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PROCEEDING

# IC - ITECHS 2014

The 1<sup>st</sup> International Conference on Information Technology and Security

Malang, November 27, 2014

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**Lembaga Penelitian dan Pengabdian pada Masyarakat**

Sekolah Tinggi Informatika dan Komputer Indonesia



**PROCEEDING**  
**The 1<sup>st</sup> International Conference on**  
**Information Technology and Security (IC-ITechs)**  
**November 27, 2014**

**Editors & Reviewers:**

Tri Y. Evelina, SE, MM Daniel  
Rudiaman, S.T, M.Kom Jozua  
F. Palandi, M.Kom

**Layout Editor:**

Eka Widya Sari

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**LEMBAGA PENELITIAN & PENGABDIAN KEPADA MASYARAKAT**

**Sekolah Tinggi Informatika & Komputer Indonesia (STIKI) – Malang**

**Website: [itechs.stiki.ac.id](http://itechs.stiki.ac.id) E-mail: [itechs@stiki.ac.id](mailto:itechs@stiki.ac.id)**

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Jl. Raya Tidar 100 Malang 65146, Tel. +62-341 560823, Fax. +62-341 562525  
Website: [itechs.stiki.ac.id](http://itechs.stiki.ac.id) E-mail: [itechs@stiki.ac.id](mailto:itechs@stiki.ac.id)

# **GREETINGS**

## **Head of Committee IC-Itechs**

For all delegation participants and invited guest, welcome to International Conference on Information Technology and Security (IC-Itechs) 2014 in Malang, Indonesia.

This conference is part of the framework of ICT development and security system that became one of the activities in STIKI and STTAR. this forum resulted in some references on the application of ICT. This activity is related to the movement of ICT development for Indonesia.

IC-Itechs aims to be a forum for communication between researchers, activists, system developers, industrial players and all communications ICT Indonesia and abroad.

The forum is expected to continue to be held continuously and periodically, so we hope this conference give real contribution and direct impact for ICT development.

Finally, we would like to say thanks for all participant and event organizer who involved in the held of the IC-Itechs 2014. We hope all participant and keynote speakers got benefit from this conference.

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# Implementation of Accurate Accounting Information Systems To Mid-Scale Wholesale Company

**Aloysius A. P. Putra, Adi Suryaputra P.**

University Of Ciputra, Surabaya

[aloysiusap@gmail.com](mailto:aloysiusap@gmail.com), [adi.suryaputra@ciputra.ac.id](mailto:adi.suryaputra@ciputra.ac.id)

## *Abstract*

*Company with medium scale has a problem in the recording business processes and financial reporting. With the increasing number of their transactions, it is not possible if it should always be handled manually. The purpose of this research is to determine the method of ACCURATE accounting information system implementation at mid-scale wholesale companies and to analyze the factors that influence the decision of a mid-scale wholesale company adopts accounting information systems for their business process. The method used in this research is by conduct a literature study and apply the method of implementation on the three mid-scale wholesale company. The authors formulate a right method of ACCURATE accounting information system implementation applied to mid-scale wholesale company, which through the process of needs analysis, setup database, and training. The authors also analyze and find the factors that influence a mid-scale wholesale company's decision to adopt an accounting information systems in the company, which is the background of the owner of the company, in addition to other factors such as price, time, and the scale and complexity of an accounting information system.*

**Keywords :** *information systems, accounting, analysis, implementation, wholesale company*

## **1. INTRODUCTION**

Information is an important part and beneficial to humans, the need for information is increasing from time to time. An information can be said to have benefits in the decision-making process if the information is presented in an accurate way, timely and relevant. A high-quality information can help a management as a basis for decision making. The functions of an information system are to collect and store data, transform the data into useful information for the management, and provide adequate controls to safeguard the assets of the organization.

