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The Legal Effect of Input Errors in Automated Transactions: The South African Matrix

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Abstract

The Electronic Communications and Transactions Act of 2002 contain comprehensive on-line consumer protection provisions. In addition, the ECT Act offers safeguards and remedies for natural persons transacting with electronic agents. Yet, the dividing line between consumer transactions and automated transactions is spurious. More often than not, a transaction will fall within both the ambit of a consumer transaction and an automated transaction. The legal effect of keying errors differs, depending on whether one colours the transaction as a consumer transaction or an automated transaction. Until such time as the ECT Act is re-vamped, transactional interfaces could accommodate these over-lapping and often conflicting legal provisions.

Keywords

Electronic transaction; error; electronic agent; consumer; automated transaction; natural person

1. Introduction

The overall objective of the ECT Act is to facilitate electronic commerce and to provide legal certainty to online traders and consumers alike. However, several contradictory and inconsistent legislative provisions have marred this objective. The consumer protection provisions are over-zealous. An analysis of the consumer protection provisions point to several inconsistencies in the calculation of time periods. In addition, South African on-line retailers are subject to more stringent requirements than the majority of on-line retailers elsewhere.

The analysis of the provisions on automated transactions also point to several contradictory provisions. A serious oversight is the dilution of the incorporation by reference requirements. The net effect of this drafting error dilutes the legislative intent of protecting ignorant South African on-line shoppers. Consumers will be bound to the supplier's terms and conditions where they were capable of being reviewed, notwithstanding the fact that the reference to them may have been unclear and indistinct.

A transaction for the supply of goods or services on a web site will also of necessity qualify as an automated transaction. Many on-line transactions will thus fall within the ambit of both a consumer and an automated transaction as a consumer is defined as a natural person. Most on-line transactional interfaces involve an electronic agent. Unfortunately, the provisions dealing with consumers and natural persons transacting with electronic agents have not been aligned. A case in point is the legal effect of keying error. The on-line supplier faces the risk that the contract could be voidable or void as a result of keystroke errors, depending on whether the transaction is viewed as a consumer transaction or an automated transaction. Although a transactional matrix can accommodate all these legislative inconsistencies the amendment of the ECT Act to exonerate these drafting errors is an imperative. .

2. The Development of South Africa's E-Commerce Law

The South African principles of contract law were formed in a paper-based world that ran on paper and ink. At the end of the 1990's the South African legal community realised that the advent of electronic communications as a medium for contract formation posed astounding and complex legal problems. Legal certainty was sought by both traders in and consumers of the new digital economy (Van der Hof, 2003, pp 165-166).

The Discussion Paper on Electronic Commerce (Jul 1999) served as a starting point for discussions concerning the development of a national policy on e-commerce for South Africa. The Green Paper on E-Commerce "Making it your business" (2000) <<http://www.ecomm-debate.co.za>> was a further step in the evolution of a South African policy on E-commerce. The Electronic Communications and Transactions Act (ECT Act) was promulgated on 25 August 2002. The overall objective of the ECT Act is to enable and facilitate electronic transactions by providing for its enforceability and thus creating public confidence in electronic transaction. As drafted, the Act represents a major step forward in the facilitation of electronic commerce in South Africa. The impact of the Act is extensive as far as Chapter III "Facilitating Electronic Transactions" is concerned as its amendments to traditional approaches to contract law are dramatic. Chapter VII "Consumer Protection" introduced austere on-line consumer protection provisions.

The ECT Act provides legal recognition to contracts formed through data messages. The meaning of several key terms, namely data, data message, electronic and electronic transaction is important for this discussion. Section 1 of the ECT Act provides that a data message means data generated, sent, received or stored by electronic means and includes voice, where the voice is used in an automated transaction and a stored record. The notion of a "data message" is not limited to means of electronic communication but is also intended to encompass computer-generated records that are not intended for communication. Thus, the notion of "message" includes the concept of "record". The reference to "similar means" is intended to reflect the fact that this Act is not intended only for application in the context of existing communication techniques but also to accommodate foreseeable technical developments. The aim of the definition of "data message" is to include all types of messages that are generated, stored, or communicated in essentially paperless form. It specifically includes any Internet content and e-mail messages but it is wide enough also to include telegraph transmissions, facsimile communication forms, Short Message System ("SMS") messages and instances where voice is used in conjunction with an automated voice recognition system. What are clearly excluded are real-time voice messages such as telephone conversations, even where the message or record is stored as a voice message.

Two observations may be made in relation to this definition. In the case of voice orientated "automated transactions", the voice messages (compiled and decompiled into electronic impulses during the process) should be recognised as the "data message" component of that transaction. First, it is unclear why the legislature only regards voice as a data message where it is used in relation to an automated transaction. Commentators noted that there are analogue (as opposed to "digital") electronic signals that are part of voice, and voice is part of the definition of "data

message" (Namespace (2002) <<http://www.namespace.org.za/>>). Secondly, the definition of a "data message" may be too narrow. The definition adopted in the Model Law includes "optical" and "digital" means of communication.

"Data" is defined as electronic representation of information of any kind. Electronic communication is defined to mean communication by means of data messages. The term "electronic" is central to both the meaning of "data" and "data message" but regrettably this term has not been defined. A definition was given for the term "electronic" in previous versions of the ECT Bill, namely digital or other intangible form. This definition of "electronic" was deemed to be inadequate and was deleted from later versions of the amended ECT Bill (ECT Bill B8 of 2002 as amended).

3. Consumer Protection

Arguably one of the most novel aspects of the ECT Act from a South African law perspective relate to consumer protection. This part of the Bill is to a large extent based on European Union's Distance Selling Directive. While it is acknowledged that consumers should be afforded protection, that protection must be appropriate and enforceable (Singleton, 2002, p 19; Turner & Traynor, 2002, p 10; Riach, 2003, p 379; Smith & Hand, 2002, pp 1597-1599; Van der Hof, 2003, pp 165-178).

A "consumer" is defined in the Oxford Advanced Learner's Dictionary as "a person who buys goods or uses services", while the ECT Act defines (and narrows it down) to "any natural person who enters or intends entering into an electronic transaction with a supplier as the end user of the goods or services offered by that supplier". The European Distance Selling Directive defines a consumer as any natural person who, in contracts covered by the Directive, is acting for purposes which are outside his trade, business or profession.

