

## E-Commerce and Mobile Commerce in South Africa: Regulatory Challenges

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**Abstract.** E-commerce refers to all forms of commercial transactions that involve individuals and organizations based on the electronic processing of data. Mobile commerce (M-commerce) is the buying and selling of goods and services using mobile telephones or personal digital assistants (PDA). M-commerce is emerging in Africa and South Africa especially as either a complement or an alternative to e-commerce as originally conceived, though there are arguments that mobile telephone technology “m-commerce” will surpass “e-commerce” as the method of choice for digital commerce transactions. This paper identifies the challenges in adopting e-commerce/m-commerce practices for economic development and competition in international trade. The liberalisation of the telecommunications sector on which e-commerce and m-commerce practices depend is being given priority by the majority of African governments. Despite advances in e-commerce and m-commerce practices in Africa, the growth of e-commerce and m-commerce has been slow. Impediments include low levels of internet penetration and limited communication infrastructure. To meet this problem, the UN adopted through the UN Commission on International Trade (UNCITRAL), Model Law on E-Commerce to help in the harmonisation of e-commerce/m-commerce related laws. Challenges are identified and recommendation made on how to improve the regulatory framework and create an environment conducive to investment and economic development.

### 1. Introduction

Electronic commerce (e-commerce) is the process of trading across the internet. A Pan African E-commerce Initiative, sponsored by the Economic Commission for Africa (ECA) and the International Development Research Centre (IDRC), in 2001 adopted the European Commission definition of e-commerce:

Electronic commerce is about doing business electronically. It is based on the processing and transmission of data, including text, sound and video. It encompasses many diverse activities including electronic trading of goods and services, online delivery of digital content, electronic fund transfers, electronic share trading, electronic bills of lading, commercial auctions, online sourcing, public procurement, direct consumer marketing, and after-sales service.<sup>1</sup>

E-commerce has the ability to eliminate the time span between ordering, delivery invoicing and payment by using the World Wide Web. It offers benefits to both vendor and buyer. The vendor can create a global presence, thus generating more potential business, reducing costs, increasing competition, and allowing the ability to customise products.<sup>2</sup> The buyer benefits through increased choice that encourages better standards of service, price reductions and a more tailored service. E-commerce has impacts on our economic and social life as it has the potential to fundamentally change the way commercial transactions, the business of government, the delivery of services and a host of other interactions are conducted, raising issues at the heart of policies directed at the regulation of traditional practices and procedures. E-commerce is sometimes also categorized under four main areas of activity: business-to-business (“B2B”), business-to- government (“B2G”), business-to-consumer (“B2C”) and consumer-to-consumer (“C2C”).<sup>3</sup>

M-commerce, which is now an accepted acronym for mobile commerce, is the buying and selling of goods and services through wireless hand-held devices such as cellular telephones, personal digital assistants (PDAs) and wireless computers.<sup>4</sup> M-commerce, which has become known as the next generation of e-commerce enables users to access the internet without needing to find a place to plug in. Mobile technology has revolutionised the way people communicate and conduct business transactions. Current Third Generation Phone (3G) handsets now

<sup>1</sup> See also Ulrike Baumö1, Thomas Stiffel & Robert Winter, *A Concept for the Evaluation of E-Commerce-Ability*, in Julie Mariga (ed), *Managing E-commerce and Mobile Computing Technologies* (2003), 2-4.

<sup>2</sup> See John E W Carstens, *Electronic Commerce in Practice: An Overview*, in John Carstens & Pierre Lucouw (eds), *E-commerce in Practice* (2004), 43.

<sup>3</sup> *Ibid.* 42-44.

<sup>4</sup> See Alex Michael & Ben Salter, *Mobile Marketing: Achieving Competitive Advantage Through Wireless Technology* (2006), 77.

feature high resolution displays, integrated video camera, audios and video content streaming, internet access at broadband speeds, location-based services, and multi-user 3D gaming.<sup>5</sup> Michael and Salter assert that these rich computing arrangements will encourage and facilitate the development of business applications for mobile phones. They state that the 3G has opened up the wireless world because of its portability, and bandwidth, making computers one of the most popular devices for data transfer. The technology behind m-commerce is based on Wireless Application Protocol (WAP).<sup>6</sup> Ahmad states that WAP “is an attempt to define a standard for how content from the internet is filtered for mobile telecommunications. It is aimed at running a mass-market mobile phone into a network-based smart phone”.<sup>7</sup> He further states that the WAP has very close connections with the internet technologically.<sup>8</sup> The WAP incorporates a relatively simple microbrowser into the mobile phone requiring only limited resources on the mobile phone. According to Ahmad, the philosophy behind the WAP’s approach is to utilize as few resources as possible on the handheld device and compensate for constraints of the device by enriching the functionality of the network.<sup>9</sup>

Africa imports more than exports goods and services from overseas markets, hence the highest vulnerability of both its consumers and traders. However this trading pattern must be seen in the context of South Africa’s economic dominance in the continent, especially in the Southern Africa region. South Africa’s economic predominance is underlined by the fact that it produces approximately 80 percent of Southern Africa’s GDP.<sup>10</sup> Alden and Soko note that an enormously lopsided trade relationship persists, with South Africa maintaining a massive surplus with its neighbouring trade partners.<sup>11</sup> The economic power of South Africa is so dominant that it has emerged as the largest foreign investor in Southern Africa in recent years.<sup>12</sup> These business forays are not only limited to Southern Africa.

The further northward expansion of South African firms has been actively encouraged by several African leaders who see the country “as the continent’s last best economic hope”.<sup>13</sup> On her part, South Africa is taking advantage of her relative competitive advantages which include: abundant investment capital, marketing and technological know-how, advanced public infrastructure, and human resources, to exploit business opportunities in the rest of Africa. South African companies are also exploiting the resultant global push for economic liberalisation and deregulation in Africa.

Telecommunications is one of the fastest growing sectors of the South Africa's economy, reflecting the rapid growth of mobile telephony in the country.<sup>14</sup> South Africa is the world’s fourth fastest growing cellular communications market. By October 2003, there were 15 million cellular users, a number expected to grow to 21 million by 2006.<sup>15</sup> Mobile national operators from South Africa, MTN and Vodacom have undergone significant expansion beyond their home markets into other African markets over the past few years. MTN now has operations in 16 African countries (including the second most important market on the continent Nigeria), while Vodacom is present in five countries (including the DRC). In most of the markets, both operators hold number one positions.

