EFFICIENCY REQUESTING PROCESS OF THE FORMAL DOCUMENT FOR BUSINESS IN INDONESIA
(using web application base on secure and encrypted sharing process)

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ABSTRACT

In recent business practices, the need of the formal document for business, such as the business license documents, business domicile letters, halal certificates, and other formal documents, is desperately needed and becomes its own problems for businesses, especially for small and medium enterprises. One stop service unit that was conceived and implemented by the government today, has not been fully integrated yet. Not all permits (related with formal document for business) can be completed and finished in one place, businesses are still have to move from one government department to another government department to get a formal document for their business. With these practices, not only a lot of the time and cost will be sacrificed, but also businesses must always fill out a form with the same field.

This study aims to assess and identify the problem, especially on applying the formal document for business, and use it as inputs for the development of a web application based on secure and encrypted sharing process. The study starts with a survey of 200 businesses that have applied the formal document for their business, to map the initial conditions of applying the formal document for business in indonesia .

With these applications that are built based on these needs, it is expected that not only the time, cost, and physical effort from both parties are becoming more efficient, but also the negative practices of bureaucratic and economic obstacles in business activities can be minimized, so the competitiveness of business and their contribution for national economy will increase.

Keywords : Formal documents for the business , Efficiencies, Web application based on secure and encrypted sharing process

Chapter 1 :
Background

Today, every business should complement their business by various formal documents (business documents) that are required, either by the government or, by the market or the consumers. Some important documents include: trade business license (SIUP), place of business Permit (SITU), Tax Identification Number (NPWP), Company Registration (TDP), Company Registration Number (NRP), The certificate of SIUP, Halal certificate, ISO, certificate of Copyright and other formal documents (Sudarno, 2008).

Related with the formal documents (business documents) to be held, there are many entrepreneurs (especially in small and medium enterprisses or SMEs) who have difficulty in taking care of or getting the document. This obstacle will become one of the reasons for the downgrade of starting and doing business in Indonesia, and this condition is still lagging behind compared to other countries.

Compared to some other countries in the ASEAN region, the easiness of doing business in Indonesia is still lagging (120 rank of 189 countries), as shown in the following table.

Table 2.
Doing Business in Multiple Countries Asia Pacific Countries

Economy	Ease of Doing	Starting a Business	Getting Credit	Protecting Investors
Singapore	1	1	2	1
Malaysia	6	3	1	3
Thailand	18	11	11	4
Brunei Darussalam	59	17	6	16
Vietnam	99	14	4	20
Philippines	108	22	14	19
Indonesia	120	23	14	8
Cambodia	137	24	4	13
Timor-Leste	172	19	23	16
Myanmar	182	25	25	24

Source: Doing Business-world Bank, 2014

Licensing system and application of some business formal documents in Indonesia, are not optimal yet (Prayitno, 2011), thereby potentially reduce the business competitiveness in Indonesia. Until 2013, the World Bank reported that the time required to start a business in Indonesia is still quite long (47 days), with an average of 9 procedures to be bypassed; still lags behind Malaysia (6 days) and Singapore (3 days). This phenomenon is not only leading to cost and longer time to obtain a formal document to start a business in Indonesia, but also opportunity cost for the company, because the maintenance process is quite long and not fully integrated. Recently, Government's One stop services unit that has existed in every area is not able to serve all the permissions (formal ducument) required by the business yet.

This study aims to get a picture of the obtaining required formal documents practised by the business (especially small and medium enterprises), to map the needs of the public in obtaining formal documents for their business, and then develop an application that can optimize physical activity, cost, and time requirement to take care of the formal documents, by using a single database (secured), encrypted, and web-based.

Chapter 2 :
Theories

Formal Procedures and Requirements

Some of the legal bases of the formal documents needed are: Brands Regulation No. 15, 2001, Industrial Design Regulation No. 31 2000, the Patent Act No. 14 2001, Cooperatives Regulation No. 2 1992, etc. All of the legal bases essentially require every business to complement their business with formal documents that are relevant to their business. For example, to have a PT or a CV, Campany needs: a Notary Act, a company Domicile, a Tax Identification Number (NPWP), a Company Registration (TDP), and a Company Registration Number (NRP).

Each document requires the applicants to fill out a form each of which usually contains similiar field, and must be loaded every time the applicants repeatedly filling out the forms for different formal documents. similarly, all the government agencies also still have to make re-entry of the applicant to the licensing service system respectively.

