

# CHAPTER I

## INTRODUCTION

### 1.1 Background

In today's culture and social life, technology has become a major stimulus for human activities. Aristotle once said "Technology imitates nature, but technology can go beyond nature through authentic human creativity and complete what nature cannot bring to a finish."<sup>1</sup> Sincerely, technology imitates how nature works, but it just simplifies and modifies the process to be faster. With the roots of invention traced back to approximately 3.3 million years ago, technology has evolved to another level, where people in this present day are no longer dependent on conventional technology, but Information Technology as well.

Since the development and the invention of the first programmable computer between 1936 to 1938 by a German civil engineer Konrad Zuse,<sup>2</sup> people's interest in computer science has rocketed since then. Zuse's Z1 computer was then developed into a better and smaller machine, and this reached the bright side in 1975, when Ed Roberts, the maker of the world's first personal computer introduced the Altair 8800.<sup>3</sup> It was compact and easy to use for common people compared to

<sup>1</sup> Joachim Schummer, "Aristotle on technology and nature", <[https://www.researchgate.net/publication/229011014\\_Aristotle\\_on\\_technology\\_and\\_nature](https://www.researchgate.net/publication/229011014_Aristotle_on_technology_and_nature)>, accessed on 17 January 2020

<sup>2</sup> Computer Hope, "When was the first computer invented?", <<https://www.computerhope.com/issues/ch000984.htm>>, accessed on 20 Januari 2020

<sup>3</sup> Miran Pavic, "Creator of First Personal Computer Dies", <<https://www.wired.com/2010/04/ed-roberts-altair/>>, accessed 20 January 2020

the previous computer models. Even Bill Gates and Paul Allen, the founder of Microsoft, used Altair 8800 to launch its first program.

Since then, personal computers are becoming more advance in terms of technology and become more accessible to people in various circles. According to Forrester Research, an independent technology, and market research company, there were over 2 billion computers in use worldwide by the end of 2018.<sup>4</sup> In 2019, it was recorded that 49.7% of households in the world at least own one personal computer at home.<sup>5</sup> Data from the Global Web Index 2018, 48% of 853,828 respondents as digital customers said that having the latest technological products are important.<sup>6</sup> The same source also stated that the most conducted online behavior is visiting or using a search engine such as Google, followed by online shopping and reading emails as the most conducted online behavior worldwide.<sup>7</sup> In Indonesia, there is an increase in the number of households that access the internet. As provided by the Central Bureau of Statistics or *Badan Pusat Statistik* (“BPS”), the number of households that access computer rises significantly from 57,33% to 66,22% in 2018. Also, there is a rise in internet users from 32,34% to 39,90% in 2018. This data is the most recent data as data of 2018 was released in 2019.<sup>8</sup>

<sup>4</sup> Worldometers, “Number of Computers Sold This Year”, <<https://www.worldometers.info/computers/>>, accessed on January 2020

<sup>5</sup> Statista Research Department, “Share of Households With a Computer at Home Worldwide from 2005 to 2019”, <<https://www.statista.com/statistics/748551/worldwide-households-with-computer/>>, accessed on 20 January 2020

<sup>6</sup> Viktoriya Trifonova, “How Device Usage Changed in 2018 and What it Means for 2019”, <<https://blog.globalwebindex.com/trends/device-usage-2019/>>, accessed on 20 January 2020

<sup>7</sup> Ibid.

<sup>8</sup> Badan Pusat Statistik, “Statistik Telekomunikasi Indonesia 2018”, <<https://www.bps.go.id/publication/2019/12/02/6799f23db22e9bdcf52c8e03/statistik-telekomunikasi-indonesia-2018.html>>, accessed on 20 January 2020

Another data from Statista 2019, there was 95.2 million internet user in Indonesia in 2018.<sup>9</sup>

Information technology has shaped the world into a new kind of routine, it changes people's lifestyle and behavior in their work, education, and social life.<sup>10</sup> The people's lifestyle in almost three decades ago was completely different than this present day, where people are now more dependent on social media in their smartphones, which make a room for privacy became more vulnerable to be infiltrated, and may lead to the increase in cybercrime activities. The internet might seem to become the most efficient and accessible source of information, but unfortunately, safety has become a major issue on the internet and people's privacy is put to risks each day.<sup>11</sup> A study from the University of Maryland stated that there is at least a hacker attack in every 39 seconds that is happening worldwide.<sup>12</sup> Research from Juniper Research calculated that the cost of a data breach in 2019 exceeds \$2 trillion in total.<sup>13</sup> These numbers show that threats to privacy and electronic personal data are a serious issue that must be resolved. Therefore, this thesis will focus on the discussion related to privacy issues and the legal protection of electronic personal data according to Indonesian Law.