The narrow definition has been criticised (Van Zyl & Van Wyk, 2001). Some have argued that the definition should not have been restricted to natural persons, as small and medium sized enterprises will also benefit from consumer protection.

3.1 Information to be Provided

The ECT Act provides that the retailer is required to specify the terms of the agreement and any applicable guarantees, a sufficient description of the product for the consumer to make an informed decision, the full price including all costs and taxes, the return and exchange policy, the manner and period during which the consumer may access a full record of the transaction, and any alternative dispute resolution codes to which the retailer subscribes, as well as stating how the wording of these codes may be accessed (s.43(1)).¹

Section 43(2) provides that the supplier must provide a consumer with an opportunity:

- (a) to review the entire electronic transaction;
- (b) to correct any mistakes; and
- (c) to withdraw from the transaction, before finally placing any order.

The Act requires owners of all web sites that offer goods and services online to stipulate their security procedures and privacy policy in respect of payment and personal information (s.43(1)(p)).

The technological specific use of the term "web site" in relation to section 43(1) of the Act restricts its application to technologies like mobile and e-mail and fax. The term web site is defined in section 1 as any location on the Internet containing a home page or a web page. The term Internet is restricted to the application of a TCP/IP protocol as the transport medium or transport connection. It follows that a supplier offering goods and services through "electronic transactions" through a medium or location other than a "web site" do not have to comply with the Section 43 disclosure requirements. Examples of such transactions are those concluded via SMS or automated transactions where the supplier uses a recorded voice. The definition of a "web page" implies that even an email or similar data message can be interpreted as a "web site" when it travels over the Internet. However, viewed from a technical perspective, email does not travel over the World Wide Web but actually through simple mail transfer protocol (SMTP), which, like the World Wide Web, is merely a sub-service of the wider Internet. Therefore, any argument to classify an email message as a "web site" would probably fail. All technologies that use Signalling System 7 as a transport medium or bearer are thus excluded from the ambit of the definition of a web site (Perlman, 2003, p 17 and footnote 122 for a discussion of GSM networks, ss 7 and other mobile technologies).

Although the ECT Act does not define "electronic transactions", it does define the term "transaction" as "a transaction of either a commercial or non-commercial nature, and includes the provision of information and e-government services" (s. 1). This definition is indeed problematic, as it includes non-commercial transactions, the provision of information and furthermore it does not expressly exclude unilateral transactions. Although no payment is required when a consumer, for example, downloads ring tones from a web site, it is still a commercial transaction with rights and obligations to both parties. Buys (2004, p 141) argues that the use of other words and terms in Chapter 7 such as "goods or services for sale, hire or exchange" (s. 43(1)), "payment" (s.43(1)(j) and s.(5)), "return policy" (s.43(1)(n)) and "commercial" (s.45(1)) indicate that "electronic transactions" for the purpose of Chapter 7 should be limited to commercial transactions entered into between suppliers and consumers.

Furthermore, the fact that "provision for information" is included in the definition opens the door for an argument that a mere visit by a consumer to a web site is an "electronic transaction" because the web site's terms of use is a non-commercial transaction entered into between the web site owner and the consumer, and the web site provides information. In my opinion it was never the intention of the legislature to bring every single web site visit within the scope of Chapter 7.

The ECT Act does not prescribe how and where the section 43(1) disclosures should be made – the only indication is that the disclosures should be "*on the web site where such goods or services are offered*". The disclosures do not have to be on the same web page as the goods or services, but only on the same web site. It is suggested that the disclosure should be included in the user agreement or terms and conditions of the

web site – preferably listed under a heading such as “Disclosures required by the ECT Act”.

The consumer must have the opportunity to review the entire transaction, correct any mistakes and to withdraw from the transaction before placing an order (s.43(2)). If the information required by section 43(1) or the opportunity to review, correct and withdraw from the transaction is not provided, the consumer may rescind the contract within 14 days of receipt of the goods or services (s.43(3)).

In terms of section 43(4), if a transaction is cancelled in terms of subsection (3)—

- (a) the consumer must return the performance of the supplier or, where applicable, cease using the services performed; and
- (b) the supplier must refund all payments made by the consumer minus the direct cost of returning the goods

The retailer must utilise a payment system that is secure with reference to accepted technological standards and the transaction type, or the retailer will be liable for the consumer's damages (s.43(5)-(6)).

3.2 Cooling-off

A cooling-off period is provided for in section 44 of the ECT Act. The consumer also has a cooling-off period of 7 days to cancel the transaction without reason or penalty and obtain a refund. The cooling-off provisions are detailed in Section 44 of the ECT Act. This section, like the whole of Chapter 7, only applies to electronic transactions notwithstanding the use of the term “any transaction” in Section 44(1). However, it seems that the scope of application of the cooling-off provisions is widened to include “any related credit agreement”. The consumer's right of withdrawal therefore not only relates to the electronic transaction in question, but also to a credit agreement related to the electronic transaction – whether or not such a transaction was concluded electronically. It may happen that the consumer and a third party, e.g. a moneylender or bank, entered into the credit agreement.

The only exclusions to these cooling-off provisions are made in respect of financial services (including insurance, banking and securities), auctions, goods intended for everyday consumption, services that have begun with the consumer's consent prior to the expiry of the 7 day period, where the price is dependant on fluctuations in the financial markets, and for the provision of accommodation, catering, transport and leisure services which are to be provided on a specific date. The sale of newspapers, periodicals, magazines and books are excluded from the ambit of the cooling-off provision. It should be noted that the exclusion only applies to the “sale” of these items and not hire or exchange. It is unclear whether digital versions of newspapers and magazines and e-books would qualify as goods in terms of this exclusion, or rather as information services, which are not excluded (Buys, op cit., p 155).

Electronic transactions concluded for the supply of digital goods, such as digital music downloads, e-books and software, which are delivered electronically directly to the consumer's computer, are not included in the list of exclusions detailed in Section

42(2). It follows that such goods may be purchased, installed and used by the consumer for a period of seven days upon which the consumer may elect to enforce the cooling-off right and return the goods to the supplier. The effect of this glaring oversight is that the market for digital downloads in South Africa is rendered unprofitable. Buys notes that this oversight will encourage piracy and copyright infringement, and creates a barrier to the cost-effective delivery of digital content to South African consumers. Numerous appeals to the communications Portfolio Committee during the drafting of the ECT Act failed to remedy this situation (Buys, *op cit.*, p 156).

