

IMPACT OF INFORMATION AND TECHNOLOGY IN THE DISPENSATION OF  
JUSTICE

A Research paper Submitted to the Faculty Law, KAMPALA INTERNATIONAL  
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### Declaration

I, Felix Ogeta, declare that the work presented in this research paper is original and has never been presented to any other University or Institution. Where other people's works have been used, these have been duly acknowledged. It is hereby presented in partial fulfillment of the requirements for the award of Bachelor of Law Degree.

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Signed.....

Date.....

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Signature .....

Date.....

### **Dedication**

I dedicate this to my Dad and Mom who sowed the seeds of my education, my family, brothers and sister who supported me at every given stage of my education. I truly am grateful of your support.

## Acknowledgements

I wish to acknowledge the support of Kampala international University for giving me the opportunity of achieving my life's dream, the faculty of law in particular and its staff that gave time and energy in mentoring and impacting knowledge in me

I deeply appreciate Joachim Alinaitwe my supervisor who was and has been very insightful during the period of study

I cannot forget Clifford, Ibra, Mvoi, Mwasaru, Solomon, Kabaa, Waswa, simret, carol, Nyamori, Opiyo, Bosire, serem, Susan, Beverly and all my friends who formed my family away from home

I proudly appreciate Aiesec Uganda and Mutuli and Apopo advocates for giving me a platform to develop and explore my potential.

Finally I sincerely appreciate FIDA Kenya for the opportunity to work for the organization and the exposure the organization has offered me.

## List of Abbreviations

UK	United Kingdom
US	United States of America
SOGA	Sale Of Goods Act
SGSA	Supply of Goods and Services Act
WLR	Weekly Law Reports
CDPA	Copyright Designs
CH	Chancery
WIPO	Intellectual Property Organization
CA	Copyright Act
USC	United States Copyright Act
CPR	Computer Programs Regulations
PTO	United States Patent and Trademarks Office
CP	Committee Reports
EU	European Union
CAFC	Court of Appeals for the Federal Circuit
UCC	Uniform Commercial Code
NCCCUSL	National Conference of commissioners on Electronic State Laws
UETA	Uniform Electronic Transaction Act
UCITA	Uniform Computer Information Transaction
LAN	Local Area Networking

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# CHAPTER 1

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## 1.1 INTRODUCTION

Information and technology has forced various professional sectors to allow specific adaptations in carrying out their day to day business this has been for reasons that they need to be effective, efficient and more importantly lessen cost- in which case cost effective.

It is impossible not to mention or even take into consideration computers which form the basis of my research paper

My paper as the topic suggests seeks to analyze the impact of information and technology on the dispensation of justice.

Thus the study intends to primarily take a close look at legal framework as it is and as it ought to be with due regard to the technological advancement realized in the recent past with the aim of bridging the gap so created

The rationale being not just to creating more laws but also harmonizing and ensuring that laws are well adapted to the technological realities

## 1.2 STATEMENT OF THE PROBLEM

In about 1950 the then IBM was rumored to have predicted that the world market for computers at the end of the century might approach one hundred machines. The degree to which the prediction fell short as a measure of how far the computing technology has pervaded our lives. The result of this dramatic increase in the use of and the reliance upon computing technology is that new and qualitatively legal problems have arisen. These problems have arisen.

Considering the fact that there are instances where transactions are not regulated by law there is definitely a problem in digital litigation in Uganda.

### 1.3 OBJECTIVE

The objective of this research is to analyze the various specific laws and their adaptations and sufficiency as far as technology is concerned.

Specific shortcomings and problems in implementation will also form subject of my paper.

To achieve various branches of the law will be subject of examination

Simply put my research aims at considering the law as it is and as it ought to be with regard to information and technology

### 1.4 RESEARCH QUESTIONS

That advancements in information and technology are part and parcel of civilized societies and may not be negated

That absence of well structured laws to address or accommodate information and technology may bring about a negative impact

That the judiciary should play a role in ensuring information and technological and its advanced embraced and that the judiciary staff are well equipped with technological knowledge

The putting in place proportional criminal sanctions

That the law and technology need to be at par since they all are moving towards the same direction but have never been at par.

## 1.5 SPECIFIC OBJECTIVES HERE UNDER

Analyze the extent of its impact as it is and as it ought to be with better framework set in place

Explain the role and scope

To ascertain matters as regards intellectual property (Patents, copyright, etc)

Its effects on the contract making as opposed to the past contract making processes

Electronic commerce

To inform information and technology society

To examine the challenges that have led to litigation relating to computer/electronic generated data .

To study other jurisdiction in their effort to embrace technology

To critically sample recommendations and a way forward for the East African justice system.

## 1.6 SIGNIFICANCE OF THE STUDY

The results of this study will play an informative role on the subject of information and technology and its impact on justice delivery – in so doing the study will point out better positioning measures so as to enable a positive impact on the dispensation of justice.

The study is intended to lay bare the gapping holes relating the acceptability of information and technology in the dispensation of justice

Lessons learnt from other jurisdictions on the subject together with recommendations will help the legal fraternity, court users generally as well as law makers so as to enable the development of a comprehensive draft law that accommodates the diversity in information and technology.

My hope is that the study will go a long way in establishing opportunity for the legal practice fraternity and more so solutions to the challenges of the law as it is.

## 1.7 REVIEW STUDIES

David I. Bainbridge<sup>1</sup>He tackles issues which include the dot.com revolution and the use of the internet for electronic commerce ;challenges to intellectual property rights such as of copyright ,privacy and freedom of expression issues ; the validity of pornographic materials and the threat posed by hackers and those who write and spread computer viruses. The notes state that the legal response has been quick in light of the threats posed giving an example of the United Kingdom which has put up harsh penalty on child pornography

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<sup>1</sup> A barrister at law ,chartered civil engineer and a member of the British computer society.Proffesor and lecturer of information technology law .written the 5<sup>th</sup> ed of the book "INTRODUCTION TO COMPUTER LAW" .[www.booksites.net/brainbridge](http://www.booksites.net/brainbridge)

Chris Reed<sup>2</sup>The book begins with procurement of systems and of services , to much current market trends into the field of intellectual property and related rights .The book also into account the impact of internet and so considers electronic data interchange.

## 1.8METHODS OF DATA COLLECTION

I intend to use the qualitative method of data collection .This will be a library research .Intend an will set out to gather information relating to my study from states and writings from renown authors in the subject.

I will also sample a number of case law from other jurisdictions and within Uganda

I will use a focus group discussion with the legal fraternity generally and the members of the bench specially to ascertain the number of cases and problems they have faced with the issue of information and technology.

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<sup>2</sup> Is a professor of electronic commerce law and head of information and technology law unit at center for commercial Law studies Westfield college London. He is one of the editors of the book 'COMPUTER LAW' 4<sup>TH</sup> ED together with John Angel

## 1.9 ABSTRACT

### 1.9.1 Computer and the law

Computer law is that branch of the law that regulates the technological aspects of information. Thus for example the law of defamation is not per se part of computer and the law but those aspects of defamation which relate uniquely to the information processing process activities will fall and therefore be treated as under the topic of computer and the law – particularly if the principals to be applied are much more complicated .

A fair example would be if court is to determine whether an internet service provider is liable for information which passes across servers, even when he or she is not the other of such and did not originate the transmission of the information.

Information processing is the automated transformation or transmission of digital information and the subject are extends to the information, processing aspects of the technology used hence the development of the subject computer and the law since the laws may have not envisaged certain technological advancements.<sup>3</sup>

The transformation in the society in which has been brought by information technology has given rise to qualitatively difference in legal issues.

Traditionally, the law categorized the subject matter of commerce into goods and services and deal wit information either as an aspect of human behavior or through intellectual property rights .Manufacturing industry processed physical entities, which were distributed were well defined as far as the legal framework was concerned .

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<sup>3</sup> Chris Reed and John Angel “Computer and the Law” 4<sup>TH</sup> pg 18 Edition these may include ea wide range of processing devices for example mobile phone and other items containing specially designed semiconductor chips- but for purpose of this paper we shall restrict ourselves to computers

Services, such as device and labor were essentially empirical matter which were considered as not permanent and thus could be regulated as a question of whether or not the provider of the service did so with proper care and in a proper manner.

Intellectual property was generated through human effort and ingenuity, and produced delimited and static results (such as a produced book or an invention) which could be exploited in a number of ways.

All these things still happen, of course, but information technology has enabled information formally an ephemeral phenomena to be turned into a quasi-physical existence and can be traded as if it were physical commodity—thus databases still sell pure information while software sell applied information in the form of computer software and much information is generated not by much human effort but by computer processes. Formally physical data has turned into dynamic digital data and are signed in non physical ways.

#### 1.9.2.1 COMMON THEMES

Throughout the subject of information and technology <sup>4</sup>there are a number of themes that one ought to consider<sup>5</sup>.

#### 1, 9.2.2 Information knowledge as species of property

The law of information and technology already recognizes that certain pieces of information are subject to private property right for such reasons inventions b

Shown by its diverse, the creative effort put into its compilation or because of their fundamental concepts or because it is been kept confidential. Other concepts incapable of being owned because of the fundamental nature or because they are mere ideas and these

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<sup>4</sup> Already narrowed down to computer and the law for purposes of this paper

<sup>5</sup> See Chris Reed and John Angel "Computer and the law fourth 4<sup>TH</sup> Edition"

are instead free for mankind .Thus an equation  $e = mc$  cannot be subject of a patent or of copyright

#### 1.9.2.3The distribution of resources and effort

The newest challenge to the intellectual property rights comes from the rise of global information networks, of which the internet is the prime example.

Copyright law in particular is based on the assumption that a protectable intellectual property asset exists in affixed form and thus only protects it against copying. Networks make it possible for information resource to without necessary copying to different computers or to incorporate in an activity in such a way that the person controlling the incorporation does not undertake any copying.

Distribution of resources and effort is even challenging specific computer laws such as those of protection. Personal data now is gathered from multiple activities and sources, held in different places which may challenge both location and content .Data protection laws only envisaged one single database controlled by a single entity

#### 1.9.2.4The internet

To provide a description or definition of internet technology that I s accessible and practicable to non technologists has been the aim of almost all papers written on the subject. In this respect a firm discussion on strategic and policy aspects of the internet form the main focus.

The internet is the main focus of a great deal of attention currently. In due course however it may come to be a special case of more general concept of information infrastructure<sup>6</sup>

Internet comprises of a network of computers which transmit massages to one another using a common set of communication protocols or set of operating rules. Networks

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<sup>6</sup> Documents that that provides introduction to information concerning infrastructure can be found in Clarke D. Clarke "Information Infrastructure"1994/1995 Fountain print media



comprise of addressable devices or nodes (computers) connected by arcs of communication channels

The nodes can be identified according to the work they perform for instance servers (which provide centralized services to the workstation -which is the node at which people perform useful functions)

Nodes are not limited to performing a single task, for example some workstations may be configured as servers and so on

The question is then that what are the special rights acquired by one who registers for internet or for an internet domain name- this first of all calls for a close scrutiny of how the internet works.

This was the focus of the court in **Pitman training limited and another v. Nominet u.k. and another**<sup>7</sup>In the case the court considered the internet as a network of computers. It continued to note that a computer which is attached to an appropriate network can use software to communicate and exchange information quickly with another computer on the network

In order to receive or to make available information on the internet a domain name is needed. A domain name in the case was described to be one linked to an address. In which case it identifies a particular internet site.

A particular domain name will only be allocated to accompany or an individual. It represents that company's computer site and it is means by which company's customers can find it on the internet.

Electronic messages can be transmitted and received on the internet. These messages are directed to e-mail addresses. Also will include the main name of the owner of the website.

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<sup>7</sup> 1997 EW J NO. 1554 ch 1997 f 1984

A website on the other hand was described as a series of files in a computer on the internet that can be accessed by anyone via the internet

It is apparent therefore that in order to receive an e-mail on the internet and in order to establish a website on the internet a domain name is needed.

Domain names appear in word the name issued for example for purposes of the above case was 'pitman.co.ke'. However, when a domain name is used on the internet it is translated into numbers known as IP numbers. The translation is carried out in series of computer software packages known as domain servers.

An IP number is required both to send and to receive e-mail. Besides translating domain names into IP numbers the servers provide services to the software on workstations or client computers

Co.uk and .com are two of the most common domain names used name suffixes. They connote respectively U.K. companies and international companies.

The internet systems has grown up informally without statutory regulation. It was originally established and run, as by academic bodies.

Initially the internet as only being used by academic bodies. and for those proposes domain names were only issued to universities and other academic bodies.

Prior to 1<sup>st</sup> August 1996 the procedure for obtaining a particular domain name required an application to be made by a service provider. The application would be made by e-mail. It would be an application for registration in the name of client of the chosen domain name. There then had to wait for a set of days, originally as was five days if no objection were raised then the client was to receive the domain name.

Having this in mind it is evident that there was legal procedure in the application neither were there legal requirements-it is evident then that there bound to be issues raised as far as

rights of the client in rem and in personum.-was this property acquired by the client or simply was it a service that was offered to the said client for a consideration so agreed

The problem presented in Pitman's case arose out of the circumstance that both the plaintiffs and the -pitman training ltd and PTC oxford ltd and the second defendant ,Pearson professional ltd are entitled to use for their respective trading purposes the name or style <pitman> One of the divisions of Pearson .

#### **1.9.2.5 Controlling of personal information**

Data that could have been previously put in small collection can now be kept in one brought together and therefore searchable globally

This however has potential to conflict with the human right to privacy..They also question the nature of privacy -since it merely a right not to expose information personal information, in which case once it has been disclosed then the right can no longer exist the question is whether it exists in controlling other people in the access to such information

The physical data characteristics of data stored and processes by which computer create problems as human still have an unjustified belief in the fallibility of computers while failing to recognize that the information comes, directly or indirectly as software processing results from failing humans. The effects this has on human behavior when faced with a computer's output will be particularly relevant to the law of tort.

