CCS2710 - Professional Issues in IT

Intellectual Property

Iraklis Paraskakis

UNIVERSITY of York
Europe Campus
CITY College

Introduction to Intellectual Property

- *Intellectual property is the name given to legal rights* that protect creative works, inventions and commercial goodwill (intangible assets of a business).
- Intellectual property rights (IPR) include the following:
  - Copyright
  - Patents
  - Trade marks
  - Law of confidence
  - Passing off
  - Design rights
  - Semiconductor regulations

Q. Why is intellectual property important?

- Intellectual property is a very important area for the computer hardware and software industries since large investments are required to finance research and development of products.

- Without IPR, there would be little incentive to invest time and money in developing original products.

- Legal remedies are available against those that steal another persons ideas or work. Primarily, such cases are dealt with by the civil courts.

- However, the rights given by intellectual property are not absolute, since the law must allow fair competition.

1.1. Introduction to copyright law

- Copyright is a benefit granted by statute.
- First English copyright law (statute of Anne) was introduced in 1709 and related only to literary works.
- It created a registration system that protected *publishers following a technological advance.*
- **Q. What was the technological advance?**
- Modern copyright law extends to literary, artistic and musical works. Currently governed by the *Copyright, Designs and Patents Act 1988 (CDPA).*

1.1. Introduction to copyright law

- Copyright provides the owner with exclusive rights to *publish*, *perform*, *broadcast*, *adapt* or *copy the whole or a substantial part of a work, for a set period of time.*
- Copyright exists for:
  - 70 years after the author's death
  - or 50 years after the creation of the work (depends on work).
- It is free and automatic on creation of a work.
- Copyright protects the *expression of an idea*, *not the* idea itself.

1.2. Patent law

- Patents give the owner the exclusive right in an invention (such as a new type of computer hardware).

- A good form of intellectual property since the owner has a monopoly in an invention for several years.

- **Q. What are the benefits of the patent system for:**
  - **inventors,**
  - **investors and**
  - **the general public?**
  - If a monopoly is available in an invention, this encourages inventors to invent and investors are more likely to provide financial backing.
  - Society also benefits, since eventually the invention falls into the public domain and commercial enterprise is stimulated.

- Acquiring a patent is an expensive and lengthy process. Applications are handled by the Patent Office.

1.2. Patent law (cont'd)

- The European Patent Convention and other treaties provide for international patent protection.
- If a patent is granted, it can be held for up to 20 years.
- In order to qualify for a patent, the invention must be *new*, *involve an inventive step and must be capable of industrial application.*

1.2 Patent law (cont'd)

- Protected inventions may be a *product (e.g., a new kind* of storage device) or a *process (e.g., a new way of* manufacturing printed circuit boards).
- Most things directly protected by copyright are excluded from patentability.
- Patent Law is implemented by the *Patents Act 1977*

The law of confidence

- The law of confidence protects information (trade secrets, business data, ideas not expressed physically).
- Copyright and patent law are defined by statute, but the law of confidence is defined by common law.
- The limitation of the law of confidence is that the information must be confidential and not in the public domain.

The law of confidence

- The law of confidence is a useful supplement to copyright and patent law since it protects ideas before they are sufficiently developed to enable copyrighting or patenting.

- Since the law of confidence is based on common law, it is flexible and has been able to keep pace with advancing technology.

Law relating to designs

- Design rights are granted by statute. They might be appropriate for protecting the design of items such as an ergonomic mouse.

- Silicon chips are protected by the *Design Right (Semiconductor Regulations) 1989.*

Trade Marks

- Many trade marks in the computer industry, e.g. the phrase 'Microsoft Word' and the Apple logo.
- May be registered under the *Trade Marks Act 1994*. *A* trade mark can be:

'... any sign capable of being represented graphically which is capable of distinguishing goods or services of one undertaking from those of other undertakings.'

- **Q. Why are trade marks important?**
  - People associate trade marks with a particular product e.g. 'Hoover' and 'Sellotape'. Also protect business reputation, quality assurance.

- Law of 'passing-off' (civil law) provides remedy for someone passing off their goods as those of another.
  - For example, dispute between Apple computer and Apple records in 1984.

The Copyright of Computer Software

- Until 1985, it was uncertain whether computer programs were protected by copyright in the U.K.
- The view of the courts was that source code listings of computer programs were protected by copyright because they resembled written English.
- But what about object code, computer files and databases?
- Apple Computer Inc. vs. Computer Edge Pty Ltd (1984)
  - defendant argued that copy of Apple II OS in 'Wombat' clones was object code, and therefore not a literary work (this argument was accepted by trial judge, but rejected on appeal).

The Copyright of Computer Software

- Software copyright is now covered by the *Copyright, Designs and Patents Act 1988 (CDPA).*
- The CDPA has itself been amended by regulations concerning the backup, decompilation and error correction of computer programs.

The Copyright, Designs and Patents Act 1988

- The CDPA provides copyright in the following:
  - original literary, dramatic, musical or artistic works
  - sound recordings, films, broadcasts or cable programmes
  - the typographical arrangement of published editions
- The owner of the copyrighted work (UK citizen but also the EU citizen) is given the exclusive right to do the following:
  - to copy the work
  - to issue copies of the work to the public (including rental of copies of sound recordings, films and computer programs to the public)
  - to perform, show or play the work in public
  - to broadcast the work or include it in a cable programme service
  - to make an adaptation of the work or do any of the above in relation to an adaptation.

