

Implementation of RSA And Base64 in Business Communication Benefits in Online Media

¹Rekno Sulanjari, ²Leonardo Budi Hasiholan, ³Firda Nisafera Ulfa, ⁴Rahma Jelita

¹Program Studi D3 Administrasi Niaga, FISIP, Universitas Pandanaran, ²Program Studi S1 Manajemen, FakultasEkonomi, Universitas Pandanaran, ^{3,4} Program Studi D3 Administrasi Niaga, FISIP, Universitas Pandanaran

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ABSTRACT

The industrial era 4.00 has almost passed, replaced by the era 5.00 which forces micro, small and medium enterprises to be more innovative in collaborating their internal activities in order to develop their business towards a better direction, at least to survive. This is also the case at CV Candi Karya, where by negotiating the policies applied to its internal performance to its prospective consumers. The implementation of RSA and Base64 in the field of work that has been carried out so far is likely to be able to increase profits in business communication so that it is expected to be able to maximize the development of its business amidst the sluggish dynamics of economic turnover in the field of outdoor advertising. Based on the research above, it was also found that if the variables X1, X2 increase, then the variable Y also increases (positive correlation). And the level of RSA implementation and Base64 implementation in this study was 50.54%, while the remaining 49.46% was caused by other factors outside this study. Business communication in CV Candi Karya company is the most effective activity for the formation of organizational development compared to other activities, which can be monitored from discussion forums with clients or potential clients with a thit of 4.84. From the results of the study it can be concluded that the Implementation of RSA and Base64 has an effect on CV Candi Karya's business communication.

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Corresponding Author:

Rekno Sulanjari
Program Studi D3 Administrasi Niaga, FISIP, Universitas Pandanaran
rekno.sulandjari@gmail.com

INTRODUCTION

Increasingly digital era advanced, image and video media have become the part that is not inseparable in communication and exchange information. From social media until message instant, image no only enrich experience users, but also convey message with more strong compared to words alone. However, the ease in access and share photo cause concern about security and privacy. Now this users technology information that uses computer as the media has increased greatly. Effective security from something system technology information is very necessary for activity everyday problems security and confidentiality is one of the aspect important from something messages, data, or information that is one of them image. Image is one of the important form of multimedia so that need effective

implementation. Citra presents information visually and the information presented by a image richer than presented in a way textual. One of the method for secure image is with the encryption process namely the process of changing plaintext into text encrypted (lubis, 2017:220).

Related issues with data security and privacy becomes very important, because lots affected users impact from action criminal like theft, destruction, or changing digital files or data from other users. For the perpetrators action said, the victim's digital files can be used for get profit for himself alone or for interest other parties who need it, which of course just can become loss big for the victims.in context in this case, protecting visual data becomes very important, and encryption is one of the solution main used for protect picture sensitive. Development technology especially on the system data security in guard information data security this has develop rapidly. In maintaining information data security there is branch knowledge in its development like cryptography and steganography. In its application done no only on one technique security only, but can done with combination in information data security (pabokory, 2015:20). Concept from cryptography is are different linguistic, mathematical, and representational processes from computing, seen from fact history state that part big cryptography done with paper, ink, and later, the telegraph. Cryptography is one of the method for prevent data leaks of a nature confidential.

In a way general there are two types cryptography, namely cryptography classical and modern cryptography. Cryptography classic (symmetric) is something algorithm that uses one key for securing data. Two techniques the usual basis done is substitution and transposition. While modern (asymmetric) cryptography is more algorithms complex than the algorithm classic, thing this caused by algorithm this use computer (amrulloh, 2017:71).for minimize problem digital data security and privacy, can used method encryption, which is one of the method for protect data. Encryption play role important in secure flow data transmission via the internet, so that make things difficult the party that does not concerned for get or view the data. Data security is matter important things to do carried out in the cyber era. Utilization various type digital technology in help various activity man need balanced with adequate data security. One of the ways that can used in data security is through cryptography (fadlan, 2021:806).

Through method this is the original data in encrypted digital files, which are known with term cryptography, and vice versa, encrypted data changed become original data form. The data has been encrypted changed to in original data form, which is known with term description. Problem related security and data privacy become enough problems important because until now no a little users who have ever become victims of theft, vandalism, or modifying digital files or data. For the perpetrators activity said, the victims' digital files can be utilized in look for profit for they or other parties who need it for various things and of course just will become something loss big for the victims (febriyanto, 2022:113).

With method here, digital files and data are hidden in form encrypted that is not means, so that make things difficult someone who doesn't have the file or data for know like what the original file or data form. In general, engineering data encryption can classified to in two categories based on use password type : scheme symmetric and asymmetric. Data

security is something matter important, because related with privacy, integrity, authentication and confidentiality. If some data is lost or changed by an unauthorized party responsible answer, then can harm for data owner (malvi, 2020: 67).

