

**MAXIMIZING THE POTENTIALS OF INFORMATION  
TECHNOLOGY IN THE LEGAL PROFESSION**

**A PAPER PRESENTED BY**

**HON. JUSTICE P. A. AKHIHIERO**

**LL.B (Hons) Ife; LL.M Lagos; B.L**

**(JUDGE, EDO STATE HIGH COURT)**

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# MAXIMIZING THE POTENTIALS OF INFORMATION TECHNOLOGY IN THE LEGAL PROFESSION

## 1.0. INTRODUCTION:

In his erudite Foreword to the 2<sup>nd</sup> Edition of *Stephen Mason's* classical work on *Electronic Evidence*, Hon. Justice Chan Sek Keong, the former Chief Justice of Singapore observed that:

*"We live in an electronic age in which every institution of government, business and industry, big and small, and even the family interact and communicate with one another electronically. Electronic devices which process data are no longer confined to what we traditionally consider as computers, but are pervasive in everyday life. They range from digital cameras and video recorders to set-top boxes, from mobile smart phones to global positioning by satellite devices, and from health-monitoring devices to defibrillators.*

*In the commercial world, communication is now carried on through electronic mail and business deals concluded in reliance on this form of electronic communication. The level of technological maturity today is such that we instinctively rely on such devices in our daily lives without question of accuracy or reliability. The result is that a preponderance of data and information concerning what goes on in the world on government, commerce and social life which were once stored on paper are now stored electronically. What was previously filed in physical form is now filed in digital form accessible only electronically, unless they are printed out and filed in the traditional way."*<sup>1</sup>

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<sup>1</sup> Mason: *Electronic Evidence* (2010) 2<sup>nd</sup> Edition, p.v.

The foregoing observation by His Lordship aptly captures our present dispensation and underlines the importance of the subject matter of this presentation. The Legal profession must take advantage of the benefits of these modern developments.

In a paper which I presented at a Seminar, sometime in June, 2008 on the topic: *THE FACE OF LEGAL RESEARCH IN THE 21<sup>ST</sup> CENTURY*, I observed that: *“Society is dynamic; the wind of change is blowing all over the world. The Greek philosopher Heraclitus (circa 540 – 480 B.C.), postulated that “everything flows and nothing stays”. He maintained that everything in nature is in a state of constant change. The Latin maxim captures it thus: tempora mutantur, nos et mutamur in illis (the times change; we also must change with the times).<sup>2</sup>*

The legal profession has no immunity against the wind of change. Like every aspect of modern life, Information Technology has introduced some radical changes in the legal profession. I will try to highlight some of these salient developments as they affect us.

## **2.0 INFORMATION TECHNOLOGY**

According to *Wikipedia* the multilingual, web-based, free-content encyclopaedia, *Information Technology (IT)* is:

*“the application of computers and internet to store, retrieve, transmit, and manipulate data, or information, often in the context of a business or other enterprise. IT is considered a subset of information and communications technology (ICT).....The term is commonly used as a synonym for computers and computer networks, but it also encompasses other information distribution technologies such as television and telephones. Several industries are associated with information technology, including computer*

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<sup>2</sup> The Face of Legal Research In The 21<sup>st</sup> century  
<http://www.nigerianlawguru.com/articles/general>

*hardware, software, electronics, semiconductors, internet, telecom equipment, engineering, healthcare, e-commerce, and computer services”.*<sup>3</sup>

Basically, Information Technology covers a broad spectrum of hardware and software solutions that enable organizations to gather, organize, and analyze data that helps them achieve their goals.

Information Technology includes several layers of physical equipment (hardware), virtualization and management or automation tools, operating systems and applications (software) used to perform essential functions. User devices, peripherals and software, such as laptops, smart phones or even recording equipment, can be included in the IT domain. IT can also refer to the architectures, methodologies and regulations governing the use and storage of data.

Computer servers run business applications. Servers interact with client users and other servers across one or more business networks. *Storage* is any kind of technology that holds information as data. *Information* can take any form including file data, multimedia, telephony data and Web data, data from sensors or future formats. Storage includes volatile random access memory (RAM) as well as non-volatile tape, hard disk and solid-state flash drives.<sup>4</sup>

This paper will focus on an appraisal of the role of Information Technology in the legal profession. For the purpose of the paper, I will use the term *legal profession* in the generic sense, to embrace all legal scholars, lawyers, jurists and all those engaged in the practice of law.

## **2.0 LEGAL RESEARCH:**

Legal research has been defined as “*the process of identifying and retrieving information necessary to support legal decision making. In its broadest sense, legal research includes each step of a course of action that begins with an*

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<sup>3</sup> [https://en.wikipedia.org/wiki/Information\\_technology](https://en.wikipedia.org/wiki/Information_technology)

<sup>4</sup> Information Technology: Margaret Rouse: <http://searchdatacenter.techtarget.com/definition/IT>.

