</sup>. An expert group, mandated by the Commonwealth Law Ministers, considered the UNCITRAL *Model Law* and found that the structure and principles of the *Model Law* would work well for common law countries. The group suggested only a limited number of changes. In reaching their conclusions the group benefited from work done, amongst others in Australia and the USA<sup>83</sup>.

The scope of the *Model Law* is limited to application to electronic messages "... used in the context of commercial activity"<sup>84</sup>. The *Guide to Enactment* provides the following with regard to the framework of the *Model Law* as it relates to aspects such as form<sup>85</sup>:

It should be noted that the techniques for recording and communicating information considered in the *Model Law*... may raise certain legal questions the answers to which will not necessarily be found in the *Model Law*, but rather in other bodies of law<sup>86</sup>.

In other words, the *Model Law* aims to complement national laws dealing with contract matters in such a manner as to promote international trade using e-commerce.

#### **4.2 "Functional Equivalence" principle discussed**

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<sup>82</sup> Stavrou & Jackson "Overview of Submissions Received on the South African e-Commerce Green Paper" 74. Although 'it is recognised that it is too wide and is vague on some issues'.

<sup>83</sup> Commonwealth Secretariat *Law in Cyber Space* 5.

<sup>84</sup> Faria 2002 HYPERLINK <http://www.irtp.com/events/ece/faria.htm> 20 February.

<sup>85</sup> Guide to Enactment, s I, par 14.

<sup>86</sup> The other bodies of law mentioned by the Guide include the law of contract of the specific country adopting the *Model Law*.

The *Guide to Enactment*<sup>87</sup> sets out the framework for the “functional equivalence” approach. As starting point, the *Model Law* observed that it should not attempt to interfere in the domestic legislation of States and that “...the wholesale removal of paper-based requirements” or the disturbance of “...the legal concepts and approaches underlying those requirements” should be avoided. It was however acknowledged that in certain instances the:

electronic fulfilment of writing requirements may necessitate the development of new rules<sup>88</sup>.

Paragraph 18 of the *Guide to Enactment* states that the “functional equivalence” approach was used in articles 6 to 8 (these are the provisions that deal with the concepts of “writing”, “signature” and “original”), but not throughout the *Model Law*.

The “functional equivalence” approach is based on the analysis of the purposes and functions of traditional paper-based requirements in order to establish how the electronic media may attain the same purposes or functions:

By definition, e-commerce is not amenable to the traditional concept of paper-based written signature, but verification of a party's identity and willingness to be bound remains<sup>89</sup>.

The Expert Group, appointed by the Commonwealth Law ministers, accepted “functional equivalence” as a guiding principle. They emphasised the importance that paper documents and electronic transactions should be treated equally by law and that one should not be given an advantage over

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<sup>87</sup> UNCITRAL 1996 HYPERLINK <http://www.uncitral.org/english/texts/electcom/ml-ecom.htm> 14 March.

<sup>88</sup> *Guide to Enactment*, s I, par 15.

<sup>89</sup> York S & Chia K (eds) *Hammond Suddards e-commerce* 51.

the other<sup>90</sup>. The objective of providing equal treatment for users of both paper-based documentation and computer-based information is also entrenched in the *Model Law on Electronic Signatures*<sup>91</sup>. With regard to electronic signature techniques, UNCITRAL found that their common purpose is to find functional equivalents for hand-written signatures as well as for other kinds of authentication mechanisms used in a paper-based environment, for example, seals or stamps<sup>92</sup>.

The Guide warns that electronic commerce should not be burdened with more stringent requirements than paper-based transactions and additional costs. The following example illustrates the approach<sup>93</sup>:

...for example, among the functions served by a paper document are the following: to provide that a document would be legible by all; to provide that a document would remain unaltered over time; to allow for the reproduction of a document so that each party would hold a copy of the same data; to allow for the authentication of data by means of a signature; and to provide that a document would be in a form acceptable to public authorities and courts.

The *Model Law* distinguishes between the different form requirements based on what is referred to as an “existing hierarchy”. The hierarchy of form requirements provides:

...distinct levels of reliability, traceability and unalterability with respect to paper-based documents.

The requirement for data to be in written form constitutes the “threshold requirement”. “Signed in writing”, “signed original” and “authenticated legal act” embody the more stringent form of requirements<sup>94</sup>. The embodiment of

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<sup>90</sup> Commonwealth Secretariat *Law in Cyber Space* 5.

<sup>91</sup> Guide to Enactment, *Model Law on Electronic Signatures*, par 5.

<sup>92</sup> Guide to Enactment, *Model Law on Electronic Signatures*, par 31.

<sup>93</sup> Guide to Enactment, s I, par 16.

<sup>94</sup> Guide to Enactment, s I, par 17.

the “functional equivalence” principle in the *Model Law* is illustrated in the provisions as discussed below.

### **4.3 Data messages, writing and signatures**

#### **4.3.1 Data messages**

Article 5 of the *Model Law* grants recognition to data messages as follows:

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

The Expert Group suggested that Commonwealth nations use “data”, “electronic record” or “electronic record system”, rather than “data message”. They believe that these words capture the concept better than “data message”<sup>95</sup>.

#### **4.3.2 Writing**

The Guide states that UNCITRAL's work regards writing as the “lowest level in a hierarchy of form requirements”<sup>96</sup>. Article 6 of the *Model Law* concentrates on three functions of writing, namely the functions that information is reproduced, read and stored. The article uses the phrase: ...“accessible so as to be usable for subsequent reference”.

The definition of writing in the *Model Law* has been criticised by the English Legislative Working Party of the Society for Computers and Law for introducing a new requirement, namely that communications will only be

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<sup>95</sup> Commonwealth Secretariat *Law in Cyber Space* 7.

<sup>96</sup> Guide to Enactment, par 49.

regarded as writing if they are retained<sup>97</sup>. Lloyd points out that although evidential difficulties arise when a written document is lost, retention is not a requirement for "hard copy" writing<sup>98</sup>. If one is left with a "written document" of which no copy exists, the practical implication will be that the burden of proof will be equal to that of an oral agreement.

The Guide draws attention to the fact that Articles 6 to 8 form a set in which the same structure was used and should be read together<sup>99</sup>.

Furthermore, the articles allow for certain documents or situations to be excluded from the operation of the Act. The Guide points out that to give blanket exclusions in these sections would place an unnecessary burden on electronic commerce<sup>100</sup>. The Expert Group found that wills, negotiable instruments, documents of title and transfers of land generally should be excluded from the operation of any Act based on the *Model Law*<sup>101</sup>.

#### 4.3.3 Signatures

The *Model Law* adopts a "comprehensive"<sup>102</sup> approach and focuses on the primary functions of a signature, namely that it must identify the person and "...indicate that person's approval of the information contained in the data message"<sup>103</sup>. As standard for the method used, it requires that the method be

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<sup>97</sup> Lloyd I *Legal Barriers to Electronic Contract* 139.

<sup>98</sup> Lloyd I *Legal Barriers to Electronic Contract* 139.

