University of Edinburgh

School of Informatics

Intellectual Property and the Digital Age

03 March 2009

Outline

- IP Basics
  - what is IP? / IP ownership / protecting IP
- Copyright
  - basics – infringement / permitted acts
  - IT / computer programs / internet
- IP in Practice – Open Source Software licensing
- Patenting and computer programs
  - basics – requirements/monopoly right
  - patents & computer programs
  - UK/ Europe /US
- IP in Practice – Creative Uses of IP in the digital age

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What is IP?

- IP = Intellectual Property
- IP is the result of creativity activity and / or innovation arising from use of human intellect
- Distinct from physical property as it is intangible
- IP is protected by Intellectual Property Rights – IPR
- Two main groups of IPRs – IPRs that permit / restrict a third parties rights to use your IP (copyright & related rights) and IPRs that give a monopoly right (patents, trade marks)
- Know-how

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Ownership of IP

- The creator of IP and the owner of IP are not necessarily the same
- Employers usually own their employees' IP
- Ownership position can be varied by contract
- IP can be jointly owned by a number of creators
- Ownership transfer (assignation) must be in writing

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Students and IP

- As a general rule IP generated by a student during his or her studies is owned by the student

- **BUT**:
  - policy of each HEI differs
  - commercially sponsored studentships
  - contribution of HEI employees to IP
  - some students are also employed researchers

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Rights to Protect IP

- Copyright ©
  - applies to original literary, dramatic and musical works incl. software and computer generated works
- Patenting
  - limited application to software
- Database right
- Others
  - trade marks (TM v ®), domain names, design rights, know-how, semiconductor topography rights
- Ideas
  - no automatic protection for ideas *per se*

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Copyright

- What is copyright?
- Copyright in more detail
- Copyright and Information Technology

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What is copyright?

- Copyright is an Intellectual Property Right
- Copyright comes into existence with the work - no need for registration
- Subject matter includes literary, dramatic, musical and artistic works (LDMA) but not ideas *per se*
- Literary Works include computer programs and compilations

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Copyright in more detail

- Who owns the copyright?
  - Author/Employee/Publisher
  - Not always straightforward
- Duration of Protection
  - Lifetime of author plus 70 years for LDMA
- Infringing Acts
- Defences

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Infringing Acts

- Copying the work
  - reproduction in any form including in an electronic medium and transient reproduction
- Issuing copies of the work to the public
- Rental / lending the work to the public
- Performing the work in public
- Communicating the work
- Adapting the work

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Defences

- Sometimes described as “permitted acts”
- Educational Copying (limited)
- Decompilation of Computer Programs
- Fair Dealing
  - Non-commercial purpose (previously research);
  - Private study;
  - Criticism/review;
  - Reporting current events

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Copyright and Information Technology

- Copyright and Computer Programs
- Copyright and the Internet
- Copyright and Databases
- Database Rights

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Copyright and Computer Programs

- Copyright protection extended to computer programs in 1992
- Protection for lifetime of Author plus 70 years
- What will infringe the copyright in a computer program
  - the copying of a “substantial part”
  - qualitative not quantitative test
- Lawful use of copyright protected computer programs
  - Making back up copies
  - De-compiling a computer program to create independent, inoperable non-compiling program
  - Adapting for lawful use i.e. correcting errors
  - Observe, study or test to determine underlying ideas

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Copyright and the Internet

- Shetland Times Case

- Copyright and Related Rights Regulations 2003
  - protection of technological measures to prevent unauthorised copying (not computer programs)
  - limitation of user rights (i.e. research exemption only for non-commercial research)
  - extension of reproduction and public communication right in digital context (transient reproduction)

- New challenges of “Web 2.0” activities – MySpace and YouTube
  - Need to obtain rights clearances
  - Control of uploaded material

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Databases

- Database = “a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means”

- EU Databases Directive in 1996 = Copyright and Rights in Databases Regulations 1997

- Protection in two parts
  - copyright protection for “**structure”** of database
  - Structure = method of arrangement involving intellectual judgment
  - a new database - specific right for the **contents** of the database

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Database Rights

- Right to maker of database to prevent unauthorised extraction/utilisation of the database contents
- Extraction
  - transfer of a substantial part of contents to another medium
- Re-utilisation
  - making available a substantial part of the contents to the public by distribution of copies
- Protection lasts for 15 years
  - living database = potentially indeterminate protection

- William Hill case

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Case Study 1

Open Source Software

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Overview

- Basics of software licensing
- What is Open Source?

- Key features of Open Source Licences
- Risks of Open Source and how to manage them

- Questions

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The rise of Open Source (“OS”)

- Huge rise in revenue of Linux-based server hardware
- Two thirds of servers run on Apache OS software
- Bristol City Council to save £1m by using StarOffice
- Firefox Browser reaches one in ten Internet Users
- 90% of enterprises running both Windows and Linux say they spend less effort managing Linux

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What is Open Source?

Software Licensing 101

Exam Paper

Question 1 – What is Open Source?