*analysis of the facts of a problem and concludes with the application and communication of the results of the investigation.”*<sup>5</sup>

Legal research generally involves the tasks of:

- I. Finding primary sources of law in a given jurisdiction, such as statutes, rules, regulations and other subordinate legislations;
- II. Searching through secondary authorities like decided cases, practice books, legal journals, dictionaries, encyclopedias and articles; and
- III. Searching non-legal sources for investigative or supporting information.

The traditional method of legal research is by conducting a manual search of law books, publications, periodicals, journals, reports and other sundry materials. This traditional approach of wading through a host of books and physical documents is fraught with several disadvantages:

- I. The process of searching is often laborious and time consuming;
- II. Sometimes the materials are not arranged in a systematic form to guarantee easy access to the required information;
- III. By virtue of the natural process of wear and tear, the books have limited lives span;
- IV. The process of retrieval of information from books is quite tasking; and
- V. Even economically, books are becoming more expensive.

Suffice to round up this segment by emphasizing that the orthodox mode of legal research through the manual search of documents is fast becoming obsolete and is not in tandem with the modern trend of research.

## **2.1 AUTOMATED LEGAL RESEARCH**

We have identified the shortcomings of the orthodox mode of legal research. In contemporary times, law libraries maintain not just a collection of books, but *films, audio and video recordings, maps, photographs, microfiches, CD-ROMS, computer software, online database and other multi-media materials.*

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<sup>5</sup> J. Myron Jacobstein and Roy M. Mersky: Fundamentals of Legal Research, 8thEd. (Foundation Press,2002) p.1.

Modern law libraries often feature telecommunications links that provide users with access to information at sites far away. We are now in the digital age, the age of automation, and the age of information technology (IT).

The low cost of microcomputers and the development of electronic sources of information have introduced a revolution in the field of legal research. The modern trend has enabled low cost digital storage of information, rapid transmission of data across computer networks and sophisticated retrieval and processing of electronic documents and information. The digital age is: *“not an age of smart machines but of humans, who through networks can combine their intelligence, knowledge and creativity in the creation of wealth and social development. It is an age of vast new promise and unimaginable opportunity.”*<sup>6</sup>

The only worrisome aspect is that in the midst of these pragmatic and progressive trends, we have observed that in Nigeria, many members of the legal profession are yet to catch the vision of information technology.

An erudite legal luminary and a leading exponent of information technology in legal research in Nigeria, *Oladipo Bali Esq.*, lamented the current mood as follows:

*“the internet represents both a threat and an opportunity to members of the legal profession. As expected, most lawyers have simply refused to wake up to the challenges thrown up by information technology as a whole. How else can one explain the fact that most lawyers (and even judges) are not computer literate not to talk of internet literacy. This approach would be fundamentally wrong. Moreover, every country (Nigeria inclusive) is producing a generation of children for whom information technology holds no fear. They are the Nintendo Generation. Those born in the 50’s and 60’s have no perception of the television as ‘technology. ‘Within three years, we will see a generation of young people in law firms for which the use of computers, software, and the internet is no different from using the telephone or television. For them it will just be another set of appliances. The way in which it works will be irrelevant. They will simply take it for granted. Time is not on the side of the ‘techno phobic ‘lawyer or judge”*<sup>7</sup>

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<sup>6</sup> Tapscott, 1995

<sup>7</sup> Bali: INFORMATION TECHNOLOGY AND THE LAW

## 2.3 LEGAL SOFTWARE

The legal profession worldwide has fully embraced the use of legal software in the area of research. There are a host of legal materials which are recorded in software form. The software are normally sold in compact discs CDs or in Flash Drives. Sometimes, they are simply installed in the Hard Disc drive of the Computer. The problem with this last approach is that in the event of a crash in your operating system, you are likely to lose all your data in the system including the installed software. Hence it is advisable to purchase your software installed in an external storage device (like CD or Flash Drive) than to have it installed directly in your computer.

The production of legal materials in software format has captured the interest of legal researchers. It offers the opportunity of delivering huge amounts of legal materials in a highly compact form. Electronic legal research has become more convenient and expeditious. The beauty of this technology is that several shelves filled with law books can be packaged into a single compact disc or flash drive.

There are some indigenous firms who have gone into the production of legal software in Nigeria. Among the early entrants, is the publishing outfit of

*Oladipo Bali Esq., Legal Digest Publishing Co.*, based in Lagos. They first came out with the *Digest Law Reports* which covered Nigerian case law on CDROM spanning a period of ten years. Next, they introduced *Compulaw*, the first wholly indigenous law library on CD-ROM with an amazing database covering 25 years of Nigerian case law, Laws of the Federation of Nigeria, Forms and Precedents, Practice and Procedure and lots more. We also have the *Easy Law* package, which contains the Laws of the Federation of Nigeria and some legal articles.

There is also the firm of *Toma and Butterworths (South Africa)*, who in conjunction with their Nigerian partners, have produced legal software of the Laws of the Federation of Nigeria and specimen Forms and Precedents.

We have *Electronic Law Companion*, produced and published by a very senior lawyer *Funmi Quadri*.

