# COM6655 Professional Issues
## Autumn 2021-22

### Intellectual Property (part 3)

Professor Guy Brown
Department of Computer Science, University of Sheffield
g.j.brown@sheffield.ac.uk

## Aims of this lecture

- To explain intellectual property issues relating to rights of employees, employers and freelance staff
- To review issues in electronic and open-source publishing
- To explain limits on patent protection for software in UK law
- To explain how the law of confidence protects computer software



# Rights of employees and freelance staff



## 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.

## 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.
- **Note**: this was the case in Whelan vs Jaslow; Whelan was hired to write the software and retained copyright ownership in it.
- https://en.wikipedia.org/wiki/Whelan_v._Jaslow



## The employee and course of employment

- An employer cannot assume that they will own the copyright in everything produced by their employees.
  - Example: A lecturer
- If an employee produces a program to help with their work **in their own time and using their 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.
- If an employee produces a program **outside the course of their duties but uses the employer's equipment** and/or does the work during the hours of employment, then copyright ownership hard to determine but is likely to rest with the employer.



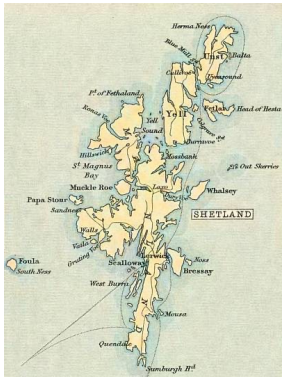
## Copyright and electronic publishing

- Electronic publishing includes sale, rental or lending of a work stored on a physical carrier (e.g. DVD), and communication by network /broadcast.
- Internet publication is attractive (e.g. academic papers) and it is widely believed that material on the Internet is freely usable – it's not!
- An author may choose to make a work freely available, but this does **not** affect their 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 is difficult. Heavy-handed tactics are often used by powerful copyright owners. Best to make terms of download explicit.



## Shetland Times v Shetland News (1996)

- The defendant operated a web site, Shetland News. On this he placed some headlines from the Shetland Times and links to the relevant Shetland Times pages.
- **Outcome**: The Shetland Times was granted an injunction against the News
- Headlines were copied, but the precedent is unclear because these would not normally be considered a 'literary work'.
- **Q. Why not?**



## Unintended consequences?

- “The Lord Ordinary … interdicts the Defenders, their employees, agents or anyone acting on their behalf or with their authority from … storing in any medium by electronic means or otherwise copying … any headline, text or photograph from any edition of "The Shetland Times" …”

Lord Hamilton, 1996

- “Lord Hamilton raises a very interesting question if we can't even store material electronically, because that is how a computer looks at web pages … That means, strictly speaking, that we can't even look at their website on-line, because the web browser software stores the page on our computers as we look at it.
- Where does that end? Does it affect everyone, or only us? In other words, could anyone be in contempt of the interdict if they even look at their site?”

G. Storey, Technical director, The Shetland News (1996)

Both quoted at: https://www.lectlaw.com/files/elw10.htm



## Free software, open source and copyleft

- Richard Stallman established the Free Software Foundation (FSF) and has campaigned against software ownership. ‘Free’ means:
  - Freedom to run the program, for any purpose;
  - Freedom to study how the program works, and adapt it to your needs;
  - Freedom to redistribute copies so you can help your neighbour;
  - Freedom to improve the program, and release your improvements to the public, so that the whole community benefits.
- Open source: Access to source code is a precondition for this.



## Freedom and copyleft

- Free does not mean non-commercial (‘free speech, not free beer’).
- Free programs are available for commercial use, development and distribution. Many examples of open-source software development which have led to commercial products (Linux, MySQL, MacOS X).
- FSF advocates a **copyleft** model
  - Allow rights to use, modify, and redistribute the program’s code or any program derived from it
  - But only if the distribution terms are unchanged.
- Example: GNU public licence (see http://www.gnu.org ).



## Implications of software copyright law

- Do not copy non-literal parts of 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 (e.g. in comments) 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 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.

# Patents and software



## Patentability of computer programs

- A patent may be granted for an invention only if the following conditions are satisfied:
  - The invention is new;
  - It involves an inventive step;
  - It is capable of industrial application;
  - It is not "excluded by subsections (2) and (3) below" ...
- In the UK, the exclusions include:
  - *A scheme, rule or method for performing any mental act, playing a game or doing business, or a program for a computer*



## The exclusions from patentability

- The exclusions only apply to the extent that a patent relates to "that thing as such."
- So computer programs can be protected by patent **indirectly** if they are part of an application which includes other elements patentable in their own right.

