

The role of Indonesian National Cyber Bureau in monitoring mining business companies

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Abstract. New innovations in computer systems were created aiming to provide convenience for its users, but unfortunately they are often followed by threats that surround them. The Company's computer security system can not control the security of every company data. Because information technology attacks have impact on consumer information management and corporate marketing activities, it is necessary to have an institution or business supervisory body for mining company to deal with corporate cybercrime. Data collection uses some methods including observation and document analysis. The data sources used are primary, secondary and tertiary. There are four stages of data analysis, namely data collection, processing, verification, and conclusions. The results indicated that data security of mining companies is critically required to protect company assets such as natural and human resources from the threats of internet criminals. The role of Indonesian National Cyber Bureau is to prevent the occurrence of crimes on the internet through the cycle of supervision forming business, and mining companies should have a robust computer software system.

1. Introduction

The existence of the internet as an information channel can make it easier for two mining companies to establish communication about the company's authority and provisions in the future [1]. The company's computer security system can not control the security of every company data. Because information technology attacks have an impact on consumer information management and corporate marketing activities, companies must have big data to be able to compete to get a competitive advantage [2]. Mining companies have websites to market their products through internet media. Due to lack of web security system, the companies' URL sare removed. Also, System Digital Center is not used to anonymize mining company weblogs [3]. Social media is competitiveto mining companies have the power to extract business value from available social media [4]. Likewise, mining companies development in Indonesia in the use of stored company data on a computer system and information technology systems is still weak.

According to Indonesian National Cyber Bureau (BSN)who is collaborating with Honeynet Project to detect cyber-attacks in Indonesia, there were 12.9 million cyber-attacks against mining companies data that have problems with data security, and company's assets, detected in Indonesia in 2018. The Ministry of Energy and Mineral Resources of the Republic of Indonesia imposes sanctions on 102 coal



mining companies in North Kalimantan. The operations were terminated due to a secret leak in the safety issues of the mining company, in the environmental assessment aspect in particular. The growth of mining industries in Indonesia has both positive and negative impacts on society and the country. The positive impacts include creating jobs for the community, mining output can be utilized to meet both domestic and international market demands, where exporting them will increase the income and economic growth of the country. The negative impacts are in the form of environmental damages. The area where the mining companies are located will erode and eventually will cause erosion. Wastes from the mining operations will pollute the environment. Mining industry activities that use fossil fuels produce CO₂, which can cause greenhouse effect and global warming.

The above issues require a cyber-surveillance or internet crime body. One of the institutions is the Federal Trade Commission (USA), BSN. The institution has functions to supervise and control cyber activities that disrupt the assets of mining companies. This institution is tasked with detecting theft of mining company data on the internet. The Federal Trade Commission is an agency that highlights websites whose feature tools support personal compliance. It also addresses personal issues [5]. The purpose of this article is to explain the role of BSN in the supervision of mining business companies on the internet.

2. Method

This study used a qualitative method. The approach of this research uses descriptive analysis, observation, and study of documents. The data sources used are primary, secondary and tertiary on mining company supervision. Observations are conducted on the mining companies sites to collect research data. Literature study is conducted to measure, compare various literature related to corporate cyber systems in Indonesia and the world. The collected data will be analyzed conceptually through the stages of data collection, data processing, data verification, and conclusions.

3. Result and Discussion

3.1. Cyber Institutions in the World

Some countries already have special cyber force units in their countries defense and security system. The agency or organization is tasked with bringing together all defense and attack efforts against security in the cyber world and its network system. Seeing the strengths and threats that can occur as a result of advances in information technology, many countries have begun to develop a cyber force to anticipate many cyber-attacks on computer networks, the internet, and infrastructure in the country. In 2011 the United States Department of Defense (US DoD) even declared internet or cyber space as new combat dimension, such as land, sea, and air.

The United States has a United States Cyber Command (US CYBERCOM) under the United States Strategic Command (US STRATCOM), which was activated in 2009, in anticipation of cyber-attacks on computer networks, the internet, and infrastructure in the country. This decision is the answer to many incidents of data theft and US military technology. NATO Cooperative Cyber Defense Center of Excellence (NATO CCD COE) is a cyber-security agency of the North Atlantic Defense Pact (NATO) established in May 14, 2008 to improve NATO's cyber defense capabilities. The headquarter of NATO CCD COE is in the city of Tallinn, Estonia. This cybersecurity center is the result of the collaboration of various NATO member countries to improve security of their computer network system. Israel is named cyber warfare under the Israel Defense Forces (IDF), the Cyber Security Operations Center (CSOC) which is responsible for detecting and counteracting threats of cyber-crime against the interests of the Australian government. China has also formed cyber troops. The force is called "Blue Army". This force is tasked with protecting the country from cyber-attacks. This digital squad is based in the Guangzhou military region, south of China. Britain also built a cyber-defense. The system, called the Cyber Security Operations Center (CSOC), is located at Britain's Government Communications Headquarters (GCHQ), in Cheltenham, about 160 kilometers northwest of London [6].

3.2. The Role of the Federal Trade Commission for Supervision of Mining Business Companies on the Internet

The main purpose of the mining business on the internet is to create shareholder wealth, which in the mining business is implementing, developing community policies on the assessment of mining materials for commercial purposes. The mining business can be profitable if good management practices are applied to bring positive impacts that will produce high business capital [7].

