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**Electronic signatures: How should the Electronic
Communications and Transactions Act 25 of 2002 be amended to
facilitate increased use in South Africa?**

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degree of Master of Laws

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ABSTRACT

Technology reform has been exacerbated by the Covid-19 pandemic in South Africa with the result that business owners have to conduct day-to-day business operations by electronic means. This includes the authentication of electronic contracts and agreements by way of electronic signatures. However, the Electronic Communications and Transactions Act, 2002 does not facilitate the use of electronic signatures in South Africa. The Electronic Communications and Transactions Act aims to abide by the principle of technology neutrality and conform to international standards. However, the act has been criticised for adopting a technology specific approach as it prefers the use of PKI technology for the fulfilment of an advanced electronic signature.

This dissertation reviews the legal framework regulating electronic signatures which includes recent South African case law, in particular, the cases of *Spring Forest Trading v Wilberry*, *Global and Local Investments v Fouche* and *Borcherds v Duxbury*. The judiciary has created some confusion amongst the legal fraternity surrounding the legal validity and use of electronic signatures when the Supreme Court of Appeal delivered two diverging judgements in the cases of *Spring Forest Trading v Wilberry* and *Global and Local Investments v Fouche*. The case of *Borcherds v Duxbury* adds to this confusion as the Eastern Cape High Court delivered a judgement which appears to suggest that an electronic signature does not satisfy the requirements of a signature. For the purposes of clarity, confirmation as to what is considered an electronic signature is required and users are forewarned to use handwritten signatures until the position is cleared.

This dissertation proposes that South Africa conduct a review of the provisions of ECTA, which should aim to conform to international standards and cater for a wider variety of transactions that can be authenticated by way of an electronic signature, given the rapid pace at which technology develops.

ACRONYMS

AES	Advanced Electronic Signature
ALA	Alienation of Land Act, 1981
ECTA	Electronic Communications and Transactions Act, 2002
EDI	Electronic Data Interchange
EIDAS	Electronic Identification, Authentication and trust Services Regulation 910/2014
EU	European Union
GCC	German Civil Code
ICT	Information and Communication Technology
PKI	Public Key Infrastructure
QES	Qualified Electronic Signature
SAAA	South African Accreditation Authority
SAPO	South African Post Office
SCA	Supreme Court of Appeal
TSA	Trust Services Act
UETA	Uniform Electronic Transactions Act
UNCITRAL	United Nations Commission on International Trade Law
USA	United States of America

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CHAPTER ONE: INTRODUCTION

“Even when the COVID-19 outbreak is contained, it’s unlikely things will return to normal.

Instead, we’re seeing the forced acceleration of previously slow-moving trends that are likely to shape the future for the long haul.”

- Andrew Filev¹

1.1. Background

With the onset of the Covid-19 pandemic, business owners and the like have had to accustom themselves to the “new normal” which comprise online meetings and online contracts. Suffice it to say, day-to-day business operations have been technologically transformed.² Conducting transactions by electronic means have become the norm and as the era of electronic commerce (“e-commerce”) progresses, it is imperative that regulatory bodies aim for clarity in the laws that apply to contracting parties as well as their commercial transactions.³ E-commerce, which entails utilizing electronic networks for commercial purposes, comprise the exchange of information, products and/or services and has become an indispensable phenomenon in today’s marketplace.⁴

The introduction of new channels through which electronic transactions may be effected, benefit small, medium and large businesses on both a global and local level.⁵ In essence, this means that parties who will most likely never see each other in their lifetimes are able to contract with one another from different points of the world.⁶ The benefits of e-commerce include an increase in business efficiency, a substantial reduction of paperwork and a positive impact on revenue.⁷ Despite the aforementioned advantages, e-commerce fosters an array of

¹ A Filev ‘COVID-19 Is A Before-And-After Moment In The Digital Transformation’ available at <https://www.forbes.com/sites/andrewfilev/2020/03/30/covid-19-is-a-before-and-after-moment-in-the-digital-transformation/?sh=7a5c8194d422>.

² Y Kleitman ‘Lockdown: Companies beware of ‘electronic signatures’ whilst employees work remotely’ *Corporate & Commercial Alert*. (8th April 2020) available at <https://www.cliffedekkerhofmeyr.com/en/news/publications/2020/corporate/corporate-and-commercial-alert-8-april-lockdown-companies-beware-of-electronic-signatures-whilst-employees-work-remotely.html>

³ A Srivastava, M Koekemoer ‘The Legal Recognition of Electronic Signatures in South Africa: A Critical Overview’ (2013) 21 (3) *African Journal of International and Comparative Law* at 427.

⁴ Ibid.

⁵ S De Klerk, J Kroon J ‘E-commerce adoption in South African businesses’ (2004) 36 (1) *South African Journal of Business Management* at 33.

⁶ T I Akomolede ‘Contemporary Legal Issues in Electronic Commerce in Nigeria’ (2007) 3 (1) *Potchefstroom Electronic Law Journal* at 3.

⁷ A Singh ‘The changing face of E-commerce in South Africa 2001-2004’ (2005) 12 (1b) *Alternation* at 627.

challenges.⁸ One of which involves the authentication of communication sent via electronic networks, in this case – the internet.⁹ It is thus imperative to ensure the certainty of the identities of the contracting parties.¹⁰ Hence, where business practices include transacting with foreign jurisdictions, the harmonisation and capability of our law to keep abreast with an ever-evolving technological environment is obviated.¹¹

The Electronic Communications and Transactions Act 25 of 2002 (“ECTA”)¹² is currently the primary piece of national legislation governing e-commerce in South Africa. Its primary objectives include, amongst others, facilitating electronic communication (“e-communication”) and transactions in the public interest by promoting legal certainty and confidence in respect of electronic communications and transactions¹³ whilst recognising the principle of functional equivalence and technology neutrality.¹⁴ ECTA is premised on the foundational principle of functional equivalence. Essentially, the principle of functional equivalence recognises e-communication and does not deny it legal effect solely on the grounds that it is in the form of a data message.¹⁵ This approach aims to fulfil the traditional requirements and functions of a manuscript signature through electronic means.¹⁶

E-communication comprises the exchange of data messages between the transacting parties’ computer systems by electronic means.¹⁷ Coetzee¹⁸ refers to this process as an electronic data interchange (“EDI”). This allows parties to trade and conclude contracts with one another electronically and without a paper trail.¹⁹ In order for parties to execute the aforesaid contracts by electronic means, they would have to utilize an electronic signature (“e-signature”) to authenticate their respective identities. ECTA regulates the legal position regarding e-

⁸ J Coetzee ‘The Electronic Communications and Transactions Act 25 of 2002: Facilitating Electronic Commerce’ (2004) 15 (3) *Stellenbosch Law Review* at 501.

⁹ Note 1.

¹⁰ Ibid.

¹¹ M Heyink ‘Electronic signatures for South African law firms’ (2014) https://www.lssa.org.za/upload/documents/LSSA%20Guidelines_Electronic%20Signatures%20for%20South%20African%20Law%20Firms_October%202014.pdf

¹² Electronic Communications and Transactions Act 25 of 2002.

¹³ Section 2 of ECTA.

¹⁴ Ibid.

¹⁵ Section 11 of ECTA; A data message is defined in Section 1 of ECTA as ‘data generated, sent, received or stored by electronic means and includes- (a) voice, where the voice is used in an automated transaction; and (b) a stored record.’

¹⁶ UNCITRAL Model Law on Electronic Commerce with Guide to Enactment (1996) at p20.

¹⁷ J Coetzee ‘Incoterms, Electronic Data Interchange, and the Electronic Communications and Transactions Act’ (2003) 15 *SA Merc LJ* at 2.

¹⁸ Ibid.

¹⁹ Note 3.

signatures in South Africa. Swales states that, given the ever-increasing use of e-commerce via e-communication, the laws that govern it should remain neutral and fluid.²⁰

ECTA regulates e-signatures in terms of the provisions of Section 13 and defines an e-signature as ‘data attached to, incorporated in, or logically associated with other data and which is intended by the user to serve as a signature’.²¹ The definition is broad enough to include the reproduction of a manuscript signature, electronically or a typewritten name at the end of an email.²² ECTA aims to create certainty and confidence in respect of electronic transactions by ensuring functional equivalence between electronic and paper-based systems.²³

ECTA distinguishes between two types of e-signatures as confirmed by the Supreme Court of Appeal (“SCA”) in the leading case of *Spring Forest Trading v Willberry*.²⁴ Firstly, where the law requires the use of a signature, and secondly where the parties to a contract impose this obligation upon themselves.²⁵ The definition of an e-signature is seemingly structured in the form of two tiers.²⁶

The first tier allows parties to an electronic transaction to decide on the form of e-signature to be used. This is referred to as an ‘ordinary electronic signature’ (“ordinary e-signature”). The requirements for an ordinary e-signature will be met if the sender intends for the data to serve as a signature.²⁷ For example, where a contracting party types his name at the foot of an email.²⁸ In the case of *Spring Forest Trading*, the court held that as long as the data in the email is intended by the user to serve as an e-signature and is logically associated with other data in the email, the requirements for an e-signature would be satisfied.²⁹

The second tier applies where the law requires the use of a signature.³⁰ Where legislation requires a signature and does not specify the type of signature to be used, this requirement will

²⁰ L Swales ‘The Regulation of Electronic Signatures: Time for Review and Amendment’ (2015) 132 (2) *South African Law Journal* at 258.

²¹ Section 1 of ECTA.

²² A Nongogo ‘Electronic signatures in commercial contracts’ (May 2020) available at <https://www.withoutprejudice.co.za/free/article/6942/view-on-24th-August-2021>; *Spring Forest Trading 599 CC v Wilberry (Pty) Ltd t/a Ecowash* 2015 (2) SA 118 (SCA).

²³ Note 8.

²⁴ *Spring Forest Trading 599 CC v Wilberry (Pty) Ltd t/a Ecowash* 2015 (2) SA 118 (SCA).

²⁵ *Ibid* para 18.

²⁶ S Eiselen ‘Fiddling with the ECT Act – electronic signatures’ (2014) 17 (6) *Potchesfstroom Electronic Law Journal* at 2814.

²⁷ Note 20; Note 26 at 2811.

²⁸ Note 21 para 27.

²⁹ *Ibid*.

³⁰ Section 13 (1) of ECTA.

only be met if an ‘advanced electronic signature’ is used (“AES”).³¹ ECTA defines an AES as “an electronic signature which results from a process which has been accredited by the Authority as provided for in section 37.”³²

In terms of ECTA, an AES is simply then, an e-signature that has been accredited by the South African Accreditation Authority (“SAAA”) and which has been designed to identify the holder of the e-signature.³³ The SAAA was introduced by Section 37 of ECTA and may, by virtue of Section 1 of the Act, impart its authority to other service providers.³⁴ The SAAA is the entity responsible for the accreditation of authentication products and services and the monitoring of authentication and certification service providers.³⁵ The process of accreditation involves a number of audits on an applicant’s security and technological procedures and evaluates their compliance with SANS code 21188.³⁶ The authentication is quite complex and cumbersome and there must be strict adherence to the accreditation regulations.³⁷ The regulations set out a number of stringent requirements, criteria and standards that must be followed during the accreditation process. Only once the product or service has successfully been accredited by SAAA, will the status of the e-signature change to that of an AES.

In instances where an AES is used by a contracting party, the signature will be deemed to have fulfilled its purpose, unless the contrary is proved.³⁸ This provides an AES with an extra layer of security that has not been afforded to ordinary e-signatures.³⁹ However, in order for an AES to become accredited by the SAAA, it will have to pass a hurdle of administrative prerequisites and includes a prescribed and non-refundable fee.⁴⁰

In practice, only two service providers have been accredited by the SAAA, namely the South African Post Office (“SAPO”) and the LAW Trust Party Services (Pty) Ltd,⁴¹ a private company with the aim to improve digital security amongst internet users.

³¹ Ibid.

³² Section 1 of ECTA.

³³ Y Mupanguvanhu ‘Electronic signatures and non-variation clauses in the modern digital world: the case of South Africa’ (2016) 133 (4) *South African Law Journal* at 860.

³⁴ Note 9.

³⁵ SAAA official website available at <http://www.saaa.gov.za/index.php/background.html>

³⁶ SANS Code 21188 – Public key infrastructure for financial services.

³⁷ The accreditation regulations were published in Government Gazette No 29995 dated 20th June 2017.

³⁸ Note 16; Section 13 (4) of ECTA.

³⁹ Ibid.

⁴⁰ Note 20 at 259.

⁴¹ SAAA Website available at <http://www.saaa.gov.za/index.php/accredited-authentication-and-certification-products-services.html>.

Arguably then, the slow adoption of AESes is as a result of the expensive and cumbersome undertaking attached to the accreditation process.⁴² Moreover, the introduction of AESes has been criticised by academics for offending the principle of technological neutrality.⁴³ Though ECTA does not specify a form of technology to be used, it does by implication and through the process of authentication, prefer specific technology, namely the digital signature. The digital signature uses technology referred to as Public Key Infrastructure (“PKI”).⁴⁴ PKI is a dual-key cryptosystem that works asymmetrically in order to provide high level security and confidentiality.⁴⁵

In 1996, the United Nations Commission for International Trade Law (“UNCITRAL”) adopted a set of Model Laws as a result of legal uncertainties surrounding e-commerce at the time.⁴⁶ The Model law on e-commerce (“Model Law (1996)”) provides a set of internationally acceptable rules to national legislators⁴⁷ and recommends that all abiding states give consideration to it, in order to achieve uniformity⁴⁸ and to develop harmonious international trade relationships.⁴⁹ The Model Law (1996) recognised that the number of business transactions taking place by way of EDI were on the rise and sought to achieve uniformity in the law that applies to electronic transactions.⁵⁰

In 2001, UNICTRAL later published the Model law on electronic signatures (“Model Law (2001)”) supplementing Article 7 of the Model Law of 1996. Article 7 of the Model law (1996) recognises an e-signature as fulfilling the same legal functions as its handwritten counterpart. This is in line with the principle of functional equivalence.⁵¹ The principle of technology neutrality is supported in the Model Law (1996) and the Model Law (2001) and states that no form of e-signature will be discriminated against.⁵² This principle of non-discrimination is also embedded in Section 2(1)(f) of ECTA and allows for fluidity in the legal environment as technological advancements are constantly being made.⁵³

⁴² Note 16.