The scope of on-line consumer protection has been curtailed by the restrictive definition of consumers and the fact that only the proprietors of websites offering goods and services to the public need to comply with the requirements of Chapter 7 of the ECT Act. This chapter also contains conflicting terms for the calculation of time periods for remedies. The calculations for the start of the 14-day period where services are concerned differ from the calculation method detailed in the cooling-off provisions of Section 44. In terms of Section 44 the seven-day (cooling off) termination period commences on the date the agreement was concluded, while the 14-day termination period, detailed in Section 43(4), commences when the services are received. It is therefore quite possible that the consumer may have more than 21 days during which the transaction may be terminated – the Section 44 period commences on the date of agreement and the Section 43(3) period only commences when the service is received, possibly long after the initial seven-day period.

It is also not clear from the ECT Act when goods and services will be offered on a web site in South Africa. Are South African retailers who host their web sites from outside the jurisdiction of South Africa bound to the ECT Act's consumer protection requirements? Notwithstanding the sweeping scope of section 46, the ECT Act is not effective extra-territorially. This in turn diminishes the effectiveness of the remedies for consumers as on-line trading invariably implies trans-border transactions. At best, South African consumers may argue that public policy dictates that South African consumers should be able to rely on consumer protection consummate with that of the ECT Act.

4. Automated Transactions

An array of complex functions may be performed in an interactive and flexible manner through innovative artificial intelligence system. In these instances a party will communicate with the world through an automated web site which requires a minimum of actual human input, but where the system will automatically generate responses to messages received from customers. For instance a web site may be programmed to receive orders which have been electronically completed by customers. Once received, the system will generate an acknowledgment of receipt of the order, and process the order accordingly. This is generally referred to as an automated transaction. Automated transactions are concluded through the functions of electronic agents, also coined "shopping agents" (Van Haentjens, 2002, pp 1-9). These systems are able to perform "inter-systemic electronic contracting" functions (Andrade et al., 2005, p 53). An electronic agent must exhibit a number of properties to be able to attain particular objectives on behalf of its owner. First, it must be

autonomous so that it is capable of making independent decisions regarding appropriate responses. Secondly, it must be reactive, in that it must be able to perform appropriate action without constant direction from its owner. Lastly, it must be proactive in the sense that it must take action without constantly referring back to its user (Andrade et al., 2005, pp 53-54).

The UNCITRAL Model Law indirectly addresses automated transactions. It provides in Article 11 that unless agreed otherwise, a contract may be formed by an offer and the acceptance of an offer by means of data messages. In other words, where data messages are used in the formation of a contract, that contract shall not be denied validity or enforceability on the sole ground that data messages were used for that purpose. The Guide notes that the provision was deemed necessary in view of the remaining uncertainties in a considerable number of countries as to the validity of electronic contract formation where the data messages expressing the offer and the acceptance are generated by computers without immediate human intervention. Section 7(b) of the United States' Uniform Electronic Transactions Act (UETA) similarly provides that a contract may not be denied legal effect or enforceability solely because an electronic record was used in its formation. The Canadian Uniform Electronic Transactions Act of 1999 (UECA) contains an almost identical provision in section 20(2) and section 8 of the Australian ETA also provides that a transaction is not invalid because it took place wholly or partly by means of one or more electronic communications. (Also, Singaporean Electronic Transactions Act 25 of 1998; see, Endeshaw, 1998, p 189; Phang & Seng, 1999, p 103; Endeshaw, 1996, pp 208-222.)

The ECT Act echoes these international provisions on the validity of electronic contract formation more than once in the ECT Act. Section 22(1) provides that an agreement is not without force and effect merely because it was concluded partly or wholly by means of data messages. Section 24 reiterates this principle by stating that an expression of intent or other statement is not without legal force and effect merely because it is in the form of a data message.

Automated contract formation by means of electronic agent is also addressed in the ECT Act. The South African provisions on automated transaction were to a large extent inspired by legislative provisions in leading jurisdictions. The Canadian UECA makes provision for electronic agents to conclude contracts for and on behalf of human actors (Gautrais, 2003-2004, p 200). The United States' UETA also provides for the legal effect of contract formation through electronic agents. Section 20 was based closely on section 10 of UETA and section 22 of the Canadian UECA.

In contrast, the Electronic Commerce Directive of the European Union does not make provision for the formation of contract by means of electronic agents (Poggi, 2000, p 727). The explanatory notes of the proposal of the E-commerce Directive mentioned that Member States should refrain from preventing the use of certain electronic systems such as intelligent electronic agent for making a contract (COM, 1998, 586 final <www.europa.eu.int/scadplus/leg/en/lvb/124202.htm>) However, the final version makes no reference to electronic agent in the main text or in the recital (Kierkegaard, 2007, p 41; Van Haentjens, 2002, p 11).

An "automated transaction" is defined in section 1 of the ECT Act to mean an electronic transaction conducted or performed, in whole or in part, by means of data

messages in which the conduct or data messages of one or both parties are not reviewed by a natural person in the ordinary course of such natural person's business or employment. An automated transaction therefore is a transaction where one or both of the parties make use of automated systems, i.e. a program that communicates with or responds to third parties without any human intervention.

The ECT Act introduces the concept of an "electronic agent". An "electronic agent" is defined to mean a computer program or an electronic or other automated means used independently to initiate an action or respond to data messages or performances in whole or in part, in an automated transaction (s. 1 ECT Act). The definition of an electronic agent was drawn from the UETA's definition of an electronic agent.

Section 20(a) provides that in an automated transaction an agreement may be formed where an electronic agent performs an action required by law for agreement formation. Section 20(b) reiterates this position and provides that an agreement may be formed where all parties to a transaction or either one of them uses an electronic agent (the legal issues are compounded where both parties use electronic agents - see Cevenini, 2003, pp 21-32; Calmet & Endsuleit, 2004, pp 181-184; Boella & Van der Torre, 2004, pp 65-80). The offer and/or acceptance are made by automated means without referring any decision for actual human input. In this case the computer and computer program constitutes an electronic agent.

