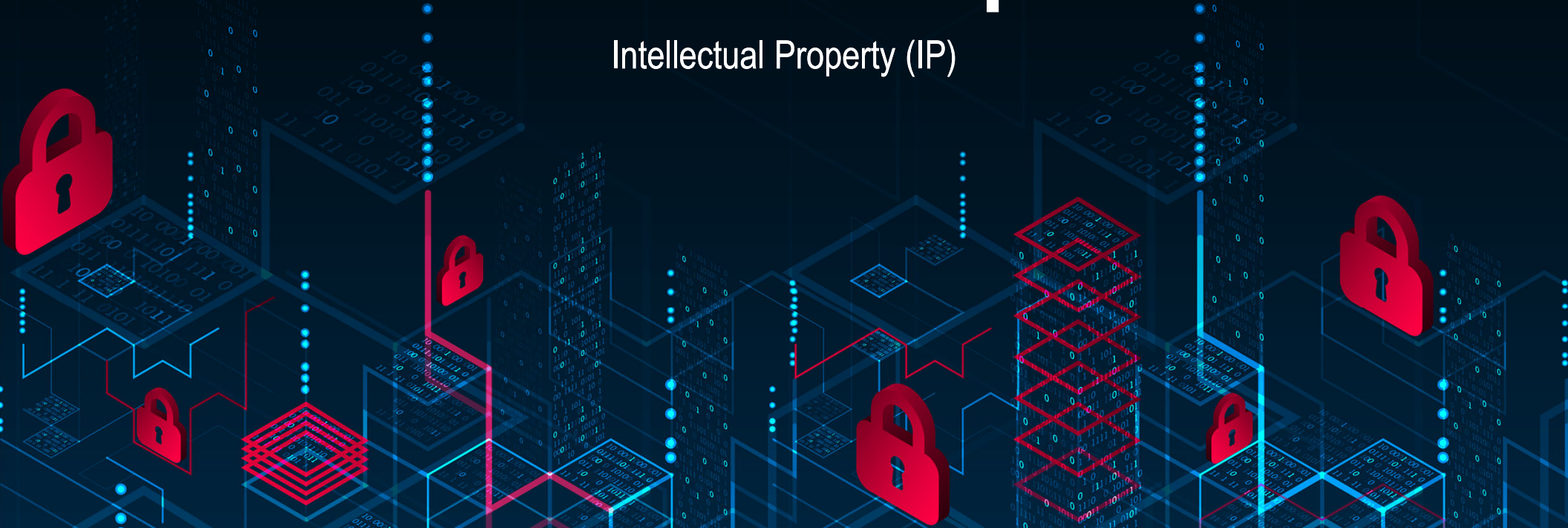


CPR E 431

BASICS OF INFORMATION SYSTEM SECURITY

Security Auditing, Legal and Ethical Aspects

Intellectual Property (IP)



Video Summary

- What is Intellectual Property?
- Copyright, Patent, and Trademark
- IP Relevant to Computer Security
- Digital Rights Management



Intellectual Property (IP)

- The U.S. legal system distinguish three primary types of property:
- **Real Property**: Land and things permanently attached to the land, such as trees, buildings, and stationary mobile homes.
- **Personal Property**: Personal effects, moveable property and goods, such as cars, bank accounts, wages, a small business, furniture,.. Etc.
- **IP**: Any intangible asset that consists of human knowledge and ideas. Examples include software, data, novels, sound recordings, or a cure for a disease medicine.



