DIGITAL MEDIUM INTELLECTUAL PROPERTY RIGHTS ISSUES AND ADMINISTRATION OF JUSTICE

(Text of Speech delivered by Justice Yatindra Singh, Judge Allahabad High Court Allahabad on 7th January , 2006 at workshop on Cyberlaws and Cyber Forensics at National Judicial Academy Bhopal)

INTELLECTUAL PROPERTY RIGHTS

1. *'What is worth copying is prima facie worth protecting'*[1] is the genesis of intellectual property rights (IPRs). These rights refer to the property that is a creation of the mind *i.e.* inventions, literary and artistic works, symbols, names, images, and designs used in commerce. It is broadly divided into two categories:

- Copyright, which includes literary and artistic works such as novels, poems and plays, films, musical works, drawings, paintings, photographs, sculptures, and architectural designs. It is in a description of a thing.
- Industrial property, which includes inventions (patents), trademarks, industrial designs, and geographic indications of source.

2. In India, IPRs are protected under the following different Acts namely,

i. The Biological Diversity Act, 2002.
ii. The Copyright Act, 1957.
iii. The Design Act, 2000.
iv. The Geographical Indications of Goods (Registration and Protection) Act, 1999.
v. The Patents Act, 1970.
vi. The Protection of Plant Varieties and Farmers' Rights Act, 2001.
vii. The Semiconductor Integrated Circuits Layout Design Act, 2000.
viii. The Trade Marks Act, 1999.

3. Apart from the aforesaid Acts, IPRs are also dealt with in two more areas namely undisclosed information or Trade Secret and the Indian Contract Act. The Contract Act does not deal with IPRs directly. It is a law dealing with contracts. However IPRs are also subject to contracts and licenses. It is in this sense that IPRs are governed by the Contract Act.

4. IPRs in digital medium are affected by the following areas:

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[1] Paterson J in *University of London* v. *University of Tutorial Process Ltd*., 1916 (2) Ch 601

(i) Trademarks
(ii) Copyright
(iii) Patents
(iv) Undisclosed Information or Trade Secret
(v) Contract
(vi) Layout - designs (Topographies) of Integrated Circuits

5. The first two have an impact on issues arising on the Internet. The second to fifth one five have relevance so far as computer software is concerned. The last one has relevance in relation to computer hardware.

INTERNET

6. In the 1970's, Vint Cerf and Bob Kahn figured out a way of splitting information into small "packets" and sending it from one computer to another in such a way that the packets could be put back together when it reached its destination. This method of splitting information into packets and putting them back together again is called Transmission Control Protocol (TCP). This process can be carried out even if there is a network of computers because every computer has an address called an Internet Protocol (IP) Address, which is made up of numbers separated by dots, and a packet is like a postcard with the address of the sender as well as of the person to whom it is being sent. A computer in the network would figure out whether it has been sent to it or not and if it is not sent to it then it will pass it on in the direction of the computer to which it is being sent. This way of getting a packet to its destination is called Internet Protocol (IP).

7. A network of computers may be closed or may be connected to other networks and other computers. Internet is a global network of all networks and computers—a universal/ global network—capable of transmitting communication or retrieving information.

WORLD WIDE WEB (THE WEB)

8. Tim Berners Lee was at CERN, European Nuclear Physics research laboratory, which had different computers with different programmes running on it. In the late 1980's, Lee thought about linking information available on different computers in use at CERN so that it would look like a one information system that every one could read. This led to the World Wide Web (the Web).

9. HyperText Markup Language (HTML) is a language for encoding documents. One of the advantage of writing a page in HTML is that a hyperlink (or link) can be provided to another web page. Every document or site or resource has a unique address called the Uniform Resource Locator (URL). The link may be provided embedding the URL of the other site/page. It is a piece of text that is differentiated from the regular text by a special colour (usually blue) or special formatting (such as underlining). By clicking a mouse or other pointing device on a link, one can view the contents or go into other site referenced by that link. This transfer or retrieval of information takes place according to the hypertext transfer protocol (HTTP). These pages are in a way linked with one another forming a web; they can be anywhere in the world. It is for this reason that this method is aptly termed as the World Wide Web (WWW) or the web. Lee did not invent the hypertext or any other thing; he put them together to form the Web.

10. This technology was developed at CERN and was its IPR. On April 30, 1993 CERN's directors declared that WWW technology would be freely available to be used by anyone, with no fees being payable to CERN. This decision - much in line with the decisions of the earlier Internet pioneers to make their products freely available - was a visionary and important one. There are many ways of communication and retrieving information on the Internet. The web is one of the methods but the decision to make www technology freely available, has led 'the Web' to be the most powerful and used form of communication and retrieval of information on the Internet. It is so common that we often think that the web and the Internet are one and the same.

LINKING

11. A browser is a programme for viewing pages on the Internet. In the 1990's browsers were developed to utilise the Web technology. The linking of one web page to another Web page is the essence of the Web. It enables a Web surfer to connect to other Web pages and retrieve information within seconds. The first page of a web site is called the Home page, which often contains a menu to go to different information available on that site. If the hyperlink is to the home page, it is called linking and if it is to a page inside a Home page, it is called deep linking.[2]

[2]It is interesting to note that British telecom has claimed patent over linking technology and has filed a suit against Internet Service providers in the US against its infringement.

12. The publication of a site on the World Wide Web is almost universally regarded as tantamount to an implied license to link by any other site.[3] Linking to a site without obtaining prior permission is not only an unquestioned practice, but is even considered to be an advantage to the linked-to site. Advertising is a primary source of revenue for the web site operators and advertisers pay according to the number of hits or number of times a site is visited. Linking may not amount to a copyright infringement.

13. However an English court granted an interim injunction in *Shetland Times* v. *Dr. Jonathan Wills and Zetnews Ltd.* In a case relating to linking. This case was later mutually settled. A Danish court in July 2002 has also granted an injunction in favour of the Danish Newspapers Publishers' Association banning news feed service Newsbooster from deep linking to newspaper stories. An appeal against the decision is pending. Let's consider another type of linking known as the 'image' (or IMG) linking.

IMG Linking

14. IMG linking makes use of 'in-lined' images. In-lined images are graphics that are visible on the screen as part of a Web document's main body (as opposed to being within a separate window), but which originate at a source other than the site that stores the document being viewed. Thus in an IMG link, the images (minus the text contents) originating on one website may appear as part of the other web page. If there is a copyright or trademark in those graphics then difficulties will arise and it may be illegal.

DOMAIN NAME DISPUTE

15. Every information or resource on the web has an address. This is called Uniform Resource Locater (URL). One can reach that resource/page/site/information by typing its URL on the browser. The URL of the Yahoo website is http://www.yahoo.com. The first element of a URL is the 'transfer protocol'. On the Web, this is almost invariably 'http'. The last three alphabets on the right side (.com in this example) are called the 'top-level domain' (TLD). It

[3]Tim Burners Lee is credited with the invention of Hyperlink. According to him, 'There is no reason to have to ask before making a link to another site'. He once received an email message asking for permission to link to his site. He declined on the ground that permission was not needed.

stands for commercial. There can be other TLDs like '.edu' reserved for educational institutions, '.gov' is the TLD reserved for government entities, and '.net' is the top-level domain reserved to networks. Countries also market two letters Country Code Top Level Domains (ccTLD) reserved for them for use of business and companies in that country.

16. The resource/page/site/information is available on the computers that are permanently attached to the Internet; they are called servers. They also have an address. It comprises four groups of numbers separated by decimals. It is called the 'Internet Protocol Address' (IP address). The URL of a resource has to contain the IP address also but it is hard to remember the IP address as it is numeric. The Domain name system (DNS) makes it easier to remember by allowing a familiar string of letters (domain name) to be used instead of the arcane IP address. It is a mnemonic device to make the addresses easier to remember. In Yahoo's case, the IP address of the host where the site is hosted is 66.94.230.35; its domain name is yahoo.com and they correspond to each other.

17. Earlier, one domain name used to point to one and only one IP address. However with the increase in use of the Internet, websites have also increased the number of their servers to facilitate access. These servers contain same information and provide the same services however their IP addresses are different. In such a case one domain name will point to many IP addresses. A server may host more than one website and in that case another domain name may also have the same IP address. Is the use of a domain name that is a trademark or the popular name of another, illegal?

18. The question whether one can use the trade name of another as a domain name has arisen in India. The Bombay and Delhi High Courts (see below)[4] have taken the view that the domain name serves the same function as a trademark and is not a mere address or like finding a number on the Internet and, therefore, it is entitled to the same protection as a trademark. They have granted injunctions restraining the defendants from using names similar to the plaintiffs' trade names as their domain names.