4.1 Attribution of Actions of Electronic Agent

In terms of section 20 of the ECT Act, a party on whose behalf a computer or electronic agent has been programmed will be bound to the pre-programmed actions of the program. Section 20(c) provides that a party using an electronic agent to form an agreement is, subject to paragraph (d), presumed to be bound by the terms of that agreement irrespective of whether that person reviewed the actions of the electronic agent or the terms of the agreement. Section 20(d) provides that a party interacting with an electronic agent to form an agreement is not bound by the terms of the agreement unless those terms were capable of being reviewed by a natural person representing that party prior to agreement formation. A few comments can be made about section 20(c). First, section 20(c) deals with the legal position of the person on whose behalf the automated system operates and not the person interacting with the electronic agent. The reference to section 20(d) is thus nugatory.

Secondly, as far as attribution is concerned, section 20(c) is in line with South African common law. Contract formation through automated means was recognised long before electronic commerce became a reality (Olmesdahl, 1984, pp 553-555). At common law, where a message or action is sought to be attributed to a person in court, the person who alleges attribution or who wants to produce a document has to prove that it is authentic (*S v. Swanepoel* 1980 (1) SA 144 (NC); also Lawack-Davis, 2000, p 296). The actions of a machine are normally attributed to the person who instructed or programmed it to perform a specific function (see, for example, the definition of the "author" of a computer-generated work in s. 1(1) of the Copyright Act 98 of 1978; *Entores Ltd v. Miles Far East Corporation* [1955] All ER 493 (CA); *Thornton v. Shoe Lane Parking* [1971] 1 All ER 686; Chissick & Kelman, 2000, p 77; *contra* De Miglio et al, 2002, pp 1-20). At common law, it followed that where mistakes occur in

electronic communication through the malfunction of an electronic agent, the party that installed the malfunctioning electronic agent must assume the risk of any defects or delays in the transmission (Kerr, 1998, pp 110-111; for a delightful discussion of "electronic wizardry", and fault on the part of the offeror and the equipment used by her, see also, Olmesdahl, 1984, p 553).

In a fully automated system human decisions are only involved in designing the system, in creating rules for human assent to the system, but human decisions are not involved in the specific transaction (Castell, 1997, p 3; for a discussion of rules to determine responsibility for agents' actions, refer to Van Haentjens, 2002, p 22). Will the person making use of an electronic agent still be bound if the electronic agent malfunctioned or failed to perform an action due to technical failures? The main issue is one of attribution – when do the actions of the electronic agent attributable to the principal? The challenge that faces courts is to determine where the communication system ends and the legal agent begins (ibid, p 3). In Case No. 9 U 94/02 (Oberlandesgericht Frankfurt. 20 November 2002 *JurPC – Internet Zeitschrift für Rechtsinformatik*, JurPC WebDok 91/2003 <<http://www.jurpc.de/rechtspr/20030091.pdf>>) the court affirmed the principle that automated communications were attributable to the person on whose behalf the system had been programmed and on whose name the message were sent.

The attribution of electronic event is addressed in the ECT Act. "Attribution" should not be confused with "authentication", a term which is sometimes used as an alternative for "electronic signature" (Kahn & Silverberg 2001, p 432; Winn & Pullen, 1999, p 462). Section 25 provides that a data message is the originators if it was sent by the originator personally (s.25(a)). A data message will also be attributed to the originator if it was sent by a person who had authority to act on the originator's behalf in respect of that data message (s.25(b)). A data message will be that of the originator if it was sent by an information system programmed by or on behalf of the originator to operate automatically, unless it is proved that the information system did not properly execute such programming (s.25(c)).

An "information system" means a system for generating, sending, receiving, storing, displaying or otherwise processing data messages and includes the Internet (s. 1 of the ECT Act). The definition of "information system" is intended to cover the entire range of technical means used for transmitting, receiving and storing information. For example, depending on the factual situation, the notion of "information system" could be indicating a communications network, and in other instances could include an electronic mailbox or even a telecopier.

Sections 25(a) and (b) is in line with South Africa's common law. Had the person referred to in section 25(a) not personally transmitted the data message, or had the person referred to in section 25(b) not been appropriately authorized to act on behalf of the originator (and subject to the rules associated with estoppel), that originator will be able to lead evidence of such fraud, and should be able to prove any agreement concluded on the basis of such misrepresentation void *ad initio* (Meiring, 2004, p 100; Christie, 2001, p 330).

4.2 Party Interacting with an Electronic Agent

4.2.1 Incorporation of Terms

Section 20(d) provides that where a party interact with an electronic agent is not bound by the terms of the agreement unless those terms were capable of being reviewed by a natural person representing that party prior to contract formation. The legal effect of this provision is unclear, especially the effect of the phrase "not bound". Is this agreement void or is the agreement simply not binding on the natural person? It has been suggested that this provision should be interpreted restrictively to the effect that this creates a situation akin to the "limping" contracts, for example a contract entered into by a minor is binding but unenforceable against the minor (Eiselen, 2008, pp 154-155). I am of the opinion that in assessing the effect of this provision; one should focus on the enforceability of the terms and conditions, and not on the contract itself. The effect of section 20(d) is simply that the natural person will not be bound to the terms and conditions, but that the *naturalia* of the contract will apply. The real complication which section 20(d) creates is the fact that it dilutes the incorporation by reference requirements of the ECT Act as provided for in section 11(3). (Also refer to *Specht v. Netscape*, Case No. 01-7860 (L) (2d Cir., October 1, 2002) <http://www.phillipsnizer.com/library/cases/lib_case295.cfm> and *Specht v. Netscape Communications Corp.* 2001 WL 755396, 150 F. Supp. 2d 585 <http://www.phillipsnizer.com/library/cases/lib_case24.cfm> on incorporation by reference.)

Section 11(3) of the ECT Act requires information may be deemed to be incorporated by reference if (a) the information is referred to in a way in which a reasonable person would have noticed the reference thereto and incorporation thereof; and (b) accessible in a form in which it may be read, stored and retrieved by the other party, whether electronically or as a computer printout as long as such information is reasonably capable of being reduced to electronic form by the party incorporating it. The incorporation by reference section requires much more than merely being "capable of being reviewed by a natural person" (Pistorius, 2004, pp 568-576). The impact of this oversight is immense as the requirements for incorporation by reference has been diluted in all cases where terms and conditions are incorporated in an automatic transaction. This could have an impact on all contracts with natural persons and also for consumer transactions. Consumers will be bound to terms and conditions where they were capable of being reviewed, notwithstanding the fact that the reference to them may have been unclear and indistinct.