<sup>99</sup> Articles 6(2), 7(2) & 8(2) of the UNCITRAL Model Law on Electronic Commerce. The articles all have a sub-article that states that the article is to apply not only when writing (or a signature or an original) is a requirement but also where the consequences of not complying with a certain form are specified.

<sup>100</sup> Guide to Enactment, par 51 – 52.

<sup>101</sup> Commonwealth Secretariat *Law in Cyber Space* 9.

<sup>102</sup> Guide to Enactment, par 56.

<sup>103</sup> Articles 6(1)(a) of the UNCITRAL Model Law on Electronic Commerce.

...as reliable as was appropriate for the purpose for which the data message was generated or communicated<sup>104</sup>.

To evaluate whether the standard was met, all the circumstances will be taken into account including any agreement between the parties. The Guide expresses the opinion that the “agreement” should not only refer to agreements such as trading partner agreements between the parties, but also to agreements involving intermediaries such as networks<sup>105</sup>.

The Guide states that it might be desirable to:

...develop functional equivalents for the various types and levels of signature requirements<sup>106</sup>.

In the South African context advanced electronic signatures as well as notarisation may be seen as such a part of the hierarchy of form requirements. The *UNCITRAL Model Law on Electronic Signatures* develops and extends functional equivalence for e-signatures.

## **5. UNCITRAL Model Law on Electronic Signatures**

In their desire to build on the fundamental principles underlying article 7 of the *Model Law* with respect to the fulfilment of the signature function in electronic commerce, UNCITRAL drafted the *Model Law on Electronic Signatures*. (To avoid confusion, the *Model Law on Electronic Signatures* will be referred to as the *E-signature Model Law*.) The new *Model Law* was adopted on 12 December 2001. It is recommended that all states give favourable consideration to not only the *Model Law*, but also to the *E-signature Model Law* when enacting or revising their laws, in the interest of

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<sup>104</sup> Articles 6(1)(b) of the UNCITRAL Model Law on Electronic Commerce.

<sup>105</sup> Guide to Enactment, par 60.

<sup>106</sup> Guide to Enactment, par 55.

international harmonisation<sup>107</sup>. The idea is that the new *Model Law* may be enacted either in conjunction with the *Model Law on Electronic Commerce*, or independently<sup>108</sup>.

A “data message” is defined as follows<sup>109</sup>:

...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; and acts either on its own behalf or on behalf of the person it represents...

And an “electronic signature” is defined as<sup>110</sup>:

...data in electronic form in, affixed to or logically associated with, a data message, which may be used to identify the signatory in relation to the data message and to indicate the signatory's approval of the information contained in the data message...

According to article 3 of the *Model Law on Electronic Signatures*, all electronic signatures that satisfy the requirements of article 6(1) or otherwise meet the requirements of the applicable law will have legal effect. Article 6(1) is a repetition of article 7(1)(b) of the *Model Law on Electronic Commerce*. The article states that an electronic signature will be acceptable if the signature is “...as reliable as was appropriate for the purpose”, taking into account all circumstances, including any relevant agreement.

Article 6(2) of the *Model Law on Electronic Signatures* follows the format of the articles of the *Model Law on Electronic Commerce*, in that it pertinently includes both requirements in the form of an obligation and those stating consequences in the absence of, in this case, a signature.

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<sup>107</sup> General Assembly resolution 56/80 of 12 December 2001.

<sup>108</sup> Guide to Enactment, *Model Law on Electronic Signatures*, par 65.

<sup>109</sup> Article 2(b) of the UNCITRAL *Model Law on Electronic Signatures*.

Article 6(3) indicates the circumstances under which a signature will be regarded as reliable:

- (a) The signature creation data are, within the context in which they are used, linked to the signatory and to no other person;  
The signature creation data were, at the time of signing, under the control of the signatory and no other person;  
Any alteration to the electronic signature, made after the time of signing, is detectable; and  
Where a purpose of the legal requirement for a signature is to provide assurance as to the integrity of the information to which it relates, any alteration made to that information after the time of signing is detectable.

The Guide points out that the above article offers practical standards against which the technical reliability of electronic signatures can be measured<sup>111</sup>. These practical standards illustrate the manner in which an e-signature may become functionally the equivalent of a hand-written signature. One of the main features of the new *Model Law* is to

...add certainty to the flexible criterion set forth in article 7 of the UNCITRAL Model Law on Electronic Commerce for the recognition of an electronic signature as functionally equivalent to a hand-written signature<sup>112</sup>.

In order to determine whether article 6 has been satisfied, the *Model Law on Electronic Signatures* provides in article 7 that certain persons, organs or authorities may be appointed. Any determination should be made in accordance with international standards and should not affect the operation of the rules of international private law<sup>113</sup>.

In their contract, parties may choose to derogate from the provisions of the *Model Law on Electronic Signatures*, as long as their agreement is valid

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<sup>110</sup> Article 2(a) of the UNCITRAL Model Law on Electronic Signatures.

<sup>111</sup> Guide to Enactment, Model Law on Electronic Signatures, par 4.

<sup>112</sup> Guide to Enactment, Model Law on Electronic Signatures, par 71.

<sup>113</sup> Article 7 of the Model Law on Electronic Signatures.

under the applicable law<sup>114</sup>. The *Model Law on Electronic Signatures* should be interpreted with regard to its international origin and the need to promote international uniformity<sup>115</sup>.

Article 12 touches on the international aspect of electronic signatures. The article provides that electronic signatures that substantially provide the same level of reliability, should be treated the same, irrespective of where the signature originated. This is an important initiative in the light of the objective of promotion of international trade.

### **5.1 A comparison between the UNCITRAL Model Law on Electronic Commerce and the UNCITRAL Model Law on Electronic Signatures**

As far as electronic signatures are concerned, article 7 of the *Model Law on Electronic Commerce* establishes a broad regime. Article 7 recognises any method used to fulfil the legal requirements for a hand-written signature. The effectiveness depends on the 'reliability' of the signature. The new *Model Law on Electronic Signatures* introduces a narrower regime that contemplates the method of electronic signatures that can be recognised as meeting the criteria of technical reliability<sup>116</sup>.

## **6. Comparative perspective**

From a South African perspective, developments in Europe, the USA and Australia are important. We would do well to take note of their approaches to e-commerce, as they are important trading partners of South Africa.

### **6.1 The European Union**

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<sup>114</sup> Article 5 of the Model Law on Electronic Signatures.

<sup>115</sup> Articles 4 and 12 of the Model Law on Electronic Signatures.

### 6.1.1 Background

From the outset it is important to note that the different countries within the European Union (EU) have widely divergent approaches to electronic commerce. Further, although the EU makes use of concepts drawn from other legal systems and pieces of legislation, the relationship with the domestic laws of member countries is not yet fully determined<sup>117</sup>.

In the case of electronic commerce, the EU chose to use directives as their legislative tools. Directives set out a binding result that must be achieved within a set time through domestic legislation in the member countries. The form and method of legislation is up to the individual member countries. The result of this method of legislation is the harmonisation of the underlying principles, but not the specific technical rules<sup>118</sup>.

