IMPLEMENTING OPEN SOURCE PROGRAM (COMPIERE) FOR ONE OF SMEs

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ABSTRAK

Currently, Information technology has changed rapidly; it makes a lot of organizations and companies to adopt the latest information technology to help success business. Supporting Information technology for businesses typically embodied in a group system consisting of information systems and its supporting infrastructure. A solution offered is the package to manage the company's resources as a whole or general known by the term Enterprise Resource Planning (ERP). ERP system is a set of packages information system built and implemented as a facilitating the realization of the concept of ERP in an organization. By implementing an ERP system in the company's work processes, all data will be integrated in one database, making it easier and faster for the management in controlling and getting information from each line of the company. In this paper described ERP technology which implemented in the small and medium enterprise (SMEs). The software Enterprise Resource Planning used is Compiere. The Compiere is one of the open source ERP software. The compiere is implemented and tested in one of a small enterprise named PT. Biru SCK Interiorindo. The results of system testing and system evaluation, shows that the implementation of Compiere has overcome the problem of merging data and increased data processing speed.

Keywords: ERP, compiere, purchasing, receipt, invoice, Opensource.

1. INTRODUCTION

The development of information technology today has grown so rapidly. Information technology is no longer regarded only as a complement, but also a one of the determinants of the implementation of the target or its business strategy, so that activities such as preparing reports, analysis and decision making can also be done quickly and precisely. PT.Biru company Interiorindo SCK engaged in construction services. The main activities of this company is taking orders and making furniture or making building renovations. At this moment in PT.Biru SCK Interiorindo management process, especially in the purchase for the transaction had done manual. To respond increasing efficiency and effectiveness desired by the company, the use of manual systems that rely on documents and reports are printed and stored in the filing cabinet is not able to meet the needs of one company about speed and accuracy of the information. ERP systems can be the answer those needs. By implementing an ERP system in the company's work processes, can assist and simplify work processes and improve system performance PT.Biru SCK Interiorindo on the purchase of the implementing management. But in the ERP system implementation is not easy. User as a business-man in addition to understand the required business processes are also required to understand the ERP technology. The main constraint that must be faced by the company to implementing ERP is a high cost that must be paid. Because that, in the design of ERP in this final task, the authors use the Compiere software application which is one of open source ERP software.

2. STATE OF ART

2.1. Enterprise Resource Planning

The enterprise resources planning systems (ERP) have received considerable attention recently, not only in the management of manufacturing industry but also within the services industries and their financial management (Ricardo et.el, 2009). ERP represent a concept which leads to a verb, as 'planning', means that the emphasized the aspect of integrated planning in an organization or company, is cross-functional, consisting of various feature in order to be able plan and manage resources more efficiently and can respond to customer needs well. The role of Information technology in ERP concept as a facilitator but also can provide added value in the downsizing process, integration and automation process. The enterprise is used to describe the general business situation in the corporate entity, from small business until big business. In perspective enterprise, the entire organization is considered as a system and each department go round system. Information on all aspects of the organization are stored and managed centrally and can be accessed by other departments which requiring. The result is the transparency of information so that each department knows what is done by other departments. In the relation to the enterprise, resources can be the company's assets include financial assets, human resources, customer, supplier, order, technology and also strategy. Resources include all of the things which are the responsibility and management challenges to be managed in order to generate profits. Function and relevance of ERP can be seen in the figure 1.
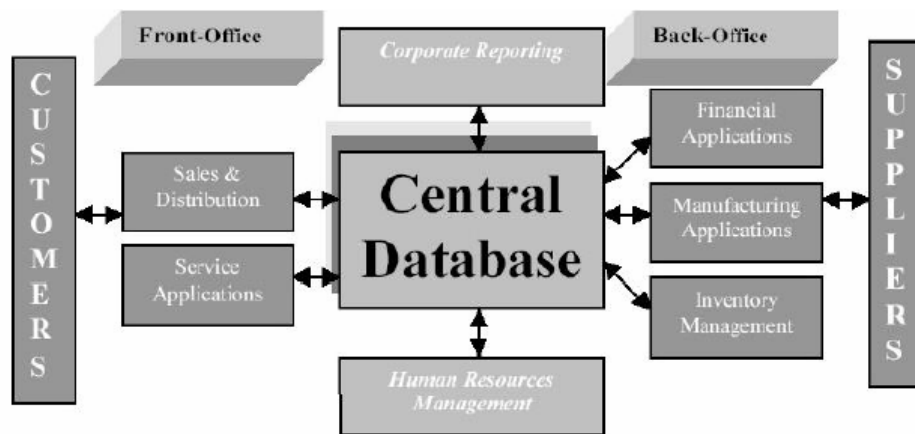