4.2.2 Legal Effect of Errors

As noted above, South African common-law principles dictate that where mistakes occur in electronic communications through the malfunction of an electronic agent, the party that installed the malfunctioning electronic agent must assume the risk of any defects or delays in the transmission. Meiring argues that the proviso in section 25(c): "...unless it is proved that the information system did not properly execute such programming" is helpful, but a strictly unnecessary reference to the rebuttable nature of these provisions (2004, p 100). This argument is only partly valid. The focus in addressing attribution is not on who made decisions in relation to specific

transactions but on how the risk should be structured in an automated transaction (Castell, 1997, p 4). Section 25(c) of the ECT Act mitigates the risks of defects as a result of programming malfunction. Where the electronic agent merely fails to respond to a data message or where delays occur in the transmission of a data message or in the performance of an action, section 25(c) will be of little assistance. As noted above, South African common law dictates that where mistakes occur in electronic communications through the malfunction of an electronic agent, the party that installed the malfunctioning electronic agent must assume the risk of any defects or delays in the transmission. Section 25(c) has altered this rule as the risks associated with programming malfunction have been mitigated.

The general principles of contract formation are applicable to mistake in cyberspace (Weitzenboeck, 2001, pp 204-234; Phang, 2005, pp 361-387; Leng, 2005, pp 157-164; Weitzenboeck, 2001, pp 1-27). A party making use of an electronic agent will thus be bound to the electronic agent's action. E-retailers have been held bound to auto-reply actions in few cases (see, *Lim v. The .TV Corporation International*, Cal. Ct. App. 2002; Case No. 9 S 289/02, Landgericht Köln. 16 April 2003, *JurPC – Internet Zeitschrift für Rechtsinformatik*, JurPC Web-Dok 138/2003 <<http://www.jurpc.de/rechtspr/20030138.pdf>>; Contreras, 2003, p 1; *contra Corinthan Pharmaceutical System Inc. v. Lederie Laboratories* 724 F Supp 605 SD Ind 1989); Case No. 21 C 26/03, Amtsgericht Westerburg, 14 March 2003, *JurPC – Internet Zeitschrift für Rechtsinformatik*, JurPC WebDok 184/2003 <<http://www.jurpc.de/rechtspr/20030184.pdf>> and Case No. 9 S 289/02 Landgericht Köln. 16 April 2003, *JurPC – Internet Zeitschrift für Rechtsinformatik*, JurPC Web-Dok 138/2003 <<http://www.jurpc.de/rechtspr/20030138.pdf>>).

Where there is an obvious mistake, courts have applied common-law principles of a voidable contract due to unilateral mistake (Van der Merwe et al, 1993, pp 25-27; Christie, 2001, pp 21-29 & 313-314) to hold that vendors have not been held bound by their electronic agents' acceptance of offers (see, *Chwee Kin Keong v. Digilandmall.com Pte Ltd* [2004] 2 SLR 594; *Chwee Kin Keong v. Digilandmall.com Pte Ltd* [2005] SGCA 2; Case No. 9 U 94/02, Oberlandesgericht Frankfurt, 20 November 2002 *JurPC – Internet Zeitschrift für Rechtsinformatik*, JurPC WebDok 91/2003 <<http://www.jurpc.de/rechtspr/20030091.pdf>> as discussed by Contreras, 2003, p 1).

The E-Commerce Directive deals with the question of mistake and error by obliging service providers to employ error-correction procedures. Art. 11(2) of the Directive provides that Member States shall ensure that the service provider makes available to the recipient of the service appropriate, effective and accessible technical means allowing him to identify and correct input errors, *prior* to the placing of the order. Kierkegaard (2007, pp 38-39) notes that the E-Commerce Directive does not address the question of mistakes and errors in electronic commerce and each Member State's laws govern these situations. Consumers are also protected where mistakes are made in contracting with automated systems in the Distance Selling Directive.

Article 14 of the Convention on the Use of Electronic Communications in International Contracts provides for error in contracting. It provides that where a person makes an input error on an interactive website and is not given the opportunity to correct it, she has the right to withdraw from that portion of the electronic

communication if he or she notifies the other party of the error as soon as possible and has not used or received any material benefit or value from the goods or services. Article 14 is restricted to errors made on “interactive websites”. Secondly, the person can only withdraw from that part of the electronic communication; the contract is not voidable or void. Thirdly, the Convention does not oblige online retailers to introduce methods of error prevention, it only provides for a remedy if there was no opportunity to correct the error (Polanski, 2006, p 12).

The ECT Act also deals with keystroke errors made in automated transactions. Section 20(e) provides that no agreement is formed where a natural person interacts directly with the electronic agent of another person and has made a material error during the creation of a data message and—

- (i) the electronic agent did not provide that person with an opportunity to prevent or correct the error;
- (ii) that person notifies the other person of the error as soon as practicable after that person has learned of it;
- (iii) that person takes reasonable steps, including steps that conform to the other person's instructions to return any performance received, or, if instructed to do so, to destroy that performance; and
- (iv) that person has not used or received any material benefit or value from any performance received from the other person.

The person making use of an electronic agent is saddled with a heavy burden, it must not only provide the natural person with an opportunity to correct the error; it must also provide that person with the opportunity to prevent the error. However, to be entitled to this protection it is required that a natural person must notify the other party of any mistakes as soon as such mistake is noticed.

The responsibility to provide an opportunity to "prevent" the error is mirrored in the UETA. It has been noted that the party acting through the electronic agent has the ability to build safeguards that will enable the individual to prevent the sending of an erroneous data message or to correct the error once sent (Beattie, 1999, p 5). It is suggested that this may be achieved through a confirmation screen where the natural person can confirm the data input and where the electronic agent sends the input data back to the natural person for confirmation before the contract will become effective (ibid, pp 5-6).

The ECT Act provides that the natural person must notify the other person of the error as soon as practicable after that person has learned of it. Similarly, the UETA requires "prompt" notification. Whether the steps to notify were soon enough will depend on a number of factors. One of them would be the natural person's ability to determine how to contact the person operating the electronic agent (Beattie, 1999, p 6).