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<sup>5</sup> Ibid. 1; See Tabrez Ahmad, *Cyberlaw, E-Commerce & M-Commerce* (2003), 46, where the author explains the Third Generation of Phone (3G) technology, stating that the mobile communications industry evolved in three stages: “

- i. Analog: One could only easily use analogue cellular to make voice calls, and typically only in any one country.
- ii. Digital mobile phone systems: Added fax, data and messaging capabilities as well as voice telephone services in many countries.
- iii. Multimedia services: Add high speed data transfer to mobile devices, allowing new video, audio and other applications through mobile phones – allowing music and television and the Internet to be accessed through a mobile terminal.”

<sup>6</sup> Ibid.

<sup>7</sup> See Ahmad, note 5 supra, 35.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid. 37.

<sup>10</sup> See Chris Alden & Mills Soko, *South Africa’s Economic Relations with Africa: Hegemony and its Discontents*, 43, 3 (2005) *Journal of Modern African Studies*, 367–392; James J Hentz, *South Africa and the Political Economy of Regional Cooperation in Southern Africa*, 43(1) (2005) *Journal of African Modern Studies*, 21-51.

<sup>11</sup> Ibid.

<sup>12</sup> In their analysis of South Africa’s economic dominance and market power of its enterprise, Alden and Soko include the following background statistics: ‘South African direct investment in the 13 SADC countries exceeded US\$5.4 billion by 2000 (Financial Mail 7.2.2003). In 2001, South African investment in the region amounted to R14.8 billion, followed by that of the UK at R3.98 billion. Significant South African investment deals in the region in 2001 and 2002 included: US\$20 million by South African Airways (SAA) for its stake in Air Tanzania; US\$6 billion by Eskom Enterprises in the Inga project in the Democratic Republic of Congo (DRC); US\$56 million by Sun International in its hotel in Zambia; US\$142 million investment by Vodacom in Tanzania and an additional US\$139 million investment in the DRC; US\$53 million by Pretoria Portland Zimbabwe in merger activity in Zimbabwe; a US\$860 million investment by BHP Billiton, the IDC and Mitsubishi in the development of the Mozal aluminium smelter in Mozambique; and a further investment of US\$1.1 billion by Sasol in the Pande and Temane gas fields in Mozambique (BusinessMap 2002).’ See Alden & Soko, note 10 supra, 374.

<sup>13</sup> Ibid.

<sup>14</sup> See South African Communications, 2002-2008: Market Review and Analysis, prepared by the Yankee Group for the Department of Communication, Republic of South Africa (hereafter DOCRSA), 65-68.

<sup>15</sup> See [http://www.southafrica.co.za/communications\\_84.html](http://www.southafrica.co.za/communications_84.html) visited 8 August 2008.

The uneven economic development in the continent is a big challenge and compromises efforts aimed at the economic integration of the region. In this regard, African governments through The New Partnership for Africa's Development (NEPAD) projects are currently addressing the development of the use of the internet as a means by which information is disseminated and through which communication and connectivity is enabled.<sup>16</sup> The slow process of liberalising telecommunication services is gradually taking off the ground. From these technological advances it is hoped that both e-commerce and m-commerce will emerge as some of those innovative methods that will transform the way products, services, and even information are bought, sold, and even exchanged in the continent. This is attributed to the fact that the content delivery over wireless devices is becoming faster, more secure, and scalable. The industries affected by m-commerce include: financial services, which includes mobile banking (when customers use their handheld devices to access their accounts and pay their bills) as well as brokerage services, in which stock quotes can be displayed and trading conducted from the same handheld device; telecommunications, in which service changes, bill payment and account reviews can all be conducted from the same handheld device; service/retail, as consumers are given the ability to place and pay for orders while on the move and so on.<sup>17</sup>

However, regarding general access to Information and Communication Technologies (ICTs), Africa, according to the 2007 International Telecommunication Union Report, still lacks in investment intensive infrastructure such as main (fixed) lines and fixed broadband.<sup>18</sup> Inadequate landline networks and relevant institutions will be some of the drivers of the m-commerce African boom. The investment environment seems promising. Of late, the growing political stability has helped attract foreign investors from a region recovering from years of civil wars. Notable also is that Africa's mobile networks are growing for some other obvious reasons. The national telecommunications are poorly managed and in most cases corrupt. Besides, these utilities cannot even lay new lines or maintain the old and existing ones. On the positive side some African governments are in the process of introducing and adopting regulatory reforms based on the United Nations Commission on International Trade Law (UNCITRAL) Model Law on E-commerce.<sup>19</sup>

## **2. The state of e-commerce and m-commerce in South Africa**

The communications sector, together with transport and storage, accounts for almost 10 percent of South Africa's gross domestic product (GDP).<sup>20</sup> The South African network is now reported to be 99.9 percent digital and includes the latest in fixed-line, wireless and satellite communication; above all, the country has the most developed telecoms network in Africa.<sup>21</sup> The fixed-line monopoly of Telkom, a listed company in which the government is the largest shareholder, expired with the licensing of Neotel as South Africa's second national operator.<sup>22</sup> Neotel is licensed to provide the entire range of telecoms services with the exception of full mobility.<sup>23</sup>

South Africa has now three mobile operators: Vodacom; MTN and Cell C. Vodacom, which is 50 percent owned by Telkom, has 61 percent of the cellular market, with seven million customers. MTN has almost five million subscribers and coverage of 900 000 km<sup>2</sup> (including sea), giving access to 94.5 percent of the population. The country's third cellular operator, Cell C, began operations in November 2001. By August 2003, Cell C had 1.5 million subscribers. All in all, the country's three cellular network operators - Vodacom, MTN and Cell C - provide telephony to over 39-million subscribers or nearly 80 percent of the population. The introduction of number portability as well as the arrival in 2006 of Virgin Mobile, a virtual network service provider that operates

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<sup>16</sup> See UNCTAD, E-commerce Development Report (2002), Executive Summary, 2, which states: "Internet connectivity has improved in Africa. The number of dial-up subscribers grew by 30 per cent in 2001 and now stands at about 1.3 million. Incoming Internet traffic represents 1 gigabyte per second, while outgoing traffic is around 800 megabytes per second. However, only 1 in 118 Africans has Internet access, and only 1 in 440 has access if the five countries with the most users are excluded from the calculation."; see also The New Partnership for Africa's Development (2002) (NEPAD), 22-27.

<sup>17</sup> Ibid.

<sup>18</sup> See International Telecommunications Union (ITU Report), Telecommunications/ICT Markets and Trends in Africa (2007), 2.

<sup>19</sup> For example, Egypt has enacted Law No. 15/2004 on E-signature and Establishment of the Information Technology Industry Development Authority (ITIDA); Mauritius has passed The Electronic Transactions Act 2000 (August 2000); Morocco has established the Comité Interministériel pour le Développement et la Promotion du Commerce Electronique, which has also produced a preliminary report; South Africa has passed the Electronic Communications and Transactions Act [No. 25 of 2002]; and Tunisia, the Electronic Exchanges and Electronic Commerce Law [enacted in August 2000]. Tunisia is one of the leaders among developing countries in ICT.