Encryption and decryption methods is effective approach for guard image file security. One of the common methods used is method base64. Base64 is method encoding that converts binary data into ascii text format. In the context of image file encryption, methods base64 can used for convert image files in a way direct to in a format that is not can read, coding base64 is step the first effective for protect integrity image. With convert image files to ascii text format, encoding base64 make it difficult read by lay people. Although picture no encoded in a way directly, base64 encoding provides layer security addition with hide image data so that no can with easy understood by people who are not authorized. However, it is necessary remember that scheme base64 is not scheme strong encryption in a way cryptography and its security still debated. Therefore that, when implement image file encryption and description use scheme base64.

Javascript is language easy programming used in implementation study this. Use javascript as language main for implement coding base64 and image file description in study this offer a number of advantages. First, javascript used in a way extensive and supported by various platforms, including web browser and environment development device soft. This is allows researchers for test and implement solution in a way efficient on different systems and environments. Second, javascript offer excellent flexibility and capability powerful programming. Researchers can with easy develop function compatible encryption and decryption with base64 and processing image data in a way efficient. In addition, javascript has various libraries and frameworks work that can used for speed up development solutions and expand its functionality.

Observing perpetrator business anywhere being in the industrial era 5.00 not can off from related processes with communication carried out with various strategies, types of methods and through various media. In terms of this business already more lots known as a business that brings in benefits that are sustainable move wheel life business that myself. Business and communication like two sides currency that is not can released one and the other because both of them is a social process, we will come to a conclusion that communication is business and, conversely, business is communication. This means that at the level of symptoms [phenomena], between communication and business is integrated symptoms. Cannot separated.business and communication you're welcome start his activities with carry out the production process, because in communication, which is produced named information ; whereas in business, which is produced is goods and services. And both, business and communication convey product or services produced the to party other.in communication, the other party can called communicator, audience, destination, and so on. While in activity business other parties often called consumers, clients, and buyers. Communication and business you're welcome cause reaction certain and have specific barriers. Communication business is every communication used for build partnerships, source power intellectual, for promote one idea ; a product ; service ; or something organization, with target for create mark for business being run.communication

business implementation in life daily use scoop up clients who are increasingly diverse and promising, because in communication business consists of comprehensive knowledge from internal and external sides business said. Internal communication includes communication vision (company), strategy, plans, culture company, values and principles the basis that exists in the company, motivation employees, as well as ideas, and so on.

METHOD

Framework thinking on research is How channel study done. Stages done with method grouping task become a number of phase, namely :

- a. Literature study, in thesis This writer take from a number of source like journals and books.
- b. Data collection, in thesis This writer collect data with method search and download picture digital with size maximum 30Mb.
- c. System analysis, problems raised in thesis This is How method secure something digital images with use RSA and Base 64 algorithms.
- d. System analysis proposal, author will make something a system that can used in encrypt and decrypt picture digital so that can sent in a way more safe.
- e. Needs analysis, for make system This writer need a number of device hardware and devices soft such as visual studio code software and laptop.
- f. System design, author start the design process system with using UML to make it visible image file data processing flow digital that will encrypted or decrypted.
- g. Manufacturing system, author make system with use Language Microsoft Visual Basic.Net 2010 programming.
- h. Implementation, after manufacturing system finished, author implement system with method try and do evaluation whether there is error or Already walk with right. Then do calculation in study with existence the relationship between variables X1, X2 and Y. The stages above can seen in the following figure 1 This.
- i. Withdrawal Conclusion. The final step is do withdrawal conclusion to research that has been done.

RESULTS AND DISCCUSION

The quantitative research method used is a survey method, which involves sampling from a population and using a questionnaire as the primary data collection tool (Singarimbun and Effendi, 2008: 3). The survey method used in this study aims for explanatory research, namely research that highlights the influence between variables by testing previously formulated research hypotheses (Singarimbun, 2008: 5). The variables used in this study are:

Independent Variable

An independent variable (influencing variable) is a variable suspected to be the cause or antecedent of another variable. It is usually marked with the symbol X (Kriyantono, 2010: 21). The independent variables in this study include:

X1 = RSA Implementation

X2 = Base64 Implementation

Dependent Variable

A dependent variable (affected variable) is a variable suspected to be the result of or influenced by the preceding variable. This variable is observed, and its value is assumed to depend on the effect of the influencing variable. The dependent variable is usually denoted by the symbol Y. (Kriyantono, 2010: 21).

The dependent variable in this study is the Business Communications of CV Candi Karya. The relationship between the independent and dependent variables can be between just two variables (bivariate relationship) or between more than two variables, usually between one affected variable and several influencing variables (multivariate relationship). (Singarimbun and Effendi, 2008: 55).

