College of Informatics and Virtual Education (CIVE)

IA 418: Cyber Criminology and Techniques

Fraud and Financial Crimes:

Copyright Infringement and Software Piracy

Intellectual Property

- **Intellectual property** refers to creations of the mind used in commerce:
  - ✓ Inventions,
  - ✓ Literary and artistic works,
  - ✓ Symbols
  - ✓ Names
  - ✓ Images,
  - ✓ Designs
- Three separate categories of intellectual property can be abstracted from the definition on this slide: **ideas**, **expressions**, and **unique commercial identifiers**.

Intellectual Property

- Types of Intellectual Property:
  - ✓ **Copyrights:**
    - Copyrights protect original **textual works** and visual or artistic expressions.
    - With copyright, digital contents in terms of **books**, **images**, **software**, **video**, etc, can be protected.
  - ✓ **Trademarks:**
    - Protect source identifications, usually for brands, **slogans**, **logos**, or designs (sometimes even scents or colors).
    - A trademark protection may **extend perpetually**.

Intellectual Property

- Types of Intellectual Property:
  - ✓ **Patents:**
    - Protects new, useful, and **non-obvious** inventions (ideas!).
    - An invention can be a **device**, a structure, process, machinery, etc.
    - Example of works that can be protected by patent law include, **hardware design**, **software**, etc

Intellectual Property

- Types of Intellectual Property:
  - ✓ **Trade secrets:**
    - ❑ Protect valuable secret information like ideas that **must be kept confidential**.
    - ❑ Others to whom they are disclosed to must also keep them confidential.
    - ❑ Similar to trademarks, trade secret protection may **extend perpetually**.

Copyright Infringement

- Copyright infringement
  - ✓ Occurs when a copyrighted work is **reproduced**, **distributed**, **performed**, **publicly displayed**, or made into a **derivative work** without the permission of the copyright owner.
  - ✓ It means that the rights afforded to the **copyright holder**, such as the **exclusive use of a work** for a set period of time, are being breached by a third party.
  - ✓ **Music** and **movies** are two of the most well-known forms of entertainment that suffer from significant amounts of copyright infringement.

Copyright Infringement

- Forms of copyright infringement- **Unauthorized use of copyrighted content:**
  - ✓ **Reproduction**: Making copies of copyrighted material without permission.
    - ❑ For example, **scanning** and **distributing** pages from a book without the author's consent.
  - ✓ **Distribution**: Sharing or selling copyrighted content without proper authorization.
    - ❑ For instance, uploading and sharing a copyrighted movie on a file-sharing platform.

Copyright Infringement

- Forms of copyright infringement- **Plagiarism and academic copyright infringement**
  - ✓ **Plagiarism:** Presenting someone else's work, such as text, ideas, or images, as one's own without giving proper credit.
    - ❑ This can occur in academic papers, articles, and creative writing.
  - ✓ **Academic copyright infringement:**
    - ❑ Using copyrighted material in academic works, like presentations or research papers, without permission or proper attribution.

Copyright Infringement

- Forms of copyright infringement- **Online piracy and illegal downloads**
  - ✓ **Torrenting:** It is a method of distributing files over the internet.
    - ❑ Involves downloading or distributing copyrighted movies, software, music, or other media.
    - ❑ Makes use of peer-to-peer (P2P) file-sharing networks.
    - ❑ It is done without authorization from the copyright holders.

Copyright Infringement

- Forms of copyright infringement- **Online piracy and illegal downloads**
  - ✓ **Streaming:** Watching or broadcasting copyrighted content without permission on unauthorized streaming platforms or websites.
    - ❑ Examples of platforms that can have their contents pirated include: Netflix, Disney, etc.

Copyright Infringement

- Forms of copyright infringement- Counterfeit goods and trademark infringement
  - ✓ **Counterfeit goods:**
    - ❑ Producing and selling goods that bear a trademark or logo identical or confusingly similar to a registered trademark without authorization.
    - ❑ For example, selling fake designer handbags with a well-known brand's logo.

Copyright Infringement

- Forms of copyright infringement- Counterfeit goods and trademark infringement
  - ✓ **Trademark infringement:**
    - ❑ Using a registered trademark without permission in a way that could lead to consumer confusion.
    - ❑ For instance, using a famous logo to promote a different product or service.

