FELDA DOCUMENT MANAGEMENT SYSTEM

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UNIVERSITI TEKNOLOGI MALAYSIA

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FELDA DOCUMENT MANAGEMENT SYSTEM

MONALISA BINTI OMAR

A thesis submitted in fulfilment of the requirements for the award of the degree
of
Master of Science (Information Technology - Management)

Faculty of Computer Science and Information Systems
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DEDICATION

Dedicated to my beloved mother and father

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ABSTRACT

The purpose of this project is to develop a Document Management System for three departments in FELDA in which the system will help users to fulfill their requirement and needs to manage documents in a secure and structured manner. These departments are Finance department, Settler & Land Plantation Department and Human Resource Department This system consists of scanning, storing, indexing, archiving, retrieval, and accessing of original documents. Document Management System will help users to save their time in searching document. The system also can prevent lost document or damage from the effects of disasters such as fire, flooding or human errors. In conclusion, besides providing benefit to users, the system will also increase productivity of Felda organization and enhances the efficiency of using information, communication and technology (*ICT*).

ABSTRAK

Tujuan projek ini dijalankan adalah untuk membangunkan Sistem Pengurusan
Dokumen bagi 3 jabatan di dalam FELDA bagi memenuhi keperluan dan kehendak
para pengguna menguruskan dokumen-dokumen dengan selamat dan teratur. Jabatan
tersebut adalah Jabatan Kewangan, Jabatan Peneroka & Tanah dan Jabatan Sumber
Manusia. Sistem ini mempunyai elemen-elemen seperti mengimbas, ruang
penyimpanan, indeks, menyimpan bagi jaga masa panjang untuk rujukan tertentu,
mengambil semula dan mencapai dokumen-dokumen. Sistem ini akan membantu
pengguna menjimatkan masa dalam mencari maklumat atau dokumen yang
diperlukan pada masa tertentu. Sistem ini juga dapat mencegah dokumen-dokumen
daripada hilang atau musnah akibat kecuaian pengguna itu sendiri atau bencana alam
seperti kebakaran, banjir dan sebagainya.Kesimpulannya, sistem ini bukan hanya
memberi faedah kepada para pengguna malahan juga dapat meningkatkan
keberkesanan penggunaan teknologi informasi, komputer dan komunikasi (*ICT*) dan
seterusnya meningkatkan produktiviti organisasi Felda.

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LIST OF ACRONYMS

ABAP	-	Advanced Business Application Programming
COLD	-	Computer Output to Laser Disk
UML	-	Unified Modeling Language
SLP	-	Settler Land & Plantation
HR	-	Human Resource
SAP	-	System Application Product
IS	-	Information System
IT	-	Information Technology
DBMS	-	Database Management System
PC	-	Personal Computer
WAN	-	Wide Area Network
LAN	-	Local Area Network
DMS	-	Document Management System
TOA	-	Table of Optical Archiving
TAC	-	Transaction
AP	-	Account Payable
PO	-	Purchase Order
ALF	-	Advanced List Format
Archive ID	-	Name of Logical archive assigned to archive mode
Doc ID	-	Document ID
SAPGui Interface	-	System Application Product Graphic User
JPEG	-	Joint Photographic Expert Group

PDF   -   Portable Document Format

OTF   -   Output Text Format

RTF   -   Rich Text Format

WORM   -   Write Once Read Multiple

DDIC   -   Data Dictionary

FI   -   Finance

DOC   -   Document

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CHAPTER 1

INTRODUCTION

1.1   Background of the Organization

Federal Land Development Authority (Felda) was established on 1st July 1956, under the Land Development Ordinance (1956). The Authority is administered by a Board, which is accountable to the Minister for Land and Co-operative Development. Its original function was to channel financial assistance to the State Governments to carry out land development programmes. This function was later expanded and Felda was then entrusted with the task of implementing the land development programmes throughout the country from 1961.

Felda's vision is to improve the quality of livelihood of the settlers with dedicated and efficient management at all times, while contributing towards the accomplishment of the nation's vision through increased agricultural productivity; to develop a competitive industry which is progressive and profitable. [*Company Profile October; 2003*]

The primary activity is to open up new areas for agricultural development and settlement of the rural and landless poor. The program aims to uplift their standard of living, thereby narrowing the gap between the quality if life if the rural and urban sectors if the country. The other role is to secure land title after collection and completion of loan repayments. To complement the development programme, support services in the form of processing, transportation and marketing of the farm produce and other services are made available. These services are provided by the companies and joint-ventures established by Felda.

After being in land development and settlement for almost five decades, the success of Felda's programmes can be seen through some of its major contribution to Malaysia's rural and national development. [*Company Profile October; 2003*]

In terms of land development, Felda has evolved as one of the most successful land development agencies in developing 667,889 hectares of oil palm and 136,732 hectares of rubber constituting 191% and 9.8% of the country's crop area. The balance of 6,509 hectares is under sugar cane and other crops.

This has made it the single largest plantation in the world with 811,140 hectares. The Felda Group contributed 20.6% and 12% of nation's crude palm oil and rubber production respectively. One of the direct impacts of Felda's land development activities is the creation of employment opportunities for the settlers, settlers' dependents and other related parties. Felda's activities account for 11 percent of the total national employment in the agricultural sector. Moreover, the opening up of interior lands also aided in the development if infrastructure, new townships and establishment if agro-based industries, thereby contributing further employment in the rural farm sector.

Felda organization comprises of several departments namely Agriculture, Entrepreneurs Development, Regions, Finance, Human Resource, Board Management, Land (Settler & Land Plantation), Committee Development, Management Services and Information. The organization chart is as shown in Chapter 4 and the functions of departments are also explained in detail in Chapter 4.

1.2   Background of the Problem

Currently records involved in the administration of Felda among others included the Finance department, Settler & Land Plantation department and Human Resource department. Information is stored manually and Felda is facing the problem of keeping them. Manual processing of those documents will cause them not to be well organized. Thus these documents are often unavailable when requested for, missing important information, or are illegible. Paper records can only be stored in one place at a time.

1.3   Statement of the Problem

With the rapid growth of the ICT technology, Felda is determined to increase their productivity and quality of work. One of the ways is by implementing document management system. However, Felda knows that they are facing a problem in managing their voluminous documents.

The main problems that have been identified by Felda's management are as follow;

1.   All documents are kept in physical forms, in stores and cabinets. The hard copy documents can be illegible and frequently have missing information or maybe unavailable at the time of user encounter. It is also costly to maintain, store and retrieve. Staff is wasting their time looking for information previously recorded. Example when the settler comes to HQ and asking to check the status loan payment, employee has to open the file from cabinet, this will cause the process would be more tedious and slow.

2.   There is no specific system that can manage those documents. Felda do not have a sustainable strategy in handling unstructured information like paper, word or power point document and scanned images. Example in Finance department, invoice documents are kept manually, and the finance staff has to use the hard copy for reference in order to key in data into the system.

3.   Confidentiality and privacy are significant issues in managing settler documents. Confidentiality concerns may cause Felda to control settler's information so tightly in SLP department.

4.   Another example in Human Resource department is paper-based processing of employee information leads to faulty and incomplete employee folders. Large office space is needed for paper storage. This results in high costs of manual paper processing (storage, access, and manual efforts) and long processing times. Therefore, a good system can help to overcome this problem.

1.4   Project Objective

The main objective of this project has been determined as:

1.   To conduct a study on the current situation so that a system can be designed to provide an easy access of Finance documents, Personnel documents and Settler documents for Finance Department, Settler & Land Plantation Department and Human Resource Department.

2.   To develop a pilot/prototype system of a document management system that can avoid loss and damage of documents for Felda.

3.   To design and build applications that can provide settler information at one place in the right context so that employee will get information immediately, correctly and timely.

4.   To formulate management strategy in producing policies and procedures with regards to Felda's document management system.

1.5   Scope of Project

The scope for this project has been determined as:

1.   This project will be used by the management and employees of three departments; Finance department, Human Resource department and Settler & Land Plantation department at Felda Headquarters.

2.   The development of a prototype system is based on Windows platform, Oracle DBMS, ABAP (proprietary software of SAP Advanced Business Application Programming), IXOS Software, Archiving Server and using client server technology.

3.   This project is a combination of a few elements such as IXOS-Doculink and COLD (Computer Output to Laser Disk) technique.

4.   The technique/methodology used is UML.

1.6   Project Limitation

This study involves the management and staff of Felda Settler & Land Plantation Department, Human Resource Department and Finance Department.

1.7   Project Importance

This system is expected to benefit the three departments, as follows:

1. The Finance Department

As a tool to scan and store business documents such as incoming, and outgoing invoices, orders, and delivery notes.

2. Settler & Land Plantation (SLP) Department

    As a tool to archive and retrieve the settler reports such as settler income statement, settler loan repayment and to distribute historical settler reports.

3. Human Resource Department

    As a tool to scan and store the personnel documents such as passport sized photograph, resume or curriculum vitae and education certificates for each employee. This will increase the sharing of these documents within the HR department for placements and references. Apart from these documents, other documents such as job application form, letter of offer, medical test report and job application letter can also be attached to the master record. The confidential documents can be stored in a check-in and check out system where it will be safer than lying around on tables. SAP's authorization profile will ensure that only relevant personnel with the right access can view the HR documents.

1.8   Description of Solution

This document management system is expected to provide a solution to the problems identified. Among its capabilities are:-

1. To control and manage documents. This system enables users in three departments; Finance department, SLP department and HR department to access to documents and data created by any process running on SAP system and will improve productivity.

2. To protect from the effects of disasters: fire, flooding, storms, as documents are securely stored in an electronic archive and data cannot be altered. This is part of the organization's server failover strategy and will help organization to reduce risk.

1.9   Summary

Chapter 1 focuses on the background of the project, problem statement, project objectives and scopes, project importance and limitations. It also discusses about the issue of current situation that facing by Felda headquarters.

Chapter two emphasizes more on the literature reviews which includes the DMS definition and the elements of document management system, the study and comparison of similar existing product, application functional review.

Chapter three focuses on the methodology that being used to develop the DMS. The operation framework in the DMS development, the system development methodology, and hardware and software requirement are described. This chapter is important to determine the tools and methodology that are going to be used in the implementation of the system.

Chapter four emphasizes on the basic processes of inquiry. Identifying and articulating research problems; determining and describing procedures for conducting research; designing data collecting procedures; formulating interpreting and drawing conclusions from data analysis, and reporting research findings and implications.

However chapter five focuses on the system implementation and testing which involves the configuration, customization, programming and system testing. The objective of system testing is to ensure that each element of the application meets the functional requirements of the business.

Chapter six focuses on organizational strategy which discusses among others, roll-out strategy, change management and expected organizational benefit.

CHAPTER 2

LITERATURE REVIEW

2.1   Introduction

This chapter explains the capabilities and features of the existing document management system described in the literatures that were reviewed. The aim of this literature review is to acquire a greater understanding of the information systems that have been implemented and are already in use in similar situations. The suitable features examined would be considered to be incorporated into the proposed system.

2.2   Document Management System

In the last few years, technology has advanced rapidly, enabling significant changes in the ways companies communicate with each other. Modern communication methods such as email, internet forms, and digital video and sound files, accelerated business processes and gave the term 'document' a new, expanded definition. Today, many companies rely heavily on electronic business documents.

As with paper documents, successfully recording, controlling and completing business processes requires securely archiving electronic documents with immediate access for authorized users. To optimize their processes and add value to their services and products, companies need an integrated archiving solution that lets them manage documents in a secure and structured manner. Combined with a workflow solution, structured document management enables employees to process information more efficiently, and provides the framework for effective knowledge management.

Document Management System (DMS) is a management control system used to regulate the creation, use, and maintenance of electronically created documents. This system links paper, image and electronic documents into one flexible and expandable document management system. DMS allows for conversion from paper to electronic and image records storage to integrate all information media. Thus, digital images, raw data, facsimile transmission, e-mail, sound or video clips and paper records can be linked through a single indexing and retrieval application. Color-coded labels may be prepared with file names, bar codes, and color codes on adhesive labels as needed. Bar code technology used on both paper and imaged documents allows all records to be indexed, tracked and retrieved through a single user application.

Simultaneously, remote access to scanned documents by multiple users is possible through the scanning and network features of some systems. Records can indexed, stored, retrieved, printed or faxed by all authorized users on a network. Fax messages are captured, stored, routed or refaxed, eliminating the need for hard copies. Electronic documents can be stored on optical as well as electronic media, and raw data can be automatically and instantly located via searches on Computer Output to Laser Disk (COLD).COLD is a technique for transfer of computer-generated output to optical disk so that it can be viewed and printed without using the original program. COLD combines the capabilities of scanning paper documents created on another system and linking them to COLD documents. [*Records Management page 254; Read Smith, Ginn and Kallaus; Seventh Edition, 2002*]

The important technologies include document management, full text retrieval, electronic document imaging, film based imaging, and workflow system. Workflow system provides automatic work processes and scheduling, controlling and routing electronic document and other work item around an organization. DMS can prevent lost records, saves storage space, manages records easily, finds documents quickly, makes images centrally available, and eliminates file cabinets. Document imaging not only keeps all documents organized, it allows those documents to be maintained and backed up daily, weekly, monthly or even yearly.

2.3   Elements of Document Management

A complete document management system comprises five elements:

i. Scanning

Scanning technologies make paper document conversion fast, inexpensive, and easy. A good quality scanner will allow putting your paper files into your computer easy.

ii. Storage

Storing also called filing places the hard copy or saves the computer record in an appropriate location. The storage system creates an organized document filing system and allows future retrieval to be simple and efficient. A stable storage system will accommodate changing documents, growing volumes, and advancing technology.

iii. Indexing

The index system creates an organized document filing system and that makes for simple and efficient retrieval. A proper indexing system allows for more effective procedures and systems. The index can include physical location information such as where the document is stored and document identification information as date archived, creator, and contents. According to Judith Read Smith [*Record Management Seventh Edition*], indexing is the mental process of determining the filing segment or name by which a record is stored or the placing or the listing of items in an order that follows a particular system.

iv. Archiving

An archive refers to a collection of records or documents with specific characteristics, and also refers to the location in which these documents are kept. It is a long-term storage of electronic document for possible future referral.

v. Retrieval

The retrieval system uses information about the documents, including index and text, to find images stored in the system. This system makes finding the right documents quick and easy. According to Judith Read Smith, Ginn, Kallaus [Record Management Seventh Edition], retrieval is the process of locating and removing a record or file from storage. It is also the action of recovering information on given subject from stored data.

vi. Access

Document viewing should be readily available to those who need it, with the flexibility to control access to the system. Although many small to medium size companies understand the benefits of a document management system, most companies have been reluctant to implement a solution due to the prohibitive cost of many systems.

2.4   Centralized Filing System

Centralized filing system is one in which the records for several people or units are located in one, central location. Generally, under the control of a records staff person or in the case of large centralized filing systems, several people. If an organization has many employees, no doubt they have experienced the frustration of trying to find files and documents that have been used by someone besides you or which; quite possibly, they have misplaced and can't remember where they put them. They might be hidden on someone else's desk, in a drawer someplace, or on the bottom of your own stack of items "to be dealt with later". Most often, the last person to use the file simply kept it in their work area. That happens when there is no central location and attendant procedures for records that need to be handled by many people from many departments.

The files are conveniently accessible to all departments. Creating a central filing system involves a process that identifies what information needs to be accessible to multiple staff and which files should be available only to specific individuals. A manager must be engaged throughout the project for obvious reasons, but also because the close analysis of information and needs assessment could impact individual job descriptions.

Consider this quote from Information and Records Management by Robek, Brown and Maedke: "No organization should permit bits and segments of its records to be scattered randomly wherever they happen to be created or to have accumulated. Neither should an organization arbitrarily force the centralization of records without regard to the practical needs of the offices that must use the records." It is this big picture that must be understood clearly before beginning to re-organize files that are used by multiple persons from various departments electronically.

2.4.1   Benefits;

Some of the main benefits of centralized filing system are less duplication of files and more efficient use of equipment, supplies, and space. All related data could also be kept together. Other important benefits are uniform service; access is provided to all staff positions (translates to less frustration and bickering among staff); simplification of routine maintenance and annual archiving of the files.