Article 9 of the *European Initiative*<sup>119</sup> provides that member states must ensure that there are no provisions in their national laws that prohibit the conclusion of electronic contracts or compromise the validity of such agreements. Certain agreements are, however, exempted from the provision, such as agreements that require notarisaton, as well as contracts dealing with succession or family law.<sup>120</sup> Subsequently, the *Electronic Commerce Directive* saw the light and article 9, as described above, was included. Member States had to implement the directive before 17 January 2002.<sup>121</sup> The obligations and benefits that arise from the

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<sup>116</sup> Guide to Enactment, Model Law on Electronic Signatures, par 76

<sup>117</sup> Thurlow WH 2001 HYPERLINK <http://www.ejcl.org/53/abs53-1.html> 23 June

<sup>118</sup> Thurlow WH 2001 HYPERLINK <http://www.ejcl.org/53/abs53-1.html> 23 June.

<sup>119</sup> A Commission communication titled *A European Initiative in Electronic Commerce* (1998); Pistorius 1999 11 *SA Merc LJ* 296.

<sup>120</sup> Pistorius 1999 11 *SA Merc LJ* 297.

<sup>121</sup> Council Directive 2000/31/EC, [2000] OJ L178/1 ("Electronic Commerce Directive"); Thurlow WH 2001 HYPERLINK <http://www.ejcl.org/53/abs53-1.html> 23 June.

directive only apply to member states. The directive does not assist trade with countries outside the EU<sup>122</sup>.

### 6.1.2 Writing

As appears from the above, electronic contracts may not be denied legal effect and, as such, writing in electronic form must be accepted. The exceptions include:

- contracts that create or transfer rights in real estate (excepting rental rights);
- contracts where the involvement of courts or public authorities are required;
- contracts of suretyship granted and on collateral securities furnished by a person for purposes outside their trade, business or profession;
- contracts governed by family law as well as the law of succession<sup>123</sup>.

### 6.1.3. Signatures

The Electronic Signature Directive is detailed and sets out a framework for the recognition of electronic signatures and certification service requirements for member states. The Directive of 13 December 1999<sup>124</sup> prohibits member states from denying the legal effect of a signature merely because it is in electronic form; not based on a qualified certificate, or not created by a secure signature creation device<sup>125</sup>.

<sup>122</sup> Thurlow WH 2001 HYPERLINK <http://www.ejcl.org/53/abs53-1.html> 23 June.

<sup>123</sup> A Commission communication titled *A European Initiative in Electronic Commerce* (1998); Article 9(3) Council Directive 2000/31/EC, [2000] OJ L178/1; Kelleher D & Murray K *IT Law and the European Union* 113.

<sup>124</sup> Directive 1999/93/EC, [2000] OJ L013/12 of December 13, 1999 on a Community Framework for Electronic Signatures; McBride Bake & Coles 2002 HYPERLINK <http://www.mbc.com/ecommerce/Intsummary.asp> 12 February.

<sup>125</sup> Article 5(2) of Directive 1999/93/EC of December 13, 1999; McBride Bake & Coles 2002 HYPERLINK <http://www.mbc.com/ecommerce/Intsummary.asp> 12 February.

The Directive defined “advanced electronic signatures” as an electronic signature that meets the following requirements:

- It is uniquely linked to the signatory;
- it is capable of identifying the signatory;
- it is created using means that the signatory can maintain under his sole control; and
- it is linked to the data to which it relates in such a manner that any subsequent change of the data is detectable.

The Directive specifically provides for the legal effect of advanced electronic signatures<sup>126</sup>:

1. Member States shall ensure that advanced electronic signatures which are based on a qualified certificate<sup>127</sup> and which are created by a secure-signature-creation device<sup>128</sup> [shall] satisfy the legal requirements of a signature in relation to data in electronic form in the same manner as a hand-written signature satisfies those requirements in relation to paper-based data; and are admissible as evidence in legal proceedings.

#### 6.1.4 Conclusion

The *Directives on Electronic Commerce and Electronic Signatures* are based on the “functional equivalence” approach. They aim to achieve equal treatment of traditional and e-commerce writing, as well as signatures.

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<sup>126</sup> Article 5(1) of Directive 1999/93/EC of December 13, 1999.

<sup>127</sup> ‘Qualified certificate’ is defined as a certificate that meets the requirements laid down in Annex I and provided by a certification service-provider who fulfils the requirement laid down in Annex II of the Directive.

<sup>128</sup> A ‘secure signature-creation device’ is defined as a signature-creation device that meets the requirements laid down in Annex III of the Directive.

Thurlow<sup>129</sup> concludes that the legislative differences between Europe and the USA do not prevent electronic contracting, but might increase transaction costs and reduce potential efficiency in order to ensure consumer protection in the particular legal environments. I believe that the same can be said of trade with South Africa.

The Directive dealing with electronic signatures establishes a complete functional equivalent for hand-written signatures in "advanced electronic signatures". The concept of "advanced electronic signature" is included in the South African Bill.

## **6.2 The United States of America**

### *6.2.1 Background*

The American legal framework is, especially with regard to their position on the technical aspects, security and programmes for bridging the digital divide, at this stage important for South African purposes<sup>130</sup>. On 29 July 1999, the National Conference of Commissioners on Uniform State Laws (NCCUSL) promulgated the *Uniform Electronic Transactions Act* (UETA). Thirty-three states have since adopted this Act<sup>131</sup>.

The Act was greatly influenced by the UNCITRAL *Model Law*<sup>132</sup>. In addition, it was also influenced by the Illinois Electronic Writings and Signatures Act<sup>133</sup>, as well as the *Oklahoma Bankers Association*

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<sup>129</sup> Thurlow WH 2001 HYPERLINK <http://www.ejcl.org/53/abs53-1.html> 23 June.

<sup>130</sup> Stavrou & Jackson "Overview of Submissions Received on the South African e-Commerce Green Paper" 74.

<sup>131</sup> McBride Baker & Coles 2002 HYPERLINK [http://www.mbc.com/ecommerce/legislative\\_1.asp?state=all](http://www.mbc.com/ecommerce/legislative_1.asp?state=all) 20 February.

<sup>132</sup> Gabriel 2000 HYPERLINK <http://www.unidroit.org/english/publications/review/articles/2000-4.htm> 22 February.

<sup>133</sup> Draft 4 November 1996.

*Technology Committee Digital Writing and Signature Statute*<sup>134</sup>. At the outset, the aim of the UETA was:

...to draft such revisions to general contract law as are necessary or desirable to support transaction processes utilizing existing and future electronic or computerized technologies<sup>135</sup>.

The Act has a broad range of application:

...[e]xcept where otherwise provided...this Act applies to electronic records and electronic signatures that relate to any transaction<sup>136</sup>.

The application is subject to limitations in three categories, namely the American Uniform Commercial Code, wills and trusts, as well as areas in which individual states choose to require paper-based transactions. Further, the UETA only applies where the parties have agreed to conduct their transactions electronically<sup>137</sup>. As is the case in the *Model Law* the UETA simply overrides the substantive law governing a transaction to allow for electronic commerce. The aim is for paper-based and electronic transactions to be subject to the same issues of proof.