(a) A tale of penguins and gnus
(b) A philosophical crusade
(c) An efficient way to facilitate the development of software
(d) A threat to the domination of Microsoft
(e) A type of software licence
(f) ALL OF THE ABOVE

Software licensing and risk

- Businesses and academic researchers are risk managers
  - Avoiding copyright infringement
  - Not breaching the terms of software licences
- Open Source is a new(ish) area of legal risks for developers and users
- OUT-LAW Survey – 75% of developers “borrow” code from 3rd parties
- Evaluating risks is key to choice between Open Source and proprietary software

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The need for licensing

- IPR in software
  - copyright
  - patents
  - database Rights
- Copyright Infringement
  - copying, using or storing the whole or a substantial part
  - quality, not quantity
- Software licences legitimise acts that would otherwise amount to copyright infringement

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Source Code

- The “crown jewels” of any software house
- Program code which a (skilled) programmer can read
- Key to modifying code to correct errors, add/remove and develop
- Very rarely disclosed to users
  - Source code escrow as a form of insurance

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Proprietary Software Licensing

- Supplier-biased terms
  - Tight licence grant (limited scope of use, number of users etc.)
  - Closed source
  - Licence Fees, royalties, duration and termination
  - Strict limitations on liability

- Customer-biased terms
  - Software warranties
  - IPR Indemnities

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Open Source – the developer & business view

- Highly collaborative (chaotic..?) development model
- Rapid evolution of software
- ‘The Cathedral and the Bazaar’

- Cheaper alternative to proprietary software
- ‘One in the eye’ for Bill Gates

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Open Source – the legal view

- Just another type of software licence

- Typical features:
  - Full access to source code
  - Right to modify code and to distribute
  - ‘Sharing’ of modified code through the same terms
  - Little warranty protection
  - Licence often at no charge (but often with support charge)

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Standard form OS Licences

- A range of standard form licences

- Some examples:
  - GPL – the Gnu General Public Licence
  - BSD – the Berkeley Software Distribution
  - MPL – Mozilla Public Licence
  - Apache, MIT, etc.

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Key risks in OS licensing

- Risk 1 - IP infringement claim
  - IP Indemnity protection (or lack thereof)
- Risk 2 - Limitations on onward exploitation
  - Reciprocity (the ‘forcing restriction’)
  - Managing the risk

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Risk 1 - IP Infringement

- Nature of OS development
  - Complex history with many contributors
  - Hobbyist developers may take ‘short-cuts’
- Potential for allegations of copyright infringement
- Potential risks / restrictions in onward exploitation of modified code
- Needs to be dealt with as an additional business risk

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Risk 2 – Reciprocity (Developers Only)

- What happens if a university researchers uses OS in developing research results / new software?
- Do you have to license the derivative works on same basis?
- Main difference between Licences is treatment of derivative work

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OS Licence Comparison

No Reciprocity

BSD Code	+	University Code	=	Combined Code		Keep control of own code
MPL Code	+	University Code	=	Combined Code		
GPL Code	+	University Code	=	Combined Code		Entire work becomes OS

'Copyleft'

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Managing Open Source Risk

- Create an internal OS policy
- Inform and educate developers / key relevant research groups
- Carry out an audit of open source use prior to exploitation of end “product”
- Create an audit trail for future use / licensee diligence
- Consider the risk in licensing on software containing open source code
- Reflect use of open source software in licence terms
  - Limited warranties / no indemnity
  - Include appropriate “reciprocity” provisions, if required

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Summing up the risks of Open Source

- Approach to risk depends on whether you are:
  - an internal user / researcher using an OS product as a research tool only
  - a developer / researcher incorporating OS in software that is developed as a research output

- OS Licences are still software licences…
  - the risks will vary depending on which licence is used
  - proper due diligence means an effective, up front review of the agreement
  - reflect outcomes of review in contracts with third parties that are used to exploit the university's technology

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Case Study 2

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Patents and Computer Programs

Patenting

- Patent protection is granted to inventions
- It gives the patent holder a negative right of monopoly
- It is a deal between the ‘inventor’ and the State

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Patenting Basics – The Tests

- Must be:
  - Novel
    - not in public domain
  - Non-obvious
    - not obvious to someone skilled in the art
  - Have Industrial Application

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Patenting Computer Programs

- Unlike in US and Japan in the UK computer programs are *per se* specifically excluded from patentability
- EU are still looking at this issue
- Special “technical effect”
  - what is that?!
- Draft European directive on this issue

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Patenting Computer Programs

- Patents **are** granted in respect of computer programs in Europe

- IBM Case
  - “novel” window environment
  - special “technical effect”

- Draft EU Directive
  - “Technical Contribution”
  - “Isolated Programs” excluded from patentability
  - Still not finalised!

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Patenting in the US

- Much more straightforward
- Possible to lodge claims covering the program itself
- Microsoft alone holds thousands of patents for computer programs
- In US more than 10,000 applications filed annually

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Strictly Confidential

- Disclosure into the public domain prior to filing a patent application = lack of novelty for your invention”
- Control disclosure of commercially sensitive/patentable technical information
- Use confidentiality agreements - 6 month novelty extension
- Disclose object code not source code

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Case Study 3

Questions

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