In creating central files, it is equally important to designate what records should not be available to everyone. The side benefits of creating the central filing system are not insignificant. It would be unusual not to recognize some out-dated records that should be archived, or which are long overdue for destruction. These are taking up valuable space already, and now is the best and possibly only opportunity to put records retention guidelines into effect.

2.5   Literature Review

Allergan, headquartered in Irvine, CA, is a technology-driven, global health care company, providing eye care and specialty pharmaceutical products throughout the world. Allergan markets products in more than 100 countries, and in 1997, generated approximately $1.1 billion in worldwide revenue. Founded in 1948, Allergan develops and commercializes products in the eye care pharmaceutical, ophthalmic surgical device, over-the-counter contact lens care, movement disorder and dermatological markets. In order to be successful, Allergan requires a very efficient and streamlined business operation strategy. Allergan management team's research and plan ahead, invest time selecting the best business systems, and then ensure that their teams are adequately trained to reap the most benefits.

This is precisely what they did when they purchased IXOS-ARCHIVE as their imaging and archiving solution for SAP™ R/3®. Competitive global companies such as Allergan are implementing imaging and archiving solutions as the sheer volume of data grows and optimum system performance, data security and employee productivity are prioritized. IXOS-ARCHIVE, the SAP-certified imaging and archiving product suite, delivers the solution for these concerns by storing and retrieving documents, reports, data and images digitally under the control of R/3 processes. System performance remains optimal with regular data archiving, data is stored securely and employees become more productive as they simply access needed information on-line, when and where it is needed, from one file system.

The Accounts Payable Shared Service Center was Allergan's first department to utilize IXOS-ARCHIVE in order to cut costs and save time. Instead of processing invoice hard copies, they are now scanned and processed for payment on-line. IXOS-ARCHIVE allows the scanned documents to be manipulated prior to being transported to the transaction processor. Pages inadvertently scanned upside down can be turned and page order can be changed for multiple-page documents. Once a scanned invoice is transported to the transaction processor, the processor can then send the invoice image to the appropriate person for payment approval and general ledger coding, or match the invoice on-line to the appropriate purchase order and receiver before processing for payment. Prior to implementing IXOS-ARCHIVE, approval requests were sent via interoffice mail and sometimes took as long as two weeks to be processed.

Allergan has sites in California, Texas, Massachusetts, Mexico, Puerto Rico and Canada which are utilizing IXOS-ARCHIVE. Very often, employees or Cost Center Managers from these different locations needed to research a particular invoice, and would call the Shared Service Accounts Payable Center in Irvine and ask them to fax copies of specific documents. With IXOS®, these phone calls to the Shared Service Center no longer have to be made. Authorized viewers can quickly access the appropriate invoice on their computer screens. Additionally, outsourcing the paper documents to be microfilmed or microfiched (at a considerable cost) is no longer necessary.

The Accounts Payable Shared Service Center has realized considerable time savings as they receive fewer phone calls asking for research. They do not need to stand in front of a photocopier making duplicates of invoices that need to be sent out for approval, general ledger coding, or auditing before being mailed. IXOS-ARCHIVE has been put to use in the Return Goods processing department which has helped eliminate manual paperwork and filing. Additionally, SAP transaction history is being archived for permanent storage and retrieval. As a company's sheer volume of data grows, system performance becomes a priority. Allergan management wisely chose to plan ahead before system performance was adversely affected, and started data archiving. Sandy Howard, Project Manager of Business Systems Development Group at Allergan, noted, "We wanted to make sure we didn't run into any performance problems. Our financial ledger is growing by about 10 gigabytes per month, and so we started archiving this data first. We'll also start archiving our SIS and LIS reporting data. IXOS required very little implementation time and the IXOS SOFTWARE team has really impressed us with their technical knowledge and outstanding customer service."

Timeshare administrators Hutchinson & Co was formed at the beginning of 1985 to act as a collection agent for just one resort, but as the company quickly developed them gradually took over all back office administration including the work of the trustee and formed Hutchinson & Co Trust Company Ltd in 1990. The company now supports more than 100 resorts in the UK, Europe and south-east Asia from its headquarters in Camberley, Surrey. Hutchinson is required to hold the documentation relating to its customers timeshare agreements for 80 years and storing and accessing the paperwork was becoming a very expensive problem. "We were surrounded by paperwork," said Hutchinson Systems Administrator David Earles. "Every single wall of the office was lined in shelves and files. We even had a separate building just to store the files. " Earles said the company began looking for digital archiving solutions several years ago but found that the technology was not yet up to the task they were facing. "Back then the machines were too expensive and too slow to make it a worthwhile option for us. Fortunately, the situation has improved a lot."

Earles and his colleagues began discussing a document management solution with Canon in June of 2001. "We went to Canon because we knew they were the best in the industry, and we needed a powerful, reliable solution," he said. Canon put together a document management solution based around the Canon DR5020 document scanner and ScanFile 2000 archiving software, and installed it a few weeks later. The Canon DR5020 scans documents of various sizes and thickness, up to and including A3. It can handle up to 75 pages per minute, with automatic feeding and double feed detection at up to 500 sheets. The DR5020 is compact, lightweight and especially user-friendly, thanks to the positioning of the control panel on the product itself. A variety of scanning options are also available, including a barcode unit for automatic indexing, an endorser for "post stamping" documents and an imprinter for "pre-stamping" documents on the actual digital image.

OKO Bank Group produces more than 15 different reports per company per month – approx. 8 million pages annually. Previously, the reports, containing over 1,000 pages each, were distributed by mail to 243 OKO Bank Group branch offices throughout the country. It used to take three to four days to copy and distribute these reports, and it was difficult to manage the procedure. Furthermore, potential legal requirements required the bank to store paper copies of each purchase invoice issued within the past six years. These documents were stored using an old archive system, and the enormous amount of paper occupied many square meters of storage space at the company site.

Service and credibility are extremely important factors in the world of banking. Both have been enhanced with IXOS-eCONserver for SAP Data Archiving and IXOS-eCONtext for SAP. The central archiving of the SAP reports is of special importance to OKO Bank Group. The firm is comprised of 310 companies, which are firmly regulated, as are all financial institutions. The various companies in OKO Bank Group are organized differently, which means that a standard report is run differently at each company. So the OKO Bank Group is required to manage well over 50 different versions of the SAP reports in order to satisfy the legal requirements of the different companies. "It is obvious that this volume and diversity places heavy demands on the electronic systems managing the archiving," explains Project Manager, Turo Mäki. Imagine an audit performed at one of OKO Bank Group's 243 branches, the case officer is now able to instantly find the requested information. The employees are able to offer more reliable and faster service, and the company is very pleased with the improved transparency and control. "It has increased efficiency and profit. On a daily basis, the electronically filed reports have proven to be faster and easier to use, because, among other things, you can search directly for the relevant key figures and paragraphs," says Turo Mäki.

According to Janet Shriver Manager [Lacerte Tax Software] in Buelow Tax Service of Port Charlotte, Florida, at the height of tax season, the company employs between 10 and 12 tax preparers who help upwards of 3,000 taxpayers file their returns. That means handling a lot of support documents. Janet Shriver started looking for a more efficient way to manage the volume of documents she and her staff had to organize, store and duplicate. She didn't have to look any further than the Lacerte Document Management System. According to her again, using DMS, I find the real benefit for us is convenience. It is great to have all the clients' information in one place. Being a tax and financial office, it's awesome to be able to find all a client's records at any time without leaving an office.

2.6   Summary

The conclusion, it is found that in literature review cases, many companies facing a problem in managing their documents. They were implemented document management system or electronic document that can prevent loss of document and increase the productivity. DMS also can save time, cost and those companies able to access quickly the appropriate reports or documents on their computer screens. Thus, this document management system must be designed in Felda because there is no system to manage huge of documents, securely stored and to avoid loss of documents.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This Chapter focuses on criteria in selecting a suitable methodology for the project's software life cycle and its development tool.

3.2 Methodology Approach

Methodology is a collection of techniques for building models and it is applied across the development of a software life cycle. There are a few categories of software development methodologies such as: Object-oriented Methodology whereby systems are modeled as a collection of cooperating objects, Structured Methodology that are based on functional (algorithmic) decomposition; and also Data-driven Methodology by which the structure of system is derived by mapping system inputs to outputs. A good software design methodology provides at least three models, which are structural model, functional model and control model.

The methodology chosen for this project is Object Oriented Methodology. The set of technique and notation is Unified Modeling Language (UML). The life cycle model is Waterfall model. Waterfall model is a software development model first proposed in 1970 by W. W. Royce [W. W. Royce, "Managing the Development of Large Software Systems", Proceedings of IEEE WESCON, August 1970]., in which development is seen as flowing steadily through the phases of requirements analysis, design, implementation, testing (validation), integration, and maintenance. The advantages of object oriented approach are realistic modeling, reusability, and resilience to change.

3.2.1   Waterfall Model - Introduction

The Waterfall Model is the classic software life cycle model. According to Schach [1999], this model was the only widely accepted life cycle model until the early 1980s. The waterfall model as shown in Figure 3.2 was originally proposed by W. W. Royce [W. W. Royce, "Managing the Development of Large Software Systems", Proceedings of IEEE WESCON, August 1970].

The Waterfall Model is the earliest method of structured system development. Although it has come under attack in recent years for being too rigid and unrealistic when it comes to quickly meeting customer's needs, the Waterfall Model is still widely used. It is attributed with providing the theoretical basis for other Process Models, because it most closely resembles a "generic" model for software development.

General Overview of "Waterfall Model"
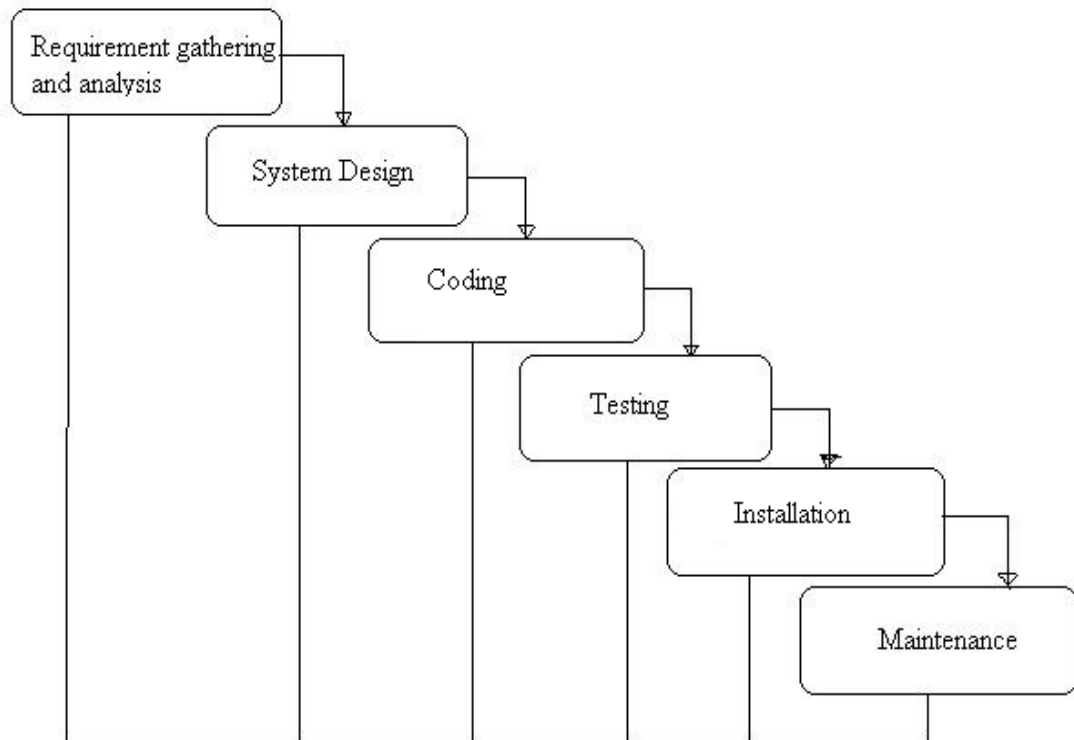
Waterfall Model Methodology is chosen for this project since it gives full focus on each and every software development aspect. This is needed since the project involve directly with integration between the three element of technology which are electronic document imaging, electronic workflow and electronic centralized filing system. The use of ABAP (Advanced Business Application Programming) that is a member of Object-Oriented Language (OOL) acquires a detailed study on the software development side.

3.2.2   Task Regions of Waterfall Model

The Waterfall Model consists of the following steps:

3.2.2.1 Requirement gathering and Analysis

This step refers to the gathering of data from three departments; Finance department, SLP department and HR department in Felda's organization. This activity involved identifying the modules, volume quantity of documents and the business processes from the blue print documentation. Recommendations are documented from this study and interviews with team leaders of selected modules will be done to further enhance the design.

3.2.2.2.System Design

Once the requirements have been collected and analyzed, it is necessary to identify in detail how the system will be constructed to perform necessary tasks. More specifically, the System Design phase is focused on the data requirements such as what information will be processed in the system, the software construction such as relationships between modules, and the interface construction, example the look of the screens.

This phase involves customization for IXOS Document Management Solution. This task is to configure SAP, IXOS Enterprise Scan and the IXOS client for document management. This includes the creation of the archived data pipeline and the attributes of the print list and document list.

3.2.2.3 Coding

Also known as programming, this step involves the creation of the system software. Requirements and systems specifications from the System Design step are translated into machine readable computer code. This task involves ABAP programming to extract all the archive reports.

3.2.2.4 Testing

As the software is created and added to the developing system, testing is performed to ensure that it is working correctly and efficiently. Testing is generally focused on two areas: internal efficiency and external effectiveness. The goal of external effectiveness testing is to verify that the software is functioning according to system design, and that it is performing all necessary functions or sub-functions. The goal of internal testing is to make sure that the computer code is efficient, standardized, and well documented. Testing can be a labor-intensive process, due to its iterative nature.

This phase includes User Acceptance Test and IXOS will ride on the testing schedule for each business processes that have been chosen for IXOS implementation. SLP testing will be done separately but in the same timeline. This will involve the group of users from Felda. The testing is targeted to ensure that the data that has been archived are intact, verified and integrity of the data is not compromised.

3.2.2.5 Installation

Once system has been tested satisfactorily it is delivered to the customer and installed for use. The introduction of the system has to be managed carefully so as not to cause unnecessary disruption and to minimize the attendant risk to change. The installation will be done at Settler & Land Plantation Administration, Finance and Human Resource department.

3.2.2.6 Maintenance

The maintenance phases usually the longest stage of the software. In this phase the software is updated to meet the changing customer needs, adapted to accommodate changes in the external environment, correct errors and oversights previously undetected in the testing phases, and enhancing the efficiency of the software. This task will make the final changes (as a result of testing) before the final go live system.

The advantage of waterfall development is that it allows for departmentalization and managerial control. A schedule can be set with deadlines for each stage of development and a product can proceed through the development process. Development moves from concept, through design, implementation, testing, installation, troubleshooting, and ends up at operation and maintenance. Each phase of development proceeds in strict order, without any overlapping or iterative steps.

3.3   Software Requirements

For the purpose of this project, the software application required to develop the system are:-

3.3.1   *IXOS ARCHIVE*

IXOS-ARCHIVE, archiving software of SAP is designed for use in mixed environments. It runs on Windows NT, major UNIX operating systems and in hybrid environments that use both NT and UNIX. The archiving database uses relational database technology and supports standard SQL databases from Oracle, Informix, or Microsoft's SQL Server. The system supports standard scanner hardware (Fujitsu, Bell & Howell, Kodak, Ricoh, HP) and jukeboxes (HP, IBM, NSM, Kodak, Plasmon, JVC). *IXOS-ARCHIVE* uses existing imaging standards such as TIFF, JPEG and PDF; it also supports OTF and ALF.