#### **1.9.2.6 Convergence of national laws**

The information and technology industry, and the dissemination and consumption of information and technology products and services ,transcends national boundaries .Differences in national treatment of these phenomena can result in major distortion of

the market –for example the tax treatment in most cases always discriminates in the favor of exporters of the information products and against the domestic supplier

In the long run countries whose laws are different from the trend may be forced or required to by the requirement of the global markets

The Australian amendment to its copyright laws following the High Court decision that the copyright laws should be substituted to in an object code <sup>8</sup>and time of the writing the united states was in consultation with the European union to harmonize the laws

A particular strong force toward the convergence is the internet already discussed above and the commercial and non- commercial activities it allows .These impose substantial pressure on the national legislation to eradicate the differences between the laws and other states

Difficulties in element of the law such as jurisdiction are easily catered for in the convergence of the law<sup>9</sup>

#### 1.9.2.7 Convergence can happen in the following ways

Through the mechanism of international convention normally to slow

Through the conscious decision of all governments to harmonize information and technology laws

Through incidental or accidental convergence driven by market forces or economic forces particularly in the information and technology sector

The last of this is by far the most common and the means of the principles of English law are likely to be replaced since in many cases are overtaken by time and events. Globalization

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<sup>8</sup> Apple computers inc. v. Computers Edge Pty Ltd (1986) FSR 537

<sup>9</sup> See the protection of individuals – directive 95/4EU [www.europeanunion/directives2003greece](http://www.europeanunion/directives2003greece) with regard to the processing of personal information and the movement of such data

is a phenomena which is not limited to trading activities –it also drives legal innovation, and the computer law is more strongly affected than most areas

#### 1.9.2.8 Compute and technology as a substitute for human endeavors

The main aim information and technology is that is that a machine substitutes the work or duties formerly done by human effort and in turn control itself in doing so. This raises a number of issues in law which must eventually be resolved:

- a) where does the responsibility lie when one , in the absence of his using a computer to perform some task would be personally liable for the loss incurred or caused
- b) How is the court to cope with the evidence which solemnly lies in send with the machine – particularly where the machine also has the power to alter the information other complexities also arise when the transaction are cross border new legal issues of identity and attribution arise. However the concept of computer signatures has been suggested to further curb any incidentals<sup>10</sup>
- c) The enhancement of the abilities of machines inevitably lead to increase expectation and standards of performance that were accepted before may very well fall short of what ought to be achieved <sup>11</sup>

#### 1.9.2.9 The move from products to information services

The shift present a challenge to the law in the sense that services that were previously the result of human effort to skill and the quality of service of service could be judged against standards expected from other humans- most information – based services are provided by computing technology ,and human input is increasingly remote from the point of service delivery .

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<sup>10</sup> EU directive on common trade and trade harmonization 2003  
[www.europeanunion/directives2003/norway](http://www.europeanunion/directives2003/norway)

<sup>11</sup> You may remember the public outcry after the hurricane of 1987 when many people complained that the meteorological department failed to predict the violent storm

#### 1.9.2.10 Conclusion

It clearly unfair to judge an automated bank teller by the standards to be expected of a human being and the law is still in the process of determining new quality and liability tests which should apply to the services. I t is important that the law is not overtaken by technology.

# Chapter 2

## CONTRACTS AND CONTRACT PROCESSES

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### 2.1 Introduction

This chapter looks at Computer related contracts. The contracts may be wholly looked at from the consideration of *system supply contracts* in which case looking at a consumer who should be supplied the following

- Hardware
- Software
- Other equipments like cables
- Services – consultancy, installation, support and maintenance

In more practical terms system supply contract maybe in two ways either one whole contract or a series of connected sub-contracts

#### 2.1.1 Contract processes

##### 2.1.1.1 Matters to consider

- Contract always be in writing or evidential satisfaction

There is also the use of standard terms. It is a feature in the IT sector that most suppliers will attempt to deal on a set of standard terms. The danger of uncritically accepting the standard terms of even the most respectable supplier can be illustrated in **Mackenzie v. British Olivetti**<sup>12</sup>. In the case a law firm bought an alive computer software to run its accounts. They discussed their needs with the sales person and signed an Olivetti standard terms. These dealt with the systems technical performance, but did not address certain important issues. The system proved unsuitable for the firm's use - it was slow, difficult to use and could not extend to cope with new business. None of these terms were dealt with in the contract. In the event the court found that the system would be suitable for the need of the law firm.

#### 2.1.1.2 Negotiating for long term

Unlike any other contract the delivery of the software or hardware is only the beginning of the relationship not its culmination - further work is needed in order to make it work properly.

**Types of contractual provisions.** Any well drafted contract must consist in a broad sense of the following:

- a) Contract mechanics that is who delivers what and where
- b) Commercial highlights for example what is the price, who owns the resulting intellectual property rights, what warranties are given in respect to such systems
- c) Problems in management

#### 2.1.1.3 Terminology

There are a number of references to different parties in a systems supply contract. In software there is the licensee and the licensor - while in hardware there is the buyer and the seller.

Legal issues applicable

Implied terms

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<sup>12</sup> (1984) 1 CL&P 92, 95



These are by virtue of the **sale of goods act**<sup>13</sup> and under the supply of Goods and the **Supply of Goods and Services Act 1982**. These terms are generally categorized as conditions and warranties, the distinction being that as the breach of a condition entitles one to repudiate a contract the breach of a warranty one can then only sue for damages.

#### 2.1.1.4 Nature of the contract

It is easy to separate software from hardware –this fact was demonstrated in the case of **Dyason v. AutoDesk Inc**<sup>14</sup> There was confusion as to whether a ‘dongle’, a device required to be inserted in a computer before a computer program would operate, contained in a computer program into the disk and one wired into the ROM –chip. Such difficulty is occasioned mostly when lawyers have to deal in a highly technical field such as computer science but it does not stop there. Even if the technological aspects are fully understood, the application of the law to them may still perplex.

In the above case it was held that to draw a distinction is not too easy since in practice hardware incorporate software and the contractual position of ‘off the shelf’ software is far from clear. Nevertheless the classification in terms of legal nature of the transaction is important and the courts suggested approach was to look at the predominant purpose of the transaction. In other words the person who was acquiring the product whether he was obtaining a software or hardware.

#### 2.1.1.5 Software acquisition

The most common way of acquiring software is by license which is granted by the copyright owner to a person or the company acquiring the software, giving permission to use the software in return a license fee is paid.

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<sup>13</sup> 1979

<sup>14</sup> (1990) 96 ALR 57

The special nature of computer software acquisition means then that the provision of the **Sale of Goods Act** do not apply

#### **2.1.1.5.1 Supply of goods and services**

The Supply of Goods and Services Act 1982 UK hereafter Supply of Goods and Services Act 1982 implies into contracts under which the property in goods passes and also into contracts for hire of goods and services

#### **Supply of Goods and Services Act 1982**

The Act will be particularly relevant, however if an independent computer firm or a programmer is engaged to write a computer program as this should come within the meaning of a service. The draftsmen of the Act did not define the term service. Section 12 however infers that such a transaction is a service therefore governed by the Act

Section 12(1) .... A contract under which a person (supplier) agrees to carry out a service. It may sometimes be difficult to determine the identity of the supplier when the computer software is bought off the shelf , For example from a dealer .

The dealer is an agent of the software company is a more likely interpretation if the acquire specifies the systems he wants. The license agreement enforces this stand point. The legal position is clear however there is lack of authority. The situation is much simpler where a software is written for and at the request of a client. This is a straight forward transaction since the contract between the client and the software developer and is covered by the Supply of Goods and Services Act 1982.

A confirmation of this was in the case of *The salvage Association v. CAP Financial services Ltd* <sup>15</sup> in which the official referee in the High court confirmed that a contract to

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<sup>15</sup> (1995)FRS 654

develop new accounting software for a client was a service contract .He went on to imply that contract *Section 13 of the Act*<sup>16</sup>

*The section* implies a term that the supplier, If acting in the course of business will carry himself with reasonable skill and care .Therefore if a firm engaged to write a computer program fails to measure up to the standards that would normally be expected from able computer programmers and the program is defective as a consequence prima facie the firm will be liable in contract.

It does not matter that the firm's employees tried their best the question is - does the software meet the objective standard

In *Salvage Association case* above it was held that there was a breach of *Section 13*<sup>17</sup> and also that a breach of express term in the contract that the software developer would have assigned suitable qualified staff to perform work. The staff originally assigned to write the program had no sufficient experience in the use of ORACLE, the language in which the software is written in.

**Time of performance** is implied in the Act *Section 14* states that in the absence of an agreed time for performance or an agreed formula to determine the time the Act also states that what is reasonable is a matter of fact .

The *case Chamock v. Liverpool Corporation*<sup>18</sup> gives an example of an unreasonable time. The defendant garage was liable in damages because it took eight weeks to repair a motor vehicle when normally a computer program should take five weeks . A contract for the writing of a computer program should be detailed about the time . What is reasonable

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<sup>16</sup> Supply of Goods and Services Act 1982 UK

<sup>17</sup> supra

<sup>18</sup> (1968)1 WLR 1498

time depends on the nature of the program and the complexity, taking into account the time required for the testing and acceptance

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#### 2.1.1.6 Hardware Acquisition

If purchased then is governed by the Sale of Goods Act <sup>19</sup> will apply and terms as to quality complying with description, satisfactory quality will be implied into the contract, subject to any exemption clause

The Supply of Goods Act replaced the old section of the Sale of Goods Act which required that the goods must be of satisfactory quality.

In the context of computers, courts consider a fair approach to merchantability in *Micron computer system Ltd v. Wang* <sup>20</sup> The court held that the failure of a computer hard disk was a normal problem and could not warrant rejection on the basis of contract of supply.

#### 2.1.1.7 Conclusion

It's important to note that separating software from hardware is a difficult task and that Sale of goods Act may only apply in cases where the hardware can be acquired and its functions are uniquely not dependent on software.

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<sup>19</sup> 1979

<sup>20</sup> (unreported) 9<sup>th</sup> May 1990

# CHAPTER 3

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## Copyright

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### 3.1 Introduction

Intellectual property is the name given to legal rights which protect creative rights, inventions and commercial goodwill. Basically it is designed to provide remedies against those who steal the fruits – with the development in the information and technology sector swimmingly this has become quite a hard task. Intellectual property are however very important in the computer world

### 3.2 Copyright law

It protects works from being copied without permission –it goes beyond and reflect on aspects such as adaptation of the work in question ,performing or showing the work .Works protected include computer programs ,databases and many more but I will restrict to the afore mentioned .

Copyright protection has a long duration, the general yardstick being the life of the author (usually the creator of the work) plus 70years or depending on the work 50 or 70 from the

end of the year during which the work was created and published .Copyright law is practical in the nature and has developed to take account of technology<sup>21</sup>

Copyright has a pragmatic approach and it extends to all manufactured works regardless of quality, subject to some basic requirements which are easily satisfied.

The 20<sup>th</sup> century has seen the flourishing of copyright to include computer programs database and even works stored in or produced by or with the information society.

The practical development of information and technology has been supported by judges who have usually been sympathetic to the principles protecting the results of a persons skill, effort or judgment .As Justice Peterson said *University press v. University tutorial press ltd*<sup>22</sup>

‘.....what is worth protecting is prima facie worth protecting .however ,this may go too far and the first work must be the result of the skill and judgment .As puffery J said in *Cantor Fitzgerald international v. Tradition (UK)*<sup>23</sup>

‘.....it is entirely possible mechanical labor may be saved by copying something produced by entirely mechanical labor

### **Infringement**

a) A person infringes the copyright in a work if he does one of the following acts prohibited to things in which copyright exists <sup>24</sup>establishes copyright exists in

a) Original literature, dramatic ,musical or artistic works

b) Sound recording films broadcasting or cable programs

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<sup>21</sup> David brain Bridge “ Introduction to Law”Ediface press ,pg 15,2001

<sup>22</sup> (1996) CH 606

<sup>23</sup> [2000]RPC 95

<sup>24</sup> Copyright Designs and Patents Act 1988 UK

- c) The typographical arrangement of published editions

There infringement is doing acts restricted by copyright and \which only the owner of copyright has the right to do or authorized are st out in *section 16*<sup>25</sup>

- a) To copy the work
- b) To issue copies to the public
- c) To rent or lend the to the public
- d) To perform show or play the work in public
- e) Broadcast the work or include it in cable program
- f) An adaptation of the work or do any of the above to adaptations

The similarities and differences between the first work and the alleged infringement my be important in finding whether the defendant had copied the first work(copying is one of the forms of infringement though all the forms of infringement require that one use has been made of the first work).Substantiality is a question of fact but once it is accepted that the defendant 's work was copied from that of the claimant ,it is no longer relevant to consider that the claimant, it is no longer relevant to consider the differences between the works (to do so would be to resist the question of whether copying had taken place).The question then becomes whether the sum of the parts copied represents a substantial part of the claimants work. A visual comparison of the two works at this stage is necessary and may be misleading. In **Williams (Textile) v. Free text inc.** <sup>26</sup> a leading case on copyright set in the contest of artistic work though of wider application . However, **Lord Scott of Foscote** distinguished a case of altered copying where he suggested that the similarities between the two works could help determine which side of the driving line , between permissible borrowing idea and permissible piracy the activity fell accepting that it is not an in figment of copying to borrow an idea.

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<sup>25</sup> supra

<sup>26</sup> [2001] FRS 11

There are certain exceptions of infringements called permitted acts contained in *Sections 27-77*<sup>27</sup>. Copyright is not infringement by fair dealing with a work for the purposes of research or private study or for criticism, review or new reporting or any of the other limited exceptions concerning inter alia education and library use. Another permitted act is the shifting, that is recording a broadcast or cable program for viewing at a more convenient time.