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[4] *Yahoo! Inc*. v. *Akash Arora*, 1999 DLT 285. *Rediff Communication Limited* v. *Cyberbooth*, AIR 2000 Bom 27.

19. The other question involved in the above mentioned cases, whether there can be a trade mark in respect of services, may not arise in future as the Trade Marks Act 1999 now specifically incorporates ‘services’ {section 2(zb) of the Trade Marks Act}. It was not there in the Trade and Merchandise Marks Act, 1958. The other important change in the Trade Marks Act from the older Act is a wider and detailed provision defining what constitutes infringement (section 29 and 30). These amendments have been made in view of article 15 and 16 of the TRIPS. In India infringement of trademark (like that of copyright) is a penal offence and civil remedies of injunction and damages are also available.

20. The question 'whether the trade name of another can be used as a domain name or not has' now been settled by the Supreme court in the M/s Satyam Infoway Ltd vs. M/s Siffynet Solutions Pvt. Ltd: JT 2004 (5) SC 541 (*SatyamInfoway* case). It has affirmed the view of the Bombay and Delhi High Court. The Supreme Court held,

- A domain name distinguishes trade or service to the Internet users. A domain name has the characteristics of a trademark and can lead to an action of passing off.
- Similar domain names may be a ground of complaint and similarity of the domain names is to be decided on the possibility of potential customers being deceived by them.
- The defenses available against a complaint are also similar to those available against an action of passing off under the trademark law.

Uniform Domain Name Dispute Resolution Policy (UDRP)

21. At present, the Internet Corporation for Assigned Names and Numbers (ICANN) is responsible for managing and coordinating the DNS to ensure that it continues to function effectively by overseeing the distribution of unique numeric IP addresses and domain names. ICANN has introduced seven new extensions namely, .aero, .biz, .coop, .info, .museum, .name, .pro. A company or organization, called registry, under contract with ICANN manages TLDs. But they do not sell domain names to the public, that task is handled by other accredited companies, called registrars, who collect a fee for each name and pay a portion of it to the registry.

22. ICANN has provided a procedure to resolve domain name disputes. It has come out with a Uniform Dispute Resolution Policy (UDRP). It is applicable to the existing TLDs as well as to the seven newly proposed TLDs by ICANN. It is also applicable to those ccTLDs who have accepted the UDRP. India has been given .in ccTLD; we have also accepted UDRP. This policy is incorporated in all agreements with the registrars and all persons who have obtained domain names. It sets out a legal framework for the resolution of disputes between a domain name registrant and a third party (*i.e*. a party other than the registrar) over the abusive registration and use of an identical or confusingly similar domain name. In case of a complaint, the dispute is compulsorily referred to a service provider but the decision by them is not final and the aggrieved person can go to a court of law.

Cyber Squatting & Typo Squatting

23. 'Cyber-squatting' is the registering of sites with famous names in the hope of selling them at a profit. 'Typo-squatting,' is using a minor variation of its name to divert customers who mistype it. These practices are illegal.

24. Air France has a website www.airfrance.com. Alvaro Collazo, a Uruguayan owner has another website www.arifrance.com, Air France raised a dispute that he was guilty of 'Typo-squatting'. WIPO, a service provider under UDRP, in July 2003 held that the use by Collazo of a 'typographical misspelling' of the Air France trademark showed that he had registered his site in bad faith, to create confusion and make money by offering links to other commercial domains. Other 'typosquat' sites held illegal by a service provider include www.nasdasq.com, a corruption of the New York Stock Exchange's nasdaq.com, and www.wallsreetjournal.com, dropping only a "t" from the name of the global business newspaper.

METATAGS AND KEY WORDS

25. Information is retrieved on the Internet with the help of search engines. They locate Web sites that match the user's particular area of interest. It is done by typing a keyword query into the search engine, and the programme searches its database and returns a list of results. The results returned by search engine programmes are a list of hyperlinks related to Web pages. In finding out relevant Web pages, search engines make use of metatags. In this regard legal

complications may arise in two different ways. But before we discuss the legal complications, let's understand what a meta-tag is.

26. We come across different kinds of tags in our daily life; they could be identification or name or price tags. They provide key information about the things that they are attached to. Similarly tags in HTML offer a small piece of information/instructions about how the content of a web page may appear. It is mentioned within angled brackets i.e. in the following sentence:

<B>This is boldfaced</B>

B stands for bold and <B> is a tag that shows from where boldfaced letters are to begin. Ending tags are preceded by / and </B> show where it ends. Tags are basic text coding techniques in HTML that provide display instructions to the browser as to how that web page should appear.

27. Meta means beyond the ordinary or usual and is sometimes used for anything which is about itself: metatags provide information about the contents on the web page, rather than how the contents of that page should appear. They are information about the information on the web page. They are located within a specially designated portion of the HTML code, which generates the page and are hidden from normal view but are read by search engines.

28. One of the meta-tags is keywords, where one mentions words that describe the contents of the web page. They are read by the search engine, matched with the keywords typed in the search engine and then the page with its link would appear in the search result. One kind of legal complication is the improper use of trademarks belonging to another. If one improperly uses trademarks of others as a metatag to associate oneself with them then this may result in a trademark violation.[5]

29. The other legal complication is a kind of selling of trademarks. Search engines earn revenue through advertisements. These advertisements keep on changing and often appear when a particular topic is searched. If one wants to have information about a product by typing the trade name on to the search engine, then the result may be a hyperlink to the home page or other information

[5]Some of such suits have been filed by Playboy.

about that product. But at this time the search engine may show an advertisement of a competitor. This is because it is so arranged by the site running the search. It is a kind of selling of metatags or improper use of trademark by the site running the search. Courts still have to decide on the legality of these issues.[6]

30. The law is also unclear whether the search engines are responsible to police trademarks in paid search. According to the search engines the advertisers themselves are responsible for the keywords and ad text that they choose to use. However, they are willing to perform a limited investigation and respect reasonable requests to remove trademark terms from the bidding process. Some examples are,

- Google is a search engines. It has been asked by the American Blind & Wallpaper Factory (the Company), an interior decor specialist, over the sale of keyword-advertising within search results that appear on Google. The Company has insisted that Google stop selling keyword phrases that the Company claims violate its trademarks. Google is willing to comply to part of the complaint and says that it could block advertisers from buying keywords that directly infringe on the Company's trademarks, including 'American Blind Factory' and 'Decorate Today,' but is unable to comply to some of the descriptive phrases like 'American wallpaper' and 'American blind', that the Company wishes to protect. In this regard, Google has sought declaration of its liability in a court in November 2003.
- A French court on Dec. 16, 2004 ruled that Google infringed on the trademarks of Le Meridien by allowing the hotel chain's rivals to bid on keywords of its name and appear prominently in related search results.
- Geico is an insurance company. It charged Google with violating its trademarks by using the word "Geico" to trigger rival ads in sponsored search results. Geico claimed that the practice diluted its trademarks and caused consumer confusion. The U.S. District Court for the Eastern District of Virginia granted Google's motion to dismiss this trademark-infringement complaint. The judge said that "as a matter of law it is not trademark infringement to use trademarks as keywords to trigger advertising".

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[6]Two such suits against search engines are,

- Lauder filed a suit against Excite as the advertisement of Fragrance Counter appears when a search for Lauder is conducted.
- Playboy has filed a suit against Excite and Netscape as an advertisement of tease.com appears if search for Playboy or Playmate is conducted.