3.3.2   *IXOS DOCULINK*

IXOS-ARCHIVE DocuLink is document management software of SAP module which integrates both R/3 documents and non R/3 documents that originate from legacy or remote systems. It offers configurable hierarchical views for intuitive search and retrieval options. DocuLink uses a high-performance hierarchical database to retrieve documents, which the system then clearly displays in the hierarchical folder structure. The main benefit of this display method is the completeness of the document overview and its intuitive structure. To better utilize the system, there s the option to let occasional users retrieve documents from DocuLink using a standard web browser. DocuLink uses standard technology such as *ABAP* and *SAP ArchiveLink*

3.3.3   Oracle 8i - DBMS

Oracle8i National Language Support for database allows users to store, process, and retrieve data in native languages. It allows for data to be sorted and presented in culturally appropriate time, date, calendar, monetary, and numeric formats that are essential for everyday use. And it ensures that database utilities and error messages are presented to the user in the appropriate native language. National Language Support is a key enabler and a fundamental building block for creating the infrastructure needed to readily share and access data globally on the Internet and World Wide Web.

(i)   Oracle 8i support security

Oracle8i also offers integrated security and directory services, which enables Public Key Infrastructure (PKI)-based single sign-on. Single Station Administration allows organizations to manage users and their privileges centrally, with greater ease and lower cost. Flexible, granular security can be built once in the data server, instead of in multiple applications, and business logic may be divorced from actual privileges and data, which means that applications can be developed once, then reused and redeployed at significant cost savings.

Information is stored on physically separate computers in different locations. Therefore, it is essential that users be able to access all information easily and consistently. Consequently, a database server must provide the technology to hide the complexity of data access from users, allowing them to access distributed information as if it were all stored on the same computer. Oracle8i addresses this requirement by providing a transparent interface to all data in the system, improving access to information and simplifying application development. Oracle8i addresses all these security and functionality needs by providing complete and robust facilities for managing data and implementing a strong, yet flexible, security policy.

(ii)   Client-Server Architecture

Oracle8i supports deployment of heterogeneous client-server and distributed database configurations by automatically and transparently performing any necessary character set conversions. The locale-dependent operations can be controlled by National Language Support parameters and environment variables on both client and server side. Server and client may run in the same or different locale, and have the same or different language requirements specified. For example, in the event that client and server specify use of different character sets, oracle8i will seamlessly and automatically handle the character set conversion.

3.3.4. Advanced Business Application Programming (SAP R/3 system)

ABAP is a programming language for developing applications for the SAP R/3 system. The latest version, *ABAP* Objects, is object-oriented programming. SAP will run applications written using *ABAP*/4, the earlier *ABAP* version, as well as applications using *ABAP* Objects.

3.4 Summary

The methodology adopted in this project is Object Oriented Methodology. The set of technique and notation is Unified Modeling Language (UML) and the life cycle model is waterfall model which including six steps. The recommended hardware and software requirements are identified based on the technical requirements of the working environment.

CHAPTER 4

SYSTEM DESIGN

4.1 Organizational Analysis

This section will describe about organizational structure, functions, core business, existing IS/IT system and problem statement in the organizational context. Figure 4.1 show the organization chart for FELDA.
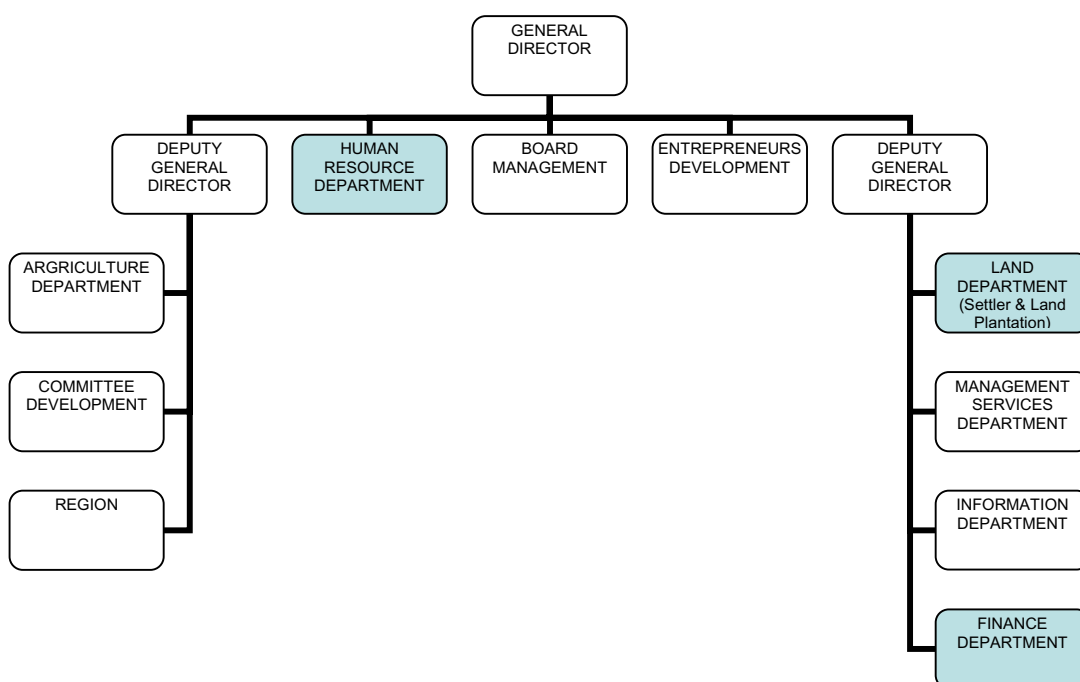
Figure 4.1: Felda Organization Chart

4.1.1 Functions

Organizational structure in Felda is divided into several categories. The highest position is General Director and followed by the Deputy General Director. Felda has many departments that monitor the whole activity on land. Below are the functions of departments in the FELDA organization:-

(i)   Human Resource Department

This department is responsible to control confidential information about all staff in the organization unit, manage recruitment, payroll, provide training, personnel development and etc.

(ii)   Board Management Department

This Board Management is responsible to advise and manage all departments in the organization.

(iii)   Entrepreneurs Development Department

This department is responsible to establish existing environment and development for settlers in order to make a contribution to other new committee and settlers. Encourage settler to engage to their economic activities to supplement their family income. These activities include planting of cash crops and animal husbandry, retail businesses, handicrafts, cottage industries, trading and manufacturing.

(iv) Agriculture Department

Manage infrastructure development, management and agricultural development.

(v)   Committee Development Department

To develop social activity for committee in Felda region in productive way such as Youth Club, Parent-Teacher Association, Women's Association and Anti-Drug Rehabilitation Programmes (PEMADAM).

(vi)   Region

This department is responsible to ensure the smooth running of the system at the scheme level by ensuring the equipment such as PC, printer in working condition and what so ever print-out either Settler's Income and reports produced as scheduled.

(vii)   Land Department (Settler & Land Plantation)

To give information about the total of settlers in Felda and the land's scale. This department also responsible to monitor the issues raised by settlers, public, regional, and mass media. Other responsibility is to update the necessary settler's information, and receive any cash payment from settler for example development cost, deduction arrears and etc.

(viii)   Management Services Department

This department has two units: IT Unit and Contract/Tender Unit. This department is to manage all activities related with IT and contract or Felda tenders.

(ix)   Information Department

To give information and knowledge to all staff and settler through radio Institut Kefahaman Islam Malaysia (IKIM.fm).This department is responsible to get idea and feedback from settler or staff so that can improve their organization.

(x)   Finance Department

To manage all finance activities such as budget, expenditure, treasury, debt and etc. To provide incentive scheme for Felda entrepreneur, provide subsidy to expand settler's house, incentive rural area agriculture.

4.1.2   Existing IS/IT systems.

The ICT Infrastructure for FELDA consists of the following components:

(i)   Server Room

The Server room is an area where principally all major computing facilities and the most critical component of ICT system such as Servers, and Main Switches are kept and operated.

(ii)   Software and Applications

The application covers all related software required to ensure smooth operation of ICT system such as Operating System (OS), SAP system, Movex System AS400, Anti-Virus etc.

(iii)   Hardware and Peripherals

The hardware includes PC, Notebook and other Peripherals such as printer, scanner and etc.

(iv)   Network System

The Network System consists of active equipments responsible to handle the network traffic within the school and between the school and WAN connection i.e. Internet. The design of Network System shall include the Core Switches, Floor Switches, Router, Firewall and Wireless LAN.

4.2   Business Model - Analysis of the Current System

Current process flow involves Settler & Land Plantation (SLP), Finance and Human Resource documents.

SLP is about the management of the Felda settlers, which consists of settler's personal and family information, settler's income and deductions, and settler's issues. SLP department monitors the issues raised by settlers, public, regional, and mass media. It is also including the activities of capturing the deductions and rates that are related to settlers such as Consolidation Annual Charging (CAC) deduction, fertilizer deduction, fresh fruit bunch price and etc. All reports that they running in system are kept manually, thus they facing a problem to have a lot of cabinets, and this will cause storage cost.

While in Finance department, they also got the finance system where the documents are not kept properly. Most of the invoices are kept physically and some document may not be traced.

In Human Resource department, personnel documents currently are not fully documented even though HR department already have the system. As for example, letter of offer, medical test report or contract are not attached to master record. At the moment, those documents are kept manually where this will cause lost of important document and involve high storage cost.

The following figures (Figure 4.2.1, 4.2.2, 4.2.3) show the bottle necks in the current system.
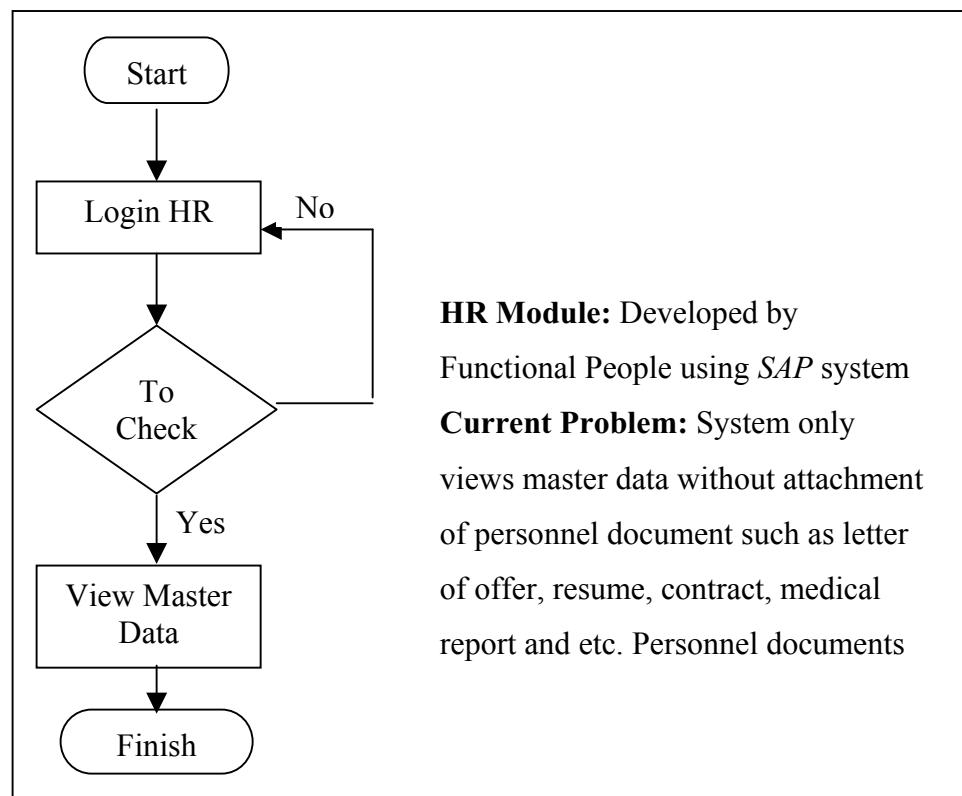
Figure 4.2.1: Current Flow Chart of Human Resource (HR) Module
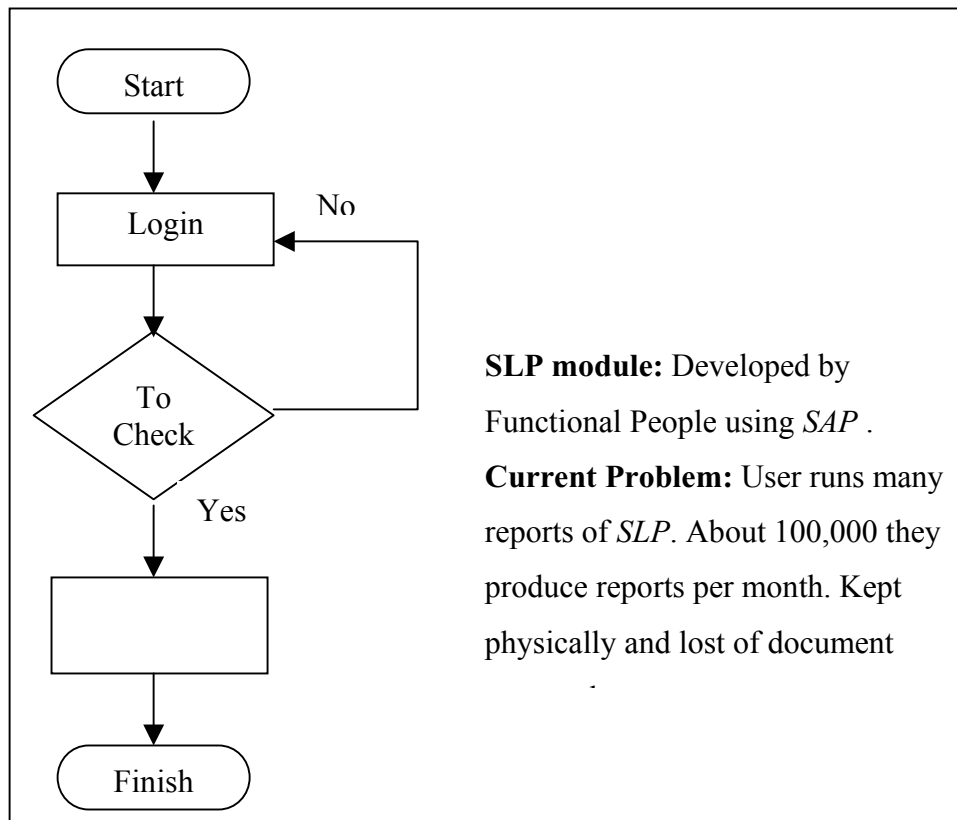
Figure 4.2.2: Current Flow Chart of Settler & Land Plantation Module
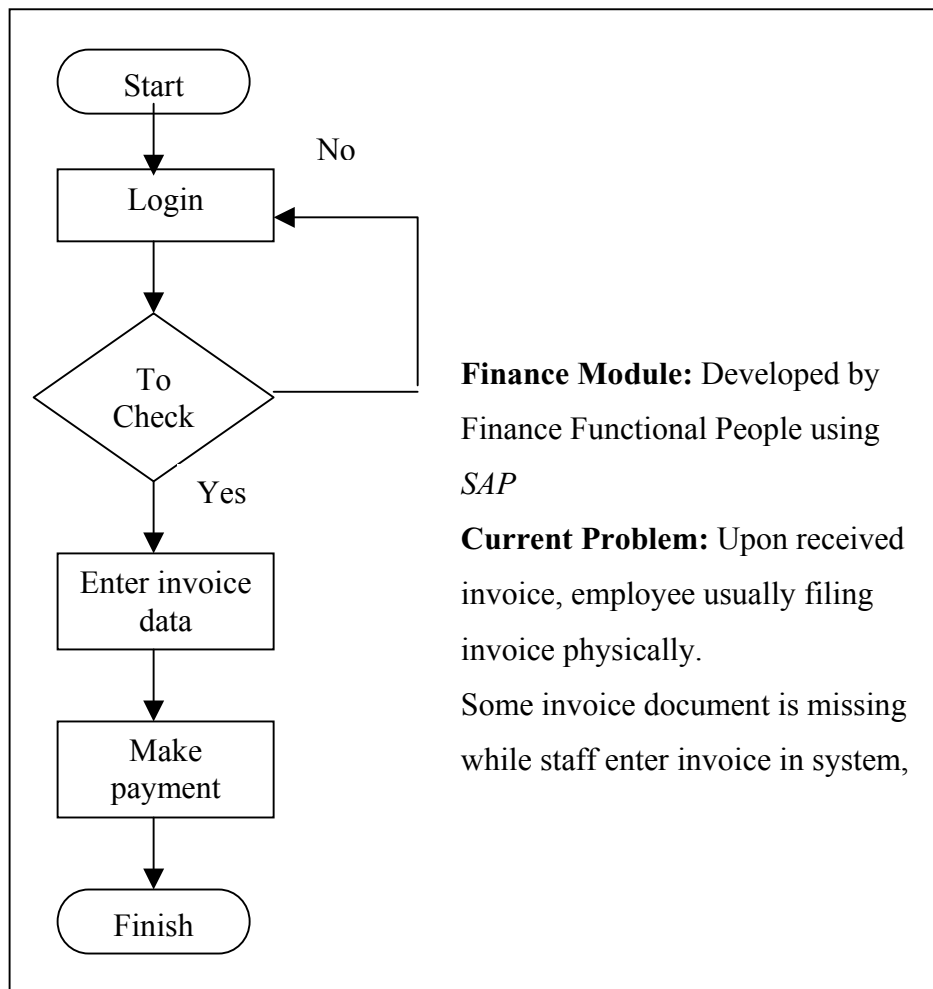
Figure 4.2.3: Current Flow Chart of Finance Module

4.3   User Requirement

The follow figures 4.3 shows the user requirement which involves in the whole system.