<sup>20</sup> See <http://www.southafrica.info/business/economy/infrastructure/telecoms.htm> last visited 8 August 2008.

<sup>21</sup> See DOCRSA, note 14 supra, Executive Summary; see also Department of Trade and Industry (DTI), *South African Wireless Communication* (2007), 10-15.

<sup>22</sup> See <http://www.telkom.co.za/> last visited 8 August 2008.

<sup>23</sup> See <http://www.neotel.co.za/neotel/view/neotel/en/page1?>; Neotel states that it is South Africa's first converged communications network operator, dedicated to improving the way South Africans communicate. Neotel is redefining the telecoms market. Our aim is to challenge convention, without compromising on world-class standards and service. Neotel is licensed as South Africa's first alternative infrastructure-based telecoms provider, capable of delivering a broad range of wireline and wireless data telecoms services on a national and international level. Neotel provides a portfolio of services to the wholesale, enterprise and consumer markets.

in partnership with Cell C, has helped enhance competition.<sup>24</sup> South African mobile companies are making inroads into Africa and the Middle East, with MTN leading with over 20 operations in these emerging markets. Notable further is that some of the world's leading telecommunication brands including Siemens, Alcatel, SBC Communications, Telecom Malaysia and Vodafone, have made significant investments in the local industry.<sup>25</sup>

Wider access to broadband, ADSL and 3G accesses have boosted internet connectivity, with the number of South African internet browsers increasing by 121 percent in two years, from 1.8-million in May 2005 to 3.8-million in May 2007, according to research firm Nielsen/NetRatings.<sup>26</sup> Bandwidth, however, remains relatively limited and expensive in South Africa, hampering the rate of economic growth. But the government has committed to increasing accessibility and bringing down costs. To this end, the Cabinet approved laws early in 2008 to enable the formation of Infraco, a new state-owned company that will provide broadband capacity through fibre-optic cables to other telecoms operators in the country. Infraco's role will complement that of state-owned signals provider Sentech, which provides internet connectivity - focusing on the public sector - through wireless systems rather than fibre-optic cables.

E-commerce in South Africa has grown tremendously over the past two decades. It is fuelled by the realisation that online procurement and supply-chain management can trim costs and improve customer relationships. Many large South African companies and institutions especially in the fields of the financial services, mining, chemical and manufacturing businesses, conduct business globally, and have thus kept pace with the demands of global customers. Growth in e-commerce is further noticeable in the procurement marketplaces, enabling vendor sourcing, order and transaction processing, and system integration. The most quoted success story in South Africa is online sale of airline tickets, whose value reached R1.8bn in 2005. It is the leading e-commerce business. Other major online retail marketplaces include Kalahari.net, Digit Mall and websites of traditional retailers. Often quoted in this category is the Pick'n Pay Retail store, which provides an online grocery-ordering service. Since 2000, a number of business-to-business (B2B) marketplaces have been launched. For example, Quadrem was established as an electronic marketplace that serves buyers and sellers in mining, metals and minerals, and provides sourcing, catalogues and transaction processing.<sup>27</sup> The famous well established Standard Bank of South Africa, one of the largest banks in the country, launched an online procurement marketplace called Thetradestandard.com in 2001 with Ariba (US) as its technology partner.<sup>28</sup>

In South Africa, the success of e-commerce and m-commerce cellular has been made possible by the opening of markets to new operators, relegating to history the monopoly provision of fixed networks. In the past decade the whole of Africa has followed suit. Most notable further is that voice telephony, primarily the Global Standard for Mobile (GSM) benefited more remarkably in the context of Africa. In comparison with the sluggish growth and high monthly rentals of fixed telecommunications, mobile operators have attracted large numbers of customers with packages of handsets, calls and text messages that are considered to be affordable by a significant part of the population. To do so they have built substantial networks making significant investments. Competition has been sufficient to push operators to expand even if not always to reduce their prices.

Use of online banking in South Africa is becoming brisk. Her largest banks, such as the Amalgamated Banks of South Africa (ABSA) and Nedbank, provide comprehensive business and personal online-banking services, including account reviews, transfers, bill presentation and payment, and various cash- and portfolio-management capabilities.<sup>29</sup> Data from BMI-TechKnowledge, a local analyst firm, indicate that there were about 1.06m online bank accounts in South Africa in 2004.<sup>30</sup> According to the Mobility 2007 study by technology research firm World Wide Worx, the penetration of mobile phone banking in South Africa has more than doubled in one year, while usage will climb even more sharply in 2008.<sup>31</sup> World Wide Worx's latest study of mobile technology and commerce in South Africa was conducted in partnership with First National Bank (FNB).<sup>32</sup>

Some of the statistics supporting the now emerging wide use of m-banking is through the official reports of WIZZIT, a mobile banking provider.<sup>33</sup> Today thousands of South Africa's citizens are able to check their account

<sup>24</sup> See <http://www.southafrica.info/business/economy/infrastructure/telecoms.htm> last visited 8 August 2008.

<sup>25</sup> See <http://www.iht.com/articles/2008/06/02/business/satel.php> last visited 8 August 2008.

<sup>26</sup> Nielsen Online, a service of The Nielsen Company, delivers comprehensive, independent measurement and analysis of online audiences, advertising, video, consumer-generated media, word of mouth, commerce and consumer behaviour, and includes products previously marketed under the Nielsen/NetRatings and Nielsen BuzzMetrics brands. With high quality, technology-driven products and services, Nielsen Online enables clients to make informed business decisions regarding their Internet, digital and marketing strategies. For more information. See [www.nielsen-online.com](http://www.nielsen-online.com) last visited 2 August 2008.

<sup>27</sup> See <http://www.quadrem.com/Home/tabid/36/language/en-US/Default.aspx> last visited 8 August 2008.

<sup>28</sup> See <http://www.thetradestandard.com/> last visited 8 August 2008.

<sup>29</sup> See <http://www.nedbank.co.za/website/content/home/index.asp>; <http://www.absa.co.za/absacoza/> last visited 8 August 2008.

<sup>30</sup> See <http://www.tectonic.co.za/?p=278> last visited 8 August 2008.

<sup>31</sup> See <http://www.internetworldstats.com/af/za.htm> last visited 8 August 2008.

<sup>32</sup> Ibid.