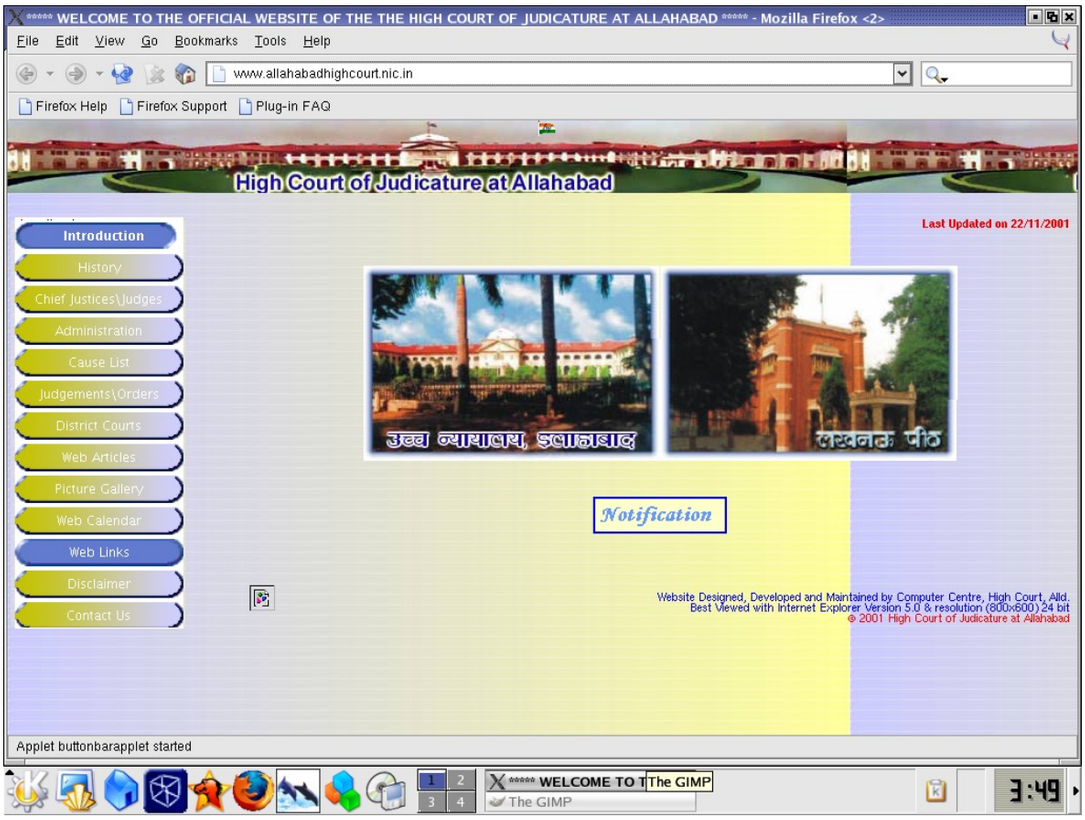
31. Questions also remain about a search engine's responsibility to give trademark holders visibility in search results based on keywords related to their trademarked terms, regardless of payment. Last year, Mark Nutritionals filed lawsuits against Yahoo-owned Overture, AltaVista, FindWhat and Kanoodle for alleged trademark infringement and unfair competition. The outcome of these suits will help in defining law in this area.

FRAMING

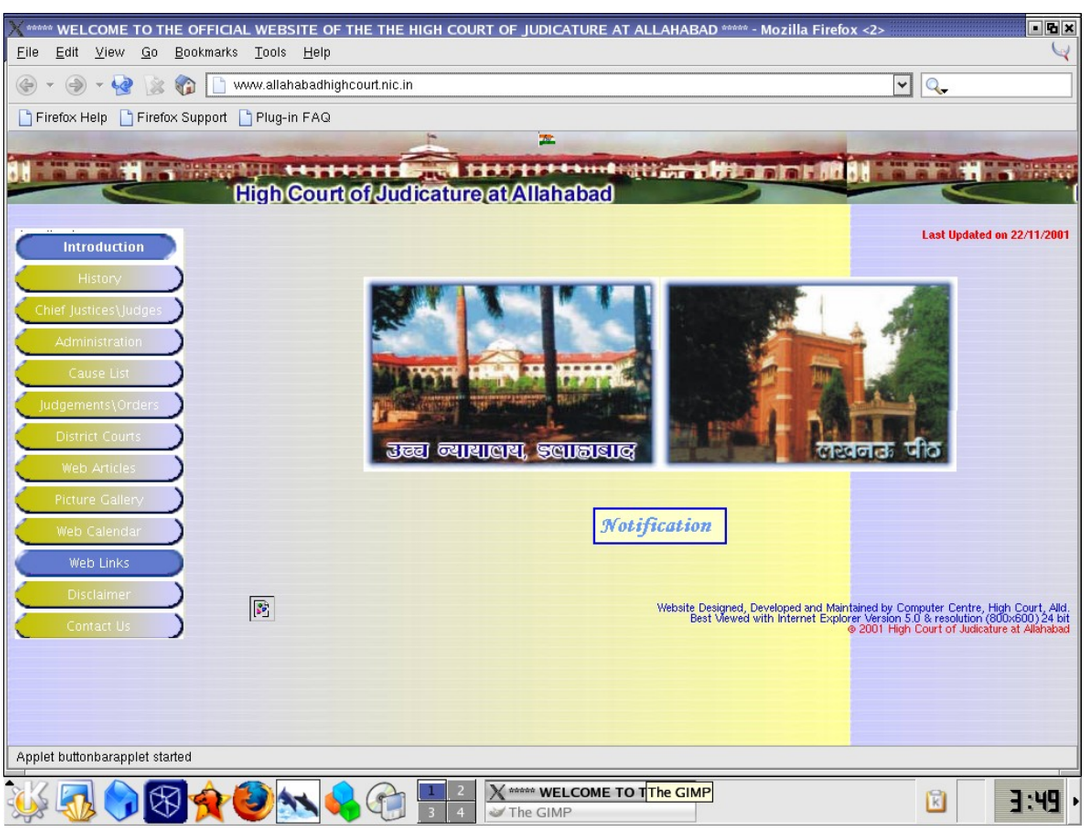
32. Framing is a tool used by some web sites. This tool provides a means for dividing a Web site into separate windows: each window is displayed in a separate portion of the Web browser screen and functions independently to display an individual Web page. This is done by providing links to other sites. A user can view another site's contents within a small area of the initial site, without actually leaving it. Framing is similar to an IMG link - but unlike an IMG link that views graphics only - frames allow the entire site to be viewed on the initial site. This may have the following effects:

- One can see a framed site but the browser's computer does not change the address. It continues to display the address of the initial site. This may confuse some casual Internet users.
- The advertisements appearing on a framed site must co-exist with the ads displayed on the borders of the initial site thereby changing the visual impact of the ads on the framed site.
- It changes the way the framed site intends its materials to appear. This may involve a copyright violation.
- There may be a trade mark violation of the framed site as it is shown on the site of the initial site.

33. Let me explain this with the help of pictures. These pictures show the website of the Allahabad High Court as it was earlier. It is no longer there. The official website of the Allahabad High Court was as follows:



34. The menu is on the left side and one of the tab is 'web links'. If you go into this tab; it used to look like this.



35. If you go into any web-address then it used to look like this. Let's enter into one of the websites namely the website of the US Supreme Court. It used to look like the following picture.

36. Here is the Home site of the US Supreme Court. If you see the web address it is that of the Allahabad High Court and the picture at the top is of the Allahabad High Court. This has not changed. The home page of the US Supreme Court is framed in the Allahabad High Court website. It is no longer there; now framing has been removed and an independent link has been provided.

37. The law in this regard is yet to be settled.[7] But to avoid any liability, one should not frame, but provide an independent link to the home page. In case one has to do it then prior permission may be taken and any liability as to the contents of the framed site should be disclaimed.

[7]One such case was *Washington Post* v. *Total news*. It has been mutually settled.

38. Should a party rush to a court of law for linking or framing violation? There are technological means to stop linking and framing; they are cheaper too. And if a party fails to adopt them then a court may consider this against them while awarding damages. It would be better to adopt technological means rather than to go to a court of law.

PEER TO PEER (P2P) FILE SHARING

39. Indexing of files is necessary before files may be shared. Peer to peer networking and different kinds of indexing methods have been explained by the first appellate court in MGM Vs. Grokster (the Grokster case) (for details see below)[8] as follows:

> 'In a peer-to-peer distribution network, the information available for access does not reside on a central server. ... each computer makes information available to every other computer in the peer-to-peer network.... Because the information is decentralized in a peer-to-peer network, the software must provide some method of cataloguing the available information'
>
> ...
>
> At present, there are three different methods of indexing:
>
> (1) a centralized indexing system, maintaining a list of available files on one or more centralized servers;
>
> (2) a completely decentralized indexing system, in which each computer maintains a list of files available on that computer only; and
>
> (3) a "supernode" system, in which a select number of computers act as indexing servers.'