5. Comparison of the Effect of Keystroke Errors by Consumers and Natural Persons

The protection offered to a natural person that made an error in an automated transaction provided for in section 20(e) is at odds with the consumer-protection

provisions of section 43(2). Where goods or services are supplied on a web site as described in Chapter VII, it is an electronic transaction in terms of which the consumer protection provisions apply. Similarly, the same transaction, namely supplying goods or services on a web site, will also of necessity qualify as an automated transaction. In this last case the web site will be deemed to be an electronic agent. A consumer is also restricted to a natural person, so the purchaser will be both a consumer transacting on a web site and a natural person interacting with an electronic agent. Note, however, that section 20 applies to all cases of transaction with an electronic agent, whereas the remedy provided for in section 43 only applies to the situation where goods or services is offered for sale or hire or for exchange by way of an electronic transaction.

The time limits differ: The natural person may cancel as soon as the person becomes aware of the error she made in transacting with the electronic agent. The consumer is at a disadvantage. In terms of Section 44's cooling-off provisions, the consumer's seven-day termination period commences on the date the agreement was concluded, while the consumer has right to terminate the agreement in terms of section 43(4) within 14 days of receipt of the services.

The remedies also differ in two respects: the agreement is void where the natural person made a material error in an automated transaction, provided the natural person has not started using the goods or services received in terms of that transaction (s.20(e)). The question of whether or not the consumer has started using the goods or services plays no role in determining the enforceability of the consumer transaction in terms of section 43(2). In the case where the natural person made an error in an automated transaction, the transaction is void *ab initio*, whereas the transaction in terms of section 43(3) is only voidable within 14 days of receiving the goods or services under the transaction. The automated transaction is void where the consumer made a material error (s.20(e), the consumer contract is voidable where the consumer made an error (s.43 (3)), but the consumer contract is also voidable where the information required by section 43(1) or the opportunity to review, correct and withdraw from the transaction is not provided (s.43(2)-(3)).

Chapter VII obliges the consumer to return the performance or cease using the service and the supplier is obliged to refund the consumer fully. The consumer only carries the costs of returning the goods to the supplier. Section 20(e)(iii) merely provides that the natural person must take reasonable steps, including steps that conform to the instructions of the person on whose behalf the electronic agent operated, to return any performance received, or, if instructed to do so, to destroy that performance. Here the natural person is at a disadvantage as the supplier is not saddled with the same obligation to refund the natural person in section 20 as is done in section 43.

6. The Transactional Interface Matrix

It has been noted that an extensive body of unwritten norms have emerged. Important Internet customary practices have emerged for on-line contracting (Polanski, 2005, p 3 & p 9). The three general obligations of online vendors are first, the obligation to provide means of identifying and correcting input errors, secondly, the obligation of the on-line vendor to summarise the transaction before accepting payment and thirdly,

the obligation of an on-line vendor to instantly and electronically confirm the order (ibid, pp 7-8). This last customary practice is not reflected in the ECT Act. Section 26(1) of the ECT Act expressly provides that an acknowledgement of receipt is not necessary to give legal effect to a data message although parties may provide acknowledgements in communication, whether automated or through conduct, to indicate that a data message has been received (s.26(2)(a)-(b)).

A South African on-line trader is faced with a complex range of variables to contend with. These legal challenges could be addressed by a competent transactional interface design (for good practices refer to Brazier et al, 2003 pp 9-20); Bergenti et al, 2005, pp 1-20 and refer to Calmet & Endsuleit, 2004, pp181-184 for sound security mechanisms). The design of the interface should include the information required by the Act, such as links to the description of the goods or services and to the contractual terms and conditions (s.42(1)). The transactional interface should provide the consumer with the opportunity to confirm all material elements of the contract, especially personal details, the type and quantity of goods or services and the price. But most importantly, the transactional interface must seek confirmation of the correctness of the information provided to prevent keystroke errors, and present the consumer with an opportunity to review the entire transaction. The interface should also present the consumer with the opportunity to withdraw from the contract before it is finalised (s.42(2)-(4); s.20(e)).

7. Conclusions

Two explanations for the seemingly contradictory and over-lapping provisions of the ECT Act could be considered. Perhaps the South African legislature was over-zealous in protecting consumers and natural persons alike. Another explanation could be that the drafters borrowed from the EU, Canada and the United States without realising the resultant duplications. The fact remains that sections 20, 43 and 44 of the ECT Act create scope for confusion. A review of the effectiveness of the ECT Act to regulate electronic commerce in South Africa is due. Recommendations for the amendment of the ECT Act includes the amendment of section 43 by the substitution of the phrase "web site" with the phrase "information system" which would allow for a more generic application of the Act to other existing and emerging technologies, and specifically m-commerce and u-commerce. In general, the provisions of section 20 should be aligned with the consumer protection provisions.

The on-line supplier faces the risk that the contract could be voidable due to the insufficiency of the information provided or voidable or void as a result of keystroke errors. A transactional interface matrix will effectively protect the supplier until such time as the ECT Act is amended.

References

Andrade, F, Novais, P and Neves, J (2005), 'Will and Declaration in Acts Performed by Intelligent Software Agents - Preliminary Issues on the Question', *Proceedings of The 4th Workshop on the Law and Electronic Agents (LEA 2005)*, available at: <http://www.lea-online.net/publications/Andradeetal_LEA05.pdf>

Beattie, C R (1999), 'Facilitating Electronic Commerce – The Uniform Electronic Transactions Act', 32(3) *Uniform Commercial Code Law Journal*, available at: <<http://www.oppenheimer.com/news/detail.asp?owdid=433>>

Bergenti, F, Bianchi, R and Fontana, A (2005), 'Secure and Trusted Interactions in Societies of Electronic Agents', *Proceedings of The 4th Workshop on the Law and Electronic Agents (LEA 2005)*, available at: <http://www.lea-online.net/publications/Bergenti_etal.pdf>

Boella, G and van der Torre, L W N (2004), 'Legal Institutions in Multiagent Systems: The Case of Contracts' in Ceyenni, C (ed.) *The Law and Electronic Agents: Proceedings of the LEA 04 workshop (2004)*, pp 65-80 available at: <<http://www.lea-online.net/publications/04boetor.pdf>>