Table 4.3: User Requirement

Module	Functionality	Transaction
Finance	Clerk - User	- Clerk scans the hardcopy delivery order - Send email to executive finance. - Clerk will record invoice data.
	Executive - User	-Executive verifies the invoice. - Executive posts the invoice in SAP and update the vendor account. - Complete park document
Human Resource	Executive - User	- Scans document, - Attach document, store - Retrieve document
	Manager -User	- View document
Settler & Land Plantation (SLP)	Executive - User	- Select report, - Archive report - Retrieve report
	Manager - User	- View Report

4.4   Conceptual Design

This section will describe the software architecture, system architecture, conceptual design of processes which involves flow diagram for link table between IXOS and SAP application, flow diagram for SLP module using COLD technique and detail business flow diagram for Finance and HR modules.

4.4.1   System Architecture – To be System

The follow figures 4.4.1(a) and 4.4.1(b) is system architecture of proposed system which involves logical architecture and physical architecture. **Physical Architecture** consists of Workstations, IXOS Archiving Server, SAP Server, LAN and WORM device.
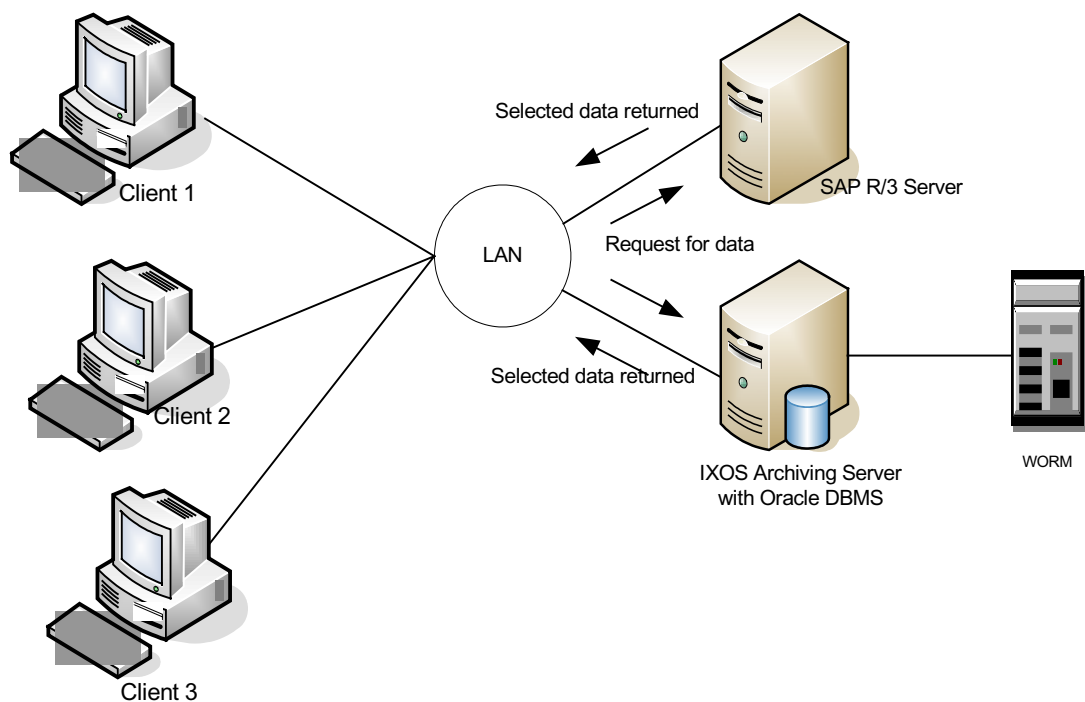
Figure 4.4.1 (a): Physical Architecture

Logical Architecture consists of Finance Module, Human Resource Module, Settler & Land Plantation Module and user interface. This new DMS system support the existing system is explained in business process flow in figures 4.4.3 until 4.4.9.

Modules	User Interface
Finance Module	SAPGui, Doculink Viewer
HR Module	
SLP Module	

Figure 4.4.1 (b): Logical Architecture

4.4.2   System Development Tools

Table 4.4 is a system development tools to implement DMS for FELDA. Detail tasks are shown in Chapter 5 (System Implementation).

Table 4.4: System Development Tools

Tools	Development Tasks
SAP R/3 Application IXOS Software	ABAP Programming for SLP Module Customization & Configuration HR,Finance and SLP Module
IXOS EnterpriseScan	Configure Scan Setting
ORACLE Database	Database development

4.4.3 Software Architecture

Figure 4.4.3 illustrates the connection of software architecture between User Interface, Application Software and Database.
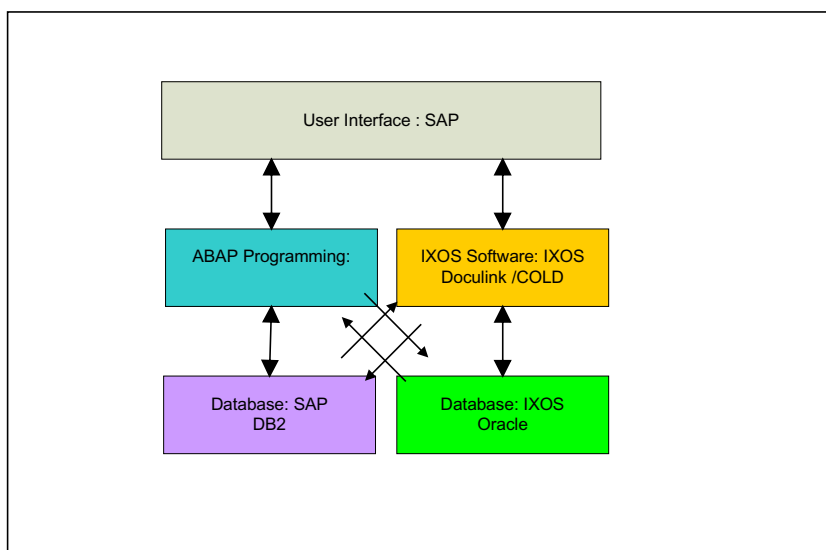
Figure 4.4.3: Software Architecture

4.4.4   Business Process Flow Diagram

1.   Business Process Flow Diagram for SLP module using COLD technique

Item	Description
Archive Server	For archiving all Settler documents.
R/3 System	The SAP System
COLD Technique	For filing the Settler documents (Computer Output to LaserDisk –COLD)
Doculink	For users to search and retrieve Settler documents
IXOS viewer	For viewing the Settler documents

Figure 4.4.4 is a system process diagram describes the general overview of IXOS COLD solutions for SLP. Both a unique address and a set of static attributes represent a COLD Settler document. The unique address consists of an archive ID and a doc ID.

In a process called filing, the document is sent to an archive server for archiving, which means, that the document is safely stored under its archive ID and doc ID. The settler document's set of static attributes and its archive ID and doc ID are sent to SAP system. Through relational tables of the SAP system, the document's set of static attributes is linked with its archive ID and document ID. The whole filing process is conducted and controlled by the COLD.

The COLD technique also creates the sets of static attributes by extracting this information from the contents of the COLD documents. In addition, a search index, based on dynamic attributes, can also be created for print lists.

The DocuLink module enables the retrieval of an archived document through its set of static attributes. Through a graphical browsing hierarchy and input fields, DocuLink provides a user-friendly search functionality of the sets of static attributes stored in SAP.
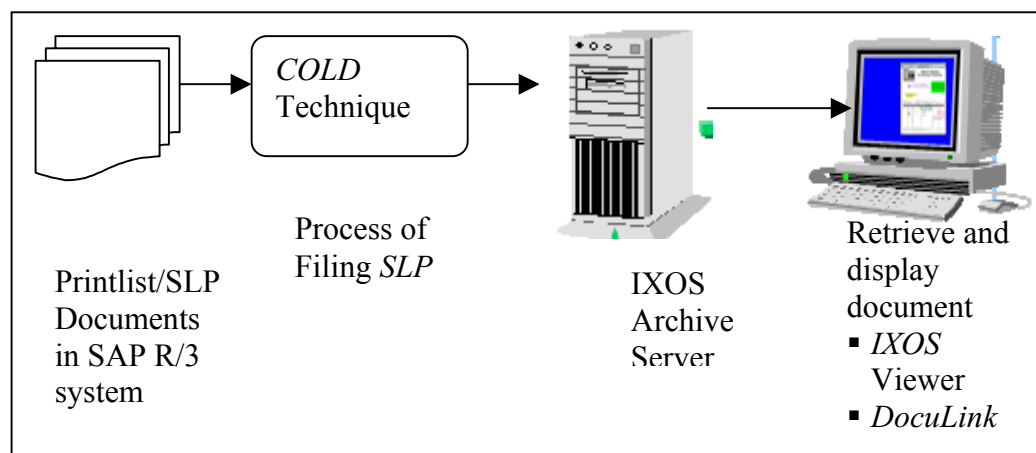
Figure 4.4.4 is process diagram for proposed system for SLP module.

2.   Link Tables: Associations of R/3 objects and archived documents

The archive ID and document ID of an archived document are determined as follows:

The definition of the node type for the document node includes the specification of an attribute object for this node type. The definition of an attribute object, in turn, includes the specification of the R/3 table that is represented in DocuLink by this attribute object. In addition it includes the specification of a SAP object type and of a SAP document type.

With the SAP object type and SAP document type determined, the table
TOAOM (SAP ArchiveLink: Meta table for links) is accessed to determine the link
table that links the sets of static attributes with the archive IDs and document IDs. To
retrieve and access an archived document which is referenced by means of archive
ID and document ID in the link table and R/3 object is created. The R/3 object is an
instance of the SAP object type that is specified for the attribute object in DocuLink.
The R/3 object is a container for the values of the document's set of static attributes.

In fact, the object ID of the R/3 object is defined by the values of the
document's static attributes. Through the object ID of the R/3 object the set of static
attributes is linked in the link table with the archive ID and document ID of the
archived document. With the SAP object type and the object ID the link table is
accessed to determine the archive ID and document ID of the corresponding archived
document. For this table entry a document node is then shown in DocuLink. Figure
4.4.5 below show the process flow diagram for Link Table.
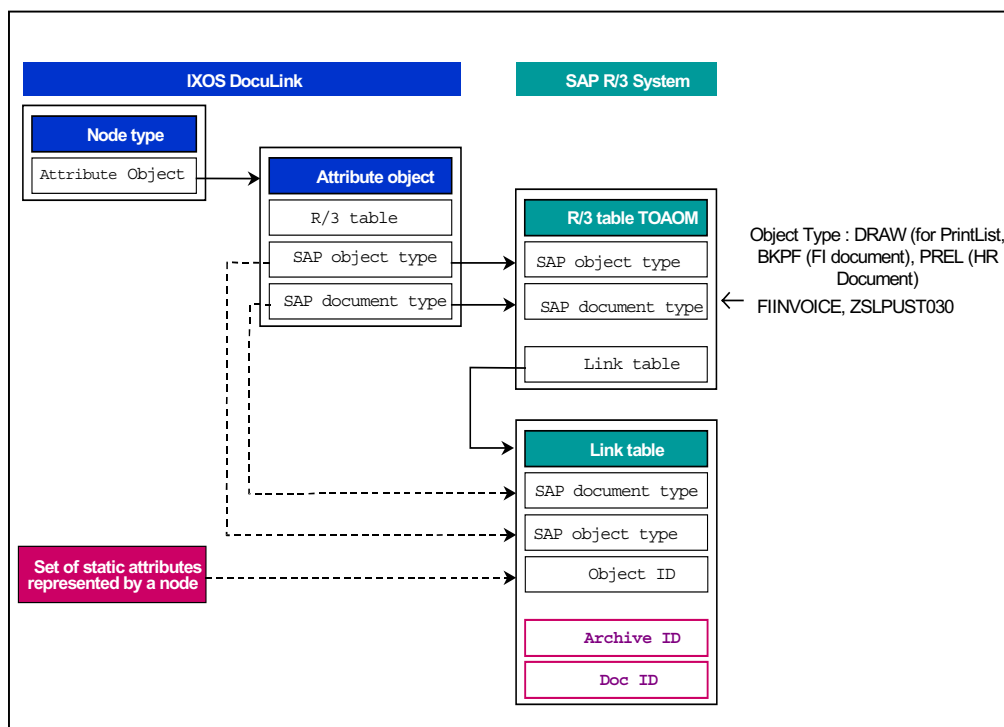
Figure 4.4.5: Process Flow Diagram for Link Table

Table 4.5 below illustrates the structure common to all ArchiveLink link tables.

Table 4.5: Link table structure

3   Detail Business Flow Diagram – Proposed System

Invoice processing involved the following scenarios:

i. Post invoice via FI-AP (non-PO purchases)

ii. Document Parking via AP (non-PO purchases)

iii. Post invoice to vendor (PO Purchase)

iv. Down payment clearing for vendor down payment

These business processes will illustrate the use of IXOS document management solutions. In all of these processes, the AP clerk will scan the documents received and a work-item is created via workflow. The AP Executive will receive a mail in the inbox to process the work item.

i.   Post invoice via FI - AP (non-PO purchases)

The following is the documented flow for invoice posting. This process flow is applicable for non-PO purchases that are not related to stock (non-material) and fixed asset. Certain purchases do not start with an "order" activity. Normally, a service rendered was the triggering point. This includes utility bills, quit rent, audit fee, road tax, legal fees, medical expenses, and insurance payments.

