

A Gift of Fire

Third edition

Sara Baase

Chapter 4: Intellectual Property

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Slides prepared by Cyndi Chie and
Sarah Frye

What We Will Cover

- Intellectual Property and Changing Technology
- Copyright Law
- Copying and Sharing
- Search Engines and Online Libraries
- Free-Speech Issues
- “Free” Software
- Issues for Software Developers

Intellectual Property and Changing Technology

What is Intellectual Property?

- The intangible creative work, not its particular physical form
- Value of intelligence and artistic work comes from creativity, ideas, research, problem solving, skills, labor, non-material efforts and attributes the creator provides
- Protected by copyright and patent law

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Intellectual Property and Changing Technology (cont.)

U.S. Constitution

Article I, Section 8, Clause 8 [The Congress shall have power]

“To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.”

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 - To produce derivative works, such as translations into other languages or movies based on books
 - To distribute copies
 - To perform the work in public (e.g. music, plays)
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 - To transfer the copyright or grant a license

Intellectual Property and Changing Technology (cont.)

Challenges of New Technology:

- Digital technology and the internet has made copyright infringement easier and cheaper
- New compression technologies have made copying large files (e.g. graphics, video and audio files) feasible
- New tools allow us to modify graphics, video and audio files to make derivative works
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Fair Use Doctrine (17 U.S.C. § 107):

- The reproduction of a particular work may be considered fair, such as
 - criticism,
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 - Purpose and nature of use – commercial (less likely) or non-profit purposes
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- Collection of techniques that control uses of intellectual property in digital formats
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Domain Names:

- Domain names may be used to criticize or protest (e.g. XYZIsJunk.org)
- Companies sue under trademark violation, but most cases dismissed
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- In one judgment against the Church of Scientology, the court ruled that the church's primary motivation was "to stifle criticism of Scientology in general and to harass its critics"

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“Free” Software

A decorative graphic consisting of a large, light blue arc that starts from the top left and curves towards the bottom right. A smaller, solid blue triangle is positioned at the end of this arc, pointing towards the bottom right corner of the slide.

“Free” Software

- **Freebies** make it more difficult to turn **parasitism** from adaptive into maladaptive behavior.

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“Free” Software

- “Free” software - idea, an ethic, advocated and supported by large, loose-knit group of computer programmers who allow people to copy, use, and modify their software
- Free means freedom of use, not necessarily lack of cost
- Open source - software distributed or made public in source code (readable and modifiable)
- Proprietary software - (commercial) sold in object code (obscure, not modifiable) (E.g.: Microsoft Office)

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- Would there be sufficient incentives to produce the huge quantity of consumer software available now?
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Issues for Software Developers

Patents for Software

- Patents protect inventions of new things or processes
- The Supreme Court refrained from clear opinion regarding software patentability
- Patents are not supposed to be given for things that are obvious or are already in common use
- The Patent Office has made mistakes

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Patents for Software

- The main function of patents is **not** to motivate new inventive processes but to protect the existing ones!

Issues for Software Developers

Patent Law (Title 35 U.S.C. § 101, Inventions patentable):

"Whoever invents or discovers any new and useful **process**, machine, manufacture, or composition of matter, or any new and useful improvement thereof, **may obtain a patent** therefor, subject to the conditions and requirements of this title."

where § 100 of that Law defines "**process**" as "process, art or method," including "a new use of a known process, machine, manufacture, composition of matter, or material."

Issues for Software Developers

Supreme Justice Kennedy:

"It is important to emphasize that the Court today is **not** commenting on the patentability of any particular invention, let alone holding that any of the above-mentioned technologies from the Information Age should or should not receive patent protection. [...] [T]he patent law faces a great challenge in striking the balance between protecting inventors and not granting monopolies over procedures that others would discover by independent, creative application of general principles."

Issues for Software Developers

Mandatory reading:

On the Software Patenting Controversy

(for in-classroom use only)

<http://csc.csudh.edu/suchenek/CSC301/PatentsForSoftwareArticle.pdf>

Knowledge workers, beware of Marx

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Marx's thesis has been lauded by
socialists as the most important
"scientific" discovery in theory of class
conflict

Knowledge workers, beware of Marx

Marx declared intellectual property as a *surplus value*

He postulated that it squarely belongs to blue-collar workers (the so-called “proletariat”) participating in manufacturing of products that utilize it

Knowledge workers, beware of Marx

Thus Marx decided that the fruits of work of knowledge workers do not belong to these knowledge workers but to the “proletariat”.

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Thus Marx decided that the fruits of work of knowledge workers do not belong to these knowledge workers but to the “proletariat”.