⁴³ The concept of technological neutrality is expanded in Chapter 2 of this dissertation.

⁴⁴ Note 3 at 432; This will be discussed in greater detail in Chapter 2.

⁴⁵ LAWtrust official website available at <https://www.lawtrust.co.za/lawtrust-managed-pki>.

⁴⁶ Note 26 at 2807.

⁴⁷ UNCITRAL website available at http://www.uncitral.org/uncitral/uncitral_texts/electronic_commerce/1996Model.html.

⁴⁸ Ibid.

⁴⁹ Note 33 at 855 - 856.

⁵⁰ UNCITRAL Model Law on Electronic Commerce with Guide to Enactment (1996) Resolution page 2

⁵¹ UNCITRAL Model Law on Electronic Commerce with Guide to Enactment (1996): Part E.

⁵² UNCITRAL Model Law on Electronic Commerce with Guide to Enactment (1996): Par 67; UNCITRAL Model Law on Electronic Signatures (2001) Article 3.

⁵³ Note 20 at 259.

For the most part, South Africa has adopted both the Model Laws into its national legislation with the exception being that of an AES which is arguably contrary to the principle of technological neutrality.⁵⁴ This is because South Africa's current definition of an AES stems largely from the set of Directives passed by the European Union ("EU") as the Electronic Signatures Directive 1999/93/EC ("Signature Directive"). The Signature Directive was developed as a result of inconsistencies in laws regulating electronic transactions by European countries and aims to guide member states in the enactment of e-signature laws.⁵⁵ However, the Signature Directive is no longer of effect in the EU since the introduction of the Electronic Identification, Authentication and trust Services ("EIDAS"). EIDAS is an EU regulation that creates standards for the creation and verification of e-signatures, and since its commencement, has repealed the Signature Directive in its entirety.⁵⁶ EIDAS has acknowledged that the Signature Directive failed to create a comprehensive framework for secure and accessible electronic transactions.⁵⁷ EIDAS was adopted some fifteen years after the Signature Directive, however, still introduces concepts rarely used and jargon too difficult to comprehend.⁵⁸

Save for the last requirement regarding the criteria for accreditation in ECTA, Section 38 (1) largely adheres to Article 6 of the Model Law (2001). However, Section 38 (1)(e) is a requirement unique to South African legislation which requires face-to-face identification.⁵⁹ The problem with this requirement is the lack of any accredited service provider under ECTA to provide face-to-face identification. This results in the exclusion of other possible advancements in technology from satisfying the criteria for accreditation as it would lack the ability to satisfy the requirement of face-to-face identification.⁶⁰

One of the primary objectives of ECTA is to ensure that electronic transactions conform to the highest international standards as envisaged in Section 2(1)(h), the purpose of which is defeated by the required standards and compliance of AESes in the Republic of South Africa.⁶¹ The

⁵⁴ Ibid.

⁵⁵ A Barofsky 'The Europeans Commission's Directive on Electronic Signatures: Technological "Favoritism" Towards Digital Signatures (2000) 24 (1) *Boston College International and Comparative Law Review* at 145.

⁵⁶ Regulation No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC.

⁵⁷ Preamble to Regulation No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC.

⁵⁸ L Determann 'Electronic Form over Substance: eSignature Laws Need Upgrades' (2021) 72 (5) *Hastings Law Journal* at 1407; EIDAS will be expanded on in Chapter 4 of this dissertation.

⁵⁹ Note 11.

⁶⁰ Ibid.

⁶¹ Ibid.

accreditation process, in its technology-specific approach, has the potential of hindering the natural growth of e-commerce as technology is constantly evolving.⁶² In order to adhere to the fundamental principles of harmonisation and technology neutrality that underlie ECTA, it is important for South Africa to review its law governing e-signatures.

However, there has been some hesitation and reluctance evinced by South African courts to condone the compliance of e-signatures. This is evident from the recent case of *Global & Local Investments v Fouche*,⁶³ where the SCA, on appeal, held that Section 13 (3) did not apply, and the typewritten name “Nick” did not satisfy the requirements of ECTA. The SCA also distinguished *Spring Forest Trading* from this case where it had little or no basis to do so.⁶⁴ This does not create an environment in which e-signatures would flourish. Burger⁶⁵ opines that the court ought to have placed emphasis on the requirements to be met to constitute an ordinary e-signature and the SCA should have followed the decision of *Spring Forest Trading*.⁶⁶

1.2. Statement of Purpose and Rationale

The purpose of this dissertation is to review the legal framework regulating e-signatures and to comment critically thereon. This dissertation also aims to suggest reform in regard to ECTA and its provisions regulating e-signatures after having considered the position of e-signatures in countries such as the United States of America, Germany and China.

The rationale for this dissertation is that South African businesses may benefit from the expansive and productive use of e-commerce. Therefore, the legislature should consolidate our national legislative practices with that of international standards thus ensuring legal certainty.

The concept of AESes introduces cumbersome administrative processes and is not cost-effective.⁶⁷ AESes create a hindrance to the natural growth of e-commerce⁶⁸ by introducing overly prescriptive requirements that favour a specific technology, thus to the detriment of future technologies⁶⁹ and also have the effect of causing impediments to the development of international trade relationships.⁷⁰ The Model Law (1996) seeks to facilitate and promote

⁶² Note 20 at 259.

⁶³ *Global & Local Investments Advisors (Pty) Ltd v Nickolaus Ludick Fouche* (71/2019) [2019] ZASCA 08.

⁶⁴ P Burger (2021) available at <https://www.werksmans.com/legal-updates-and-opinions/electronic-signatures-recent-developments/>.

⁶⁵ *Ibid.*

⁶⁶ *Ibid.*

⁶⁷ *Ibid.*

⁶⁸ Note 62; Note 55 at 159.

⁶⁹ Note 55 at 158.

⁷⁰ Note 20 at 263.

international trade, therefore a departure from this set of internationally accepted standards can severely hamper our progress as an economy stepping into a new realm of streamline production by electronic means. States are advised to conform to the principle of technological neutrality as envisaged by the Model Laws. However, South Africa's departure from the principle of technological neutrality in the implementation of AES introduces many administrative steps and unnecessary cost factors.⁷¹ When contracting over cross border jurisdictions, the use of authentication may become an issue where either state prefers a particular technology.⁷²

The shift to paper-less communication internationally is irreversible,⁷³ South African businesses must therefore flow with the transition to ensure economic progress and advancement in order to keep up with international and domestic trade. While it is imperative to foster strong and reliable standards to govern electronic signatures, South Africa has failed to adhere to acceptable international standards.

1.3. Research Methodology

The research methodology followed in this dissertation will be doctrinal in nature. The main piece of national legislation that will be examined is ECTA which governs e-communications and e-transactions in South Africa. This dissertation will focus on the cases of *Spring Forest Trading v Wilberry*,⁷⁴ *Global and Local Investments v Nickolaus Fouche*⁷⁵ and *Borcherds v Duxbury*,⁷⁶ in particular. An examination of foreign governance of e-signatures will be conducted in Chapter 4. The main source of content for the purposes of this dissertation will be from published journal articles authored by academics in various accredited journals as well as published textbooks and online articles.

1.4. Research Questions

1. How are e-signatures currently regulated in South Africa?
2. How do jurisdictions where e-signatures have had more time to mature and develop, regulate the legal position compared to South Africa?

⁷¹ Note 20 at 259.

⁷² UNCITRAL 'Promoting confidence in electronic commerce: legal issues on international use of electronic authentication and signature methods' (2009) at 68.

⁷³ *Jafta v Ezemvelo KZN Wildlife* (2009) 30 ILJ 131 (LC) para 71.

⁷⁴ *Spring Forest Trading 599 CC v Wilberry (Pty) Ltd t/a Ecowash and Another* (725/13) [2014] ZASCA 178; 2015 (2) SA 118 (SCA).

⁷⁵ *Global & Local Investments Advisors (Pty) Ltd v Nickolaus Ludick Fouché* (71/2019) [2019] ZASCA 08.

⁷⁶ *Borcherds and another v Duxbury and Others* (1522/2020) [2020] ZAECPHC 37; 2021 (1) SA 410.

3. Why do provisions regulating e-signatures need to abide by the principle of technological neutrality?
4. In order to effectively promote technological neutrality as required by section 2(f) of ECTA, what amendments are required to the legal framework regulating e-signatures?

1.5. Conclusion

The Covid-19 pandemic has had an adverse effect on businesses in South Africa and it is imperative, given the need for minimal social interaction, to promote laws that allow e-signatures to remain effective and fluid. The South African judiciary has acted with significant hesitation over the acceptance of the validity of e-signatures, even where the use of an e-signature is permitted by ECTA. Moreover, where the legislature has clearly provided for exceptions to the use of e-signatures, the judiciary has disregarded these exceptions. The common law regarding the interpretation of e-signatures have been problematic for reasons that will be expanded on in Chapter 2 of this dissertation.

This dissertation focuses on the importance of e-signatures in today's marketplace in an effort to promote trade relationships and the importance of technological neutrality in an ever-changing technological environment. EIDAS has acknowledged the lack of accessibility and security of its predecessor, the Signature Directive. However, EIDAS does not shed much light on the position of e-signatures and, instead, introduces novel and complex technologies with which users have to grapple.⁷⁷

⁷⁷ Note 58 at 1392.

CHAPTER TWO: THE PRINCIPLE OF TECHNOLOGY NEUTRALITY AND THE UNCITRAL MODEL LAW

2.1.Introduction

As stated above, the Covid-19 pandemic has exacerbated the need for a shift from paper-based to electronic communication.⁷⁸ The number of international trade transactions conducted by electronic means has significantly increased during the last decade⁷⁹ and there is a need for Information and Communication Technology (“ICT”) to meet demands for virtual services.⁸⁰ ECTA is the primary piece of legislation that regulates the use of e-communications and transactions in South Africa and was promulgated in 2002, some nineteen years ago. ECTA has in itself, bound its regulations to achieving technological neutrality, by virtue of the Act’s objectives.⁸¹

Cross-border trade has become the future and in order to successfully expand on this, South Africa requires legal structures that apply internationally.⁸² The creation of a technologically neutral and non-burdensome approach to the governance of e-signatures is vital for South Africa to facilitate its increased use. Technology is constantly developing and as a result, has the potential to increase international trade and e-commerce thus providing a profound effect on globalization.⁸³

This chapter will focus on the principle of technology neutrality and its relevance, if any, in today’s marketplace and the impact of the harmonization of regulations governing electronic transactions with international standards. The principle of technology neutrality is a cornerstone principle of ECTA and is important given the speed at which technology advances thus ensuring that legislation accommodates new and future technological developments.⁸⁴

⁷⁸ D Walwyn, L Cloete ‘South Africa has failed to harness the digital revolution: how it can fix the problem’ available at <https://theconversation.com/south-africa-has-failed-to-harness-the-digital-revolution-how-it-can-fix-the-problem-147799>.

⁷⁹ Note 33 at 853.

⁸⁰ Note 76.

⁸¹ Section 2(1)(f) of ECTA states that one of the objects of the act is to promote technology neutrality in the application of legislation to e-communications and e-transactions.

⁸² A H Raymond, J B Lambert ‘Technology, E-Commerce and the Emerging Harmonization: The growing body of International Instruments facilitating E-Commerce and the continuing need to encourage wide adoption’ (2014) 17 *International Trade and Business Law Review* 1 at 419; This ensures harmonization in the laws that apply to cross-border transactions.

⁸³ JAE Faria ‘Legal Harmonization through Model Laws: The Experience of the United Nations Commission on International Trade Law (UNCITRAL)’ at 1.

⁸⁴ Section 2 (1) (f); UNCITRAL ‘Promoting confidence in electronic commerce: legal issues on international use of electronic authentication and signature methods’ (2009) at 37.

2.2. The Principle of Technology Neutrality

The principle of technology neutrality emanated from the USA Framework for Global Electronic Commerce (1997) wherein it was stated that regulations which govern online transactions should remain technologically neutral.⁸⁵ This principle subsequently gained recognition and was adopted by the EU and USA in various legislative texts.⁸⁶ Koops states that regulations should aim to maintain the effects of technology usage and not the use of technology itself.⁸⁷

In essence, a technology neutral approach means not assuming or preferring the use of a specific technology over another.⁸⁸ Hence, regulations that govern online communication and e-signatures should not prescribe the form of technology to be used, with the result that it does not discriminate against other forms and does not hinder the growth of similar technologies in the future.⁸⁹ Regulations that are technology-specific have the potential of stagnating the market with the effect that worthy competitors with similar signature technology solutions are left with no entry into the marketplace.⁹⁰ Koops advises that legislation should strive to remain technologically neutral so as to only regulate the effects of technology and not prescribe the form of technology that a consumer elects.⁹¹ Technology neutrality entails adopting a minimalist approach to e-signatures. This means laying out minimum requirements for the fulfilment of an e-signature.⁹² This minimalist legislative approach shifts the focus on the method used to sign and to ensure that that method is fit for its purpose.⁹³

Weber opines that what may presently be acceptable as a signature may differ from what is acceptable in the future as one cannot predict its evolution hence, it is better to allow for the

⁸⁵ Matsepo Regina Kulehile 'An Analysis of the regulatory principles of functional equivalence and technology neutrality in the context of electronic signatures in the formation of electronic transactions in Lesotho and the SADC region' (unpublished PHD thesis, University of Cape Town, 2017) at 68.

⁸⁶ Ibid at 69.

⁸⁷ B J Koops 'Should ICT Regulation Be Technology-Neutral?' in Bert-Jaap Koops, Miriam Lips, Corien Prins and Maurice Schellekens (eds) *Starting Points for ICT Regulation: Deconstructing Pevalent Policy OneLiners* (2006) at 6.

⁸⁸ Note 85 at 71.

⁸⁹ M Tuba 'The technology-neutral approach and electronic money regulation in the EU: identifying the promises and challenges for future regulation in South Africa' (2014) 47 *Comparative and International Law Journal of Southern Africa* 3 at 381.

⁹⁰ P Samuelson 'Five Challenges for Regulating the Global Information Society' available at <https://ssrn.com/abstract=234743>

⁹¹ Note 87.

⁹² S Christensen, R Low 'Electronic Signatures and PKI Frameworks in Australia' (2004) 1 *Digital Evidence & Electronic Signature Law Review* at 41.