<sup>33</sup> See <http://www.wizzit.co.za/> last visited 8 August 2008

balances, transfer funds, purchase airtime and pay utility bills via their mobile phones. Over and above, WIZZIT offers internet banking services and a MasterCard-branded Maestro debit card for retail purchases.<sup>34</sup>

### 3. Regulations governing e-commerce & e-mobile in South Africa

A number of disparate pieces of legislation, many of which have undergone subsequent amendment, govern the ICT sector.<sup>35</sup> These include: The Broadcasting Act 1999;<sup>36</sup> the Independent Communications Authority of South Africa Act 2000 (ICASA Act);<sup>37</sup> and the Interception and Monitoring Act 2002.<sup>38</sup> These legislative reforms amongst others culminated in the enactment of the Electronic Communications and Transactions Act 2002 (ECTA), which provides a legal framework for electronic transactions, deals with cryptography, cyber-crime and the protection of privacy.<sup>39</sup> These legislative reforms resulted in the adoption of the Electronic Communications Act of 2006 which will regulate the convergence of technologies in the ICT sector.

The Electronic Communications Act (ECA) seeks to promote convergence in the broadcasting, broadcasting signal distribution and telecommunications sectors, and to provide the legal framework for convergence of these sectors. It sets the stage to make new provisions for the regulation of electronic communications services, electronic communications network services and broadcasting services. It will provide for the control of the radio frequency spectrum and for the continued existence of the Universal Service Fund. The passing of the Act enables the ICT sector to reflect the integration of telecommunications with information technology, broadcasting and broadcasting signal distribution.<sup>40</sup> In addition, government also enacted the ICASA Amendment Act which further incorporates postal regulation into the mandate of the Independent Communications Authority of South Africa (ICASA).

A number of institutions were created by legislation to regulate or provide policy intervention in the ICT sector. The Independent Communications Authority of South Africa (ICASA), as mentioned above, is the overall sector regulator, created to unify the formerly separate regulation of broadcasting and telecommunications. It is tasked with regulating electronic communications in the public interest and to ensure fairness and a diversity of views. Concerns have repeatedly been raised about its effectiveness in doing this, given the degree to which it has historically been constrained by legislation. Questions have also been raised about the calibre of both councillors and senior line management.

On issues of access, the recently renamed Universal Service and Access Agency of South Africa (USAASA)<sup>41</sup> is tasked with promoting “universal access and universal service”, along with administering a Universal Service and Access Fund, through which a levy on the revenues of ICT sector licensees is aggregated and disbursed to support increased ICT access (including the under-serviced area licensees). The track record of the Agency has unfortunately been poor, with most funding having gone to telecentres, few of which have been able to demonstrate any degree of sustainability. No funding has yet been given to “needy persons”, who await a formally gazetted definition of their status, and although the new under-serviced area licensees have received subsidies, the lack of viability of these companies suggests this will make little if any impact on the provision of communications access to disadvantaged communities.

The management of the internet is undertaken by the .za Domain Name Authority, established under ECTA to “administer and manage the .za domain name space,” as well as the relevant registrars and registries of domain names.<sup>42</sup> An elected stakeholder body, it has recently undertaken a review of how the .za domain is structured and administered. A further government-established body with an interest in information society policy is the Presidential National Commission on the Information Society and Development (PNC on ISAD). The PNC on ISAD was launched in 2002 as a South African counterpart to the Presidential International Advisory Council, a high-profile body of international IT experts invited to advise the president on ICT policy and development matters.<sup>43</sup> The Council consists of 31 individuals drawn largely from government and business, with a smattering of academics and a lone NGO representative. It has an advisory mandate relating inter alia to “bridging the digital divide” and “overall government policy framework on ICTs”.

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<sup>34</sup> Ibid.

<sup>35</sup> See generally DOCRSA, note 14 supra.

<sup>36</sup> The Act deals with broadcasting policy and regulation, as well as with the public broadcaster.

<sup>37</sup> This Act created a unified regulator for both broadcasting and telecommunications.

<sup>38</sup> The Act deals with the circumstances under which electronic surveillance and interception are permitted, as well as related procedures and responsibilities.

<sup>39</sup> See generally Electronic Communications and Transactions Act 25 of 2002 (ECTA). To be further discussed comprehensively below.

<sup>40</sup> The Electronic Communications Act of 2006 repealed the Telecommunications Act of 1996, as well as some sections of the Broadcasting Act, excluding sections dealing with the public broadcaster.

<sup>41</sup> See generally DOCRSA, note 14 supra.

<sup>42</sup> See Chapter X, ECTA.

<sup>43</sup> See Department of Communication (2007), [www.doc.gov.za](http://www.doc.gov.za) last visited 8 August 2008.

It must be stated however that South Africa's model is characterized by certain deficiencies which for lack of space are just summarised below:<sup>44</sup>

- licensing implementation delays and non-transparent processes;
- spectrum allocation and management issues also relating to delays in the allocation of new license bands;
- access and interconnection arrangements lacking detailed legislative criteria and comprehensive regulatory guidelines;
- inadequate retail price regulation;
- universal service policy unmatched with clear funding and implementation mechanisms and a well-equipped implementation agency;
- inadequate enforcement of anti-competitive conduct rules;
- regulatory structure compromised by dual responsibilities of the sector regulator and the Ministry of Communications.

The Electronic Communications and Transactions Act 2002 (ECTA), places computer-generated documents on the same footing as traditional paper evidence. ECTA contains minimalist enabling provisions on contract formation and seeks to remove legal barriers to e-commerce in South Africa, by providing for functionally equivalent rules for electronic contracting.<sup>45</sup>

### 3.1 Formation and validity of contracts

Regarding the formation and validity of agreements ECTA states that "an agreement is not without legal force and effect merely because it was concluded partly or in whole by means of data messages."<sup>46</sup> In South Africa, as in other jurisdiction in Africa, a legal contract requires the consent of both parties, whether in writing or orally. In an on-line environment, the acceptance of an offer is made by the "mouse click on icon" method. A "click wrap" agreement is made when the terms and conditions of the contract of sale are shown on a commercial website.<sup>47</sup> The Electronic Communications and Transactions Act 25 of 2002 lays the foundation to enable e-mail contracts and legally binding digital signatures. Section 11 of ECTA recognises the legal status of electronic data. Section 13 deals with digital signatures, and specifies that an electronic signature generally satisfies the legal requirement of a contract, unless it is otherwise specified.<sup>48</sup> The Act further states that an agreement "concluded between parties by means of data messages is concluded partly or in whole by means of data messages. at the time when and place where the acceptance of the offer was received by the offeror."<sup>49</sup>

ECTA further provides that a data message must be regarded as having been received by the addressee, "when the complete data message enters an information system designated or used for that purpose by the addressee and is capable of being retrieved and processed by the addressee".<sup>50</sup> A literal interpretation of this section is that a contract will be regarded as having been concluded at the moment when the data message containing the acceptance enters the information system used by the offeror and is capable of being retrieved by the offeror. However, the general rule is that the offeror must receive communication of the acceptance.<sup>51</sup> The provisions regarding offer and acceptance also have implications as far as the revocation or withdrawal of offers are concerned. According to Christie, the general rule is that an offer can be withdrawn at any time before acceptance.<sup>52</sup> The implication is that the offer cannot be withdrawn once it has been accepted. For on-line contracts under ECTA it would seem that as soon as the acceptance enters the information system of the offeror, even if the offeror is not yet aware of the acceptance, the offer can, according to section 23 (b) of ECTA, no longer be revoked. This is a clear deviation from the normal rules relating to offer and acceptance.