<sup>9</sup> Databoks, "Berapa Pengguna Internet di Indonesia?", <<https://databoks.katadata.co.id/datapublish/2019/09/09/berapa-pengguna-internet-di-indonesia>>, accessed on 21 January 2020

<sup>10</sup> Erpinnews, "Impact of Information Technology on Society", <<https://erpinnews.com/impact-of-information-technology-on-society>>, accessed on 21 January 2020.

<sup>11</sup> Susan Alexandra, "3 Major Internet Privacy Issues and How to Avoid Them", <<https://securitytoday.com/articles/2019/09/03/3-major-internet-privacy-issues-and-how-to-avoid-them.aspx>>, accessed 21 January 2020.

<sup>12</sup> Devon Milkovich, "15 Alarming Cyber Security Facts and Stats", <<https://www.cybintsolutions.com/cyber-security-facts-stats/>>, accessed on 21 January 2020

<sup>13</sup> Ibid.

The development of electronic media platforms along with information technology, and the growth of internet is inevitable. The growth of the internet had taken its place since decades ago, the era where people started to partake in their interests in developing information technology and using them for business purposes. As a fundamental process, it is historically essential to understand the early growth of electronic media platform and the internet in the world, its regulation as well as its development in Indonesia.

As social beings, humans need to communicate with each other, whether it is between friends, families, or coworkers. The creation of the world wide web has triggered people to be more involved with the online world. Since then, people have been using the internet to connect and communicate.

Before the world wide web, emails have existed yet it was not common to use emails due to its complexity. In addition, emails are considered as a formal way of electronic communication. When it comes to social media, “Six Degrees” can be regarded as the pioneer of social media.<sup>14</sup> The concept of Six Degrees is almost the same as the present-day social media; creating profiles, be friends with each other, and share information. From 1997 to 2001, Six Degrees had about 1 million members.

In 2002, another well-known social media platform, Friendster, was born and created by Peter Chin, Jonathan Abrams, and Dave Lee. At that time, Friendster was the most popular social media worldwide and had around 100 million users.

<sup>14</sup> Ash Read, “The Unabridged History of Social Media”, <https://buffer.com/resources/history-of-social-media>>, accessed on 25 January 2020.

Besides Friendster, Myspace was also popular between 2005 to 2008, until Facebook competed them.<sup>15</sup>

Facebook is created by Mark Zuckerberg and his roommates at Harvard University. At first, Facebook was only limited to Harvard students, but now everyone can be a member of Facebook for free. The main concept of Facebook is quite similar to the previous social media platforms, with some extras such as status blogs.<sup>16</sup> Facebook has competed Friendster and other social media platforms in terms of users, and today, Facebook is regarded as the social media platform with the most users in the world, which is around 2.23 billion.<sup>17</sup> In the following years, social media such as Tumblr, Twitter, Instagram, Snapchat, Vines, WhatsApp, and Line are becoming trendy and popular among people globally. As reported by a media company We Are Social, there are around 4.54 billion internet users in the world in 2020 which is a significant number compared to the number of internet users back in 2000 which is 413 million worldwide.<sup>18</sup> The company also reported that there are 5.19 billion unique mobile phone users.<sup>19</sup> On average, internet users worldwide spend around 6 hours and 43 minutes online each day in 2020.<sup>20</sup> When it comes to time spent on the internet, Indonesia is ranked in 8<sup>th</sup> place worldwide

<sup>15</sup> Ash Read, Loc.cit, pg. 4

<sup>16</sup> Irfan Ahmad, “The History of Social Media [Infographic]”, <https://www.socialmediatoday.com/news/the-history-of-social-media-infographic-1/522285/>, accessed January 25 2020

<sup>17</sup> Alfred Lua, “21 Top Social Media Sites to Consider for Your Brand ” <https://buffer.com/library/social-media-sites>>, accessed on 25 January 2020

<sup>18</sup> Simon Kemp, “Digital 2020: 3.8 Billion People Use Social Media”, <<https://wearesocial.com/blog/2020/01/digital-2020-3-8-billion-people-use-social-media>>, accessed on 27 January 2020

<sup>19</sup> Ibid.