One part that very relevant to the implementation of information systems in a company is accounting. Accounting is an important support in the business of information technology that has been progressing quite rapidly. Mid-scale company, like many growing in Indonesia currently has a problem with the recording business processes and financial reporting. With the increasing number of their transactions, not possible if it should always be addressed by hand. So mid-scale companies requires an accounting information system implementation in order to help the business processes within the company. From this background, the identification problem is formulated as following : "How to implement ACCURATE accounting information systems at mid-scale wholesale company ?"

The purpose of this study was to determine the right method of ACCURATE accounting information system implementation at mid-scale wholesale companies and to analyze the factors that influence the decision of a medium-scale wholesale company adopted the accounting information system to assist business processes.

## 2. RESEARCH METHOD

Avison (2006 : 24) said that the information system development methodology is a collection of procedures, techniques, tools, and documentation aids which will help the systems developers in their efforts to implement a new information system. A methodology consists of several stages, each stage consists of several sub-steps that will guide system developers in selecting a technique that might be appropriate at each stage of the project and also help them to plan, manage, control, and evaluate an information system project. One well-known theory of the development lifecycle of information systems is the Information Systems Development Life Cycle (SDLC). This cycle is known as the waterfall model (Avison & Fitzgerald, 2006).

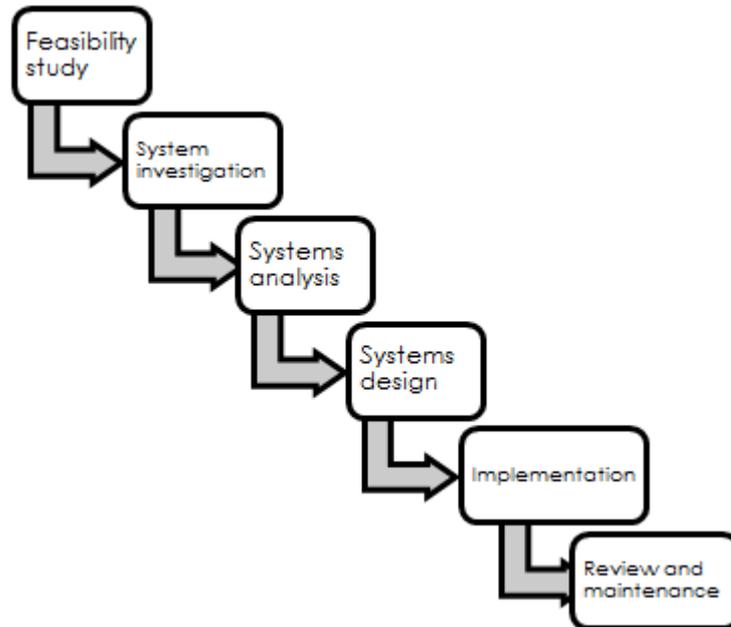


Figure 1 *Information Systems Development Life Cycle*

The research conducted by the authors is make the process of implementation and direct observations at three different companies all of which are mid-scale wholesale company. They are Golden Interior, PT . Dyas Marto Perkasa, and Merpati Stationery. In this chapter the authors will explain the overall stages of what is being done during the study.

### 2.1 *Literature Study*

This stage is the initial stage or initiation by the authors prior to the implementation process directly. Writers need to understand the theories relating to the implementation of information systems before finally carrying out the implementation process itself.

### 2.2 *Needs Analysis*

After conducting a literature study, understand, and take the essence of theories existing implementations, the authors begin the next phase of implementation by doing a needs analysis of the client company. This process usually lasts for one day along with setting the initial data base. As described in the previous section, that the process of needs analysis was conducted by the authors to help companies conduct judgment and seek solutions to the problems faced. In general, candidates ACCURATE software users have a need for an accounting information system that can record every transaction and generate a journal of the transactions of the company and automatically help users who previously did manually recording.

### 2.3 Setup Database

After conducting interviews and observations to the needs of the client company, the authors make the process of installing ACCURATE software on a computer used at the client company, and then perform the initial database configuration (set up the database) on ACCURATE software that already installed to be used next. In ACCURATE software, initial settings database includes five kinds of data, the chart of accounts, vendor lists, customer lists, inventory lists, and fixed assets list. All files are prepared in the form of a Microsoft Excel file (.xls) corresponding tabular format specified by the developer of ACCURATE, namely CPSSoft.

