Information Technology Fundamentals

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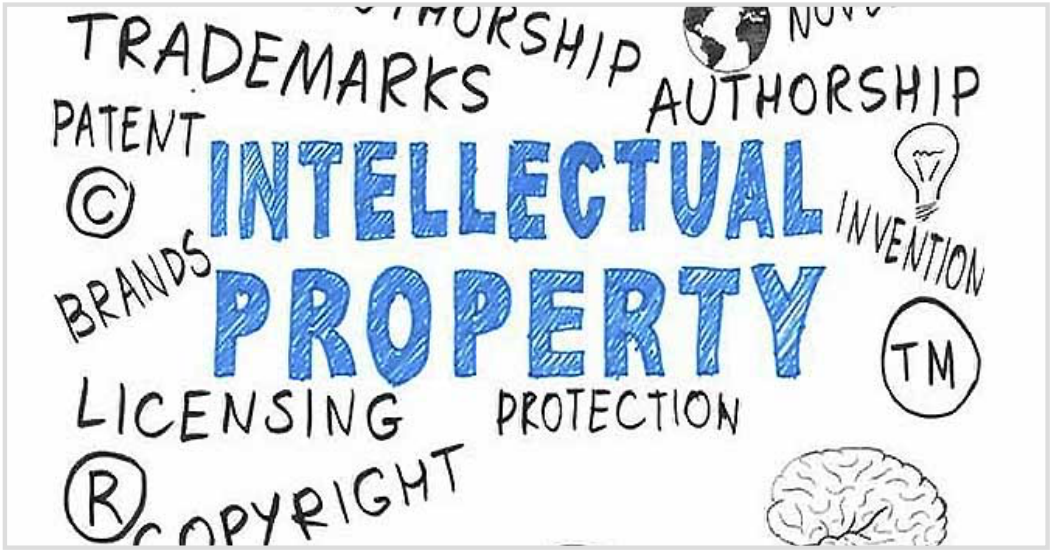


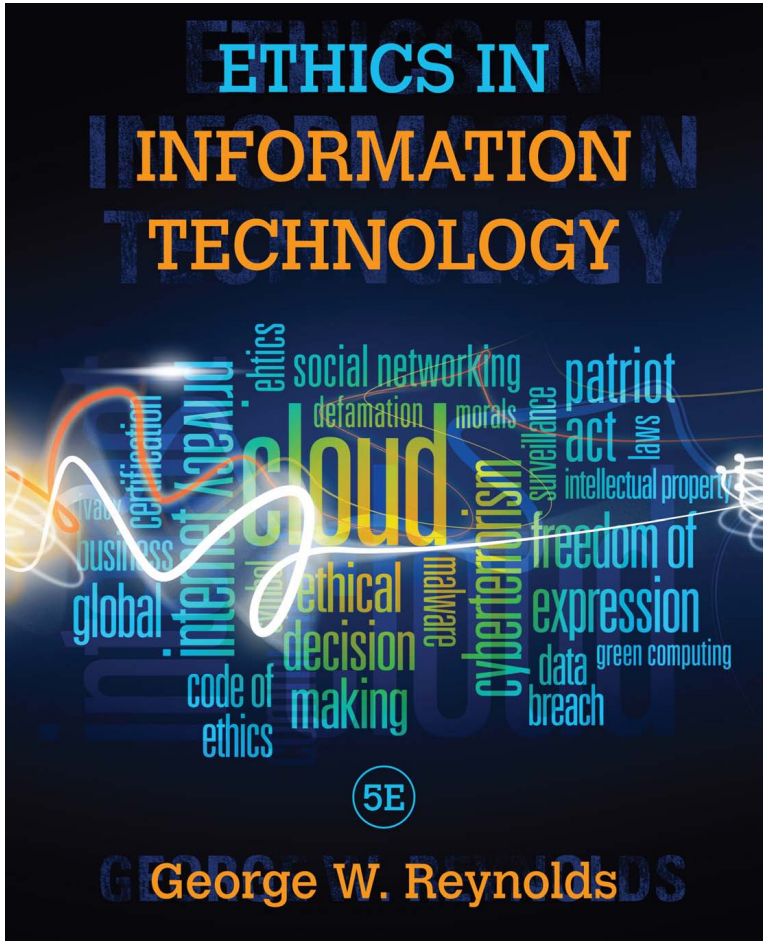
Professionalism: Intellectual Property
Module 4: Part 2

Module 4. Main Objectives

1. Explain Intellectual Property: Copyright, Patent, and Trade Secret
2. **Review Key Intellectual Property: Plagiarism, Open Source Codes, and Competitive Intelligence**

Main Reference

- George W. Reynolds, 2011. **Ethics in Information Technology.** Engage Learning.