The department executive that orders the goods or services will receive the delivery document. This document will then be sent to the Accounts department for processing since this purchase is without a Purchase Order. Using IXOS Enterprise Scan, the AP clerk scans the hardcopy delivery order and a work-item is created for the AP executive to post the document in SAP. Similarly, when the invoice is received, the AP clerk will scan it and create another workflow for the AP executive to create the invoice in SAP and update the vendor account. (See the figure 4.4.6)
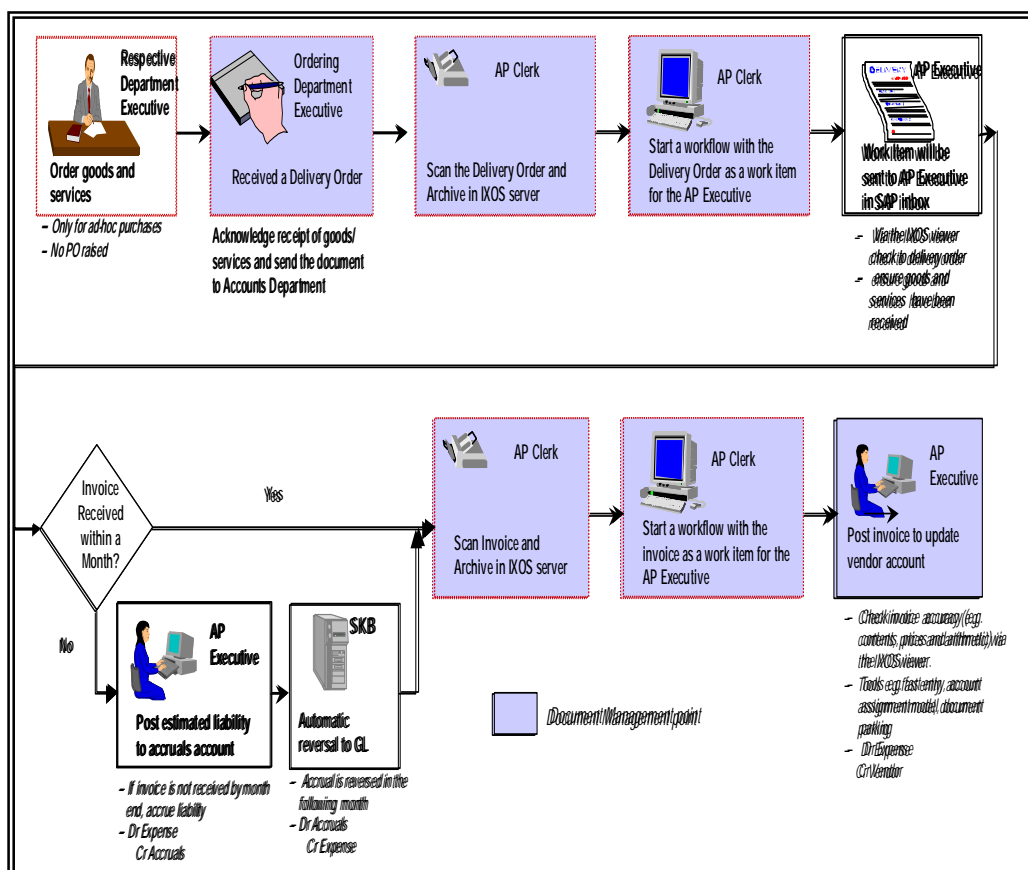
Figure 4.4.6: Post invoice via FI - AP (non-PO purchases)

ii.   Document Parking via AP (non-PO purchases)

The following is the documented flow for document parking via AP. This is an optional process flow to the normal invoice processing via AP. It uses the document parking function. If several parked documents are posted via a list, the system issues a list when this activity is completed that details the system documents that have been successfully posted.

When a parked document is saved, the transaction figures such as asset values and control totals are not updated, and the system does not generate any automatic postings. No balance checks are made but the balance is displayed in the parked documents overview. From this list, any necessary post-processing to parked documents that could not be posted due to missing information such as a cost accounting assignment can be carried out when the information is available.

A batch input session to post the parked documents can also be carried out for example for the case of settler's quit rent. In the process flow, the AP clerk scans the received invoice, creates an invoice in SAP with reference to the received invoice, attach the scanned invoice to the invoice in SAP and park it in the system. A workflow with a work item is started for the AP executive to complete the parked document. This flow is depicted in the following illustration: (See the figure 4.4.7)
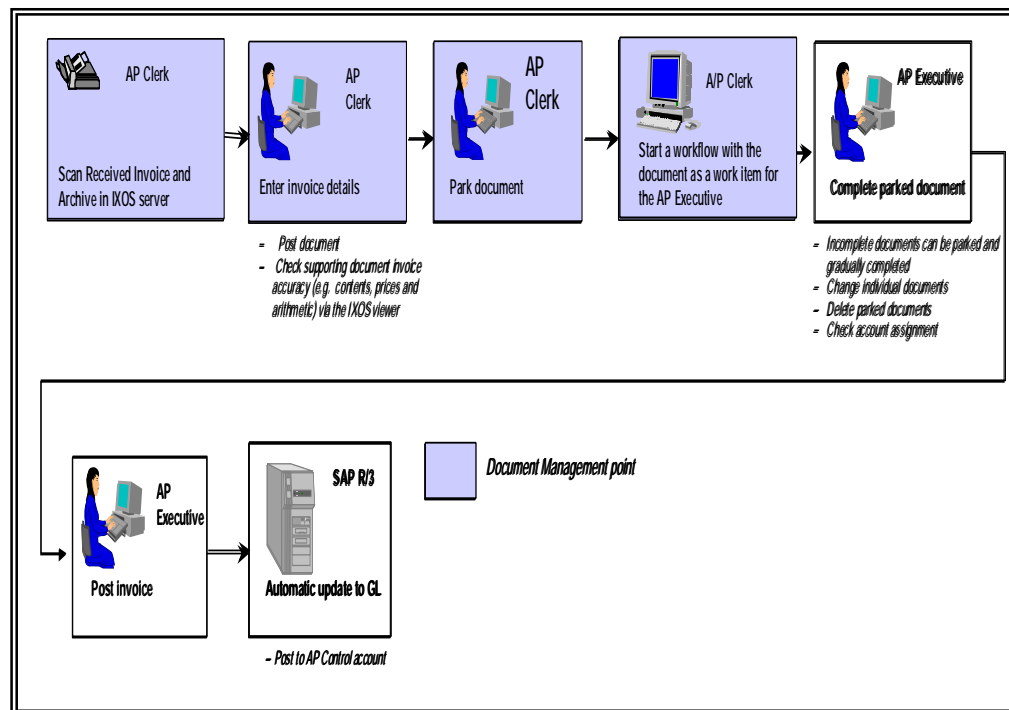
Figure 4.4.7: Document Parking via AP (non-PO purchases)

iii.   Post invoice to vendor (PO Purchase)

The documented flow is for invoice posting with reference to a Purchase Order. Any department executive can create the purchase requisition. The purchasing executive will then create a purchase order based on this Purchase Requisition. When the goods/ services are delivered, the department executive that created the Purchase Requisition will receive and confirm the goods/ services delivered with a delivery order.

The delivery order is then sent to the Accounts Department where the AP clerk will scan and create a workflow for the department executive that created the requisition to post the document into SAP. When the invoice is received, the AP clerk will scan the document and similarly created a workflow for the AP executive to perform invoice verification. The following is the illustration of this business process: (See the figure 4.4.8)
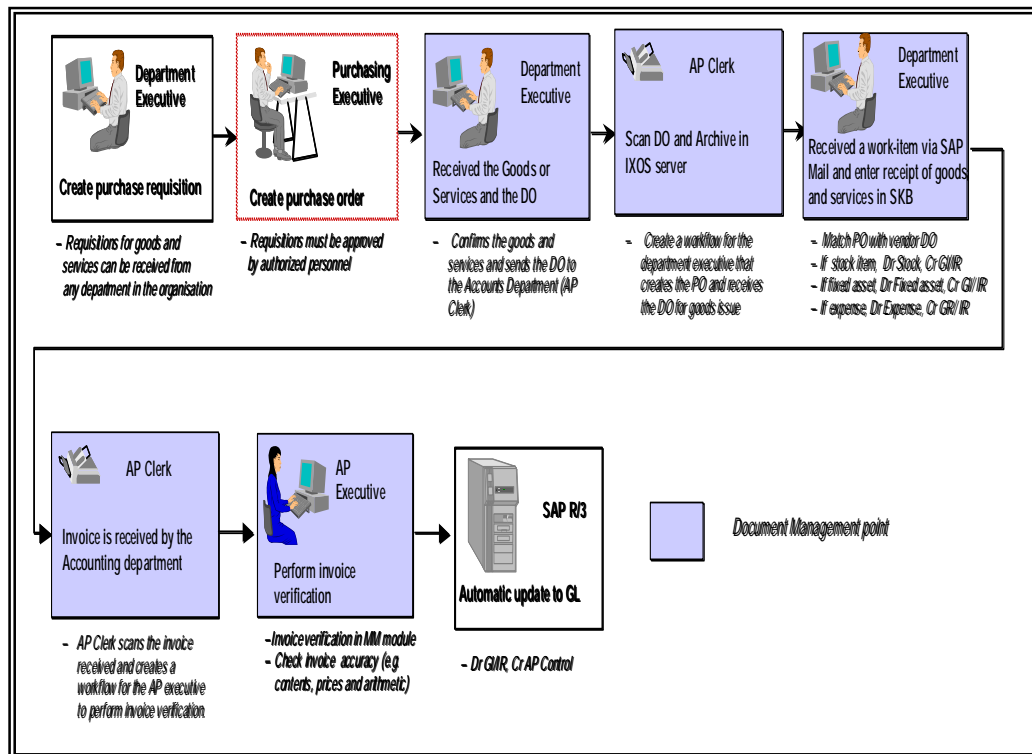
Figure 4.4.8: Post invoice to vendor (PO Purchase)

iv.   Down Payment Clearing for Vendor Down Payment

This business process flow begins with the Purchase Requisition created by a department executive. The purchasing executive will create a Purchase Order based on this Purchase Requisition and inform the AP executive that the purchase needs a down payment. The AP executive will then create a down payment posting for this purchase. When the department executive that requisitioned the items received the goods or services, he/she will send the delivery order to the Accounting Department.

The AP Clerk will receive the delivery order, scan this document and create a workflow in SAP for the department executive who will do the necessary postings. When the actual invoice is received, the document will be sent to the Accounts Department and once again, the AP clerk will scan the document and this time a workflow will be created for the AP executive to clear the down payment and perform a payment run. (See the figure 4.4.9)
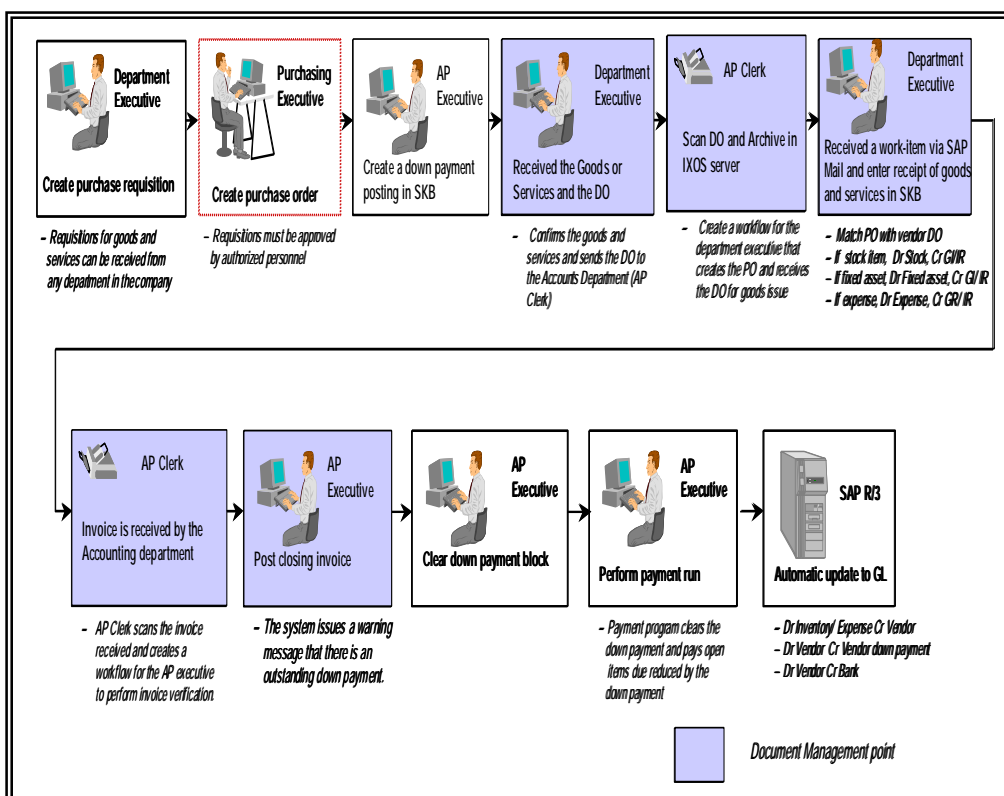
Figure 4.4.9:   Down Payment Clearing for Vendor Down Payment

v.   Business Process Flow: Employee Master Data

Human Resource (HR) master data recommended the use of IXOS to store a passport sized photograph, resume or curriculum vitae and education certificates for each employee. This will increase the sharing of these documents within the HR department for placements and references. Apart from these documents, other documents such as job application form, letter of offer, medical test report and job application letter can also be attached to the master record. The following is the illustration of the business process flow: (See the figure 4.4.10)
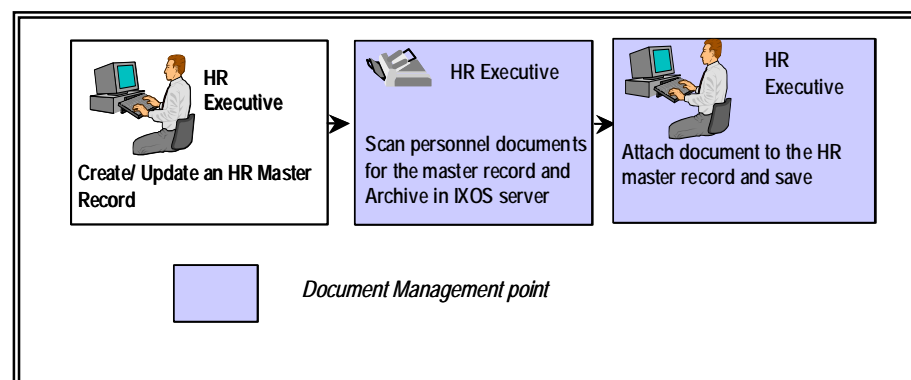
Figure 4.4.10: Business Process Flow: Employee Master Data

With this solution, the confidential documents can be stored in a check-in and check out system where it will be safer than lying around on tables. SAP's authorization profile will ensure that only relevant personnel with the right access can view the documents. In the beginning, a process of scanning and attaching the document should be carried out after the conversion of HR master data. As an on-going process, any documents related to the personnel can be attached to the HR master record as the need arise.