Infringement of copyright

- A person infringes copyright if he does a restricted act or authorises another to do a restricted act without the permission of the copyright owner.
- Exceptions to infringement relating to computer programs have been introduced by the *Copyright (Computer Programs) Regulations 1992.*

Remedies for copyright infringement

- **Injunction** — a court order requiring the defendant to do something or refrain from doing something e.g. stop selling unauthorised copies of a computer program.
- **Damages** — copyright damages are assessed as the estimated loss resulting from the infringement.
- **Additional damages** —appropriate when the copyright owner has suffered damage to reputation or feelings as well as purely financial loss.
- **Criminal penalties** for 'secondary infringements' e.g. commercial dealing in pirated software.

Authorship and ownership

- The owner of copyright in a work is the author of the work, *except when the work is made by an employee in* the course of his employment, in which case the employer will be the owner unless otherwise agreed.

- The CDPA distinguishes between two types of work produced using a computer – those generated by a *human author and computer-generated works.*

Authorship and ownership

- **Q. The term 'computer' is not defined in the CDPA. Why not?**
  - The word 'computer' is not defined by the CDPA since it would be difficult to give a precise definition that would allow for future advances in technology. Likewise, the interpretation of the phrase 'computer program' is left to the courts.
- *Computer works created by a human author*
  - Computer programs created by a human author are protected as form of 'literary work'.
  - Copyright in a literary work (including computer programs) expires 70 years after the year in which the author dies.

Computer-generated works

- Under the CDPA, a computer-generated work is one which is '*generated by a computer in circumstances such that there is no human author'*.
- So, computer output such as printed reports are protected by copyright as literary or artistic works.
- Copyright in computer-generated works expires 50 years after the work was created.

Computer-generated works

- The author of a computer-generated work is '*..the person by whom the arrangements necessary for the creation of the work are undertaken..*'
- For example, if a business has a computer system which automatically generates financial reports without any human intervention, the person who manages the computer facilities will be the *author*.
- However, the organisation will be the copyright *owner*.

Subsistence of copyright in computer programs

- The CDPA states that for copyright to subsist in a computer program it must be *original and recorded.*
- The meaning of ‘original’ is that the program should be the result of a modest amount of skill, labour or effort and that it originates from the author.
- Practically all computer programs meet the requirement of originality.

Subsistence of copyright in computer programs

- Literary works (including computer programs) must be *recorded in writing or otherwise; 'writing' is:*
- *'..any form of notation or code, whether by hand or otherwise and regardless of the method by which, or medium in or on which, it is recorded..'*

What is a 'substantial part' of a program?

- Copyright protection would be useless if infringement could only occur by copying the entire work.
- **Q. Why?**
  - The CDPA states that the exclusive rights apply to the whole or a 'substantial part' of the work.
  - The test of infringement is therefore one of *quality* rather than *quantity*.
  - In the case of computer programs, copying a very small part of a program will be an infringement if that part is significant in terms of the program's function.

Q. Does this have implications for software design?

- It follows that, in theory, it is possible to increase copyright protection by modularising a single program into a number of subprograms which will each be independently protected.

- If an infringement occurred, the test of substantiality would involve a single subprogram rather than the whole system.

IBCOS Computers Ltd. vs. Barclays Mercantile Highland Finance Ltd. (1994)
See: Bainbridge pp. 29-30, Ayres p. 97.

- Defendant wrote programs to handle payroll and accounts and developed it for IBCOS. When he left, he signed an agreement stating that IBCOS owned copyright in the software and agreeing not to write competing software for two years.

- Dependent wrote another software package for Barclays which had a similar function. Restraint of trade agreement had expired, but IBCOS still sued for infringement.

- Common errors noticed in both programs, mostly spelling and punctuation in comments. Shows value of mistakes in listings!

IBCOS Computers Ltd. vs. Barclays Mercantile Highland Finance Ltd. (1994)
See: Bainbridge pp. 29-30, Ayres p. 97. (cont'd)