### 6.2.2 Writing

In the USA, the meaning of “writing” has been extended to include digital forms<sup>138</sup>.

<sup>134</sup> Second Discussion Draft 17 June 1996.

<sup>135</sup> Gabriel 2000 HYPERLINK  
<http://www.unidroit.org/english/publications/review/articles/2000-4.htm> 22 February

<sup>136</sup> Section 3(a) of UETA (1999); Gabriel 2000 HYPERLINK

<http://www.unidroit.org/english/publications/review/articles/2000-4.htm> 22 February.

<sup>137</sup> Gabriel 2000 HYPERLINK

<http://www.unidroit.org/english/publications/review/articles/2000-4.htm> 22 February.

<sup>138</sup> Chissick M & Kelman A *Electronic Commerce Law and Practice* 95.

The Uniform Commercial Code defines 'writing' as 'printing, typewriting, or any other intentional reduction to tangible form.'<sup>139</sup> Their approach is illustrated by the opinion given in *Clyburn v Allstate*<sup>140</sup>:

In today's 'paperless' society of computer generated information, the court is not prepared, in the absence of some legislative provision or otherwise, to find that a computer floppy diskette would not constitute a 'writing' within the meaning of [the Statute].

Where a person has to provide, send or deliver information in writing to another the provisions of the Act will only be satisfied if the information can be retained and later retrieved<sup>141</sup>. The UETA validates electronic records as originals when the law requires that originals should be retained.

### 6.2.3 Signature

The UETA attributes an electronic record or signature to a person if it resulted from an action by that person<sup>142</sup>. Gabriel points out that the act by a person may be proved in any manner, including a showing of any security procedure that was applied, to determine the identity of the person to whom the electronic record or signature was attributable<sup>143</sup>.

The viability of notarisation as a legal requirement received particular attention. Eventually, the Drafting Committee decided that abolishing the practice of notarisation would be beyond their mandate and elected to allow the signing by and the information required from a notary to be provided electronically. It does however, remove the stamp / seal requirement<sup>144</sup>. It is

<sup>139</sup> s1-1201(46) Uniform Commercial Code.

<sup>140</sup> 826 F.Supp.955 (D.S.C. 1993).

<sup>141</sup> Section 18(a) of UETA (1999).

<sup>142</sup> Section 9(a) of UETA (1999).

<sup>143</sup> Gabriel 2000 HYPERLINK  
<http://www.unidroit.org/english/publications/review/articles/2000-4.htm> 22 February.

<sup>144</sup> Gabriel 2000 HYPERLINK  
<http://www.unidroit.org/english/publications/review/articles/2000-4.htm> 22 February.

important to note that this differs from the approach in the *Model Law*. The *Model Law* provides that, if the document meets the requirements of integrity and originality, then it should be given the same legal significance as properly notarised paper document. The effect hereof is that necessity of notaries are "assumed away"<sup>145</sup>.

#### 6.2.4 Conclusion

The conclusions in the UETA are in line with the practicalities of electronic commerce. Electronic writing and signatures are recognised. The South African legislative approach paid attention to particularly the provisions relating to notaries as an alternative to the approach followed by UNCITRAL.

### 6.3 Australia

#### 6.3.1 Background

Most submissions in response to the Green Paper regarded compatibility with UNCITRAL, the United Kingdom, Ireland and Australia as important<sup>146</sup>. The *Australian Electronic Transactions Act* was passed on 25 November 1999 and received Royal Assent on 10 December 1999. The Act aims to create a:

light-handed regulatory regime for the use of electronic communications in transactions.

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<sup>145</sup>

Gabriel

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HYPERLINK

<http://www.unidroit.org/english/publications/review/articles/2000-4.htm> 22 February.

<sup>146</sup> Stavrou & Jackson "Overview of Submissions Received on the South African e-Commerce Green Paper" 44.

The Act removes the existing barriers that may prevent Australians from using e-commerce to satisfy obligations under Commonwealth law<sup>147</sup>. The Act relates primarily to the dealings between persons and the government agencies<sup>148</sup>.

The Act is based on the recommendations of the Electronic Commerce Expert Group, which in turn recommended that legislation based on the UNCITRAL *Model Law* be enacted. It is pointed out that Australia was closely involved in the development of the *Model Law*. The principles of "functional equivalence" and technological neutrality are embraced<sup>149</sup>.

The Act is given broad operation but is subject to the principle of statutory interpretation that these general principles will not apply where more specific legislation exists. The Act applies to 'transactions' and is not limited to commercial transactions<sup>150</sup>.

### 6.3.2 Writing

For purposes of a law, a transaction will not be invalid merely because it is in electronic form, unless a regulation provides otherwise<sup>151</sup>.

An electronic communication will be considered to be in writing if it is 'readily accessible so as to be usable for subsequent reference'. Further, if the electronic communication is given to a Commonwealth entity, any particular requirements with regard to technology requirements must be met and if it is a non-Commonwealth entity, the recipient must consent to

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<sup>147</sup> Attorney General's Department HYPERLINK <http://www.law.gov.au/publications/ecommerce/Etactssummary.html> 20 February.

<sup>148</sup> OzNetLaw HYPERLINK <http://www.oznetlaw.net/printinformationfact.asp> 23 June.

<sup>149</sup> Attorney General's Department HYPERLINK <http://www.law.gov.au/publications/ecommerce/Etactssummary.html> 20 February.

<sup>150</sup> Commonwealth Secretariat *Law in Cyber Space* 7.

<sup>151</sup> OzNetLaw HYPERLINK <http://www.oznetlaw.net/printinformationfact.asp> 23 June.

receive information electronically. Consent may be inferred from a person's conduct, such as making available his e-mail address<sup>152</sup>.

It would be reasonable to expect that the information would be readily accessible at the time the information is given and on subsequent occasions.

### 6.3.3 Signatures

The Act follows a "minimalist" approach<sup>153</sup>. With specific reference to signatures, section 10 identifies the basic elements, namely, that it must identify the person and indicate his or her approval of the information communicated<sup>154</sup>. These clauses and principles clearly originate from the UNCITRAL *Model Law*. The Act is silent on what superior signatures may be used and what form they would take<sup>155</sup>.

The Act does not state what standard will constitute an electronic signature; so, parties are free to decide what will be acceptable under the circumstances. The reliability will be determined with regard to all the circumstances at the time of transmission<sup>156</sup>.

### 6.3.4 Conclusion

The Act implements the "functional equivalence" approach<sup>157</sup> and was drafted using the same points of departure as the South African Act.

<sup>152</sup> OzNetLaw HYPERLINK <http://www.oznetlaw.net/printinformationfact.asp> 23 June.

<sup>153</sup> Commonwealth Secretariat *Law in Cyber Space* 12.

<sup>154</sup> Attorney General's Department HYPERLINK <http://www.law.gov.au/publications/ecommerce/Etactssummary.html> 20 February.