⁹³ S Mason 'Electronic Signatures in Practice' (2006) 6 *Journal of High Technology Law* 2 at 153.

natural flow of the development of technology.⁹⁴ This means not tying legislation to a state of technological development.⁹⁵

2.2.1. *The relevance and benefits of technology neutral legislation in South Africa*

Regulations aimed at online communication should not unduly discriminate against other forms of technology.⁹⁶ Embracing the principle of technology neutral laws in the regulation of e-signatures also promotes the innovation of newer e-signature technologies.⁹⁷ Eiselen states that this principle enhances various methods of authentication.⁹⁸ Kulehile concurs, and states that by regulations remaining neutral, it allows for fair competition between competitors in the market.⁹⁹

Regulations that are neutral to the possible forms of technology foster various advantages. For example, there is a lower chance of that regulation becoming superannuated given the rapid pace at which technology advances.¹⁰⁰ Tuba states that one of the purposes of this approach is to lessen the risk of current legislation from becoming obsolete and losing their purpose in the future.¹⁰¹ Swales similarly states that legislation should strive for technology neutrality in order to curb the risk of it becoming “*technologically outdated*.”¹⁰² Therefore, to save e-signature regulations from becoming counterproductive, it is imperative that lawmakers adopt an inclusive approach. Technology reform is on the rise, and it is imperative that the existence of e-signature regulations be justified for its purpose.¹⁰³

Another advantage of promoting newer and improved technological developments, is that the market is then open to other forms of authentication and a consumer is provided with a host of

⁹⁴ D Weber ‘Tech Neutrality in Australian Signature Law’ (2015) 24 *Journal of Law, Information and Science* 1 at 109.

⁹⁵ S Blythe ‘Digital Signature Law of the United Nations, European Union, United Kingdom and United States: Promotion of Growth in E-Commerce With Enhanced Security’ (2005) 11 *Richmond Journal of Law and Technology* 2 at 6.

⁹⁶ Note 87 at 8.

⁹⁷ Ibid at 9.

⁹⁸ Eiselen at 316.

⁹⁹ Note 85 at 72.

¹⁰⁰ Ibid at 73.

¹⁰¹ Note 89.

¹⁰² Swales at 268.

¹⁰³ C Koopman, P McLaughlin ‘When Technology Makes Regulations Obsolete’ (2016) available at https://www.mercatus.org/expert_commentary/when-technology-makes-regulations-obsolete.

effective and cost-friendly alternatives¹⁰⁴ thus facilitating the growth of e-commerce.¹⁰⁵ This promotes accessibility amongst its users – the consumer.

A further benefit is that by incorporating the principle of technology neutrality, that piece of legislation is in accordance with international standards and hence promotes harmonisation amongst various jurisdictions. Harmonisation allows various states to contract with one another effortlessly without differing forms of technology that do not align. By allowing consumers the freedom of choice, this promotes the growth of international trade and the transactions that give rise to it. Therefore, the law should be flexible enough to encompass technological and market-related developments. Considering the fact that the digital market is highly competitive and constantly evolving, South Africa would benefit from legislation that is open to newer forms of technology and competition.¹⁰⁶

Section 2 of ECTA lists the Act's objectives for the purpose of enabling and facilitating e-communications and transactions in South Africa and one of the listed objectives of ECTA is to promote technology neutrality in the application of legislation. In the case of *Ketler*¹⁰⁷ the Court highlighted the social and economic importance of the need to promote technology neutrality when applying regulations. The Court stated that the objectives of ECTA are to promote investment and innovation of newer technologies whilst promoting its effective development for potential consumers.¹⁰⁸

In a digital era, where speed and cost-effectiveness are imperative to its success,¹⁰⁹ consumer-friendly laws are of cardinal importance.¹¹⁰ Hence, the principle of technology neutrality is an essential component for the growth and development of e-commerce and is of relevance in today's marketplace. In order to operate streamline transactions spanning the border, it is important for South Africa to unify its laws with what is expected on an international level.¹¹¹ Differing frameworks regulating e-commerce create legal uncertainty and reluctance in the minds of users.¹¹² Technologically neutral e-signature laws have the effect of limiting disputes

¹⁰⁴ Note 85 at 73.

¹⁰⁵ Section 2 (1) (k) of ECTA states that one of the objectives of the Act is to promote the development of electronic transactional services which are responsive to the needs of users and consumers.

¹⁰⁶ J M Winston 'Technology neutrality in Internet, telecoms and data protection regulation' (2014) *Computer and Telecommunications Law Review* at 1.

¹⁰⁷ *Ketler Investments CC t/a Ketler Presentations v Internet Service Providers* [2014] (2) SA 569 (GSJ).

¹⁰⁸ *Ibid* para 30.

¹⁰⁹ Note 89 at 3.

¹¹⁰ The White Paper on Making Deals in Cyberspace: What's the Problem? (October 2017).

¹¹¹ *Ibid*.

¹¹² *Ibid*.

between contracting states as almost all forms of e-signature technologies are welcomed.¹¹³ The growth of e-commerce can also be to the advantage of small businesses in South Africa which enable them to increase their reachability.¹¹⁴

2.3. UNCITRAL Model Law on Electronic Commerce (1996) and UNCITRAL Model Law on Electronic Signatures (2001)

A model law is a legislative instrument that is suggested to their member States for enactment into their national law and is a vehicle for the harmonization of national laws with international standards.¹¹⁵ The United Nations Commission on International Trade Law (“UNCITRAL”) was established by the General Assembly of the United Nations in the year 1966¹¹⁶ with the mandate to develop legal instruments for the harmonization of international trade law.¹¹⁷ The objective of UNCITRAL comprise that of developing a legal framework that facilitates international trade in order to ensure harmonisation.¹¹⁸ This forms an integral part of maintaining a robust cross-border legal framework.¹¹⁹ UNCITRAL has been instrumental in regulating the laws governing e-signatures in several countries¹²⁰ and provides a global framework to guide lawmakers in the regulation of e-commerce.

UNCITRAL decided to draft a model law to suit global needs which came about as a response to the shift in the communication process from paper to EDI,¹²¹ recognising that as the internet became more accessible to its member States, international trade transactions needed to be regulated and developed in harmony with each other.¹²² UNCITRAL took note of the fact that a model law had the potential to fuel harmonious economic relations amongst its’ members.¹²³ The result of this was the Model Law (1996) which had the objective of harmonization for the purposes of facilitating growth and the development of e-commerce.¹²⁴ The Model Law (1996) is based on fundamental principles such as technology neutrality and functional equivalence.¹²⁵ Therefore, by member States adhering to key legal texts such as the Model Law (1996), these

¹¹³ Ibid.

¹¹⁴ Ibid.

¹¹⁵ Note 83 at 13.

¹¹⁶ Ibid at 2.

¹¹⁷ S Eiselen ‘The UNCITRAL: International trade in the digital era’ (2007) 2 *PER* at 7.

¹¹⁸ UNCITRAL website available at <https://uncitral.un.org/>.

¹¹⁹ Ibid.

¹²⁰ For example, the United States of America, Canada, New Zealand, Australia, and Singapore.

¹²¹ UNCITRAL Model Law on Electronic Commerce with Guide to Enactment (1996) para 124 at 64.

¹²² Guide to Enactment of the UNCITRAL Model Law on Electronic Commerce (1996) at 16.

¹²³ Preamble to UNCITRAL Model Law on Electronic Commerce at 2.

¹²⁴ UNCITRAL Model Law on Electronic Commerce with Guide to Enactment (1996) para 123 at 63; UNCITRAL Model Law on Electronic Commerce with Guide to Enactment (1996) para 123 at 63.

¹²⁵ UNCITRAL website available at <http://tfig.unece.org/contents/uncitral-model-law-esignatures.htm>.

principles are ensured in legislation governing e-commerce. UNCITRAL acknowledged that ineffective legislation on a national level led to a hindrance to international trade.¹²⁶

UNCITRAL was mindful of the fact that, since the inception of the Model Law (1996), newer technologies were being developed for the purpose of personal identification in electronic communications and electronic contracts and they were being executed using e-signatures. UNCITRAL subsequently adopted the Model Law (2001).¹²⁷

The Model Law (2001) is a key text regulating the electronic use of signatures to authenticate electronic documents and came about as a result of increased use of authentication procedures and to increase certainty when contracting electronically.¹²⁸ An added layer of security was needed and this created the concept of a second set of laws to augment the first. The Model Law (2001) acknowledges the transition from paper-based forms of authentication to an electronic form¹²⁹ and aims to facilitate the use of e-signatures in this regard.¹³⁰ It also states that by infusing the procedures laid out in this text with national legislation, it would create a media-neutral territory within which parties could transact.¹³¹ This translates to non-discrimination amongst new innovations in signature technology by not favouring the use of a specific technology over another.¹³²

Hence, the Model Law (1996) and Model Law (2001) were drafted with the intention to promote harmonisation and the unification of international trade law¹³³ which comprise legislative recommendations and principles.¹³⁴ They are predicated on three foundational principles which are: functional equivalence, technology neutrality and party autonomy.¹³⁵ These basic principles aim to ensure that rules are developed to facilitate the transition of traditional regulations to a digital environment. Faria maintains that the Model Law (1996) and

¹²⁶ Guide to Enactment of the UNCITRAL Model Law on Electronic Commerce (1996) at 16.

¹²⁷ UNCITRAL Model Law on Electronic Signatures with Guide to Enactment (2001) pvii.

¹²⁸ UNCITRAL Model Law on Electronic Signatures with Guide to Enactment (2001) Chapter 1 Part Two at 8.

¹²⁹ UNCITRAL Model Law on Electronic Signatures with Guide to Enactment (2001) Resolution adopted by the General Assembly pvii.

¹³⁰ UNCITRAL Model Law on Electronic Signatures with Guide to Enactment (2001) Part Two Chapter 1 at 9.

¹³¹ Ibid.

¹³² The principle of technology neutrality and its benefits thereof are discussed in this chapter.

¹³³ B Aalberts, S van der Hof 'Digital Signature Blindness Analysis of Legislative Approaches to Electronic Authentication' (2000) 7 *EDI Law Review* 1 at 25.

¹³⁴ Note 83 at 15.

¹³⁵ Ibid at 25 - it is stated that functional equivalence is the assumption that electronic communications can fulfil the same functions as its paper-based counterpart, the principle of technology has been dealt with in the first part of Chapter 2 of this dissertation and party autonomy means that parties to an electronic transaction have the freedom to agree on the appropriate method of authentication.

Model Law (2001) act as vehicles for the legal harmonization of national law with international standards and have the ability to facilitate business on a global scale.¹³⁶

2.4.A harmonised approach

As per the Resolution adopted by the General Assembly, UNCITRAL highlighted the fact that it had a mandate to further the progressive harmonization and unification of the law, bearing in mind the extensive development of international trade.¹³⁷ The General Assembly also, quite importantly, noted that legal certainty will be enhanced by the harmonization of the regulation of e-signatures.¹³⁸ Faria opines that the Model Laws (1996) and (2001) act as instruments to promote the effectiveness of harmonisation and states that UNCITRAL, rightfully so, elected not to conclude binding standards in the regulation of e-commerce in its early stages.¹³⁹ In essence, the enactment of these common standards on a global level ensures the uniform operation of e-signatures which also promotes the integration of developing countries into international trade.¹⁴⁰

2.4.1. ECTA and the principle of harmonisation

One of the objectives of ECTA is to standardise South African national laws with that of international standards.¹⁴¹ This is achieved by harmonisation of national regulations.¹⁴² It is thus imperative that South Africa align its laws with international standards and regimes in order to avoid the creation of uncertainties between South Africa and other jurisdictions. These inconsistencies have the potential of obstructing trade and creating a barrier to international business transactions. The benefit of harmonizing South African e-commerce laws with international standards is that of increased trading partners which leads to the growth in the e-commerce environment, increased business transactions on a global scale and the removal of barriers in our national law with regard to technological neutrality.¹⁴³ As cross border trade grows, so does the need for harmonization of laws in order to transact with trading partners

¹³⁶ Ibid at 2.

¹³⁷ Resolution adopted by the General Assembly 56/80 Model Law on Electronic Signatures adopted by the United Nations Commission on International Trade Law.

¹³⁸ Ibid.

¹³⁹ Note 83 at 24.

¹⁴⁰ Ibid at 30.

¹⁴¹ Section 2(1)(h) of ECTA.

¹⁴² Note 83 at 2

¹⁴³ The White Paper on Making Deals in Cyberspace: What's the Problem? (October 2017).

effectively.¹⁴⁴ Harmonization ensures legal certainty and predictability when transacting electronically.¹⁴⁵

2.5. Conclusion

South Africa is Southern Africa's third largest economy¹⁴⁶ and has seen a rapid transformation in the digital environment due to the Covid-19 pandemic, which has amplified the migration from paper-based systems to online transactions.¹⁴⁷ There is a possibility for technological development to support the growth of the South African economy.¹⁴⁸ As discussed, the benefit of unifying e-commerce laws with that of international standards is increased trading partners thus leading to the growth of e-commerce. The Model Law (1996) and Model Law (2001) provide a framework for lawmakers to achieve regulatory coherence and should be followed.¹⁴⁹ They also promote the principle of technology neutrality which is useful for pursuing interoperable e-signature regulations.¹⁵⁰

¹⁴⁴ A H Raymond, J B Lambert 'Technology. E-Commerce and Emerging Harmonisation: The Growing Body of International Instruments Facilitating and the Continuing Need to Encourage Wide Adoption' (2014) *International Trade and Business Law Review Journal* at 440.

¹⁴⁵ Note 83 at 2.

¹⁴⁶ E Benson 'Which African country has the highest GDP in 2021?' available at <https://africa.businessinsider.com/local/markets/which-african-country-has-the-highest-gdp-in-2021/yd784tx>.

¹⁴⁷ Note 78.

¹⁴⁸ Ibid.

¹⁴⁹ Note 143.

¹⁵⁰ Ibid.