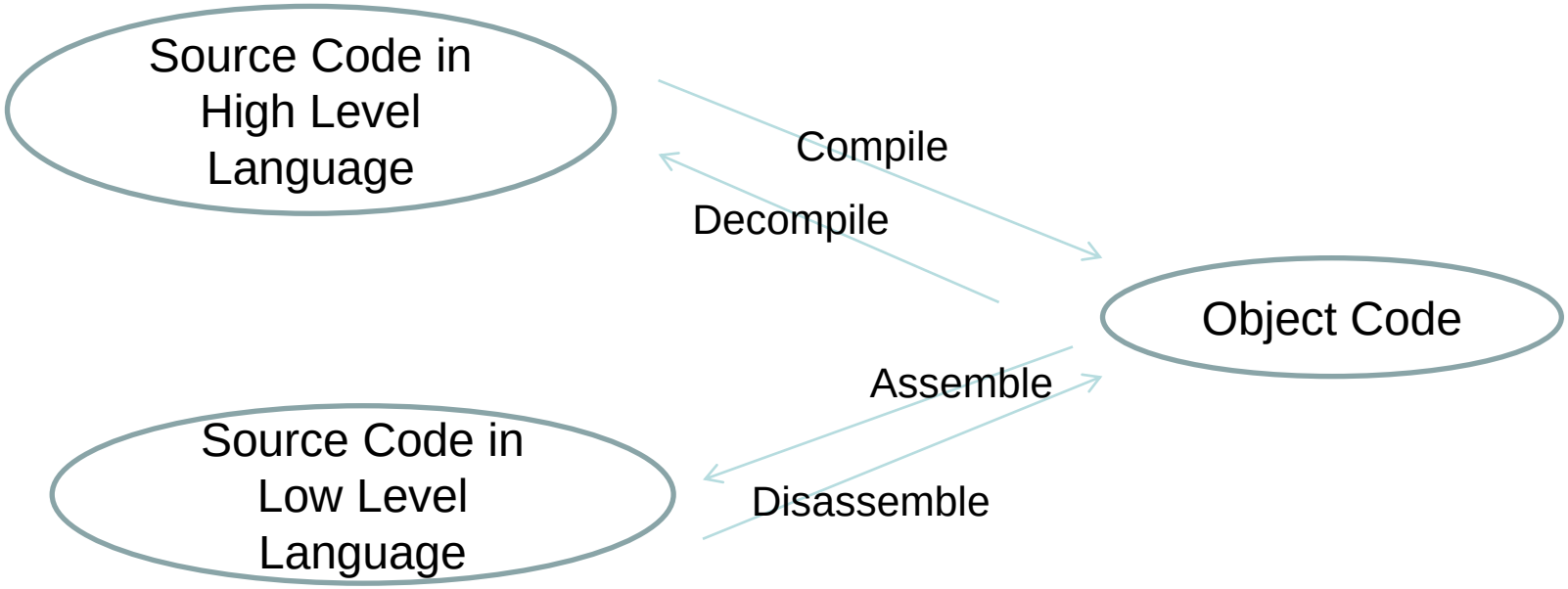
- Literal copying was concluded.
- Copyright also subsisted in the arrangement of the whole suite of programs, since selection and arrangement of these required skill and judgment.
- Infringement of 335 programs, 171 file layouts and 46 screen layouts. Judge noted that the data division of a COBOL program (data structures) may constitute a substantial part of a program, even though its relatively a small part of the program listing

2.6.4. Making an adaptation

- Making an adaptation of a work includes translating it, which is defined with regard to computer software as:
- *'..In relation to a computer program a 'translation' includes a version of the program in which it is converted into or out of a computer language or code or into a different computer language or code, otherwise than incidentally in the course of running the program..'*

2.6.4. Making an adaptation

- This provision aims to control the decompilation and disassembly of computer programs.



- The *Copyright (Computer Programs) Regulations 1992 now expressly permit 'reverse engineering' under* certain circumstances.

Exceptions to copyright infringement

- Some recent changes to English copyright law are implemented by the *Copyright (Computer Programs) Regulations 1992*.

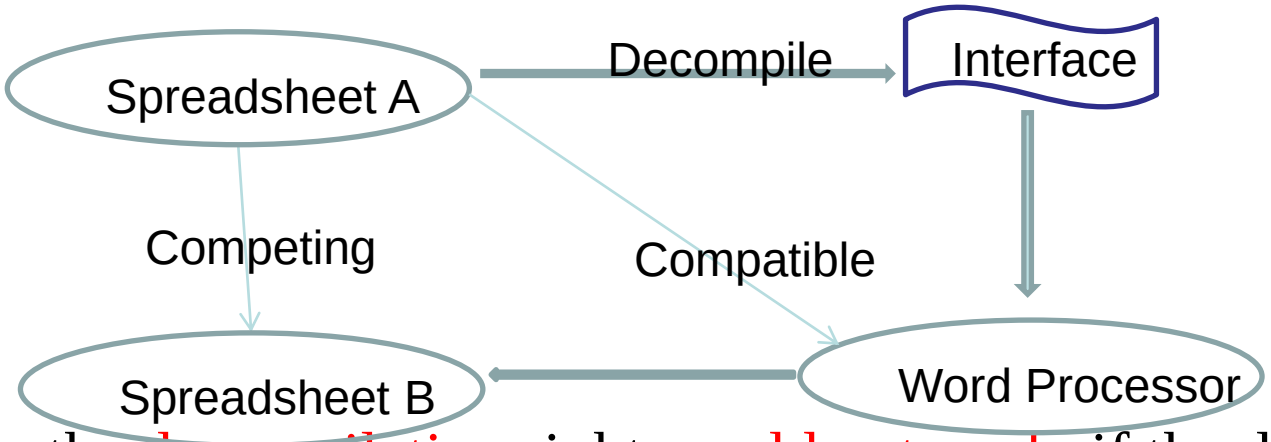
- CCPR were prompted by an EC directive on the legal protection of computer programs. The CCPR address three issues:
  - the right to *decompile*
  - the right to make *back-up copies*
  - the right to copy or adapt for purposes of *error correction.*

- Also, the CCPR introduce a defence of 'public interest', e.g. if it is in the interest of the public that a program listing should be published.
- **Q. Under what circumstances would such a defense be appropriate?**

2.7.1. Decompilation of computer programs

- The restricted act of making an adaptation includes decompilation and infringes copyright unless allowed by the new decompilation right.
- By the new right, a lawful user of a program may decompile a program *if necessary to obtain the information necessary to achieve the interoperability of an independently created program with the decompiled program.*
- **Example — decompiling for compatibility**
  - A software developer may write a word processing system which will be compatible with the data format of a rival company's spreadsheet program — OK.
  - However, the developer now has the interface details of the spreadsheet contained in its own product.
  - What if it uses these details to make a competing spreadsheet product without copying substantial parts of the code from the original spreadsheet program?

- The CCPR handles this by making it an infringement to use or supply information obtained by decompilation for the development of a program *substantially similar in its expression to the original program*



- So, the decompilation right would not apply if the developer intended to use the information obtained by decompilation to develop a competing product.
- Also, the decompilation right does not apply if the information required is readily available, e.g. the interface details have been published or made available at reasonable cost.