<sup>155</sup> Commonwealth Secretariat *Law in Cyber Space* 12.

<sup>156</sup> OzNetLaw HYPERLINK <http://www.oznetlaw.net/printinformationfact.asp> 23 June.

<sup>157</sup> The Act favoured a two-step implementation process. Prior to 1 July 2001 the Act only applied to laws of the Commonwealth specified in the regulations. Subsequently the Act applies to all laws unless specifically excluded from the operation of this Act.

## 7. The *Electronic Communications and Transactions Act*<sup>158</sup>

### 7.1 Introduction

The *Green Paper on E-Commerce*<sup>159</sup> identified the electronic formation of contracts and the legal implications of e-commerce as two of the challenges facing the policy makers. The Green Paper states further that:

[a]ny proposed legislation must be uniform and conform to existing international standards and rules.

Submissions in response to the Green Paper were also in favour of using the provisions of the UNCITRAL *Model Law* as a guide in the drafting of legislation<sup>160</sup>.

Edward Nathan & Friedland Inc identifies the following fundamental issues with regard to which the industry and consumers require certainty<sup>161</sup>:

1. recognition by the parties of electronic messages irrespective of another form of communication used by one of them ('recognition');
  - legal attribution of an electronic message to a party purporting to have sent it ('attribution');
  - need for and method of acknowledgement of receipt ('acknowledgement');
  - and
  - deemed time and place of despatch and receipt of electronic messages (time & place).

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<http://www.law.gov.au/publications/ecommerce/Efactssummary.html> 20 February It is important to note that in June 2000 101 laws of the Commonwealth were already exempted from the operation of the Act. Attorney General's Department HYPERLINK [http://www.law.gov.au/publications/ecommerce/ElectronicTrans\\_Act.html](http://www.law.gov.au/publications/ecommerce/ElectronicTrans_Act.html) 20 February.

<sup>158</sup> Electronic Communications and Transactions Act 25 of 2002.

<sup>159</sup> Department of Communications "Green Paper on E-Commerce - Making it your business" November 2000 17 – 19.

<sup>160</sup> Stavrou & Jackson "Overview of Submissions Received on the South African e-Commerce Green Paper" 42.

<sup>161</sup> Edward Nathan & Friedland 2001 HYPERLINK <http://www.ecomm-debate.co.za/docs/report.html> 4 February.

## 7.2 Legal recognition

Chapter III of the Act (*Facilitating Electronic Transactions*) under Part 1 deals with the legal requirements for data messages. Section 11(1) states the following, specifically with regard to the legal recognition of data or data messages:

Information is not without legal force and effect merely on the grounds that it is wholly or partly in the form of a data message.

This is an adaptation of article 5 of the UNCITRAL *Model Law* that provides that "information" shall not be without "legal effect, validity or enforceability", because it is in the form of a "data message". The Act defines data message as:

...data generated, sent, received or stored by electronic means and includes-

- (a) voice, where voice is used in an automated transaction; and
- (b) a stored record<sup>162</sup>.

In comparison, the *Model Law* defines 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.

The approach taken in the *Model Law* has remained intact as incorporated into the South African Act. As a result international legal comparison will be possible and useful for the interpretation of our legislation. The legal

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<sup>162</sup> S 1 of the Electronic Communications and Transactions Act 25 of 2002.

recognition of data messages is fundamental to contracting on-line<sup>163</sup> and this section lies the foundation for electronic commerce.

### **7.3 The requirement of "writing"**

Section 12 of the Act is the first of what may be termed the search-and-replace provisions. In other words, the Act requires that in all Acts (other than those specifically excluded), the words "in writing" will be read to include data messages and other information available for subsequent reference. Section 12 defines the requirement of writing as follows:

A requirement under law that a document or information must be in writing shall be met if the document or information is-

- (a) in the form of a data message, and  
accessible in a manner usable for subsequent reference.

Although the text of the *Model Law* and the Act does not correspond exactly, the keywords, such as "data message", "accessible" and "usable for subsequent reference" in the above article clearly rely on the *Model Law*. The article should be interpreted as such and here the provisions of the *Guide to Enactment* may be useful.

The Guide states that UNCITRAL's work focussed upon writing as the "lowest level in a hierarchy of form requirements"<sup>164</sup>. Writing as a requirement is distinguished from "signed writing", "signed original" and "authenticated legal act". Article 6 of the *Model Law* concentrates on two functions of writing, namely that information is reproduced and read.

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<sup>163</sup> Stavrou & Jackson "Overview of Submissions Received on the South African e-Commerce Green Paper" 40.

<sup>164</sup> Guide to Enactment, par 49.

Article 6(3) of the *Model Law* allows for exceptions where the enacting state does not wish to establish a complete functional equivalence. Section 4 of the Act deals with the sphere of application of the proposed Act. Schedule 1 to the Act contains the acts exempted from the operation of the Act and states specifically from the operation of which sections of the Act these acts are exempted. The acts mentioned, are the *Wills Act*<sup>165</sup>, the *Alienation of Land Act*<sup>166</sup>, the *Bills of Exchange Act*<sup>167</sup> and the *Stamp Duties Act*<sup>168</sup>. Section 4(4) of the Act also permits individual acts to expressly require information to be posted, displayed or transmitted in a particular manner.

Another deviation from the *Model Law* is that the Act does not specifically state that the “requirement under law” refers to both obligations and instances where the law simply provides for the consequences where information is not in writing. This deviation should be of no consequence as it stands to reason that issues regarding documents not in writing, will not arise in the case of electronic documents.

As appears above “data message” is given a comprehensive definition. As a result, the section dealing with writing is short but encompassing. It establishes a functional equivalence between traditional and electronic writing and should provide the required legal certainty. Most submissions in response to the Green Paper favoured legislation that provided clarity on the issue<sup>169</sup>, and this section clearly obliges.

## **7.4 The requirement of “signatures”**

### **7.4.1 Introduction**

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<sup>165</sup> Act 7 of 1953.

<sup>166</sup> Act 68 of 1981.

<sup>167</sup> Act 34 of 1964.

<sup>168</sup> Act 72 of 1968.

<sup>169</sup> Stavrou & Jackson "Overview of Submissions Received on the South African e-Commerce Green Paper" 44.

The South African Act follows a “two-tier” approach, as discussed by Le Roux, with regard to ordinary and advanced electronic signatures<sup>170</sup>. The UNCITRAL *Model Law* only sets out the requirements that a signature in relation to a data message should comply with. These requirements are that the signature must identify the person and indicate the person's approval of the information contained in the data message<sup>171</sup>.

#### 7.4.2 Ordinary electronic signatures

Subsection 13(2) of the Act<sup>172</sup> is the catch-all provision that gives recognition to all signatures that do not qualify as advanced electronic signatures. This subsection paves the way for the development of e-commerce, as it states that a signature shall not be denied legal force and effect merely because it is in electronic form. It forms the basis of the “two-tier” approach<sup>173</sup>.