This can be relevant in the context of the internet since the information available on the website is classed as a cable programme. This permitted act only if the recording is made for personal use and an internet cafe which operated a CD burning service for its customers in return for a consideration could not rely on the defence this was held in the case of *Entertainment UK Ltd v. Eayinternet Ltd* [2003]<sup>28</sup>

This case also confirms that liability for infringement applies even if the person responsible for copying was not aware of the work being copied was protected by copyright. The defendant's employees were instructed not to look at the content of downloaded files they copied onto CDs for customers.

There are also some important exceptions relating to computer programs introduced by the Copyright Regulation<sup>29</sup>. These allow for recompilation exception, making back-up copies of computer programs and other lawful uses of a program including errors in correction.

Further specific exceptions relate to data bases. There are additional ways of infringing copyright, known as secondary infringement and there are also some criminal offences which now carry a maximum penalty of a term of imprisonment not exceeding ten years and or fine.

In broad terms the secondary infringements and some criminal offences apply where the infringer has been dealing commercially with infringing copies, such as by importing,

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<sup>27</sup> Supra note 24

<sup>28</sup> EWHC 62 (Ch)

<sup>29</sup> Copyright (computer programs) Regulation 1992 UK



distribution or selling them, and, unlike the primary infringing acts described above, some form of knowledge is required ; that is, that the person involved knew or had reason to believe that he was dealing with infringing copies.

### **3.3 Copyright in the information and technology society**

During the December 1996 Diplomatic conference held under the auspices of the world Intellectual Property Organization (WIPO). This resulted in the promulgation of a new treaty law -WIPO- Copyright treaty .The treaty gave a face lift to the protection of copyright especially the implications on the digital era and the need to fight piracy on a world wide basis .It was perceived as particularly important to harmonize copyright and relate rights and to improve the level of protection already in place

By the time the law was being passed the European Union had already set up directive on the matter that are of concern.

The rights provide for include the following

- a) A reproduction right which extends also to temporary reproduction
- b) A right to the public of copyright works and a right of making a available to the public other subject matter and a distribution right

#### **3.3.1 Copyright infringement via the internet**

Law of copyrights has had to keep pace with the advancement in information and technology. The most challenging must be the regulating of the use and abuse of copyright material accessible via the internet

Three of the most fundamental questions to ask are first, who may be liable for copyright infringement? Secondly, what is the appropriate law and jurisdiction? Thirdly, what acts of infringement may have been committed under the internet law? Possible infringers fall into three main categories: originators of the material, recipients of it and the network operators. Some of the ways in which they could find themselves liable under English law are as follows.

An originator who transmits infringing material via the internet may, by the act of transmitting be infringing copyright. The originator may as well infringe on copyright by performing showing, playing or broadcasting <sup>30</sup>the material. This is because the act of sending a message containing infringing material in the knowledge that it will be necessarily be copied along the way may constitute infringement of copyright by transmission.

It may also be the case that the originator may be liable for making the the item available on his or her computer borrowed or browsed by merely sending instructions by another computer to send the material to it ( for instance via World wide web Transfer protocol)

However, in the case of privacy at least, the greatest problem may not be identifying whether or not an originator has infringed on a copyright , but rather identifying who and where the originator is. Sophisticated techniques exist for ensuring the anonymity of persons making material available via internet.<sup>31</sup>

Likewise the receiver of the material may be infringing copyright if he or she receives infringed copyright material at the time of sending notice should taken of the fact that the recieipient must have formed the requisite mens rea<sup>32</sup> nd someone who browses material on

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<sup>30</sup> A perfect example is seen in the case of *Shetland Times Ltd v. Dr Jonathan and another* [1998] Masons CLR 159, Where in finding that the balance of convenience fell in favor of awarding interim injunction against the use of a website containing the headlines pursuer ,LORD Hamilton accepted the argument that there was a prima facie case of infringement cable broadcast in the information was conveyed to the user's site and that constituted sending within the meaning of section 20 of 1988 Act UK

<sup>31</sup> For example 'spoofing' involves obtaining false a false internet protocol address or the use of anonymous retailers

<sup>32</sup> In which case had it with the very intention of infringing

the website or accesses it by instructing the originator's computer to send the material may infringe copyright

Material may be downloaded deliberately or a copy of part of or all the file held on a remote website may be automatically by of copyright process known as 'caching' whereby material is copied on to the user's PC to speed up future access to website

Network operators that carry bits of data containing infringing material and there may be several such operators in many jurisdictions along the route of transmission, may be liable for infringing of the copyright by the fact of having copied the material en route, even if copying be automatic and though the network operators would never see the material

In message protected by copyright. This would mean that subject to express or implied licences network operators would be infringing copyright whenever they transmitted a message protected by copyright, whether or not the message infringed copyright when it left the sender. Similarly, they may be caught by the various displays and performance provisions referred to above in relation to originators.

However, under the law as it stands, network operators are most likely to infringe by transmission. The question is what degree of knowledge would be necessary for them to fulfill the *mens rea* required for secondary infringement? Would it be efficient for software house to issue a letter to say a public network operator like BT, stating that in all probability, that operators network was being used for making infringing copies? Would it be sufficient to produce evidence that a specific customer was using the network in this manner? Would it be sufficient that the network operator knew that the copy of the material being transmitted was sourced from a copy of the material or a neighboring network, which was unlikely to have received explicit permission to copy the work? The answers to these questions are unknown at this point, but network operators probably not be held to have the requisite knowledge unless they had received very specific and detailed information concerning the activities of a specific customer. Even at that point, there are good policy reasons not to hold network operators liable for secondary infringement, many

of which have actively been drawn to the attention of legislators by network operators themselves<sup>33</sup>.

There has not as yet, any court decision in the united kingdom or commonwealth countries concerning the liability of network operators for copyright in infringement via the internet, In the united states though there has been several cases already of which I sample in this paper

In *Playboy Enterprises Inc V. Frena (1993) CCH Computer cases 47,020* it was held that there has been infringement of the claimant's right publicly to distribute and display copyrighted photographs by the defendant, on whose bulletin board the photographs had been posted by some of the defendant's subscribers without his knowledge.

To be distinguished from also is the case of *Religious Technology Center V. Netcom Online Communications Services (1995) CCH computer cases 47,0411* which may signaled a move away from the imposition of liability for direct infringement upon service providers despite strict liability under the *Copyright Act 1976 UK*.

In the Netcom case the District Court of the northern District of California held that 'it does not make sense to adopt a rule that could lead to the liability of countless parties whose role in the infringement is nothing more than setting up and operating a system that is necessary for the functioning of the internet'. However to what extent it may have been significant that there were other defendant to the action who were clearly liable for direct infringement under the US Copyright Act is not clear.

A key question is whether jurisdiction should be determined by reference to where material originated ,where it went along the way or where it ended up displayed ,stored or

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<sup>33</sup> Christopher Millard's and Robert carolina's 'commercial Transactions on The Global Information Infrastructure: A European Perspective ,John Marshall Journal of Computer and Information Law,vol 14, No 2, Winter 1996.

printed out of it may ,of course ,be correct to say that an infringement has taken place in more than one jurisdiction and under more than one law .Possibilities for 'forum shopping' will undoubtedly flow from this

### **3.4 Scope of protection for computer related programs and data**

#### **3.4.1 Idea and expression , symbolism and functionality**

In the United Kingdom there is no statutory rule that bars ideas from copyright protection<sup>34</sup>

The copyright (Computer Programs Regulations 1992) are silent on the point. However, a number of English and other commonwealth precedences appear to exclude ideas as from copyright protection. *In Donohue v. Allied Newspapers Ltd*<sup>35</sup> Farewell stated unequivocally that there is no copyright in an idea or in ideas

The apparent logic of the rule was stated in the Supreme court of Canada in *Cuisenaire v. Southwest Import Ltd*<sup>36</sup> The court made an observation that were the law allowed ideas as copyright then everybody who made a rabbit pie in accordance with the recipe of Mrs. Beeton's cookery book would infringe the literary copyright in that book

The claimed distinction then is between an idea that cannot be protected by copyright , such as procedure for making a rabbit pie, and an expression of an idea, such as written recipe describing the rabbit pie making process, which can be protected by copyright.

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<sup>34</sup> Section 102 of the USC provides 'in no case does copyright protection ..extend to any idea , procedure ,process,system ,method of operation ,concept ,principle or discovery , regardless of form in which described ,explained illustrated or embodied in such work'

<sup>35</sup> {1938} ch 106

<sup>36</sup> {1996} SCR

In the case of a computer program, however, such a tidy analysis is not possible. Indeed, it may be that the statement that the ideas can never be protected by copyright is misleading over-implication

For instance ideas such as algorithms on which a program is based on or the process which the program runs. Because the nature of the interaction between software and hardware and a program, unlike a page from a recipe book, can simultaneously be symbolic Means by which a computer is prompted by all mean , lines that describe the operation or procedure can also be used to implement it. It is as though putting together a few pages of a recipe book and coming up with the dish.

This special characteristics of a computer program has a number of significant consequences in copyright law .One is that use of a program is almost impossible without copying and or adaptation occurring<sup>37</sup>

Another is that there may be no way to achieve function compatibility between one or more items of hardware or software without reproducing substantial amount of code to effect the desired interface or communication

In the early days of computer software development, developers tended to rely on trade secret law and contractual obligations to protect their work products. Although these means of protection are still important, it soon became clear that they could not deal with all situations, particularly in an industry where workers tended to function as independent contractors and changed employers frequently. Thus, the focus of protection turned to the two main statutory rights: patent and copyright. In addition, we shall review a relatively new type of protection that has been derived from but is different from copyright protection giving protection to semiconductor chips.

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<sup>37</sup> This will be further discussed

The first statutory form of protection to attract the attention of software developers was copyright since the writing of code was similar to any other form of writing, computer languages being regarded as just one other form of language. Moreover, in the 1970's the case law in the patent field was showing some doubts as to whether computer programs could constitute patentable inventions. The early application of copyright law to computer software gave fairly broad protection. However, as the copyright case law developed, the application of traditional copyright limitations on the scope of protection to the new field of protection for computer programs led to a narrowing of the scope of protection afforded by copyright. The courts pointed out that the purpose of copyright was to protect particular expressions of an idea not the idea itself. Any broader protection had to meet the standards of novelty and non obviousness required by the patent law.

At about the time that these decisions started to come down, case law relating to patentability of software-related inventions also started to change, this time in a liberalizing direction opening up the way to patent protection for software-related inventions. Part of the focus for protection therefore started to shift to patents, although the simplicity of securing copyright protection as compared with patent protection and the fact that for copyright protection there is no need to establish the inventively of the work in question means that copyright protection remains of major importance in this field. Indeed, although it has become clear that traditional inhibitions on the grant of software related inventions have now been jettisoned in respect of inventions relating to business methods as well, as the Patent and Trademark Office develops its expertise in examining patent applications relating to software and business methods, it may become more difficult to obtain patents in this field and the focus may swing back to copyright protection.

The contents of this booklet are no substitute for proper legal advice on any particular problem, but we hope they will be helpful in a general way in assisting readers in focusing on the issues involved. While we believe that the information set out is accurate as of the date of writing, we cannot be held liable for any errors that may have occurred.

Under the U.S. patent statute, patents may be granted for any new and useful process, machine, manufacture or composition of matter.<sup>38</sup> This broad statutory definition of subject matter has enabled the United States to take a lead in widening the scope of subject matter for which patent protection may be obtained. Thus, the United States has been in the forefront in developing the criteria for patentability of computer-related inventions. Over the years, however, case law has put a gloss on this general statement and created certain limitations on what is patentable. Among the types of inventions that have in the past been denied patent protection by case law are (1) inventions in the form of certain algorithms and (2) inventions relating to methods of doing business.<sup>39</sup>

Traditionally cases decided by the courts have tended to treat these two classes of excluded subject matter as being distinct. However, they have similarities in situations where a business scheme is to be implemented by use of a computer since in essence most business schemes are simply rules for solving problems. Furthermore the United States Patent and Trademark Office (PTO) has recently indicated that, although "Office personnel have struggled with claims directed to methods of doing business", such claims are to be treated like any other type of process claim." We will therefore consider these two classes of subject matter together in this paper.

Although not discussed in detail in this paper, to be patentable an invention must meet all of the other criteria for patentability that are required for other inventions. The most significant of these is the invention must be new and not obvious. As a practical matter these requirements present major problems for the Patent Office since searching the prior art in this area is extremely difficult and few Examiners have the necessary background to make good assessments of obviousness. The problem was highlighted when the Commissioner of Patents used his powers to order re-examination of U.S. Patent 5,241,671 which related to the Compton Multimedia patent. This patent had been claimed by competitors to cover almost all possible ways of providing a multimedia system

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<sup>38</sup>[www.ladas.com/patents](http://www.ladas.com/patents)

<sup>39</sup> *supra*



and to be nothing more than a collocation of old elements. On re-examination new art was considered and an initial determination made that the claims were invalid. There is still very little case law giving guidance as to the application of these requirements to inventions in the software and business method arts and one should not be surprised if some of the early patents granted in this field are ultimately held to be invalid not because of the nature of their subject matter but on more traditional grounds.

### 3.4.2 Case Law Developments

The broad statutory definition of subject matter has enabled the United States to take a lead in broadening the scope of subject matter for obtaining patent protection. The Supreme Court has noted the breadth of this language in **Diamond v. Chakrabart**<sup>40</sup> in the following words:

In choosing such expansive terms as "manufacture" and "composition of matter" modified by the comprehensive "any". Congress plainly contemplated that the patent laws would be given wide scope. The relevant legislative history also supports a broad construction.