2.7.2. Atari Games Corp. v Nintendo of America 1991

- See: H. C. Moore (1992) Atari v. Nintendo: Super Mario uses “expressive” security feature to lock out the competition. *Rutgers Computer & Technology Law Journal,* ***18, pp. 919-940.***

- Decompilation was a central issue in this interesting U.S. case. Nintendo market the successful Nintendo Entertainment System (NES) computer game console.
- Atari intended to manufacture games cartridges to take advantage of the large user base of the NES.
- However, Nintendo created a ‘lock’ and ‘key’ program to exclude Atari (and other competitors) from doing so.
- The NES contains the ‘lock’ program which looks for the ‘key’ in the software of a games program held in a cartridge. If the ‘key’ is not found, the console will not run.

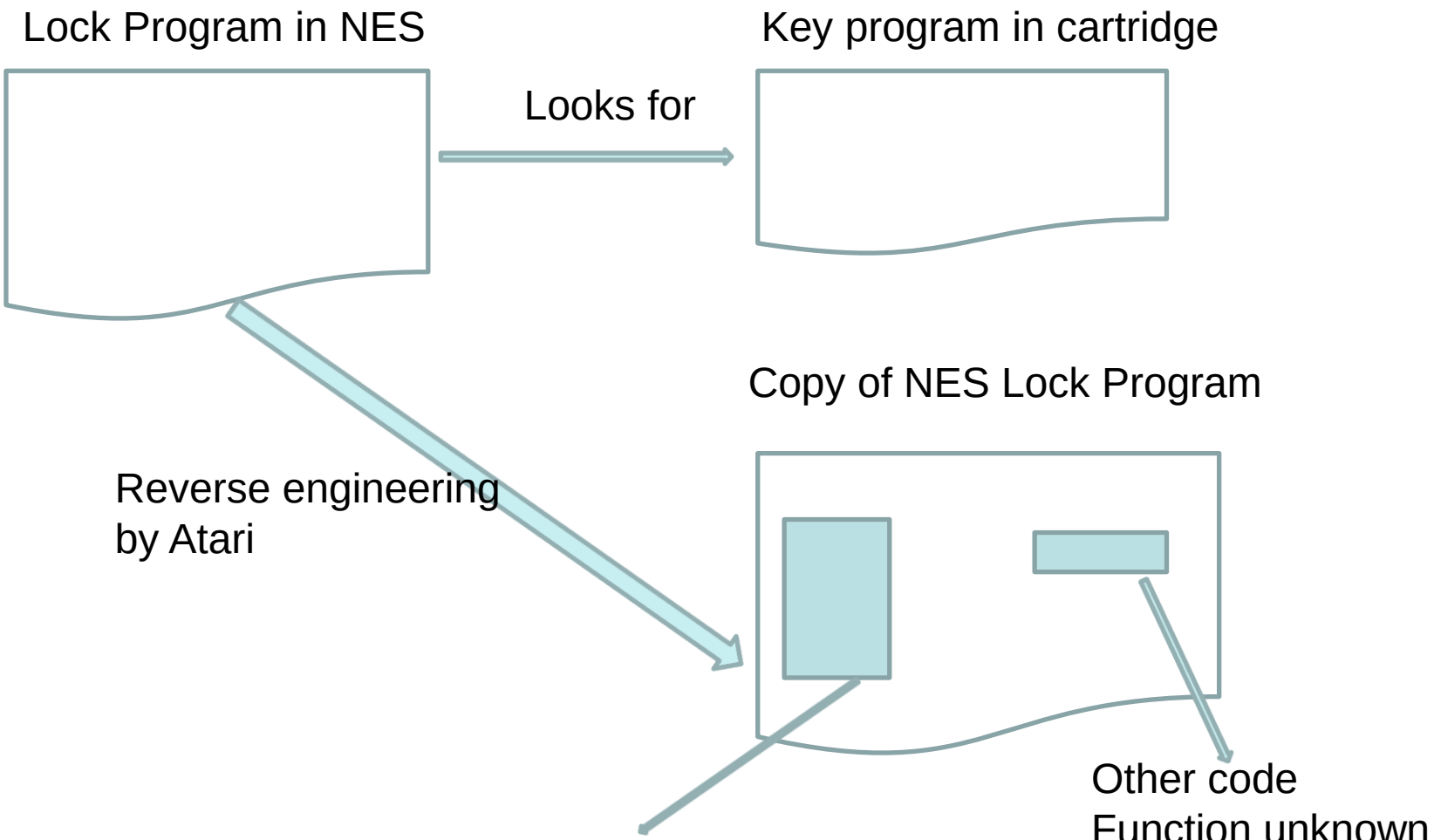
2.7.2. Atari Games Corp. v Nintendo of America 1991 (cont'd)

- To enable Atari cartridges to work in the NES, Atari attempted to reverse engineer the NES software in order to develop a compatible 'key'.
- Their attempts at reverse engineering were unsuccessful. So how did Atari get the source code for the 'lock' program in the NES console?
- Amazingly, a lawyer for Atari falsely claimed to the Copyright Office that Atari was defending itself in an infringement action against Nintendo, and the copyright office supplied him with a source code copy of the NES software.
- Nintendo sued for breach of copyright.

2.7.2. Atari Games Corp. v Nintendo of America 1991 (cont'd)

- Atari claimed that the software in the NES contained no expression of an idea that was protectable by copyright,
- since there was only one way of writing the software so that it was compatible with the software 'key' in the cartridge.
- Despite this reasonable argument, the court found for Nintendo and granted an injunction preventing Atari from using the reverse-engineered 'key' software in its own cartridges.