In Africa, national laws have different rules governing the conclusion of a contract; part of the region's colonial legacy. The continent is divided into different zones reflecting inherited legal foreign systems. For examples, Francophone Africa has its post-colonial legal system based on civil law, while Anglophone Africa has its own based on common law English legal system. Although these national laws are often related, the national rules can lead to different outcomes. For example, under English law a display of goods on website is regarded as an invitation to treat, while under Dutch law the inclination would be to qualify such a display as a public offer.<sup>53</sup>

<sup>44</sup> See DOCRSA, note 14 supra, 87

<sup>45</sup> See Tana Pistorius, *From Snail Mail to Email: Time of Econtracting*, XXXIX CILSA, 183

<sup>46</sup> See section 22 (1), ECTA.

<sup>47</sup> See Sizwe Lindelo Snail, *Electronic Contracts in South Africa: Comparative Analysis*, in Kierkegaard (ed), *Business and Law: Theory and Practice* (2008), 307-328.

<sup>48</sup> Ibid. 317-319.

<sup>49</sup> See section 22(b), ECTA..

<sup>50</sup> See section 23(b), ECTA.

<sup>51</sup> See RH Christie, *The Law of Contracts* (2001), 32.

<sup>52</sup> Ibid. 46.

<sup>53</sup> See Martien Schaub, *European Legal Aspects of E-commerce* (2004), 71-72.

Schaub further explains that under Dutch law, ordering a web advertised product can be qualified as an acceptance of an offer resulting in a legally binding contract, while English law quite controversially qualifies such customer's order as an "offer to buy".<sup>54</sup>

### 3.2 Jurisdictional aspects

The jurisdictional aspect covered by ECTA is also not that unproblematic. ECTA's Section 22(2) provides that the place of the contract is the place where the acceptance of the offer is received. Then section 23(c) states that a data message must be regarded as having been received at the addressee's usual place of business or residence. In an on-line contract then through a computer network it will mean that an acceptance by a customer where the data message is sent to the dealer (assuming that he is the offeror), the place of the contract will be where the dealer is deemed to have received the message which, in terms of ECTA is dealer's usual business address.<sup>55</sup> In e-commerce, e-mail use has become prevalent. ECTA now clarifies the position. The place of contract will be where the contract was concluded by means of email, which is, the dealer's (offeror's) usual place of business. Where an offer is in writing and the acceptance is by means of email one can also assume that the place of the contract will be the usual place of business or residence of the offeror. With mobile phones being web enabled, the World Wide Web can be reached by the users anywhere and at any time. Instead of the web page being viewed on the regular desktop, the WAP cell-phone can facilitate in one surfing the web in the palm of her or his hand with facilities of telephone conferences, e-mail messaging and the convenience of conducting business in any country. ECTA does not provide for this type of situation.

### 3.3 The role of electronic signatures

Provision in ECTA is made on how an online contract can be signed.<sup>56</sup> An "electronic signature" is defined as "data attached to, incorporated in, or logically associated with other data and which is intended by the user to serve as a signature." There exists a range of electronic authentication methods, of varying degrees of security and reliability, for a person to authenticate an electronic communication. ECTA states that where the signature of a person is required by law and such law does not specify the type of signature, that requirement in relation to a data message is met only if an advanced electronic signature is used.<sup>57</sup> The Act further states that an electronic signature is not without legal force and effect merely on the grounds that it is in electronic form.<sup>58</sup> Examples exist also in other jurisdiction of different versions of symbols and forms which are accepted as representing signatures. These include a typed name at the end of an email, a personal identification number and the swiping of a magnetic stripe card (EFTPOS), inserting a chip card in a reader, typing passwords, transmitting a digitised form of a manual signature, encryption of the message using a secret key, and biometric identifiers (fingerprint, face, voice recognition, retinal scan and signature dynamics such as the speed and pressure of the person's manual signature).<sup>59</sup>

According to McCullagh, digital signature technology is viewed by various industries, such as the financial industry, as the best authentication mechanism currently available.<sup>60</sup> A digital signature is not a computerised image of a hand written signature. If it was, it would be simple for a forger to copy the signature and paste it into other digital documents. Rather, it is the transformation of a record using an asymmetric cryptosystem and a hash function so that a person having the initial message and the signer's public key can accurately determine:

- whether the transformation was created using the private key that corresponds to the signer's public key; and
- whether the initial record has been altered since the transformation was made.

Digital signature technology can therefore be used to validate the identity of the signer of a message, the authenticity of a message and the integrity of a message. Most e-mail programmes today (e.g. Microsoft Outlook) allow the creation and addition of digital signatures to e-mails. The New York appellate court on 1 April 2008 ruled that e-mails were signed writings that modify contracts.<sup>61</sup> The case was filed in October 1999, and related to

<sup>54</sup> Ibid.

<sup>55</sup> See section 23(c), ECTA.

<sup>56</sup> See Snail, note 47 supra, 317-319; see section 13, ECTA.

<sup>57</sup> See section 13(1), ECTA.

<sup>58</sup> See section 13(2), ECTA.

<sup>59</sup> See generally M Sneddon, *Legislating to Facilitate Signatures and Records: Exception, Standards and the Impacts of the Statute Books*, 21(2) (1998) University of New South Wales Law Journal.

<sup>60</sup> See A McCullagh, *Legal Aspects of Electronic Contracts and Digital Signatures*, in A Fitzgerald, B Fitzgerald, P Cook & C Cifuentes (eds), *Going Digital: Legal Issues for E-commerce, Multimedia and the Internet*.