<sup>20</sup> Ibid.

with the average time spent on the internet at 7 hours and 59 minutes per day.<sup>21</sup> The top five most used features on the internet in 2020 are chat applications, social networking applications, video applications, games, and online shopping applications.<sup>22</sup> In terms of online entertainment, YouTube, Netflix, and Spotify have also been regarded as the most popular online entertainment platforms.

The most used social platforms on the internet in 2020 are Facebook, YouTube, and WhatsApp. However, when it comes to concerns on the misuse of personal data, internet users in Indonesia within the age category of 16 to 64 years old, 59% of them are concerned with electronic system provider companies using their electronic data.<sup>23</sup> In Indonesia, the most used social media platforms in 2020 are YouTube, WhatsApp, Facebook, Instagram, and Twitter.<sup>24</sup>

Besides social media, Gmail, which is an email platform created by Google, a technology company found in 1998, has changed the common stereotypes of email that is old-fashioned and complicated, into an advanced and user-friendly one. Gmail is considered to be the best email service provider as it offers the most advanced system, security, and user-friendly platform.<sup>25</sup> Besides Gmail, Google is also famous for its cloud computing facility.

<sup>21</sup> Simon Kemp, Loc. cit, pg.5

<sup>22</sup> Simon Kemp, Loc.cit, pg.5

<sup>23</sup> Simon Kemp, Loc. cit, pg.5

<sup>24</sup> Databoks, “10 Media Sosial yang Paling Sering Digunakan di Indonesia”, <<https://databoks.katadata.co.id/datapublish/2020/02/26/10-media-sosial-yang-paling-sering-digunakan-di-indonesia>>, accessed on January 27 January 2020

<sup>25</sup> Sarah Hanks, “11 Of the Best Free Email Service Providers of 2019”, <https://www.technorms.com/14035/10-free-email-service-providers>>, accessed on 27 January 2020

Google Gmail was launched on 1 April 2004 and since then, the number of users has been increased to such an incredible amount. With 1.5 billion active users worldwide in 2019, Google holds 20% of the email service market in the world.<sup>26</sup> Moreover, the service is also available in 72 languages and free of charge, making it accessible to most countries with access to the internet, including Indonesia. Gmail has various features, starting from the very basic features such as email services, and other special features such as Google Pay, and Google Cloud.<sup>27</sup> A Gmail account can be used for YouTube accounts, Google Play store accounts, and other web services that collaborate with Google. As an electronic service provider, Google holds almost all information of users which includes location, communication, personal biodata, google searches, even users' preferences. This what makes Google is considered as one of cloud computing platforms on the internet.<sup>28</sup>

Cloud computing or *Komputasi Awan* is:

The delivery of computing services including servers, storage, databases, networking, software, analytics, and intelligence over the internet to offer faster innovation, flexible resources, and economies of scale.<sup>29</sup>

<sup>26</sup> Christo Petrov, "Gmail Statistics 2020", <<https://techjury.net/stats-about/gmail-statistics/#gref>>, accessed on 28 January 2020

<sup>27</sup> David Nield, "21 of the Best Gmail Features You Might Not Have Found Yet", <<https://gizmodo.com/21-of-the-best-gmail-features-you-might-not-have-found-1833765905>>, accessed on 28 January 2020

<sup>28</sup> Todd Haselton, "How to Find Out What Google Knows About You and Limit the Data It Collects", <<https://www.cnbc.com/2017/11/20/what-does-google-know-about-me.html>>, accessed on 28 January 2020

<sup>29</sup> Microsoft Azure, "What is Cloud Computing?", <<https://azure.microsoft.com/en-us/overview/what-is-cloud-computing/>>, accessed on 29 January 2020