2.7.2. Atari Games Corp. v Nintendo of America 1991 (cont'd)



2.9. Non-literal copying – "look and feel"

- A literal copy of a program involves duplication of a substantial part of it without permission.
- Should copyright protection extend to non-literal elements of a program that are not directly perceivable?
- What if two programs 'look' and 'feel' the same, even if the code is completely different?
- Copyright protects expression, not ideas. However, it is generally accepted in English Law that expression can extend beyond a literal form.
- Where should the line between idea and expression be drawn?
- This is not clear in the CDPA, but has been tested in several cases is the U.S.
- These cases are not binding on English/European courts, but U.S. courts often set influential precedents (especially in the area of computer technology).

2.9.1. Whelan Associates Inc. v Jaslow Dental Laboratories (1987)

- See: Bainbridge p. 32.
- One of the first cases to address the issue of look and feel as grounds for infringement of copyright, and therefore set an influential precedent.
- Jaslow (defendant) had hired Whelan to develop a program for computerising his dental practice.
- Jaslow paid the cost of development and helped Whelan design the user interface so that it reflected his business methods.
- The program ran on an IBM mainframe. A few years later, Jaslow decided there was a market for the program on PCs, so he developed his own program using a different language but the same screen designs.
- He marketed it and Whelan sued for copyright infringement.
- Whelan's claim was that Jaslow had copied the underlying structure of her original program, and the structure was protected by copyright.

2.9.1. Whelan Associates Inc. v Jaslow Dental Laboratories (1987) (cont'd)

- The judge was impressed by the similarity of the screen displays of the two programs, apparently without realising that programs with the same interface can have a completely different underlying structures.
- The court distinguished between idea and expression by reference to the purpose of the program:
- The purpose of a work is taken to be the idea of the work whereas everything pertaining to the work that is not necessary to the purpose is expression.
- If there are several ways of achieving the desired purpose, none of which is necessary to the purpose, those ways are expression and are therefore protected by copyright.
- Hence Jaslow was free to use Whelan's idea, but the structure of the program was a form of literary expression and therefore copyright, since there were many other ways that Jaslow could have structured the program other than the method used by Whelan.
- Additionally, the two programs had the same 'look and feel' and the same person had been involved in both programs, which raised suspicion of copying.
- The court concluded that it was an infringement of copyright for Jaslow to have used a similar program structure as Whelan's.

2.9.2. Computer Associates International v Altai (1992)

- See: Bainbridge p. 34, Ayres p. 96.

- The ‘look and feel’ test in Whelan v Jaslow has been disapproved of in the U.S. Courts of Appeal, and was reversed in this case.

- The defendant (Altai) had produced a program for controlling the order in which tasks are carried out by a computer. It incorporated a common interface component allowing the use of different operating systems, and this part had been added by a former employee of the plaintiff (Computer Associates) who had a similar program and interface.

- The former employee of the plaintiff was very familiar with the interface element of their program, and had access to source code.

2.9.2. Computer Associates International v Altai (1992) (cont'd)

- When the plaintiff issued a summons, the defendant re-wrote their program using different programmers in order to avoid infringing the plaintiff's copyright in the interface. The plaintiff still proceeded with the suit, even though the defendant had not challenged an award of $364,444 damages in respect of the earlier version of the program.

- The trial judge, and subsequently the Appeal court, concluded that the later version of the program did not infringe the plaintiff's copyright

2.9.3. The Test Applied in Computer Associates International v Altai (1992)

- The Court of Appeal suggested a three-step test for *nonliteral* copyright infringement.

- *Abstraction* — *identifying non-literal elements. This* involves tracing the steps of the designer from the code back to the original program function.

- *Filtration* —*separation of protectable expression from* non-protectable material. Some elements of the program (ideas, code dictated by efficiency, code in the public domain) are not protectable under copyright law. These elements are filtered out to identify the core ('golden nugget') of protectable material.

- *Comparison* — *a determination of whether the* defendant has copied a substantial part of the protected expression. This code is likely to reduce the copyright protection for program structure, menus and interfaces. After the 'filtration' stage there may be no 'golden nugget' left.

2.9.4. Apple Computer Corp. v Microsoft Corp. and Hewlett Packard (1988-1992)

- See: P. Samuelson (1992) Updating the copyright look and feel lawsuits, *Communications of the ACM,* ***35 (9), pp.25-31***

- The most visible aspect of a computer program, and the key to its usability, is the user interface - the system of commands and graphic images that are used to communicate with the user.

- Particular styles of user interface adopted by some software companies have become popular with users, and have therefore tended to be adopted by other software companies.