Contents

- Key Intellectual Property Issues

1. Plagiarism
2. Reverse Engineering
3. Open Source Code
4. Competitive Intelligence
5. Cybersquatting

Plagiarism

- **Theft** and **passing off** of someone's ideas or words as one's own
- **Many students**
  - Do not understand what constitutes plagiarism
  - Believe that all electronic content is in the public domain
- **Plagiarism detection systems**
  - Check submitted material against databases of electronic content

Steps to Combat Student Plagiarism

- Help students understand what constitutes plagiarism
- Show students how to document Web pages
- Schedule major writing assignments in portions
- Tell students that you know about Internet paper mills
- Educate students about plagiarism detection services

Plagiarism Detection

- **Databases** used to detect plagiarism:
  - More than 5 billion pages of publicly accessible electronic content on the Internet
  - Millions of works published in electronic form, including newspapers, magazines, journals, and electronic books
  - A database of papers submitted to the plagiarism detection service from participating institutions

Partial List of Plagiarism Detection Services and Software

Name of service	Web site	Provider
iThenticate	www.ithenticate.com	iParadigms
Turnitin	www.turnitin.com	iParadigms
SafeAssign	www.safeassign.com	Blackboard
Glatt Plagiarism Services	www.plagiarism.com	Glatt Plagiarism Services
EVE Plagiarism Detection	www.canexus.com/eve	CaNexus

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Reverse Engineering

- Process of taking something apart in order to
  - Understand it
  - Build a copy of it
  - Improve it
- Applied to computer
  - Hardware
  - Software
- Convert a program code to a higher level design
- Convert an application that ran on one vendor's database to run on another's

Reverse Engineering

- **Compiler**
  - Language translator
  - Converts computer program statements expressed in a source language to machine language
- **Software manufacturer**
  - Provides software in machine language form
- **Decompiler**
  - Reads machine language
  - Produces source code

Reverse Engineering

- Courts have ruled **in favor of using reverse engineering**
  - To enable interoperability
- Software license agreements **forbid** reverse engineering
- Semiconductor Chip Protection Act (SCPA)
  - Established a new type of intellectual property protection for mask works

George Hotz (1989)

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Open Source Code

- Program source code made **available** for use or modification
  - As users or other developers see fit
- **Basic premise**
  - Software improves
  - Can be adapted to meet new needs
  - Bugs rapidly identified and fixed
- High reliability
- GNU General Public License (GPL) was a precursor to the Open Source Initiative (OSI)

Commonly Used Open Source Software

Open source software	Purpose
7-Zip	File compression
Ares Galaxy	Peer-to-peer file sharing
Audacity	Sound editing and special effects
Azureus	Peer-to-peer file sharing
Blender 3D	3D modeling and animation
eMule	Peer-to-peer file sharing
Eraser	Erase data completely
Firefox	Internet browser
OpenOffice	Word processing, spreadsheets, presentations, graphics, and databases
Video Dub	Video editing

Blake Ross (1985)

Why Open Source?

1. Share code to **earn respect** for solving a common problem in an elegant way.
2. Used open source code that was developed by others and **feel the need to pay back**.
3. The firm **is paid for the employees' time spent** to develop the software rather than for the software itself
4. Develop open source code in the **hope of earning software maintenance fees**
5. Develop useful code but may be **reluctant to license and market it**, and so might donate the code to the general public.

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Competitive Intelligence

- Gathering of legally obtainable information
  - To help a company gain an advantage over rivals
- Often integrated into a company's strategic plans and decision making
- Not industrial espionage
- Nearly **25 colleges and universities offer courses or programs**
- Without proper management safeguards it can cross over to industrial espionage

A Manager's Checklist for Running an Ethical Competitive Intelligence Operation

Question	Yes	No
Has the competitive intelligence organization developed a mission statement, objectives, goals, and a code of ethics?		
Has the company's legal department approved the mission statement, objectives, goals, and code of ethics?		
Do analysts understand the need to abide by their organization's code of ethics and corporate policies?		
Is there a rigorous training and certification process for analysts?		
Do analysts understand all applicable laws—domestic and international—including the Uniform Trade Secrets Act and the Economic Espionage Act, and do they understand the critical importance of abiding by them?		
Do analysts disclose their true identity as well as the name of their organization prior to any interviews?		
Do analysts understand that everything their firm learns about the competition must be obtained legally?		
Do analysts respect all requests for anonymity and confidentiality of information?		
Has the company's legal department approved the processes for gathering data?		
Do analysts provide honest recommendations and conclusions?		
Is the use of third parties to gather competitive intelligence carefully reviewed and managed?		

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Cybersquatting

- **Trademark** is anything that enables a consumer to differentiate one company's products from another's
  - **May be**
    - **Logo**
    - **Package design**
    - **Phrase**
    - **Sound**
    - **Word**

Cybersquatting (continued)

- **Trademark law**
  - Trademark's owner has the right to prevent others from using the same mark
    - Or confusingly similar mark
- **Cybersquatters**
  - Registered domain names for famous trademarks or company names
  - Hope the trademark's owner would buy the domain name
    - For a large sum of money

Cybersquatting (continued)

- To curb cybersquatting
  - Register all possible domain names
    - .org
    - .com
    - .info
- **Internet Corporation for Assigned Names and Numbers (ICANN)**
  - Current trademark holders are given time to assert their rights in the new top-level domains before registrations are opened to the general public