Although many scholars and articles debated on a clear definition of cloud computing, commonly, cloud computing is simply a combination of the utilization of computer technology on the internet. Cloud computing can refer to online software and online data center which can be accessible at any time and place.<sup>30</sup> The term cloud refers to the internet, wherein cloud computing users can access data not only from a personal device, but from other devices as well. Cloud computing gathers data from users and stores it in the “cloud” which is the internet.<sup>31</sup>

As for the legal definition, the term “cloud computing” itself is not stipulated under Indonesian Law. However, according to Law No. 19 of 2016 on Electronic Information and Transactions concerning the Amendment of Law no. 11 of 2008 concerning Electronic Information and Transactions (“ITE Law”), as cloud computing offers similar facilities like other electronic system providers, thus cloud computing provider fits in the category of electronic system provider which is stipulated under Article 1 paragraph (6a) of ITE Law.<sup>32</sup>

Cloud computing offers numerous benefits for users, especially for businesses that rely on digital platforms. There are 3 (three) key benefits of cloud computing according to IBM, which are flexibility, efficiency, and strategic value.<sup>33</sup>

<sup>30</sup> Ian Hutomo, “Apa Itu Cloud Computing?”, <<https://www.kompasiana.com/ianhutomo/5500f4dfa333115318510435/apa-itu-cloud-computing>>, accessed on 29 January 2020

<sup>31</sup> Ibid.

<sup>32</sup> Teguh Afriyadi, S.H., M.H., “Aspek Hukum Penerapan Teknologi Komputasi Awan (Cloud Computing)”, <<https://www.hukumonline.com/klinik/detail/ulasan/lt50c97b8b0dc50/aspek-hukum-penerapan-teknologi-komputasi-awan-cloud-computing/>>, accessed on 29 January 2020

<sup>33</sup> “Cloud Computing Benefits”, <<https://www.ibm.com/cloud/learn/benefits-of-cloud-computing>>, accessed on 29 January 2020

Cloud computing is flexible as it allows the cloud to handle and support fluctuating workloads and process a large amount of data at the same time. It is also accessible at any time and place. Unlike the previous days, businesses can use the cloud to store essential data as it is more convenient and organized, compared to the conservative way which is riskier.<sup>34</sup> Cloud computing also provides efficiency for users by minimalizing data loss, as stored data are backed up in network data. It also enhances businesses by speeding up the market as developing in the cloud allows them to introduce their applications or services to the market quickly.<sup>35</sup> In addition, cloud computing offers strategic value to businesses as cloud computing helps stakeholders to involve in the development of the business through streamlined work, which means businesses are able to work in a more organized workflow. As cloud computing is also accessible by access holders worldwide, it enables people to conduct collaborative works without having to do a face-to-face meeting, as meetings can be done online.<sup>36</sup> Other benefits of cloud computing may include cost-efficiency. Cloud computing is an affordable working platform for companies, especially small-medium enterprises and startups. With cloud computing, companies could save quite a number, mainly costs regarding infrastructure. Cloud computing minimizes infrastructure costs and could increase productivity.<sup>37</sup>

<sup>34</sup> IBM, Loc.cit, pg. 8

<sup>35</sup> IBM, Loc.cit, pg. 8

<sup>36</sup> IBM, Loc.cit, pg. 8

<sup>37</sup> Sarah Lavinski, “10 Disadvantages and Risks of Cloud Computing”, <<https://medium.com/faun/10-disadvantages-risks-of-cloud-computing-35111de75611>>, accessed on 29 January 2020

Despite the advantages, cloud computing also has several disadvantages. When it comes to cloud computing, the major issue will always be security. The security issue in cloud computing has taken a spotlight since its invention. As cloud computing enables many people to access data, it means that if the user does not really understand the privacy settings as well as its terms and conditions, stored data might be stolen or deleted.<sup>38</sup> Cloud computing is not as simple as it looks and there are a lot of technical aspects related to cloud computing. The use of stored data in cloud computing is also unclear, therefore, there must be a comprehensive law regarding the limitation of usage of data in cloud computing by the cloud computing provider.<sup>39</sup> Besides, when users are engaged with cloud computing activities, it means that the users are entrusted with the security system and data protection conducted by the cloud computing provider.<sup>40</sup> Therefore, it mainly relies on the terms and conditions on the usage of the cloud computing facilities that are offered by the providers. Thus, security has remained to become a central issue in cloud computing facilities, especially where there are cases of illegal database trading that happened in Indonesia, as well as in other countries. This also become a problem when a company holds a big data on personal information and behavior data of billions of user, as it might become a threat in the future or illegitimately use by individuals to fulfill his or her own “interests”.