The Committee Reports accompanying the 1952 Act ( US) inform us that Congress intended statutory subject matter to include anything under the sun that is made by man" . This is not to suggest that Section 101 of the Patent Act has no limits or that it embraces every discovery. The laws of nature, physical phenomena, and abstract ideas have been held

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<sup>40</sup> 447 U.S.303, 206 U.S.P.Q. 193 (1980). The court also commented that:

The Patent Act of 1793, authored by Thomas Jefferson, defined statutory subject matter as "any new and useful art, machine, manufacture, or composition of matter, or any new or useful improvement [thereof]." Act of Feb. 21, 1793, § 1, 1 Stat. 319. The Act embodied Jefferson's philosophy that "ingenuity should receive a liberal encouragement." 5 Writings of Thomas Jefferson 75-76 (Washington ed. 1871). See *Graham v. John Deere Co.*, 383 U.S. 1, 7-10 (1966). Subsequent patent statutes in 1836, 1870, and 1874 employed this same broad language. In 1952, when the patent laws were recodified, Congress replaced the word "art" with "process," but otherwise left Jefferson's language intact. The Committee Reports accompanying the 1952 Act inform us that Congress intended statutory subject matter to "include anything under the sun that is made by man." S. Rep. No. 1979, 82d Cong., 2d Sess. 5 (1952); H.R. Rep. No. 1923, 82d Cong., 2d Sess. 6 (1952)

not patentable. Thus a new mineral discovered in the earth or a new plant found in the wild is not patentable subject matter. Likewise, Einstein could not patent his celebrated law  $E = mc^2$ ; nor could Newton have patented the law of gravity. Such discoveries are "manifestations of ... nature, free to all men and reserved exclusively to none.

A fairly early example of what cannot be patented was found in one of the claims of Morse's patent in *O'Reilly v. Mors*<sup>41</sup>. The claim was to "the use of the motive power of electric or galvanic current ... for making or printing intelligible characters ... at any distance." The Supreme Court rejected such a claim as not being directed to any statutorily defined class of protectable subject matter but merely to a "principle"<sup>42</sup>

Over the years questions have arisen as to whether certain other types of invention can be the subject matter of patent protection. The types of subject matter that must have been commonly subject to consideration are those that have been classified as being directed to mere "mental steps". The "mental steps" doctrine developed slowly in the first half of the Twentieth Century and reached its zenith in *Halliburton Oil Well Cementing v. Walker*<sup>43</sup> and, although not specifically adopted by the Supreme Court in *Gotschalk v. Benson*<sup>44</sup>

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<sup>41</sup> 56 U.S. 112 (S. Ct 1854).

<sup>42</sup> This decision was distinguished in *Dolbear v. American Bell Telephone Company* 126 U.S. 1 (S. Ct. 1888) where the claim in question was to:

A method ... of transmitting sounds telegraphically ... by causing electrical undulations, similar in form to the vibrations of the air accompanying said vocal or other sounds ...

The Court noted that in Morse's case, the claim had been to the use of magnetism as motive power without regard to the particular process with which it was connected in the patent whereas in Bell's case the claim was restricted to a defined process.

<sup>43</sup> 146 F.2d 817, 64 U.S.P.Q.2d 278 (9th Cir 1944) reversed on other grounds 329 U.S. 1, 71 U.S.P.Q. 175 (1946). The Ninth Circuit characterized the claimed method as consisting "in setting down three knowns (obtained from observation of seismographic echoes) in a simple equation and from them determining or computing an unknown (the depth of an oil well). ... We think these mental steps, even if novel, are not patentable..."

<sup>44</sup> 409 U.S. 63, 175 U.S.P.Q. 673. The Court held that a method for converting numerals expressed as binary coded decimal numerals into pure binary numbers did not fall within the statutory definition of a "process"

clearly finds echoes<sup>45</sup> there. It bedeviled some early attempts to secure patent protection in the field of computer software but has been largely by-passed by the most recent case law.

The first sign of a breach in the traditional view<sup>46</sup> that inventions relating to computer software were unpatentable was found in 1979 in the case of **In re Bradley**.<sup>47</sup> The Court of Customs and Patent Appeals (the predecessor of the Court of Appeals for the Federal Circuit in respect of appeals from the Patent Office) held an invention relating to firmware to be patentable. Two years later, in the case of **In re Diehr**<sup>48</sup> (which related to a computer controlled process for curing rubber) the Supreme Court held a computer-related process to be patentable on the ground that the mere fact that the claims required a computer to apply a mathematical formula in controlling a process did not mean that an attempt was being made to patent the mathematical formula itself. The court commented that an application of a mathematical formula (or indeed of any law of nature) to a known structure or process "may well be deserving of patent protection" and stated its view that in determining whether patentable subject matter existed one should look at the invention as a whole and not just at what was novel about it. Thus, a computer controlled process could be patentable even if the process when controlled by other means was already known as long as application of the program used to the process was not obvious. The court did, however, reassert the "long-established principle" that laws of nature, natural phenomena and abstract ideas are excluded from patent protection.

An early illustration of the application of the Supreme Court's reasoning is found, for example, in the decision of the Court of Customs and Patent Appeals in **In re Abele**

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<sup>45</sup> The Court commented that "Phenomena of nature, though just discovered, mental processes, abstract intellectual concepts are not patentable as they are the basic tools of scientific and technological work"

<sup>46</sup> As expressed, for example, in decisions such as **Gottschalk v. Benson** 409 US 63, 175 U.S.P.Q. 673 (S Ct 1972) (holding that a computer program whose sole object is to generate numerical values according to an algorithm is unpatentable) and **Parker v. Flook** 437 US 584, 198 (a computer program is unpatentable if all it does is generate numerical values even if the values bring about a physical result)

<sup>47</sup> . 600 F.2d 807, 202 U.S.P.Q. 480 aff'd by an equally divided Supreme Court 450 US 381 (1981), 209 U.S.P.Q. 97.

<sup>48</sup> Reported in the Supreme Court as **Diamond v. Diehr** 450 US 175, 209 U.S.P.Q. 97 (1981)

<sup>49</sup>where the court upheld patent claims which related to a program for carrying out calculations when applied to X-ray data from a CAT scanner, but rejected claims directed to the program for the calculation itself.

The PTO approach to the algorithm issue came to be known as the Freeman-Walter-Abele test after the three cases on which it was based.<sup>50</sup>The test was summarized by the Court of Appeals for the Federal Circuit in *Arythmia Research Technology Inc v. Carazonix Corp*<sup>51</sup> as follows:

It is first determined whether a mathematical algorithm is recited directly or indirectly in the claim. If so, it is next determined whether the claimed invention as a whole is no more than the algorithm itself; that is whether the claim is directed to a mathematical algorithm that is not applied to or limited by physical elements or process steps.

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<sup>49</sup> 684 F.2d 902, 214 U.S.P.Q. 682 (CCPA 1982). The CCPA has also upheld claims to, for example, computer programs for translating languages (e.g. Persian into English) 197 U.S.P.Q. 852, and for preparing architectural specifications (203 U.S.P.Q. 971).

<sup>50</sup> **In re Abele** 214 U.S.P.Q. 682 (CCPA 1982), **In re Walter** 205 U.S.P.Q. 397 (CCPA 1980) and **In re Freeman** 197 U.S.P.Q. 464 (CCPA 1978). ). In 1989 the Patent Office issued guidelines based on the holdings of these cases to aid in determining what was patentable in this field. It adopted a two-part test: a) is a mathematical algorithm present in the claim? b) if so, is it applied in any manner to physical elements or process steps? As long as the answer to the second question is "yes", the invention is, in principle, patentable. These guidelines are now to be replaced by the recently published new guidelines which are discussed later in this paper.

<sup>51</sup> **In re Abele** 214 U.S.P.Q. 682 (CCPA 1982), **In re Walter** 205 U.S.P.Q. 397 (CCPA 1980) and **In re Freeman** 197 U.S.P.Q. 464 (CCPA 1978). ). In 1989 the Patent Office issued guidelines based on the holdings of these cases to aid in determining what was patentable in this field. It adopted a two-part test: a) is a mathematical algorithm present in the claim? b) if so, is it applied in any manner to physical elements or process steps? As long as the answer to the second question is "yes", the invention is, in principle, patentable. These guidelines are now to be replaced by the recently published new guidelines which are discussed later in this paper.

The mere fact that a mathematical formula is not used does not of itself ensure that a claim is patentable. As was stated in *In re Grams*<sup>52</sup> "words in a claim operating on data to solve a problem can serve the same purpose as a formula".

Examples of cases where inventions have been found to be suitable for patent protection include inventions relating to analysis of electrocardiographic signal<sup>53</sup>, conversion of seismic signals or traces<sup>54</sup>, a vehicle navigation system., a method of determining the width of fractures intersecting a borehole and a system for processing and supervising a plurality of subscriber accounts by the interaction of various means. However, a method for graphics interpolation was held not to be patentable on the ground that when the algorithm was discounted all that was left in the claim was display of the result obtained and "such post-solution activity does not convert claimed subject matter into" something covered by the statute.

After a period of relatively little case law on this subject at the appellate court level, the mid to late 90's have seen several cases that need to be considered.

In *In re Warmer dam*<sup>55</sup> the claimed invention was a method of generating a data structure which represented the shape of a physical object in a position and/or motion control machine. After pointing out that the well-known expression that "anything under the sun that is made by man is patentable" did not in fact appear in the patent statute, the Court reemphasized the Supreme Court's holding in *Diehr* that the laws of nature, natural phenomena and abstract ideas were not patentable. The case is of interest in that the court

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<sup>52</sup> 12 U.S.P.Q. 2d 1824 (CAFC 1989).

<sup>53</sup> **Arrhythmia** – see note 51 above. In this case process claims for analyzing electrocardiac signals to determine specific heart activity which included use of an algorithm (defined in the specification by way of a formula) were upheld on the ground that the algorithm was applied to physical process steps. The mere fact that the output was a number also did not preclude patentability since the number was a measure expressed in millivolts of a specified heart activity.

<sup>54</sup> **In re Taner** 214 U.S.P.Q. 678 (CCPA 1982), **Application of Sherwood** 204 U.S.P.Q. 537 (CCPA 1980) cert. denied 450 US 994 (1981).

<sup>55</sup> 30 U.S.P.Q. 2d 1455 (CAFC 1994)

seems to have tried to get away from the use of the term "mathematical algorithm " as being something to which precise boundaries could not be applied and to ask the question whether the claimed method did any more than manipulate abstract ideas. It concluded that the claims did no more than call for such manipulation and so did not encompass statutory subject matter.

In *In re Schrader*, the Court of Appeals for the Federal Circuit denied patent protection to Schrader's claimed method whereby parcels of real property or other things are sold at auction by a procedure of bidding and determining optimum prices that, according to Schrader, "is usefully but not necessarily performed with the aid of a computer." The basis of the court's decision was that it considered what Schrader was seeking to patent was a mathematical algorithm.

In reaching its decision, the CAFC applied the following two-step test: first, determine whether a mathematical algorithm is recited directly or indirectly in the claim; if it is, then determine whether the claimed invention as a whole is no more than the algorithm itself.

Thus, if the claim is directed to a mathematical algorithm that is not applied to or limited by physical elements or process, the claim is non-statutory. "However, when the mathematical algorithm is applied to one or more elements of an otherwise statutory process claim ... the requirements of [the statute] are met."

Since the Federal Circuit considered that Schrader's process was a mathematical optimization procedure and thus a mathematical algorithm was implicit in the claim, the court addressed the second step. The Court found that there was nothing about the steps set out in the claim that reflect a physical change, effect or result and, since the second step of the test was not met, the method was unpatentable. The court distinguished *Schrader* from cases where patentable subject matter was found when the claims involved the transformation or conversion of subject matter representative of physical activity such as *Arrhythmia Research Technology v. Corazonix Corp*<sup>56</sup>. where an algorithm was applied

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<sup>56</sup> 22 U.S.P.Q. 2d 1033 (CAFC 1992)

to data obtained from electrocardiograph signals that were representative of human cardiac activity and *In re Taner*<sup>57</sup> where the data in question were seismic reflection signals representing discontinuities below the earth's surface.

The *Schrader* decision may be compared with the decision in *Paine Webber v. Merrill Lynch* noted above<sup>58</sup>, where the Federal District Court of Delaware, had found Merrill Lynch's system for processing and supervising subscriber accounts to be patentable subject matter because the court was "unable to find any direct or indirect recitation of a procedure for solving a mathematical problem" in the claimed system. A factor in that case may also have been that the invention was claimed as a system rather than a process and thus the claim at least implied a requirement for use of appropriate hardware.

The Court of Appeals for the Federal Circuit heard the case of *In re Alappat* in part because of certain procedural issues (the case achieved some notoriety when the Commissioner of Patents required reconsideration of an Appeal Board's decision to allow a patent before a separate and enlarged Appeal Board, including himself, which then held the subject matter to be unpatentable). In its decision the Federal Circuit upheld the Commissioner's right to proceed in the way that he had. However, the court reversed the Board's decision on the substantive issue and upheld the patentability of a claim directed to: "A rasterizer for converting vector list data representing sample magnitudes of an input wave form into anti-aliased pixel illumination intensity data to be displayed on a display means" which comprised a series of elements defined purely in means form for determining certain features, normalizing such features and then outputting the illumination intensity data in question.

The purpose of the invention was to provide a smooth wave form display in a digital oscilloscope. The essence of the Patent Office's rejection of the case had been that the means elements of the claims each simply recited a mathematical operation so that the

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<sup>57</sup> 214 U.S.P.Q. 678 (CCPA 1982)

<sup>58</sup> *Paine, Webber, Jackson and Curtis v. Merrill Lynch, Pierce, Fenner and Smith* 564 F. Supp 1358, 218 U.S.P.Q. 212 (D. Delaware 1983).

combination of the steps in itself was a "mathematical algorithm for computing pixel information" and that "when the claim is viewed without the steps of this mathematical algorithm no other elements or steps are found". This being the case, the enlarged Patent Office Appeal Board had found the invention lacking in statutory subject matter.