### 2.4 Training

The final phase carried out by the authors before the company is ready to use the ACCURATE software in running business process is doing a training to the prospective users in those company. The purpose of this activity is to describe the features that can be accessed in the ACCURATE and teach ways to use. This training process begins with the presentation of each module in the ACCURATE, such as general ledger module, cash and bank, sales, purchase, and inventory. Furthermore, the authors do a demo of ACCURATE use for some examples of transactions and then provide an opportunity for prospective users to try to use to enter the company's transaction into ACCURATE software. This method evenly authors use in conducting the training process in three mid-scale wholesale companies that are objects of this study. The time taken to carry out this training is very relative and vary by company depending on the candidate 's ability to absorb knowledge user submitted implementer, but in general, this process usually lasts for 2-3 days.

## 3. RESULT AND DISCUSSION

The authors run the implementation phase as written in research methods to the three mid-scale wholesale company which is the object of research and here are the results.

Company	Problems Faced	Constraints on Implementation	Solution Offered by Using ACCURATE	Modules Used	Time
<i>Golden Interior</i>	Increasing the number of the transactions does not allow the recording is done manually and there is no profit or loss report at the end of the month.	No Microsoft Excel file prepared by the company.	Recording purchase and sales transactions tidy and also can generate the income statement at the end of the month automatically. Recording of tax invoices.	<ul style="list-style-type: none"> <li>• Cash and Bank</li> <li>• Purchase</li> <li>• Sales</li> <li>• Inventory</li> </ul>	4 Days
<i>PT. Dyas Marta Perkasa</i>	Difficulty finding a transaction history in hundreds of Microsoft Excel files and reports the resulting balance sometimes unbalanced.	Existing inventory list in a Microsoft Excel file has a format that is not the same as that determined by ACCURATE and supplies up to 500 types of goods.	All transactions are stored and can be searched easily using the date or form number of transactions and the resulting balance sheet will also be balanced because of recording each transaction is automatically recorded directly on the debit and creditside. Recording of tax invoices.	<ul style="list-style-type: none"> <li>• Cash and Bank</li> <li>• Purchase</li> <li>• Sales</li> <li>• Inventory</li> <li>• Fixed Asset</li> </ul>	4 Days
<i>Merpati Stationery</i>	Unable to control the company accounts payable and receiveable and also there is no financial statements at the end of the month.	No Microsoft Excel file prepared by the company and the number of the inventory reached 1900 of goods.	Each purchase and sales transactions entered in the ACCURATE software will automatically recorded as company's payable or receiveable and may result in the income statement and balance sheet at the end of the month. Recording of tax invoices.	<ul style="list-style-type: none"> <li>• Cash and Bank</li> <li>• Purchase</li> <li>• Sales</li> <li>• Inventory</li> </ul>	6 Days

**Table 1 Implementation Phase on Three Mid-Scale Wholesale Company**

After conducting research on three mid-scale wholesale company with implementing ACCURATE accounting information systems, the authors concluded that the ACCURATE

accounting information system implementation phase on a mid-scale wholesale company through three processes, there are needs analysis, setup database, and training. The explanation of each of these processes are as follows.

### 3.1 Needs Analysis

Early initiation process to find out the problems faced by the client and the client needs to the information system that can be implemented in the company. An implementer should understand the problems faced by the client and explain what solutions can be offered if the client has used ACCURATE accounting information system. This process lasted for one day along with setup the company database.

### 3.2 Setup Database

The process of importing the company's data into ACCURATE software before it can be used in the transaction. Important data used for this process is a list of costumers, list of suppliers, and a list of inventory. As for the list of accounts can use the list of accounts existing automated in ACCURATE software, in addition to the list of fixed assets are also optional for clients who want to include the recording of fixed assets in its accounting records. Most of the constraints experienced during this process is the unavailability of data needed in Microsoft Excel file format, so that an implementer needs to create or spruce up the file first. This process lasts for 1-2 days in conjunction with a needs analysis process and depending on the amount of data to be exported into the ACCURATE software. However in certain circumstances, such as a list of items that should be recorded in the thousands and manually would take a longer time.