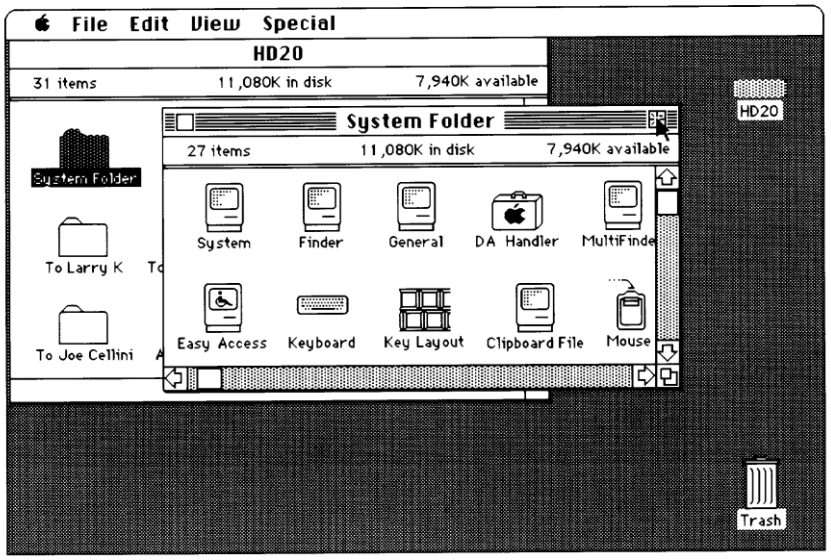
- Apple Computer Corp. brought a copyright infringement suit against Microsoft and Hewlett-Packard in the U.S. in 1988, claiming that the defendants had adopted very similar user interfaces in their Windows and New Wave software as used by Apple in its copyrighted software for the Macintosh computer.

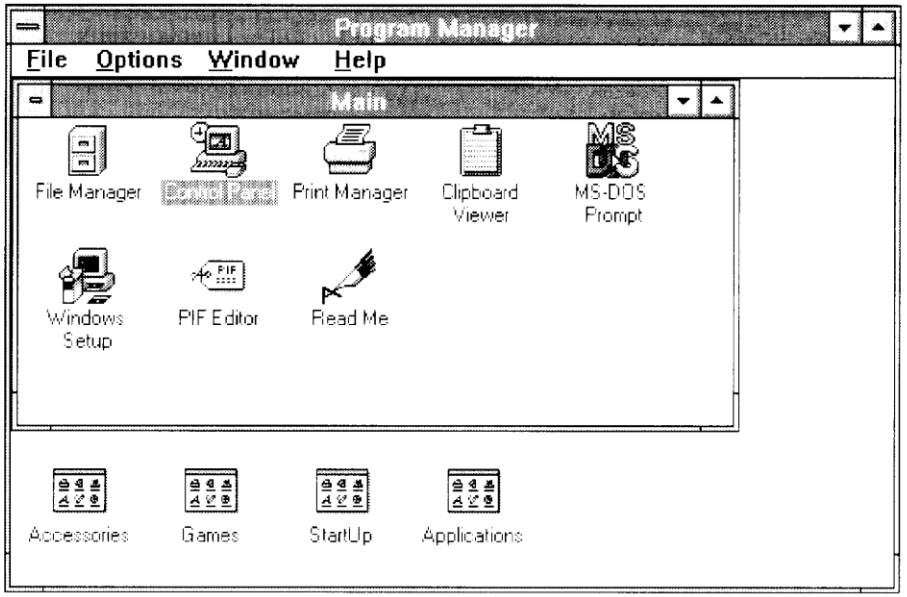
- Apple claim infringement because their competitors have developed software with the same ‘look and feel’ as their Macintosh software, i.e. they are claiming copyright protection for a certain style of interface.

2.9.4. Apple Computer Corp. v Microsoft Corp. and Hewlett Packard (1988-1992)

- The case has some interesting aspects. One is the level of detail at which the similarities in the software should be considered.
  - For example, the graphic images in the Macintosh and Windows software are quite different, so an infringement is unlikely to have occurred at this level of detail.
  - However, Apple is claiming that the overall 'look' of the software is similar. Thus, the courts are faced with the following conundrum; if the components of the two interfaces are unprotected by copyright law, is it possible to assemble these components into a product that is protected by copyright law?
  - Arguments continued until 1997, when Microsoft purchased a substantial share of Apple and paid an undisclosed amount to settle

• Mac and Windows 3.0 Interfaces





2.9.5. John Richardson Computers Ltd. v Flanders and Chemtech Ltd (1993)

- See: D. Horan (1993) John Richardson Computer Limited v Flanders and another - a commentary. *Computer Law & Practice*, ***9 (2), pp. 70-*** 73. Also see Bainbridge p. 35.

- Decided February 1993. The first example of an English court applying the test in Computer Associates International Inc. v Altai (1992). Both parties develop and market computer programs used by pharmacists for producing labels for prescriptions and stock control.

- Richardson (plaintiff) wrote a program for the Tandy computer in 1982. In 1983, he employed Flanders (defendant) to write a program with the same look and feel for the BBC computer. Flanders left Richardson in 1986 but continued to do some self-employed consultancy for him.

2.9.5. John Richardson Computers Ltd. v Flanders and Chemtech Ltd (1993) (cont'd)

- An Irish company approached Richardson asking for a version of the program for the Irish market. Richardson was not interested but said that Flanders could write the program as long as it was not marketed in the U.K.

- Flanders rewrote the program for the IBM PC. Richardson was developing a PC version at the same time. Flanders marketed his program in the U.K. and Richardson sued for infringement of copyright in the BBC version of the program.

2.9.5. John Richardson Computers Ltd. v Flanders and Chemtech Ltd (1993) (cont'd)

- The BBC and IBM versions were written in different languages so there was no literal similarity. The judge identified some non-literal similarities. He also found that some of these similarities were the result of copying, and that these amounted to a substantial amount of the plaintiff's program.

- The judge concluded infringement of copyright. This decision strengthens the copyright protection for computer programs, and stresses the need for ex-employees to be careful not to use non-literal elements from programs they have written for previous employees

2.10. Rights of employees and freelance staff

- Normally, an author of a work is the owner of copyright in that work.
- An exception applies to works made by an employee in the course of employment, in which case the *employer* owns copyright in the work.