The Federal Circuit disagreed and concluded that what was being claimed was in fact a machine since the means in question had to have some physical embodiment (and since the decision *In re Donaldson*<sup>59</sup> it was clear that means claims had to be construed so as to cover equivalents of what was actually disclosed in the specification). The court then, however, went on to consider the general question of the "mathematical algorithm" exception to patentability. While not denying the existence of such an exception, the court concluded that it must be read very narrowly. The court took the view that Congress had intended that "anything under the sun that is made by man" should be patentable and thus one should not read additional limitations into the statute. The limitations that existed were to be confined simply to those set out in the Supreme Court's decision in *In re Diehr* namely "laws of nature, natural phenomena and abstract ideas". Mathematical algorithms were only to be found to be unpatentable when they represented nothing more than an abstract idea. The court concluded that what was being claimed in the present case was:

not a disembodied mathematical concept which may be characterized as an 'abstract idea' but rather a specific machine to produce a useful concrete and tangible result.

The fact that the four claimed means elements function to transform one set of data to another through what may be viewed as a series of mathematical calculations does not

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<sup>59</sup> 29 U.S.P.Q. 2d 1845 (CAFC 1994). This case emphasized that the wording of the sixth paragraph of 35 USC 112 was of equal importance to PTO determinations of novelty and obviousness as to questions of determining the scope of protection afforded by a claim using "means plus function" language. The relevant paragraph reads as follows:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure material or acts described in the specification and equivalents thereof.



alone justify a holding that the claim as a whole is directed to non-statutory subject matter.<sup>60</sup>

The mere fact that the applicant himself had admitted that the claim covered a general purpose computer programmed to carry out the claimed invention did not alter this conclusion since once programmed to carry out the particular functions set out in the claim, "such programming creates a new machine because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from programmed software".

A strong dissent to the decision was registered by Chief Judge Archer on the ground that the holding was in effect opening the door to patentability of discoveries in mathematics, the scope of which would be repugnant to Congress's statutory scheme for the promotion of the useful arts.

In the next case to come before the Federal Circuit Court of Appeals on this subject, *In re Trovato*<sup>61</sup>, claims that were superficially similar to those in question in *Alappat*, were initially held not to be patentable. However this panel decision was subsequently vacated *sua sponte* by the court and remanded for reconsideration in the light of *Alappat* and proposed new Patent and Trademark Office guidelines in this area. In *Trovato* the claims in issue were again in means plus function form and were directed to a method of determining motion of an object. In this case, however, unlike *Alappat*, the specification gave little detail as to the means that were to be used. The Court pointed out that:

Trovato's applications fail to explain how the claimed inventions actually employ the numbers to control movement ... the absence of even a cursory description of how the

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<sup>60</sup> 31 USPQ.2d bridging pages 1557 and 1558.

<sup>61</sup> 33 U.S.P.Q. 2d 1194

computed values are implemented further indicates that the claimed methods comprise only numerical manipulation.

The court contrasted this situation with that in *Alappat* where the specification had disclosed a specific hardware embodiment involving an arithmetic logic circuit, barrel shifters and a read only memory. Whether the features were in fact any more important than the hardware features implied in *Trovato* by its simple reference to use of a computer is difficult to say but it is hard to envisage a computer without arithmetic logic circuits and a read only memory.

Following these cases, there was a tendency to write claims to include a tangible product or an application of the results to a physical situation, if this was not possible one tried to bring the claims within the terms of the *Alappat* decision and recite the operation of the program on specific physical elements of the computer itself.

The patentability of software-related inventions is not, however, confined to the algorithm/business method area.

In *In re Lowry*<sup>62</sup> the question before the court was whether the data structure and information in a computerized data processing system should be analogized to printed matter when considering issues of patentability. The claim in issue was directed to a memory for storing data for access by an application program and recited one of its elements as: "a plurality of attribute data objects stored in said memory, each of said attribute data objects containing different information from said database." An attribute data object (ADO) was defined in the specification as a single primitive data element comprising "sequences of bits which are stored in the memory as electrical (or magnetic) signals that represent information." The Patent Office appeal board had analogized the data structure composed of such ADO's to printed matter and in accordance with established case law held that one could not rely on printed matter to establish a distinction from the prior art. Thus the claim was held to be obvious over prior art that

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<sup>62</sup> 32 U.S.P.Q.2d 1031 (Fed Cir 1994).

differed from what was claimed only with respect to the ADO's and their hierarchical and non-hierarchical relationships in the database. The Court of Appeals for the Federal Circuit disagreed, it stated "The printed matter cases have no relevance where the invention as defined by the claims requires that the information be processed not by the mind but by a machine, the computer" (emphasis in the original). In the present case the data in question could only be accessed by sophisticated software systems. Thus the differences between the prior art and the data structure of the invention in suit had to be considered in deciding on the obviousness or inventiveness of the invention claimed.

Until recently, the United States Patent and Trademark Office Manual of Patent Examining Procedure took the view that business schemes and ways of operating a business are not patentable. Devising ways of securing protection for useful business schemes probably remains one of the last great frontiers for creative lawyering in respect of patentable subject matter. Inroads on the traditional prohibition have already been made. For example, claims have been allowed to a system for processing and supervising a plurality of subscriber accounts by the interaction of various "means", effecting such processing and supervision which, as a practical matter, was possible only by using a computer. The recitation of various "means" in the claim seems to have allowed the Patent Office to regard the claim as a method claim. Certainly, this was what was understood when the patent came to be litigated. The court upheld the patent, commenting that it was not necessary to determine whether it in fact claimed an apparatus or a process on the ground that even though the scheme might be unpatentable if done by hand, it should in fact be treated as a computer related invention. Once this was done, it was clear that what was claimed was not a simple algorithm and so was patentable for the reasons discussed above.

The question of the patentability of essentially business schemes came before the courts again in the case of *State Street Bank v. Signature Financial*<sup>63</sup>. The claims were to a "data processing system for managing a financial services configuration of a portfolio established

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<sup>63</sup> 149 F.3d 1368, 47 U.S.P.Q.2d 1596 (CAFC 1998)

as a partnership, each partner being one of a plurality of funds" comprising a number of different "means" including several different "means for processing data" for a number of different purposes. The claims were intended to cover what was referred to as a "hub and spoke" relationship between a partnership portfolio and partner funds. The outcome of all the data processing was inter alia to allow allocation between the spokes of the hub's daily income, expenses, net realized gain or loss and the unrealized gain or loss. It is of particular use to fund managers. The Massachusetts District Court had held that the claim did not define a patentable invention under 35 U.S.C. §101 on two grounds: first, the claim was directed to, in essence, an accounting system that could be carried out with pencil and paper and therefore lacked sufficient "physical" activity to be patentable (i.e. it is effectively a mathematical algorithm) and second it fell within the long-established exception to patentability that had established for business methods.

On appeal the Federal Circuit Court of Appeals reversed the lower court decision. The Court first noted that as a practical matter the time frame within which the data processing had to be carried out a computer or equivalent device is a virtual necessity. The court went on to construe the claim, noting that it was written in means plus function form and holding that when properly construed in the light of the specification it was directed to a machine. Thus, in view of the court's decision in *In re Alappat*, the present system was patentable as long as it met all the other requirements for patentability. The Court then went on to address the supposed mathematical algorithm and business methods exceptions to patentability.

So far as the former is concerned, the court stated:

Unpatentable mathematical algorithms are identifiable by showing that they are merely abstract ideas constituting disembodied concepts or truths that are not "useful." ... Today we hold that the transformation of data representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm ... because it produces "a useful, concrete and tangible result" - a final share price ...

So far as the business method exception to patentability was concerned , the court took the "opportunity to lay this ill-conceived exception to rest." After analyzing prior cases that had been said to create the exception the court concluded that all of them had really been decided on the ground that what was claimed was an abstract idea or a lack of novelty and so concluded that the exception did not exist. In noting that the district court's application of the doctrine had in part turned on its finding that the patent in suit was "sufficiently broad to foreclose virtually any computer-implemented accounting method necessary to manage this type of financial structure", the court noted that issues of undue breadth of claim could be addressed under other provisions of the law.

Subsequently, the Federal Circuit was faced with the question of whether process claims which essentially related to a method for calculating charges for long distance telephone calls depending upon which long distance carrier had been selected by the originator of the call and the recipient met the requirements of 35 U.S.C. §101. In **AT&T Corp. v. Excel Communications Inc.** 50 U.S.P.Q.2d 1447 (Fed Cir 1999). The court viewed the **Grams** and **Schrader** cases noted above as being "unhelpful" because of a misguided concern as to whether any "physical transformation" resulted from the acts carried out, this in the court's view not being required by the Supreme Court precedents. The court reasserted its view as set out in **Alappat** that if what was claimed was more than an abstract idea or law of nature or if the mathematical concept has been reduced to some practical application rendering it useful, then the statutory requirement was met. There was no difference in principle between apparatus claims as found in **Alappat** and **State Street Bank** and the process claims of the present invention and so 35 U.S.C. §101 had been complied with.

In the winter of 1999-2000, considerable attention has been given to the case of **Amazon.com v. Barnesandnoble.com.**<sup>64</sup> Both parties are active in selling books and other items over the Internet. Amazon secured a patent for a method a method of placing an order in a client- server system in which the key elements are that on the client side "in response to only a single action being performed" a request is sent "to order the item along

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<sup>64</sup> 53 U.S.P.Q.2d 1115 (W. D. Wash 1999).

with an identifier of the purchaser of the item to a server system" and that the "item is ordered without using a shopping cart ordering model". The District Court in the Western District of Washington granted a preliminary injunction to restrain Barnes and Noble from continuing to use one of its means for ordering on the ground that it was likely to be found to be an infringement of this patent even though the action was brought only 22 days after the patent issued. Normally the courts like to see that a patent has been accepted and respected by the industry before granting preliminary injunctions in patent cases. Here, however, the evidence put in by Barnes and Noble to challenge validity seemed weak to the judge and she took note of the fact that the claimed technique had already achieved commercial success.

#### The First Inventor Defense

The new first inventor defense (sometimes referred to as a prior user defense) was added by the 1999 reforms to the patent law and became effective on November 29, 1999 except that it shall not apply to any action for infringement that is already pending on that date.<sup>65</sup> The defense applies only to actions for infringement of claims that may be infringed by "any method of doing or conducting an entity's business". The exact scope of this provision is not entirely clear. The Senate Committee report refers to the need for such a provision as becoming more urgent following the Federal Circuit's decision in **State Street Bank v. Signature Financial Group** as a result of this decision having held to be patentable various business methods which until recently had been thought not to be patentable but indicates that the provision is not intended to be confined to the facts of that case, commenting:

The first inventor defense is not limited to methods in any particular industry, such as financial services, but applies to any industry which relies on trade secrecy for protecting methods of doing or conducting the operations of their business.

A further comment indicates that the provision is not intended to be restricted to any particular form of claims if the essence of what is claimed is in fact a business method, for

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<sup>65</sup> 35 USC 273 added by Public Law 106-113 sections 4302 - 4303.

example it is intended to cover a machine that has been programmed to carry out a business method. The Senate Committee comments on the bill point out that trade secret law serves the public interest in a different way from patent law by protecting investments in new technology and notes that "it would be administratively and economically impossible to expect an inventor to apply for a patent for all methods and processes now deemed patentable."

The provision applies only if the party being sued had, acting in good faith, reduced the subject matter in question to practice at least one year before the effective filing date of the patent being sued on. (The effective filing date is defined as including validly claimed priority dates.) If the requirement is met it protects two different types of activity depending on the nature of the party asserting the defense. These are where there had been use in good faith before the effective filing date of the patent in suit that is either commercial use (which is defined as including filing an NDA or similar application for marketing approval) or in the case of a non-profit research laboratory or a non profit entity "such as a university, research center or hospital" any use "for which the public is the intended beneficiary". The defense is personal, does not render the patent invalid and in cases where a business is assigned is confined to sites where the invention was used before the effective filing date of the patent or the date of the assignment, whichever is later. The defense does however carry over to those who acquire a "useful end product produced by the patented method." In the case of non-profit organizations is confined to use the organization in question and does not extend to any subsequent commercialization of that work. Pleading such a defense which fails shall be a ground for award of attorney fees to the prevailing party.

#### The USPTO's Position on Computer Software Today

In April 1995 following the Lowry decision, the United States Patent and Trademark Office announced that it would no longer reject claims to computer programs embodied in a tangible form such as a floppy disk as being *per se* unpatentable but would require claims to such inventions to be examined for novelty and nonobviousness.

In October 1995, the PTO issued a legal analysis in support of its view on the patentability of computer-related inventions generally following decisions such as *Alappat* and *Lowry* which effectively overturned much of the PTO's previous thinking. According to the PTO's new draft guidelines, one must first determine whether an invention is useful in the technological arts having a "real world" value as opposed to something that represents nothing more than an idea or concept or is simply a starting point for further investigation or research. Within these confines methods of doing business should be treated like any other process. The claimed invention must then be assessed against the classes of statutory subject matter namely: machines (which in principle may include a computer programmed to carry out certain actions), articles of manufacture (which in principle may include computer readable memory devices) and processes (which in principle may include specific operational steps performed on or with the aid of a computer. According to the PTO, the only types of subject matter that are "clearly non-statutory" are:

- (1) data structures or programs *per se* (which are mere information rather than a computer implemented process or specific machine or computer readable memory as an article of manufacture;
- (2) compilations or arrangements of nonfunctional information or a known machine-readable storage medium encoded with such information; or
- (3) natural phenomena such as electricity and magnetism.

Claims to subject matter of these types are indistinguishable from abstract ideas and laws of nature. However, if a claim recites the use of a computer program to act on the data, this should be considered as a claim to a process and if the claim recites a physical structure then it should be considered an article of manufacture. The PTO also points out that nonfunctional data (such as words, images or other information cannot provide a practical utility as required by the patent law and as such merely loading such information onto, say, a known compact disc does not render the disk patentable.