In terms of procedure, in general, every process of the formal document application requires a long process. One example is:
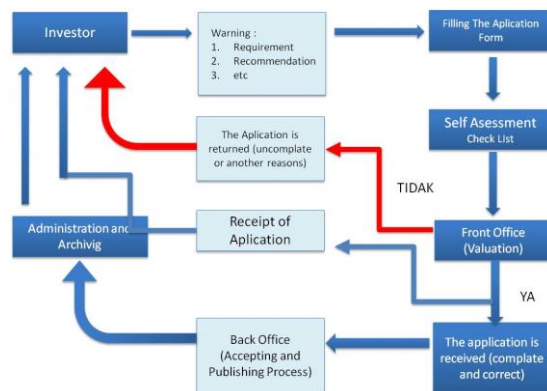

Figure 1. Licensing Procedure Investment in Indonesia (BKPM RI, 2012)

The figure above shows that there are stages that are still done manually, so every applicant must come to the government office waiting in the queue, filling out a form with the

many items and by bringing all the physical requirements. The same thing should be done to get a formal document in the other government agencies. This is a manual process whose solution needs to be pursued.

Security Considerations in Business Document Handling System

As mentioned earlier, in practice, **A** permit application process (and other formal documents) requires physical presence of the applicant to the appropriate office affairs, and The aplication documents must be equipped with physical evidence such as binding signature and company seal, even using the stamp. In the permit application involving multiple government office**S** (across departments) needed proof with approval authority of any department that demonstrate the validity of the documents accompanying the application.

In addition to knowing the authenticity and validity of each letter, the physical evidence is also used as a means to prevent the denial by the company. This shows that the confidence (trust) in the permit application process can only be achieved with a physical presence and authentic evidence such as signature, stamp, stamp, and using the sealed envelopes.

Information technology promises comfort in electronic transactions in which an entity does not need to meet physically to make transactions. The transaction in this case is not only a financial transaction, but also social exchanges such as email, chat, as well as community service by the government through e-government as a formal permit application or document. However, the security and the establishment of trust becomes imperative in conducting electronic transactions. This is due to the inter-transaction entity which does not have to meet face to face physically, stamped signature and the stamp cannot be done in an electronic transaction. Therefore, **?**the formal document application information system prototype**?** To be constructed in this study, must implement certain mechanisms and technologies to the trust that is formed in a

manual system which can form in the computer-aided system also. So that, some literature suggests four pillars of security that must be supported in electronic transaction systems (Kesterson, 1997; Lim, 2003):

1. Authentication, a state where the parties to a transaction could prove the originality of the message contain**ING** the transaction receipt.
2. Confidentiality, a state where a message containing the transaction information can only be read by those who are entitled.
3. Integrity, a state where the system can detect intentional changes to the message containing the transaction information **is** transmitted.
4. The Non-repudiation, a state where the maker of a message cannot that the message belongs to him

Regulation of the Republic of Indonesia No. 11 of 2008 on Information and Electronic Transactions (ITE Law) also require**s** that electronic transactions are valid and enforceable and should be able to support the four pillars. The implementation of the four pillars in the computer system is the use of electronic signatures (digital signatures) that are supported by the public key infrastructure (Public Key Infrastructure - PKI). In this case**,** PKI is the infrastructure that is essential in electronic transactions in general (Wilson, 2005), and in the context of licensing information system that will be built in this study.

Design

Public key infrastructure requires a body to be known by the Certification Authority (CA) (Adams et al 2003), whose job it is to verify each transaction, and the actors manage electronic certificate (digital certificate) to be used in secure transactions and achieve the trust that exists in non-transaction electronics.
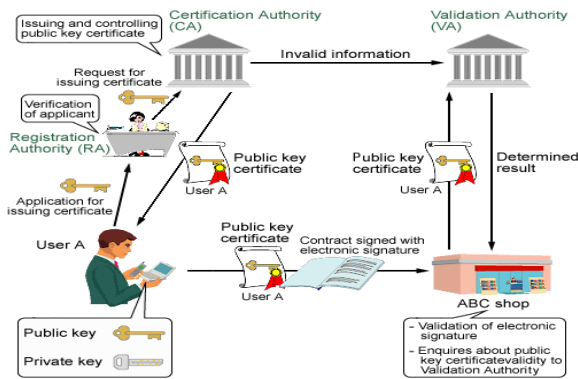
Figure 2. Public Key Infrastructure and Certification Authority (Hitachi, 2012)

Figure 2 presents the process of how to obtain an electronic certificate from the CA. In this study the CA system will be built and managed by a competent authority or a trusted party, in this case Gunadarma University as a neutral institution that will host the service. Each SME will receive an electronic certificate issued by the CA, To be used to interact with information systems web-based permit application. Without such a certificate, the user cannot access the system. Additionally, any documents, whether the request, approval / rejection, and cross-department will be equipped with a digital signature that is packaged in the format of the S / MIME.