Section 13(3) provides for the instance where the parties themselves require electronic signatures to their agreement but have not been specific regarding the type of e-signature. The subsection states that the electronic signature will meet the requirement in relation to a data message if:

- (a) a method is used to identify the person and to indicate the person's approval of the information communicated; and
- (b) having regard to all the relevant circumstances at the time the method was used, the method was as reliable as was appropriate for the purposes for which the information was communicated.

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<sup>170</sup> Le Roux Sept 2000 *De Rebus* 26; see page 1.

<sup>171</sup> Article 7 (1)(a) of the UNCITRAL Model Law on Electronic Commerce.

<sup>172</sup> S 13(2) of the Electronic Communications and Transactions Act 25 of 2002.

<sup>173</sup> Le Roux Sept 2000 *De Rebus* 26; see page 1.

The Act contains a similar provision regarding reliability to that contained in article 7(1)(b) of the *Model Law*. In the Act agreements are not specifically included under 'relevant circumstances', as is the case in the *Model Law* and Guide to Enactment.

Subsection 13(3)(b) refers to the relevant circumstances 'at the time the method was used'. This is in response to suggestions by the Expert Group advising the Commonwealth nations<sup>174</sup> that in providing a reliability test a State should make it clear at what time the method must be appropriate.

The Expert Group did not support the inclusion of a reliability test because they feel that it imposes a stricter test for electronic signatures than for paper-based signatures. They held that if a commonwealth country decide to include the test they should state expressly that the method of signature must be appropriate at the time of signature not the time of reading.<sup>175</sup>

Further, in order to establish whether a signature was "...as reliable as was appropriate for the purpose"<sup>176</sup>, the *Guide to Enactment*<sup>177</sup> provides certain guidelines that may be of persuasive value<sup>178</sup>. The Guide does not attempt to give an exhaustive list.

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<sup>174</sup> Commonwealth Secretariat *Law in Cyber Space* 11.

<sup>175</sup> Commonwealth Secretariat *Law in Cyber Space* 11.

<sup>176</sup> Article 7 (1)(b) of the UNCITRAL Model Law on Electronic Commerce.

<sup>177</sup> Guide to Enactment, par 58.

<sup>178</sup> (1) the sophistication of the equipment used by each of the parties;  
 (2) the nature of their trade activity;  
 (3) the frequency at which commercial transactions take place between the parties;  
 (4) the kind and size of the transaction;  
 (5) the function of signature requirements in a given statutory and regulatory environment;  
 (6) the capability of communication systems;  
 (7) compliance with authentication procedures set forth by intermediaries;  
 (8) the range of authentication procedures made available by the intermediary;  
 (9) compliance with trade, customs and practice;  
 (10) the existence of insurance coverage mechanisms against unauthorised messages;  
 (11) the importance and value of the information contained in the data message;  
 (12) the availability of alternative methods of authentication and the cost of implementation;

In stating in section 13(3) that 'where an electronic signature is required' the subsection raises the question of what is to be the case when 'a signature' (no medium) mentioned is required, in other words whether the parties must agree to use electronic signatures for the subsection to apply. It is possibly in answer to this that subsection (5) was introduced.

Subsection 13(5) does not follow the example of any of the above legislation and particularly deviates from the UNCITRAL *Model Laws*. The subsection states the following:

Where an electronic signature is not required by the parties to an electronic transaction, an expression of intent or other statement is not without legal force and effect merely on the grounds that-  
it is in the form of a data message; or  
it is not evidenced by an electronic signature but is evidenced by other means from which such a person's intent or other statement can be inferred.

As a result of section 11(1), a party requested to submit a 'signed document' may submit an electronic document, as section 13(2) acknowledges documents signed electronically. In the light of the above, it is unclear whether subsection 13(5) is necessary at all.

The words, "party to an electronic transaction", suggest that the parties must consent to receive documents electronically. If one party has no e-mail address the other cannot e-mail him a signed document. However, I believe that it will create legal uncertainty if a party may refuse to accept the signed document delivered to his e-mail address; thus, consent is presumably to be inferred from the fact that he has made his e-mail address known.

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(13) the degree of acceptance or non-acceptance of the method of identification in the relevant field both at the time the method was agreed upon and the time when the data message was communicated; and

Again in article 7(3) of the *Model Law*, the opportunity is created for certain exclusions. Examples of possible exemptions include wills and negotiable instruments where the essence of negotiability is the existence of a single, irreproducible document.

The Expert Group expressed the view that exceptions in subsidiary legislation will be advantageous, because it lends flexibility in an area where technology is subject to rapid changes<sup>179</sup>. In the South African Act it was decided to list exclusions from the operation of any sections of the Act in Schedule 1.

#### 7.4.3 *Advanced electronic signatures*

As far as signatures are concerned, the South African Act attaches particular significance to the concept of “advanced electronic signatures”<sup>180</sup>. Any “requirement by law’ that a document be signed, is only met by an advanced electronic signature, unless otherwise stated by the particular Act

The “advanced electronic signature” is defined as:

an electronic signature which results from a process which has been accredited by the Authority as provided for in section 37 of this Act<sup>181</sup>.

In turn, section 38 sets out the criteria for accreditation:

The Accreditation Authority may not accredit authentication products or services unless the Accreditation Authority is satisfied

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(14) any other relevant factor.’

<sup>179</sup> Commonwealth Secretariat *Law in Cyber Space* 10.

<sup>180</sup> S 13(1) of the Electronic Communications and Transactions Act 25 of 2002.

<sup>181</sup> S 1 of the Electronic Communications and Transactions Act 25 of 2002.

that an electronic signature to which such authentication products or services relate-

- (a) is uniquely linked to the user;
- (b) is capable of identifying that user;
- (c) is created using means that can be maintained under sole control of that user; and
- (d) will be linked to the data or data message to which it relates in such a manner that any subsequent change of the data or data message is detectable.
- (e) is based on face-to-face identification of the user.

Section 38 draws from the European Directive<sup>182</sup> but adds the requirement of face-to-face identification as a further safety precaution. Face-to-face identification is unique to the South African legislation. This measure aims to prevent fraud and improve certainty when engaging in on-line transactions where businesses and clients never physically meet. South Africa as a developing country may need the additional safeguard to protect consumers.

Subsection 13(4) creates the rebuttable presumption that, once an advanced electronic signature has been used, it is a valid electronic signature and properly applied to the data message<sup>183</sup>. As a result of the standards required of authentication service providers in section 38, advanced electronic signatures should, as a rule, be more secure than ordinary electronic signatures<sup>184</sup>. The involvement of a third party (authentication service provider) is preferable in order to centralise information and vouch for the integrity and reliability of e-signatures<sup>185</sup>.

A public body that renders e-government services, such as accepting electronic filing or issuing electronic permits<sup>186</sup>, may, by notice in the

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<sup>182</sup> Directive 1999/93/EC of December 13, 1999 on a Community Framework for Electronic Signatures.

<sup>183</sup> S 13(4) of the Electronic Communications and Transactions Act 25 of 2002.

<sup>184</sup> S 13(1) of the Electronic Communications and Transactions Act 25 of 2002.