Not being in the class of inventions regarded *per se* as falling outside the bounds of statutory subject matter does not, however, mean that an invention is necessarily patentable, even if it is novel and not obvious. The guidelines legal analysis addresses the issues that arise in the statutory classes as follows:

#### Machines and manufactures:

To be patentable the claim must recite definite physical characteristics. The PTO points out that a computer memory may be defined in terms of a logic circuit formed when a programmed computer performs in accord with the program, a memory defined by functional and/or structural characteristics or a memory whose physical structure is defined by the act of storing a computer-executable program code. Lacking such physical characteristics, a product claim that is associated with a process may also be patentable but only if that process is itself the subject of statutory subject matter.<sup>66</sup>

The PTO does, however, take the view that a signal carried on a carrier wave can be regarded as being a manufacture and patentable, so as long as the signal is new, non-obvious and useful.

#### Processes:

According to the PTO to be statutory a process must involve one or more acts that manipulate physical matter or energy resulting in some form of physical transformation. However, the subject matter manipulated does not have to be a physical object but can be "intangible matter representative of or constituting physical activity or objects". Thus not only is a process patentable if it affects objects

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<sup>66</sup> The guidelines recognize that there is a difference between the situations in **Trovato** and **Alappat** since they point out patentability of a computer-related "machine" invention depends solely on the patentability of the process features of the program or its application depends upon the degree of information given as to the hardware aspects of the computer used.

external to a computer or the way in which the computer itself functions (such as an operating system) but also if the process is one that acts on data in the form of a magnetic or electrical signal where the data represent a physical object or activities external to the computer "and where the process causes some transformation of the physical but intangible representation of the physical object or activities." However, a process that simply performs mathematical operations or which manipulates abstract ideas without practical application (such as bids) is still regarded as being non-statutory. Furthermore a non statutory process will not be rendered statutory by "post solution" activities that do not impose any real limitation on the claim so that merely reciting that the results of a mathematical operation are displayed, recorded or transmitted or that the results are equated with other data do not render the claim statutory.

### 3.5 Conclusion

While these guidelines were being adopted, the Commissioner himself moved the Court of Appeals to vacate a decision of the PTO Appeal Board in *In re Beauregard*.<sup>67</sup> The Board had rejected an application relating to a computer program product on the basis of the printed matter doctrine. The court noted that the PTO now accepted that "computer programs embodied in a tangible medium such as floppy diskettes" could form patentable subject matter and remanded the application to the Board for further consideration.

In July 1996, a long-standing section of the Manual of Patent Examining Procedure setting out the prohibitions on patenting methods of doing business was deleted and replaced with a discussion of the trend exemplified by the cases discussed above.

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<sup>67</sup> 35 U.S.P.Q.2d 1383. The PTO had rejected claims to software contained on a floppy disk under the printed matter doctrine. However as part of the review process leading to the new guidelines, the Commissioner concluded that this doctrine was not applicable to this type of claim.

## CHAPTER 4

# E- Commerce(case study of the United States Of America

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### 4.1 Introduction

It has been estimated that in 1999 the value of "e-commerce" in the United States amounted to about \$500 billion the price of the same in east Africa is not as high but is expected to get there. The "e" nature of this commerce raises a number of legal issues that have not arisen in the context of traditional commercial contracts, for example: what is a signature if the terms have been negotiated over the Internet; where is a contract formed; what terms are implied - questions which may not have arisen previously or to which the answers may be different in the new environment. Such differences may be highlighted by the fact that a substantial proportion of e-commerce does not relate to transactions pertaining to goods or even services as traditionally understood but to information or other intangibles. However, it is important to recognize that simply because there is an "e" element, a transaction does not cease to be commerce and many traditional rules still apply. Simply because a contract may have been made over the Internet does not mean that if it is for the sale of goods, Article 2 of the Uniform Commercial Code (UCC) does not apply, nor that if it is for the leasing of equipment, Article 2A of the UCC does not apply. However, in view of the new environment, a number of laws have been enacted or are

under consideration to supplement or, where necessary, modify the traditional law so as to make it more readily applicable to e-commerce.

Responsibility for the regulation of commerce in the United States is split between the federal government and the states. Article I, Section 8 of the U.S. Constitution gives to the United States Congress the power to legislate the regulation of commerce with foreign nations, among the several states, and with the Indian tribes. However, the right to regulate all other commerce remains with the individual states. Furthermore, the states are not precluded from enacting laws even if they have an effect on interstate commerce if such laws are in an area in which Congress has not itself made any law. Traditionally, contract law has therefore been regarded as a matter of state law rather than federal law except in areas such as antitrust law and regulation of certain industries. However, it is clear under Article VI, Section 2 that where Congress has enacted a law within its area of competence, this is the law of the land and any state law that is inconsistent therewith is preempted by the Federal Statute.

The boundary between the respective areas of state and federal competence has not always been constant. Under Chief Justice Warren, the Supreme Court took a fairly expansive view of what was meant by regulation of interstate commerce and upheld the power of Congress to enact federal laws in a wide field. More recently however, under Chief Justice Rehnquist, the Supreme Court has tended to favor the rights of the states over those of the federal government in cases where the dividing line was not clear and the power of Congress to make law under the Interstate Commerce Clause has been cut back. For example, in *United States v. Lopez*,<sup>68</sup> the Supreme Court held that Congress had no power under this provision to enact the Gun Free School Zone Act since the law lacked a relation to any economic activity that might by repetition elsewhere have a substantial effect on interstate commerce. In *Seminole Tribe of Florida v. Florida*<sup>69</sup> and in *College*

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<sup>68</sup> 515 U.S. 549 (1995).

<sup>69</sup> 517 U.S. 44 (1996).

*Savings Bank v. Florida Prepaid Postsecondary Education Expense Board*<sup>70</sup> it was held that the Interstate Commerce clause did not give Congress the power to enact laws curtailing the sovereign immunity of the states enshrined in the Eleventh Amendment.

In the e-commerce area, there has been only a little federal legislation, for example the Anticybersquatting Consumer Protection Act and the Children's Online Privacy Protection Act. Most legislative action has been at the state level. The National Conference of Commissioners on Uniform State Laws (the body that drew up the UCC) has issued two model laws that may be enacted by the states, namely, the Uniform Electronic Transactions Act and the Uniform Computer Information Transactions Act. Additionally, a number of states have already enacted laws affecting some areas of e-commerce. One further point to note is that this is an area where aspects of intellectual property law may impinge in non-traditional ways, for example as they apply to Internet service providers.

In this Guide we will attempt to deal with some of these issues and in particular those that relate to formation of contracts, particularly aspects of contracts relating to computer information, privacy issues, liability of online service providers as well as some aspects of the anticybersquatting law. Issues relating to patentability of e-commerce methods and the application of copyright law to e-commerce are dealt with in our separate Guide to Protection for Computer Software.

#### **4.2 Contract Formation**

Currently, there is no legislation in force in the United States which mandates disclosure of certain information in business-to-business or business-to-consumer transactions specifically governing online transactions. While the Internet may be revolutionizing the way many companies conduct business, the rules in e-commerce transactions follow, for the most part, the rules set forth in traditional, paper-based transactions. For example, to be enforceable, certain contracts must be signed by the party to be bound and the elements of offer, acceptance and consideration must exist.

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<sup>70</sup> 119 S.Ct 2219 (1999).

### 4.3 Requirements for Writing and Signature in the Electronic Age

In July, 1999, the National Conference of Commissioners on Uniform State Laws (hereinafter NCCUSL) gave final approval to the Uniform Electronic Transactions Act (UETA) and offered this as a model law for enactment by the states to cover contracts governed by state law. The UETA was drafted with the purpose of facilitating electronic commerce by establishing that electronic transactions should have the full force and effect of traditional paper transactions. The UETA was drafted to complement and not supersede existing state law. On June 30, 2000, President Clinton signed into law the Federal Electronic Signatures on Global and National Commerce Act, colloquially referred to as "E-Sign". Prior to the adoption of the UETA as a model law and the enactment of the Federal law, several states had enacted laws relating to electronic signatures. Some had been of general application, while some were restricted to the use of electronic signatures in certain situations only.

One other issue that arose with prior state laws was that some state laws were restricted only to certain types of electronic signatures (commonly referred to as "digital signatures"). These latter laws typically required some form of encryption to make the signature valid, commonly a combination of public key and private key and in some cases tended to be dependent on particular technology. The Federal law and UETA are not dependent on any particular type of technology and the preemption provisions in the Federal law will, in due course, require that for interstate and international commerce, a technology neutral system will prevail. The main provisions of UETA and E-Sign are set out below. There are, however, differences between them that should be noted. These include: more consumer consent provisions in the Federal law than in UETA and the omission from the Federal law of provisions relating to the attribution and deemed timing of electronic signature which appear in UETA.

### 4.4 The Uniform Electronic Transactions Act (a Model for State Laws)

The UETA applies to transactions in which each party has agreed to conduct the transaction by electronic means and supplements existing substantive state law. Its main provisions are as follows:

Section 7:

- a) A record or signature may not be denied legal effect or enforceability solely because it is in electronic form;
- b) A contract may not be denied legal effect or enforceability solely because an electronic record was used in its formation;
- c) If a law requires a record to be in writing, an electronic record satisfies the law;
- d) If a law requires a signature, an electronic signature satisfies the law.

Section 9:

- a) An electronic record or electronic signature is attributable to a person if it was the act of the person. The act of the person may be shown in any manner, including a showing of the efficacy of any security procedure applied to determine the person to which the electronic record or electronic signature was attributable;
- b) The effect of an electronic record or electronic signature attributed to a person is determined from the context and surrounding circumstances at the time of its creation, execution or adoption, including the parties' agreement, if any and otherwise as provided by law.

Section 14:

- a) A contract may be formed by the interaction of electronic agents of the parties, even if no individual was aware of or reviewed the electronic agent's actions or the resulting terms or agreements;
- b) A contract may be formed by the interaction of an electronic agent and an individual, acting on the individual's own behalf or for another person, including by an interaction in which the individual performs actions that the individual is free to refuse to perform and which the individual knows or has reason to know will cause the electronic agent to complete the transaction or performance.

An "electronic signature" is defined as "an electronic sound, symbol or process attached to or logically associated with a record and executed or adopted by a person with intent to sign the record.

#### 4.5 State Laws

Several states have already passed legislation relating to digital or electronic signatures. For example, California enacted a Uniform Electronic Transactions Act on September 16, 1999 based on the model law and has also passed a specific law relating to use of digital signatures in brokerage contracts. <sup>71</sup>In New York, the General Obligations Law Section 5-701 which requires certain contracts to be in writing has been amended to provide that "the tangible written text produced by telex, telefacsimile, computer retrieval or other process by which electronic signals are transmitted by telephone or otherwise shall constitute a writing and any symbol executed or adopted by a party with the present intention to authenticate a writing shall constitute a signing."<sup>72</sup>

States which have adopted the UETA in substantially the same form as the model law include Idaho, Indiana, Kentucky, Minnesota, Nebraska, Pennsylvania, South Dakota, Utah and Virginia.

#### 4.6 The Federal Electronic Signatures on Global and National Commerce Act

##### The new federal law

So far as any transaction in or affecting interstate or foreign commerce is concerned, a signature, contract or other record may not be denied legal effect, validity or enforceability solely because it is in electronic form. Furthermore, a contract relating to such a transaction may not be denied legal effect, validity or enforceability solely because an

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<sup>71</sup> The California law is not identical with UETA by excluding transactions governed by other state laws and limiting the courts rights to infer agreement by conduct.

<sup>72</sup> New York General Obligations Law S 5-701b(4)



electronic signature or record was used in its formation. An electronic signature is defined as being:

An electronic sound, symbol or process attached to or logically associated with a contract or other record and executed or adopted by a person with the intent to sign the record."

An electronic record is defined as being:

A contract or other record created, generated, sent, communicated, received, or stored by electronic means.

The statute does not, however, affect any other statute or rule of law that applies to such transactions. Nor does it permit anyone required by law to make information available to consumers in writing, to supply such information in electronic form, unless the consumer has consented to the supply of the information in electronic form after being given information about this possibility and what is required to receive the information in electronic form.

The statute also provides that a contract or other record relating to a transaction in or affecting interstate or foreign commerce may not be denied legal effect, validity or enforceability solely because its formation, creation or delivery involved the action of one or more electronic agents, so long as the action of any such electronic agent is legally attributable to the person to be bound.

Provision is made for a limited exemption to federal preemption of state law so that a state law may modify, limit or supersede the above provisions if, subject to certain exceptions, that law is an enactment of UETA discussed above or if certain other specified circumstances apply. The question of whether the Federal statute preempts states digital signature legislation has been the subject of some debate among the cognoscenti and awaits some case law to resolve the issue. The Act does, however, clearly preempt any state law requiring contracts or signatures to be in non-electronic form.

## Contract Formation by Shrink-wrap and Click-wrap Agreements

Questions arise as to the effect and enforceability of shrink-wrap and click-wrap agreements. The former are typically agreements printed on a box in which software is sold and the opening of the box, the use of the software or the failure to return the product to the point of sale is deemed to constitute acceptance of the terms set out.<sup>73</sup> The latter are terms set out on a web page or something similar in which the other party is requested to indicate acceptance of the terms set out by clicking on a box on the screen. Shrink-wrap licenses have met with varying reactions by the courts.<sup>74</sup> In any case, it is clear that such contracts can be regarded as contracts of adhesion. In principle, there is nothing wrong with such contracts. However, the courts have a tendency to look at such contracts more strictly than those that have been freely bargained for when it comes to application of rules relating to unconscionability. Section 2-302 provides that courts may decide not to enforce any contract or clause in a contract that is found "to have been unconscionable at the time it was made."<sup>75</sup>

The courts have had fewer problems with click-wrap licenses, although these again have some elements of a contract of adhesion since there is no scope for individual bargaining. Click-wrap agreements are often included in software downloads and are present on many websites. They contain proprietary rights provisions which state that the information contained in the licensed software cannot be copied or disclosed without the licensor's

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<sup>73</sup> There are, however, certain specific provisions relating to issues of wills, codicils, testamentary trusts, other features of family law, court orders, notices or documents, notices by utility services, termination or cancellation notices relating to health insurance or life insurance, recalls of dangerous products and documents relating to the handling of hazardous materials, pesticides or other toxic or dangerous materials.