<sup>61</sup> See [http://www.ibls.com/internet\\_law\\_news\\_portal\\_view.aspx?s=latestnews&id=2032](http://www.ibls.com/internet_law_news_portal_view.aspx?s=latestnews&id=2032) last visited 6 August 2008.

the claim of breach-of-contract. The court wrote, "The e-mails from plaintiff constitute 'signed writings' within the meaning of the statute of frauds, since plaintiff's name at the end of his e-mail signified his intent to authenticate the contents."<sup>62</sup> The court further stated, "Bloom's name at the end of his e-mail constituted "'signed writing' and satisfied the requirement of § 13(d) of the employment agreement that any modification be signed by all parties."<sup>63</sup>

### 3.4 Protection of consumers

Entrepreneurs, foreign and local, as well as consumers need familiarise themselves with ECTA sections pertaining to consumer protection.<sup>64</sup> Providers of goods and services are obliged to make certain information available to consumers on Web sites where such goods or services are offered. The particular information required include: the merchant's full name and legal status; physical address and telephone number; security procedures, policies and any code of conduct that the merchant subscribes to; and the manner of payment and the full price of goods or services, including transport costs, taxes and any other fees or costs. There are certain transactions that are excluded from the ambit of the legislation. Included in the list of excluded electronic transactions are: financial services, insurance and reinsurance operations, banking services and operations relating to dealings in securities; auctions; the supply of foodstuffs, beverages or other goods intended for everyday consumption; and; transactions where the price for the supply of goods or services is dependant upon fluctuations in the financial markets and which cannot be controlled by the supplier.<sup>65</sup>

The commercial providers are also expected to provide consumers with an opportunity to review the entire electronic transaction, to correct any mistakes and to withdraw from the transaction, before finally placing any order. In cases where a merchant fails to comply with this obligation, the consumer can cancel the transaction within fourteen days of receiving the goods or services under the transaction.<sup>66</sup> In term of section 43, the consumer is also entitled to a "cooling-off period" and can cancel without reason any transaction within seven days from the date of receipt of the goods.<sup>67</sup> The protection given to consumers under Chapter VII applies irrespective of the legal system applicable to the agreement in question. Any provision in the agreement that excludes any rights guaranteed under the Chapter is null and void. There are also important provisions in ECTAA affecting merchants including foreign merchants offering goods or service online.<sup>68</sup>

Finally, there ought to be added to ECTA, a section which expressly deals with pre-contractual requirements governing B2B and B2C environments, respectively. In B2C environments there should always be a presumption in favour of a consumer, a consumer being a weaker party in the about to be contractual relationship. In such a situation, prior to the taking of an order, appropriate, effective and accessible technical means that allow the identification and correction of input errors should be made available.<sup>69</sup> The vendor must then acknowledge receipt of the recipient's order without undue delay and by electronic means.<sup>70</sup> Thereafter, the order and acknowledgement of receipt would be deemed to have been received when the parties to whom they have been addressed are able to access them.<sup>71</sup> These requirements might not be necessary in a B2B situation as it is taken that parties are contracting on equal terms. Under these circumstances there need be added to ECTA another section on "vendor pre-contractual information duties". Such an amendment will include a clarification on the legal consequences of electronic messages, specifying technical steps that have to be taken in order to conclude a contract. The information should be easy to understand and not be open to misinterpretations.

## 4. Challenges in developing a regulatory framework

The challenges facing Africa are multi-varied and common among countries in many respects. They are political and have also socio-economic ramifications. They are compounded by the fact that Africa is home to a population with high rates of illiteracy which implies extremely low levels o computer literacy skills. This observation also applies to South Africa despite her own comparatively sophisticated physical and telecommunications

<sup>62</sup> See *Rosenfeld v Zerneck*, 4 Misc 3d 193 [2004]; [http://www.ibls.com/internet\\_law\\_news\\_portal\\_view.aspx?s=latestnews&id=2032](http://www.ibls.com/internet_law_news_portal_view.aspx?s=latestnews&id=2032) last visited 6 August 2008.

<sup>63</sup> See [http://www.ibls.com/internet\\_law\\_news\\_portal\\_view.aspx?s=latestnews&id=2032](http://www.ibls.com/internet_law_news_portal_view.aspx?s=latestnews&id=2032) last visited 6 August 2008.

<sup>64</sup> See Chapter VII, ECTA.

<sup>65</sup> See section 42, ECTA.

<sup>66</sup> See section 43, ECTA.

<sup>67</sup> *Ibid.*

<sup>68</sup> See sections 45-47, ECTA.

<sup>69</sup> A similar provision is contained in the EU's Directive 2000//31/EC on e-commerce, article 11(2); See Paul Przemyslaw Polalanski, *Information Society Services and the Convergence Media*, in Kierkegaard (ed), *Business and Law: Theory and Practice* (2008), 255-256.

<sup>70</sup> See Schaub, note 63 supra, 71.

<sup>71</sup> *Ibid.*



infrastructure and highly developed financial sector. Civil wars, internecine strife, acts of terrorism and political instabilities inevitably disturb smooth operations of business and free flow of goods and services.<sup>72</sup> Wars have always been costly and divert much needed resources from economic development to supporting the war. Added to that are costs from rebuilding infrastructure. The other challenges discussed below, though not exhaustive, need be addressed.

First, is the issue of language and cultural barriers? The continent consists of 54 nations each with its own official language and culture. In terms of the colonial legacies, Africa can be divided into distinct zones based on languages and received legal systems. There are Anglophone, Francophone Arabic and Portuguese language zones and related received legal systems. Language is a vehicle for communication. For inter-country trade to flourish a common means of communication should be developed and adopted. Computer networks and programs, and e-business in particular, are based on internet technology which uses “universally acceptable languages.”<sup>73</sup> These technologies offer none of their services in African indigenous languages.

Second, are problems associated with different national currencies? In general, inter-African business is affected by each country adopting its own national currency and in many cases these currencies are not directly exchangeable. Shemi and Magembe observe that “the tendency is for invoicing to be done in the hard currencies subjecting the buyer and the seller to foreign currency exchange risk.”<sup>74</sup> Moreover, most countries in Africa have a system of foreign exchange controls that further complicate cross border trade.