<sup>185</sup> York S & Chia K *Hammond Suddards e-commerce* 54.

<sup>186</sup> S 27 of the Electronic Communications and Transactions Act 25 of 2002.

*Government Gazette*, make specific form requirements<sup>187</sup>. The public body may specify the authentication service provider, or state the criteria that an authentication service provider must meet<sup>188</sup>. Alternatively, a public body may require that the authentication service provider be a preferred authentication service provider<sup>189</sup>.

Subsection 28 (2) appoints the South African Post Office Ltd as a preferred authentication service provider. Provision is made for the appointment by the Minister of other preferred authentication service providers, based on the service providers' obligations in terms of universal access. It is to be hoped that the Minister will appoint additional preferred authentication service providers to avoid a monopoly.

Subsection 40(1) deals with the accreditation of foreign products and services. In terms of this section, the Minister of Communications may, by notice in the *Government Gazette*, recognise the accreditation (or similar recognition) granted to any foreign authentication service provider or its authentication products or services. It is assumed that the Minister will exercise this authority in consultation with the Accreditation Authority. Taking into consideration the aim of the proposed act to encourage international trade, it will be vital that the Minister extends the recognition promptly and efficiently where appropriate.

#### 7.4.4 Discussion of electronic signatures

Lefebvre comments on the dual function of a signature, namely that it identifies the signatory and indicates that the party is willing to be bound by the contract<sup>190</sup>. Authentication and integrity are as important in the

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<sup>187</sup> S 28(1) of the Electronic Communications and Transactions Act 25 of 2002.

<sup>188</sup> S 28(1)(d) of the Electronic Communications and Transactions Act 25 of 2002.

<sup>189</sup> S 28(1)(d) of the Electronic Communications and Transactions Act 25 of 2002.

<sup>190</sup> Pistorius 1999 11 *SA Merc LJ* 295.

electronic era. Smedinghoff takes the analysis a step further. According to him, electronic signatures serve three critical purposes, namely, to identify the sender, to indicate the sender's intent and to ensure the integrity of the document signed<sup>191</sup>. In this regard, Pistorius expresses the opinion that a balanced approach to encryption is vital. Where a restrictive approach may stifle the global economy, a too slack approach will result in insecurities in e-commerce<sup>192</sup>.

Digital signature is an encryption method commonly currently used<sup>193</sup>. The International Standards Organisation define the concept of a digital signature as:

... data appended to, or a cryptographic transformation of a data unit that allows a recipient of the data unit to prove the source and integrity of the data unit and protect against forgery<sup>194</sup>.

According to Christianson & Mostert digital signatures are valuable in ensuring authentication, privacy, message integrity and non-repudiation<sup>195</sup>. Digital signatures also have the added advantage of being able to definitively imprint "time" into the signature "stamp"<sup>196</sup>. Different technological tools have been and are being developed to address these issues. Most responses to the Green Paper emphasised the importance of a technologically neutral approach<sup>197</sup>.

<sup>191</sup> Smedinghoff & Bro 1999 [HYPERLINK http://profs.lp.findlaw.com/signatures/signature\\_2.html](http://profs.lp.findlaw.com/signatures/signature_2.html) 22 February.

<sup>192</sup> Pistorius 1999 11 *SA Merc LJ* 297.

<sup>193</sup> The following describes the technical nature of digital signatures: "Digital signatures are based on the application to electronic data of an algorithm contained within the data stream which authenticates the identity of the sender by encoding the document until the intended recipient unlocks the data stream." York S & Chia K *Hammond Suddards e-commerce* 52

<sup>194</sup> Lloyd I *Legal Barriers to Electronic Contract* 141.

<sup>195</sup> Christianson & Mostert May 2000 *De Rebus* 28.

<sup>196</sup> York S & Chia K *Hammond Suddards e-commerce* 52.

<sup>197</sup> Stavrou & Jackson "Overview of Submissions Received on the South African e-Commerce Green Paper" 43.

The South African Act has a wider ambit than the UNCITRAL *Model Law*, in that it addresses both what it regards as ordinary and as advanced electronic signatures. The authentication criteria stipulate the required elements of an advanced electronic signature. The South African authentication requirements add two requirements to those contained in the *E-signature Model Law*, namely that the signature must identify the user and there must be face-to-face identification of the user<sup>198</sup>.

Electronic signature in the South African context is given a wide definition:

...data attached to, incorporated in, or logically associated with other data and which it is intended by the user to serve as a signature<sup>199</sup>,

but only advanced electronic signatures (in other words, those signatures accredited by the Accreditation Authority) will be acceptable where a signature is required by law<sup>200</sup>.

The requirements in order to qualify as electronic signature make no reference to specific technological applications and, as such, are neutral. No preference for a particular technological procedure was given. A media neutral environment was also created in the *Model Law on Electronic Signatures*<sup>201</sup>. Article 3 of the new *Model Law on Electronic Signatures*, titled "Equal treatment of signature technologies", embraces the technological neutrality by granting legal effect to all e-signatures considered reliable based on the criteria of Article 6.

Technology neutrality has been widely favoured, because it would allow legislation to encompass future technologies with the minimum

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<sup>198</sup> S38(2) of the Electronic Communications and Transactions Act 25 of 2002; Article 6(3) of the UNCITRAL Model Law on Electronic Signatures.

<sup>199</sup> S1 of the Electronic Communications and Transactions Act 25 of 2002.

<sup>200</sup> Ss13(1) and 38 of the Electronic Communications and Transactions Act 25 of 2002.

amendment<sup>202</sup>. In keeping with this, Chama points out that e-policy should not be “PC-centric”, but rather embrace trends to mobile business (“m-commerce”)<sup>203</sup>.

Section 13(3)(a) of the Act states the functions that an electronic signature should fulfil to receive treatment equal to a traditional signature. An electronic signature should identify the person and indicate the person's approval of the information communicated. From this, it is clear that the South African Act adheres to the principle of “functional equivalence”, as it deals with e-signatures on the basis of functional requirements. This is a positive step, as most responses to the Green Paper were in favour of technological neutrality<sup>204</sup>.

### **7.5 The requirements of “notarisation, acknowledgement and certification”**

In particular instances, formalities other than writing and signatures are also required. In the case of among others, long leases, ante-nuptial contracts and the lease of mineral rights<sup>205</sup>, notarial execution and registration are requirements to ensure that rights are enforceable against third parties. Notarial execution is effected before a notary public with due formality. Registration is effected by means of an entry in a register kept by the state<sup>206</sup>.

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<sup>201</sup> Guide to Enactment, Model Law on Electronic Signatures, par 5.

<sup>202</sup> Commonwealth Secretariat *Law in Cyber Space* 6.

<sup>203</sup> Chama K 27 November 2000 *Computing SA* 3.

<sup>204</sup> Stavrou & Jackson “Overview of Submissions Received on the South African e-Commerce Green Paper” 43.

<sup>205</sup> S46 of Act 16 of 1967.