2.10.1. Copyright ownership by freelance staff

- Copyright in a program written by a freelance programmer in the absence of any other agreement will belong to the programmer.

- It is therefore essential when employing freelance staff to make contractual provision for determining copyright ownership.

- Yamaha Music in Greece paid twice a freelancer since there was no clear mention of copyright in contract. Freelancer claimed that software was to be used by Yamaha Greece and not given to its customers.

2.10.2. The employee and course of employment

- An employer cannot assume that he will own the copyright in everything produced by his employees.
- A lecturer owns the copyright in a book or article he writes because he is primarily employed as a teacher and not as writer.
- If an employee produces a program to help with his work in his own time and using his own equipment, the employer should try to make an agreement on the use of the program and ownership of copyright.
- Otherwise, problems could arise if the employee moves to another company or attempts to market the program.

2.10.2. The employee and course of employment (cont'd)

- If an employee produces a computer program outside the course of his duties but uses the employees equipment and/or does the work during the hours of employment, then copyright ownership is difficult to determine but is likely to rest with the employer.

- **Q. What are the 'employee' rights of students?**

3. Copyright and Electronic Publishing

- Electronic publishing includes sale, rental or lending of a work stored on a physical carrier (disk, CD-ROM), communication by network (WWW) and broadcast (Prestel, CEEFAX).
- Internet publication is attractive (e.g. academic papers)
- Widely believed that Internet is public domain – NO!
- An author may choose to make a work freely available, but this does affect subsistence of copyright.
- Internet service providers may be liable for infringement by users since CDPA states that copyright may be infringed by a person who *authorises another to do a restricted act (e.g. providing a bulletin board).*
- • International dimension a nightmare. Almost impossible to police. Bully-boy tactics by powerful copyright owners (e.g. Disney).
- Best to make terms of download explicit.
- *Example: linking images on web pages.*

3.0.1. The Shetland Times v. The Shetland News (1996)

- Shetland Times sued Shetland News for copyright infringement, when the latter set up hypertext links connecting its website to that of the Shetland Times.

- The Shetland Times website contained online copies of articles and photographs that appeared in the printed edition of the Shetland Times. By clicking on one of the headlines in the Shetland News, the user gained immediate access to the related text in the Shetland Times, bypassing its front page.

- The Scottish Court of Session accepted that a claim in copyright was arguable and granted an interim injunction against the Shetland News.

3.0.1. The Shetland Times v. The Shetland News (1996)

- The substantive case was due to be heard in the Court of Session, but an out of court settlement was agreed in December 1997.

- The Shetland News has apparently agreed that its link to the Shetland Times must be marked with the words "A Shetland Times Story" and appear next to a "button showing legibly the Shetland Times logo.

- This legend and button will act as hypertext links to the Shetland Times online headline page. Legal commentators may feel deprived that the case has settled without answering complicated questions under the Copyright, Patents and Designs Act 1988.

3.0.1. The Shetland Times v. The Shetland News (1996)

Questions:

- It was a URL and a headline that were copied. Are these literary works?
  - This would depend on its length and uniqueness. Re the URLs, infringement could only be shown if the URLs copied were a substantial part of the database of URLs in the Time's documents. There can be no copyright in single facts. A defence of 'fair dealing' exists if copying is for one of several permitted purposes, including "reporting current events". It would appear that the News had a good 'fair dealing' defence.

- Does the setting up of a web site constitute an implied licence to link to that site (but NOT to copy its contents)?
  - Probably, since that is the purpose of the web! Would passing off have been a more appropriate complaint

4. Implications of Software Copyright Law

- Do not copy non-literal parts of computer programs; screen displays, menus, database structure etc.
- Even if an element of new software is ‘dictated by function’ (e.g. search algorithm) create it independently.
- Prepare, date and keep preparatory materials for software development. Insert deliberate mistakes or redundant code.
- Be aware that copyright extends to compilations of programs and data files.
- Ensure that employees do not use materials or confidential information from previous employment.
- Be very, very careful when using software engineers who have worked on a similar project for a previous employer.
- Obtain signed transfer of copyright from self-employed programmers or consultants.
- Check licence agreements for terms in respect of decompilation and making back-up copies.
- Make arrangements for error correction of programs.

5. Patentability of Computer Programs

- A patent may be granted for an invention only if following conditions are satisfied:
  - The invention is new;
  - It involves an inventive step;
  - It is capable of industrial application;
  - The grant for a patent for it is not excluded by subsections (2) and (3) below...
- The exclusions referred to include:
  - A scheme, rule or method for performing any mental act, playing a game or doing business, or a program for a computer;
  - However, the Act only applies to a patent or application for a patent relating to a thing as such.
- Q. Clearly, the above exceptions exclude computer programs from patentability. Why?

  new' and 'inventive step'. Usually, programs are just a collection of familiar components that do something slightly differently from previous programs. Also, programs are protected by copyright law.

5.1. The exclusions from patentability

- The exclusions only apply to the extent that a patent relates to that thing *as such*.
  - This means that computer programs can be protected by patent indirectly if they are part of an application which includes other elements that are patentable in their own right.
  - Recent plans for a 'utility model' patent which would last for 10 years and apply to software.

- ***5.2. Patent Law in the U.S.***
- Patent law is different in the USA and a number of programs have been successfully patented, e.g. Apple has patented pulldown menus for use with a mouse.