Another weakness of cloud computing is connectivity. Although it is true that cloud computing is accessible worldwide, cloud computing needs internet

<sup>38</sup> Sarah Lavinski, Loc.cit, pg. 9

<sup>39</sup> Sarah Lavinski, Loc.cit, pg. 9

<sup>40</sup> Sarah Lavinski, Loc.cit, pg. 9

connectivity. Without the internet, cloud computing is not accessible at all therefore users need a strong internet connection. This might be an issue when users are traveling or living in developing or remote areas where internet connection is not widespread.<sup>41</sup>

Although the internet was invented in the 1980s, the use of the internet was not popular until the invention of the World Wide Web or commonly known as the “www”. In Indonesia, the first access to the internet was unknown, however, according to ARIN and APNIC, the first Indonesian internet protocol which is the UI-NETLAB was registered by the University of Indonesia on 24 June 1988. From 1992 to 1994, the number of internet users in Indonesia are starting to grow, although it was not comparable to the present-day internet users in Indonesia. During that time, with the help of IndoNet (the first Indonesian internet service provider) internet users used Lynx, an American remote browser to gain access to the internet. The first Indonesian online news on the internet is republika.com in 1994 and then followed by Tempo.co in 1996.<sup>42</sup> As more people use the internet, more businesses started to use the internet as their platform to sell products. Companies like Kaskus and Bhinneka.com is one of the first e-commerce platforms in Indonesia, although both platforms were merely used to introduce or to promote

<sup>41</sup> Sarah Lavinski, Loc.cit, pg. 9

<sup>42</sup> Antonius Bram, “Perkembangan Internet di Dunia dan di Indonesia”, <<https://www.kompasiana.com/antoniuz2/5b8c843bab12ae21d70bd753/perkembangan-internet-di-dunia-dan-indonesia?page=all>>, accessed on 31 January 2020

products, not to conduct the transactions.<sup>43</sup> The transactions still were done in real-time through traditional methods such as meetups or at least via phone calls.

Due to the rise of internet users, experts, and academicians from Padjajaran University and the University of Indonesia had proposed the government to enact a law regarding the use of internet and e-commerce. Padjajaran University has drafted a bill on Cybercrime and the University of Indonesia drafted a bill on E-commerce Law. In 2003, both drafts were compiled into one bill which is the bill on Electronic Information and Transactions. The bill adopted the hybrid theory, which is the combination of both instrumental and substantive theory. The hybrid theory argues that technology is neutral, but could be a black mirror in the future. Therefore, the use and the creation of technology must be regulated under the boundaries of the law.

After five years, the bill was enacted as Law No. 11 of 2008 on Electronic Information and Transaction or commonly referred as ITE Law.<sup>44</sup> The law also adopted principles and regulations from the United Nations Commission on International Trade Law (UNCITRAL) Model Law on Electronic Commerce with Guide to Enactment 1996 and UNCITRAL Model Law on Electronic Signature. The law regulates on two general grounds, which are the electronic information and transactions and on prohibited acts.

<sup>43</sup> Bhinneka, "Sejarah E-Commerce Indonesia: Apa yang Telah dan Akan Terjadi?", <<https://www.kompasiana.com/www.bhinneka.com/59b25877085ea65943594dc2/sejarah-e-commerce-indonesia-apa-yang-telah-dan-akan-terjadi?page=all>>, accessed on 31 January 2020

<sup>44</sup> Leski Riskinaswara, "Menilik Sejarah UU ITE dalam Tok-Tok Kominfo #13", <<https://aptika.kominfo.go.id/2019/02/menilik-sejarah-uu-ite-dalam-tok-tok-kominfo-13/>>, accessed on 31 January 2020

The law was revolutionary, as it is the first law that regulates cybercrime and e-commerce. For the first time, this law stipulates electronic evidence as a legal tool and evidence in law. The government also enacted a specified law regarding electronic transactions which is Government Regulation No. 82 of 2012 on the Implementation of Electronic Transaction Systems. Nonetheless, this law is more specific to electronic transactions rather than the protection of personal electronic data.

