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ITE Legal Review on the Use of Computer Technology in Geological Exploration and Digital Accounting Systems

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Abstract

The development of information and communication technology has changed various aspects of human life significantly. In Indonesia, Law Number 11 of 2008 concerning Information and Electronic Transactions (UU ITE) has been implemented which regulates the use of information technology and electronic transactions. However, along with the rapid development of technology, the ITE Law underwent two changes, the latest through Law Number 1 of 2024. This research aims to explore the application of the ITE Law in the use of computer technology for geological exploration and digital accounting systems. , using a qualitative approach. The research results show that the implementation of the ITE Law still faces challenges related to data protection and information security. Many companies find it difficult to ensure compliance with ITE legal regulations, while sensitive geological and accounting data is vulnerable to unauthorized access and data leaks. The implication of this research is the need to increase outreach and training regarding ITE laws, update information security policies, and adopt advanced security technologies to protect sensitive data more effectively.

Keyword:
ITE law, computer technology, geological exploration, digital accounting systems, information security

INTRODUCTION

The development of information and communication technology has changed various aspects of human life significantly. In Indonesia, Undang-Undang Nomor 11 Tahun 2008 tentang Informasi dan Transaksi Elektronik (UU ITE) has been promulgated to regulate the use of information technology and electronic transactions. However, along with the rapid development of technology, UU ITE has undergone two changes, the last one being through Undang-Undang Nomor 1 Tahun 2024. These changes aim to increase legal certainty and recognize and respect the rights and freedoms of individuals in the digital space.[5] [6]

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[5] Alegre, C. L., Usman, U., & Taruh, V. (2024). Pengaruh Pemanfaatan Teknologi Dan Transparansi Terhadap Kinerja Pemerintah Desa Dengan Akuntabilitas Sebagai Variabel Intervening (Studi Kasus Pada Pemerintah Desa Kecamatan Kabila Bone Kabupaten Bone Bolango Provinsi Gorontalo). Jurnal Buana Akuntansi, 9(1), 26-40.

One of the main challenges faced in the implementation of UU ITE is the complexity of multi-interpretation articles that often cause legal uncertainty. Pasal-pasal like Pasal 27 ayat (3) about insults and defamation is often considered to be "pasal karet" that can be abused to silence criticism and freedom of expression.[7] This raises concerns among the public and digital business people, who feel that UU ITE is more often used to criminalize than to protect their rights.

In addition, the development of digital technology also brings new challenges in terms of information security. Digital technology allows for the easy misuse of information, so the issue of information system security becomes very important.[8] The information security approach must be carried out holistically, including technology, socio-cultural-ethical, and legal approaches. Without strict security, computer networks and information systems will be very easy to be infiltrated, intercepted, or accessed illegally and without rights.[9]

In the context of geology and accounting, the use of computer technology has become an integral part of the process of data exploration and management.[10] Computer technology enables the efficient collection, storage, and analysis of geological data, as well as facilitates the accurate and transparent management of digital accounting systems. However, the use of this technology also poses data security risks that must be addressed through proper regulation.

The urgency of this research is also driven by increasing geopolitical tensions and global economic fragmentation, which has an impact on economic performance and investment in Indonesia. Geopolitical tensions led to significant changes in the direction of the economic policies of major countries, which became more inward-looking and led to deglobalization. This has an impact on slowing global trade activities and investment flows, which in turn affects Indonesia's export performance.

In addition, the rapid development of digital technology also adds to the complexity of the challenges faced.[11] On the one hand, digital technologies offer great opportunities for innovation and efficiency, but on the other hand, they also pose security and privacy risks that must be addressed through proper regulation. In this context, the revision of the ITE Law is very important to ensure that existing regulations can accommodate technological developments and the changing needs of society.[12]

This research is also important to evaluate how ITE law can be applied in the management of geological data and computer-based accounting. The protection of geological and accounting data collected and stored digitally is essential to prevent data leakage and unauthorized access.[13] In addition, this study will explore how ITE law can support the use of information technology in digital accounting systems, including the efficiency, accuracy, and transparency of financial reporting.