Sometime in September, 2005, a prominent Nigerian legal luminary *Deji Sasegbon, Esq., S.A.N* published a 30 volume encyclopedia of Nigerian Law and Practice: *SASEGBON'S LAWS OF NIGERIA*. The publication is unique amongst legal publications in Nigeria. It is a monumental work that covers virtually every aspect of Nigerian substantive law and procedure. The beauty of the package is that the

softcopy of the entire work is also available in CD-ROM format and in a Flash drive depending on your choice. This is a major breakthrough in the development and deployment of legal software to facilitate legal research in Nigeria.

As we have observed, the major benefit of these electronic products is that within a small space, the contents of vast libraries comprising of a host of statutes, decided cases, articles and precedents are stored in compact form. These no doubt are invaluable research tools for law scholars and practitioners.

## 2.4 THE INTERNET

The internet is a worldwide computer network which enables people from all over the world to communicate with one another in a matter of moments. Researchers use the internet and its multimedia component, the *World Wide Web* to access materials from sites all over the world. A *website* is basically an *electronic book* (e-book) with several web pages. The book is hosted on the internet at a particular website address, prefaced with the letters: “www”.

Every Web page has its own address called a *Uniform Resource Locator (URL)*. E.G-(<http://www.nigerianlawguru.com/articles/constitutionallaw.pdf>). Much like the address on an envelope with a name, street address, city, state, and country. Each part of the URL provides information about the Web page.

The web pages contain information which the website seeks to disseminate to the public. Web pages can have one of two characteristics. They can be *restrictive*, in the sense that users are only allowed to view the page or they can be *interactive* in the sense that users can read and/or update the contents of the webpage. In this age of information technology, the internet has opened up a breathtaking in-road into the field of automated legal research. There are several legal websites with huge data bases of legal materials. Some of them are *free sites* which you can access without subscription, while some others are *fee paying sites*. The latter are *Password Protected*, so that you cannot access materials without a password. Most often, you can only have a password if you are a fee-paying subscriber. Some of such password protected sites include the website of most legal journals such as:

- (i) *African Journal of Legal Studies*<sup>8</sup>
- (ii) *African Human Rights Laws Journal*<sup>9</sup>

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<sup>8</sup> [www.africalawinstitute.org](http://www.africalawinstitute.org)



(iii) *South African Law Journal*<sup>10</sup>

Other such pass worded sites include the *Law Pavilion*<sup>11</sup> ; the *Legalpedia* site<sup>12</sup> and even some parts of the *Nigerian Bar Association* website.<sup>13</sup>

Among the free legal websites we have the popular American law site, *Find law*<sup>14</sup> which offers access to a host of materials on both substantive and procedural aspects of American Law. There are also some other foreign sites that offer free access to legal forms and precedents of solicitor's letters, contracts, testamentary instruments, power of attorney, court forms and other legal documents<sup>15</sup>

Coming to Nigeria, we have some very useful free sites to access legal materials, such as the website of the *International Centre for Nigerian Law*<sup>16</sup> Here; you will find a large database containing several relevant statutes of the Laws of the Federation of Nigeria. We have the *Nigeria Law Reports site*<sup>17</sup> containing the official law reports of the judgments of the Supreme Court of Nigeria. We also have *Nigerian Law Guru Website*<sup>18</sup>, of which the presenter is the Editor and the Founder. The site was designed to facilitate research on all aspects of Nigerian law. It contains relevant resource items such as salient statutes and Rules, Legal Articles, Legal Information, Digest of cases etc., etc. Next is the *Nigerian Legal Information Institute*<sup>19</sup>. This is another free site hosting Journals and Articles on *Nigerian Law*, Legal Education, Legal practice and Law Firms. ... The NLI provides free *Internet* access to *Nigerian legal* materials.

## 2.5 INTERNET SEARCH:

The very first step to take before you can access the internet with your computer is to get connected to the internet. Internet connectivity can be done through an *Internet Service Provider (ISP)*. An ISP is the middleman connecting

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<sup>9</sup> [www.chr.up.ac.za/centre](http://www.chr.up.ac.za/centre)

<sup>10</sup> [www.journals.co](http://www.journals.co)

<sup>11</sup> [www.Lawpavillion.com](http://www.Lawpavillion.com)

<sup>12</sup> [www.legalpediaonline.com](http://www.legalpediaonline.com)

<sup>13</sup> [www.nigerianbar.org](http://www.nigerianbar.org)

<sup>14</sup> [www.findlaw.com](http://www.findlaw.com)

<sup>15</sup> [www.freelegalforms.net](http://www.freelegalforms.net); [www.uslegalforms.com](http://www.uslegalforms.com); [www.lectlaw.com](http://www.lectlaw.com)

<sup>16</sup> [www.nigerialaw.org](http://www.nigerialaw.org).

<sup>17</sup> [www.nigrialawreports.com](http://www.nigrialawreports.com)

<sup>18</sup> [www.nigerianlawguru.com](http://www.nigerianlawguru.com)

<sup>19</sup> [www.nlii.org](http://www.nlii.org)

users' to the internet for a fee. Another option is to get a direct connection to the internet through a *satellite VSAT*. This is a more expensive approach. It is not recommended for private individuals but for big organizations with commercial objectives. Fortunately, for us in Nigeria, most of the Global System for Mobile Communications (GSM) operators (like MTN, Airtel, GLO, Etisalat etc.), also provide internet services.