CHAPTER THREE: THE POSITION OF E-SIGNATURES IN SOUTH AFRICA

3.1.Introduction

The Model Law (1996) and Model Law (2001) were instrumental in the drafting of ECTA as both model laws were used by the South African legislature.¹⁵¹ ECTA was promulgated in South Africa for the purpose of, *inter alia*, facilitating e-commerce.¹⁵² ECTA rightfully provides that an e-signature will not be denied legal validity solely on the ground that it is in electronic form.¹⁵³ However, ECTA has been criticised for being technology specific in its current definition and regulation of e-signatures.¹⁵⁴

The aim of this chapter is to review and explain the South African position of e-signatures and the effect thereof, if any. This chapter will begin by addressing the regulation of e-signatures in terms of ECTA and will thereafter focus on the validity of e-signatures in terms of recent South African case law, in particular, the cases of *Spring Forest Trading v Wilberry*,¹⁵⁵ *Global and Local Investments v Fouche*¹⁵⁶ and lastly, *Borcherds v Duxbury* and how these cases have applied the e-signatures provisions contained in ECTA.¹⁵⁷ The case of *Spring Forest Trading v Wilberry* is the leading case on the interpretation of e-signatures, while the decisions of *Global and Local Investments v Fouche* and *Borcherds v Duxbury* have been extensively criticised by authors for offending the provisions of ECTA.

3.2.Electronic Communications and Transactions Act 25 of 2002

E-signatures are used to authenticate electronic contracts or transactions in South Africa but will firstly have to meet the legal prescripts laid out in ECTA in order to be deemed valid.¹⁵⁸ ECTA was promulgated in 2002, signifying the close of the process launched by the South African government to establish a legal framework for the governance of e-commerce in South Africa.¹⁵⁹ Section 3 of ECTA states that, when the Act is being interpreted, one should not

¹⁵¹ S Eiselen 'Fiddling with the ECT Act – electronic signatures' (2014) 17 *Potchefstroom Electronic Journal* 6 at 2811.

¹⁵² Section 2 of ECTA.

¹⁵³ Section 13 (2) of ECTA.

¹⁵⁴ Note 20.

¹⁵⁵ *Spring Forest Trading 599 CC v Wilberry (Pty) Ltd t/a Ecowash* 2015 (2) SA 118 (SCA).

¹⁵⁶ *Global & Local Investments Advisors (Pty) Ltd v Nickolaus Ludick Fouché* (71/2019) [2019] ZASCA 08.

¹⁵⁷ *Borcherds and another v Duxbury and Others* (1522/2020) [2020] ZAECPHC 37; 2021 (1) SA 410.

¹⁵⁸ M Njotini 'Precaution against What? – The Electronic or E-Authentication Frameworks of the United Kingdom, Canada and South Africa' (2018) 51 *Comparative and International Law Journal of Southern Africa* 2 at 195.

¹⁵⁹ Michalsons 'Guide to the ECT Act in South Africa' available at <https://www.michalsons.com/blog/guide-to-the-ect-act/81>.

exclude other relevant statutory or common law from being applied, in recognising or accommodating electronic transactions or data messages. Therefore, the common law plays a crucial role in the validity and development of e-signatures. ECTA applies to any electronic transaction or data message concluded in South Africa.¹⁶⁰ Electronic transactions and communications are performed by way of data messages.¹⁶¹ A data message is defined as meaning 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.¹⁶²

An e-signature is defined in ECTA as ‘data attached to, incorporated in, or logically associated with other data and which is intended by the user to serve as a signature.’¹⁶³ In the case of *Spring Forest Trading v Wilberry*,¹⁶⁴ the court held that as long as the ‘data’ is intended by the user to constitute a signature and is logically associated with other data in the communication, the requirement for an e-signature would be met.¹⁶⁵ This constitutes an ordinary e-signature in terms of ECTA and is regulated by Section 13 (3). The requirements of Section 13 (3) make it pertinent that a court, when deciding upon the validity of an ordinary e-signature, to critically assess the subjective intention of the parties at the time of signing.¹⁶⁶ Section 13 (3) of ECTA finds application in instances where an e-signature is required by the transacting parties, but the type of e-signature to be used has not been specified. The requirements, as stipulated in Section 13 (3) of ECTA, stem from the Model Law (1996), in particular, Article 7, thus solidifying a technology neutral approach to the regulation of ordinary e-signatures,¹⁶⁷ as discussed in Chapter 2 above.¹⁶⁸ Gregory states that this approach to e-signatures promotes the growth of future developments of e-signature technology which are presently unforeseen as the future development of technology is unascertainable.¹⁶⁹

However, ECTA introduces a second type of e-signature, presently identified as an AES and is regulated by Section 13 (1) which states that where the signature of a person is required by law and such law does not specify the type of signature to be used, that requirement will only

¹⁶⁰ Section 4 (1) of ECTA.

¹⁶¹ Electronic communication is defined as communication by means of data messages and this is contained in Section 1 of ECTA.

¹⁶² Section 1 of ECTA.

¹⁶³ Ibid.

¹⁶⁴ *Spring Forest Trading v Wilberry* (725/13) [2014] ZASCA 178.

¹⁶⁵ Ibid para 27.

¹⁶⁶ A Srivastava ‘Electronic Signatures in Online Transactions: Lessons from South Africa’ (2016) 45 *Common Law World Review* at 148.

¹⁶⁷ S Snail ‘A Comparative review of legislative reform of electronic contract formation in South Africa’ (LLM Thesis, University of South Africa, 2015) at 30.

¹⁶⁸ At 19 of this dissertation.

¹⁶⁹ J D Gregory ‘Solving legal issues in electronic commerce’ (1999) 32 *CBLJ* at 84-104.

be met if an AES is utilized. An AES is defined in ECTA as meaning “an electronic signature which has been accredited by the Authority as provided for in section 37.” Section 37 of ECTA falls under Part 2 (Accreditation) of the Act, and outlines the process of an application for accreditation to the South African Accreditation Authority (SAAA). For the purposes of the act, the Director General is the controller of the SAAA.¹⁷⁰ The Director General is vested with the powers as listed in section 36 of ECTA, which include but are not limited to monitoring the conduct, systems and operations of an authentication service provider. An authentication service provider is defined as a person whose authentication products or services have been accredited by the SAAA under Section 37.¹⁷¹ These products or services refer to those applications or programs that are designed to identify the holder of an AES.¹⁷² Only two service providers have been accredited by the SAAA and recorded on the SAAA official website since 2012.¹⁷³ The slow adoption of AES’s in South Africa suppose an unwillingness and an indication that the over regulation of e-signatures may stifle the growth of e-commerce and cross-border trade thus minimizing South Africa’s effect in the global market. This will, in turn, adversely affect South Africa’s trade relationships with other jurisdictions.

The cardinal difference between an ordinary e-signature and an AES is that the former is required where the parties to a transaction require a signature and the form of signature has not been determined, and the latter, where statutory law requires a document to be signed. While an AES holds various advantages, it has been criticised for not adhering to international standards and offending the principle of technology neutrality, a cornerstone principle upon which ECTA relies.¹⁷⁴ The AES does not adhere to the principle of technology neutrality as it favours a specific technology known as Public Key Infrastructure (“PKI”).¹⁷⁵ The AES seems to favour PKI technology, although at first glance, the provisions of section 13 (3) appear to conform to the principle of technology neutrality until one examines the requirements of an AES in sufficient detail.¹⁷⁶ Digital signatures remain one of the primary ways in which PKI can be utilized by authentication service providers today.¹⁷⁷ Digital signatures differ from e-signatures in that the former are specific to the use of PKI technology whereas the latter is

¹⁷⁰ Section 34 of ECTA.

¹⁷¹ Section 1 of ECTA.

¹⁷² Ibid.

¹⁷³ The South African Post Office and LAWTrust are the only two accredited service providers since 2012.

¹⁷⁴ Note 20 at 260; The principle of technology neutrality was discussed at length in Chapter 2 of this dissertation.

¹⁷⁵ Note 3 at 429.

¹⁷⁶ Ibid.

¹⁷⁷ S L Gereda ‘The Electronic Communications and Transactions Act’ Telecommunications Law in South Africa (2006) at 275.

not.¹⁷⁸ For example, transactions for the exchange of Bitcoin are also protected using PKI technology¹⁷⁹ and it can be said with sufficient certainty that PKI technology is secure and reliable. While the PKI system fosters various advantages, it is not without its disadvantages. The use of the PKI system is impractical, lengthy, time-consuming, expensive and at risk of becoming outdated.¹⁸⁰ Obtaining accreditation from SAAA is a cumbersome operation that requires time consuming identity verification processes. Moreover, the Model Law (1996) and Model Law (2001), both of which encourage and promote the effectiveness of international trade, states that national legislatures should not impose stricter standards of security and unnecessary costs on online users than those in the paper-based sphere.¹⁸¹

The danger of the dissonance lies with the prevention of effective cross border transactions.¹⁸² National legislatures should take cognisance of the effects of digital signature infrastructures on the growth of e-commerce in order to prevent the creation of barriers to international trade.¹⁸³ Neither the Model Law (1996) nor the Model Law (2001) prescribe the use of a specific type of technology, allowing e-commerce to flow naturally with the innovations in e-signature technology.¹⁸⁴ ECTA has gained many of its provisions from the Model Laws drafted by UNCTRAL. However, it defeats the objectives of harmonization and conformity with international standards by its provisions regarding the regulation of AESs.¹⁸⁵

3.3. *The Common Law*

This dissertation focuses, in particular, on the cases of *Spring Forest Trading v Wilberry*, *Global and Local Investments v Fouche* and *Borcherds v Duxbury*. The decisions of *Global and Local Investments v Fouche* and *Borcherds v Duxbury* have been criticised for not adhering to the provisions of ECTA. The result of this is two conflicting decisions of the SCA which

¹⁷⁸ P Mutabuzi (2021) 'What is the Difference Between Digital Signatures and Electronic Signatures?' available at <https://www.linkedin.com/pulse/what-difference-between-digital-signatures-electronic-mutabazi#:~:text=Notably%2C%20electronic%20signatures%20include%20all,used%20to%20verify%20a%20document>.

¹⁷⁹ E Reddy, V Lawack 'An Overview of the Regulatory development in South Africa regarding the use of cryptocurrencies' (2019) 31 *SA Merc LJ* at 10.

¹⁸⁰ Kulehile Matsepo *An analysis of the regulatory principles of functional equivalence and technology neutrality in the context of electronic signatures in the formation of electronic transactions in Lesotho and the SADC region* (LLM Thesis, University of Cape Town, 2017) at 49.

¹⁸¹ T Pistorius 'Developing countries and copyright in the information age: The Functional Equivalent Implementation of the WCT' (2006) 9 *PER/PELJ* at 164-197.

¹⁸² Note 167 at 26.

¹⁸³ Ibid.

¹⁸⁴ Note 162 at 111.

¹⁸⁵ Ibid.

has created confusion and uncertainty in the legal fraternity. The case of *Global and Local Investments* suggests that an e-signature is not equivalent to a handwritten signature whereas the case of *Spring Forest Trading* suggests that data messages will generally suffice where an agreement between the parties require a signature.¹⁸⁶ This inevitably creates a confounding situation. The decision of *Spring Forest Trading* is in line with the provisions of ECTA, in particular, Section 13 (2) which states that an e-signature is not without legal force and effect merely because it is in electronic form. The court in *Global and Local Investments* held that the word “electronic” must be present in the agreement between the parties for an e-signature to be legally valid. This divergence is problematic and will be analysed below.

3.3.1. *Spring Forest Trading v Wilberry*

In *Spring Forest Trading v Wilberry*,¹⁸⁷ the court had to decide whether an agreement between the parties had been validly cancelled by way of an email exchange which contained the parties’ names at the foot of the correspondence and which agreement contained a non-variation clause.¹⁸⁸ The court rightfully pointed out that one of the objectives of ECTA is to promote legal certainty and confidence when transacting and communicating electronically.¹⁸⁹ Hence, where there are formal requirements of ‘writing’ and ‘signature’, these requirements can be fulfilled by way of e-communication. The issue in contention between the parties was whether the parties’ names at the foot of the email communication constituted their e-signatures in terms of the non-variation clause contained in the agreement. The court had regard to Section 13 of ECTA and held that the Act clearly distinguishes between two types of e-signatures, namely the ordinary e-signature and an AES.¹⁹⁰ As discussed in 3.2 above, Sections 13 (1) and (3) are distinguishable in that subsection (1) will apply in situations where a signature is required by statutory law and subsection (3) applies in situations where a signature is required by the parties to an agreement and they have not agreed on the form of signature to be used. Accordingly, where the parties to an agreement require a signature but do not specify the type of signature to be used, the requirement will have been complied with if an ordinary e-signature that identifies the person signing and indicates their approval of the content of the information communicated.

¹⁸⁶ L Swales ‘Electronic signatures: where to next?’ (2022) *TSAR* (1) at 88.

¹⁸⁷ *Spring Forest Trading v Wilberry* (725/13) [2014] ZASCA 178 (21 November 2014) para 2.

¹⁸⁸ *Ibid.*

¹⁸⁹ Note 162 paras 15 & 16.

¹⁹⁰ Note 162 para 17.

It was also stated that the courts' view toward e-signatures have not been formalistic in that they look to whether the method used fulfils the functions of a signature or not.¹⁹¹ W submitted that an AES was required in the present circumstances as Section 13 (1) should not only apply in instances where the law requires a signature, but also where the parties to an agreement impose their own formalities.¹⁹² The court held that the inclusion of a non-variation clause to the agreement was not imposed by the parties by law and that an AES did not apply to private agreements between parties. The court stated that the agreement between the parties did not require elaborate authentication and complex accreditation processes¹⁹³ and to foist cumbersome requirements upon the parties would be unnecessary.¹⁹⁴

In the light of this, the court held that the typewritten names that appeared at the foot of the email did indeed constitute the parties' ordinary e-signatures and in turn, their intention to vary the terms of the contract.¹⁹⁵ The court stated that the parties' names at the foot of the emails clearly evinced an intention by the parties to cancel the agreement between them. The judgement has set the tone for the validity of e-signatures in the future in that a court will look to the parties' intention at the time of signing and whether the method used satisfies the function of an e-signature as opposed to its formal requirements. The court significantly recognised the ability of requirements such as 'writing' and 'signature' to be satisfied through electronic transactions.¹⁹⁶

The form of e-signature used will not necessarily affect its function of authentication and approval.¹⁹⁷ In this case, the court held that the form of signature used indicated the parties' approval and intention to be bound by the contents of the e-communication. An e-signature is equivalent to a handwritten signature, as confirmed by the provisions of ECTA.¹⁹⁸ This all-encompassing approach to e-signatures was welcomed by Mupanguvanhu and Mason.¹⁹⁹ Mupanguvanhu states that where a transaction is concluded between two parties and they intend on fast-tracking their communication, an ordinary e-signature should suffice and that an AES is not necessary, given the costly and administrative requirements that obtaining an AES

¹⁹¹ Note 162 para 26.