4.   Table Relationship Diagram in SLP Module

Figures 4.4.11, 4.4.12 and 4.4.13 show the table relationship diagram for SLP program archiving.
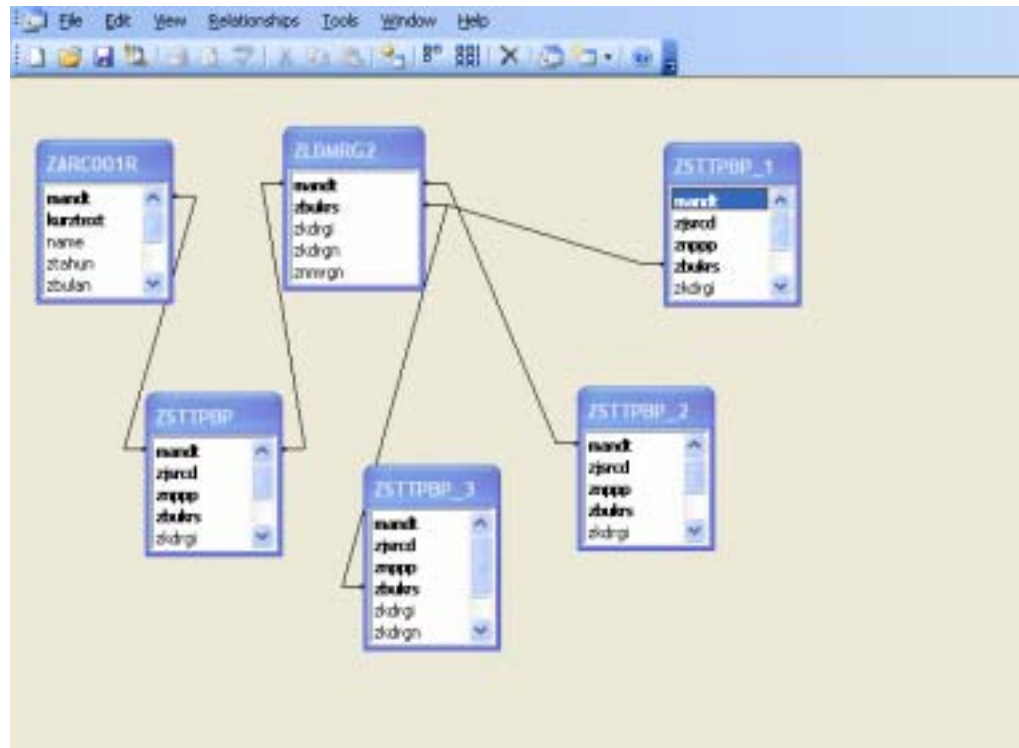
Figure 4.4.11: Dividend Calculation of Oil Palm
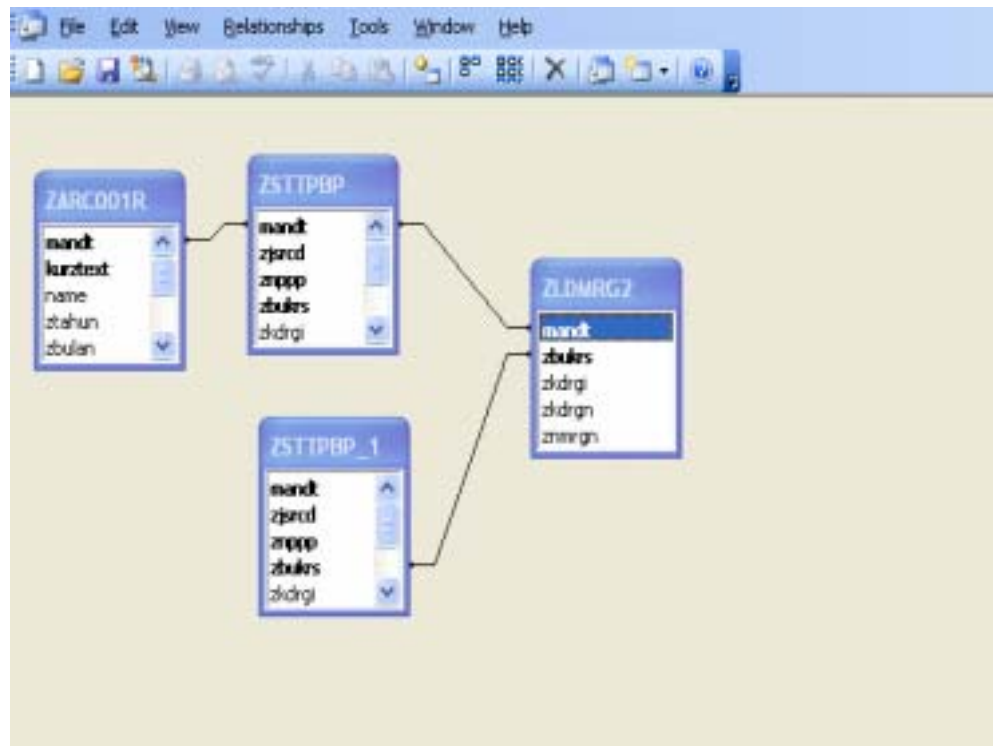
Figure 4.4.13: Pay sheet Report for Settler
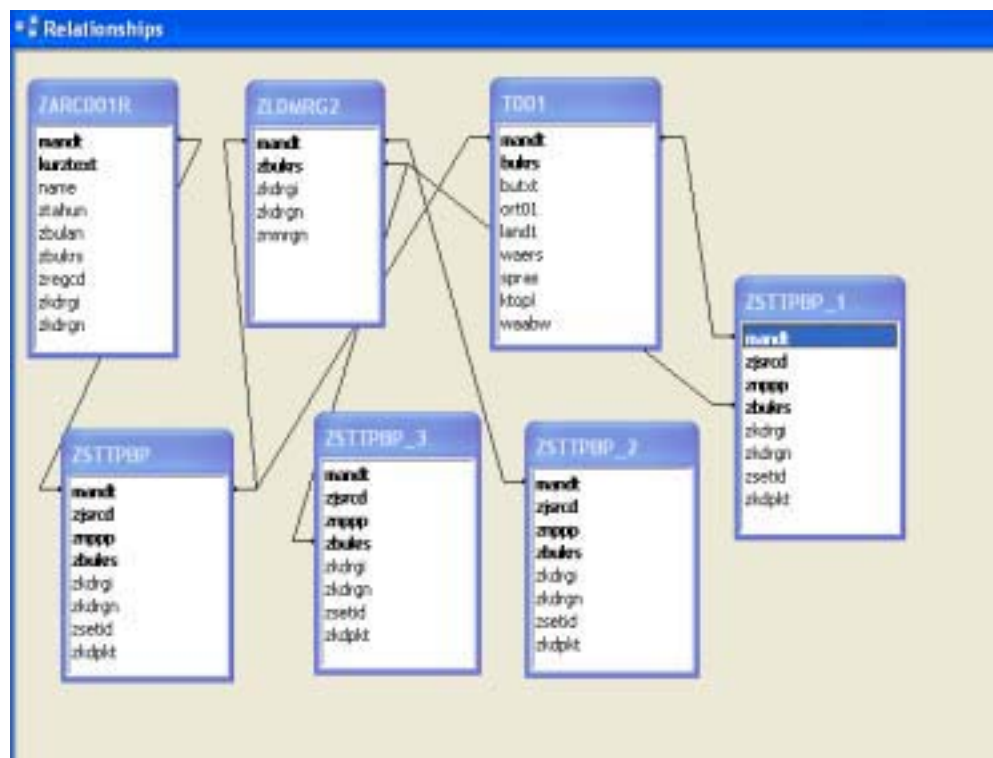
Figure 4.4.12: Calculation of Rubber Income

5   Use Case Diagram

Use Case Diagram is categorized under Behavioral Diagram, which captures some user visible function. A Use Case may be large or small function depending on the level of detail in the project modeling effort. A use case achieves a discrete goal for the user. Figure 4.4.13 shows the program module involves in the whole system.

Figure 4.4.13: Use Case Felda Document Management System

6   Sequence Diagram and Class Diagram

A sequence diagram is used to capture use cases and dealing with
concurrency. It is also used to clarify and explore single use case involving several
objects. Class diagram shows the classes and their associations. It has something in
common with an entity-relationship diagram. It describes the static or structural parts
of the system and the relationships between them. The follow figures 4.4.14 until 4.4
.27 to show the sequence and class diagrams.
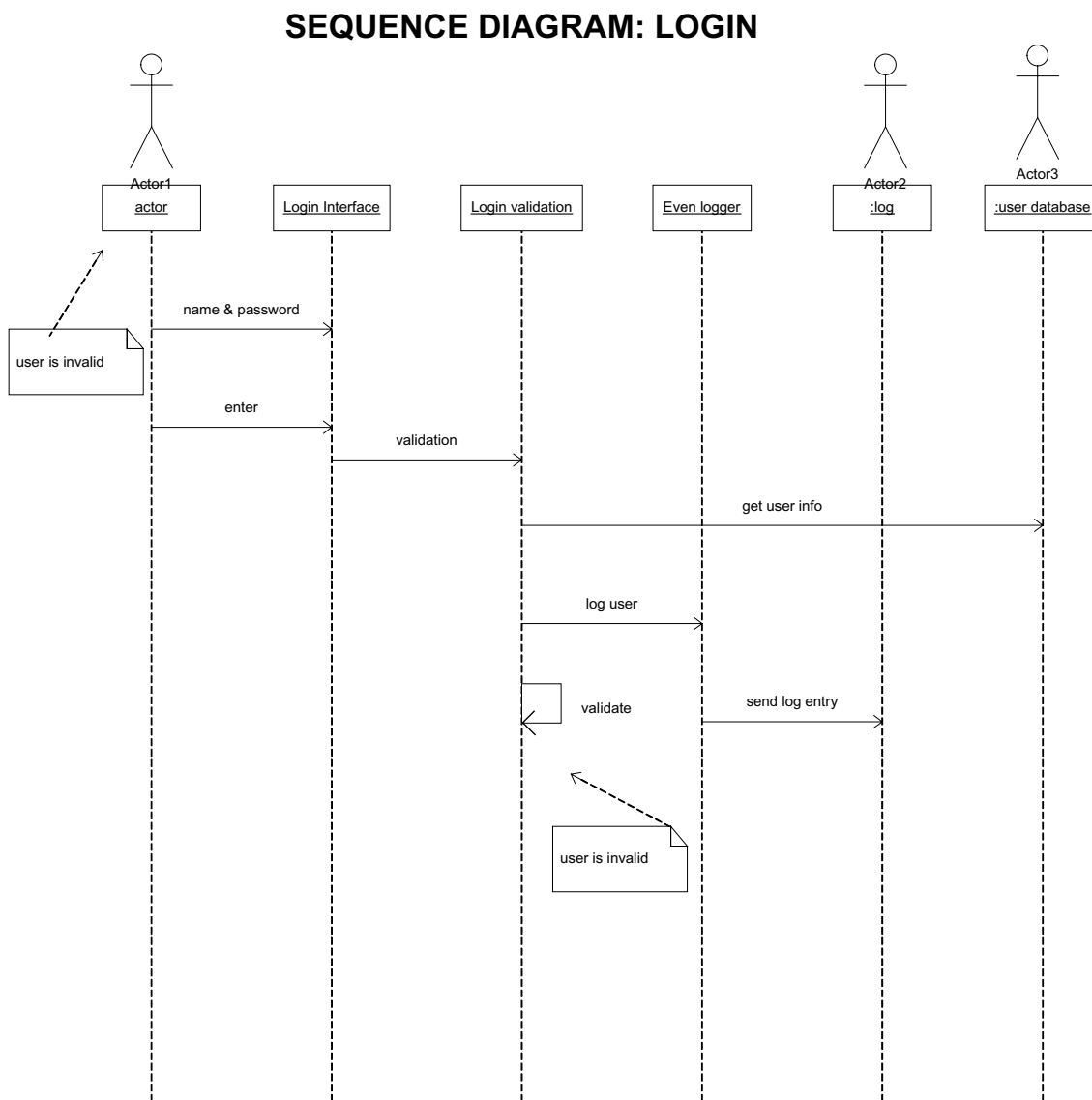
Figure 4.4.14: Sequence Diagram: Login

CLASS DIAGRAM: LOGIN
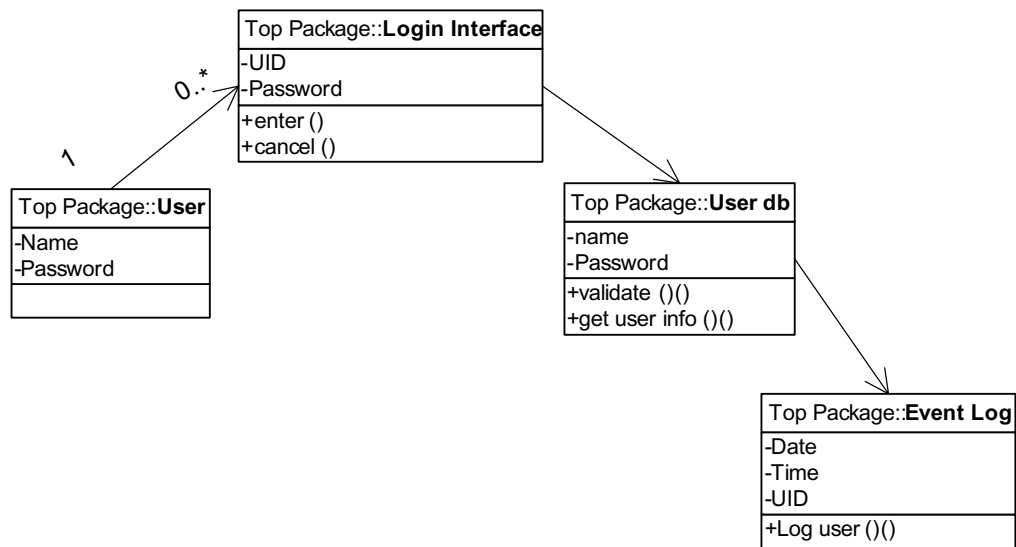
Figure 4.4.15: Class Diagram: Login

SEQUENCE DIAGRAM: Scan & Store Finance Document
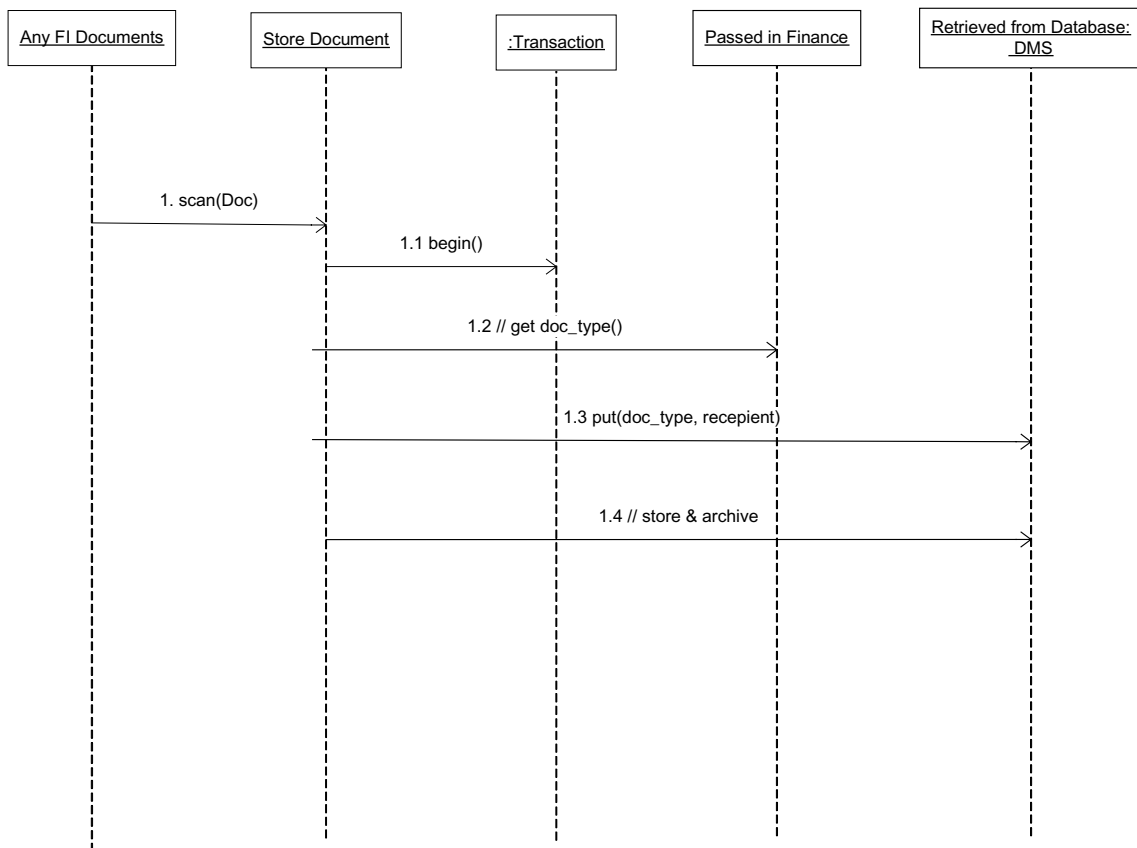
Figure 4.4.16: Sequence Diagram: Scan & Store Finance Document