Figure 1. ERP Basic Concept (Ashalom, 2010)

"Integration" is often mentioned in the ERP concepts related with the interpretation such as: Linking between different streams of business processes, methods and communication techniques, harmonization and synchronization of business operations, and coordination of business operations.

2.2. Open Source Software

Open source software are non-commercial, meaning can be directly used without the need to pay licensing or other purchases (Don klaiss, 2008). The characteristic of the application open source which is provided in the application not configured, can supports customizable, and provided and given its source code directly. Although there is no purchase cost, difficulty level and stage of implementation of this application remains the same as commercial applications (Don Klaiss, 2008). Even harder, because the software has the characteristic of open source, accordingly implementation becomes the responsibility of management companies that use it. That is, when deciding to choose the open source applications the company will accept full responsibility for the entire implementation process from requirements analysis, module selection, strategy implementation, modification, maintenance and etc. Exception to open source application that have been modified and sold as a commercial application. Several types of open source ERP applications, for example: Compiere, GNU Enterprise, OFBiz, OpenMFG, ERP5, WebERP and much more, it is seen in the www.opensourceit com/ERP.html.

2.3. Compiere

Compiere is one of the software Enterprise Resource Planning (ERP), and the first based on open source and one of the most popular today (http://www.erpwire.com/erp-articles/erp-trends.htm, 2010). Compiere is designed for industries engaged in the service, distribution and retail. There are basic functions of Material Management and Manufacturing Planning, including even in a limited scale. Compiere is for small and medium companies, such a single company, to distribution circuits, outlets from a manufacturing, etc (Renee, 2006). Compiere has 3 different kinds of licenses(Budi Agung, 2008), namely: Compiere Community Edition, distributed under the GPL Opensource license that could be used for free but not supported by Compiere Inc. Secondly, Compiere Standard Edition, distributed under GPL Opensource and this license in the backup with the quality support, including access to Compiere technical support services, migration tools and Service Pack releases; Thirdly, Compiere Professional Edition, designed for medium-sized companies that need functionality and above the best system, and in the support by Compiere, Inc. or Authorize Compiere Partner.

3. METHODOLOGY

The devices required in the implementation of ERP system is a computer device with minimum specifications are Pentium 4 with 512 MB of memory minimum for evaluation or training and at least 1 GB for production. The software used consisted of Oracle XE as the database, the Java JDK 5 with internet connection to create a new database [previously done on computer environment settings that will be used first] when there is no internet connection could import empty database, Compiere 3.0 application, and Window XP operating system.

Step in the implementation of ERP are: Creating client and organizational needs, Creating users and roles in question, create accounting schema, determining document type, preparing the necessary data and system testing.

4. RESULT AND DISCUSSION

4.1. Start to Implement Compiere

To implement compiere, used 5 steps:

First, Initial Tenant / Client setup, Initial setup starts to run the Initial Tenant Setup on the system with System Administrator role. Click the Tenant Rules, then change the default values in the window according to the needs of the company. Tenant Setup will create two user and role and all the data standard. A user with the role tenant-level (Admin-level) has all rights to maintain rules and to enter transactions. User with role-level organization (user-level) has all rights to conduct transactions. Menu tenant set-up can be seen in the figure 2.