¹⁹² Note 162 para 19.

¹⁹³ Note 162 para 21.

¹⁹⁴ Note 162 para 22.

¹⁹⁵ Note 162 para 29.

¹⁹⁶ *Spring Forest Trading v Wilberry* (725/13) [2014] ZASCA 178 (21 November 2014) para 16.

¹⁹⁷ Note 11.

¹⁹⁸ Section 13 (2) of ECTA.

¹⁹⁹ Note 33 at 868; S Mason 'Electronic Signatures in Practice' (2006) 6 *Journal of High Technology Law* 2 at 152 – 153.

entail.²⁰⁰ Mason suggests that when determining the legal validity of an e-signature, one must have regard to the party's intention at the time of signing and whether the method chosen is fit for its purpose.²⁰¹ A formalistic approach to the regulation of e-signatures has the effect of tying regulations to a standard of technical development.²⁰² This hinders the growth of new and potentially more effective technological solutions. The court in this case set the tone for the interpretation of ECTA in such a way so as to facilitate the growth of e-commerce in South Africa, rather than hinder it.

The court had regard to the aims, objectives of ECTA as well as the purpose of the agreement between the parties.²⁰³ The SCA held that the process of obtaining an AES remains complex and that imposing such onerous requirements has the effect of stifling the growth of e-commerce and would create uncertainty in the interpretation of ECTA.²⁰⁴ The Model Law (1996) states that legal uncertainty in regard to e-signatures on a national level creates a hindrance to international trade and will not promote South Africa's existing international trade relationships.²⁰⁵

This case has set the tone for agreements cancelled via email correspondence as the cancellation was held to be binding on the parties. The court also established a pragmatic instead of formalistic approach when the court looked to whether the method of signature fulfilled the functions of a signature instead of the form of signature used. This is in line with the purpose of ECTA.²⁰⁶ The decision of the SCA in this case promotes legal certainty, confidence and accessibility to e-signatures in South Africa.

3.3.2. *Global and Local Investments v Fouche*

In *Global and Local Investments v Fouche*,²⁰⁷ the court was required to determine whether the use of an e-signature authorized G to release funds held in F's account, entrusted to G. There was a written mandate that existed between the parties wherein G undertook to act as G's agent and would invest funds on behalf of him. The mandate also required all instructions to be sent *via* telefax or email and signed by F. This is where the contention between the parties existed.

²⁰⁰ Note 33 at 869.

²⁰¹ S Mason 'Electronic Signatures in Practice' (2006) 6 *Journal of High Technology Law* 2 at 152 – 153.

²⁰² T Pistorius 'Contract Formation: A Comparative Study of Legislative Initiatives on Select Aspects of Electronic Commerce' (2002) 25 *CILSA* at 135.

²⁰³ Note 166 at 145.

²⁰⁴ *Ibid* at 146.

²⁰⁵ Model Law (1996) at 16.

²⁰⁶ One of the objectives of ECTA is to promote e-transactions in South Africa.

²⁰⁷ *Global & Local Investments Advisors (Pty) Ltd v Nickolaus Ludick Fouché* (71/2019) [2019] ZASCA 08.

The court had to determine whether a fraudulent email seemingly bearing F's ordinary e-signature, authorizing G to release funds on behalf of him, was valid and binding on the parties. The court noted that the purpose of a signature was to fulfil an authentication and verification purpose.²⁰⁸ The court held that it was not satisfied that the email containing F's purported ordinary e-signature at the foot of the email served an authentication purpose. The court also noted, significantly, that G was not allowed to apply the provisions of section 13 of ECTA as the terms of the mandate did not make provision for an e-signature.²⁰⁹ This conflicts with the decision of *Spring Forest Trading* where the court held that they are required to accommodate e-transactions and data messages in the application of legislation hence where there is a formal requirement of a "signature" that is imposed either by law or the parties to a contract themselves, this requirement can be satisfied through e-transactions.²¹⁰

However, in the light of the above, the court held that it was not satisfied with G's argument that F validly gave it instructions to invest money on his behalf and was ordered to pay F the sum of R804 000.00.²¹¹ The court noted that the approach of the courts to e-signatures has always been pragmatic and not formalistic, which means they look to whether the method of the e-signature used fulfils the function of a signature as opposed to insisting on the form of the signature to be used, as confirmed by the SCA in *Spring Forest Trading*. The court in this case stated that as the mandate did not contain the word "electronic" when setting out the requirements pertaining to instructions, G could not rely on the provisions of ECTA.²¹²

3.3.3. Comparative analysis of the decisions of *Spring Forest Trading v Wilberry* and *Global and Local Investments*

The SCA proffered two contrasting decisions in the cases of *Spring Forest Trading* and *Global and Local Investments v Fouche*. In the former, the SCA held that the name of the parties on the email correspondence meant that the agreement had been validly cancelled, and in the latter, held that the matter was distinguishable from the former as there was an issue as to the authority

²⁰⁸ Ibid para 1.

²⁰⁹ Ibid para 14.

²¹⁰ *Spring Forest Trading v Wilberry* (725/13) [2014] ZASCA 178 (21 November 2014) para 16.

²¹¹ *Global & Local Investments Advisors (Pty) Ltd v Nickolaus Ludick Fouché* (71/2019) [2019] ZASCA 08 (18 March 2020) para 17.

²¹² *Global & Local Investments Advisors (Pty) Ltd v Nickolaus Ludick Fouché* (71/2019) [2019] ZASCA 08 (18 March 2020) para 14.

of the person who had actually forwarded the emails to G.²¹³ In the case of *Global and Local Investments*, the court adopted a rather pragmatic approach when it ought to have had regard to the requirements of an e-signature, which were clearly met, as illustrated and confirmed in the case of *Spring Forest Trading*. The court, in having drawn the conclusion it did, has created confusion in the common law regarding the validity of e-signatures creating hesitation amongst online users. It can be concluded that “wet-ink” signatures are just as susceptible to fraud as e-signatures hence e-signatures should not be denied validity solely on the basis that it is in electronic form, as confirmed by the provisions of ECTA.²¹⁴ This confusion has resulted in transacting parties opting for the use of handwritten signatures as opposed to e-signatures and does not promote confidence or legal certainty in the use of e-signatures.

The court in *Global and Local Investments*, strayed from the rationale of *Spring Forest Trading* and this creates a potentially detrimental effect on the confidence and trust in e-transactions by users and the like. Section 13 (3) of ECTA includes the use of an e-signature where the parties to an agreement do not stipulate the type of e-signature to be used. It is now suggested that when parties enter into agreements with one another, they should indicate whether or not an e-signature will suffice for the purpose of that agreement. Swales, in a recent article commenting on the case law discussed in this paper, suggests that what constitutes an e-signature in terms of section 13 of ECTA has been perplexed.²¹⁵ He further states that when consideration is given to the signature provisions of ECTA, a signature most certainly includes an e-signature provided that it meets the list of requirements.

In conclusion, it is submitted that the case of *Global and Local Investments* is inconsistent with the provisions of section 13 (2) of ECTA and the court ought to have had regard to the requirements of an e-signature. The fact that the word “electronic” was absent from the terms of the mandate do not render the fact that e-communication or an e-signature was used, void.

3.3.4. *Borcherds v Duxbury*

As confirmed in the case of *Spring Forest Trading*, parties to an electronic transaction can electronically sign documents to conclude transactions so long as the form of signature used,

²¹³ Y Kleitman ‘ Lockdown: Companies beware of ‘electronic signatures’ whilst employees work remotely’ available at <https://www.cliffedekkerhofmeyr.com/en/news/publications/2020/corporate/corporate-and-commercial-alert-8-april-lockdown-companies-beware-of-electronic-signatures-while-employees-work-remotely.html>.

²¹⁴ Section 13 (2) of ECTA states that an e-signature is not without legal force and effect merely on the grounds that it is in electronic form.

²¹⁵ Note 186 at 89.

complies with the requirements of ECTA. However, ECTA contains a few exceptions in terms of Section 4 (4) read with Schedule 2 of the Act, for example, an agreement for the alienation of immovable property.²¹⁶

In *Borcherds v Duxbury*, the sellers attempted to set aside a sale of immovable property transaction on the basis that, *inter alia*, the agreement was signed by one of the parties using an e-signature, which in terms of ECTA, is listed as one of the instances where an e-signature cannot be used.²¹⁷ Hence, it was argued that the agreement had not been in writing and properly signed by the parties and should be of no force and effect, given the requirements imposed by the Alienation of Land Act, 1981 (“ALA”).²¹⁸ The purchaser utilized an application on his cellular device to sign the agreement, namely ‘DocuSign’.²¹⁹ The court held the agreement to have been validly concluded between the parties and the sale and purchase agreement was upheld.²²⁰ Section 2 of the ALA specifically requires an agreement of sale of immovable property to be in writing and signed by the parties. The court reasoned that the ALA does not define what is meant by the word ‘sign’.²²¹ However, it is worth noting that at the time the ALA was drafted, the national legislature could not have anticipated the use of e-signatures to agreements for the purchase and sale of immovable property as electronic communication were in their infancy.²²² The court had regard to whether the method of signature used fulfilled the function of a signature as opposed to insisting on the form of signature to be used.²²³ However, in order to keep up with the pace at which technology advances and to avoid the provisions of ECTA from becoming obsolete, ECTA will have to cater for a larger variety of solutions and this requires an amendment of the Act which includes the deletion of the exceptions contained

²¹⁶ Section 4 (4) read with Schedule 2 of the act states that ECTA must not be construed as giving validity to the following transactions: -

1. An agreement for the alienation of immovable property as provided for in the Alienation of Land Act, 1981.
2. An agreement for the long-term lease of immovable property in excess of 20 years.
3. The execution, retention and presentation of a will or codicil as defined in the Wills Act.
4. The execution of a bill of exchange as defined in the Bills of Exchange Act.

²¹⁷ Section 4 read with Schedule 2 of ECTA.

²¹⁸ *Borcherds and Another v Duxbury and Others* (1522/2020) [2020] ZAECPHC 37; 2021 (1) SA 410 (ECP) para 25.

²¹⁹ *Borcherds and Another v Duxbury and Others* (1522/2020) [2020] ZAECPHC 37; 2021 (1) SA 410 (ECP) para 22.

²²⁰ *Borcherds and Another v Duxbury and Others* (1522/2020) [2020] ZAECPHC 37; 2021 (1) SA 410 (ECP) para 38.

²²¹ *Borcherds and Another v Duxbury and Others* (1522/2020) [2020] ZAECPHC 37; 2021 (1) SA 410 (ECP) para 27.

²²² S Sampson ‘Electronic Signatures for the Sale of Immovable Property: Are they really legal?’ available at <https://www.denoonsampsoninc.co.za/electronic-signatures-for-the-sale-of-immovable-property-are-they-really-legal/>.

²²³ *Borcherds and Another v Duxbury and Others* (1522/2020) [2020] ZAECPHC 37; 2021 (1) SA 410 (ECP) para 25.

in Schedule 2 of ECTA. This will allow consumers to use e-signatures in additional instances and avoids limitation. The court held that the provisions of ECTA did not apply and reasoned that the parties did not intend for the transaction to be of electronic means.²²⁴ The court regarded the signatures as valid only because it considered them an exchange of the parties' manuscript signatures which was communicated by electronic means. Hence, the court concluded that there was no e-transaction nor an e-signature in the circumstances. This leaves doubt as to whether digitised versions of a handwritten signature constitute an e-signature or not. In conclusion, this case has created some confusion amongst the legal fraternity in regard to the electronic signing of the purchase and sale of immovable property agreements as the court disregarded the exceptions contained in Section 4(3) of ECTA.²²⁵

This case has also raised concerns surrounding e-transactions and its validity thereof.²²⁶ Only once ECTA and the ALA are reconciled accordingly, will there be a degree of certainty regarding the conclusion and execution of sale of immovable property agreements.²²⁷ For now, the court has cautioned that handwritten signatures are still the preferable method of signing.²²⁸

3.4. Conclusion

ECTA has made it a provision that, when interpreting the Act, regard must be had to other statutory law as well as the common law. When the courts are asked to decide on the issue of validity in regard to an e-signature, the court will generally have regard to the aims and objectives of ECTA as well as the main purpose of the agreement between the parties.²²⁹ Judicial reasoning has evinced that validity does not have to do with the form of e-signature used, but has more to do with the function which the e-signature was intended to serve. However, when the courts make contrasting decisions in regard to the validity of e-signatures, online users are left uncertain and hesitant. South Africa must come to terms with the fact that e-commerce is the future, and it is time that South Africa align its laws with that of international standards in order to ensure harmonious trade transactions. The regulation of AESs currently is problematic in that it hinders the growth of newer and innovative e-signature technologies.

²²⁴ Note 220.

²²⁵ L Theron 'Electronic Signatures: Borchers and another v Duxbury and others' available at <https://honeysattorneys.co.za/electronic-signatures-borchers-and-another-v-duxbury-and-others/>.

²²⁶ J Weber 'Where do we stand on sale of immovable property agreements signed electronically' (2020) available at <https://www.cliffedekkerhofmeyr.com/en/news/publications/2020/Real-Estate-Alert-8-December-2020-Where-do-we-stand-on-sale-of-immovable-property-agreements-signed-electronically-.html>.

²²⁷ Note 222.

²²⁸ Borchers and Another v Duxbury and Others (1522/2020) [2020] ZAECPHC 37; 2021 (1) SA 410 (ECP) at para 35.

²²⁹ Note 166 at 145.

The over-regulation and confusion surrounding the use of e-signatures stifles the growth of e-commerce in South Africa thus minimizing South Africa's impact in the global market. There is a need to certainty so that the public is clear on the legal implications of e-signatures and the law governing their use.

The divergent approaches of the SCA in the cases of *Spring Forest Trading* and *Global and Local Investments* has been criticised by commentators as being problematic.²³⁰ The former case set the tone for the interpretation of e-signatures in the future and is in accordance with Section 13 of ECTA, however, the latter places some doubt on the current position of the legal validity of e-signatures and whether they are equivalent to manuscript signatures. Hence, it is advisable that where parties wish to use e-signatures when transacting, they should include this as term to their agreement.

As a result of the decision of *Borcherds v Duxbury*, there is a lack of clarity in regard to agreements for the sale of immovable property. The court did not have regard to the provisions of section 13 of ECTA and held that the act did not apply. This leaves doubt as to whether an e-signature satisfies the requirements of a signature where parties to a transaction digitize their handwritten signatures.