Brazier, F M T, Oskamp, A, Schellekens, M H M and Wijngaards, N J E (2003), 'Can Agents Close Contracts?' in Oskamp, A and Weitzenböck, E M (eds.) *Proceedings of the Law and Electronic Agents workshop (LEA'03)*, pp 9-20 available at: <http://www.lea-online.net/publications/Paper_1_Brazier_Contract.pdf>

Bridges.org (2002), 'South Africa's Electronic Communications and Transactions (ECT) Bill: analysis and commentary submitted to the Government on 6 May 2002', available at: <<http://www.bridges.org/policy/sa/ect/index.html>>

Buys, R (2004), "Online Consumer Protection and SPAM" in Buys, R (ed.) *Cyberlaw @ SA The law of the Internet in South Africa*, (2nd Ed.), (Pretoria: Van Schaik Publishers)

Calmet, J and Endsuleit, R (2004), 'An Agent Framework for Legal Validation of E-Transactions' in Cevenini, C (ed.) *The Law and Electronic Agents: Proceedings of the LEA 04 workshop, (2004)*, pp 181-184 available at: <<http://www.lea-online.net/publications/12calmet.pdf>>

Castell, D (1997), 'Electronic Contract Formation' in Cameron, D M, Aird and Berlis (eds.) *Jurisdiction*, available at: <<http://www.jurisdiction.com/ecom3.htm>>

Cevenini, C (2003), 'Contracts for the Use of Software Agents in Virtual Enterprises' in Oskamp, A and Weitzenböck, E M (eds.) *Proceedings of the Law and Electronic Agents workshop (LEA'03)*, pp 21-32 available at: <http://www.lea-online.net/publications/Paper_2_Cevenini.pdf>

Chissick, M & Kelman, A (2000), *Electronic Commerce Law and Practice* (2nd Ed.) (London: Sweet & Maxwell)

Contreras, J L (2003), 'Are Sellers Bound by Mistakes in Online Advertisements?', available at: <<http://www.wilmerhale.com>>

Christie, R H (2001), *The Law of Contract* (Durban: Butterworths Professional Publishers (Pty) Ltd)

De Miglio, F, Onida, T, Romano, F and Santoro, S (2002), 'Electronic Agents and the Law of Agency' in Sartor, G (ed.) *Proceedings of the workshop on the Law of Electronic Agents (LEA02)*, available at: <<http://www.lea-online.net/publications/DemiglioOnidaRomanoSantoro.pdf>>

Eiselen, S (2008), "E-commerce" in van der Merwe, DP (ed.) *Information and Communications Technology Law* (Durban: LexisNexis)

Endeshaw, A (1998), 'The Singapore E-commerce 'code'', 3(8) *Information & Communications Technology Law*, p 189

Gautrais, V (3003-04), 'The Colour of E-consent', 1 *University of Ottawa Law & Technology Journal*, p 189

van Haentjens, O (2002), 'Shopping Agents and Their legal Implications Regarding Austrian Law' in Sartor, G (ed.) *Proceedings of the workshop on the Law of Electronic Agents (LEA'02)*, available at: <<http://www.lea-online.net/publications/Vanhaentjens.pdf>>

Haupt (2005), *The pudding is in the proof – Basic principles of the law of contract discussed and applied to instances of 'click-wrap and browse-wrap' agreements*, LLM research report (Wits) (Unpublished)

Kahn, R A and Silverberg, D J (2001), 'From Mount Sinai to Cyberspace: Making Good E-business Records', 57 *Business Lawyer*, p 431

Kierkegaard, S M (2007), 'E-Contract Formation: U.S. and EU Perspectives', 3 *Shidler Journal of Law, Communication & Technology*, p 12 available at: <<http://www.lctjournal.washington.edu/Vol3/a012Kierkegaard.html>>

Kerr, A J (1998), *The Principles of Law of Contract* (5th ed.), (Durban: Butterworths)

Lawack-Davis, V (2000), *Aspects of Internet Payment Instruments* (unpublished LLD thesis) University of South Africa,

Leng, T K (2006), 'Legal Effects of Input Errors in eContracting', 22(2) *Computer Law & Security Report*, p 157

Meiring, R (2004) "Electronic Transactions" in Buys, R (ed.) *Cyberlaw @ SA The law of the Internet in South Africa*, (2nd ed.) (Pretoria: Van Schaik Publishers)

Namespace ZA (2002), 'Comments on the Electronic Communications and Transactions Bill by Namespace ZA - Draft ECT bill submission - 2002-04-24' available at <<http://www.namespace.org.za/>>

Olmesdahl, M C J (1984), 'Unheralded Demise of Wolmer versus Rees', 100 *South African Law Journal*, p 545

Perlman, L (2003), 'Application of the South African Electronic Communications and Transactions Act 25 of 2002 to Mobile Commerce' submitted in fulfilment for LLB research report (Unisa) (Unpublished)

Phang, A and Seng, D (1999), 'The Singapore Electronic Transactions Act 1998 and the proposed art 2b of the Uniform Commercial Code', 2(7) *International Journal of Law and Information Technology*, p 103

Phang, A (2005), 'Contract Formation and Mistake in Cyberspace – The Singapore Experience', 17 *Singapore Academy of Law Journal*, p 387

Pistorius, T (2004), 'Click-wrap and web-wrap agreements', 4 *SA Mercantile Law Journal*, p 568

Poggi, C T (2000), 'Electronic Commerce Legislation: An Analysis of European and American Approaches to contract formation', 41 *Virginia Journal of International Law*, p 224

Polanski, P P (2005), 'Common Practices in the Electronic Commerce and Their Legal Significance', paper delivered at the 18th *Bled eConference eIntegration in Action* held in Bled, Slovenia, 6-8 June 2005

Polanski, P P (2006), 'Convention on E-Contracting: The Rise of International Law of Electronic Commerce?', 19 *Bled eConference eValues*, Bled, Slovenia, June 5-7, 2006

Riach, E (2003) 'Cookies and spam' 153 *New Law Journal* 379

Singleton, S (2002), 'In Focus – New E-Commerce Regulations', 25.11 *Consumer Law Today* 19

Turner, M and Traynor, M (2002), 'E-Commerce – Better Late than Never', 10.9(19) *IT Law Today*