The *Napster* Case

40. The Napster case was the first to come to the courts in peer to peer networking. Shawn Fanning (high school nickname Napster a reference to his nappy hair) wanted to share the music in his computer with his friends. He thought of developing a software so that the music in one computer could be exchanged with another. No other person thought it to be a good idea. He, still in his teens, left his college to create this software. Now Music in MP3 format can be transferred

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[8] *MGM Studios* v. *Grokster*. Complete text of the judgement is available at http://www.ca9.uscourts.gov/ca9/newopinions.nsf/E9CE41F2E90CC8D788256EF400822372/$file/0355894.pdf?openelement§

with the help of Napster. In order to do it, one has to download it (provided free of cost on registration) and install it in the computer. This enables the computer to log on to the Napster server. When a request is made, the Napster server searches other users online who may have that music file. If there is one then Napster puts both computers directly in touch with each other so that music files can be downloaded. It is P2P file sharing. The Napster server merely puts computers directly in touch with each other but the copyrighted music does not go through its server *i.e.* it does not receive or contain illegal music at any time. It merely permits transfer of music files (MP3 format) from one PC to another PC. Napster is using the first method of indexing namely a centralised server. At one time there were about 25 million Napster users. They could download music files, which might have been the copyright of others, free of cost.

41. Several record companies filed a suit against Napster restraining it from engaging in or assisting others in copying, downloading, uploading, transmitting or distributing copyright protected music without the express permission of its rightful owner. According to Napster it is merely a space-shift similar to a time-shift in the Sony case (for details see below)[9] and it seeks expansion of the 'fair use' doctrine articulated in that case. The District court of the Northern district of California has granted a preliminary injunction against Napster from engaging in or facilitating the copying, downloading, transmitting or distributing of the plaintiffs' copyrighted musical compositions.[10]

42. Napster filed an appeal and obtained a stay order. During the pendency of the appeal it also settled the case with most of the companies by agreeing to pay a

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[9] Sony Corporation had made VCRs (called VTR) that could record TV programmes. This has changed the way we watch TV. One can, with the help of a VCR, record programmes, which may be copyrights of others and see it at a later time. The copyright owners sued Sony Corporation. Their suit was dismissed. Their allegations were,

- Individuals have used the VCRs to record some of the owners' copyrighted works on the TV.
- These individuals had infringed the copyrights and
- Sony Corporation was liable for such infringement because of their sale of the VCRs.

The US Supreme Court dismissed the suit and in *Sony Corporation* v. *Universal City Studios,* 464 US 417 held that:

- The time shift for watching the TV programme for private viewing was fair use and it does not infringe copyright.
- A manufacturer is not liable for selling a staple article of commerce that is capable of commercially significant non-infringing uses.

[10]Complete text of judgement is available at
http://news.cnet.com/News/Pages/Special/Napster/napster-patel.html

fee. The appellate court partly allowed the appeal {Napster- I (239 F.3d at 1027)} and sent the case back. The appellate court held that Napster's products were capable of substantial or commercially significant non-infringing uses and contributory liability could be imposed on Napster only to the extent that it,

- receives reasonable knowledge of specific infringing files;
- knows or should know that such files are available on the Napster system; and
- fails to act to prevent illegal distribution of the copyrighted works.

43. The district court on remand required the record companies to give Napster notice of specific infringing files, and then required Napster to continually search its index and block all files containing the particular works at issue. The record companies appealed, arguing that Napster should be required to search for and to block all files containing any protected copyrighted works, not just those works which the record companies have been able to provide. This order was upheld {Napster-II (284 F.3d at 1095-96)} holding that the plaintiffs have to bear the burden of providing notice to Napster of copyrighted works and files containing such works before Napster has the duty to disable access to the offending content.

The KaZaA Case

44. KaZaA is a Dutch company and distributes P2P file sharing software like Napster. However their software - unlike Napster's - is neither limited to MP3 files nor do they have a similar technology. It employs a third method of indexing the files. A suit has been filed against KaZaA in the US. During the pendency of this suit, a Dutch copyright group filed a suit against KaZaA, in Holland to stop it from offering file sharing software or face a daily fine of $124,000. The Dutch Supreme Court in December 2003 upheld a decision of the court below and held that KaZaA cannot be held liable for copyright infringement of music or movies swapped with its free software. The suit against KaZaA is still pending in the US however another suit against Grokster and SmartCast (the Grokster case) has been decided. Now the suit against KaZaa in US may be decided on the same terms as the decision in the Grokster case. Let's consider the Grokster case.

The *Grokster* Case

45. Groskter and SmartCast also distribute file sharing software. Grokster licenses 'FastTrack' technology from KaZaA. SmartCast was earlier licensing 'FastTrack' technology from KaZaA but now it uses 'Morpheus' its branded version of Gnutella[11]. Grokster, as is the case with KaZaA, employs the third method of indexing the files; whereas Gnutella and SmartCast employ second method of indexing files. The entertainment companies filed suit against Grokster and SmartCast in the US. The suit of the Entertainment Companies and their first appeal in the case against Grokster and SmartCast were dismissed (for judgement of the first appellate court see below)[12]. The first appellate court held:

- The software technologies are capable of substantial or commercially significant non-infringing uses and the software distributors cannot be liable for constructive knowledge of the infringement.
- Napster employed the first method. SmartCast and Grokster employ the second and third.
- Napster could avoid the download. Neither can Grokster nor can SmartCast avoid it even if they closed down their doors and deactivated all computers within their control: users of their products could continue sharing files with little or no interruption.

46. The entertainment companies filed an appeal before the US Supreme Court. The US Supreme Court allowed the appeal in July 2005.[13] The judgements of the courts below were set aside. The case was remanded to the trial court for further proceedings in accordance with the observations in the judgement. The question involved was,

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[11] Gnutella is open source software where a central server is not involved. It neither has any office, nor any server. One merely has to install it on a computer and send a message. The message goes to another online computer with Gnutella that in turn forwards it to other similar online computers. This goes on till one finds a computer that has the required file then the two computers are directly connected and the file can be downloaded. It is not restricted to MP3 format: it works on all kinds of files. There isn't any central server; it is decentralised; and neither any index of available file is maintained on any centralised server (or computer) nor any file goes through such server.

[12] *MGM Studios* v. *Grokster*. Complete text of the judgement of the first appeal is available at http://www.ca9.uscourts.gov/ca9/newopinions.nsf/E9CE41F2E90CC8D788256EF400822372/$file/0355894.pdf?openelement§

[13] The text of the judgement is available at http://caselaw.lp.findlaw.com/scripts/getcase.pl?court=US&vol=000&invol=04-480&friend=nytimes#concurrence2

> Under what circumstances is the distributor of a product capable of both lawful and unlawful use liable for acts of copyright infringement by third parties using the product.

The US Supreme Court distinguished the The Sony case holding that

> '[in the Sony case], the evidence showed that the principal use of the VCR was for "time-shifting," or taping a program for later viewing at a more convenient time, which the Court found to be a fair, not an infringing. ... There was no evidence that Sony had expressed an object of bringing about taping in violation of copyright or had taken active steps to increase its profits from unlawful taping.'

The Court held that:

> 'one who distributes a device with the object of promoting its use to infringe copyright, as shown by clear expression or other affirmative steps taken to foster infringement, is liable for the resulting acts of infringement by third parties.'

47. In the Grokster case the US Supreme Court referred to the competing claims of the copyright holders on the one hand and innovators on the other hand in the following words.

> 'The tension between the two values is the subject of this case, with its claim that digital distribution of copyrighted material threatens copyright holders as never before, because every copy is identical to the original, copying is easy, and many people (especially the young) use file-sharing software to download copyrighted works. This very breadth of the software's use may well draw the public directly into the debate over copyright policy, Peters, Brace Memorial Lecture: Copyright Enters the Public Domain, 51 J. Copyright Soc. 701, 705-717 (2004) (address by Register of Copyrights), and the indications are that the ease of copying songs or movies using software like Grokster's and Napster's is fostering disdain for copyright protection, Wu, When Code Isn't Law, 89 Va. L. Rev. 679, 724-726 (2003). As the case has been presented to us, these fears are said to be offset by the different concern that imposing liability, not only on infringers but on distributors of software based on its potential for unlawful use, could limit further development of beneficial technologies. See, *e.g.*, Lemley & Reese, Reducing Digital Copyright Infringement Without Restricting Innovation, 56

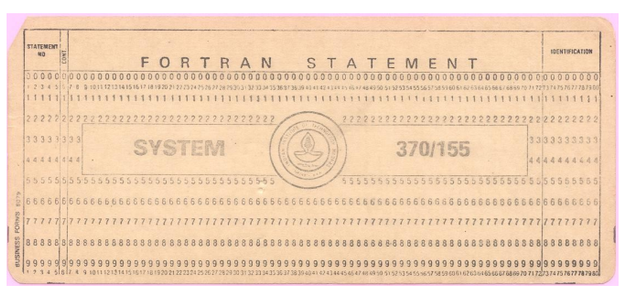
Stan. L. Rev. 1345, 1386-1390 (2004); Brief for Innovation Scholars and Economists as *Amici Curiae* 15-20; Brief for Emerging Technology Companies as *Amici Curiae* 19-25; Brief for Intel Corporation as *Amicus Curiae* 20-22.[14]'

US Supreme Court answered it in favour of the copyright holders. Were there other ways to sort out the problem - common standard ... format .... or a different kind of business module? Has the court weighed too heavily against the technology? Well, the future will tell us.