²³⁰ Note 186 at 88.

CHAPTER 4: COMPARATIVE ANALYSIS OF FOREIGN REGULATION OF E-SIGNATURES

4.1.Introduction

Technology is constantly developing, and, as a result, has the potential to increase international trade transactions and e-commerce, thus having a positive effect on globalization.²³¹ It is important that South Africa align its laws with international standards in regard to cross-border transactions in order to avoid unnecessary confusion and complexity when parties located in different jurisdictions, transact with one another.²³² The number of international trade transactions conducted using electronic means have significantly increased during the last decade.²³³

EIDAS was adopted by the EU and subsequently replaced the Signature Directive, as mentioned in Chapter 1 of this dissertation.²³⁴ The provisions of the Model Law (1996), Model Law (2001) and EIDAS have been adopted by various countries in the regulation of e-signatures globally and have been a guiding mechanism.²³⁵ However, both instruments differ in their approach to e-signatures, one being technologically neutral and the other, largely technology specific.

This chapter will focus on the foreign governance of e-signatures, in particular EIDAS and will evaluate the position of e-signatures in countries such as the United States of America (“USA”), Germany and China and thereafter comment on the extent of South Africa’s compliance with international standards. South Africa should be guided by the lessons of other jurisdictions in regard to the regulation of e-signatures, in order to support the economic development of South Africa and ensure compatibility with other jurisdictions.²³⁶

²³¹ Note 83.

²³² L Determann “Electronic Form over Substance – eSignature Laws Need Upgrades” (2021) 72 *Hastings Law Journal* 72 at 1446.

²³³ Note 33 at 853.

²³⁴ Preamble to EIDAS.

²³⁵ Note 83 at 2.

²³⁶ UNCITRAL ‘Promoting confidence in electronic commerce: legal issues on international use of electronic authentication and signature methods’ (2009) at 67.

4.2. *Electronic Identification, Authentication and Trust Services Regulation (EIDAS)*

On 3rd December 2000, the European Parliament and the Council of the EU adopted the Signature Directive. The purpose of the Signature Directive was to facilitate the use and recognition of e-signatures.²³⁷ However, the directive has been criticised for being technology specific in its approach by preferring the use of specific technology with the effect of being counterproductive.²³⁸ The Signature Directive was repealed in 2014 and replaced by EIDAS which came into effect from July 2016.²³⁹ EIDAS was adopted as the Signature Directive was not effective in establishing a cross-border framework effective for secure electronic transactions,²⁴⁰ and this was of concern as the objective of the EU, at the time of drafting the directive, was to facilitate the use of e-signatures amongst EU member States.²⁴¹ Hence, EIDAS was necessary in order to expand on the content of the Signature Directive and to provide clarity in regard to the legal framework regulating electronic transactions.²⁴²

Electronic authentication is not restricted by national borders hence there is a need for standardization internationally.²⁴³ In order to achieve the goal of standardization, EU member States are encouraged to implement the provisions of EIDAS subject to their national electronic identification schemes.²⁴⁴ One of the objectives of the European Parliament was to remove the barriers that existed to the cross-border use of e-signatures.²⁴⁵ EIDAS identifies three types of e-signatures, namely, simple e-signatures, advanced e-signatures and qualified e-signatures (QES).²⁴⁶ The definition of a simple e-signature in terms of EIDAS is identical to the definition of an e-signature in terms of ECTA. An AES in terms of ECTA also has the same requirements as that of an advanced e-signature in terms of EIDAS, save for the fact that EIDAS does not require face-to-face identification.²⁴⁷ A QES is defined in EIDAS as “...*an advanced electronic signature that is created by a qualified electronic signature creation device, and which is based*

²³⁷ Article 1 of the Directive 1999/93/EC of the European Parliament and of the Council of 13th December 1999 on a Community Framework for electronic signatures.

²³⁸ Note 58 at 1449.

²³⁹ Preamble to EIDAS (3).

²⁴⁰ Preamble to EIDAS (3).

²⁴¹ Article 1 of the Directive 1999/93/EC of the European Parliament and of the Council of 13th December 1999 on a Community Framework for electronic signatures.

²⁴² Preamble to EIDAS (3).

²⁴³ C Cuijpers, J Schroers ‘eIDAS as guideline for the development of a pan European eID framework in FutureID’ available at <https://repository.ubn.ru.nl/bitstream/handle/2066/135087/135087.pdf>.

²⁴⁴ Preamble to EIDAS (9).

²⁴⁵ Preamble to EIDAS (18).

²⁴⁶ Article 3 (10), (11), and (12) of EIDAS.

²⁴⁷ The requirement of face-to-face identification is unique to South Africa.

on a qualified certificate for electronic signatures.”²⁴⁸ In terms of Article 25 of EIDAS, a QES will have the equivalent legal effect as that of a handwritten signature thus carrying the highest probative value.

Both advanced e-signatures and QESs, in terms of EIDAS, must remain under the sole control of the signatory,²⁴⁹ thus ensuring a high level of confidence. They are also required to be linked to the electronic data being authenticated.²⁵⁰ Donchevska has pointed out that the most common technology used to fulfil the requirements of an advanced e-signature is PKI technology.²⁵¹ This requires the signatory to obtain the relevant certification and cryptographic keys.²⁵²

A QES may be defined simply as an advanced e-signature with a digital certificate which has been encrypted by a qualified and secured signature creation device.²⁵³ It is clear that a QES provides a higher level of security and confidence in the conclusion of electronic transactions. All QESs must be created by using a QES creation device, which is defined by EIDAS as meaning software or hardware that has been configured and is used to create a secure e-signature.²⁵⁴

Notwithstanding the above, EIDAS fails to explain the position of the law with clarity. EIDAS comprises a complex set of regulations that include confusing technical standards.²⁵⁵ The confusion lies in the choice between an advanced e-signature or QES. Market confusion does not allow transacting parties to easily decide which e-signature is best suited to their electronic transaction and the implications thereof, especially when transacting parties are situated in different jurisdictions.²⁵⁶ Given the state of confusion and unnecessary requirements, parties are opting for traditional means of signing i.e., handwritten signatures.²⁵⁷

EIDAS differentiates between three types of e-signatures, the requirements of which rise as the levels increase. This means that fewer requirements are needed to fulfil a simple e-signature,

²⁴⁸ Article 3 (12) of EIDAS.

²⁴⁹ Article 26 (c) of EIDAS.

²⁵⁰ Article 26 (d) of EIDAS.

²⁵¹ B Donchevska ‘Possibilities for Application of the Electronic Signature in the Lawmaking Process at the Assembly of the Republic of North Macedonia’ (2020) 15 *Balkan Social Science Review* at 80.

²⁵² B Donchevska ‘Possibilities for Application of the Electronic Signature in the Lawmaking Process at the Assembly of the Republic of North Macedonia’ (2020) 15 *Balkan Social Science Review* at 80.

²⁵³ Article 3 (12) of EIDAS.

²⁵⁴ Article 3 (22) of EIDAS.

²⁵⁵ Note 58 at 1418.

²⁵⁶ Ibid at 1446.

²⁵⁷ Ibid at 1447.

and more for a QES.²⁵⁸ As discussed in Chapter 2, legislation should aim to regulate only the effects of technology and not the form of technology itself.²⁵⁹ Njotini²⁶⁰ states that the authentication of e-signatures should not be specific to a particular technology and this is in line with the internationally accepted principle of technology neutrality²⁶¹ which guards against the over regulation of e-signatures in an ever-changing technological environment.²⁶² Legislation should not aim to prescribe requirements of a specific technology before it matures, as this piece of legislation runs the risk of becoming obsolete and outdated.²⁶³ One of the most notable characteristics of technology is that it is borderless hence e-signature regulations are only as effective as their conformity to international standards which are functional and adequate.

4.3. Extent of South Africa's compliance with EIDAS and the Model Law (1996) and Model Law (2001)

The provisions and requirements contained in the South African ECTA have seemingly stemmed from the Signature Directive and Article 6 of the Model Law (2001), save for the last requirement of face-to-face identification, which is unique to South Africa.²⁶⁴ As discussed above, the Signature Directive has been criticised for its technology specific approach by preferring the use of digital signature technology. As a result, ECTA has adopted the same technology specific laws into South Africa's legislation and prefers the use of PKI technology to satisfy the requirements of AESs. ECTA was adopted in 2002 and its provisions regulating the use of e-signatures have not been amended since that date. Hence, ECTA has not taken into consideration the provisions of EIDAS. Nevertheless, and as mentioned above, EIDAS fails to explain the law with adequate clarity. EIDAS is too complex and is compounded due to the introduction of various types of e-signatures.

ECTA introduces the concept of the AES. In terms of ECTA, AESs are required to meet an extensive list of requirements and which requirements can only be met if PKI technology is

²⁵⁸ B Donchevska 'Possibilities for Application of the Electronic Signature in the Lawmaking Process at the Assembly of the Republic of North Macedonia' (2020) 15 *Balkan Social Science Review* at 80.

²⁵⁹ BJ Koops 'Should ICT Regulation Be Technology-Neutral?' in Bert-Jaap Koops, Miriam Lips, Corien Prins and Maurice Schellekens (eds) *Starting Points for ICT Regulation: Deconstructing Pevalent Policy OneLiners* (2006) 6.

²⁶⁰ Note 158 at 199.

²⁶¹ As discussed in Chapter 2 above.

²⁶² UNCITRAL 'Promoting confidence in electronic commerce: legal issues on international use of electronic authentication and signature methods' (2004) at 40.

²⁶³ *Ibid.*

²⁶⁴ Eiselen at 2813.

used in the process of authentication.²⁶⁵ PKI technology is the e-signature creation data used to create an AES. ECTA seems to depart from international standards. ECTA confines a signatory to an electronic transaction that requires an AES in terms of the act, to the specific use of PKI technology. This contravenes one of the core principles of ECTA, which is that of technology neutrality.²⁶⁶ As discussed in Chapter 2,²⁶⁷ regulations that do not adhere to the principle of technology neutrality have the potential to stagnate the market, whilst newer and more innovative technologies are prevented from entering the market as they do not meet the requirements of the prescribed form of technology.²⁶⁸ Whereas the Model Law (1996) and the Model Law (2001) are premised on the principle of technology neutrality, it is advisable that South Africa align its national laws with the international standards laid out by UNCITRAL by removing its technology specific laws in regard to AESes, thus ensuring compliance with the objectives of ECTA.²⁶⁹

4.4. International legal framework

4.4.1. United States of America

4.4.1.1. Uniform Electronic Transactions Act

The Uniform Electronic Transactions Act (UETA) was finalized and subsequently approved in July 1999²⁷⁰ and operates in 47 different states within the USA.²⁷¹ Its purpose is that of removing barriers to electronic commerce by validating and effectuating electronic records and signatures.²⁷² UETA defines an e-signature as “*an electronic sound, symbol, or process attached to or logically associated with a record and executed or adopted by a person with the intent to sign the record.*”²⁷³ UETA thus legitimizes e-signatures and establishes that handwritten signatures are equivalent to one another.²⁷⁴ In order for an e-signature to be deemed legally valid in terms of UETA, it will have to meet the requirements as listed in the

²⁶⁵ Note 158 at 199.

²⁶⁶ Chapter 2 of this dissertation focuses on the importance and relevance of technology neutrality in today's marketplace.

²⁶⁷ 2.2.1. of this dissertation.

²⁶⁸ P Samuelson 'Five Challenges for Regulating the Global Information Society' available at <https://ssrn.com/abstract=234743>.

²⁶⁹ Note 83 at 2; Section 2 (1) (h) of ECTA.

²⁷⁰ A Wittie, J Winn 'Electronic Records and Signatures under the Federal E-Sign Legislation and the UETA' (2000) 56 *The Business Lawyer* at 296.

²⁷¹ Terry Robert 'Electronic Signatures and State Laws' available at <https://www.bcgbenefits.com/blog/electronic-signatures>.

²⁷² UETA Preparatory Note.

²⁷³ Section 2 (8) of UETA.

²⁷⁴ Terry Robert 'Electronic Signatures and State Laws' available at <https://www.bcgbenefits.com/blog/electronic-signatures>.

act²⁷⁵ and confirm that e-signatures can have the same legal effect as handwritten signatures. Section 7 of UETA states that an e-signature may not be denied legal effect or enforceability solely because it is in electronic form. However, UETA only applies to electronic records and signatures relating to a transaction. A transaction is defined in UETA as interactions between people relating to business, commercial and governmental affairs.²⁷⁶

Furthermore, UETA follows a technologically neutral approach by noting that no specific technology is required in order to create a valid e-signature.²⁷⁷ This is in line with the underlying principles of the Model Law (1996) and the Model Law (2001) which advise countries to allow for the flow and development of newer technology models.²⁷⁸ UETA and the Model Law (1996) share a common attribute and that is their minimalistic nature.²⁷⁹ Both documents are instructive and aim to promote the imposition of minimalism in its regulation of e-signatures.²⁸⁰ While technology is constantly improving, it is suggested that South African legislation should align our legal infrastructure with this approach.²⁸¹ By prescribing technology specific requirements for the validity of e-signatures, the risk of legislation becoming outdated becomes a reality. It is imperative, for the purposes of sustainability, to promulgate rules and regulations that consider the rapid change in technology.²⁸² This in turn promotes the growth of e-commerce.

UETA allows for a broad interpretation of the term “agreement” between the parties. As long as the parties have agreed to conduct the transaction electronically, UETA will apply to the intended transaction and allows for communication on a global scale.²⁸³ It is clear that UETA has the broad purpose of intending to remove barriers to e-commerce. The Act strives to facilitate electronic transactions by providing a broad scope of application and striving for technology neutrality. Sections 7 and 9 of UETA legally recognise an e-signature as being effective and enforceable in a transaction by attributing the record to a person by virtue of his signature.

²⁷⁵ An intention to sign, consent, an association of the signature with the record and record retention.

²⁷⁶ Section 3 of UETA.

²⁷⁷ Uniform Electronic Transactions Act with Prefatory Note and Reporter’s Notes (1999) at 3.

²⁷⁸ UNCITRAL Model Law (2001) Guide to Enactment.

²⁷⁹ A Boss ‘The Uniform Electronic Transactions Act in a Global Environment’ (2001) 37 *Idaho Law Review* 2 at 288.