- *5.2.1. Stac Electronics v Microsoft (1994)*
  - Microsoft was negotiating with Stac to include its compression algorithm in MS-DOS. Negotiations broke down, but Stac claimed that Microsoft incorporated the algorithm in MS-DOS anyway. The algorithm is described in two U.S. patents. Microsoft were unable to prove that the algorithm was in the public domain when the patents were approved in 1985. Stac were awarded $120 million. Stac accepted a deal of $43 million plus Microsoft buying $40 million of Stac stock, probably because they were wary of losing an appeal.

6. The Law of Confidence

- The law of confidence is concerned with the protection of trade secrets, secrets of a personal nature and secrets concerning the government of the country.

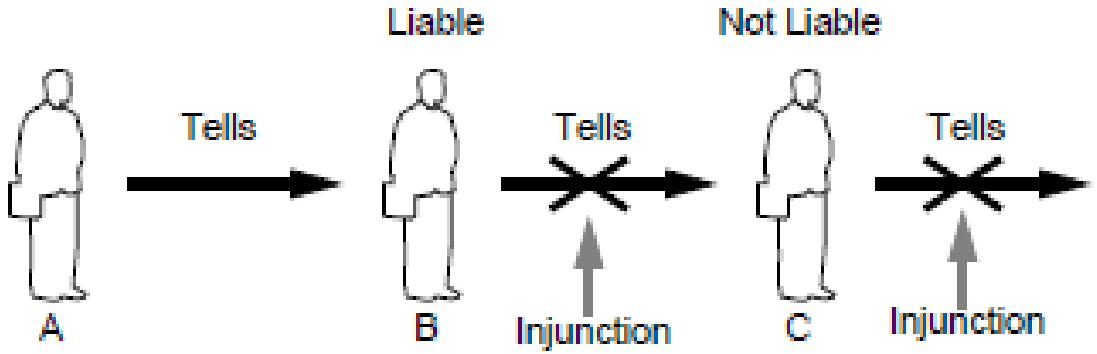
- The law of confidence can prevent a person divulging information given on an explicit or implicit understanding that it should not be disclosed to others.

- The law of confidence is common law, derived almost entirely from case law. It protects ideas; copyright law only protects the expression of ideas.

- An action for breach of confidence requires three elements:
  - The information must have the necessary quality of confidence about it.
  - The information must have been imparted in circumstances importing a quality of confidence; an obligation of confidence was imposed.
  - There must be an unauthorised use of that information to the detriment of the party communicating it.

6.2. Obligation of confidence

- A person who is given information but is unaware of its confidential nature will be able to use it freely.
- This is a major weakness of the law of confidence; it is ineffective against innocent third party recipients of the information.



- Obligatic a freelance programmer may be employed under a contract that forbids him to disclose details of the client's business to anyone else.
- Obligation of confidence may be imposed when there is a duty of good faith, e.g. as in the relationship between a client and his bank manager or solicitor.

6.3. Employees and the law of confidence

- The employee/employer relationship is a special case and may be governed by explicit terms in the contract of employment.

- The courts face a dilemma here. Ex-employees have to make a living, but much of their skill will involve what they learned from previous employment.

- 6.3.1. Northern Office Microcomputer Ltd. v Rosenstein (1982), See Bainbridge p. 95.

  - A computer programmer developed a program that was similar to one he had written for his previous employer. The trial judge agreed that computer programs were protected by confidence but said the protection should be limited. Rosenstein would not be allowed to simply copy the program in question, but he would not be required to 'wipe clean the slate of his memory' since this would restrict his use of his own training, skill and experience. Copyright infringement was also considered in the case. It was noted that the nature of the program itself was an important issue here, i.e. whether it was mundane, novel, or whether the purpose of the program could be construed as a trade secret. If the program was mundane, there would be nothing stopping the employee deriving a similar program as long as he did not simply copy his ex-employers program.

6.3.2. Summary of employees rights

- An ex-employee can make use of his memory of the work he has carried out in previous employment unless it involves genuine secrets or is covered by an explicit term in his contract of employment.
- Computer programmers can make use of programming skills they have learned unless there is something special about them or they have agreed in a contract not to make further use of them.
- A restrictive contract which tries to prevent an ex employee from making use of mundane skills is likely to be considered a restraint of trade.
- Similarly, a contract that attempts to restrict the nature of an employees future employment will also be regarded as a restraint of trade by the courts.
- So, contracts may *protect legitimate interests of the employer, but may not stifle fair competition.*

6.4. Confidence and computer hackers

- Hackers may also be liable under the law of confidence (as well as criminal law).
- If a hacker gains access to confidential files stored on a computer, the law of confidence may be able to prevent the hacker from making use of the information.

Q. Is there an obligation of confidence on a hacker?

  – Probably, if the information has a quality of confidence, since a hacker will know that there is a good chance that the information he accesses is confidential. In 1980, the Law Commission recommended an addition to the law of confidence which would impose an obligation of confidence on a person who improperly acquires information by using or interfering with any computer or data retrieval mechanism.

6.5. Remedies for breach of confidence

- The most important remedy is an injunction preventing the use or disclosure of the information.

- If the information has already been divulged to sufficient people so that it is no longer confidential an injunction would be useless.

- In this case, damages will be available against the person responsible if the use or disclosure of the information is to the detriment of the ‘owner’.

7. Summary

- In this section we have considered the following:
  - Copyright legislation in the U.K., the Copyright, Designs and Patents Act 1988.
  - Copyright of computer programs and restricted acts; **copying**, **adaptation**, **decompilation**, **error correction**.
  - Problems with U.K. copyright law.
  - Look and feel, and the distinction between ideas and expression in computer software.
  - Patentability of computer programs.
  - The law of confidence for protecting confidential information. The application of the law of confidence to hacking and software development.