FAKULTI TEKNOLOGI MAKLUMAT DAN KOMUNIKASI
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

BITS3443: DIGITAL FORENSICS

Assignment 1: Cybercriminal Profiling

April 20, 2021

1 INTRODUCTION

Nowadays, cybercrime or criminal offenses committed in the Internet environment take a stable position in the overall mass of criminal offenses. Cyberspace is easy to use to harm an individual, a group of people, or a country as a whole (Aldona, 2019). Since criminologists consider cybercrime as a new type of criminal activity in the cyberspace, the causes of cybercrime, the characterization of a criminal, the victimological aspects have been studied, and new theories have been raised (Aldona, 2019; Balogun & Zuva, 2018). Cybercrime, like traditional crimes, consists of action and loss. Actions are related to victim/purpose, modus operandi, criminal and harm. While, loss is related to impact of the actions.

2 CRIMINAL PROFILING

Criminal profiling is a popular investigative technique where psychological achievements are also used. It is often reflected in detective films by analyzing the features of a criminal offense,

the investigator assumes about what a potential criminal might be. The profile of cybercriminal combines the description of an individual's behaviour and qualities that are created without knowing the identify of a criminal.

Criminal profiling involves the identification of an unknown criminal by using several techniques which are analysis of the crime scene, determination the individualities of criminal offence and, characterization of the personality of a criminal (Kocsis, 2006). The analysis of crime scene is the inspection of a particular place and the objects contained therein, if it is made after receiving information about the committed criminal offense and if there is sufficient reason to believe that a crime has been committed there or continued in this place (Aldona, 2019). Its purpose is to find and seize traces that indicate the commission of a criminal offense, as well as to restore the mechanism of committing a criminal offense.

In the case of cybercrime, the investigator has to recognize a huge amount of evidence in electronic or digital form. The crime scene, contrary to the physical scene, contains computer systems or networks. A set of scene conditions and other investigation data can provide information about the personality, motivation, and characteristics of the offender. Taking into account the diversity of cybercrime and profiling approaches, joint work of multidisciplinary specialists is essential in terms of forensic aspect, psychological aspect and, the technical aspect.

When predicting and profiling an individual's behaviour, his/her most significant psychological features such as an emotional state and demographic. However, in case of cybercriminal, the analysis of criminal activities (modus operandi) and action type, as well as the analysis of the crime scene are more significant because modus operandi reflects the nature of cybercriminal (Lieckiewicz, 2011).

3 How to Profile?

The criminal profiling of an unknown cybercriminal involves three stages:

1. Law enforcement officer collects data obtained from the crime scene and transmits them to the profiler.

2. Profiler analyzes the data.

3. Profiler provides predictions on the nature of a potential criminal.

4 Key Elements of Cybercriminal Profile

Profiling of a cybercriminal may include several criminological and criminal-law-based key elements (Andola, 2019):

1. Personality characteristics/traits, which are specific to a particular person, and which predispose he/she to commit a cybercrime.

2. Criminal professionalism that means the personality traits that contribute to the safe and effective commitment of cybercrime.

3. Technical knowledge related to specialized knowledge and skills in dealing with complex programs and devices that enable cybercrime.

4. Social characteristics are demographic features, socio-economic status, sociopsychological and moral qualities.

5. Characteristics of motivation (a system of human activity orientation that prompts people to act).

6. Modus operandi (Activities of the cybercriminal).

7. Method on how a cybercriminal has identified or contacted the victim.

5 SCENARIO

Someone Had Taken Over My Life
by Laura Shin, 18 Nov 2014

In February 2013, Amy Kerbs came home after work on a Friday and received a phone call. Amy had gotten a call the day before as well from a major credit card company asking her to call them, and she initially thought that was fraudulent. She thought, 'Oh sure, I'm going to call this credit card company and talk to them about my account.' [Sarcastically] I thought it didn't seem legit.

Amy cross-checked the phone number, and sure enough, it was to a major credit card company's fraud department. They said someone had tried to obtain a credit card using her name, address and Social Security number and asked if had she signed up for a card. She told them she had not. It was more serious than she thought. She just thought someone had stolen her credit card and had gone out to eat and purchased some items.

They said, 'We flagged this. We'll deactivate the card'. Even though there were all these flags, they still sent the credit card out to this address that was not hers.

QUESTION

Based on the scenario, develop a profile for the cybercriminal that describe the behaviour of crime. This includes the identification of cybercriminal's key elements.

[Hint: Use the information given in this document and find additional information by doing literature in order to gather the understanding on cybercriminal profiling and cybercrime]

5.1 Tasks

Your are required to do the following:

1. Do your assignment in group based on the group assigned and choose a leader. Please inform me if any of your member does not commit to the task for further advice.

2. Discuss in group your strategy and plan for profiling the cybercriminal.

3. You are required to think like a criminal, police officer or victim in constructing the profile. Criminal creativity thinking and psychology knowledge is required in this task and all key elements of cybercriminal profile must be included in the poster.

4. Design a poster to show and explain the profile constructed using A0 size.

5. Present your assignment in the class.

6 Deliverable

Your deliverable in this assignment is a **POSTER** of your constructed cybercriminal profile and the presentation during class session.

All information related to the profile must be included on your poster. List for the references used must be attached during the submission.

6.1 Marks Allocation

The allocation of marks will be as follows:

Item	Marks
Cybercriminal Profile Construction	45
Presentation	15
Poster	40
Total	**100**

6.2 Important Dates

The poster must be submitted before or on **Friday (07th May 2021) before 10pm**.
Please take note that:

- Late submission will be not accepted

7 REFERENCES

Aldona, K. (2019). Meaning of profiling of cybercriminals in the security context. In SHS Web of Conferences (Vol. 68, p. 01009). EDP Sciences.

Balogun, A. M., and Zuva, T. (2017, July). Open issues in cybercriminal profiling. In 2017 1st International Conference on Next Generation Computing Applications (NextComp) (pp. 141-145). IEEE.

Kocsis, R. N. (2006). What Is Criminal Profiling? (pp. 1-11). Humana Press.

Lickiewicz, J. (2011). Cyber Crime psychology-proposal of an offender psychological profile. Problems of forensic sciences, 2(3): 239-252.