By doing so, he clearly violated natural right of an individual to the fruits of his/her own work. (Recall John Locke’s article on Natural Rights discussed in Chap. 1.)

Knowledge workers, beware of Marx

Followers of Marx agree: the fruits of work of knowledge workers do not belong to these knowledge workers but to the “proletariat”.

Knowledge workers, beware of Marx

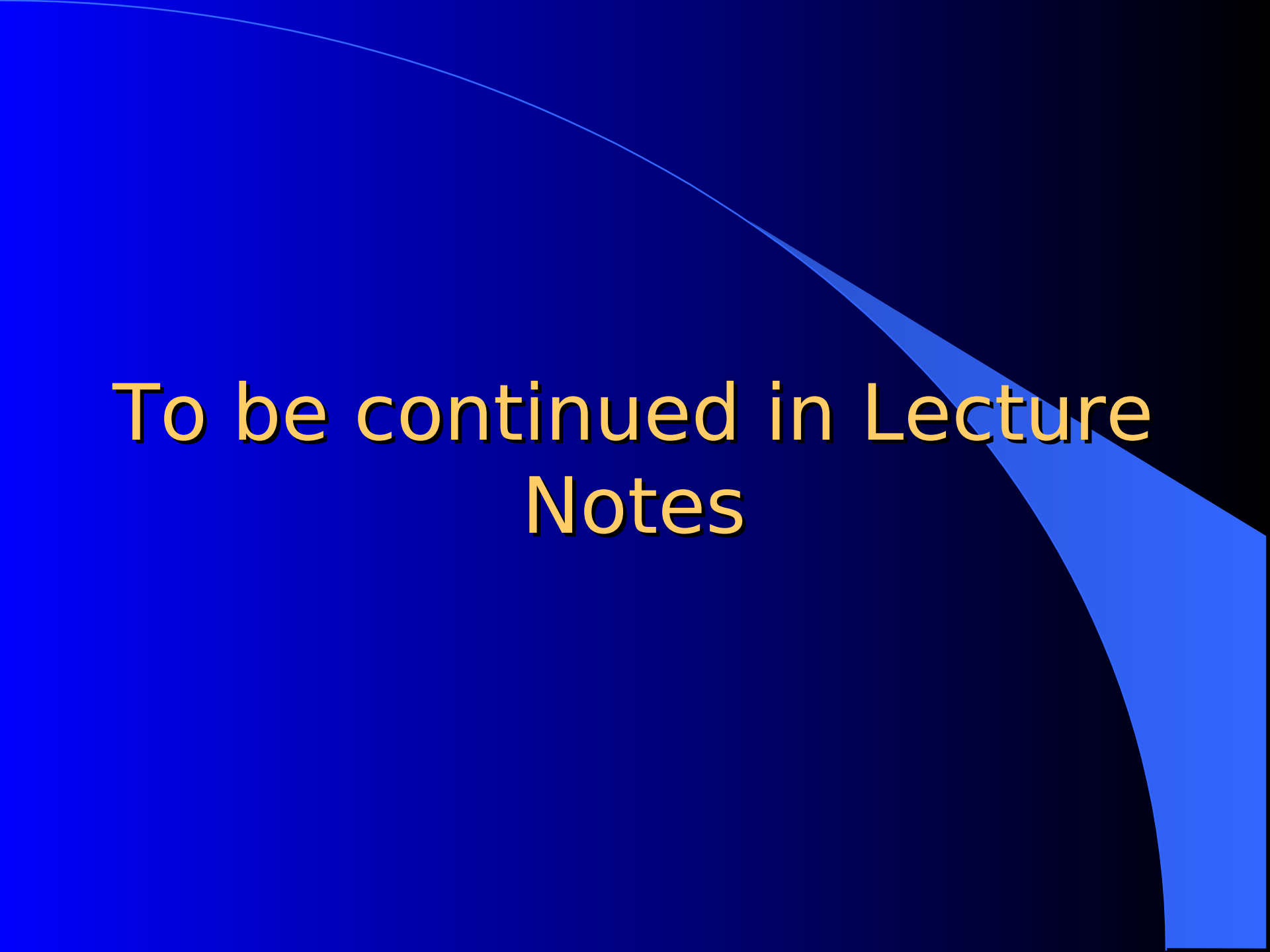
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This is one of the reasons why you, the future knowledge worker, may become the most exploited class in the modern history of the West

Knowledge workers, beware of Marx

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A decorative graphic consisting of a large, light blue arc that starts from the top left and curves towards the bottom right. A smaller, solid blue triangle is positioned on the right side, pointing towards the center of the slide.

To be continued in Lecture
Notes