Figure 2. Initial Tenant Setup

Second, Initial Client Setup Review, conducted to review the tenant who has been made. What the username and password can be used. Menu of Initial Client Setup Review can be seen in the figure 3.
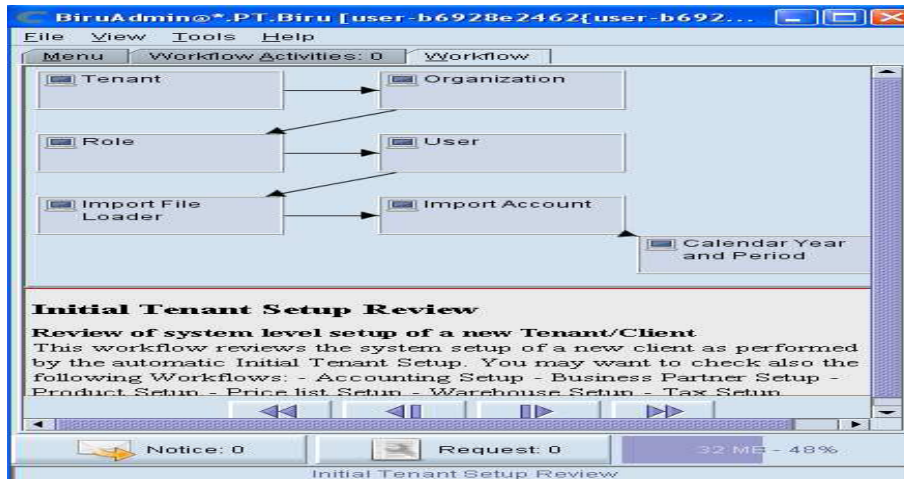

Figure 3. Initial Tenant Setup Review

Third, Accounts import, to import the accounts - accounts of the company.
Fourth, Product set-up, Import Products, Business Partner, price lists and other data required. This is done to enter the product data with a set price within a certain time, making it easier for the company purchasing the goods in the bargain. Menu of product set-up can be seen in the figure 4.
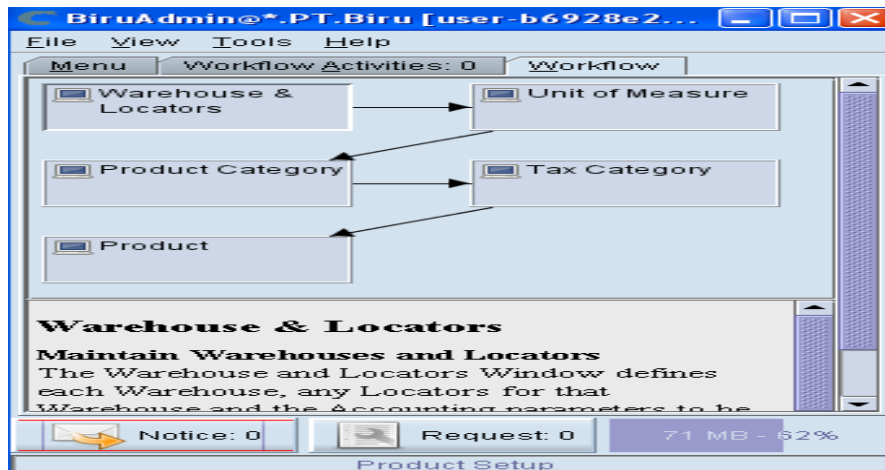