CLASS DIAGRAM: Scan & Store
Finance Document
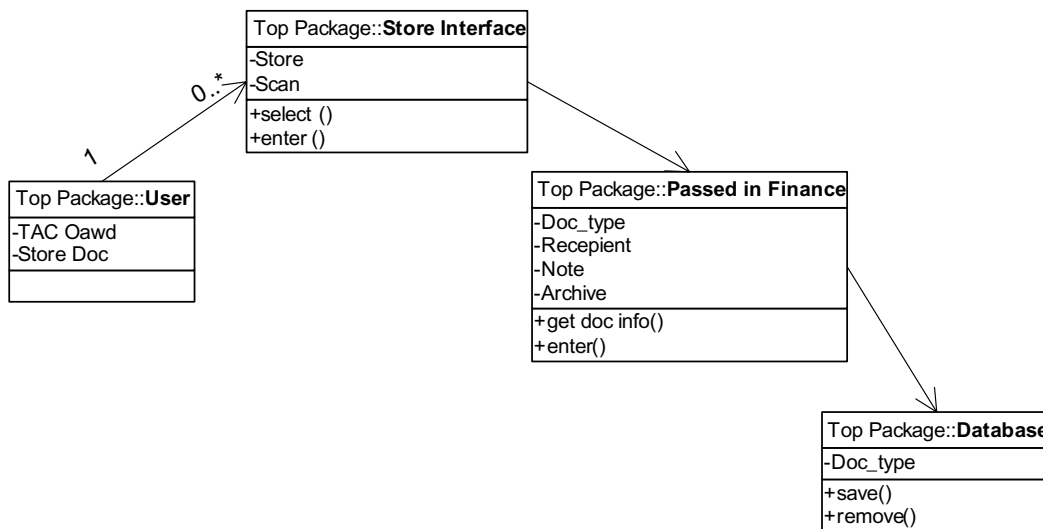
Figure 4.4.17: Class Diagram: Scan & Store Finance Document

SEQUENCE DIAGRAM: Retrieve Finance Document

Any FI Documents	SAP Inbox	:Transaction	Passed in Finance	Retrieved from Database: DMS

1. check (email)

1.1 begin()

1.2 // get document()

1.3 // process invoice

1.4 get (invoice no())

[invoice doc does not exist]

1.5 search (invoice no ,invoice)

[invoice doc does exist]

1.6 // view document
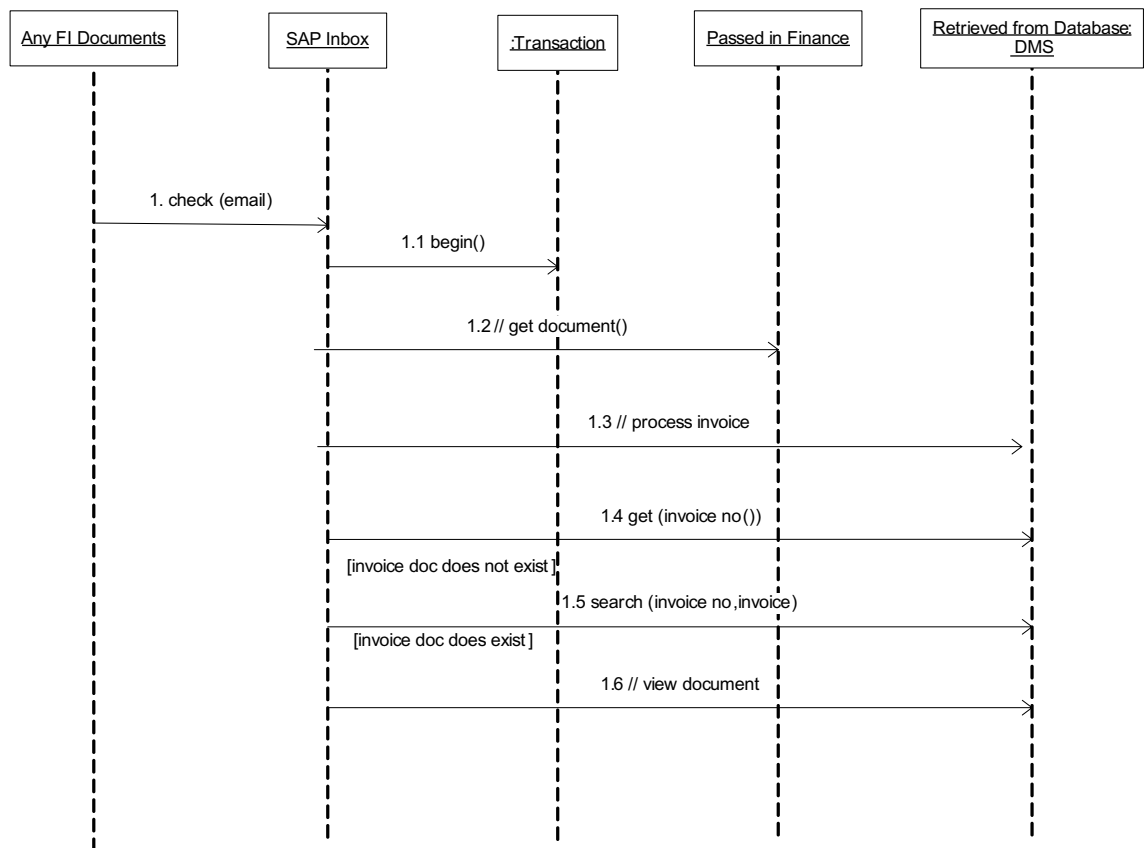
Figure 4.4.18: Sequence Diagram: Retrieve Finance Document

CLASS DIAGRAM: Retrieve Finance Document
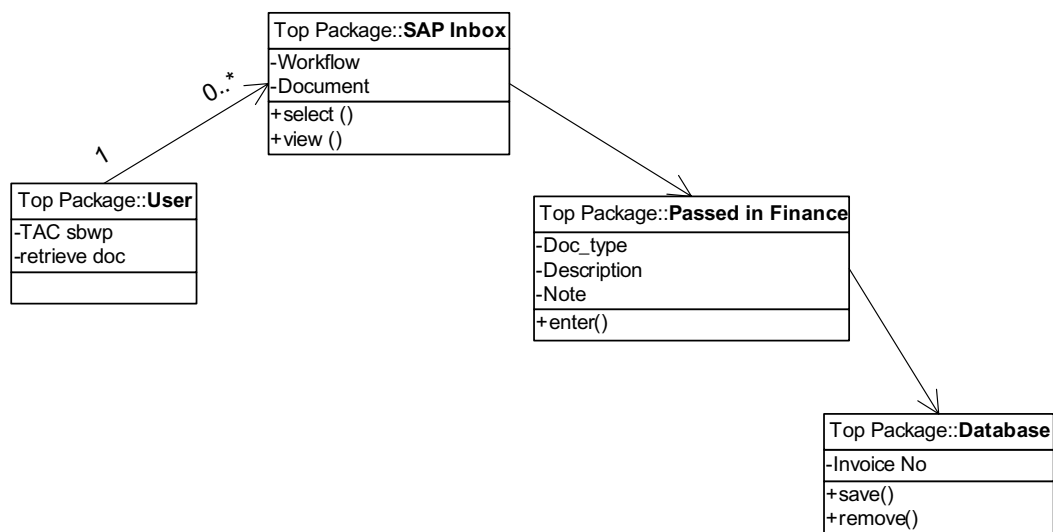
Figure 4.4.19: Class Diagram: Retrieve Finance Document

SEQUENCE DIAGRAM: Manage SLP Document
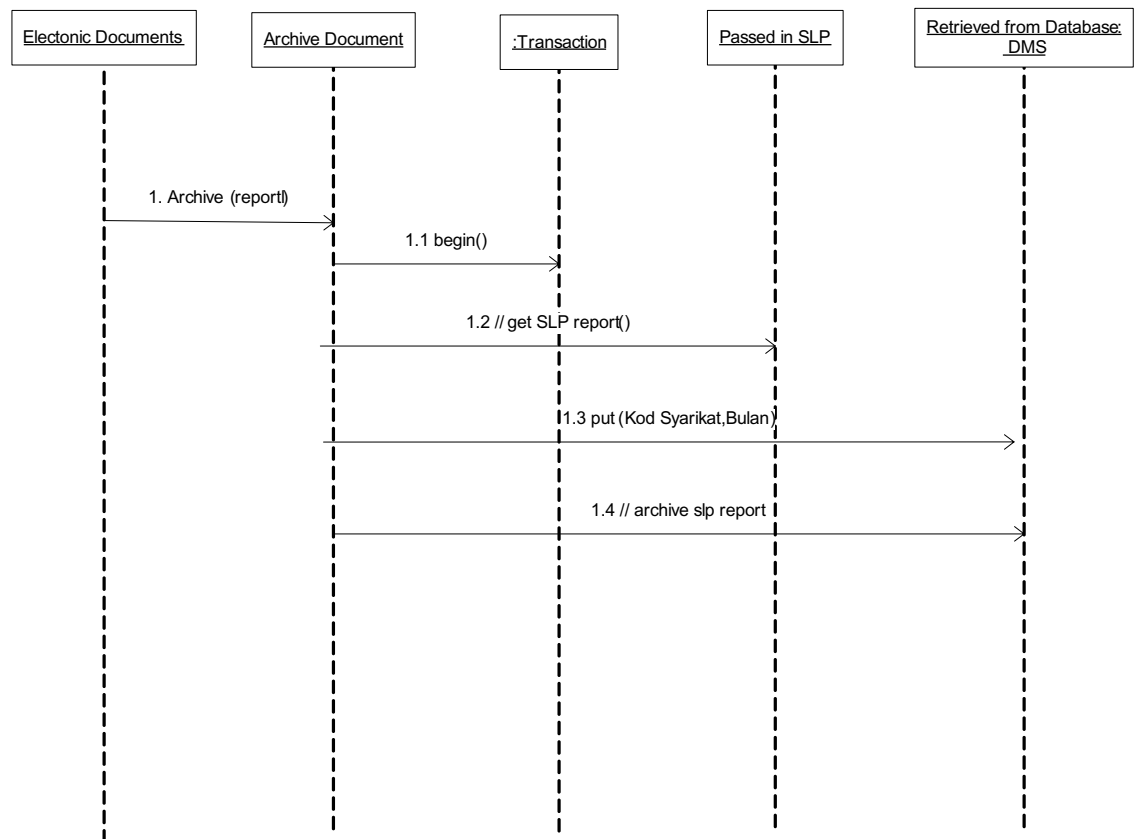
Figure 4.4.20: Sequence Diagram: Manage SLP Document

CLASS DIAGRAM: Archive SLP Document

Top Package::Electronic Document

-SLP Report

+confirm ()
+cancel ()

0..*

1

Top Package::User

-Report
-Archive

Top Package::Archive Document

-Kod Syarikat
-Bulan
-Tahun
-Kod Rancangan
-Kod Peringkat
-Larian Ujian

+get Kod Syarikat ()
+put Kod Syarikat()

Top Package::Database

-Kod Syarikat
-Bulan
-Tahun
-Kod Rancangan
-Kod Peringkat
-Larian Sebenar
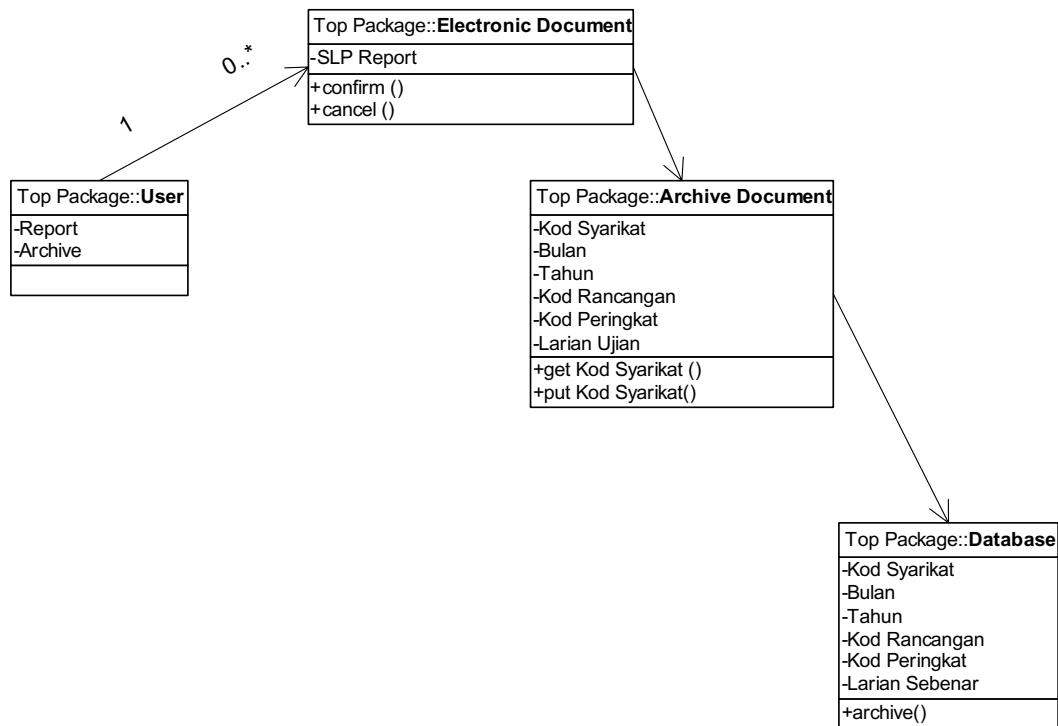
+archive()

Figure 4.4.21: Class Diagram: Archive SLP Document

SEQUENCE DIAGRAM: Retrieve SLP Document
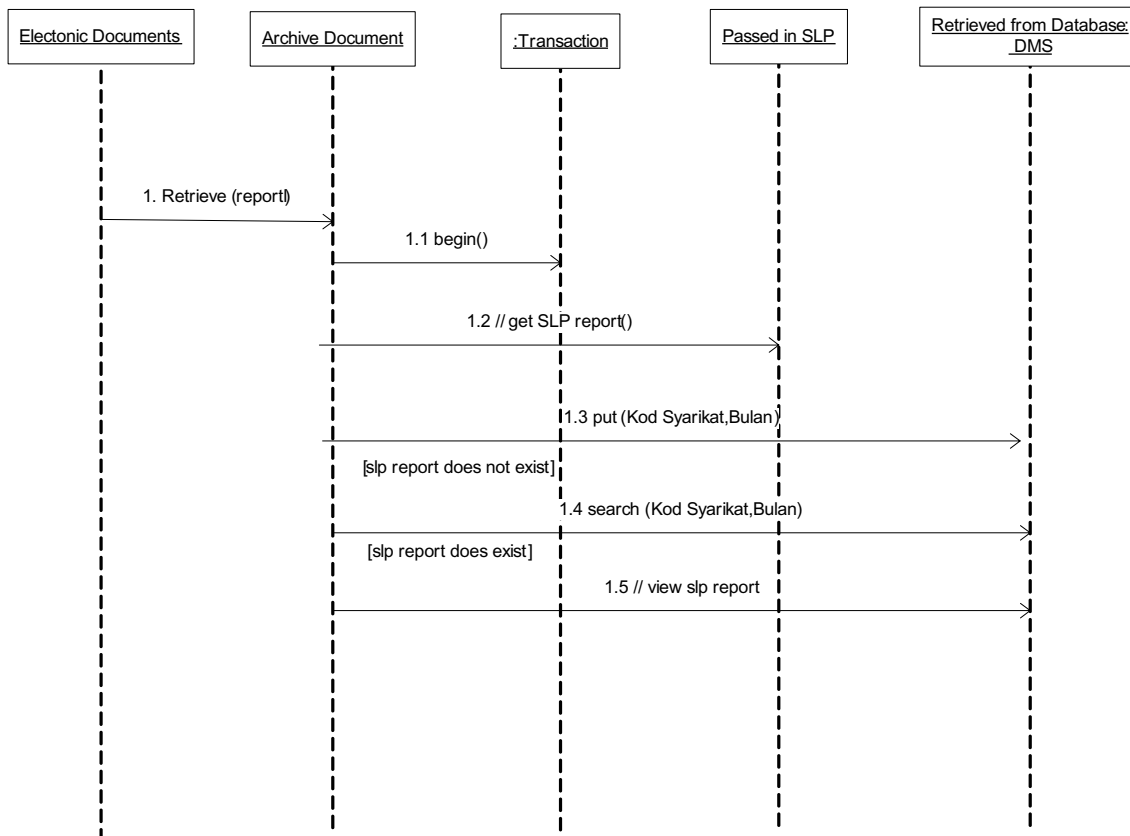
Figure 4.4.22: Sequence Diagram: Retrieve SLP Document

CLASS DIAGRAM: Retrieve Document (SLP)

Top Package::**Electronic Document**
-SLP Folder
+select ()
+cancel ()

0..*

1

Top Package::**User**
-TAC J6NY
-Retrieve

Top Package::**Retrieve Document**
-Kod Syarikat
-Bulan
-Tahun
-Kod Rancangan
+get Kod Syarikat ()
+put Kod Syarikat()