Connection to the ISP for further connection to the internet can be through *dialup access* or *wireless access*. Dial up access is through a telephone to the ISP, while wireless is *via* satellite. Once internet connectivity is established, you can browse the internet to search for information. For a beginner, conducting a search on the internet can be time consuming and frustrating. This is not surprising, given the enormous amount of information on the web. Since the Web is not arranged in any standard form, finding information can be quite challenging. To obviate these difficulties, *search engines* have been developed to facilitate searches on the internet.

## **2.6 SEARCH ENGINES:**

*Search engines* are software programs that help users find information stored on the internet. They are remotely accessible programs that let you do keyword searches for information on the Internet. There are several types of search engines and searches may cover titles of documents, URL's, headers, or full text. Keep in mind that the results you get from one search engine may not match the results you get from another search engine. In fact, they are often different due to the way each search engine operates. Therefore, it may actually be beneficial to use more than one search engine on a regular basis.

Many of these search engines run regular programs such as *web crawlers* or *spiders*. These are automated browsers that perpetually trawl the net in search of particular data which they capture and send back to their site of origin to be indexed therein. The ways sites get listed on these search engines vary, with the most obvious being the site's author registering his site with a particular search engine. Here is a list of some search engines that might give you good results:

1. *Bing*<sup>20</sup> – This is Microsoft's new search engine;

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<sup>20</sup> [www.bing.com](http://www.bing.com)

- ii. *Yahoo!*<sup>21</sup> – This is Yahoo’s search engine which not only searches the web but also all the Yahoo! Pages;
- iii. *Lycos*<sup>22</sup> – This is one of the older and less popular Internet search engines that allows you to search a variety of categories (web, image, video, people, shopping, etc);
- iv. *Ask.com*<sup>23</sup> Allows you to use a more intuitive way to search by simply typing in a complete question instead of a list of keywords; and
- v. *Google*<sup>24</sup> – The most popular of all the search engines. It has become so popular that *Google* has even become a verb and now people around the world talk about *Googling* for information on the Internet.

A fairly lengthy and complete list of search engines and more can be found at Wikipedia's List of Search Engine<sup>25</sup> page.

The most popular search engines are, *Yahoo! Inc. and Google Inc.* In this section, we will briefly look at Google and Yahoo! Search engines.

## **2.7 GOOGLE SEARCH ENGINE:**

First you must navigate your way to the Google Website, by entering the website address ([www.google.com](http://www.google.com)) in the URL (uniform resource locator) box. When you get to the Google site, you will find a blinking cursor in a search box where you can type the word or phrase that you are interested in.

*Google Instant* is a search enhancement feature that shows results as you type. It is even designed to predict a person's search by updating the page and showing results while you type. It is a time-saving feature. You can narrow your search and use better keywords in order to get more relevant results. Putting a phrase into quotes tells Google to look for the exact words in that exact order.

## **2.8 YAHOO SEARCH ENGINE:**

Yahoo! is another search engine that many people use. The main Yahoo! page also has more information on it, such as sports and news headlines,

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<sup>21</sup> [www.yahoo.com](http://www.yahoo.com)

<sup>22</sup> [www.lycos.com](http://www.lycos.com)

<sup>23</sup> [www.ask.com](http://www.ask.com)

<sup>24</sup> [www.google.com](http://www.google.com)

<sup>25</sup> [http://en.wikipedia.org/wiki/List\\_of\\_search\\_engines](http://en.wikipedia.org/wiki/List_of_search_engines)

entertainment links, and links to many other items. This tends to cause the page to appear more cluttered than the Google site, but may prove itself useful to you as well. As with Google, when you first go to the Yahoo! Website<sup>26</sup>, there is a blinking cursor in the search box. The Yahoo Search engine operates very much like the Google search engine as it displays a list of hits of matching items. These are links to further resources, and each link here also has a text description taken from that source that matches your query.

## 2.9 SEARCH METHODOLOGY:

In order to embark on an effective internet search, you must have a clear understanding of how to prepare your search. You must identify the subject matter of the search, distill the main concepts in your topic and determine any synonyms, alternate spellings, or variant word forms for the concept. If you are to search for materials in a particular website, you must enter the correct address of the website in the search box. When you arrive at the particular site, you must study the arrangement of materials in the site in order to determine the web pages you need to open. Most times, the particular website will have a search engine on the site to facilitate your search for materials within the site.

Due to the large number of search engines in the internet it is advisable that internet users should pick one or two effective and efficient search engines and develop expertise by using those search engines consistently.

From personal experience, *Google* and *Yahoo* search engines are quite efficient

Most search engines have a *Help* feature that can assist users when they are in difficulties. Furthermore, there is a particular website called *Search Engine Watch*<sup>27</sup> that can teach you everything you need to know about the use of search engines, as well as providing valuable links to relevant and useful search engines.