Copyright Infringement

- Demographic characteristics of copyright infringement:
  - ✓ **Males** are more likely to engage in copyright infringement than females.
  - ✓ Older college/varsity students are likely to engage in piracy than younger ones.
  - ✓ On average, younger individuals are more likely to engage in piracy than older individuals.
  - ✓ Over one-third of students commit some form of software misuse or piracy.

Copyright Infringement

- Demographic characteristics of copyright infringement:
  - ✓ Students who are more familiar with computers, and those completing computer-related courses of study, reporting the most misuse.
  - ✓ Students in higher years of courses were also more likely to engage in software misuse.
  - ✓ Piracy activity is conducted by people from many social classes.

Copyright Infringement

- Motivations of copyright infringement:
  - ✓ A combination of reduced cost and immediate access.
    - ❑ As legitimate forms of immediate access are now available, while piracy remains, it would seem that reduced cost is the dominant factor.
  - ✓ Uploaders may be motivated by reciprocity
    - ❑ However, many users never upload content
  - ✓ A range of choice, lack of access to credit cards, convenience and being able to access content that was not otherwise available.

Copyright Infringement

- Consequences of copyright infringement:
  - ✓ **Legal ramifications**
    - Copyright holders have the right to take legal action against infringers to protect their works.
    - Warning letters or notices can be issued to the infringer, demanding them cease the infringing activities.
    - If the willful infringement continues, the copyright holder can file a lawsuit.

Copyright Infringement

- Consequences of copyright infringement:
  - ✓ **Civil penalties and damages**
    - The copyright holder may be entitled to claim **monetary damages** from the infringer.
    - The amount of damages may be based on actual **losses** suffered by the copyright holder or the **profits** gained by the infringer through the infringement.
    - **Statutory damages** may be available, providing predetermined amounts of compensation as stipulated by cybercrime/copyright law.

Copyright Infringement

- Consequences of copyright infringement:
  - ✓ **Criminal penalties**
    - Certain cases of copyright infringement can be subject to criminal prosecution.
    - Criminal penalties may include **fines** and **imprisonment**.
    - Criminal prosecution is more likely in cases of **large-scale** and **organized piracy** or **counterfeiting**.

Copyright Infringement

- Prevention Strategies for Copyright Infringement
  - ✓ Understanding and respecting copyright laws
    - ❑ Copyright and Neighbouring Rights Act No. 7 of 1999.
    - ❑ Cybercrimes Act, 2015 on Intellectual Property
  - ✓ Obtaining **proper licenses** and **permissions**
    - ❑ Individuals and organizations should obtain the necessary licenses or permissions from the copyright holders.
    - ❑ This applies to using music, images, software, and other copyrighted works.

Copyright Infringement

- Prevention Strategies for Copyright Infringement
  - ✓ **Educating employees and stakeholders**
    - ❑ Companies and institutions should provide awareness, education and training to their employees, contractors, and other stakeholders.
    - ❑ Employees, contractors and stakeholders need to copyright laws and the importance of respecting intellectual property rights.

Copyright Infringement

- Prevention Strategies for Copyright Infringement
  - ✓ **Monitoring and enforcing copyrights**
    - ❑ Copyright holders, Police and COSOTA actively monitor the use of copyrighted works to identify potential infringements.
    - ❑ If infringement is detected, prompt action should be taken, such as sending cease and desist letters or filing legal actions if necessary.
  - ✓ …what other strategies do you have in mind?

Copyright Infringement

- Class Activity: conduct an online search regarding copyright infringement cases in Tanzania (15 Minutes reading, 10 for discussions).
  - ✓ What parties have been involved in the dispute?
  - ✓ What act and provisions were used to prosecute the suspect?
  - ✓ How could digital forensics been used to investigate the case?
  - ✓ How does the Tanzania's copyright law complement or contradict the cybercrime law?

Software Piracy

- Software piracy is the illegal using, coping, and reselling of software without the consent of the software vendor.
  - ✓ The unauthorized use may be for **personal** or **business** purposes.