By using CA and digital signatures, then any transactions that occur in this system will be safe in the context, authentication, confidentiality, security of transaction integrity, and prevention of denial. With the ultimate goal of that security and confidence (trust) is reached. In terms of application development, the effort put in applications built Websites need to pay attention to some of the researches that have been done. Siu (2001) and Sularto (2004) stated that the implementation of information and communication technology is not an easy process to do. Despite the huge potential benefits, the implementation process is not easy and risk-free (or cheap). Acting rationally, being flexible and viewing angle**s** and having an open mind is a key factor in the use of information and communication technologies that already exist and examine the use of new

technologies in the future. Several lessons can be learned from the experience of the development of information and communication technology **are** as follows:
a. Development approaches based on the needs and requests.
b. Be realistic about what can be done by technology.
c. Ensuring the implementation of the scheme is flexible and thorough.
d. Beware of unintended consequences.

Chapter 3 :
Methodology

In general it can be said that this study is a constructive research to build an application that can optimize the practice of physical effort, cost, and time required to take care of a variety of formal business documents, using a single secure database (secure), encrypted, and Web-based. This application is built based on the results of the mapping formal document processing practices to businesses in small and medium enterprises in the Jabodetabek area. Mapping obtained from 200 respondents who once took care of business formal documents for their business.

Furthermore, referring to the stage of development of the system by Pressman (1992), and by taking into account the relevance to the topic of this study, some of the activity development and implementation of applications that will be built includes:
1) Needs of Analysis and Identification Document Flow
2) Legal study of Digital Signature Technology and Utilization Potential system is built
3) Systems design
4) Analysis of Risk and Safety
5) Implementation System with Security Best Practice
6) System testing
7) Establishment of Certification Authority

Meanwhile, prepare the website for an application that has been built to be accessible on-line and in real time. The necessary stages are shown in the figure below.
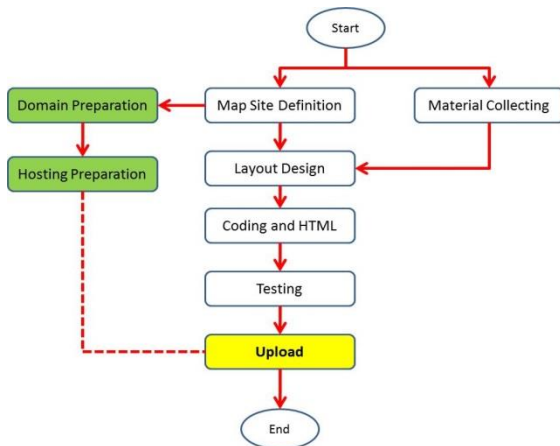
Figure 3. Steps of Website Preparation
(Oktavina, 2012, Adjusted)

Chapter 4 :
Result and Discussion

The study was based on formal document processing practices that are currently going on, as shown in the figure below.
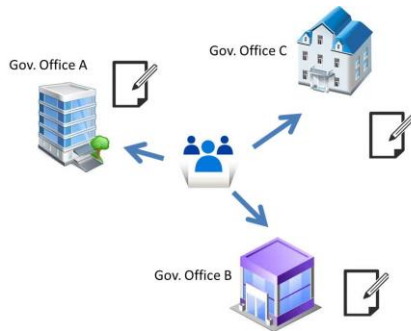

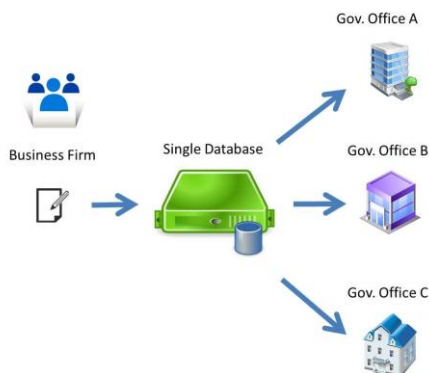Figure 4. Practices of Formal Document Handling in Indonesia

Figure 5. Practices of Formal Document Handling Using Single Database Application

Both of the picture**S** above show**s** the change process to obtain formal documents for the business. It becomes easier and efficient. If in figure 4 **a** business firm must come, queue, and fill the application form and any kind of document to each government agency**;** then in figure 5, **A** business firm just fill**S** out the form digitally, and then stored it in a database. Furthermore, the database can be used for a variety of formal document processing, simply by selecting the relevant fields with application forms from each government institution. `

Basically, made up to this paper, The other research conducted is not 100% complete yet**;** The main activities recently completed are surveying mapping and developed prototype for an application.

From the survey results of the mapping**,** some can be delivered as follows:

- The majority (98.98%) of respondents have a business license**;** their market**S** mostly are local market oriented (48.98%), with a daily turnover of more than 5 million rupiah**S** (41.84%)
- The majority of respondents once applied more than 1 business formal document**s** (65.21%)
- 68.37% respondents stated that there was never any socialization as to how to apply the business formal documents.