In 2016, the previous ITE law is amended by Law no. 19 of 2016 regarding the Amendment of Law no. 11 of 2008 on Electronic Information and Transactions. However, the new amendment does not include the protection of personal electronic data in a specific manner, but only focus on matters such as the “Right to be Forgotten”, evidence that is gained from tapping, right of the government to take down any electronic document that is against the law, and sentence deduction.<sup>45</sup>

The law regarding the protection of personal electronic data was finally enacted on 1 December 2016 and it is established under the Ministerial Regulation of the Ministry of Communication and Information No. 20 of 2016 concerning the Protection of Personal Data on Electronic System (“Permenkominfo 20/2016”).<sup>46</sup> The government was planning to establish a new law on the protection of personal data or known as UU PDP by the end of 2019. However, according to the new

<sup>45</sup> Hukumonline, “Perubahan UU ITE Tidak Tetapkan Batasan “Data Pribadi”, <<https://www.hukumonline.com/berita/baca/lt583832e4da71c/perubahan-uu-ite-tidak-tetapkan-batasan-data-pribadi/>>, accessed on 2 February 2020

<sup>46</sup> Yovita, “Indonesia Sudah Miliki Aturan Soal Perlindungan Data Pribadi”, <[https://kominfo.go.id/content/detail/8621/indonesia-sudah-miliki-aturan-soal-perlindungan-data-pribadi/0/sorotan\\_media](https://kominfo.go.id/content/detail/8621/indonesia-sudah-miliki-aturan-soal-perlindungan-data-pribadi/0/sorotan_media)>, accessed on 2 February 2020

Ministry of Communication and Information Johnny G Plate the new law will be promulgated in October 2020.<sup>47</sup>

Although many people consider the internet as a useful resource and accommodating most of the time, from other's perspectives, the internet is also a disastrous place where some irresponsible people could conduct criminal acts. The criminal act does not only happen in reality, but can also be found across the internet, and this term is known as cybercrime. Generally, cybercrime is unlawful or illegal activities that are done via or on the internet.<sup>48</sup> Hacking or data theft is one of the examples of cybercrimes and the term "cybercrime" is very broad, as the internet features are expanding and upgrading.

Cybercrime has become a global issue and has triggered internet-based companies, especially e-commerce companies to strengthen their cybersecurity system. Cybercrime Statistics 2017 from Cybersecurity Venture had predicted that the financial losses that arise from cybercrime will cost as much as \$6 trillion annually by 2021.<sup>49</sup> Cyber Security Breaches Survey conducted by the Department for Digital, Culture, Media, and Sport in 2018 stated that at least 43% of businesses were a victim of cybercrime for at least once.<sup>50</sup> In 2019 alone, Juniper Research

<sup>47</sup> Ferry Sandi, "Menkominfo: UU Perlindungan Data Pribadi Kelar Oktober 2020", <<https://www.cnbcindonesia.com/tech/20191105185253-37-112923/menkominfo-uu-perlindungan-data-pribadi-kelar-oktober-2020>>, accessed on 3 February 2020

<sup>48</sup> Transunion, "What is Cybercrime? Definition and Examples of Cybercrime", <<https://www.iovation.com/topics/what-is-cybercrime-definition-and-examples-of-cybercrime/>>, accessed on 3 February 2020

<sup>49</sup> Pierluigi Paganini, "Cybercrime Statistics in 2019", <<https://securityaffairs.co/wordpress/96531/cyber-crime/cybercrime-statistics-in-2019.html>>, accessed on 3 February 2020