Another important facility for effective internet search is the *web browser*. In computer science, a web browser is a software program that enables a computer to locate, download, and display documents containing text, sound, video, graphics, animation and photographs located on computer networks. The act of viewing and moving between documents in the internet is called *web browsing* or *web surfing*. It involves connecting one web page to another by using *hyperlinks* (automatic connections).

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<sup>26</sup> [www.yahoo.com](http://www.yahoo.com)

<sup>27</sup> [www.searchenginewatch.com](http://www.searchenginewatch.com)

Examples of web browsers are the popular *Internet Explorer*, *Mozilla Firefox*, *Netscape*, *Crazy Browser* and the recently introduced *Google Chrome* browser. A browser's performance however depends on a host of factors including

the speed and efficiency of the user's computer, the type of modem being used for the internet connection and the bandwidth of the data-transmission medium. Browsers may also have difficulty reaching a site during times of heavy traffic on the network because of high use of the site. The period of heavy traffic is usually between 12.00 noon to about 5.00 p.m. on working days. There is usually less traffic early in the morning and late at night. These are the best periods to browse the internet.

Some software have been developed to facilitate quick download of materials from websites. Some of them are available free of charge on the internet. They include *Download Accelerator Plus (DAP)*<sup>28</sup>; *Speed-Downloading*<sup>29</sup>; *Onspeed*<sup>30</sup>; *1-Boost*<sup>31</sup> and several others.

Using any of these software will speed up your internet connection.

### **3.0 SOCIAL NETWORKING:**

Social Networking is the latest craze on the Internet and includes online communities of people who share certain interests, activities, etc. While many of them are just about connecting to other people for social interaction, some can be used to glean new information from the web. Social network sites include: *Face book*; *Twitter*; *Instagram* etc. Services such as *StumbleUpon*<sup>32</sup> will give you recommendations on websites that might be of interest to you based on a set of interests and keywords.

Other services like *LinkedIn*<sup>33</sup> focus on connecting people in like profession, business or calling. *LinkedIn* platform is essentially a professional one where members can solicit for the opinions of professional colleagues across the globe. For example, as a lawyer, you can connect to other lawyers and contribute to on-line discussions on salient aspects of the law. You can kick-start the discussions by

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<sup>28</sup> [www.speebit.com](http://www.speebit.com)

<sup>29</sup> [www.Speed-Dowloading.com](http://www.Speed-Dowloading.com)

<sup>30</sup> [www.onspeed.com](http://www.onspeed.com)

<sup>31</sup> [www.starcomms.com](http://www.starcomms.com)

<sup>32</sup> [www.stumbleUpon.com](http://www.stumbleUpon.com)

<sup>33</sup> [www.linkedin](http://www.linkedin)

yourself and watch the thread of discussion grow or you can join a current discussion thread by making your comments online. Under this platform you enjoy the benefit of updating yourself with current developments in various aspects of law across the globe. The platform is also a veritable source for job seekers. There are regular adverts on job openings in different professions from different organisations and institutions from all over the world. With your online Profile showcasing your professional qualifications and work experience it is quite easy for recruiting individuals and organisations to contact qualified applicants. Your online contributions to current legal discussions can also showcase your talent and give you an edge in such recruitment exercises.

#### **4.0 INTERNET SECURITY:**

The need for computer security existed long before the advent of the Internet. Shortly after the computer was developed, the need to protect the computer became apparent. Presently, the well established field devoted to securing computers and other data is known as *Information Security*. The subject of *Internet Security* is merely a specialized aspect of Information Security. Hence, many of the principles and techniques of Internet Security were actually adopted from the practice of Information Security.

The public nature of the Internet creates new challenges in the practice of Information Security. There are a number of risks associated with going online. These result from either visiting malicious websites or inadvertent disclosure of personal information.

Security as a concept can be quite nebulous. Security can encompass activities that protect your computer systems from viruses, restrict the use of hardware, software, or data, or prevent users from performing bad activities or

actions of malice. The basic goal is to allow only legitimate users to do only legitimate things.

However, there is nothing like full proof security. A 100% secure system does not exist. Like everything in life, there will always be some element of risk involved. All we can do is to reduce the risk to the barest minimum. The standing joke is that the only system that is completely secured is one that is unplugged, switched-off, locked away and buried. That is a pretty secured system, but of course, it is completely useless.

#### **4.1 INTERNET CONTROLS:**

In this age of hi-tech information technology, the Internet has provided the greatest access to freedom of information and communication. Like all kinds of freedom, the Internet has been exploited by many unscrupulous individuals to perpetrate their mischief.

These range from sending unwanted and sometimes *offensive e-mails (scam mails)*, to *credit card fraud, advanced fee fraud (a.k.a. 419)*, having other systems infected with *malicious viruses, invasion of private information or communication, etc.*

The emergence of these unwholesome practices has necessitated the development of some forms of *Internet Controls*. These are control measures, to prevent abuses by users in the system. Some control measures provide security at the level of the computer system, while some others operate at multiple layers.

The categories of control measures are not closed. With continuous research in the field, new measures are being introduced. We may safely consider some of the operating controls under the subsequent sub-headings.