*The courts have consistently found that, where claims recite standard hardware, such conventional apparatus does not form part of the contribution. This is often the case in computer program inventions – an application relating to a computer program cannot be saved simply by claiming conventional computer hardware programmed in a particular way.*

Patent Practice Notes 2014



## Patent law in Europe

- An EU *Directive on Patentability of Computer-Implemented Inventions* was proposed in 2002
  - Controversial because many feared that it would adversely affect open source software development, putting much power in the hands of large developers.
- Defeated in the European Parliament in July 2005.
- **Consequences**: National laws will not be harmonised across the EU. Countries can continue to pass their own (possibly contradictory) laws concerning patents on computer-implemented inventions.

https://en.wikipedia.org/wiki/Proposed_directive_on_the_patentability_of_computer-implemented_inventions

## Patent law in the USA

- Patent law is different in the USA and a number of software innovations have been successfully patented.
- Example: Apple holds US Patent 6,493,006 for 'Graphical user interface having contextual menus'. https://patents.justia.com/patent/6493006
- **Stac v Microsoft (1994)**
- Stac Electronics sold a disk compression utility called Stacker from 1990; Microsoft introduced MS-DOS 6.0 in 1993, which included a compression utility called DoubleSpace; this was after they had talked to Stac Electronics and had examined their code.
- Stac Electronics sued Microsoft for infringement of two patents on the compression software, and won.
- https://en.wikipedia.org/wiki/Stac_Electronics#Microsoft_lawsuit



# Law of confidence and software



## The Law of Confidence

- This is concerned with the protection of trade secrets, secrets of a personal nature and secrets concerning the government of the country.
- It 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.
- The Law of Confidence protects **ideas**; copyright law and patents only protect the **expression** of ideas.



## European Convention on Human Rights: Article 8

- European law also protects some aspects of confidentiality:
- **Article 8 – Right to respect for private and family life**
  1. Everyone has the right to respect for his private and family life, his home and his correspondence.
  2. There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others.

## Taking action

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



## Quality of confidence

- Four elements are necessary in testing for quality of confidence:
  1. Release of the information would **injure the owner** of the information **or benefit others**.
  2. The owner **must believe the information to be secret** and not already in the public domain.
  3. The owner's belief in 1 and 2 must be **reasonable**.
  4. The information must be judged in the light of usages and practices of the particular trade or industry concerned.
- **Q. List some things that have a quality of confidence**



## Examples

- Examples of information which has a quality of confidence:
  - Ideas for a new or improved computer system, hardware or software.
  - Lists of customers and associated information.
  - Much of the information stored on computer databases is confidential.
  - A company's strategy for future research and development, production and marketing




## 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.

## How obligation of confidence arises

- **Explicit agreement**, e.g. a programmer may be employed under a contract that forbids them to disclose details of the client's business to anyone else
- **Duty of good faith**, e.g. the relationship between a client and their bank manager or solicitor
- **Circumstances** in which disclosure was made, if a reasonable person would realise that information was given in confidence



## 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
- **Q. If I learn to program in Java while working for one employer, can I use it in my next job as well, or did I learn it "in confidence"?**



## Northern Office Micro Computers (PTY) Ltd. v Rosenstein (1982)

- A significant case from South Africa:
  - Rosenstein was employed by NOMC to take over development of software, then resigned and claimed copyright in software he had developed.
  - South African law did not allow his employers to claim copyright ownership.
- NOMC claimed that the law of confidence applied.
- **Decision**: Law of confidence applied, but protection should be limited. An employee should not copy programs, but an employee is not expected to 'wipe clean the slate of their memory'; this would be an unreasonable restriction on the use of past experience and skills.



## Summary of employees' rights

- An ex-employee can use their memory of the work carried out in previous employment
  - unless it involves genuine secrets
  - or is covered by an explicit term in her/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. A contract that attempts to restrict the nature of an employee's future employment will also be regarded as a restraint of trade by the courts.
- **In summary, contracts may protect the legitimate interests of the employer, but should not stifle fair competition.**

## Remedies for breach of confidence

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



## 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.

Recent case law (August 2021): High Court rejects claim for distress following cyber attack on DSG Retail Ltd and release of personal information.

*"Although there was a failure by DSG which allowed cyber-attackers to access individuals' personal data, there was no positive conduct by DSG which amounted to a breach of confidence. DSG was the victim of the attack."*



## Summary

- Important for you to understand intellectual property ownership issues going forward, both as a potential employer and employee
- Particular copyright issues in case law around electronic publishing
- In the UK, there is no patent protection for software 'as such'
- Law of confidence (which protects ideas), and is a useful adjunct to copyright law (which protects expression) in respect of computer software