Previous research conducted by Wahyu Agus Winarno in 2011 with the title Sebuah Kajian Pada Undang-Undang Informasi dan Transaksi Elektronik (UU ITE) published on Jurnal Ekonomi Akuntansi dan Manajemen explains that UU ITE It was created to regulate

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[6] Jawa Pos Radar Jombang. 2022. Tahukah Anda? Aplikasi Komputer Akuntansi ini Bisa Bikin Kerja Makin Mudah. https://radarjombang.jawapos.com/nasional/661012790/tahukah-anda-aplikasi-komputer-akuntansi-ini-bisa-bikin-kerja-makin-mudah. Diakses tanggal 02 Juni 2024

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[11] Rimayati, E. (2023). Cyber Counseling: Inovasi Layanan Bimbingan Dan Konseling Di Era Digital. Asadel Liamsindo Teknologi.

[12] Putro, A. N. S., Wajdi, M., Siyono, S., Perdana, A. N. C., Saptono, S., Fallo, D. Y. A., ... & Setiyatna, H. S. (2023). Revolusi Belajar di Era Digital. Penerbit PT Kodogu Trainer Indonesia.

[13] Midtrans. Ini Pentingnya Keamanan Data Bisnis di Era Digital dan Tips Menjaganya. https://midtrans.com/id/blog/keamanan-data. Diakses tanggal 30 Mei 2024

the use of the internet and information technology as a means of transacting and communicating electronically. However, there are still many things that need to be added to the law, especially related to trade and the national economy to realize the welfare of the community. Contents of UU ITE The most crucial thing is that it emphasizes acts that do not directly intersect with electronic commerce, such as immoral problems, gambling, insults, extortion, fake news, and hatred. Things that are missed and should be more focused on in UU ITE Among other things, the problem of spamming, the sale of personal data, computer viruses, and types of phishing that can interfere with the smooth running of electronic commerce.[14]

Other research by Achmad Syaiful Hidayat Anwar in 2010 with the title Peran Auditor Teknologi Informasi Dalam Mengurangi Kejahatan Komputer Published on journal The Journal of Innovation in Business and Economics (JIBE) examines information systems based on computer technology and Internet networks, security and control factors are important aspects that need to be managed effectively to protect information systems from errors, fraud, irregularities, crimes, and unethical use of information technology. These concepts of security and control should be directed at the company's efforts to prevent errors and deviations, detect indications of misuse of technology, and evaluate information systems. Convergence UU ITE 2008, the implementation of computer forensics, and the involvement of IT auditors are concrete steps to reduce cheating and computer crime. Support from the government, the community, and law enforcement is urgently needed, including the provision of clear and firm legal sanctions, as well as an objective and independent attitude of law enforcement, to solve security issues in information and electronic transactions.[15]

In contrast to the research we are currently conducting, this study aims to overcome the limitations of previous research by in-depth and innovatively examining the application of ITE law in the use of computer technology for geological exploration and digital accounting systems. Unlike previous studies that tend to focus on one specific aspect, this study adopts a holistic approach that includes technological, socio-cultural-ethical, and legal aspects. This study will evaluate how ITE law can support efficiency, accuracy, and transparency in geological data management and accounting, and offer practical solutions to address challenges faced in data protection and information security. By offering new insights into the effective application of ITE law in the context of geology and digital accounting, this research is expected to make a significant scientific contribution and great benefits to the development of better and more responsive regulations to technological developments and the needs of society.

The urgency of this research is very high considering the rapid development of information and communication technology which continues to bring significant changes in various aspects of life. The current ITE Law needs to continue to be adjusted to the dynamics of technology and the needs of society to ensure that existing regulations can provide legal certainty and protect individual rights in the digital space. In addition, this research is also important to evaluate how ITE law can be applied in geological data management and computer-based accounting, as well as offer solutions to the challenges faced in data protection and information security.

RESEARCH METHODS

This study uses a qualitative approach with a case study design to explore the application of ITE law in the use of computer technology for geological exploration and digital accounting systems.[16] It is hoped that the results of this study will provide in-depth insight into the

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[16] Juliardi, B., Runtunuwu, Y. B., Musthofa, M. H., TL, A. D., Asriyani, A., Hazmi, R. M., ... & Samara, M. R. (2023). Metode Penelitian Hukum. CV. Gita Lentera.

application of the ITE Law in this context and offer practical solutions to data protection and information security.