Third, are recorded low information technology skills, security issues and ICT phobia?<sup>75</sup> The shortage of qualified Information technology personnel necessary to support e-commerce and m-commerce across the continent is wide spread in Africa. This matter is now being addressed through relevant NEPAD structures. The problem of lack of human capital is compounded by the high incidence of HIV/AIDS pandemic, TB, malaria and other rampant prevalent preventable diseases which have reduced the human resource level in the business sector. Regarding security Issues and ICT phobia, research studies have shown that perceived lack of security of e-commerce transactions and ICT phobia, are a major hindrance to the diffusion of e-commerce amongst businesses and consumers.<sup>76</sup>

Fourth, is the Africa context which must inform the further development of e-commerce and m-commerce? Alternative e-commerce and m-commerce models that are appropriate to the African business environment must be found. In this regard, Shemi and Magembe state that most business in Africa is micro-business, smaller than the small business of USA.<sup>77</sup> Therefore, e-commerce as currently construed favours large businesses that have the necessary resources. These authors further argue that e-commerce in Africa needs to rely on business associations and cooperative models of business, and that there should also be new ways of evaluating e-commerce/m-commerce risks in Africa.<sup>78</sup>

Fifth, there are general concerns about the affordability of mobile telecommunications for large parts of the population.<sup>79</sup> ICASA, in 2005, published a mobile pricing comparison document, in which it alleged that South African mobile prices were substantially higher than in a set of other countries.<sup>80</sup> However, the mobile operators were highly critical of the document, arguing that the data used was substantively flawed and that comparison against other countries was spurious because of the different operating conditions in South Africa.<sup>81</sup> Shemi and Magembe argue on the other hand, that it is unlikely that GSM technology could be made affordable for everyone, while remaining viable for operators.<sup>82</sup> They further argue that since long-term subsidies will not be affordable, alternative solutions will have to be sought.<sup>83</sup> From their side, mobile network operators have criticized regulation as restricting investment and for failing to reflect local circumstances.<sup>84</sup> They also criticise regulators for uncritically copying from developed countries, without consideration of local circumstances.<sup>85</sup>

At a continental NEPAD has taken some initiative to address these problems, more especially with regard to the physical and telecommunication infrastructure. The NEPAD e-Africa Commission and 5-P Holdings, LLC signed on the 24th October 2007, a Memorandum of Understanding (MOU) in Pretoria, South Africa, to construct

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<sup>72</sup> See generally Alice P Shemi & Beatrice A S Magembe, *Challenges and Prospects of E-commerce in Africa, : The Need for Strategic Alliances and Collaboration*, Vol 1 Issue 3 (2003) USA-Africa Institute. There have been wars and civil unrest in many African countries - Liberia, Ivory Coast, DRC, Angola, Rwanda and Burundi.

<sup>73</sup> Ibid. 28.

<sup>74</sup> Ibid.

<sup>75</sup> Ibid. See also UNCTAD, *E-commerce and LDCs Challenges for Enterprises and Governments*, (2000), 17-18.

<sup>76</sup> See Shemi & Magembe, note 72 supra, 29.

<sup>77</sup> Ibid.

<sup>78</sup> Ibid.

<sup>79</sup> Steve Esselaar, Allison Gillwad & Christoph Stock, *South African Telecommunications Review* (2007), 49

<sup>80</sup> Ibid.

<sup>81</sup> Ibid.

<sup>82</sup> See Shemi & Magembe, note 72 supra, 29

<sup>83</sup> Ibid.

<sup>84</sup> See Esselaar et al, note 79 supra, 49-53.

<sup>85</sup> See Shemi & Magembe, note 72 supra, 29.

the submarine segment of the NEPAD ICT Broadband Infrastructure Network, UHURUNET. The submarine fibre optic network will encircle the entire continent of Africa, with connections to Europe, Brazil, India and the Middle East.<sup>86</sup> The International Finance Corporation (IFC), a member of the World Bank Group, the African Development Bank (AfDB), the European Investment Bank (EIB), Germany's development bank (KfW), and the development bank of France (AFD) have signed agreements to invest in the East African Submarine Cable System, a landmark fibre-optic cable project that will connect 21 African countries to each other and the rest of the world with high-quality internet and international communications services.<sup>87</sup> The cable will transform the telecommunications landscape in the region as it improves access for 250 million Africans and substantially reduces costs for consumers and businesses. Construction was supposed to have begun in mid-December 2007. The cable, known as EASSy, is expected to be fully operational in time for the 2010 Soccer World Cup in South Africa. It will run 10,000 kilometres from the continent's southern tip to the African horn, connecting South Africa, Mozambique, Madagascar, Tanzania, Kenya, Somalia, Djibouti, and Sudan. Another 13 adjoining countries will also be linked to the system as terrestrial backbone networks are completed through a broader World Bank Group initiative. These countries include Botswana, Burundi, the Central African Republic, the Democratic Republic of Congo, Chad, Ethiopia, Lesotho, Malawi, Rwanda, Swaziland, Uganda, Zambia, and Zimbabwe.

## **5. Recommendations**

A number of studies have produced Reports on the state of the overall telecommunications infrastructure and the regulatory framework that have been put in place in Africa.<sup>88</sup> Some of the recommendations herein made are based on observations made in these Reports.

### **Establishing financial services for e-commerce/m-commerce**

The banking and financial sectors should be encouraged and assisted in the implementation of changes to their policies, practices and services to accommodate the growth of e-commerce and m-commerce in the national economy. The regional initiatives, such as those just announced by the COMESA Bankers Association<sup>89</sup>, or the creation of an IT Forum by central bank governors of the SADC region should be pursued in other regions.<sup>90</sup>

### **Involving Central Banks in e-commerce/m-commerce policy development.**

The Central Banks of African States must take initiatives, nationally, regionally and across the continent to address issues relating to fiscal and monetary policies which will be affected by the emergence of e-commerce.<sup>91</sup> On-line payments and foreign exchange controls should be developed in the most reliable effective manner. The governments and Central Banks should take steps necessary to provide for legally acceptable means of on-line payments and financial transfers. Governments should be willing to conduct a review of foreign exchange control rules and procedures in the light of the introduction of e-commerce/m-commerce practices.

### **Security and trustworthiness.**

To increase the security and trustworthiness of on-line business transactions, the governments should put in place systems to accredit agencies which will in turn have a reliable capacity to certify the validity of electronic signatures and electronic contracts.<sup>92</sup>

### **Reforming relevant ICT related laws.**

The laws include: copyright laws (laws on intellectual property which should be brought into line with the WIPO Copyright Treaties); laws regarding protection of databases, privacy protection, trademarks and domain names; laws on competition; laws regarding the use of cryptography; laws relating to new forms of 'cyber-crime'.<sup>93</sup>

<sup>86</sup> See <http://www.itu.int/ituweblogs/treg/CategoryView.category.Africa.aspx> last visited 14 July 2008.

<sup>87</sup> See <http://www.itu.int/ituweblogs/treg/CategoryView.category.Africa.aspx> last visited 14 July 2008.

<sup>88</sup> The Reports include: The ECA/IDRC Pan-African Initiative on e-Commerce (2002); ITU's Telecommunication/ICT Markets and Trends in Africa (2007), UNCTAD's E-Commerce and Development Report (2002), ITU's World Telecommunication/ICT Development Report (2006) (Measuring ICT for Social and Economic Development); UNCTAD'S Information Economy Report (2007-2008), Panos Report on Completing the Revolution: The Challenge of Rural Telephony in Africa (2004), and Commission for Africa Report on the Impact of Mobile Phones in Africa (2004).

