

# INVENTORY MANAGEMENT INFORMATION SYSTEM DEVELOPMENT AT BPRTIK KEMKOMINFO JAKARTA

Elvi Fetrina<sup>1</sup>, Eri Rustamaji<sup>2</sup>, Tatat Nuraeni<sup>3</sup>, Yusuf Durrachman<sup>4</sup>  
Department of Information System, Faculty of Science And Technology  
Syarif Hidayatullah State Islamic University  
Jl. Ir. H. Juanda No.95 Ciputat 15412 Indonesia  
Phone: (021) 7493606 Fax: (021) 7493315  
Lvfet2@yahoo.com

**Abstract**— The Institute of Training and Research for Information and Communication Technology (BPRTIK) is an institution under the Ministry of Communications and Information Technology (KEMKOMINFO). Since this Institution manages its inventories by using spreadsheet so that the data are not synchronized properly and prone duplication of data. The inventory reports such as maintenance process reports are also done manually and are recorded in papers that have not been organized into a single database, making those reports are vulnerable to a loss or corruption of data. In addition, the process of task's assignment and monitoring are still done manually by using a memo or even verbally which then lead to the undocumented reports. In this study, the data were collected by interview, observation and literature study. Rapid Application Development (RAD) and Object-Oriented Approach using Unified Modeling Language (UML) were used as the system development and design methods respectively. The results of this study is inventory management information system, which can support and manage the inventory's processes such as the process of controlling and monitoring, maintenance, assignment and reporting.

**Keywords**—inventory management; Rapid Application Development, United Modelling Language

## I. INTRODUCTION

In the era of technology, people are forced to be a technologically aware person. This rapid development has given many benefits to the humankind especially in the process of communication and getting information.

Moreover, an organization or company also needs technology in order to improve the productivities to get the maximum output. It applies also for the division of state property and assets of the Institute of Training and Research for Information and Communication Technology (BPRTIK).

BPRTIK is an institution under the Ministry of Communications and Information Technology (KEMKOMINFO) that aims to provide training and research in the field of Information and Communication Technology. Division of state property and assets, one of many divisions in BPRTIK, is assigned to manage inventory on BPRTIK building.

However, the inventory of the BPRTIK has not yet organized properly. Most of the inventory management are

done by using a tool such as a spreadsheet, which might cause unsynchronized and duplication of data. Moreover, the reports are saved in the form of hardcopy not saved in one single database. The assignment and monitoring process also are done manually by memo sometimes even just verbally. All of these may lead to redundancy data and difficulties to supervise and monitor the results of the assigned tasks.

## II. LITERATURE REVIEW

### A. Definition of Management

Management is 'the art of managing the available resources, such as people, goods, money, thoughts, ideas, data, information, infrastructure and other resources in his power to be fully utilized in order to achieve organizational goals effectively and efficiently' (Joseph, 2012, p.10) [1].

### B. Definition of Inventory

According to the Indonesian Big dictionary (KBBI) inventory is 'a list of all the items belonging to the office (schools, companies, boats, etc.) used in carrying out the task' [2].

Inventory items are items that are in the control and management of the department in a usage period of more than one year (Hendrato 2005, p.2) [3].

In the Government Regulation number 27 in the year of 2014, Inventory (inventory management) is an activity to perform data collection, recording, and reporting the results of the data collection State/Region. State Assets are all items purchased or obtained at the expense of the State Budget or derived from other legitimate acquisition.

### C. Similar Research

Previous research that has been done around this topic including a study that has been conducted by Arip Saripudin entitled 'Inventory Information System Procurement Intranet on the Faculty of *Dirasat Islamiyah* Syarif Hidayatullah State Islamic University Jakarta'. The process of data collection use Microsoft Office and the result of this study is Inventory Procurement system based on intranet that simplify and accelerate the process of inventory and procurement



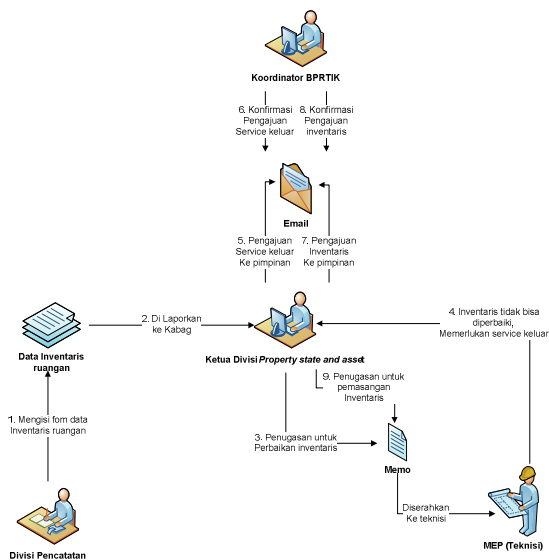


Figure 4.1. Rich Picture Current Workflow

### 3) Analysis of Proposed System

Analysis of the purposed system can be figured as below:

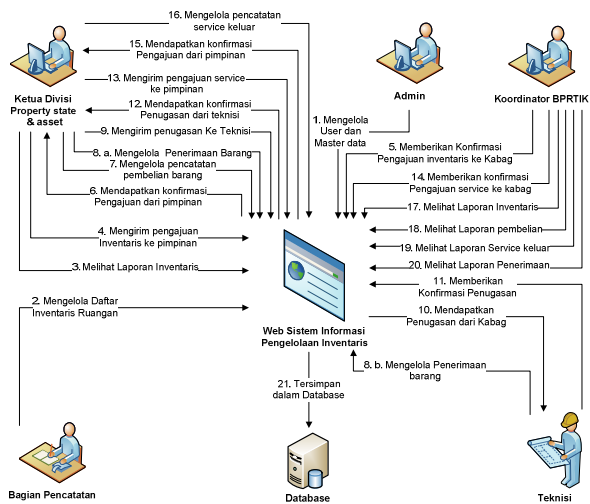


Figure 4.2. Rich Picture Proposed System

### B. Workshop Design

### 1) Use Case Diagram

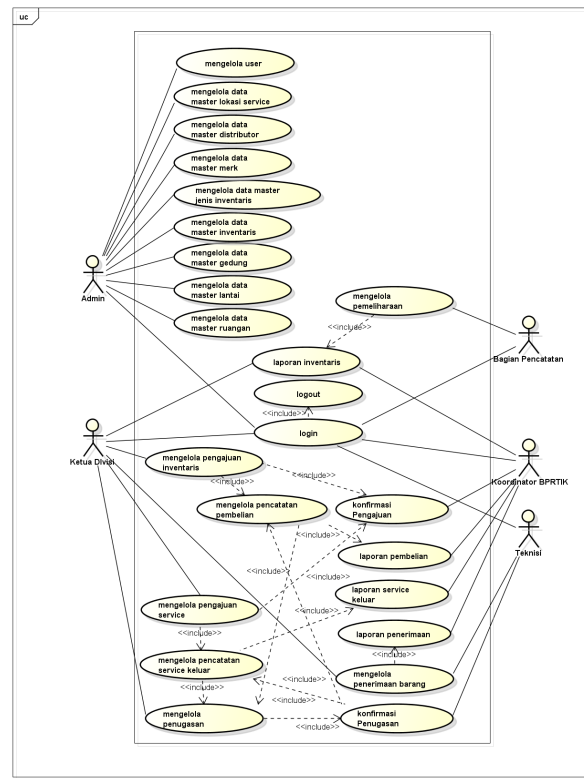


Figure 4.3. Use Case Diagram

## 2) Activity Diagram

Here is example of the activity diagram

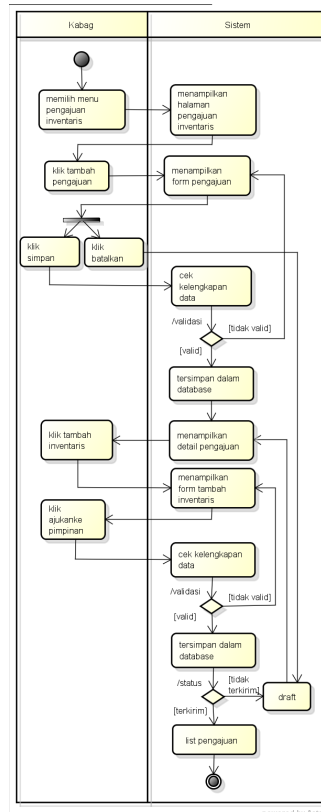


Figure 4.4. Activity Diagram for inventory Request

Below is the class diagram for the Inventory Management Information System:

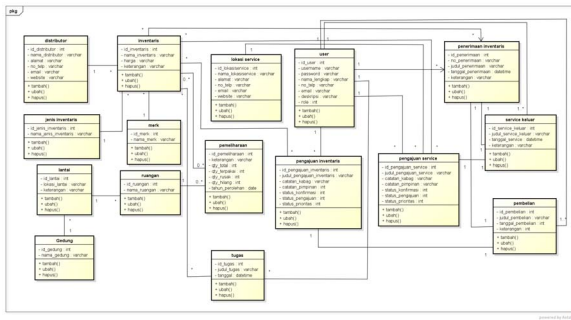


Figure 4.5. Class Diagram

## V. CONCLUSION

1. Inventory Management Information System is able to facilitate the performance of the division of state property and asset inventory management process starts from the process control, maintenance, filing, purchasing, external service, reception, assignment to the reporting process.
2. The system was built using Rapid Application Development (RAD) and Unified Modeling Language (UML)
3. With this system, the data is stored directly into the database so it will minimize the possibility of loss or damage data

## VI. RECOMMENDATION

1. This system could be elaborated and integrated with the Financial System.
2. This system could be expanded in the form of mobile application

## ACKNOWLEDGMENT (Heading 5)

We thank to the Faculty of Science and Technology of Syarif Hidayatullah State Islamic University Jakarta and all the staff in the Division of Property and Assets of BPRTIK who has supported this study.

## REFERENCES

- [1] Yusup M.Pawit. 2012. *Perspektif Manajemen Pengetahuan Informasi, Komunikasi, Pendidikan dan Perpustakaan*. Jakarta: Rajawali Pers
- [2] <http://kbbi.web.id/inventaris/21/08/2016>
- [3] Hendrato, 2005. Pelaksanaan Inventarisasi Barang Milik/Kekayaan Negara. Surakarta : Universitas Sebelas Maret K. Elissa, "Title of paper if known," unpublished.
- [4] Kendall& Kendall. 2011. *System Analysis and Design*. USA: Pearson Education
- [5] Hasibuan, 2007. *Metodologi Penelitian pada Bidang Ilmu Komputer dan Teknologi Informasi*. Depok : Fasilkom UI
- [6] [6] Kerjasama Andi & Wahana Komputer. 2007. *Aplikasi Program Database Inventory dengan Microsoft Visual FoxPro*. Yogyakarta: ANDI
- [7] Sugiarti,Y. 2013. *Analisis dan Perancangan UML*. Yogyakarta: Graha Ilmu