#### 4.2 SECURE WEBSITES:

Before entering private information such as passwords or credit card details on a website, you can ensure that the link is secure in two ways:

- (i) The web address should begin with 'https: //'. The letter 's' stands for 'secure'; and
- (ii) When sending confidential information over the Internet, such as usernames, passwords, or credit card numbers, only send it securely. To verify this, look for a small padlock (🔒) in the bottom right corner of your browser window or next to the address bar (as shown below). If visible, this lock should also be in the locked position and not unlocked.



Internet Explorer secure address bar

Furthermore, the padlock symbol should be in the browser window frame and not on the page. If it appears on the page itself, this will probably indicate a fraudulent site.

While the lock is in the locked position, the data is encrypted (coded), which prevents anyone from understanding the data if it is wrongly intercepted. When no lock is visible or if it is in the unlocked position, all the information is in plaintext which can be read if intercepted. If you observe that a web page is not secure, you must be careful about your transactions there. It is a risky site. Anything can happen. It is best not to do any transactions there that may jeopardize your security.

The above features indicate that the website owners have a *digital certificate* that has been issued by a trusted and reliable internet security organisation, such as *VeriSign* or *Thawte*, which indicates that the information



transmitted online from that website has been *encrypted* (coded) and protected from being intercepted and stolen by third parties.

When using websites that you do not know, look for an Extended Validation (or EV-SSL) certificate, which indicates that the issuing authority has conducted thorough checks into the website owner. The type of certificate held can be determined by clicking the padlock symbol in the browser frame which will launch a pop-up containing the details.

### **4.3 PASSWORD PROTECTION:**

A password is a basic security mechanism that consists of a secret pass phrase created using alphabetic, numeric, alphanumeric and symbolic characters, or a combination. A password is used to restrict access to a system, application or service to only those users who have memorized or stored and/or are authorized to use it. Passwords are used commonly to gain entry to networks and into various Internet accounts in order to authenticate the user accessing the website. A password may also be called an access code, PIN or secret code. Generally, a password is used in combination with a user name and in most cases; an individual must provide both to gain access to a system, network or other password-protected area.

We live in a password-driven world, where between 4 and 20 characters can determine whether you're able to access your data, communicate with friends, or make your online purchases. The problem is that passwords should be different everywhere you use them, and that can make it difficult to remember them all. And, if a password is truly strong, that makes it even more difficult<sup>34</sup>.

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<sup>34</sup> Eric Griffith: Password Protection: How to Create Strong Passwords  
<http://www.pcmag.com/article2/0,2817,2368484,00.asp>

Websites that store confidential data, such as an online bank site, need to use strong passwords. Also, it is highly recommended that you use a different password for each website that requires a login.

#### **4.4 TWO FACTOR AUTHENTICATION:**

Another layer of password protection is what is known as the *Two-factor authentication*. This procedure introduces an additional protection by requiring an additional step in verifying a login. Typically, the two-factor authentication may be required where the service suspects an illegal login by a suspected fraudster. Sometimes, this suspicion is prompted when you attempt to login with a new computer or a device not recognised by the service. So sometimes, after verifying your password, if the service does not recognize your computer, it sends your phone a text message with a verification code. So if an intruder stole your password but did not have your phone, even with your valid password, that person still cannot access your e-mail account.

The *Two-factor authentication* should at the *very* least be enabled on your e-mail account. Most account passwords can be reset using the *forgot password feature*, which sends a new password or link to reset the password to the e-mail address on file. If anyone has access to your e-mail account, they could get the new password for your account.

You are advised never to transmit confidential data over e-mail, such as *passwords, credit card information*, etc. The reason is that E-mails are not encrypted (coded) but are transmitted in plain text which can easily be read. So if intercepted by a third-party, it could be read and such valuable confidential details obtained.

#### **4.5 PHISHING SCAMS:**

Phishing is the attempt to obtain sensitive information such as usernames, passwords, and credit card details often for malicious purposes, by masquerading as a trustworthy entity in an electronic communication.<sup>35</sup>

You must be on the alert and familiarise yourself with phishing scams and techniques, which are used to trick people into divulging their account

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<sup>35</sup> [en.m.wikipedia.org/wiki/i](http://en.m.wikipedia.org/wiki/i)

information. Online banking sites, and other online payment platforms like *PayPal*, *eBay*, *Amazon*, *Interswitch* and other popular sites that require logins are popular targets of such scammers.

The guiding principle is that you must protect your privacy and avoid identity theft or fraud. If you receive an unsolicited mail directing you to login to an unknown website by asking you some questions to divulge your personal identification details, be on the alert to see whether it is a secured site. If you login carelessly you might become a victim of identity theft with all the chain of negative consequences.

So if you are unsure about a website, do not sign in. The safest thing to do is to close and reopen your browser and navigate to a secured site. To be on the safe side, you can use a web browser with *antiphishing detection*. Some genuine and updated Internet Explorer, Mozilla Firefox web browsers have such security features.