<sup>89</sup> See <http://www.comesabankers.org/IT.htm> last visited 12 July 2008.

<sup>90</sup> See <http://www2.sadcbankers.org/SADC/SADC+Bankers.nsf/AnnualReport?OpenView> last visited 12 July 2008.

<sup>91</sup> The mission identified only three Central Banks which were active in this area – those in Tunisia, South Africa and Mozambique.

<sup>92</sup> See for example, Chapter IV of ECTA, on the appointment of Accreditation Authority and other officers.

### **Creating a positive investment climate**

Government policy makers should be ready to create an investment climate in which investors have confidence and in which the risks and benefits of e-commerce/m-commerce are known and understood.

### **Encouraging business start-ups**

It is important that governments should create an environment in which establishing new business start-ups is encouraged, possibly through the establishment of incubators, and in which venture capital firms are enabled to operate.

### **Making e-commerce be seen as nationally and continentally vibrant.**

The role that governments play in partnership with the private business sector to boost African goods and services on the Internet as alternatives to the products and services of other parts of the world is critical. It should be the duty of governments in collaboration with business associations, investors associations and international agencies, to provide affordable access to ICT through technology access community centers (TACCs). Governments have the capacity to deliver IT support to small and medium scale enterprises (SMEs) as the first step on the route to enabling them to participate in e-commerce/m-commerce; failing which this undertaking can be done by mobilizing international development aid.

### **Capacity building**

- Assistance to women entrepreneurs. It is imperative that governments put in place the special assistance needed for women entrepreneurs who often face added difficulties in obtaining information and credit. This can be boosted by the creation of national portals for women entrepreneurs in the internet.
- Assistance to youth. The youth is the future of any nation. Therefore governments should appreciate that the early introduction of young people to IT skills will be of fundamental importance to the economy of tomorrow.
- Filling the gaps in the education and training systems. The arrival of e-commerce/m-commerce and the new knowledge based economy in Africa confronts the economies of the continent with the need to both improve the teaching of IT related matters throughout the existing formal education system and to put in place new learning opportunities for people already in the work-force. In such a context governments must address a series of important skills gaps which include:
  - inadequate IT knowledge among many public servants, including many of those at senior level. Governments cannot play a leading role in enabling e-commerce/m-commerce if public servants have inadequate levels of understanding of IT;
  - inadequate entrepreneurial skills among the technically trained, which inhibits the emergence of new start-ups in the new economy;
  - inadequate numbers of adequately skilled trainers in IT fields;
  - Inadequate numbers of certified training programs in areas relevant to e-Commerce;
  - inadequate knowledge of the changes being brought about by e-commerce/m-commerce in the legal profession and among judges who will be called on to participate in the new economy.

### **Organising synergies and collaborative efforts**

The public and private sectors of African countries, acting jointly, should formulate national skills strategies in order to face the growing challenges of the new knowledge-intensive economy. Since there are few researchers in the region working on issues of e-commerce/m-commerce, in part due to the lack of funding available to support their activities, governments should be prepared to work with donor agencies to address this gap in skills. Policy-related research on issues of e-commerce/m-commerce can only flourish in areas where there are adequate numbers of trained researchers, adequate flows of information, and openness among decision-makers in both the

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<sup>93</sup> See for example, Chapter IX of ECTA on the appointment of cyber inspectors.

public and private sectors to integrating the results of policy-research into their decision-making processes. African governments should work with their private sectors and the international donor community to address these weaknesses in policy-making.

## **6. Conclusion**

It has been argued that e-commerce is useful to both producers and consumers in Africa as it helps countries overcome the traditional barriers of distance from markets and lack of information about market opportunities. Producers and traders no longer need to maintain physical establishments requiring large capital outlays. Virtual shops and contact points on the internet may enable storage close to the production site and distribution can be made directly to the consumer. Increased advertising possibilities world wide may help small and medium industries and businesses in Africa that traditionally find it difficult to reach customers abroad. Ecommerce may also enable such firms to eliminate middlemen while trying to sell their products abroad.

M-commerce is now punted as a business practice that will surpass e-commerce in Africa as a method of choice for digital commerce transactions. It is the buying and selling of goods and services through wireless handheld devices such as cell phones and personal digital assistants (PDAs). Known as next-generation e-commerce, m-commerce enables users to access the internet without needing a place to plug in. It is said to be everything that e-commerce is or even more. Both e-commerce and m-commerce can only operate effectively if the physical telecommunication infrastructure in Africa is improved and the regulatory framework standardized and developed so as to attract foreign direct investment. A well functioning and modern telecom infrastructure, satisfactory supply of electricity and access to hardware, software and servers are basic requirements for e-commerce. Widespread access to telecommunications at low prices and availability of telecom equipment at international prices can enhance the capacity of countries to participate in e-commerce.

Numerous factors account for the ICT underdevelopment in Africa, prominent among the reasons are: the lack of basic economic infrastructure, such as reliable power supplies and national electrification; inadequate transport and basic telecommunication infrastructure, absence of skilled ICT personnel, lack of political will or initiative on the part of government, political instability, economic mismanagement, and poverty generally. Notable also is that the primary cause of the technological divide is lack of funds in Africa, coupled with mismanagement of the little resources available. Most African countries are heavily indebted, and are burdened with interest and loan repayments. They are unable to raise the capital needed to finance the development of their fundamental infrastructure, and train personnel for ICT development. The economic circumstances precipitate government inertia in the development of the necessary infrastructures, and there are no research and development projects in ICT or other sectors. Serious steps have to be taken to develop the ICT infrastructure in the continent.

Another problem in Africa is the lack of reliable well-developed regulatory framework for ICT, which is essential for wide acceptance and efficient operation of electronic systems. Although ICT presents legal problems in developed countries too, most countries in Africa are gradually enacting laws to facilitate paperless transacting. It is regrettable that developed countries are not doing much to assist developing countries develop their ICT infrastructure. Bodies such as NEPAD and other relevant structures of the African Union supported by several United Nations agencies are seized with some of these problems and are lending a helping hand.

Trade and business communications through electronic means give rise to a number of legal issues. For instance if goods or service were sold over the internet across countries, in which geographical location can the transaction be deemed to have occurred? Some of these questions may be important from the point of view of consumer protection and establishing the jurisdiction. Furthermore electronic transactions require electronic contracts and electronic signatures which have not been provided for in the contract laws of many countries in Africa. All these legal requirements can be facilitated through making use of the United Nations Model Laws which are being developed with regard to e-commerce/m-commerce and other ICT related law.