<sup>74</sup> The term "transaction" is defined as being an action or set of actions relating to the conduct of business, consumer or commercial affairs between two or more persons

<sup>75</sup> The doctrine of unconscionability is a basis by which a party to an otherwise enforceable sales agreement may avoid that agreement. Although UCC Article 2 does not include a definition of unconscionability, Official Comment 1 to 2-302 states:

The basic test is whether, in light of the commercial background and the commercial needs of the particular trade or case, the clauses involved are so one-sided as to be unconscionable under the circumstances existing at the time of the making of the contract.

permission <sup>76</sup> and prevent the licensee from selling or otherwise disposing of his/her copy of the software. This may extend to further limit the licensee's right to decompile or disassemble the program for any reason, or to copy any part of the program. By including these terms in "click-wrap" agreements, licensors can offer more protection for propriety information than is afforded under the Copyright Act and sometimes federal and international intellectual property laws. <sup>77</sup>

Unlike "shrink-wrap" agreements, "click-wrap" agreements present the consumer with a choice. The consumer is free to read the terms of the license and decide whether he/she wants to abide by its terms. Because "click-wrap" agreements are interactive, and demand a response from the consumer, they are enforced.

Because of the common use of "click-wrap" acceptances of offers in the field of the supply of information over the Internet, the Uniform Computer Information Transactions Act (UCITA which is discussed in more detail below) contains some specific provisions that are relevant. Click-wrap contracts are enforceable under the UCITA if three requirements are satisfied. First, the licensee must have reason to know that additional contract terms will be proposed after the initial agreement. Second, the licensee must be given the right to return the product at the licensor's cost. Third, the licensee must be compensated for reasonable costs of restoring the system if it is altered by the installation of license terms for review. The same standard of "manifesting assent" applies as for all other licenses under UCITA.

Until UCITA is enacted, there are certain steps now that the on-line licensor can take in order to maximize the probability that a "click-wrap" licensing agreement will be enforced. First, the agreement should present the term of the license in a manner that will attract the licensee's attention and it should also be made very clear to the licensee that he or she is

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<sup>76</sup> Zackary M. Harrison, "Just Click Here: Article 2B's Failure to Guarantee Adequate Manifestation of Assent in Click-Wrap Contracts," 8 *Fordham Intell.Prop. Media & Ent. L.J.* 907, 910 (1998); see also *Thomas H. Watkins and Lisa O. Laky*, *Internet Issues for Lawyers*, 547 *PLI/Pat* 899, 903 (1999)

<sup>77</sup> *Id.* at 909-911

required to read the license terms. <sup>78</sup>Second, the licensee should be required to affirmatively accept the license terms by clicking an "I Accept" or "I Agree" button and should also be given the option of rejecting the terms and canceling the software installation or download. Third, the agreement should ask questions to ensure that the licensee has the authority and legal capacity to accept the agreement terms. Finally, the licensee should not be permitted to install the software without accepting the license terms.

#### **4.7 Electronic Records as Negotiable Instruments**

Article 3-104 of the Uniform Commercial Code defines a "note" as being a negotiable instrument in the form of a written undertaking to pay money signed by the person undertaking to pay. An acknowledgment of an obligation by the obligor is not a promise unless the obligor also undertakes to pay the obligation. The Electronic Signatures in Global and National Commerce Act provides that any such promise made electronically that relates to a loan secured by real property may be treated as a "transferable record" if the issuer of the record expressly agrees. Transferable records may be executed using electronic signatures. Under the Act, a controller of a transferable record as defined above is in the same position as and has in general the same rights and defenses as a holder on due course of a paper negotiable instrument. It is, however, expressly provided that delivery, possession and endorsement are not required for these provisions to apply.

The "controller" of a transferrable record is defined as being a person who a system employed for evidencing the transfer of interest in the transferable record reliably established as the person to whom the transferrable record was issued or transferred.

#### **4.8 Contracts Relating to the Supply of Computer Information**

As noted above, the National Conference of Commissioners on Uniform State Laws has proposed a model law covering contracts for the supply of computer information - the Uniform Computer Information Transactions Act (UCITA). To date, Virginia and Maryland are the only two states that have adopted the UCITA. Originally, it was envisaged that much of what has become UCITA would form a new Article 2B of the Uniform Commercial Code, but late in the proceedings, it was found preferable to draft a separate model law.

The UCITA defines a "computer information transaction " as "an agreement ... to create, modify, transfer, or license computer information or information rights in computer information or informational rights in computer information." "Computer information" is defined as "information in electronic form which is obtained from or through the use of a computer or which is in a form capable of being processed by a computer." The term is specifically stated to include a copy of any information and any documentation or packaging associated with the copy. "Informational rights" means "all rights in information created under laws governing patents, copyrights, mask works, trade secrets, trademarks, publicity rights or any other law that gives a person, independently of contract, a right to control or preclude another person's use of or access to the information on the basis of the rights holder's interest in the information."

Contracts covered include those to license software, create a computer program, distribute information on the Internet, and gain access to online databases. Mass market transactions include all consumer contracts as well as transactions involving other end-users if the transaction is directed to the general public or conducted under terms consistent with an ordinary retail transaction. All transactions and licenses are limited by unconscionability, fundamental public policy, and express agreements between the parties.

There has been some discussion as to whether some aspects of UCITA may be preempted by the Federal Copyright statute. Under this, copyright certainly exists for compilations of data as long as there has been some element of creativity about the selection or organization of the data. Section 301(a) of the Copyright Act preempts any "legal or equitable rights that are equivalent to any of the exclusive rights within the general scope of copyright." However, the better view seems to be that the two are complementary, one relating to whether or not rights exist and the other to how they may be used.

As might be expected from its history, the UCITA has much in common with Article 2 of the UCC, including the basic approach that its role is to provide default rules that the parties can, if they wish, modify or ignore to meet their particular circumstances. The

UCITA deals with this issue specifically in Section 104, which provides that for contracts falling within its ambit "the parties may agree that this Act, including contract-formation rules, governs the transaction in whole or in part or that other law governs the transaction and this Act does not apply."

Interesting features of the UCITA include the following:

#### **4.8 Manifestation of Assent and Authentication**

Section 112 provides that one may assent to a record or term by conduct or by authenticating a record or term with the intent to adopt or accept it. In both cases, however, it is necessary that the party who is to be bound by it must have knowledge of or the opportunity to review the record or term in question. Certain rules prescribe what is meant by having an opportunity to review the relevant record or term. Additionally, for transactions involving the Internet, Section 211 provides that the requirement to provide an opportunity to review terms may be met by, before the earlier, the user obtaining the information requested or being obligated to pay:

(A) Displaying prominently and in close proximity to a description of the computer information, or to instruction or steps for acquiring it, the standard terms or a reference to an electronic location from which they can be readily obtained or

(B) Disclosing the availability of standard terms in a prominent place on the site from which the computer information is offered and promptly furnishing a copy of the standard terms on request before transfer of the computer information.

Sections 107 and 108 provide that authentication may be effected electronically, including by an electronic agent as is provided for in the UETA but go on to provide that:

Authentication may be proven in any manner, including a showing that a party made use of information or access that could have been available only if engaged in conduct or operations that authenticated the record or term.

The effect of this is seen, for example, in Section 201 (UCITA's Statute of Frauds provision), where it is provided that enforcement of certain contracts requiring payment of a contract fee of \$5,000 or more may require that the party against which enforcement is sought, authenticate a record sufficient to indicate that a contract has been formed.

#### **4.9 Choice of Law**

Section 109(b) provides:

In the absence of an enforceable agreement on choice of law the following rules determine what jurisdiction's law governs in all respects for purposes of contract law:

- (1) An access contract or a contract providing for electronic delivery of a copy is governed by the law of the jurisdiction in which the licensor is located when the agreement is made;
- (2) A consumer contract that requires delivery of a copy on a tangible medium is governed by the law of the jurisdiction in which the copy is or should be delivered to the consumer;
- (3) In all other cases, the contract is governed by the law of the jurisdiction having the most significant relationship to the transaction.

#### **4.10 Formation of Contracts by Electronic Agents**

Section 206 provides:

A contract may be formed by interaction of electronic agents. If the interaction results in electronic agents engaging in operations that under the circumstances indicate acceptance, a contract is formed, but a court may grant appropriate relief if the operations resulted from fraud, electronic mistake or the like.

Similarly an electronic agent may also form a contract with a human.

#### **4.11 Mass Market Licenses**

Under Section 208 of UCTIA, one can, in general, adopt the terms of a record, including standard forms by, for example, manifesting assent. This provision is, however, modified

for mass market licenses to provide that such adoption only occurs if the assent is manifested before or during the party's initial performance, or use of, or access to the information. Additionally, terms are not part of the license if unconscionable, preempted by federal law or contrary to public policy.

#### **4.12 Electronic Errors**

Under Section 214 UCTIA, consumers, but not persons involved in B2B transactions, may be excused from the consequences of electronic error in an automated transaction if no reasonable means to detect and correct or avoid the error is provided. To do this, however, the consumer must not have used or received any benefit from the information that was supplied as a result of the error and must promptly notify the other party of the error and deliver up or act, pursuant to reasonable instructions, to another person or destroy all copies of the information in question.

#### **4.13 Warranties**

The warranties under the UCITA are similar to those relating to the sale of goods under the UCC. Although the UCC's warranty of title becomes a simple warranty when the licensor of information is a merchant, "the information shall be delivered free of the rightful claim of any third person by way of infringement or misappropriation" unless the licensor is operating in accordance with detailed specifications provided by the licensee.

#### **4.14 Electronic Self-Help**

Two provisions of the UCITA which have been subject to criticism as possibly making life easier for hackers, relate to the authorization of means for enabling licensors to disable computers at a distance if the contract is terminated. Some computer software experts have expressed the view that the incorporation of a code to permit this in original downloads of information would provide additional ways for unauthorized intrusion by others. The provisions in question are Sections 605, 815 and 816.

Section 605 authorizes the supplier of computer information to include an automatic restraint in the information or a copy of it and to use that restraint to prevent misuse of the information supplied if:



- (1) a term in the agreement authorizes the use of the restraint;
- (2) the restraint prevents a use that is inconsistent with the agreement;
- (3) the restraint prevents use after expiration of the stated duration of the contract or a stated number of uses; or
- (4) the restraint prevents use after the contract terminates, other than on expiration of a stated duration or number of uses, and the licensor gives reasonable notice to the licensee before further use is prevented.

Any such automatic restraint must not prevent the user from using his own or some other person's information as long as this is accessed without use of the information supplier's information or informational rights. However, the information supplier is not to be held liable for any loss caused to the user by any permitted use of an automatic restraint.

#### 4.15 Conclusion

E-commerce is a reality and as the UCITA suggest the only to ensure free and fair competition across the board is if there are Uniform Laws or a convergence of laws at a given point .

#### Recommendations for the East African legal systems use of Information and technology<sup>79</sup>

Assemblage of electronics and telecommunications proclaims that knowledge is universal and it is nobody's domination any more. One has to wait and see the creation of the revolutionary technology of the twentieth century.

The day is not far, when a Judge sitting in a courtroom will be examining the case records on the flat screen of the computer laid on his tabletop. On touching buttons of the computer the Judge will be able to turn pages of the case records, documents, video record the evidence, of the witness and record arguments advanced by the counsel, hurt for the case references and citation of different decisions and on conclusion of the hearing of the case deliver his order or judgment by dictating to the microphone attached to the

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<sup>79</sup> See recommendations by Sri A.C.Upadhyay, Registrar General(ex), Gauhati High Court ;[www.legalfiction.com](http://www.legalfiction.com), which are very popular and useful for probing legal solutions

computer with the help of Voice Recognition Software. A certified copy of the judgment or order delivered by the court can be obtained on line on the website or in the certified copy counter of the Court

Its only a question of time, when Hon'ble Judges of the Supreme Court sitting in e-Court room at Delhi in front of life size LCD projector screen will be able to view the learned counsel advancing arguments at e-Court Bench of the Supreme Court of India, stationed at Guwahati. Similarly, Learned Counsel at e-Court Bench of the Supreme Court at Guwahati will be replying to the queries of the e-Court of the Supreme Court, on a life size LCD projector screen.

All these may hear like excerpt from a science fiction, but the advancement Information Technology has established ardently that speed and accuracy is bound to radically change the future of the civilization.

The fundamental principle behind justifying the existence of any judicial system is to ensure dispensation of justice at the earliest opportunity. In a democracy like ours, Judiciary plays significant role in adjudicating the rights of the litigant public. It has been established beyond doubt that with the help of Information Technology the process of dispensation of justice can be made easier, more convenient, accurate, less time consuming, less expensive involving lesser manual labour. Introduction of Information Technology in court management has reduced the movement of files and records attended by transparency in the entire system of administration of justice.

Needless to say, to accomplish an attractive outcome with the use of Information Technology, keenness of Officers of the court is an essential pre-requisite.

Judiciary in India is caught in a vicious cycle of delays and backlogs. As a matter of fact backlog of cases causes frustrating delay in the adjudicative process and at the same time, backlog of cases causes frustrating delay in the adjudicative process and at the same time, backlog puts extreme pressure on the existing process of adjudication. This development grows on with no noticeable solution just around the corner.