The independent and dependent variables in this study use a multivariate asymmetric relationship. An operational definition is a research element that explains how to measure a variable. In other words, an operational definition is a kind of implementation guideline for measuring a variable (Singarimbun and Effendi, 2008: 46). The indicators of the dependent variable (Y) include:

- i) Accelerating Problem Solving.
- ii) Decision Making.
- iii) Improving Professionalism.
- iv) Providing a Positive Response to Stakeholders.
- v) Increasing Productivity.
- vi) Strengthening Business Relationships.

The population and sample in this study were loyal consumers of CV Candi Karya from before the Covid-19 pandemic in 2019 to early 2024. The sampling technique used was Purposive Random Sampling, which, using the Taro Yamane calculation formula, obtained the required sample size of 44 consumers. The data collection technique used in this study was a questionnaire. A questionnaire is a list of questions that must be completed by respondents, also known as a survey (Kriyantono, 2010: 97). The validity test instrument was tested using the Product Moment Correlation calculation, the reliability test used the Alpha Coefficient (Cronbach's) calculation, and the data analysis technique used the F Test with One-Way ANOVA.

Partially, all X variables (X1, X2) have a significant relationship or influence. This can be seen from the calculated t-value and the Sig. The calculated t-value is greater than the table t-value, while the Sig. The Sig. The X1 variable, RSA implementation, has a significant relationship with business communication (calculated t-value = 3.681 > t-value = 1.724). Similarly, the Sig. The X2 variable, Base64 implementation, has a significant relationship with business communication activities. The Sig... First, based on the calculation results, it can be seen that the correlation between RSA implementation (variable X) and business communication activities (variable Y) is 0.475, which, when viewed in the correlation assessment criteria table, is sufficient.

Therefore, there is a sufficient correlation between RSA implementation and BASE64 in CV Candi Karya's business communication activities. This indicates that the

implementation of RSA and BASE64 in CV Candi Karya's business communication is running quite well and consistently. Furthermore, the calculation results for the questionnaire regarding business communication activities given to respondents showed that respondents' ability to answer questions regarding measuring their understanding of the impact of RSA and BASE64 implementation on CV Candi Karya's business communication was good, as evidenced by the overall percentage of their responses. The ten questions posed were accurate. This indicates that the participants' reactions were appropriate, consistent with expectations. In other words, there was a congruence between the message (stimulus) conveyed and the accuracy of the questionnaire responses, leading to a feeling of relative satisfaction with the results. The information obtained through organizational change can also provide input to employees to change their behavior toward the common good.

Second, the implementation of Base64 in business communication was deemed the most effective effort compared to other efforts or factors, with a regression coefficient of 0.557. By presenting a valid and efficient RSA and Base64 implementation process, the effectiveness of RSA and Base64 implementation as a tool for business communication can be further enhanced.

CONCLUSION

The implementation of RSA and Base64 is a strategy that business owners can develop amidst the current sluggish business dynamics in the outdoor advertising sector, enabling more effective business communication. This is what CV Candi Karya has done, enabling the company's operations to survive. The intended category of organizational communication effectiveness is not rigid but flexible, implemented by all elements involved in the development process of CV Candi Karya, including leaders, employees, and across channels. Based on the above research, it was also found that if variables X1 and X2 increase, then variable Y also increases (positive correlation). The level of RSA and Base64 implementation in this study was 50.54%, while the remaining 49.46% was due to factors outside of this study. The implementation of RSA within CV Candi Karya is the most effective activity for establishing business communication compared to other activities. This can be observed through discussion forums with clients or potential clients, with a THIT of 4.84. The research results conclude that the implementation of RSA and Base64 impacted CV Candi Karya's business communications. The above study also found that if variables X1 and X2 increased, then variable Y also increased (positive correlation). The effectiveness of RSA and Base64 implementation in this study was 50.54%, with the remaining 49.46% attributed to factors outside the study. Based on the research hypothesis, the implementation of RSA within CV Candi Karya was the most effective activity for fostering business communications compared to other activities, as evidenced by the discussion forum's THIT score of 4.84. The researcher's recommendations are as follows, to achieve business communications, RSA and Base64 implementation at CV Candi Karya should be more flexible. It should not always be limited to a specific, exclusive design. A simple design should also be applied to maintain customer satisfaction in enjoying the product. This means

that not only large companies can benefit from the benefits, but even small companies can still benefit from RSA and Base64 implementation, even with very simple systems. RSA and Base64 implementation can be implemented with an additional order fee if it is absolutely necessary for certain businesses that require it, resulting in improved and more progressive business communications leading to the development of CV Candi Karya.

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