SOFTWARE

Source Code and Object Code

48. Computers do not understand our language. They only understand 'machine language' or 'machine code' i.e. instructions which consist of a series of 0s and 1s. In the earlier days a computer program used to be written in machine code or by punching a punchcard. The punched slot or unpunched slot indicated requisite information to the computer. This process was slow and tedious. Such a programme, although intelligible to the computer, was virtually unintelligible to any one except an equally skilled programmer.



(Computer Punch Card)

49. From earlier days, the Computer scientists also devised an alternative language for writing programmes, known as 'assembler language'. These

[14]The mutual exclusivity of these values should not be overstated, however. On the one hand technological innovators, including those writing file sharing computer programs, may wish for effective copyright protections for their work. See, *e.g.*, Wu, When Code Isn't Law, 89 Va. L. Rev. 679, 750 (2003). (StreamCast itself was urged by an associate to "get [its] technology written down and [its intellectual property] protected." App. 866.) On the other hand the widespread distribution of creative works through improved technologies may enable the synthesis of new works or generate audiences for emerging artists. See *Eldred* v. *Ashcroft*, 537 U. S. 186, 223-226 (2003) (*Stevens*, J., dissenting); Van Houweling, Distributive Values in Copyright, 83 Texas L. Rev. 1535, 1539-1540, 1562-1564 (2005); Brief for Sovereign Artists et al. as *Amici Curiae* 11.

assembler languages had advantages over writing a programme in machine code but they still required many instructions to be written in order to achieve the simplest tasks. A number of high-level languages—such as Basic, Fortran, Cobol, Pascal etc—have been devised in order to simplify the work of a programmer. The use of these high level languages enables a programmer to write a programme in terms that nearly resembles ordinary English unlike those used in the lower level languages. They also permit complex operations for the computer to be directed by a relatively compact command. The programmes as written by a programmer are known as the source code. It is complied by a compiler converting it into the programme that can be understood by a computer, it is then known as the object code or machine code or binary code, machine language.

50. GAIM is popular proram that loads different instant messangers (MSN or Yahoo) together.

(Logo of GAIM)

51. Source code of GAIN is disclosed; it is known to everyone. It is written in C^{++}. A small part is follows.

```
#include "proxy.h"
#include "signals.h"
#include "sslconn.h"
#include "sound.h"

struct GaimCore
{
char *ui;
```

```
void *reserved;

};

static GaimCoreUiOps *_ops  = NULL;
static GaimCore      *_core = NULL;
```

52. If you read it then you can understand a few words mentioned therein and what it is trying to say. It is kind of description of something. The source code of a computer program, if it is available or disclosed, is a literary work within the Copyright Act and is so protected. The question, whether object code is also so protected was debateable but before it could be raised in our country Copyright Act was amended by two amending Acts namely Act no. 38 of 1994 and Act no. 49 of 1999. The definition of the 'literary work' in section 2(o) of the Copyright Act was amended to include computer programme as well as computer database. The result is that not only the computer programmes (subject code as well as object code) but computer database is also protected as a copyright.

Trade Secret

53. A work must be published before it can be protected as a copyright. The object code of every software is available; it runs the computer or the application therein: it is protected as a copyright. However source code may or may not be available. In case it is available or published it is protected as copyright. In proprietary software, the source code is generally never available; it is secret. In such an event it is protected as a trade secret or undisclosed information.

Copylefted and Open Source Software

54. Everyone is not using copyright to preserve their rights or prevent others from using it without their permission; some are using it in such a way that it does not become the exclusive property of anyone: they are not copyrighting it but copylefting it. It is a new word, a new concept. In order to copyleft a software, the copyright holder has to publish the source code with the declaration that everyone has the right to copy, distribute, and modify the software without any payment of royalty or fee provided in case of redistribution of the same software or distribution of the modified software, the source code is also disclosed and similar freedom—as given by the original copyright holder—is given to the others. Copylefted

software is also called free software as there is freedom to modify it. It is also called GPLed software as general public license (GPL) has a condition that copylefts a software.

55. Software where the source code is disclosed may or may not be copylefted and there can be degrees of copyleftness: it all depends on the terms of the licence under which it is released. In 1997 free software enthusiast got together to start 'Open Source Initiative' a non profit public organisation. It has come out with ten guidelines. These guidelines ensure that software is copylefted to some degree. Software satisfying the guidelines is known as 'Open Source Software'.

SOFTWARE - Patents

56. Patentability of computer software is controversial as well as debatable. Patents can be granted for inventions. The word 'invention' {section 2(1)(j) of the Patents Act} read with the word 'inventive step' {Section (1)(ga) of the Patents Act} means a new product or process that is capable of industrial application. Invention must be novel and useful. It should not be obvious to a person skilled in the art. It must be a significant advance in the state of the art and should not be an obvious change from what is already known. Generally this is the global law but is being applied differently in different countries.[15]

Law - US

57. Section 3 of the Indian Patents Act explains what are not inventions. Patents cannot be granted for discoveries and inventions mentioned in section 3 of the Patent Act. There is no such limitation in the US law as the Congress intended to include anything under the sun that is made by man, but the US Supreme Court in the Chakrabarty case (for details see below)[16] held,

[15] Clause 27 of the TRIPS defines patentable subject matters. The relevant part of sub-clause (1) of clause 27 is as follows

> 1. Subject to the provisions of paragraphs 2 and 3, patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application.

A footnote is inserted here in the TRIPS states,

> For the purposes of this Article, the terms "inventive step" and "capable of industrial application" may be deemed by a Member to be synonymous with the terms "non-obvious" and "useful" respectively.

[16]This case is reported in *Diamond* vs. *Chakrabarty*, 447 US 303: 65 L Ed 2d 144. Plasmids are hereditary units physically separate from the chromosomes of the cell. In a prior research, Chakrabarty and an associate discovered that plasmids control the oil degradation abilities of certain bacteria. In particular, the two researchers discovered plasmids capable of degrading camphor and octane, two components of crude oil. In the

> 'This is not to suggest that … [law] has no limits or that it embraces every discovery. The laws of nature, physical phenomena, and abstract ideas have been held not patentable. Thus a new mineral discovered in the earth or a new plant found in the wild is not a patentable subject matter. Likewise, Einstein could not patent his celebrated law that $E=mc^2$; nor could Newton have patented the law of gravity. Such discoveries are manifestation of nature, free to all men and reserved exclusively to none.'

58. The US Supreme Court in Parker v. Flook (437 US 584: 57 L Ed 2d 451) also held that a method for updating alarm limits during catalytic conversion, which is a mathematical formula, is not patentable.

59. The US Patents Act neither specifically refers to programmes for computers, nor to the business methods. The US Supreme Court in the Gottschalk case (for citation see below)[17] held that a computer program - involving a method to convert binary-coded-decimal numerals into pure binary numerals - cannot be patented for the reason,

- The method was so abstract as to cover both known and unknown uses of the binary-coded-decimal to pure binary conversion;
- The end use could vary and could be performed through any existing machinery or future-devised machinery or without any apparatus;
- The mathematical formula involved had no substantial practical application except in connection with a digital computer; and
- The result of granting a patent would be to improperly issue a patent for an idea.

In short, algorithm cannot be patented. A computer program - standing alone or by itself - cannot be patented in the US, but what would be the position if it were a part of an industrial or business process?

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work represented by the patent application at issue here, Chakrabarty discovered a process by which four different plasmids, capable of degrading four different oil components, could be transferred to and be maintained stably in a single Pseudomonas bacterium, which itself has no capacity for degrading oil. The new bacteria were not 'products of nature', because Pseudomonas bacteria containing two or more different energy generating plasmids are not naturally occurring.
At present, biological control of oil spills requires the use of a mixture of naturally occurring bacteria, each capable of degrading one component of the oil complex. In this way, oil is decomposed into simpler substances which can serve as food for aquatic life. However, for various reasons, only a portion of any such mixed culture survives to attack the oil spill. By breaking down multiple components of oil, Chakrabarty's micro-organism promises more efficient and rapid oil-spill control and his patent application was allowed.

[17] *Gottschalk* v. *Benson*, 409 US 63: 34 L Ed 2d 273.