<sup>50</sup> Jack Foster, "21 Terrifying Cybercrime Statistics", <<https://www.dataconnectors.com/technews/21-terrifying-cyber-crime-statistics/>>, accessed on 4 February 2020

claimed that the total loss due to cybercrime alone was \$2 trillion. Cybercrime often attacks big companies or at least medium-sized enterprises. However, as per Juniper Research, 13% of cyber-attacks happened to small businesses, as small businesses do not invest a significant amount of money for cyber securities, thinking that small business would not be a target for cyber-attacks from hackers.<sup>51</sup> Meanwhile, from these numerous cyber-attacks, only 10% are reported in the U.S each year while others remain unreported.<sup>52</sup> Also, The 2019 Official Annual Cybercrime Report came out with a prediction that stated that businesses might fall for ransomware attacks every 14 seconds.<sup>53</sup>

In Indonesia, there were 3429 reported cases of cybercrime from January 2019 to August 2019 as reported by the Directorate of Cybercrime from the Indonesian Police Department.<sup>54</sup> The most reported cases are e-commerce scams and hoaxes. E-commerce scams include online scams such as winning a lottery, bonuses, or data theft through “one-time password” or OTP codes. Hoaxes or false news were in the second rank due to the political tension regarding the national election.<sup>55</sup>

Another proof or indication that illegal database trading is happening in Indonesia is a fraud call. It is quite common for people in Indonesia, especially

<sup>51</sup> Matt Powel, “Cyber Security Statistics for 2019”, <<https://www.cpomagazine.com/tech/11-eye-opening-cyber-security-statistics-for-2019/>>, accessed on 4 February 2020

<sup>52</sup> Ibid.

<sup>53</sup> Ibid.

<sup>54</sup> CNN Indonesia, “Polri Catat 3000 Kasus Kejahatan Siber Hingga Agustus 2019”, <<https://www.cnnindonesia.com/teknologi/20191029183819-185-443890/polri-catat-3000-kasus-kejahatan-siber-hingga-agustus-2019>>, accessed on 4 February 2020

<sup>55</sup> Databoks, “Penipuan Online, Kejahatan Siber yang Paling Banyak Dilaporkan”, <<https://databoks.katadata.co.id/datapublish/2019/10/31/penipuan-online-kejahatan-siber-paling-banyak-dilaporkan>>, accessed 5 February 2020

smartphone users to receive a message or call, indicating that users have won a prize or a lottery. The scammer is really professional until many people reported this kind of incident to the Cyber Police Department. By getting random messages, it may indicate that people's personal data such as phone numbers are actually being traded illegally in the black market. There are quite a number of people who fall into this kind of scam, and those people might lose millions of rupiahs, or at least, some of their data like passwords are stolen.<sup>56</sup>

Most of these cases are happening because almost every internet service platform requires personal data input, especially online banking or financial service facilities. These data such as full name, home address, date of birth, bank accounts, and even credit card numbers, are submitted to the electronic system providers such as technology companies or e-commerce companies. Electronic system providers bear both users' personal electronic data and behavior data. These data are essential in order to verify the credibility and authenticity of the user, whether the registered user is a real person, or a robot. These electronic data are stored and secured by the electronic system provider. Legally it needs to be protected regardless of some exceptions such as transparency for police investigation purposes.

Nonetheless, there is no guarantee that these data might and could be shared with other third parties through Electronic Data Interchange. In the worst scenario, the third parties that have gained access to the electronic data could easily sell those data to other parties through illegal trading.

<sup>56</sup> Wan Ulfa Nur Zurha, "Bisakah Data Pribadi Kita Aman?", <<https://tirto.id/bisakah-data-pribadi-kita-aman-ctgf>>, accessed on 5 February 2020

Data protection has become one of the crucial issues in cybercrime as it is not as easy as it sounds. With more than 143 million internet users in Indonesia that are growing each day, 50 popular e-commerce platforms<sup>57</sup>, 164 financial technology companies<sup>58</sup>, it is very hard to monitor data protection. Internet scams and data theft are proof that personal electronic data are not fully secured.

As elaborated by the cybercrime cases previously, it proves that Indonesia still faces a serious threat to the protection of personal electronic data. In reality, the law on the protection of personal electronic data in Indonesia is still far from effective, as the law has not been able to guarantee the protection of personal electronic data in Indonesia and there is yet a law that specifically protects and guarantee data privacy from not getting leaked or traded illegally. Therefore, there must be a distinct, specific, and thorough development of ITE laws regarding the protection of personal electronic data in order to secure and prevent illegal data trading in the future which will be discussed furtherly in this thesis.