#### **4.6 COOKIES:**

Cookies are files on your computer, Smartphone or tablet that websites use to store information about you between sessions. Most of the time they are harmless – carrying out tasks such as keeping track of your username so that you don't have to log into a website every time you visit it, and storing your usage preferences.

However, some are used to track your browsing habits so that they can build a profile of your interests and activities with a view to fraud. To avoid falling victim, you can take the following precautionary measures:

- Set your browser to warn you when a cookie is installed. Note that some sites will not work if you block cookies completely.
- Some browsers will let you enable and disable cookies on a site by site basis so you can allow them on sites you trust.
- Use an anti-spyware program that scans for so-called tracker cookies.
- There are also cookie management programs that can delete old cookies and help manage them. In addition you can use settings in some browsers to delete unwanted cookies.
- Use a plain text email display instead of HTML email so that tracking files and cookies cannot be included in email files.

## **4.7 SAFE USE OF BROWSERS:**

A *Browser* is a program that enables a computer to locate, download, and display documents containing text, sound, video, graphics, animation, and photographs located on computer networks. The act of viewing and moving about between documents on computer networks is called *browsing*.

Browsers allow users to access Web information by locating documents on remote computers that function as Web servers.<sup>36</sup>

The most common internet browsers enable you to manage your settings such as allowing and blocking selected websites, blocking pop ups and browsing in private. Respective browsers will tell you to do this in slightly different ways, so it is recommend that you visit the security and privacy section of the websites, or the help area of the browsers themselves: The popular browsers are: Internet Explorer; Opera; Google Chrome; Safari; and Mozilla Firefox browsers.

Some browsers also have the ability to identify fraudulent websites by default. Always ensure that you are running the latest version of your chosen browser that your operating system will support. Also, be sure to download and install the latest updates.

Always remember to log out of a secure website when you have completed your transaction, and before you close the browser. Closing the browser does not necessarily log you out.

Ensure you have effective and updated antivirus/antispymware software and firewall running before you go online.

## **5.0 ANTI VIRUS PROTECTION:**

A Computer Virus is a self-duplicating computer program that spreads from computer to computer, interfering with data and software. Just as biological viruses infect people, spreading from person to person; computer viruses infect personal computers (PCs) and servers, the computers that control access to a network of computers. Some viruses are mere annoyances, but others can do

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serious damage. Viruses can delete or change files, steal important information, load and run unwanted applications, send documents via electronic mail (e-mail), or even cripple a machine's operating system (OS), the basic software that runs the computer.<sup>37</sup>

Viral infection can be prevented by obtaining software from legitimate sources. However, the best prevention may be the installation of current and well-designed antiviral software. Such software can prevent a viral infection and thereby help stop its spread. Several types of antiviral software can be used to detect the presence of a virus. If you do not want to install anti-virus protection, you may have an option. If your computer is running a newer version of Windows; at least have *Windows Defender* running on the computer. Also, having a *malware* protection program on the computer, such as *Malware bytes*, is also a good method of protecting your computer against *malware* and *spyware*.

Since new viruses are developed almost daily, antivirus software must be updated periodically and the system scanned regularly in order to be effective.

## **6.0 DOCUMENT MANAGEMENT:**

The legal profession has witnessed some radical developments in the field of Legal Drafting and Documentation. Those over the age of 40 will likely recall growing up in a world that was still largely analogue.

But within a generation, there has been a profound transformation in legal offices. Research and legal drafting no longer depend exclusively on the use of bound volumes and paper documents in traditional folders. Briefs, memos or deals that were once prepared using typewriters are now produced on personal computers, which are sometimes connected to the Internet.

Looking at the story of legal drafting is an exercise in looking at the application of available technologies. The new technologies have resulted in major improvements in the ways that legal professionals conduct their business. Computers, photocopiers, laser printers, pagers and fax machines have all made

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legal practices capable of accomplishing more, in less time and with greater accuracy, than in the past. And so it is again with today's mobile and Web-based applications.

Those tools can range from free Web-based applications for finding and validating relevant material and basic table-of-authority creators to more sophisticated drafting software that integrates with other essential everyday applications.

For example we now have E-Books of Law Reports, Statutes & Rules, Forms and Precedents etc. All these electronic books have simplified the drafting and preparation of Legal Documents. All you need to do now is to simply download any relevant precedent, fill it with any necessary modifications and you are home and dry with your Legal Documents. If for instance you are writing an Appellate Brief, all your legal authorities can simply be copied from the soft copies of your Law Reports and you paste same on your brief. Large excerpts from E-Books can easily be reproduced in your legal documents by the simple *copy and paste* approach. There is no need to go through the rigors of writing or typing volumes. If you have the legal material in soft copy you just copy and paste in the new document. This brings us to the issue of Digital storage or Digital Archiving.

## **6.1 DIGITAL FILING SYSTEM:**

We will examine the subject of Digital Filing from two dimensions. First from the domestic front that is filing of documents in the Law Office and external filing in Court.

In this age of electronic documents and electronic court filing, it has become imperative for law firms to adopt digital filing systems. You can organize the filing system of a digital law office similarly to the filing system of a law office with paper files. You can simply replicate, refine, and expand your paper file system in the digital world.