Figure 5. Product Setup

While, Business partner contains the database from the parties that doing business with the company. There are three types of Business Partner; vendors, customers and employees. Input data in the Business partner is done to simplify the purchasing in the search for suppliers to provide goods that required the project or warehouse, and find customers remain. The pricing for customers and vendors are determined by using the Price List (list price). Business partners decide Price List, and Price List to determine Price.
Fifth, Refine Setup, input data purchases that made by the Purchasing department at purchase Order window .
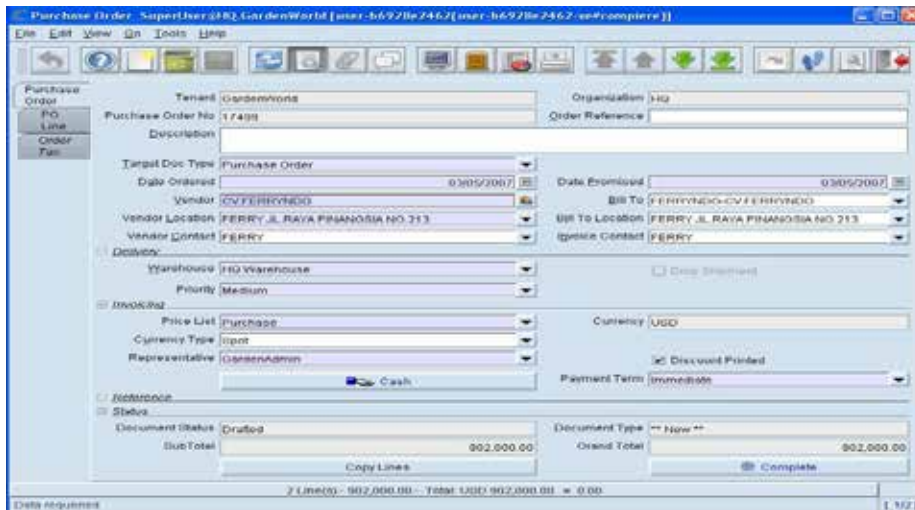
Figure 6. Purchase Order Window

Every Window Purchase Order (PO) must contain information Business Partner, without this PO can not be recorded. Fill the Warehouse to know the purpose and the purchase of goods which is to warehouse. Click the tab PO Line to enter into the charging order to be purchased products. After the PO has been completed and the process has been completed, the next process is to make receipt of goods. Choose Material Receipt of branch Requisition-to-Invoice. After window appeared Material Receipt Requisition, choose Business Partner (Vendor) that will send the goods. After that press the button to Create Lines From copy-line data from PO into Material Receipt Line. All of fill of the warehouse can be seen in the figure 7.
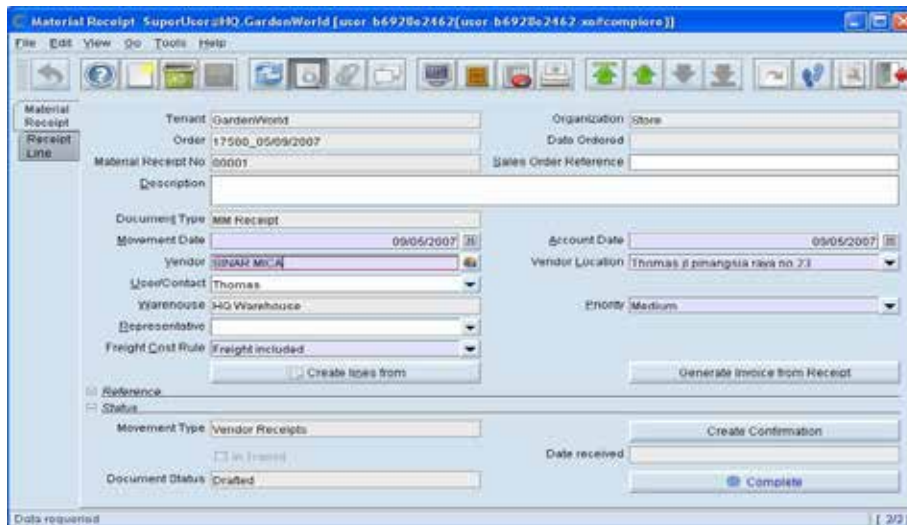