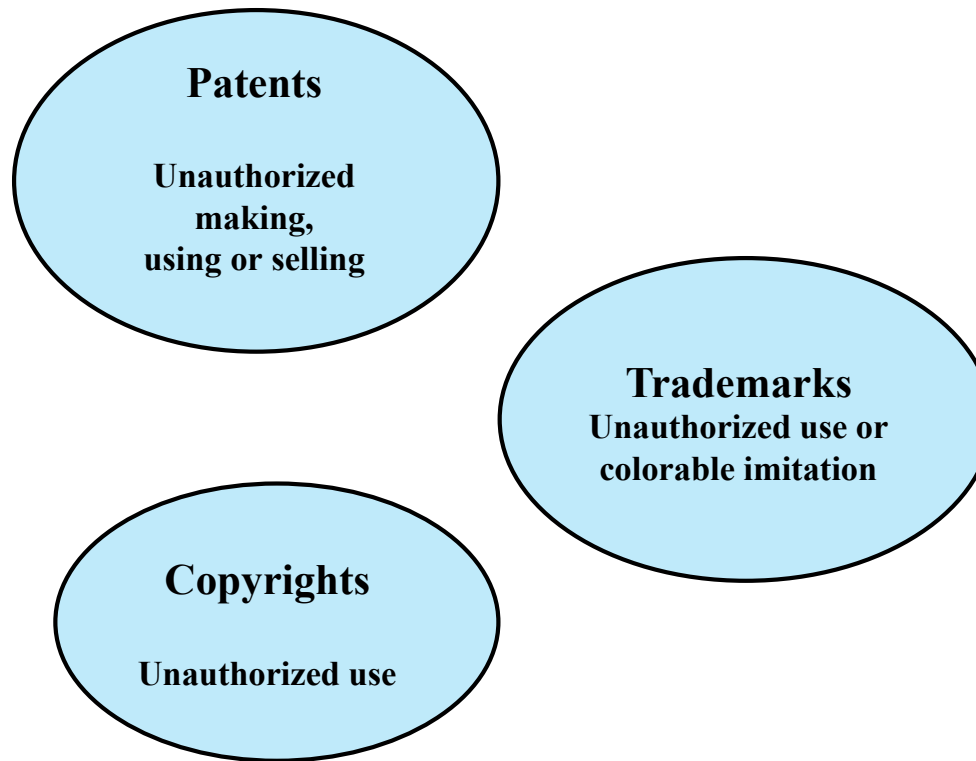


Figure 19.1 Intellectual Property Infringement

Copyright

- Protects tangible or fixed expression of an idea but not the idea itself
- Creator can claim and file copyright at a national government copyright office if:
 - Proposed work is original
 - Creator has put original idea in concrete form



Copyright Rights

- Copyright owner has these exclusive rights, protected against infringement:
 - Reproduction right
 - Modification right
 - Distribution right
 - Public-display right
- Examples include:
 - Musical works (songs)
 - Dramatic works (plays)
 - Graphic, works (cartoon characters)
 - Architectural works (buildings)
 - Software-related works
 - Motion pictures and other audiovisual works (movies)



Patent

- Grant a property right to the inventor
- “The right to exclude others from making, using, offering for sale, or selling” the invention in the United States or “importing” the invention into the United States
- Types:

Utility

- Any new and useful process, machine, article of manufacture, or composition of matter

Design

- New, original, and ornamental design for an article of manufacture

Plant

- Discovers and asexually reproduces any distinct and new variety of plant

Trademark

- A word, name, symbol, or device
- Used in trade with goods
- Indicates source of goods
- Distinguishes them from goods of others
- Trademark rights may be used to:
 - Prevent others from using a confusingly similar mark
 - But not to prevent others from making the same goods or from selling the same goods or services under a clearly different mark



STATA

Intellectual Property Relevant to Network and Computer Security

- A number of forms of intellectual property are relevant in the context of network and computer security
- Examples of some of the most prominent:

Software	Databases	Digital content	Algorithms
<ul style="list-style-type: none">• Programs produced by vendors of commercial software• Shareware (internal use)• Proprietary software created by an organization for internal use• Software produced by individuals	<ul style="list-style-type: none">• Data that is collected and organized in such a fashion that it has potential commercial value	<ul style="list-style-type: none">• Includes audio and video files, multimedia courseware, Web site content, and any other original digital work	<ul style="list-style-type: none">• An example of a patentable algorithm is the RSA public-key cryptosystem