Smith, G and Hand, A (2002), 'Implementing the E-Commerce Directive', 152 *New Law Journal* 1597

van der Hof, S (2003), 'European Conflict Rules Concerning International Online Consumer Contracts', 12(2) *Information & Communication Technology Law*, pp 165-178;

Van der Merwe, S et al. (2000), *Contract General Principles* (Kenwyn: Juta & Co)

Van Zyl, M M and Van Wyk, G A (), 'E-law Consumer Protection in the South African Electronic Communications and Transactions (Ect) Bill A Commentary on Chapter VII (Sections 43-50) Of the ECT Bill', unpublished paper (Polytechnic Of Namibia, Windhoek, Namibia)

Weitzenboeck, E M (2001), 'Electronic Agents and Contract Formation', 3(9) *International Journal of Law & Technology*, p 204

Weitzenboeck, E M (2001), 'Electronic Agents and the Formation of Contracts' in *ECLIP Electronic Commerce Legal Issues Platform* ECLIP EP 27028 (version 29.04.2001)

Winn, J K and Pullen, M R (1999), 'Despatches from the Front: Recent Skirmishes Along the Frontiers of Electronic Contracting Law', 55 *Business Lawyer*, p 455

Cases

Chwee Kin Keong v Digilandmall.com Pte Ltd [2004] 2 SLR 594

Chwee Kin Keong v Digilandmall.com Pte Ltd [2005] SGCA 2

Corinthan Pharmaceutical System Inc. v. Lederie Laboratories 724 F Supp 605 (SD Ind 1989

Case No. 21 C 26/03 (Amtsgericht Westerbürg. 14 March 2003, *JurPC –Internet Zeitschrift für Rechtsinformatik*, JurPC WebDok 184/2003
<<http://www.jurpc.de/rechtspr/20030184.pdf>>)

Case No. 9 S 289/02 (Landgericht Köln. 16 April 2003, *JurPC – Internet Zeitschrift für Rechtsinformatik*, JurPC Web-Dok 138/2003
<<http://www.jurpc.de/rechtspr/20030138.pdf>>;

Case No. 9 U 94/02 (Oberlandesgericht Frankfurt. 20 November 2002 *JurPC – Internet Zeitschrift für Rechtsinformatik*, JurPC WebDok 91/2003
<<http://www.jurpc.de/rechtspr/20030091.pdf>>)

Entores Ltd v Miles Far East Corporation [1955] All ER 493 (CA)

Lim v. The .TV Corporation International (Cal. Ct. App. 2002

Thornton v Shoe Lane Parking [1971] 1 All ER 686

S v Swanepoel 1980 (1) SA 144 (NC)

Specht v. Netscape, Case No. 01-7860 (L) (2d Cir., October 1, 2002)
<http://www.phillipsnizer.com/library/cases/lib_case295.cfm>

Specht v. Netscape Communications Corp. 2001 WL 755396, 150 F. Supp. 2d 585
<http://www.phillipsnizer.com/library/cases/lib_case24.cfm>

Legislation & Official documents

Copyright Act 98 of 1978

Directive 97/7/EC of the *European Parliament and of the Council 20 May 1997 on the protection of consumers in respect of distance contracts on distant selling* O.J. L. 144/19, 4 June 1997

Directive 2000/31/EC L178; [2000] (OJ 17 July) European Parliament and Council of 8 June, 2000 on *Certain Legal Aspects of Information Society Services, in particular electronic commerce, in the internal market* available at <http://europa.eu.int/comm/internal_market/en/media/electcomm/com31en.pdf>

Department of Communications Discussion Paper on Electronic Commerce (Jul 1999) <<http://www.ecomm-debate.co.za>>

Department of Communications *Green Paper on E-Commerce for South Africa* (2000) <<http://www.ecomm-debate.co.za>>

Electronic Communication and Transactions Act 25 of 2002 (South Africa)

Electronic Transactions Act 1999 (commenced by Proclamation on 15 March 2000) (ETA) (Australia)

Electronic Transactions Act 25 of 1998 (Singapore)

Uniform Electronic Transactions Act (4 August 1999 draft) (adopted at its Annual Conference Meeting in its One-Hundred-And-Eighth Year in Denver, Colorado (July 23B30 1999 (United States)

Uniform Electronic Commerce Act 1999 (UECA)
<<http://www.law.ualberta.ca/alri/ulc/acts/eUECA.htm>> (Canada)

UNCITRAL Model Law on Electronic Commerce 1996 with additional art 5*bis* as adopted in 1998 (General Assembly Resolution 51/162 of 16 December 1996)

United Nations' Convention on the Use of Electronic Communications in International Contracts, A/60/515.

Working Group on Electronic Commerce "The Guide to Enactment" (1996)
<<http://www.uncitral.org>>

ⁱ Section 43(1) provides:

"A supplier offering goods or services for sale, for hire or for exchange by way of an electronic transaction must make the following information available to consumers on the web site where such goods or services are offered:

- (a) Its full name and legal status;
- (b) its physical address and telephone number;
- (c) its web site address and e-mail address;
- (d) membership of any self-regulatory or accreditation bodies to which that supplier belongs or subscribes and the contact details of that body;
- (e) any code of conduct to which that supplier subscribes and how that code of conduct may be accessed electronically by the consumer;
- (f) in the case of a legal person, its registration number, the names of its office bearers and its place of

registration;

- (g) the physical address where that supplier will receive legal service of documents;
- (h) a sufficient description of the main characteristics of the goods or services offered by that supplier to enable a consumer to make an informed decision on the proposed electronic transaction;
- (i) the full price of the goods or services, including transport costs, taxes and any other fees or costs;
- (j) the manner of payment;
- (k) any terms of agreement, including any guarantees, that will apply to the transaction and how those terms may be accessed, stored and reproduced electronically by consumers;
- (l) the time within which the goods will be dispatched or delivered or within which the services will be rendered;
- (m) the manner and period within which consumers can access and maintain a full record of the transaction;
- (n) the return, exchange and refund policy of that supplier;
- (o) any alternative dispute resolution code to which that supplier subscribes and how the wording of that code may be accessed electronically by the consumer;
- (p) the security procedures and privacy policy of that supplier in respect of payment, payment information and personal information;
- (q) where appropriate, the minimum duration of the agreement in the case of agreements for the supply of products or services to be performed on an ongoing basis or recurrently; and
- (r) the rights of consumers in terms of section 44, where applicable."