Figure 7. Fill in the Material Receipt Window

After receiving the goods, the company will automatically get a loan, to create an invoice is in the window Invoice (Vendor) to pay the debt to the business partners who provide goods. Repayment process is similar to the Material Receipt process. After the Invoice window appears, select the business partner selection first, select a product line that will be paid, method is similar to the Material Receipt by pressing the Create button lines form.
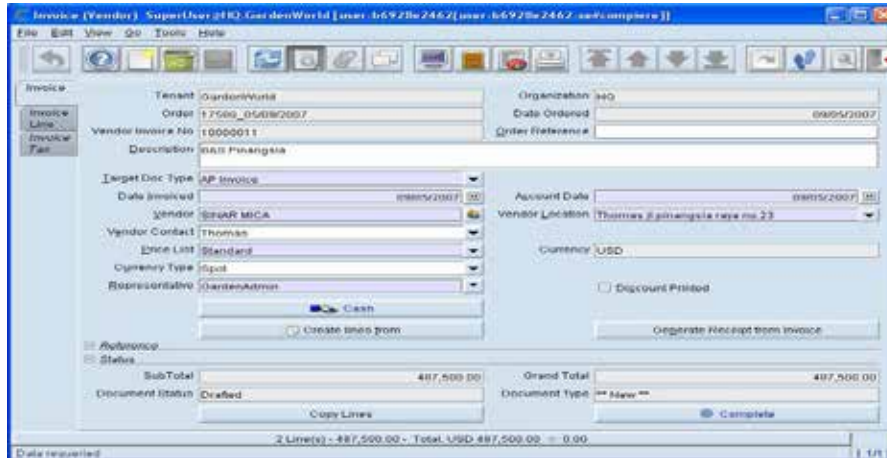
Figure 8. window invoice

After forms invoices appears, choose a select box selected, press the button to process it. Information is automatically selected will be copied to the invoice window. If the process has been completed, press the complete button, so that Compiere will follow up this activity and record it. Window invoice form can be seen in the figure 8.

5. ERP SYISTEM TESTING

System testing using a computer and done in the Biru SCK Interiorindo. It was a small Enterprise. Testing is done to saw what the system good running, free errors and no bug. The purpose of the testing system is to ensure that the system is functioning as expected.

System testing methodology using Black Box, takes an external perspective of the test object to derive test cases. These tests can be functional or non-functional, though usually functional. The test designer selects valid and invalid inputs and determines the correct output. There is no knowledge of the test object's internal structure.

In the case, System testing did a test module to enter purchasing data sample, the process of receiving the goods upon receipt by the warehouse or the project. Test results in the purchase process shows that the system has to ensure the integration of data and modules. It was seen from the purchase order module will affect the value of receipts module, and modules of receipt will affect the value on the invoice module (vendors).

6. SYSTEM EVALUATION

System evaluation is the process of assembling evidence that a system Meets, or fails to meet, a prescribed assurance target. In the case, System evaluation done by comparing the performance of ERP system with the old system, also done by looking at the data processing speed, and support the planning and systems integration. Interview with user was conducted to obtain an evaluation system. The results of system testing and system evaluation, shows that the implementation of Compiere has overcome the problem of merging data and increased data processing speed for PT.Biru SCK Interiorindo. The results of system evaluation in the form table can be seen in the table 1.

Table 1. Result of Interview

No	Questions / Answered	Yes (%)	No(%)
1	Processing Speed	100	
2.	Data Merging Speed	100	
3.	The effectiveness of data processing	100	
4.	Easy To Use	80	20
5.	Increase Performance Enterprise	100	

The five questions posed to the user, with four questions answered and agreed to give 100% value, while one question was answered agrees with the value of 80% for the question easy to use.

7. CONCLUSION
Based on the results of testing and evaluation conducted,
1. With Compiere implementation, especially in the buying process until making invoice for vendors to assist and facilitate the work processes.
2. Improving system performance at PT. Biru SCK Interindo. Performance includes, reduction in us paper usage, eliminating the same input data over time, and integrity of data between department.
3. Compiere is easy to use.
4. Security in the way system very well, because using a system based on the database using the username and password for each department.

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