²⁸⁰ A Boss ‘The Uniform Electronic Transactions Act in a Global Environment’ (2001) 37 *Idaho Law Review* 2 at 289.

²⁸¹ *Ibid.*

²⁸² Note 280.

²⁸³ Terry Robert ‘Electronic Signatures and State Laws’ available at <https://www.bcgbenefits.com/blog/electronic-signatures>.

In the implementation of UETA, the drafting committee considered four imperative concepts on which UETA is premised. These were firstly that the barriers surrounding the growth and development of e-commerce should be eliminated. Secondly, parties to a transaction should have the liberty of choosing the medium through which they prefer to transact, and despite the medium they have chosen, it should be subject to the same legal infrastructure. Thirdly, the legal framework should practice neutrality by not prescribing specific technology. Lastly, States should practice uniformity in its regulation of e-signatures as the internet knows no boundaries.²⁸⁴ UETA thus applies the above principles by affirming that a record or signature shall not be denied legal effect or validity solely because it is in an electronic form²⁸⁵ thus removing existing barriers to e-commerce. Section 5 of the Act states that the Act will apply only to transactions where parties have agreed to conduct transactions electronically. What constitutes consent will be derived from their conduct.²⁸⁶ This ensures that party to a transaction has the liberty of choosing the medium through which to transact. Be it via a paper-based system or electronic means, the legal effect will be identical. This is reiterated by section 7 of UETA as explained above. UETA is also not technology specific in that it defines an e-signature in Section 2 (8) of the Act broadly and is designed to ensure that no matter how an e-signature is executed, it will be deemed to have met the requirements for an e-signature in terms of act. In its regulation of e-signature, UETA assures technological neutrality by virtue of its non-prescriptive requirements.

4.4.1.2. The E-Sign Act

On 14th June 2000 and for the purpose of facilitating the further growth of e-commerce, the Senate and House of Representatives introduced a new Act known as the Electronic Signatures in Global and National Commerce Act (E-sign Act).²⁸⁷ The E-sign Act was only given effect on 1st October 2000 and aims to give legal effect and validity to e-signatures, electronic contracts and electronic records and has also created a standard in the USA for the regulation of e-signatures. The E-sign Act regulates electronic transactions in a business and consumer setting. The act is similar to UETA in that it is not prescriptive in the regulation of electronic transactions. Being prescriptive in the regulation of electronic transactions entails putting

²⁸⁴ P B Fry 'Introduction to the Uniform Electronic Transactions Act: Principles, Policies and Provision' (2001) 37 *Idaho Law Review* 2 at 249.

²⁸⁵ Section 7 of UETA.

²⁸⁶ Section 5 (2) of UETA.

²⁸⁷ Preamble to the Electronic Signatures in Global and National Commerce Act.

certain barriers and restrictive requirements which in turn create an obstruction to the growth of e-commerce.

One of the purposes of the E-sign Act is to ensure that “*with respect to any transaction in or affecting interstate or foreign commerce – a signature, contract or other record relating to a transaction will not be denied legal effect, validity or enforceability solely because it is in electronic form.*”²⁸⁸ Section 106 (5) of the E-sign Act thus promotes technological neutrality in that it does not prescribe any minimum requirements for the validity of an e-signature. Section 106 (5) defines an e-signature as an electronic sound, symbol or process, attached to or logically associated with a contract or other record and executed or adopted by a person with the intent to sign the record. The above definition simply requires an intent to be bound by the e-signature executed without preferring specific technology or authentication.²⁸⁹ An e-signature may be executed by virtue of a computerized depiction of a manuscript signature or a typed name at the end of an electronic message etc.²⁹⁰ This legal infrastructure actively facilitates the growth e-commerce in an ever-changing technological climate.

As we shift from a paper-based system and move into a realm controlled by technology, it is essential that we design our legal infrastructure in a manner that supports the growth and development of e-commerce, in particular e-signatures. We require legislation that eliminates confusion and establishes clear standards and requirements. UETA and the E-sign Act achieve this by virtue of their non-prescriptive requirements in the regulation of e-signatures. Both Acts create uniformity in that they are non-prescriptive and flexible²⁹¹ and South Africa will benefit from an adoption of this approach. As it stands, the provisions of Section 13 (1) are technology specific in that they prescribe the use of digital signature technology for the conclusion of an AES. ECTA requires e-signature provisions that are non-prescriptive and flexible while still achieving security.

4.4.2. Germany

Germany is a member of the EU and accepts e-signatures as being of legal effect and validity.²⁹² In 1997, Germany adopted the SigG (also known as the Signaturgesetz). SigG had the purpose

²⁸⁸ Section 101 (9) of the E-sign act.

²⁸⁹ S R Zennick ‘The E-Sign Act: The Means to Effectively Facilitate the Growth and Development of E-Commerce’ (2001) 76 *Chicago Kent Law Review* 3 at 1982.

²⁹⁰ Note 58 at 1425.

²⁹¹ S R Zennick ‘The E-Sign Act: The Means to Effectively Facilitate the Growth and Development of E-Commerce’ (2001) 76 *Chicago Kent Law Review* 3 at 1986.

²⁹² Note 58 at 1418.

of creating general conditions for digital signatures.²⁹³ Germany remain one of the first EU member States to have enacted digital signature laws based on PKI infrastructure.²⁹⁴ SigG was limited to the regulation of digital signatures only. While the use of a digital signature will be deemed to be secure, the setting particular technical standards is an issue.²⁹⁵

The fundamental flaw of SigG was that it did not afford digital signatures the same legal weight as manuscript signatures.²⁹⁶ Germany adopted an additional Act referred to as the Trust Services Act (“TSA”), which came into effect in July 2017 and largely follows the provisions of EIDAS.²⁹⁷ The TSA aims to facilitate the use of e-signatures in Germany in conjunction with the German Civil Code (“GCC”).²⁹⁸ The GCC also governs the use of e-signatures and states that simple e-signatures and advanced e-signatures do not hold the same legal validity as their handwritten counterparts and are therefore not of the same legal effect.²⁹⁹ Section 126a of the GCC states that where an e-signature is required to replace its handwritten counterpart, only a qualified e-signature will suffice. Rossnagel and Zibuchka state that qualified e-signatures have not been a success since inception, given their complex certification requirements.³⁰⁰ A qualified e-signature is based on a qualified certificate and is generated utilizing a secure creation unit demanding high technical standards.³⁰¹

An accredited qualified e-signature requires that the entire procedure be inspected and authenticated by an independent entity. This technical check is the underlying difference between a qualified electronic signature and an accredited qualified electronic signature. While guaranteeing a high level of reliability and security, this approach is outdated.³⁰²

²⁹³ Section 1 of SigG.

²⁹⁴ K M Brisch, C E Haupt ‘Information Technology meets Healthcare: The Present and Future of German and European e-Health initiatives’ (2009) 12 *DePaul Journal of Health Care Law* 1 at 136.

²⁹⁵ C Kuner, A Miedbrodt ‘Written Signature Requirements and Electronic Authentication: A Comparative Perspective’ (1999) 143 *EDI Law Review* 6 at 148.

²⁹⁶ A Lincoln ‘Electronic Signature Laws and the need for Uniformity in the Global Market’ (2004) 8 *Journal of Small and Emerging Business Law* 1 at 76.

²⁹⁷ C Bierekoven, P Bazin, T Kozłowski ‘Electronic signatures in German, French and Polish law perspective’ (2004) *Digital Evidence and Electronic Signature Law Review* at 7.

²⁹⁸ S Petrack ‘E-Signature Regulations: Germany’ available at <https://ally-law.com/e-signature-regulations-germany/>.

²⁹⁹ Section 126a of the German Civil Code (2002).

³⁰⁰ H Rossnagel, J Zibuchka ‘Integrating Qualified Electronic Signatures with Password Legacy Systems’ (2007) 4 *Digital Evidence and Electronic Signature Law Review* at 7.

³⁰¹ K M Brisch, C E Haupt ‘Information Technology meets Healthcare: The Present and Future of German and European e-Health initiatives’ (2009) 12 *DePaul Journal of Health Care Law* 1 at 138.

³⁰² B B Aalberts, S van der Hof ‘Digital Signature Blindness Analysis of Legislative Approaches to Electronic Authentication’ (2000) 7 *EDI Law Review* 1 at 19.

Scott Lowry, CEO of a US Certification Authority, has argued that, in order to benefit from the power of the internet, parties must have the same level of confidence in an online transaction as they would when transacting on paper.³⁰³ It is necessary that a country's legal infrastructure adopt a harmonized definition of what constitutes an "electronic signature," one that passes muster with its manuscript counterpart, respects all national legal infrastructures and achieves party autonomy.³⁰⁴ The main legal instruments that regulate the use and effects of e-signatures in Germany are the TSA and the GCC.³⁰⁵ Both of which state that simple e-signatures and advanced e-signatures do not satisfy the written form requirement in Germanic law, only a qualified e-signature satisfies this requirement.³⁰⁶ However, qualified e-signatures do not serve a practical purpose with its complex nature, which ascribes to its market failure.³⁰⁷ Hence, complex regulations regarding e-signatures do not fare well in the advancement of e-commerce.

4.4.3. China

In 2007, China was said to become the hub of the world's largest online market.³⁰⁸ Prior to that, and taking effect in April 2005, China enacted a new piece of legislation that intended to legalise electronic transactions. This codification is known as the PRC Electronic Signature Law (PRC Act) also known as the Peoples Republic of China Signature Law. The PRC Act was enacted for the purposes of standardizing e-signatures, validating the legal effects of e-signatures and safeguarding transacting parties' rights and interests.³⁰⁹

Article 2 of the PRC Act defines an e-signature as data included or attached in electronic form for the purpose of identifying the signer and proof that the signer takes cognisance of the content, he/she is attesting to. The principle of party autonomy expresses itself throughout the

³⁰³ S E Blythe 'Digital Signature Law of the United Nations, European Union, United Kingdom and United States: Promotion of Growth in E-Commerce with Enhanced Security' (2005) 11 *Richmond Journal of Law & Technology* 2 at 19.

³⁰⁴ C Kuner, A Miedbrodt 'Written Signature Requirements and Electronic Authentication: A Comparative Perspective' (1999) 143 *EDI Law Review* 6 at 148.

³⁰⁵ Note 58 at 1418.

³⁰⁶ Note 58 at 1418.

³⁰⁷ P Krawczyk 'When the EU Qualified Electronic Signature Becomes an Information Services Preventer' (2010) *Digital Evidence and Electronic Signature Law Review* at 7.

³⁰⁸ S E Blythe 'Digital Signature Law of the United Nations, European Union, United Kingdom and United States: Promotion of Growth in E-Commerce with Enhanced Security' (2005) 11 *Richmond Journal of Law & Technology* 2 at 91.

³⁰⁹ Article 1 of the PRC Act.

PRC Act as the Act states that parties may agree, or not, to use e-signatures when transacting with one another.³¹⁰

The PRC Act was amended once in 2015 and a second time as recent as the year 2019. The PRC Act, however, states that an e-signature may not be used to authenticate marriage certificates or applications involving the stoppage of water, heat or gas supply and other utility services.³¹¹ This is perhaps owing to the importance of the abovementioned documents. This however shows a lack of confidence in e-communication as recent as 2019.

The PRC Act distinguishes between a simple e-signature, advanced e-signature and a qualified e-signature but does not treat them different from one another. Where parties agree to an electronic transaction, they have the election of either a simple, advanced or qualified e-signature.³¹²

Article 13 of the PRC Act discusses what constitutes a “reliable” e-signature. In terms of Article 13, four requirements must be met. Firstly, when the e-signature creation data is used, it must be proprietary to the party utilizing the signature. Secondly, at the time the electronic contract is signed, the e-signature creation data must be controlled only by the party signing. Thirdly, any change to the e-signature must be able to be detected. Lastly, any change to the content of the data message after signing must be capable of detection.³¹³ Article 34 defines creation data as characters and codes that are used in the course of electronically signing an electronic document and that reliably connects the e-signature to the signatory. Article 13 of the PRC Act is similar to Article 6 of the Model law (2001) in that they denote similar requirements for what is deemed a reliable e-signature. Article 6 of the Model Law (2001) states that an e-signature will be deemed reliable if the signature creation data is linked to the signatory and no other person, the signature creation data at the time of signing was under the sole control of the signatory, any alteration made to the e-signature is detectable and any alteration made to the contents of the information is detectable. Both articles are extremely similar in the requirements they prescribe. Article 14 of the PRC Act states that a reliable e-signature shall have the same legal effect as that of a handwritten signature. These articles ensure that e-signatures are afforded the same recognition as handwritten signatures.³¹⁴

³¹⁰ Article 3 of the PRC Act.

³¹¹ Article 3 of the PRC Act.

³¹² Note 58 at 1441.

³¹³ Article 13 of the PRC Act.

³¹⁴ UNCITRAL Model Law on Electronic Signatures with Guide to Enactment (2001) at 52.

In conclusion, China has adopted somewhat of a hybrid approach by providing validity to all forms of electronic signatures while still ranking digital signatures with the highest status. The PRC Act outlines what constitutes a reliable e-signature in terms of the act without limiting a contracting party to the use of a specific technology, thus ensuring technology neutrality.³¹⁵ Several forms of technologies could be used to electronically sign a document hence hybrid systems, such as the system in China are welcomed as they abide by the internationally accepted principle of technology neutrality.³¹⁶

4.5. Comparative Analysis

Traditionally, parties have been asked to append their handwritten signatures where required by law. With the rapid growth of new technological developments and the advent of Covid-19, e-signatures have proved to be an invaluable resource.³¹⁷ In the adoption of e-signature laws, countries should take into consideration elements of adaptability, expense, security and convenience. By adopting a progressive stance, countries open the door to systematic international trade relationships and seamless trade transactions.³¹⁸ Whereas USA have been criticised for adopting too liberal an approach in the regulation of e-signatures, and Germany too conservative, South Africa should aim to achieve a harmonious balance between both these approaches in order to promote the objectives of ECTA i.e. to ensure that electronic transactions conform to the highest international standards as envisaged in Section 2 (1) (h).

China, in its regulation of e-signatures, prescribes the acceptable forms of an e-signature without prescribing specific technology that will satisfy the requirements as mentioned above. By contrast, in the Germanic approach, simple and advanced e-signatures are not afforded the same legal effect as handwritten signatures, in contravention of the principle of functional equivalence.³¹⁹

³¹⁵ W Mallesons 'A Comprehensive Guide to Electronic Signature, from a Legal Perspective' (2019) available at <https://www.chinalawinsight.com/2019/01/articles/intellectual-property/a-comprehensive-guide-to-electronic-signature-from-a-legal-perspective/>.