### 3.3 Training

The process of knowledge transfer that done by the lementer to prospective users in the company. This process begins with a presentation and demonstration of the use of existing modules in the ACCURATE software, such as general ledger, cash and bank module, sales module, purchase module, inventory module, and fixed assets module. Furthermore, the implementor can provide the opportunity for candidates to train users to input transactions into the ACCURATE software based sample of transactions that have occurred in the company. This process lasts for 2-3 days and depends on the ability of potential users to absorb the material described by the implementor.

Overall, the implementation phase of ACCURATE accounting system on a mid-scale wholesale companies can be seen in figure 2 below.

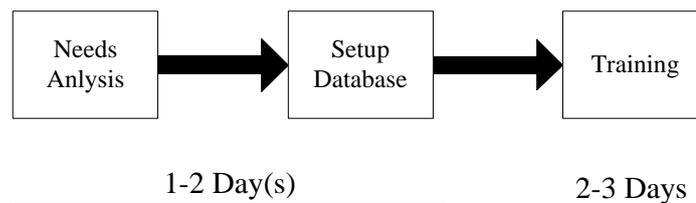


Figure 2 ACCURATE Information System Implementation

#### 4. CONCLUSION

Some of the conclusions obtained from this study are :

1. Mid-scale wholesale company in general is a new users of ACCURATE accounting information systems that start switching its business process from the manual system of recording transactions to transaction recording system that has been computerized. This is because the mid-scale wholesale company's daily transaction volume has reached dozens of transactions and began to have difficulty taking notes manually.
2. The need for a mid-scale wholesale company of ACCURATE accounting information systems include the need to record the sales and purchase transactions, the need to create tax invoice, and the need to make a financial report at each given period.
3. ACCURATE accounting information system implementation at a mid-scale wholesale company through three processes, there are needs analysis, setup database, and training.
4. Factors that influence the mid-scale wholesale company's decision to adopt an accounting information systems used in the company including the price, scale and complexity, time, and the background of the owner of the company.  
Characteristics of software that specifically affect the mid-scale wholesale company in adopting an accounting information systems used in the company is a standard feature, the information system has been widely used everywhere (ubiquitous system), and the features of the tax in accordance with government regulations.

#### REFERENCE

- [1] Avison, D., & Fitzgerald, G. (2006). Information systems development: Methodologies, techniques & tools 4th edition. London: McGraw-Hill Companies.
- [2] Bodnar, G. H., & Hopwood, W. S. (2001). Accounting information systems. Upper Saddle River, New Jersey: Prentice Hall.
- [3] Daneshgar, F., Low, G. C., & Worasinchai, L. (2013). An investigation of 'build vs buy' decision for software acquisition by small to medium enterprises. Information and Software Technology. Retrieved from [www.elsevier.com/locate/infsof](http://www.elsevier.com/locate/infsof)
- [4] Gelinas, U. J., & Dull, R. B. (2008). Accounting information systems 7th edition. Mason, Ohio: Thomson/South-Western.
- [5] Hall, J. A. (2004). Accounting information systems 4th edition. Cincinnati, Ohio: South-Western College Pub.
- [6] Perdiasari, Lutfia. (2009). Advanced Setup Using ACCURATE 4. Jakarta : Bisnis2030.
- [7] Puspitasari, Devi. (2007). Kewirausahaan Merencanakan Usaha Mikro/Makro. Jakarta : CV. Pandu Karya.
- [8] Rainer, R. K., Turban, E., & Potter, R. E. (2007). Introduction to information systems: Supporting and transforming business. Hoboken, NJ: Wiley.
- [9] Romney, M. B., & Steinbart, P. J. (2006). Accounting information systems 9th edition. Upper Saddle River, N.J: Pearson Prentice Hall.