Industrial Process

60. The Diehr case (for citation see below)[18] was a case involving a process for curing rubber that included a computer programme. Rubber in a mould is to be heated for a given time according to the Arrhenius equation, named after its discoverer Svante Arrhenius. The inventor had found a process for constantly measuring temperature inside the mould, which was fed to a computer that opened the mould at the right time. The court by a five to four decision held that a patentable claim does not become unpatentable merely if it uses a mathematical formula, or a computer programme, or a computer. In short, a computer programme may not be patentable as such but may be patentable as a part of an industrial process.

Business Methods

61. Traditionally, the processes concerned with technology only could be patented. Many other activities including business methods, or data analysis which one would consider processes, were excluded from patents. However, since the Diehr case, there has been a shift in the US. US Patent and Trade Office (USPTO) has issued a Manual of Patent Examining Procedures containing guidelines for patenting inventions. Its earlier policy for computer related inventions {Paragraph 706.03(a)} was as follows:[19]

> 'Though seemingly within the category of a process or method, a method of doing business can be rejected as not being within the statutory classes.'

This was deleted and a new paragraph {706.03(a)} was added,

> 'Office personnel have had difficulty in properly treating claims directed to methods of doing business. Claims should not be categorized as methods of doing business. Instead such claims should be treated like any other process claims'.

62. The aforesaid change was noticed by the US court of appeal in the State Street case (for citation see below)[20] and the court held that,

> 'Whether the claims are [patentable or not] should not turn on whether the claimed subject matter does "business" instead of

[18] *Diamond* v. *Diehr*, (1981) 450 US 175: 67 L Ed 2d 155.
[19] See *Hotel Security Checking Co*. v. *Lorraine Co*., 160 F. 467 (2nd Cir. 1908) and *Wait (in re:)*, 24 USPQ 88, 22 CCPA 822 (1934).
[20] *State Street Bank* v. *Signature Financial Group,* 149 F. 3d 1352. Text is also available at http://www.ll.georgetown.edu/Fed-Ct/Circuit/fed/opinions/97-1327.html

> something else.'

The court also held that,

> 'To be patentable an algorithm must be applied in a "useful" way.
>
> …
>
> 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, formula, or calculation, because it produces a useful, concrete and tangible result'

63. In short the law in the US is that, 'an abstract idea by itself never satisfies the requirements of the Patents law. However an abstract idea when practically applied to produce a useful, concrete and tangible result satisfies it. Today, USPTO has one chapter on Patent Business Methods and is granting patents to software techniques for business methods and data analysis, if they are useful. Australia and Japan have also followed suit. Some examples of patents of business methods granted in the US are:

- Single click to order goods in an on-line transaction;
- An on-line system of accounting;
- In-line rewards incentive system;
- On-line frequent buyer programme; and
- Programmes letting customers set their own prices for hotel booking etc.

64. The law whether a computer programme is patentable per se or in conjunction of business methods is still in flux. In the US 'Business Method Patent Improvement Act of 2000'[21] was introduced in the Congress on October 3, 2000 and would apply to all pending applications as well as to all patents issued. It will restrict the ability of the USPTO to issue business method patents. Among the others it would create a presumption of obviousness where a computer has been used primarily to implement a known business method. It has not yet been passed and many feel that it may never be passed.

Law – Europe

65. Article 52(2)(2) of the European Patent Convention 1973 (EPC) specifically

[21]The text of the bill is available at http://www.techlawjournal.com/cong106/patent/bus_method/berman.asp

states that 'schemes, rules and methods for performing mental acts, playing games or doing business, and programmes for computers' will not be regarded as inventions. This is also the law of the member countries of the European Patent convention: computer programmes and business methods cannot be patented there. However, in practice, the approach has changed. The application for patents is now considered if presented as producing technical effects (i.e. programme for speeding up image enhancement) rather than as claiming abstract programmes or business methods.[22] Patenibility of computer software was being introduced through patent Software directive but it was defeated in the European Parliament on 6th July 2005.

Law – India

66. Section 3 of the Patents Act provides what are not invention and cannot be patented. Section 3(k) provides that a mathematical or business method or computer programme *per se* or algorithms is not invention for purposes of the Patents Act. The word 'computer programme' is modified by the word 'per se'. This word means standing alone, or by itself, or in itself. It shows that under section 3(k) a computer programme standing alone or by itself can not be patented. Nevertheless it also means that if a computer programme is not standing alone then it may be patented; it leaves doubts regarding its scope. The courts may interpret it in the same manner as the Europeans are doing or could do all the way as is being done in the US: of course its finer boundaries will be determined when courts actually interpret these words[23].

REVERSE ENGINEERING

67. Reverse engineering means 'starting with the known product and working

[22]An informative study on Article 52 of the EPC regarding computer programme titled 'Art 52 EPC: Interpretation and Revision' is available at http://swpat.ffii.org/analysis/epc52/index.en.html

[23] Section 3(k) as it stands today was substituted by the 2002 Amendment. It was replaced by section 3(k) and 3(ka) by the Patents Amendment Ordinance 2004 (the 2004 Ordinance). Section 3(ka) as substituted by the 2004 Ordinance excluded mathematical method or business method or algorithms from the field of invention. It was the same as was provided by the 2002 Amendment in Section 3(k). However, the law regarding computer programme was further clarified in section 3(k) by the 2004 Ordinance. After the 2004 Ordinance, computer programme per se was further qualified by the phrase 'other than its technical application to industry or a combination with hardware'. It showed that the computer programme in its technical application to industry or a combination with hardware only could be patented: a scope narrower than US approach but perhaps wider than European approach. The 2004 ordinance has been repealed by the Patents Amendment Act 2005 (Act 15 of 2005) (the 2005 Amendment) however it left the section 3(k) as was substituted by the 2002 Amendment intact; it did not incorporate the amendments in 3(k) or substitution of 3 (ka) as proposed by the 2004 Ordinance.

backward to derive the process which aided in its development or manufacture.' In other words reverse engineering is taking apart an object to see how it works in order to duplicate or enhance the object.

68. Reverse Engineering in the context of a computer programme is also referred to as decompilation or disassembly. There is some difference among the three but the word reverse engineering is a general word and is broader than the other two: this is my reason for using it.

69. The reasons for reverse engineering in the software industry could be to,

- Retrieve the source code of a programme because the source code was lost; or
- Study how the programme performs certain operations; or
- Improve the performance of a programme; or
- Fix a bug (correct an error in the programme when the source code is not available); or
- Identify malicious content in a programme such as a virus; or
- Adapt a programme written for use with one microprocessor for use with a differently designed microprocessor; or
- Achieve interoperability.

70. The last reason of the preceding paragraph is the most debatable; some countries have declared the terms of the license, prohibiting reverse engineering to achieve interoperability to be void (see below).[24] The question is when is reverse engineering legal? When does it amount to infringement of IPRs? In case it is not illegal then can it be prohibited by the terms of a contract?

Copyrighted Software

71. The leading case[25] on the aforesaid point is the Sega case (for details see below).[26] Accolade, a computer game company, reverse engineered Sega game

[24] The European Union has declared anti-decompilation clauses in software contracts prohibiting reverse engineering to achieve interoperability to be void. See Council Directive 91/250 on Legal Protection of Computer 1991 O.J. (L122) 42. A few other countries, notably Australia, have followed suit. See Jonathan Band, Software Reverse Engineering Amendments in Singapore and Australia, J. Internet L. 17, 20 (Jan. 2000).

[25] Another case though prior in time is *Atari Games Corp.* v. *Nintendo of America Inc.*, 975 F.2d 832, 24 U.S.P.Q.2D (BNA) 1015. The text of the judgement is also available at, http://cyber.law.harvard.edu/openlaw/DVD/cases/atarivnintendo.html

[26] *Sega Enterprises Ltd*. v. *Accolade, Inc.,* 977 F2d 15; 93 Daily Journal DAR 304. The text of the judgement is also available at,

programmes in order to get information necessary to make its games compatible with the Sega Genesis console. Accolade then sold its independently developed games. These games were in competition with those made by Sega and third-party developers, who had been given a license by Sega. In the suit filed by Sega for infringement of its IPRs, Accolade raised the defence of fair use. One of the points involved in the case was,

> 'Whether the [US] Copyright Act permits persons who are neither copyright holders nor licensees to disassemble [reverse engineer] a copyrighted computer programme in order to gain an understanding of the unprotected functional elements of the programme.'

The Court, in the light of the public policies underlying the US Copyright Act, held that,

> 'When the person seeking the understanding has a legitimate reason for doing so and when no other means of access to the unprotected elements exists, such disassembly is, as a matter of law, a fair use of the copyrighted work.'