In supervising the activities of mining business, companies can be divided into a supervision cycle of mining business enterprise, as follows:

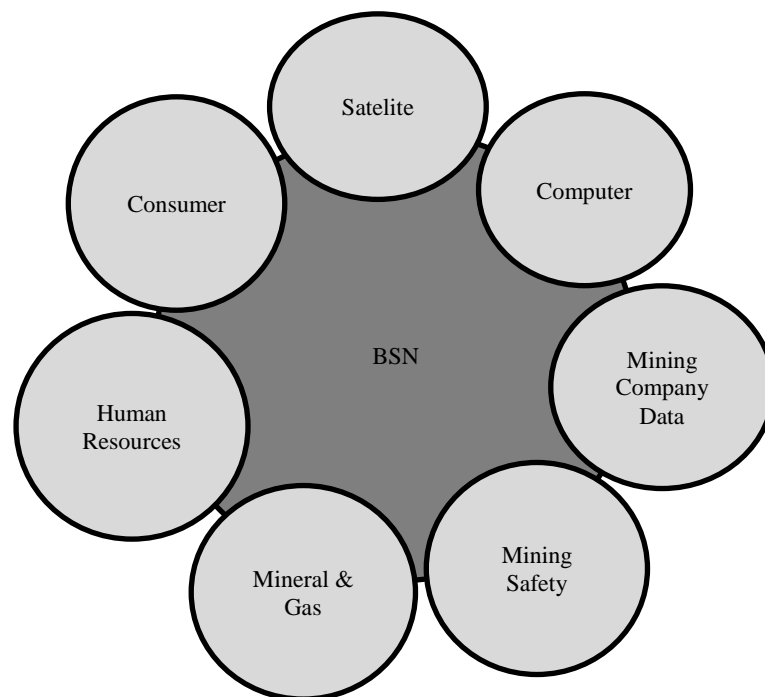


Figure 1. Business Companies Monitoring Cycle

The trade commission has the following roles in supervising mining business activities: (1) Mining Tech; (2) Mineral and Coal Resource Conservation; (3) Mining Occupational Health and Safety (OSH); (4) Safety of Mining Operations; and (5) Environmental, Reclamation and Post-Lake Management [8]. Supervision of the implementation of mining business activities [9], consists of:

- 1) Technical Supervision of Mineral and Coal Mining, including: (a) Mining Business Permit (IUP) or Special Mining Business Permit (IUPK) for Exploration consisting of: implementation of exploration techniques and procedures for calculating resources and reserves; (b) Mining Business Permit (IUP) or Special Mining Business Permit (IUPK) for Production Operation, consisting of construction planning and implementation which include mining equipment testing (commissioning); mining planning and implementation; planning and implementing of processing and refining; and planning and implementing of transportation and sales.
- 2) Marketing supervision, including (a) realization of production and realization of sales, which include quality, quantity, and prices of minerals and coal; (b) obligation to meet the needs of minerals or coal for domestic interests; (c) plans and realization of mineral or coal sales contracts; (d) sales costs incurred; (e) planning and realization of non-tax state revenue; (f) mineral and / or coal processing and refining costs.
- 3) Financial supervision includes budget planning, budget realization, investment realization, and fulfillment of payment obligations.

- 4) Supervision of mineral and coal data management consists of monitoring the acquisition activities, administration, management, arrangement, storage, maintenance, and destruction of data and/or information.
- 5) Supervision of Mineral and Coal Resource Conservation.
 - a. Conservation of minerals is an effort to realize optimal management of minerals by considering various needs, technological developmentability, economic, socio-cultural, political and other related sectors.
 - b. Conservation of minerals is based on optimization, savings, sustainability, benefits of broader and environmentally friendly interests of the people.
 - c. Conservation of mineral materials aims to strive to realize the wise use of minerals, to optimize and prevent the waste of excavated materials in order to develop community prosperity and carry out sustainable development.
 - d. Conservation is carried out by (1) mining and processing recovery; (2) Management and / or utilization of marginal reserves; (3) Management and / or utilization of low quality coal and low grade minerals; (4) Management and / or utilization of associated minerals; (5) Data collection of resources and reserves of minerals and coal that are not mined, and (6) Data collection and management of the results of processing and refining.
- 6) Oversight of Mining Safety and Health Management
 To create a system of occupational safety and health in the workplace that involves management elements, workforce, conditions and work environment that are integrated in order to prevent and reduce workplace accidents and diseases and create a safe workplace, efficient and productive requires an OSHManagement System.
 Management System based OSH stated in the Decision of the Minister of Manpower No. Per.05/1996 is part of the overall management system which includes organizational structure, planning, responsibilities, implementation, procedures, processes and resources needed for the development, implementation, achievement, assessment and maintenance of occupational safety and health policies in the context of risks control related to work activities to create a safe, efficient and productive workplace.

4. Conclusion

Mining companies data security on the internet is indispensable to maintain the company's assets starting from natural potentials, human resources, minerals and gas resources, computers, mining company assets data, and investors from threats of criminals on the internet. BSN's role is to prevent the occurrence of crimes on the internet through the cycle of supervision of the mining business, and mining companies should have a strong and complete computer software system.

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