³¹⁶ UNCITRAL 'Promoting confidence in electronic commerce: legal issues on international use of electronic authentication and signature methods' (2004) at 29.

³¹⁷ S E Blythe 'Lithuania's Electronic Signature Law: Promoting the Growth of Secure E-Commerce Transactions' (2007) 23 *Barry Law Review* 8 at 25.

³¹⁸ S E Blythe 'Lithuania's Electronic Signature Law: Promoting the Growth of Secure E-Commerce Transactions' (2007) 23 *Barry Law Review* 8 at 40.

³¹⁹ The Model Law (1996) states that countries should adopt a functional equivalent approach to e-signatures, which means that their respective identification systems should recognize e-signatures as being equivalent to handwritten signatures, which Germanic law fails to do.

By adopting too liberal an approach (i.e. USA), South Africa will open the floodgates to serious security struggles. The goal of electronic communication regulations is that of trustworthiness.³²⁰ Users should have some degree of trust in electronic communication for it to be effective. In order for South African users to have faith in e-signatures, the e-signature one elects to use will have to shadow some form of reliability. However, by following the approach of German lawmakers, South Africa would open itself to many hurdles in that South African users may find it difficult to interact using technology specific e-signature forms thus creating market confusion.³²¹ By allowing South Africans a certain level of freedom, South Africa opens the door to diverse usage and as e-commerce grows, so does the South African economy.

Chinese e-signature regulations specifically elect not to include what comprises a “reliable” e-signature in the circumstances and leaves this to the judiciary to decide.³²² This ensures technology neutrality by not subjecting a party to the use of a particular technology. This is in line with international standards. A notable feature of Chinese e-signature legislation is the inclusion of the principle of party autonomy. This means that transacting parties can decide whether or not they wish to use e-signatures. The other notable and significant feature of the PRC Act is that it highlights the requirements for what constitutes a reliable e-signature without prescribing the use of specific technology.

Section 38 of ECTA is similar to Article 6 of the Model Law (2001) in regard to the criteria for what constitutes a reliable signature. However, ECTA goes a step further by requiring face-to-face identification for the accreditation of an authentication service provider. Given the new work-from-home culture as a result of the Covid-19 pandemic, the requirement of face-to-face identification proves to be futile and ineffective, especially when parties conclude private transactions with one another remotely. Hence, this requirement should be removed from ECTA.

As most countries have adopted the Model Laws with no hurdles, South Africa should aim to do the same. One of the objectives of ECTA is to ensure that electronic transactions conform to the highest international standards.³²³ It is time for South Africa to amend its laws regulating the effects of e-signatures which have not been done since its adoption, in 2002 and to bring

³²⁰ Note 158 at 192.

³²¹ Note 58 at 1449.

³²² C Cao ‘A Note to China’s New Law on Electronic Signatures’ (2016) *Digital Evidence and Electronic Signature Law Review* (13) at 155.

³²³ Section 2 (1)(h) of ECTA.

them in line with internationally accepted standards. South Africa will benefit from the implementation of a hybrid solution that does not prescribe the use of specific technology but allows the contracting parties to self-regulate their electronic transaction.³²⁴ The over regulation of e-signature regulations may result in unnecessary expenditure and wasted efforts.³²⁵

4.6. Conclusion

One of the main differences between American law and European Law is that the former does not prescribe the use of specific technology for the fulfilment of an e-signature and the latter does.³²⁶ USA creates a rather general approach to the regulation of e-signatures and South African legislation should follow the same approach to ensure harmonization with international standards.³²⁷ Determann states that more complex requirements for e-signatures mean more complicated consumer processes.³²⁸ Given the further deterioration of the South African economy due to Covid-19,³²⁹ it is suggested that South Africa amend its laws regulating e-signatures in order to accelerate its potential in the market and create streamline international trade transactions. South Africa's approach to e-signatures is outdated given the technical standards raised by the use of AESs. This needs to be amended in line with international standards which state that the law should only aim to regulate the effects of technology and not the form of technology itself.

³²⁴ UNCITRAL 'Promoting confidence in electronic commerce: legal issues on international use of electronic authentication and signature methods' (2004) at 29.

³²⁵ UNCITRAL 'Promoting confidence in electronic commerce: legal issues on international use of electronic authentication and signature methods' (2004) at 40.

³²⁶ Note 58 at 1433.

³²⁷ Ibid.

³²⁸ Ibid.

³²⁹ M Teresi 'Effects of Covid-19 on the South African Economy' available at <https://www.borgenmagazine.com/south-african-economy/>.

CHAPTER FIVE: CONCLUSION

5.1. Summary of findings

Cross-border trade has resulted in the interdependence and interconnectedness of world populations, economies and legal foundations.³³⁰ It is important for South Africa to adhere to the highest international standards in order to facilitate multi-jurisdictional relationships. The future of technology is undeterminable. Burri states that policy makers need to deal with the unpredictability of technology in an ever-evolving environment.³³¹ The principle of technology neutrality takes into account the multi-directional nature of technology and is one of the objectives of ECTA.³³²

Chapter 2 of this dissertation focused on the principle of technology neutrality and the benefits of technologically neutral regulations. As discussed, technology neutrality is one of the cornerstone principles of both ECTA, the Model Law (1996) and the Model Law (2001). In regard to the regulation of e-signatures, technology neutrality entails not prescribing the use of specific technology to satisfy the requirements of e-signatures with the result that regulations are not tied to a particular state of development of technology. The benefits of technology neutrality include fair competition, lower risk of legislation becoming outdated and losing its' purpose and standardization.

E-signatures are governed by Section 13 of ECTA which differentiates between two types of signatures, namely: the ordinary e-signature and an AES. The former creates a wide scope of requirements to be met, however, the latter prescribes the use of PKI technology which is where the obstacle lies. By prescribing the use of technology to be used in the execution of an AES, regulators create a barrier to other competitors and newer technologies from entering the marketplace. Equal access to the marketplace creates vast choices for the consumer and also avoids the dominance or monopoly of a certain technology developer.

The South African judiciary has not applied the law in this regard in a uniform or clear manner. As discussed in Chapter 3 of this dissertation, the provisions of ECTA state that when ECTA is being interpreted, regard must be had to other statutory law as well as the common law. However, the decisions of *Spring Forest Trading v Wilberry*, *Global & Local Investments v*

³³⁰ J Bryant 'Africa in the Information Age: Challenges, Opportunities, and Strategies for Data Protection and Digital Rights' (2021) 24 *Stanford Technology Law Review* at 393.

³³¹ M Burri 'Digital Transformation: Heralding in a New Era for International Trade Law' (2021) 13 *Trade Law and Development* at 40.

³³² Section 2 (1)(f) of ECTA.

Fouche and *Borcherds v Duxbury* differ from one another and do not provide security or confidence in the legal validity and effect of e-signatures in South Africa, nor certainty in how to use apply ECTA and the use of e-signatures in transactions such as the purchase of land. Hence, users have become reluctant and hesitant to migrate to e-communication as an alternative. It is important that regulators amend ECTA in order to remove the impediments contained in Schedule 2 of the Act which sets out the exceptions to the use of e-signatures in certain transactions. The ALA does not exclude the use of e-signatures for the authentication of sale of land agreements and neither should ECTA. It is clear that most South African statutory law predates the anticipation of e-commerce. However, given the pace at which e-commerce has grown, the judiciary ought to take cognisance of the fact that agreements can be concluded and signed by electronic means. In the case of *Borcherds v Duxbury*, the court failed to have regard to ECTA and held that its provisions did not apply to the agreement for the sale of immovable property agreement as the parties did not include the word “electronic” in their agreement. While the decision of *Spring Forest Trading* was consistent with the provisions and objectives of ECTA, the cases of *Global and Local Investments* and *Borcherds* have created doubt as to whether a signature can be fulfilled by electronic means.³³³ It is worth noting that an amendment of ECTA is in order for the purpose of confirming whether or not a signature includes an e-signature and further for the removal of the exceptions contained in ECTA in consideration of the fact that the e-commerce is constantly developing and the world is moving with this change. The ALA was drafted in 1981, prior to the contemplation of the e-signatures. ECTA should be amended to make provision for a wider variety of instances where an e-signature might be used.

The over-regulation of e-signatures hinders the growth and development of e-commerce and does not allow the law to flow with the growth and reform of technology. The EU follows this approach by focusing the EC Directive on the use of digital signature technology to fulfil the requirements of a ‘reliable’ e-signature whereas the Model Law (1996) and the Model Law (2001) follow a technologically neutral approach. Article 3 of the Model Law (2001) states that “nothing in the Law shall be applied so as to exclude, restrict or deprive of legal effect any method of creating an electronic signature that satisfies its requirements or otherwise meets the requirements of applicable law” solidifying a fluid approach to the regulation of e-signatures.

³³³ Note 186 at 91.

The Signature Directive has been criticised for being technology specific by preferring the use of PKI technology for the fulfilment of an e-signature. The Signature Directive was subsequently replaced by EIDAS. EIDAS fails to explain the position of the law with certainty and includes technical standards that are confusing and convoluted and South Africa would not benefit from this approach.

As analysed in Chapter 4 above, Germany largely follows the provisions of EIDAS in the regulation of e-signatures and as a result, prefers the use of a qualified e-signature to have the same legal effect as handwritten signatures. However, this approach is outdated in that it ties the regulation to a particular state of technological development. Technology is ever-developing and makes this technology specific approach unpractical and uneconomical. USA, however, has adopted a rather flexible approach to e-signatures and South Africa would benefit from regulations that are non-prescriptive and harmonized with that of international standards resulting in harmonious international trade transactions and increased trading partners. It is important for South Africa to open the market to other competitors thus creating alternatives for consumers and fair competition. Presently, ECTA opens itself to monopolistic behaviour which favours digital signature technology developers in South Africa.³³⁴

China has adopted a hybrid approach in the regulation of e-signatures, in that it affords legal effect and validity to all forms of e-signatures but still holds digital signatures (with the use of PKI technology) of the highest rank. The PRC Act also prescribes what constitutes a ‘reliable’ e-signature in terms of the act without prescribing the use of a specific technology thus ensuring security and at the same time, abiding by the principle of technology neutrality. A hybrid approach is welcomed as it allows various forms of technologies to fulfil the functions and requirements of an e-signature without preferring a specific technology over any other.

The accreditation process in South Africa involves time-consuming and cumbersome administrative requirements and has resulted in the slow adoption of AESes in South Africa. The Court in *Spring Forest Trading v Wilberry* significantly noted the requirements of a non-refundable fee and complex criteria to meet the satisfaction of the SAAA.³³⁵ This does not fare well when regard is had to the fact that the concept of AESes in South Africa simply defeats the objectives of the legislature, one of which objectives is to facilitate the use of e-signatures.

³³⁴ LAWtrust official website available at <https://www.lawtrust.co.za/solutions/advanced-electronic-signatures>—which confirms that Lawtrust is the only private accredited company to provide digital signatures in South Africa.

³³⁵ *Spring Forest Trading v Wilberry* (725/13) [2014] ZASCA 178 (21 November 2014) par 21.

The Model Law (1996) recognizes that situations where national legislation creates uncertainty and obstacles to the use of e-communication, this inevitably leads to the vitiation of international trade and international trade relationships.³³⁶

5.2. How should the Electronic Communications and Transactions Act 25 of 2002 be amended to facilitate the increased use of e-signatures in South Africa?

Considering the above findings, South Africa would benefit from the implementation of a hybrid and technologically neutral approach to the regulation of e-signatures. With the acceleration of technology reform due to the Covid-19 pandemic, internet security is an important factor when regard is had to the facilitation of e-signatures. Presently, ECTA distinguishes between the use of an ordinary e-signature and an AES in terms of Section 13 of the Act. An AES requires accreditation and which accreditation can only be granted by the SAAA. A hybrid solution that offers a user both security and effectiveness without cumbersome administrative processes appear to be the most efficient and functional solution to the regulation of e-signatures in South Africa. As discussed above,³³⁷ the requirement of face-to-face identification is futile and unnecessary as it creates a hindrance to private agreements between parties that do not require the use of an AES.

It is crucial that ECTA align its provisions with international standards and legal frameworks to prevent the creation of barriers to effective cross-border transactions. In conclusion, the provisions of Section 13 of ECTA offend the principle of technology neutrality and the result of this includes an outdated piece of legislation, creation of impediments for newer technologies from entering the marketplace, discord between international legal frameworks. The advantages of ECTA in abiding by the principle of technology neutrality and harmonisation of the law include seamless international trade transactions, increased trading transactions, growth of the South African economy in that technology developers will be given a fair opportunity to develop innovative e-signature technologies and the consumer is provided with cost-friendly alternatives.

In regard to the exceptions contained in Schedule 2 of ECTA and the confusion created by the Supreme Court of Appeal in *Borcherds v Duxbury*, regulators ought to revise these provisions to permit the use of e-signatures to authenticate a larger variety of transactions. The legislature

³³⁶ Model Law (1996) at 16.

³³⁷ At 45 of this dissertation.

needs to provide clarity and confirmation as to the status and validity of e-signatures, as a result of the cases of *Global and Local Investments* and *Borcherds v Duxbury*.

South Africa holds a significant trade relationship with the United States of America (“USA”) and is South Africa’s third largest bilateral partner in interindustry trade sector.³³⁸ The International Trade Administration of USA also suggests collaborating with South African companies in regard to joint ventures, mergers and acquisitions thus allowing South Africa to access and infiltrate the American market.³³⁹ South Africa is also a member of the BRICS, which comprises a group of emerging countries ³⁴⁰ and which aims to promote development and co-operation.³⁴¹ It is crucial, for South Africa to promote existing and future international trade relationships, to amend its regulations pertaining to e-signatures in a manner that promotes the principle of technology neutrality and abides by the highest and most effective international standards.

³³⁸ International Trade Administration Official Website available at <https://www.trade.gov/knowledge-product/exporting-south-africa-market-overview>.

³³⁹ Ibid.

³⁴⁰ Brazil, Russia, India, China and South Africa.

³⁴¹ International Trade Centre Official Website available at <https://www.intracen.org/country/south-africa/#:~:text=The%20country%20has%20a%20well,%2C%20US%2C%20Japan%20and%20India>.

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