<sup>206</sup> Joubert W A (ed) *The Law of South Africa* Reissue Vol 5 par 170; Also mortgages [*Harris v Trustee Buissinne* (1840) 2 M 105; *Smith v Farrelly's Trustee* 1904 TS 949 955; s3 of Act 47 of 1937] and assignments of patents [s60(1) of Act 57 of 1978].

Notaries are required to explain the document to the parties and to satisfy themselves regarding the identity and competency of the parties. Two competent witnesses must sign the notarial document. All appearers must sign in the presence of the notary or acknowledge their signatures in his presence<sup>207</sup>.

The E-commerce Act goes beyond the scope of the *Model Law* and includes section 18 that deals with notarisational, acknowledgement and certification. Section 18(1) allows notaries, commissioners of oath, witnesses and others to perform their functions by electronic means. This is done by attaching an "advanced electronic signature".

Further guidelines to assist notaries may be required to establish when a notary has done his duty to ensure that the electronic signatures of the parties are in order.

Subsection 18 (2) and (3) provide for the certification of copies of documents retained in electronic form on paper, and vice versa. Subsection (2) allows the certification of printouts of an electronic document, whereas subsection (3) allows certification by advanced electronic signature of an electronic copy of a paper document. Common sense would dictate that an electronic certified "copy" of an electronic document should also be possible by using an advanced electronic signature as authenticating procedure.

In my opinion, although the progression towards the use of technology is commendable, certain difficulties will arise, as all the strict requirements regarding notarisational has not been sufficiently translated into electronic terms. Notaries who make use of technology, will have to be cautious in

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<sup>207</sup> Joubert W A (ed) *The Law of South Africa* Reissue Vol 14 par 445; *Incorporated Law Society v Kuyper* 1925 TPD 760.

order to avoid being held liable in the event of fraud or misrepresentation by either party. The Green Paper set out to clarify how electronic communications will satisfy the requirements by law<sup>208</sup>, in this instance, with regard to notarial practice. I believe that, in this particular respect, there remains a measure of uncertainty.

### **7.6 Other provisions dealing with form**

Subsection 19(2) of the Act provides as follows:

An expression in a law, whether used as a noun or verb, including the terms "document", "record", "file", "submit", "lodge", "deliver", "issue", "publish", "write in", "print" or words or expressions of similar effect must be, interpreted so as to include or permit such form, format or action in relation to a data message unless otherwise provided for in this Act.

This subsection enables electronic commerce and electronic governance within existing legislation. This will become a powerful tool for interpretation purposes as it relates closely to the data messages, written and/or signed in terms of the Act.

In terms of subsection 19(4), a document required to be sent by registered or certified post may be sent electronically to the South African Post Office Ltd. The Post Office then registers the document and electronically forwards it to the address given by the sender. It is unfortunate that the legislation only makes provision for the Post Office to register post. An additional service provider could benefit consumers, as volumes of registered letters are being sent. This subsection provides a quick alternative manner with which to comply with formalities.

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<sup>208</sup> Department of Communications "Green Paper on E-Commerce - Making it your business" November 2000 21.

This section is in line with the principle of “functional equivalence”, as put forward in the Green Paper. It is also, in my opinion, in line with international trends.

## 8. Conclusion

In conclusion, it is realistic to say that the ECTA will have a huge impact on the legal considerations when trading electronically. It appears that, although South Africa has an inherently flexible common law, certain reforms are necessary. Most of the perceived legal problems in our common law relating to e-commerce, are just that: perceived. However, in the interest of legal certainty, e-commerce legislation on form requirements is to be welcomed.

In my opinion, the requirement of writing would not have posed a problem to the common law. However, with regard to signatures, there is a larger measure of uncertainty. As illustrated by the case law on signatures drawn from the law of succession, judges have often disagreed on what constitutes a signature. It is submitted that what is now termed by legislation as an “advanced electronic signature” should have been regarded by our common law as a signature, because it is the functional equivalent of a traditional signature, but setting down standards by way of case law, would have been a costly and confusing exercise.

The South African Act draws on a vast base of knowledge regarding e-commerce legislation. We have based our legislative approach on the approach taken in the UNCITRAL *Model Laws*. We have also adhered to suggestions by the Commonwealth Expert Group. We have retained the concept of an “advanced electronic signature” from the EU *Directive on Electronic Signatures*. These inclusions ensure that South African legislation is in line with international trends. Differences between the various pieces of legislation, as discussed above, exist, but the underlying principles, such as “functional equivalence” and technological neutrality, are the golden threads that run through these articles and sections.

As with all attempts to harmonise law ,a great deal will depend on the interpretation of the law by courts seized with litigation arising from the legislation. I believe South African courts are not oblivious to the importance of international trade and the harmony of trade laws. Further, section 233 of the Constitution entrenches the principle.

The concept of “functional equivalence” emerges as an important thread woven through the sections dealing with form requirements drafted by UNCITRAL and the legislation by the EU, the USA and Australia too. There appears to be consensus that functional equivalence is the preferable technologically neutral way to ensure that electronic media solutions perform the same functions as the traditional paper-based form requirements. As technology still develops with leaps and bounds, the importance of technology or media neutrality should not be understated.

With the introduction of the ECTA, legislation enters a new era for electronic commerce in South Africa. The legislation introduces a number of safeguards unique to electronic commerce and the resulting “faceless” trade.

Data messages are given legal recognition. Electronic writing is established as the functional equivalent of writing on paper and constitutes the lowest level in a hierarchy of form requirements. The South African legislation identifies the following core functions of signatures:

- to identify the person; and
- to indicate the person’s approval of the information communicated.

In addition, an e-signature must be as reliable as is appropriate for the particular purpose. The Act uses these provisions to establish equal treatment for e-signatures and traditional signatures. Advanced electronic

signatures are required to meet additional criteria. Service providers must be accredited by the Accreditation Authority according to set standards.

Further form requirements provided for, include notarisation, acknowledgement, certification and the registration of post. Also in these cases, the functional equivalents of traditional methods are allowed.

From the above, it is clear that the South African legislation embraces “functional equivalence”.

There are a few issues that arise from the Act that could provide difficulties. The purpose of subsection 13(5) in the South African Act is not clear and may cause interpretation difficulties. The section does not follow international examples and appears to be superfluous. However, in keeping with the principles of the interpretation of statutes, it will influence the understanding of the sections on e-signatures. Besides, notaries will require guidelines to assist them in acting in accordance with the law in the technological era.

Finally, the acknowledgement of foreign authentication services will be of great practical importance and should enjoy the proper attention. “Functional equivalence” will operate as the underlying principle in the legislation of different countries. It will facilitate international trade; therefore, it is important not to hamper these advances with restrictive policies and bureaucracy regarding foreign authentication services.

In line with the most responses to the Green Paper, the ECTA has to a large extent conformed to international standards as well as incorporated “functional equivalence” and technological neutrality.

The South African legislation is sound in approach, as “functional equivalence” allows for technical neutrality and the equality of different media, whilst establishing a logical point of departure when evaluating e-commerce solutions. As a whole, the proposed South African e-commerce legislation on form requirements should be welcomed by commerce.

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