The reason for delay in the administration of justice is both systemic and subjective, which may be a result of adversarial or accusatorial character of the civil process practiced in our justice system, which, it is said, provides wide maneuvering power to the lawyers. Slow service of summons further slow down the process, which effectively stays the trial and delays and disposal. Interim relief, injunctions and orders delay the hearing of the main issues. The lack of resistance on adjournment and reluctance to limit adjournments on the pretext of heavy workload perpetrate laws delay. Long drawn out process of litigation may financially benefit the 'gensde-robe' as well as profit the vested interest of the concerned parties, but the disposal of litigation is delayed. Sometimes, interlocutory orders and appeals may also fragment the main case into many parts and ultimately delaying the disposal. The system and the statute also grant abundant scope for frequent amendments of the plaint and written statement. Statutory non-compulsion to use pre-existing rules and

orders to expedite the trial, coupled with absence of accountability, give advantage to conduct the case the way it suits one's own interest. There is no scope for client-to-client interaction; thus any possibility of alternative dispute resolution is virtually nipped in bud. Failure of the parties to present witnesses sometimes is deliberate to delay disposal. Inadequate administrative and logistic support system for the Courts with huge workload on the shoulders brings down the administration of justice to a screeching halt.

Addressing a batch of subordinate court Judges in a refresher course organized by the Tamil Nadu State Judicial Academy, Hon'ble Mr. Justice K.T. Thomas, former Judge of the Supreme Court of India said, "people in Mumbai were seeking not the assistance of law courts to settle the disputes but the help of the mafia. These, he said, were distant hoof beat of a forthcoming danger and do not mistake the hoofs for those of Zebras, but they are the sounds of incoming militancy of horses". Hon'ble Mr. Justice Thomas noted in his speech that computerization provided the only suitable solution to the problem of backlog of cases.

Good court administration is an essential prerequisite for quick disposal of litigation. A good court administration has been described in many different ways. In simple terms it may be explained to imply :

1. Efficient record-keeping and systematic filing of the cases with the help of computers.
2. Computers supported subject wise classification of cases.
3. Monitoring of cases on the basis of the stages they have reached with the help of computers.
4. To identify dead cases in order to prevent the clogging of other schedules.

Well-organized court administration is indispensable for orientation and control over pending cases. Court administration is required to help the court instantly with any information it needs for effective case management. Court staff equipped with modern technologies like Information Technology is indispensable for good administration.

Information Technology needs of the Judges are diverse. A Judge would like to know the judgments in cases similar to the one he is going to take up, delivered by his court or any other superior court. If the information is available in his personal computer or laptop he can prepare himself easily before coming to the court. If such information were stored in computer the judge would be able to get a list of precedents on the touch of a button without consulting the librarian or the books. This helps the Judge to deliver judgments and orders without deviation from the established law.

With the help of Voice Recognition Software a Judge can dictate a judgment to the computer, which will directly convert such dictation into a readable language. This will not only minimize dependence on staff of the court but also save time.

In the subordinate courts, the Judicial Officer need to record evidence of the witness in presence of under-trial prisoners. On many occasions, criminal trials get adjourned for absence of the under trials in the court for want of security escorts from jail resulting in unnecessary and avoidable adjournments. Here again, application of video conferencing facility, from the court to the prison where the under-trials are housed, will be able to take care of the problem. Video conferencing service will not only help in avoiding unnecessary adjournments of cases but also save lot of money on transportation.

A computer placed on the tabletop of a judge will also help to balance the number of cases on a particular date on the touch of a button. A Judge may also like to record important piece of the arguments advanced by a counsel through audio visual system, this will enable the judge, to remember the arguments, while dictating the judgments.

Information Technology will be equally useful for the legal professional. Fresher in the legal profession will not have to strive hard to learn the intricate procedure followed by the courts in filing case. Rules of filing may be made available in the website and the new comers to the profession will be able to guide themselves with the information available in the website. After the petition is submitted in the filing counter, a lawyer does not have to wait to see the case number, he may collect the case number and other details of listing by browsing any of the website of the court or the "Kiosks" placed inside the Court premise.

An advocate will only be able to easily excess the next day's cause list, on the Web, at the end of the day, but also will be able to sort out cases where he is appearing as an advocate. When an advocate visits the court, for advancing arguments, he can avoid carry huge volume of books for the purpose of citing relevant decisions in the court, instead he will easily carry a floppy in his pocket and argue his case by attaching it to his Laptop computer whenever necessary. This will not only be of assistance to the advocate but may change the complexion of the arguments in the court. An advocate will be able to see the order passed by the court on the website and will be able to obtain a certified copies without really applying for it and waiting for a week to 10 days to receive the certified copies. Information Technology will be able to make it possible. In this way, it is apparent that the Information Technology will be able to make it possible. In this way, it is apparent that the Information Technology will be of immense help to an advocate.

Information Technology needs of registry of the courts are numerous. In the filing counter, court fees can be automatically calculated with the help of computer. The filing clerk will be able to calculate the time limitation of the case presented before him for registration with the help of the computer installed in the filing counter.

When a case is free from filing defects, computer will register automatically basing on the existing procedures. Information Technology will not only reduce much of the work of the registry, but it will also speed up the filing process for the benefit of the advocates and thus lessen the job of the registry.

The computers can allocate listing of the cases automatically to various courts depending on the subject category and the availability of courts on a given day. Information Technology tools will generate cause lists automatically and send it to the advocates by electronic mails or make it available on the web for providing easy access to the advocates and litigants.

Thus, the Registry will be behind the screen and serve the information needs of the advocates and the litigants in a more efficient manner. Information Technology can help the registry in maintaining the mandatory records in the form of hard copies as well. It will also be able to generate the required status information of pending and disposed of cases for answering Parliament/Assembly questions.

In the High Court, computer generates cause list automatically, in consequence manual intervention is eliminated ensuring publication of cause list in time without any irregularities, strictly in chronological order.

All cases having the same law point(s) to be decided by the courts can be bunched/grouped and posted before one Bench for disposal with the help of Information Technology. This will help the courts to expedite disposal of cases.

When information is in the computer, it will become simpler to recall dismissed cases when review petitions are filed. Information Technology will lend a hand to the registry of the court, in streamlining its day-to-day activities, which is one of the intents of the Court management.

If all the judgment of the courts can be made available in the computer, it will not only save a lot of time for judges and advocates in locating precedents, but also save a lot of space in maintenance of a law library. Even an ordinary litigant also will be able to find out precedents on his own.

Cause lists of the court are made available on interned in such a way that advocates can generate their own cause list consisting of their own cases, thus avoiding them to go through hundreds of pages of the cause list to locate cases. If for any reason advocates name is not appearing in the cause list, retrieval can be made through the name of either the petitioner or the respondent. It is also possible to generate and print 'court-number-wise,' Judge wise' cause list or the entire cause list if required. As the computer application is available on Interned almost immediately after court hours, a litigant public also can easily find out whether his case is coming up for hearing or not, without bothering the advocates. Once the system is perfected and reliance is established the Registry of the court may consider reducing the generation of copies of cause lists, as most of the advocates will be dependent on the Interned version of cause lists. It will save good amount of money and valuable time for everyone connected with the court management.

When daily orders are made available on Internet, litigant can have access to the signed orders from their own place. It will enhances confidence in the judicial process and save a

lot of time and expenses on traveling to the court to obtain a copy of the order. The Government of India is actively considering to provide computer hardware to all the courts in India with back up facility equipped with terminals and printers. In the process all court rooms will be connected on LAN( Local Area Networking). In the mean time, in some High Courts' judgments and orders are available on Internet. In most of the High Courts generation of cause lists and positing of cases to various courts is done by the computer system without human intervention. Bunching or grouping of cases is easily done by the computer. Court fee and time limitations are calculated automatically. In some of the High Courts the computer also generates usual notices. In computer based filing counters filing receipts are generated for reference of advocates. Query counters are connected either on Internet or NICNET. Most of the High Courts ever have FTDMA/IPMV-sat - based Internet connectivity.

The impact of the computerization process and Information Technology in court management has streamlined and modernized Registries' day-to-day work.

The process of computerization has started in the subordinate courts in India. Some of the District Courts are now able to generate cause list, store judgments on computers, generate notices automatically, generate certified copies, monitor case flow, post cases in a transparent way, assist in caveat matching, access e- mail and internet and help litigants get case status information from query counters.

In the Districts courts, computerization has provided transparency of information to the litigants and advocates. It has helped the court administration in streamlining the activities of its office. Computers have provided judicial and legal databases to the Districts Judges, which are accessible on the touch of a button of the computer.

All this is not a small achievement in a country like ours. Recently Ministry of Law and Justice Vide its letter No.2933/JSJS/2003 dated 15th December,2003 informed the Registry that the Central Government is preparing a scheme to computerize, within next three months, all city courts in the state capitals or the place where the High Court is situated on 100% granted basis. If this scheme succeeds hopefully all the judicial courts in Guwahati city will be computerized within next three months.

Internet, which is said to be the treasure house of worldwide web is capable of giving any information that is available under the sun. There are websites meant for judges and advocates. Virtual law libraries are available on the internet. 'Find law' is one of the best sites. All the judgments of US Supreme Court, past and present are available in the internet free of charge. In India also such websites are on the way<sup>80</sup>.

## 5.2 Conclusion

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<sup>80</sup> There are web sites like Lexis Nexis, legal 2000([www.orbitinfo](http://www.orbitinfo.com)). Com); Westlaw. [www.lawsearch.com](http://www.lawsearch.com); [www.Lawyers.Com](http://www.Lawyers.Com); [www.briefxchg.com](http://www.briefxchg.com); [www.seamlers.com](http://www.seamlers.com); [www.lawinc.com](http://www.lawinc.com); [www.nic.in/lawmin](http://www.nic.in/lawmin). [www.mylawfirm.Com](http://www.mylawfirm.Com); [www.legalfiction.com](http://www.legalfiction.com), which are very popular and useful for probing legal solutions.

Information Technology revolution is definitely catching up every corner of the globe. The software market is agog with legal data bases like SCC online, JUDIS, Judgments Today, Grand Jurix, Gujarat case laws, Gujarat Code, India Code, Some Important Acts. IT Act. Companies Act, Electronic Dictionary, Electronic Encyclopedias etc. Text of judgments and head notes of the decision of the Supreme Courts easy search facilities are available for fast and easy retrieval of the required law points. We can visualize bookless electronic law library and paperless office in near future.

We can hope and trust that Information Technology, which is said to be the future of human civilization, will surely find a solution to get rid of the scourge of laws delay.

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### Reports

ABA - Committee on Technology and Information Systems report

The Committee was created in 1997 as a successor to the Coordinating Commission on Legal Technology (CCOLT) and is comprised of representatives from a number of Association entities selected by the ABA President to provide guidance and oversight for the Association's technology initiatives.

Bit Law Legal Resource

BitLaw is a comprehensive Internet resource on technology and intellectual property law. In this site, you will find complete copies of the United States Patent, Copyright, and Trademark statutes, as well as the relevant regulations from the Code of Federal Regulations. BitLaw also includes converted versions of the TMEP and MPEP (the office manuals created by the United States Trademark and Patent Offices, respectively). Each of these documents include links to the relevant statutory and regulatory sections. Finally, BitLaw contains a great deal of custom written descriptions of how these areas of the law affect the computer and technology industries.

Computer and Information Technology Law - Definition

Information Technology Law (or IT Law) is a set of recent legal enactments, currently in existence in several countries, which governs the process and dissemination of information digitally. These legal enactments cover a broad gamut of different aspects relating to computer software, protection of computer software, access and control of digital information, privacy, security, internet access and usage, and electronic commerce. These laws have been described as "paper laws" for "paperless environment".



## Statutes

### Computer Security Act of 1987

In 1987, the U.S. Congress, led by Rep. Jack Brooks, enacted a law reaffirming that the National Institute for Standards and Technology (NIST), a division of the Department of Commerce, was responsible for the security of unclassified, non-military government computer systems. Under the law, the role of the National Security Agency (NSA) was limited to providing technical assistance in the civilian security realm. Congress rightly felt that it was inappropriate for a military intelligence agency to have control over the dissemination of unclassified information.

### Cornell Institute for Computer Policy and Law (ICPL)

The EDUCAUSE / Cornell Institute for Computer Policy and Law provides leadership to colleges and universities in developing information technology policies. Founded in 1996 at Cornell University, the Institute incorporates experts from a wide variety of fields, including chief information officers, student judicial-affairs administrators, librarians, attorneys, policy officers, and many others. The Institute supports the professional development of information technology, policy and legal professionals within higher education to facilitate the creation and administration of effective information technology policies. It also monitors and analyzes changes in technology and law to assess the impact of those changes on academic information technology policy.

### Digital Signature Legislation

Legislators and business leaders long recognized that the passage of some kind of digital legislation was of central importance to the development of e-commerce. However, for several years Republicans and Democrats in the U.S. Congress haggled over what should be included in such a bill. In the meantime, several states passed their own legislation allowing some forms of digital signatures to be legally binding in certain situations. When a major piece of national legislation went into effect in 2000, it was heralded as a giant step toward the harmonization of interstate and international laws, and was expected to help propel e-commerce forward in the early 2000s.

### e Sign Laws and Regulations

June 30, 2000 President signed by Clinton the "Electronic Signatures in Global and National Commerce Act" (ESIGN) using his electronic signature ID, and thereby established the validity of electronic signatures for interstate and international commerce.

### Health Information Technology Act of 2009

This bill encourages the use of clinical health care informatics systems and services by offering monetary incentives to health care providers in order to offset the related costs of such technology. It would also seek to develop national standards regarding data and

communication health information technology, working towards the goals of efficient data exchange and improved health care quality while protecting patient privacy and security.

#### National Institute of Standards and Technology - Computer Security Division

The E-Government Act [Public Law 107-347] passed by the 107th Congress and signed into law by the President in December 2002 recognized the importance of information security to the economic and national security interests of the United States. Title III of the E-Government Act, entitled the Federal Information Security Management Act of 2002 (FISMA), included duties and responsibilities for the Computer Security Division in Section 303 "National Institute of Standards and Technology."

#### Uniform Computer Information Transactions Act

#### Uniform Electronic Transaction Act September 1999

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