68,37
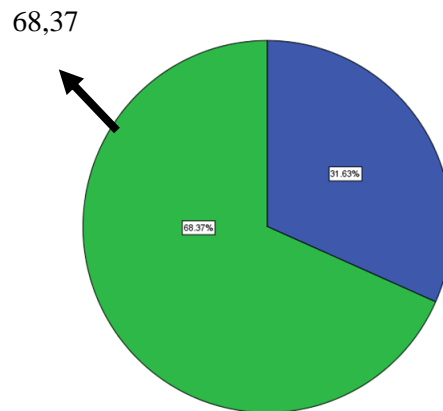
- 83.67% of respondents got the applying information from The government offices directly, and only 9.18% which got the information from the internet.
- In average, the majority of respondents require more than 3 kinds of business formal documents (42.26%), especially on SIUP (71.58%).
- More than half of the respondents said they needed at least 3 requirements for applying the busiess formal document.
- The majority of respondents (87.76%) had to come directly to the office and just 1.02% did it through on line
- 54.08% reported that They had to fill out an average of at least 2 forms when they applied business formal document, and the rest stated that They to fill more than 2 forms.
- 75.51% of respondents stated that they should always fill the business name, address, owner's name, ID, phone / hp, and type of business, in any application form

4.08%
2.04%
16.33%
75.51%

75,51%
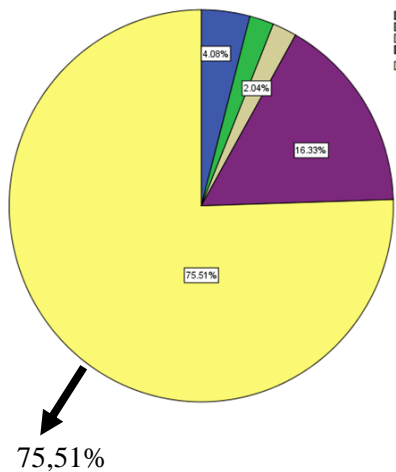
- 78.57 of respondents said they would obtain licensing information on the granting of the petition, by coming directly to the government office, and only 5.10% can see it on the internet

Other results of the survey showed that nearly all respondents (98.98%) have agreed that there is a computer application which can facilitate the processing of a business formal document and all of them have stated that They are willing to use computers to apply business formal document.

Referring to these results, The researchers are optimistic that the applications that are built will be petrified of efforts in obtaining the formal documents for his business. Until now the prototype of the application has been made with the following basic functions:

a. As an application that provides a single database of small and medium enterprisses. With This application, every business firm only fills one-time about their business profile data which can then be used to fulfill any request form the field of Business formal documents, and send them to the appropriate government agencies

b. As applications that can be used by government agencies to improve the efficiency of the provision of formal documents for the business firm also. Therefore, this application was built with the attention to the principles of data security and user'S authorization.

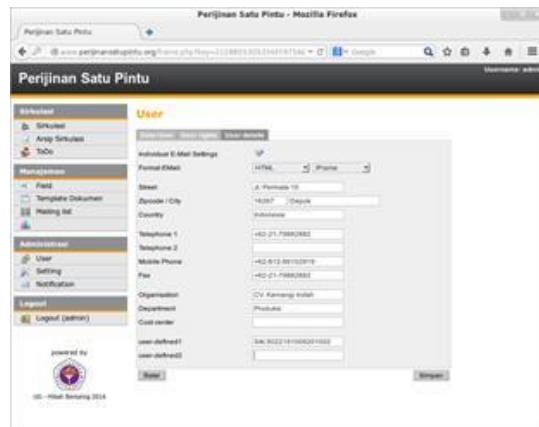Some display prototypes for which have been completed are as follows :

Figure 6. Completeness Form of Data Users

Figure 7. Approval Status

The next research plan**S** are:
1. The next plan in the development of this application prototypes is to integrate literature and information security routine (kriptography - Public Key Infrastructure), among others: Use of https and CA in the system **.**
2. Authentication using client certificates and digital signatures**.** no longer using the username and password.
3. Use of digital signatures on each petition and granting permission. So it is not necessarily wet signature anymore that convert**S** the validity of the document based on the Law on Information and Electronic Transactions.

If the researchers successfully integrate the circulatory system and security system based on a digital signature, then it will be be a prototype application of e-Government in Indonesia to make full use of PKI in accordance with the EIT Law.

Chapter 5 :
Conclusion

Although still in the process, this study has shown that in the applying business formal document practices, businesses firm**S** (especialy on small **AND** medium enterprisses) still have to do it physically by filling out some forms for each requirement document, with plenty of stuffing the same item. In this process, the next process that occurs in the relevant governmenet agencies will take more time also.

The application that will be built and that have been finished in a prototype version are apparently expected to drive the acceleration and The efficiency of applying business formal document**S**. However**,** the database's security of the business firm and using authorizations will remain a concern in the completion of applications that will be built.

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