This case has been followed in almost all subsequent cases in the US.[27]

72. The law in India regarding permissibility of reverse engineering in respect of copyrighted computer software is similar to the law laid down in the Sega case. Section 52 of the Copyrights Act defines acts that do not constitute an infringement of copyright. Sub-sections (aa) to (ad) to Section 52 of the Copyright Act (see below)[28] relate to computer software. This section broadly protects acts (including

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http://www.eff.org/Legal/Cases/sega_v_accolade_977f2d1510_decision.html

[27] See, e.g., *DSC Communications Corp.* v. *DCI Techs.*, Inc., 81 F.3d 597, 601 (5th Cir. 1996); Bateman v. *Mnemonics, Inc.*, 79 F. 3d 1532, 1539 n.18 (11th Cir. 1996); *Mitel, Inc.* v. *Iqtel*, *Inc.*, 896 F. Supp. 1050, 1056-57 (D. Colo. 1995), 124 F.3d 1366 (10th Cir. 1997); *Sony Computer Entertainment, Inc.* v. *Connectix Corp.*, 203 F.3d 596.

[28] Section 52(1)(aa) was substituted by Act number 38 of 1994 and section 5291)(ab) to (ad) were substituted by Act number 49 of 1999. The relevant part of Section 52 of the Copyrights Act is as follows:

52. Certain acts not to be infringement of copyright.—(1) The following acts shall not constitute an infringement of copyright, namely:—

(aa) the making of copies or adaptation of a computer programme by the lawful possessor of a copy of such a computer programme, from such copy—

(i) in order to utilise the computer programme for the purpose for which it was supplied; or

(ii) to make back-up copies purely as a temporary protection against loss, destruction or damage in order only to utilise the computer programme for the purpose for which it was supplied.

(ab) the doing of any act necessary to obtain information essential for operating inter-operability of an independently created computer programme with other programmes by a lawful possessor of a computer programme provided that such information is not otherwise readily available;

those of reverse engineering) in order,

- To obtain information essential for operating inter-operability of an independently created computer programme with other programmes if such information is not otherwise readily available and
- To determine the ideas and principles which underline any element of the programme for which the computer programme was supplied;
- To make copies or adaptations of legally obtained copy of the computer programme for non-commercial personal use.

73. In our country contractual rights are dealt with under the Indian Contract Act. Section 23 of the Indian Contract Act declares a contract to be void if it is against public policy. Public policy has been declared under section 52 of the Copyright Act. Reverse engineering has been permitted in a limited way. A contract, prohibiting reverse engineering in software to the extent permitted by the Copyright Act, may not stand in a court of law.

Patented Software

74. Unlike in the US copyright law, there is no clause in the US Patent Law to permit fair use of Patents. In India also there is no provision in the Patents Act, similar to section 52 of the Copyrights Act. What would be the position if reverse engineering - even to achieve interoperability or for fair use - is prohibited by a contract?

75. The law - as to when a patented software may be reverse engineered - is not clear. Some legal commentators in the US (see below)[29] have recommended that there should be similar clauses in the US protecting the fair use of patented computer programmes. This may not be necessary.

(ac) the observation, study or test of functioning of the computer programme in order to determine the ideas and principles which underline any elements of the programme while performing such acts necessary for the functions for which the computer programme was supplied;
(ad) the making of copies or adaptation of the computer programme from a personally legally obtained copy for non-commercial personal use.

[29] Reverse Engineering and the Rise of Electronic Vigilantism: Intellectual Property Implications of 'Lock-Out' Programmes by Julie E. Cohen 68 S. Cal. L. Rev. 1091 (1995). It is availble at http://www.law.cornell.edu/commentary/intelpro/chn95int.htm
The Law of economics of Reverse Engineering by Pamela Samuelson & Suzanne Scotchmer. It is available at http://www.sims.berkeley.edu/~pam/papers/l&e%20 reveng3.pdf

76. A Computer Software/programme consists of two parts: source code and object Code. It is the source code that will help in achieving interoperability of other computer programmes. Sometimes it is disclosed in the patent application. However, generally it is not disclosed and in a patent application only flow charts are given showing how the devise works[30]. In such a situation, the computer programme only will be protected as a trade secret or copyright. The US Supreme Court in the Kewanee case (for details see below)[31] held that trade secret does not prohibit any one to find it out or develop it by fair and honest means including reverse engineering. A condition in a contract prohibiting reverse engineering to find out source code which is protected as trade secret may also amount to creating monopoly in an idea forever without getting it patented and such a condition may run foul of section 23 of the Contract Act. In this connection one may also refer to the U.S. Supreme Court decision in Bonito Boats v. Thunder Craft Boats, 489 US 141[32]. In case the computer programme is protected as a copyright then the same principles as I have discussed earlier should apply.

ANTI CIRCUMVENTION LAW AND DIGITAL RIGHTS MANAGEMENT

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[30]At present, this practise is generally followed while filing patent applications in different countries. Patent requires that everything should be disclosed. It is doubtful whether this practise of non-disclosure of source code is valid or not. In a suitable case this question has to be gone into.

[31] The case is reported in *Kewanee Oil Co*. v. *Bicron Corp.*, 416 US 470. The plaintiff company was engaged in making synthetic crystal useful in the detection of ionizing radiation. It developed a novel 17-inch crystal as a result of processes that were considered trade secrets. Some of its employees—who had entered into an agreement to maintain secrecy—joined the defendant company. The defendant also started manufacturing 17-inch crystals. The plaintiff filed a suit for injunction and damages for misappropriation of trade secrets. The trial court applied the Ohio trade secret law and granted permanent injunction. The appellate court reversed the decision on the ground that the Ohio trade secret law was in conflict with the patent law of the US. The US Supreme Court allowed the appeal and upheld the Ohio trade secret law. The Supreme Court also held,

> 'The protection accorded to the trade secret holder is against the disclosure or unauthorized use of the trade secret by those to whom the secret has been confided under the express or implied restriction of non-disclosure or non-use. The law also protects the holder of a trade secret against disclosure or use when the knowledge is gained, not by the owner's volition, but by some improper means …, which may include theft, wiretapping, or even aerial reconnaissance. A trade secret, however, does not offer protection against discovery by fair and honest means, such as by independent invention, accidental disclosure, or by so-called reverse engineering.'

[32] In the Bonito case, Bonito Boats developed a hull design for a fibreglass recreational board. It wasn't patented. Florida legislature enacted a statute that prohibited the use of a direct moulding process to duplicate the unpatented boat hulls and forbade the knowing sale of such hulls. Bonito Boats filed a suit against Thunder Craft Boats for violation of this statute. The US Supreme Court held the statute to be against the US Patent Law and as creating a monopoly in an unpatented item.

77. World Intellectual Property Organisation (WIPO) has sponsored the WIPO Copyright Treaty (WCT), and the WIPO Performances and Phonograms Treaty (WPPT). They are sister treaties and deal with digital rights management (DRM) as well as anti circumvention laws. India is member of the WIPO but has yet to sign the WCT or the WPPT. Two articles of the WCT (11 and 12) (see below)[33] and two of the WPPT (18 and 19) (see below)[34] are relevant. The purpose of these two articles is to ensure that DRM systems and technologies employed to protect copyright in digital content are not circumvented. There is little difference between

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[33]Articles 11 and 12 of the WCT are as follows:

Article 11. Obligations concerning Technological Measures.—Contracting Parties shall provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under this Treaty or the Berne Convention and that restrict acts, in respect of their works, which are not authorised by the authors concerned or permitted by law.

Article 12. Obligations concerning Rights Management Information.—(1) Contracting Parties shall provide adequate and effective legal remedies against any person knowingly performing any of the following acts knowing, or with respect to civil remedies having reasonable grounds to know, that it will induce, enable, facilitate or conceal an infringement of any right covered by this Treaty or the Berne Convention:

(i) to remove or alter any electronic rights management information without authority;

(ii) to distribute, import for distribution, broadcast or communicate to the public, without authority, works or copies of works knowing that electronic rights management information has been removed or altered without authority.

(2) As used in this Article, "rights management information" means information which identifies the work, the author of the work, the owner of any right in the work, or information about the terms and conditions of use of the work, and any numbers or codes that represent such information, when any of these items of information is attached to a copy of a work or appears in connection with the communication of a work to the public.

[34]The WPPT states (differences highlighted):

Article 18: Obligations concerning Technological Measures

Contracting Parties shall provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by performers or producers of phonograms in connection with the exercise of their rights under this Treaty [Berne Convention omitted] and that restrict acts, in respect of their performances or phonograms, which are not authorized by the performers or the producers of phonograms concerned or permitted by law.