Digital filing systems begin with the commitment to capture digital images of all incoming paper resulting in storage of digital files in a structured system. The first step is to create a *Digital Filing Cabinet* on your Desk Top, Laptop, I pad etc. The Filing Cabinet consists of *Digital folders* that contain everything found in traditional paper files. Each folder should be properly labeled for easy identification. The concept of digital filing is not difficult if you equate it with paper filing. For example, think of a shared hard disk drive as the file room. The

cabinets within the room are large divisions on the disk. Within those cabinet-sized divisions are folders for each client. *Client folders* are further divided into *Sub-Folders* based on *Subject Matter*.

In the digital filing system, if a document comes into the office in soft copy, say as an e-mail, the document is filed in the appropriate folder. But if it comes in as a hard copy, the document is scanned to Adobe Portable Document Format (PDF) and saved to the appropriate folder and the filing is done

In the filing arrangement, it is advisable to create a special folder for *Archived or Closed files*.

All law firms have some type of filing system. Digital filing systems can be modeled on existing methods or structured alphabetically. By simply altering the nature of the file room, file cabinets, and the type of media being stored, you can make your office more efficient and organized.

An important aspect of Digital Filing of documents is that of storage. You must have trustworthy storage devices. In physical terms, most computer files are stored on some type of data storage device. For example, most *operating systems* store files on a *hard disk*. Hard disks have been the most common form of storage since the early 1960s. Where files contain only temporary information, they may be stored in *RAM* (Random Access Memory). Computer files can be also stored on other media in some cases, such as *magnetic tapes, compact discs, Digital Versatile Discs (DVD), Zip drives, USB flash drives, etc.* The use of *solid state External Hard Disc Drives (HDD)* is also beginning to rival the hard disk drive.

Essentially, you must store all you documents in reliable storage devices and have *reliable storage backups* in the event of a *system crash* or unmitigated *virus attack* leading to irreparable damage to your documents. A modern trend in the practice of storage backups has been introduced with the advent of *Cloud Computing*. *Cloud Computing* is a type of internet based computing that provides resources and data to computers and other devices on demand. It is a model for enabling on-demand access to a shared pool of computing resources. Cloud Computing provides a veritable avenue for users to store their resources in the shared pool as a form of backup. This is essentially an internet based back up storage device.

We come to the aspect of *E-Filing in Court*. With the advancements of internet technology, e-filing is becoming a more common practice amongst courts in several jurisdictions all over the world. But in Nigeria, the practice is slowly evolving. This obviously is as a result of the pronounced apathy towards ICT in the legal profession in Nigeria. As at the last count the practice has been introduced in Lagos State, Rivers State, FCT High Court and the Federal High Courts in a few states of the Federation. Not only has e-filing allowed courts to save a lot of money in administrative costs, it also has provided more accuracy in tracking legal documents, increased data integrity, and maximized efficiency in managing legal files.

Now, legal professionals and their clients can submit and view legal documents online (in limited jurisdictions) instead of having to drive to the courthouse. This practice is more environmentally friendly and by all means more cost effective.

The subject of electronic filing in court is too vast to be treated in detail in this presentation. It will suffice for us at this stage to submit that the practice of manual filing of legal documents is an age-old practice that will slowly be discontinued as more courts throughout the country continue to invest in economically feasible online tools to streamline the filing of legal documents.

## **7.0 CONCLUSION:**

The Legal Profession is witnessing a silent revolution. The growing use of smart phones, tablet computers and cloud-based tools among legal professionals has provided 24/7 wireless access to information and data. Legal professionals can now carry with them an entire digital law library; time-tracking and invoicing applications; scanned images, files and documents; legal dictionaries; Rules of Court and other legal accessories.

It is a very exciting period of our Legal History. The best are yet to come. We are already envisioning the New Frontiers of this Digital revolution. Eventually, the entire Court system will be fully automated. There will be full scale e-filing of Court processes 24/7. There will be electronic recording of proceedings; even electronic recording of some extrajudicial processes. There will be e-judgments; e-rulings and e-execution of judgments and rulings.

Very soon Wills will not only be documented in paper format but it will be backed up with video recordings of the execution of the Will and the Testator



reading the Will under video coverage to attest to the proof of the validity of the Will. This will drastically reduce incidents of litigation to challenge the validity of the Will. The same video back up will be introduced in the execution of contract documents. These video clips will assist proof in court during trials.

Procedures such as *visit to the locus in quo* may soon become obsolete and irrelevant. The digital procedure may just involve frontloading video clips of the *locus in quo*. In other words, the *locus in quo* will visit the Court. During the trial the witnesses will simply be examined and cross examined on the facts emanating from the video clip.

This is the age of automated legal practice. Every, Lawyer or Jurist must be ICT compliant to maximise the potentials of this cutting edge technology

Thank You.

HON. JUSTICE P. A. AKHIHIERO  
LL.B (Hons) Ife; LL.M Lagos; B.L  
(JUDGE, EDO STATE HIGH COURT)  
[www.nigerianlawguru.com](http://www.nigerianlawguru.com).