## **1.2 Formulation of Issue**

Data abuse or misuse of data is a serious threat to people's privacy, as it may not just affect society on a domestic scale, but global scale. The lack of transparency of Electronic System Providers towards users' personal data in the electronic system, as well as the rise of cybercrime rates has shown that electronic

<sup>57</sup> iPrice Insights, "Peta E-Commerce Indonesia", <<https://iprice.co.id/insights/mapofecommerce/>>, accessed on 5 February 2020

<sup>58</sup> Otoritas Jasa Keuangan, "Penyelenggara Fintech Terdaftar dan Berizin di OJK per 20 Desember 2019", <<https://www.ojk.go.id/id/berita-dan-kegiatan/publikasi/Pages/Penyelenggara-Fintech-Terdaftar-dan-Berizin-di-OJK-per-20-Desember-2019.aspx>>, accessed on 5 February 2020

personal data is a valuable object that is private, confidential, and must be protected. Therefore, as a form of research regarding this issue, this thesis will analyze and answer the following issues such as:

1. How is the use of Electronic Personal Data by Electronic System Provider reviewed through the elements of agreement as stipulated in Article 26 of Law No. 19 of 2016 on the Amendment to Law No. 11 of 2008 concerning Electronic Information and Transactions?
2. How does the law enforcement for personal database trading is reviewed through Ministerial Regulation of the Ministry of Communication and Information No. 20 of 2016 concerning Protection of Personal Data in Electronic System?

### **1.3 Research Purposes**

#### **1.3.1 General Purpose**

Although this thesis is a mandatory program that contributes to the accomplishment of Law Studies to obtain a Bachelor Degree in Law, this thesis can also become a source of knowledge, a reference, and a study that other people might find it useful, especially for students, or other individuals that might use this thesis as a reference in the future.

#### **1.3.2 Specified Purposes**

The core purpose of this thesis is to analyze whether the current law regarding electronic data protection is specific, suitable, and in line with the reality

in preventing cybercrimes such as illegal database trading, to create a healthy internet ecosystem, as well as for maintaining security and stability of the information technology advancement in Indonesia.

## **1.4 Research Benefits**

### **1.4.1 Theoretical Benefit**

The benefit from this thesis is to gain a theoretical and legal understanding on the Indonesian law regarding electronic data, especially on how the current law exclusively regulates electronic data protection, and to understand the aspects that are needed to be considered to reconstruct a new specified law on electronic data protection that is suitable for the current internet ecosystem.

### **1.4.2 Practical Benefit**

In practice, the study of this thesis may provide a reference for students, scholars, and possibly government bodies or institutions in terms of the development of cyber law in Indonesia. This thesis also contributes to the general studies of cyber law and to increase people's awareness of the importance of cybersecurity in Indonesia.

## **1.5 Systematic of Writing**

### **CHAPTER I: Introduction**

This chapter will focus on the general background of this thesis, formulation of issue, research purpose, theoretical and the practical benefits, and the framework of the writing of this thesis.

## **CHAPTER II: Literature Review**

This chapter focuses on research on legal terms and understanding of Indonesian Cyber Law. Interpretations and opinions of scholars regarding the topic of the thesis may also be included in this segment.

## **CHAPTER III: Research Methods**

This chapter will elaborate on the research methods that are used in gaining the relevant information to construct this thesis.

## **CHAPTER IV: Analysis and Discussion**

This chapter of this thesis will focus on answering, discussing, and analyzing the formulation of issues of this thesis which includes:

1. How is the use of Electronic Personal Data by Electronic System Provider reviewed through the elements of agreement as stipulated in Article 26 of Law No. 19 of 2016 on the Amendment to Law No. 11 of 2008 concerning Electronic Information and Transactions?
2. How does the law enforcement for personal database trading is reviewed through Ministerial Regulation of the Ministry of Communication and Information No. 20 of 2016 concerning Protection of Personal Data in Electronic System?

## **CHAPTER V: Conclusion**

This final part of this thesis will be the main conclusion of this thesis, which includes the conclusion to the first formulation of issue and the conclusion to the second formulation of issue based on the discussion and analysis of this thesis. In

addition, this chapter will also elaborate the author's recommendation regarding this issue.