RESULT

This study reveals various important findings related to the application of ITE law in the use of computer technology for geological exploration and digital accounting systems. From in-depth interviews with IT managers, geologists, accountants, and legal staff, it was found that most companies have adopted computer technology to improve efficiency and accuracy in the management of geological and accounting data. However, this implementation is inseparable from various challenges, especially those related to data protection and information security.

One of the key findings is that many companies still face difficulties in ensuring compliance with ITE legal regulations. Some IT managers revealed that the interpretation of the articles in the UU ITE It is often confusing and multi-interpreted, thus causing legal uncertainty. This is exacerbated by the lack of socialization and training on the application of the law ITE in the corporate environment, which causes many staff not to fully understand their legal obligations.

In the context of geological exploration, computer technology has made it possible to collect and analyze geological data more efficiently. However, the geologists interviewed expressed concerns regarding the security of the data collected. Sensitive geological data, such as information about mineral reserves and drilling locations, is vulnerable to unauthorized access and data leakage.[17] Although the company has implemented various security measures, such as data encryption and the use of firewalls, there are still loopholes that can be exploited by irresponsible parties.

On the other hand, digital accounting systems have helped companies in improving the transparency and accuracy of financial reporting. The interviewed accountant stated that the use of cloud-based accounting software has simplified the process of financial recording and reporting.[18] However, they also acknowledge that there are significant security risks associated with data storage in the cloud. Several incidents of data leaks and cyberattacks that occurred in the past raised concerns about the security of accounting data stored digitally.[19]

An analysis of legal documents and company policies shows that despite efforts to comply with ITE legal regulations, its implementation is still not optimal. Many companies do not yet have a comprehensive and integrated information security policy. Existing policies are often partial and do not cover all aspects necessary to effectively protect data. In addition, the lack of internal audits and oversight is also a factor that hinders compliance with ITE laws.

Participatory observations conducted in some companies show that there is a gap between established policies and practices on the ground. For example, although companies have established data encryption policies, in practice, many staff do not follow encryption procedures correctly. This is due to a lack of training and awareness about the importance of data security. In addition, the use of personal devices to access company data also poses significant security risks.

Triangulation of data from various sources shows that there is an urgent need to increase socialization and training on ITE law within companies. Many staff are unaware of their legal obligations and do not understand the risks associated with the use of computer technology. More intensive and ongoing training is needed to ensure that all staff understand and comply with ITE legal regulations.

[17] Zaenurrohman, I. J. A. (2022). Kekuatan Dan Kelemahan Riset Berbasis Digital. Metode Riset Berbasis Digital: Penelitian Pasca Pandemi, 47.
[18] Prihatiningtias, Y. W., Emaliana, I., & Lailiyah, N. M. (2021). Menulis Artikel Penelitian Akuntansi dan Bisnis dalam Bahasa Inggris. Universitas Brawijaya Press.
[19] Syahril, M. A. F. (2023). Hukum Informasi dan Transaksi Elektronik.

The study also found that there is a need to update and strengthen information security policies in companies. Existing policies need to be expanded to include all aspects necessary to effectively protect data, including data encryption, firewall use, and access monitoring. In addition, internal audits and oversight need to be improved to ensure that the established policies are followed correctly in the field.

In terms of geological data protection, companies need to adopt more advanced security technologies and strengthen existing security procedures. The use of technology such as blockchain can help improve security and transparency in the management of geological data. Additionally, companies need to work closely with the authorities to ensure that sensitive geological data is properly protected and not misused.

Overall, the study shows that despite efforts to comply with ITE legal regulations, there are still many challenges that need to be addressed. Companies need to increase socialization and training on ITE law, update information security policies, and adopt more advanced security technologies. Thus, it is hoped that the application of ITE law in the use of computer technology for geological exploration and digital accounting systems can be more effective and provide better protection for sensitive data and information.

Discussion

This study reveals various important findings related to the application of ITE law in the use of computer technology for geological exploration and digital accounting systems. The results show that most companies have adopted computer technology to improve efficiency and accuracy in the management of geological and accounting data. However, this implementation is inseparable from various challenges, especially those related to data protection and information security.