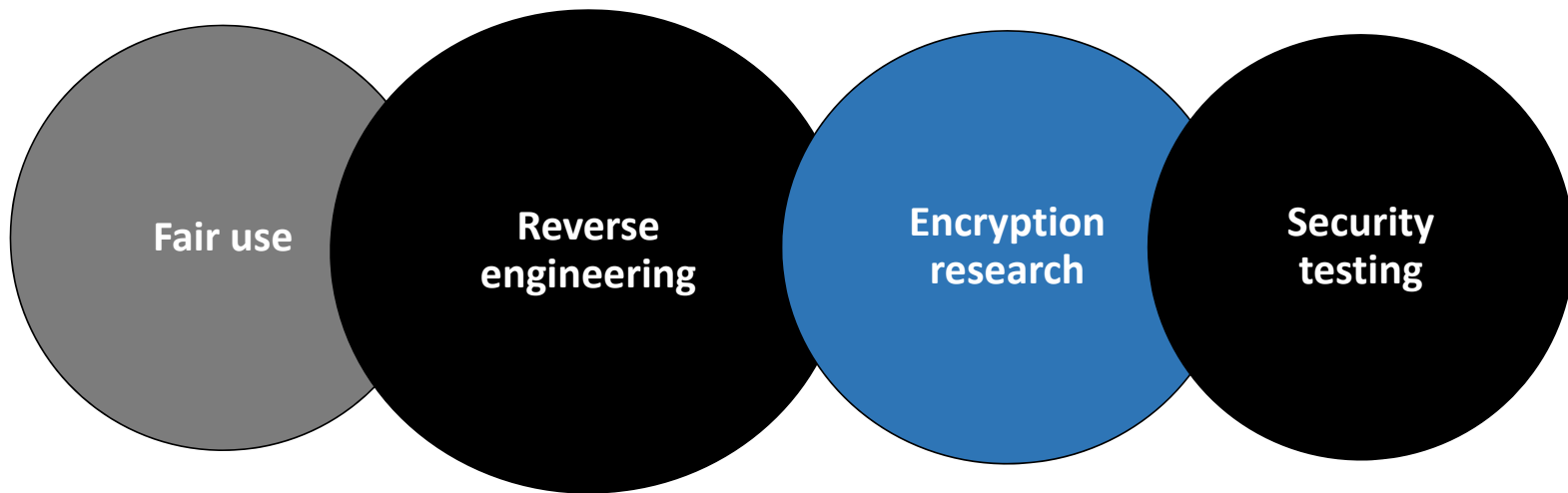
U.S. Digital Millennium Copyright ACT (DMCA)

- Signed into law in 1998
- Strengthen protections of digital copyrighted materials
- Encourages copyright owners to use technological measures to protect their copyrighted works
 - Measures that prevent access to the work
 - Measures that prevent copying of the work
- Prohibits attempts to bypass the measures
 - Both criminal and civil penalties apply to attempts to circumvent



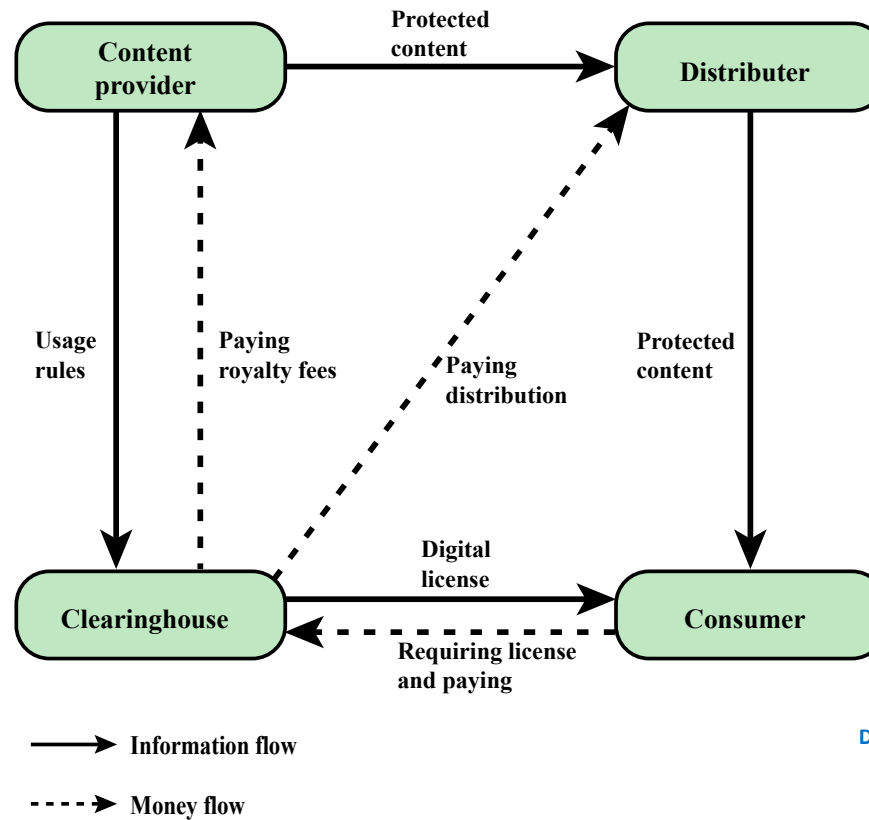
DMCA Exemptions

- Certain actions are exempted from the provisions of the DMCA and other copyright laws including:



- Considerable concern exists that DMCA inhibits legitimate security and encryption research
 - Feel that innovation and academic freedom is stifled and open source software development is threatened

DRM Components



DRM: Digital Rights Management

illustrates a typical DRM model in terms of the principal users of DRM systems

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