Software Piracy

- Types of software piracy:
  - ✓ **Softlifting**
  - ✓ **Hard disk loading**
  - ✓ **OEM unbundling**
  - ✓ **Counterfeiting**
  - ✓ **Online piracy**

Software Piracy

- **Softlifting** aka **softloading**:
  - ✓ Means sharing a program/software with someone who is not authorized by the license agreement to use it.
  - ✓ A common form of softlifting involves purchasing a single licensed copy of software and then loading onto several computers.

Software Piracy

- **Hard disk loading**
  - ✓ This form of piracy involves loading an unauthorized copy of software onto a computer being sold to the end-user.
  - ✓ Often committed by hardware dealers in order to attract customers.

Software Piracy

- **Renting**
  - ✓ Involves renting out a copy of software for temporary use, without the permission of the copyright holder.
  - ✓ The practice, similar to that of renting a video from a video library, violates the license agreement of software.

Software Piracy

- **Original Equipment Manufacturer (OEM)**
  - ✓ Means selling stand-alone software originally meant to be included with a specific product.
  - ✓ An example of this form of piracy is someone providing drivers to a specific printer without authorization.

Software Piracy

- **Counterfeiting**
  - ✓ Refers to producing fake copies of software, making it look authentic.
  - ✓ This involves providing the box, CDs, and manuals, all designed to look as much like the original product as possible.
- **Online Piracy**
  - ✓ The fastest-growing form of piracy is Internet piracy.
  - ✓ There are hundreds of thousands of sites providing unlimited downloads to any user.

Software Piracy

- Why software piracy?
  - ✓ Lack of awareness in proper use of software.
    - ❑ Most of the users do not even bother to read license agreements before moving to the next step in the installation period.
  - ✓ High price of software license.
    - ❑ Software products developed in economically rich countries are generally not affordable in poorer countries

Software Piracy

- Why software piracy?
  - ✓ Legal enforcement
    - **Software piracy is low** in countries with high awareness of copyright rules and laws.
    - In USA, copyright infringement can result in a jail term of up to 5years along with $250k fine.
  - ✓ Social and cultural factors
    - Prevailing social structure of a country and the attitudes shared by the members of that society correlates to piracy rates.

Software Piracy

- Why software piracy?
  - ✓ Availability of pirated software on the Internet
    - ❑ Access to high-speed Internet connections makes it easier to download software programs.
  - ✓ Software format
    - ❑ The software is created in digital format, which is an easy medium to pirate and easily disseminated using low cost digital media and the internet.

Software Piracy

- Effects of software piracy on users:
  - ✓ **Lower productivity:** pirated software often includes damaged or incomplete programs.
  - ✓ **Malware infection**: pirated software may include malicious software which can destroy users' data on the drive.
  - ✓ **Subject to raid**: users of pirated software can be raided by Software & Information Industry Association (SIIA), Business Software Alliance (BSA), and Software Publishers Association (SPA).

Software Piracy

- **Class discussions**: the effect of software piracy on government and software vendors
  - ✓ .....
  - ✓ .....
  - ✓ .....
  - ✓ .....
  - ✓ .....
  - ✓ .....
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IP Protection in Tanzania

- **Cybercrimes Act, 2015**: on violation of intellectual property:
  - ✓ A person shall not use a computer system with intent to violate intellectual property rights protected under any written law.
  - ✓ A person who contravenes this section commits an offense and in case the infringement is on:-
    - ❑ **Non-commercial basis:** is liable to a fine of not less than **5M** or to imprisonment of not less than **3yrs** or both.

IP Protection in Tanzania

- **Cybercrimes Act, 2015**: on violation of intellectual property:
  - ✓ A person who contravenes this section commits an offense and in case the infringement is on:-
    - **Commercial basis:** is liable to a fine of not less than **20M** or to imprisonment of not less than **5yrs** or both.
    - When infringement is for commercial basis, additionally, the offender is liable to pay **compensation** to the victim of the crime as the court may deem just.

Class Activity

- The use of **blockchain** has been promoted as a way to protect intellectual property. Read related articles online and answer the following questions (15 minutes reading, 15 minutes discussions):
  - ✓ Is blockchain a viable way to protect intellectual property? Why or why not?
  - ✓ Are there any drawbacks to its use?