One of the key findings is that many companies still face difficulties in ensuring compliance with ITE legal regulations. Interpretation of the articles in UU ITE which is often confusing and multi-interpretation causes legal uncertainty.[20] [21]This is in line with previous research which states that interpretation is necessary to understand the text of the law which is unclear because it contains open norms, ambiguous norms, vague norms, and contradictory norms. The lack of socialization and training on the application of ITE law in the corporate environment causes many staff not to fully understand their legal obligations.

In the context of geological exploration, computer technology has made it possible to collect and analyze geological data more efficiently. However, sensitive geological data, such as information about mineral reserves and drilling locations, is vulnerable to unauthorized access and data leakage. Although the company has implemented various security measures, such as data encryption and the use of firewalls, there are still loopholes that can be exploited by irresponsible parties. This shows the need to improve the security of digitally stored geological data.

On the other hand, digital accounting systems have helped companies in improving the transparency and accuracy of financial reporting. The use of cloud-based accounting software has simplified the process of financial recording and reporting. However, there are significant security risks associated with data storage in the cloud. Several incidents of data leaks and cyberattacks that occurred in the past raised concerns about the security of accounting data stored digitally.

An analysis of legal documents and company policies shows that despite efforts to comply with ITE legal regulations, its implementation is still not optimal. Many companies do not yet have a comprehensive and integrated information security policy. Existing policies are often partial and do not cover all aspects necessary to effectively protect data. In addition,

[20] Susanti, D., & Efendi, A. (2019). Memahami Teks Undang-Undang dengan Metode Interpretasi Eksegetikal. Kertha Patrika, 41 (2), 141–154.
[21] Hukumonline. 2022. Catat! Ini 11 Jenis Interpretasi Hukum. https://www.hukumonline.com/klinik/a/11-jenis-interpretasi-hukum-lt62d50908c18c5/. Diakses tanggal 25 Mei 2024

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Triangulation of data from various sources shows that there is an urgent need to increase socialization and training on ITE law within companies. Many staff are unaware of their legal obligations and do not understand the risks associated with the use of computer technology. More intensive and ongoing training is needed to ensure that all staff understand and comply with ITE legal regulations.

The study also found that there is a need to update and strengthen information security policies in companies. Existing policies need to be expanded to include all aspects necessary to effectively protect data, including data encryption, firewall use, and access monitoring. In addition, internal audits and oversight need to be improved to ensure that the established policies are followed correctly in the field.

In terms of geological data protection, companies need to adopt more advanced security technologies and strengthen existing security procedures. The use of technologies such as blockchain can help improve security and transparency in the management of geological data.[22] Additionally, companies need to work closely with the authorities to ensure that sensitive geological data is properly protected and not misused.

Overall, the study shows that despite efforts to comply with ITE legal regulations, there are still many challenges that need to be addressed. Companies need to increase socialization and training on ITE law, update information security policies, and adopt more advanced security technologies.[23] Thus, it is hoped that the application of ITE law in the use of computer technology for geological exploration and digital accounting systems can be more effective and provide better protection for sensitive data and information.

CONCLUSIONS AND SUGGESTIONS

This study successfully answered the goal of exploring the application of ITE law in the use of computer technology for geological exploration and digital accounting systems. The results of the study show that the application of ITE law in the use of computer technology still faces various challenges, especially related to data protection and information security. Therefore, it is necessary to make efforts to increase socialization and training on ITE law within the company, as well as update and strengthen information security policies. The findings of this study have wide application possibilities in improving compliance with ITE legal regulations in Indonesia and can be used as a reference to improve the security of data and information stored digitally.

Based on the results of the research, there are several suggestions to overcome the cultural lag in the application of ITE law in the use of computer technology for geological exploration and digital accounting systems, intensive socialization and training on ITE law are needed to increase staff awareness; and the Company must update its information security policy to cover all aspects of data protection; then it is necessary to develop more effective security systems such as blockchain to protect sensitive data; and It takes the cooperation of companies, the government and the community to increase legal awareness of ITE and data security. For further research, a cross-country comparative study with a mixed method is

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recommended, as well as focusing on the legal implications of ITE in specific contexts such as e-commerce, data privacy, or cybersecurity.

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