Article 19: Obligations concerning Rights Management Information

(1) Contracting Parties shall provide adequate and effective legal remedies against any person knowingly performing any of the following acts knowing, or with respect to civil remedies having reasonable grounds to know, that it will induce, enable, facilitate or conceal an infringement of any right covered by this Treaty [Berne Convention omitted]:

(i) to remove or alter any electronic rights management information without authority;

(ii) to distribute, import for distribution, broadcast, communicate or make available to the public, without authority, performances, copies of fixed performances or phonograms knowing that electronic rights management information has been removed or altered without authority.

(2) As used in this Article, "rights management information" means information which identifies the performer, the performance of the performer, the producer of the phonogram, the phonogram, the owner of any right in the performance or phonogram, or information about the terms and conditions of use of the performance

the two. This difference has been highlighted in the footnote where they are quoted.

78. Article 11 of the WCT (18 of the WPPT) deals with the circumvention of technological Measures. It requires the members to provide adequate legal protection and effective remedies against the circumvention of technological measures (such as encryption) used by the right holders to protect their rights.

79. Article 12 of the WCT (19 of the WPPT) deals with the protection of rights management information. It requires the members to prohibit deliberate alteration or deletion of electronic 'rights management information' *i.e.* Information that accompanies the material protected by copyright, and which identifies the work, its creators, performer, or owner, and the terms and conditions for its use.

80. India has not yet signed these treaties and is first contemplating specific legislation under these Articles. Article 12 of the WCT (19 of the WPPT) does not pose serious problems. However for adopting legislation under Article 11 of the WCT (18 of the WPPT) different approaches are being considered.

- Ban the technology used for circumventing technological measures, with specified (*bona fide*) exceptions, or
- Simply ban the use of such technology for infringing purposes - either in general terms or by banning its use - except for specified (*bona fide*) purposes.

81. The rights holders mainly, music companies prefer the former approach while members of the scientific and academic community prefer the latter. Some suggest that perhaps the easiest solution—from the point of view of compliance with the Treaty—would be to simply make infringement by circumvention of technological measures a separate offence with higher punishment. The government is likely to decide its stand soon and come out with specific legislation. However cases are being decided in other countries related to anti circumvention issues and it is a good idea to take a look at them.

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or phonogram, and any numbers or codes that represent such information, when any of these items of information is attached to a copy of a fixed performance or a phonogram or appears in connection with the communication or making available of a fixed performance or a phonogram to the public.

The *DeCSS* Case

82. Content Scramble System (CSS) is an encryption scheme to protect movies on DVDs. It can be decrypted in DVD players with a set of 'player keys' with understanding of the CSS encryption algorithm. Without the player keys and the algorithm, a DVD player cannot access the contents of a DVD. With the player keys and the algorithm, a DVD player can display the movie on a television or a computer screen, but cannot copy it on a computer or manipulate its content. This technology was licensed to manufacturers of DVD players who were obliged to keep the player keys confidential.

83. Linux is an operating system. In 1999, it did not support any DVD player. Jon Johansen, a Norwegian 15 year old teenager wanted to develop a DVD player in Linux. In September 1999, he reverse engineered a licensed DVD player, and found out the player keys and other information necessary to decrypt CSS. He wrote a decryption program called 'DeCSS'. This program can decrypt the DVD's CSS protection. It allows the user to copy the DVD's files and place it on their hard drive.

84. The Motion Picture Association of America (MPAA) requested the Norwegian Economic Crime Unit to start criminal proceeding against Johansen for unscrambling CSS and writing DeCSS. Johansen was charged with violating the Norwegian Criminal Code section 145(2), which outlaws breaking into another person's locked property to gain access to data that no one is entitled to access. This is for the first time that the Norwegian government had attempted to punish individual for accessing their own property. Previously, the government had used this law to prosecute only individuals who had violated someone else's secure system, like a bank or telephone company system, in order to obtain another person's records. The three-member Oslo City Court unanimously acquitted Johansen. The court found that Johansen was entitled to access information on a DVD that he had purchased, and was therefore entitled to use his program to break the code. The appeal filed by the government was also dismissed.

85. In September 1999, Corley posted an article about the DeCSS phenomenon with copies of source code and object code of DeCSS on his website. His article detailed how CSS was cracked with links to other websites where DeCSS could be found.

86. The Digital Millennium Copyright Act (DMCA Act) was enacted in the US in 1998 to implement the WCT to provide legal protection and remedies against the circumvention of technological measures. The movie studios filed a suit against Corley seeking permanent injunction restraining him,

- From posting the source code and object code of DeCSS on his website; and
- Providing links to other sites containing DeCSS.

The trial court granted the injunction on the ground that Corley contravened the DMCA Act. The order of the trial court has been upheld by the appellate court (for citation see below).[35]

The Heise Online Case

87. Heise Online is a German website providing news. It published a report about a new software by Slysoft; an Antigua based company, selling software enabling users to make copies of copy-protected CDs and DVDs. The report took a critical view of Slysoft's claims, but also provided a link to the Slysoft's web site however there was no direct link to download the software. The Music companies filed a case against the Heise online in Germany. The court held[36] that:

> The music industry did not have the right to prevent the article in question from being published but the publisher had no right to provide such link despite freedom of the press being guaranteed under Article 5 of the German Constitution.
>
> - The freedom of the press is limited by the provisions of copyright law and the music industry's ownership interests had to be preserved.
> - By providing a link, Heise Online made finding the software "much easier", thus increasing the danger of violations of copyrights considerably.

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[35] *Universal City Studios, Inc*. v. *Corley*, 273 F. 3d 429, 60 USPQ 2D (BNA) 1953 (2d Cir. 2001).

[36] The text of the judgement in German is available at http://www.heise.de/heisevsmi/07_Urteil_07.03.05.pdf

- Heise Online has intentionally provided assistance in the fulfillment of unlawful acts and is liable as an aider and abettor under section 830 of the German Civil Code just as the vendor is.
- It is irrelevant that no link was provided to download the software or the readers could directly access the vendor's web site or they could find the product via a search engine.

The court granted injunction and damages of 500,000 euros. This order has been upheld by the Appellate court. It is debatable whether, in view of press freedom, such news report could be restrained.

The *SonyPlayStation* case

88. The Sony PlayStation is one of the most popular computer game consoles (platform). If you want to play a game then you have to insert a disc into the PlayStation; it's like inserting a musical disc into a CD player. The PlayStation is coded through what is called Regional Access Coding (RAC) to play games available in the region in which the PlayStation was sold. This means that a game purchased in the USA cannot be played on a PlayStation purchased in Australia; the platform will not support it. It will also not support any burnt or unauthorised version of a game as the copying process does not embed the necessary coding in the copy. As a consequence, a device known as the “mod chip” surfaced in the market for consumers seeking greater choice of digital games. It extended the functioning of the PlayStation allowing games from other regions to be played on the PlayStation. This chip can also play copied, unauthorised or burnt games on the PlayStation.

89. A suit was filed in Australia alleging that the chip was in violation of the anti circumvention law. The court dismissed the suit holding, (for citation see below).[37]

- Regional Access Coding (RAC) neither prevented the access to the copyright content nor acted as a copy control mechanism of the copyright content.
- RAC is not a technological protection measure as it only prevents a user to play a game that was not coded for the region in which the PlayStation was sold.

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[37] *Kabushiki Kaisha Sony Computer Entertaining* v. *Stevens,* 2002 FCA 906.

- The mod chip only overcame RAC and is not a circumvention device.

90. Sony filed an appeal against the aforesaid order. It was allowed by the full Court of the Federal Court of Australia however the Australian High Court allowed the appeal and restored the order of the trial court (for citation see below)[38].

3.3.15. The Italian courts have also similarly opined and dismissed a suit on behalf of Sony.

CONCLUSION

91. Michael Lewis wrote a book in 1999 on the success story of the Silicon Valley entitled 'The new new thing: a Silicon Valley story'. The most quoted line from this book is, 'The definitive smell inside a Silicon Valley start-up was of curry.' Let's hope that—with a better understanding of role of IPRs in cyber laws—not only inside a Silicon Valley start-up, but also inside the operating system of e-commerce and cyberspace will there be the smell of curry.

Justice Yatindra Singh
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[38]Stevens v Kabushiki Kaisha Sony Computer Entertainment [2005] HCA 58 (6 October 2005). The text of the judgement is also available at http://www.austlii.edu.au/au/cases/cth/high_ct/2005/58.html