Top Package::**Database**
-Kod Syarikat
-Bulan
-Tahun
-Kod Rancangan
+View()
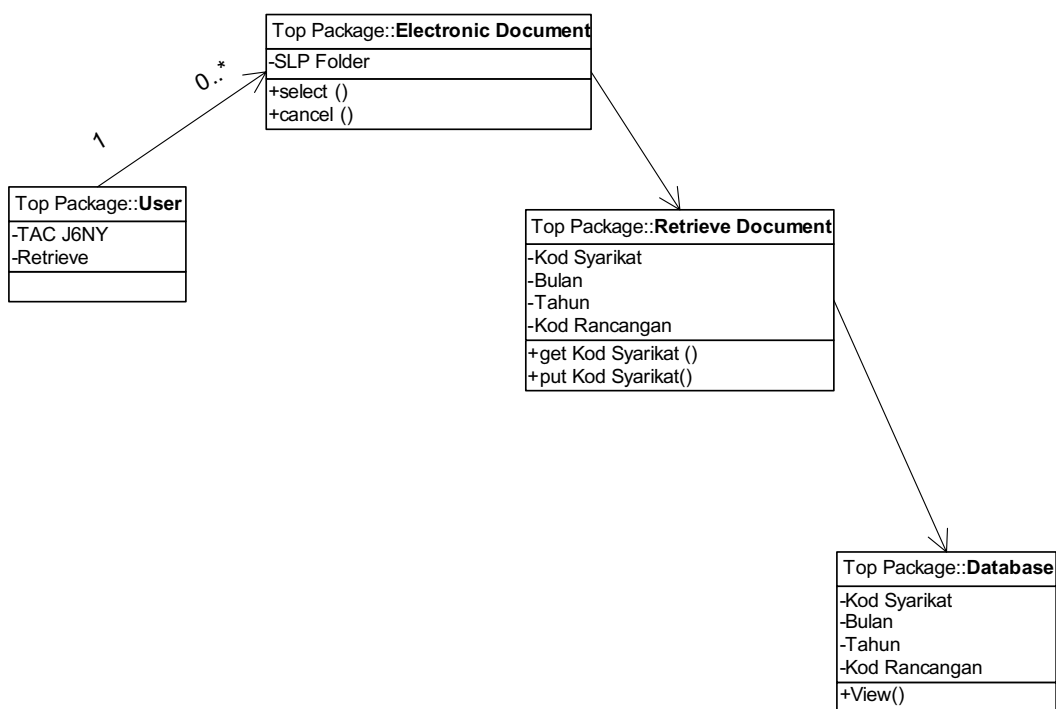
Figure 4.4.23: Class Diagram: Retrieve SLP Document

SEQUENCE DIAGRAM: Scan & Store HR Document
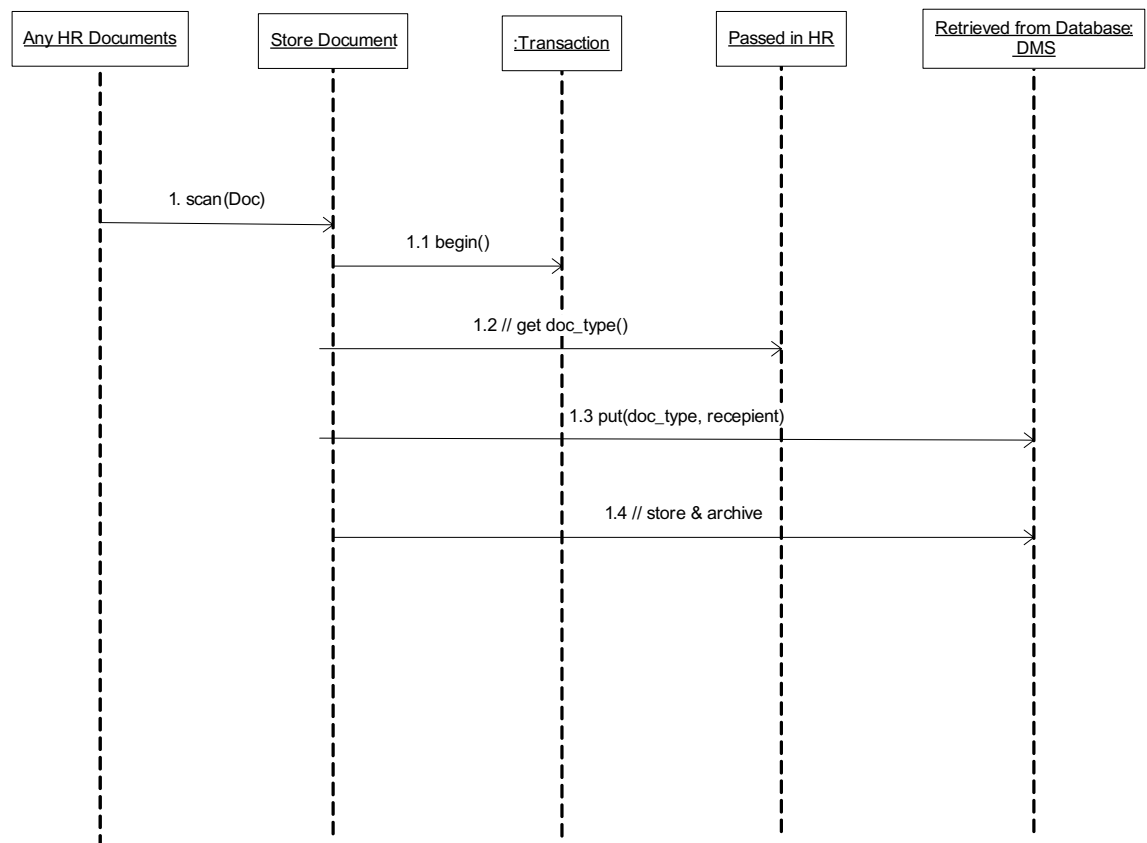
Figure 4.4.24; Sequence Diagram: Scan & Store HR Document

CLASS DIAGRAM: Scan & Store HR Document

Top Package::**HR Document**
-Store
-Scan
+enter()
+cancel ()

0..*

1

Top Package::**User**
-TAC OAWD
-Store

Top Package::**Passed in HR**
-Personnel Number
-InfoType
-Date of Origin
+enter()

Top Package::**Database**
-Personnel Number
-Info Type
-Date of Origin
+save()
+remove()
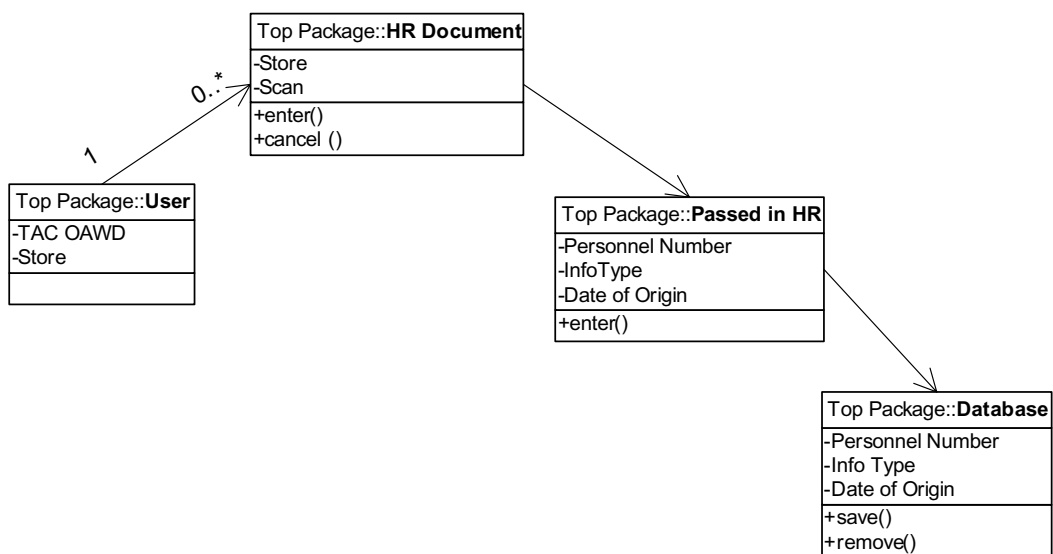
Figure 4.4.25: Class Diagram: Scan & Store HR Document

SEQUENCE DIAGRAM: Retrieve HR Document
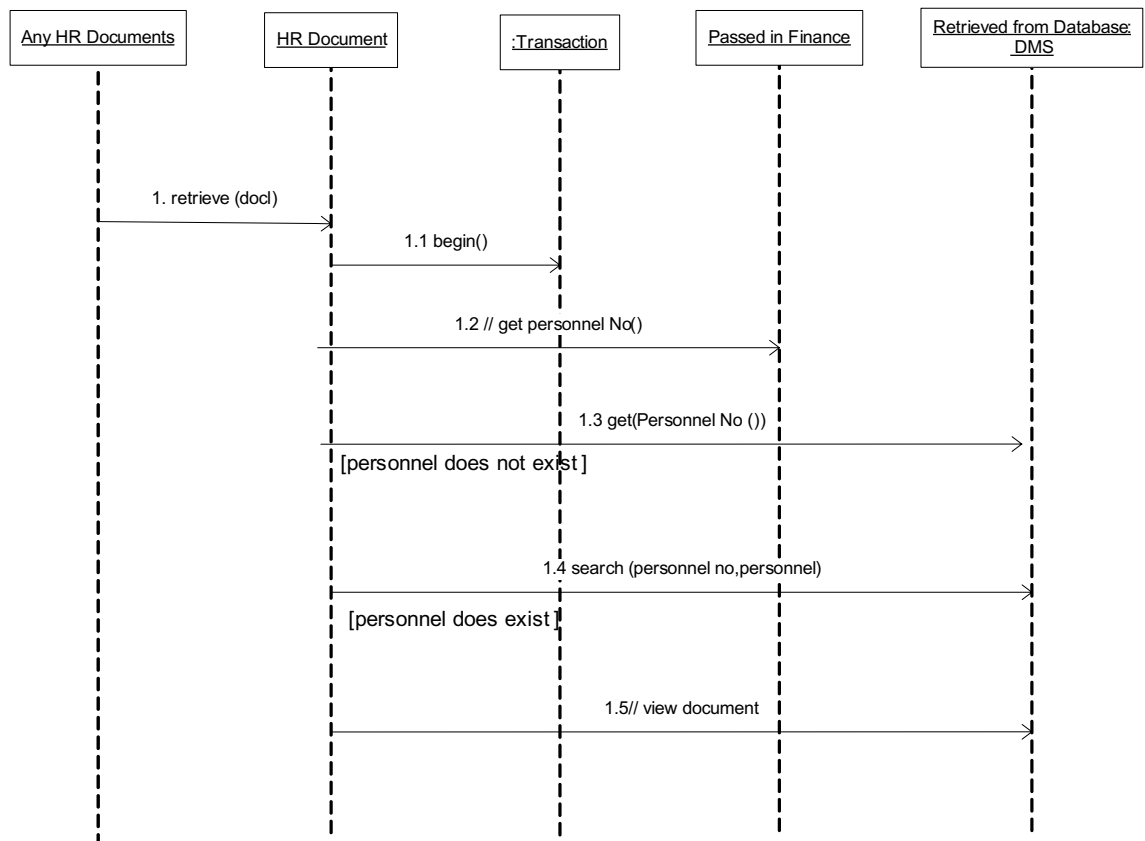
Figure 4.4.26; Sequence Diagram: Retrieve HR Document

CLASS DIAGRAM: Retrieve HR Document

Top Package::**HR Document**
-personnel no
-
+enter()
+view()

0..*

1

Top Package::**User**
-TAC J6NY
-retrieve doc

Top Package::**Passed in HR**
-Doc_type
-Description
-Note
+enter()

Top Package::**Database**
-Personnel No
+save()
+remove()
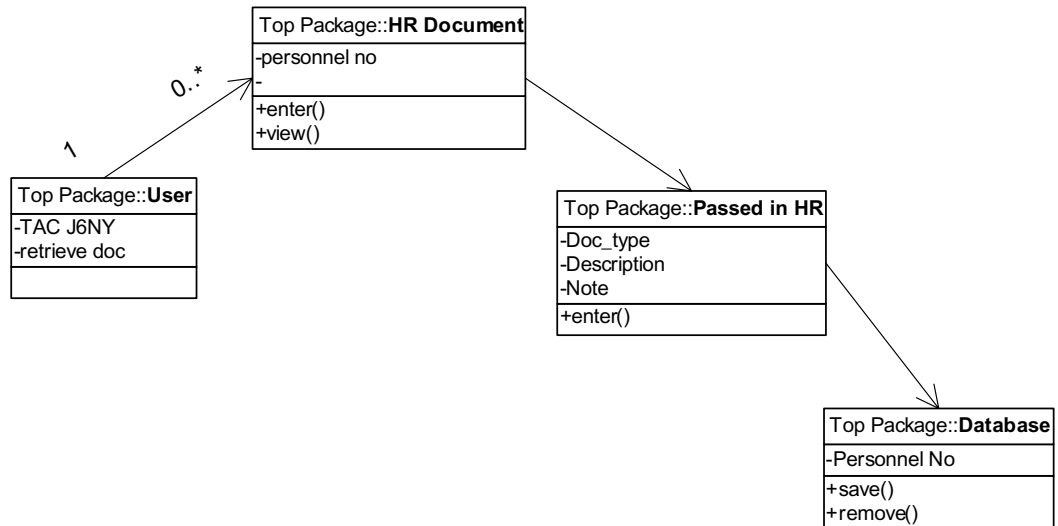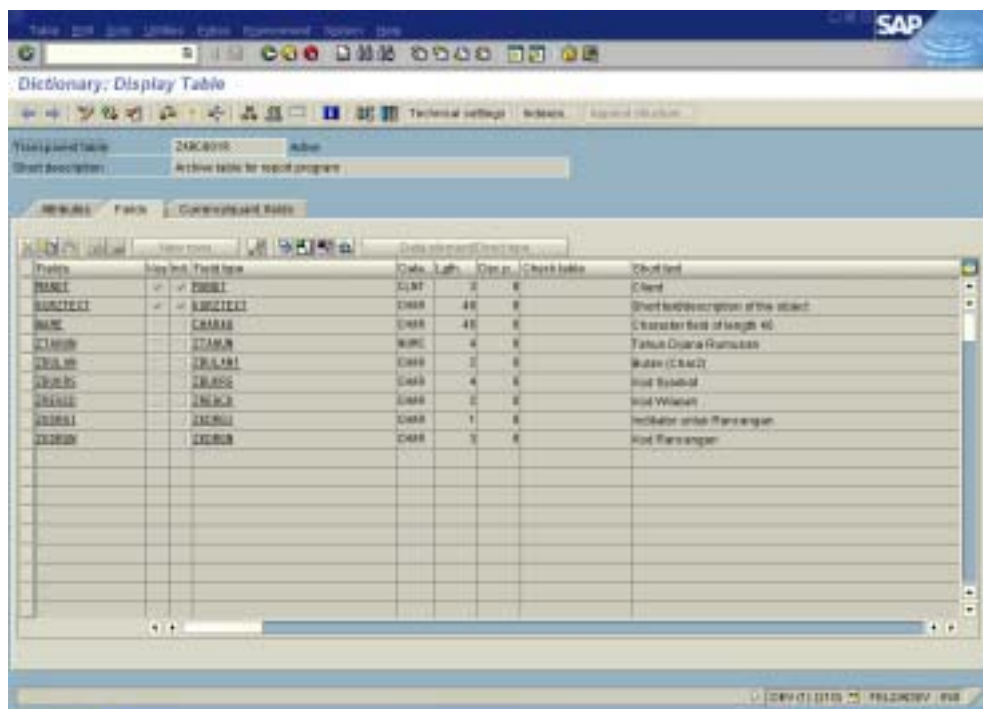
Figure 4.4.27; Class Diagram: Retrieve HR document

4.5   Physical Design

The physical design involves several activities. The activities are;

4.5.1   Database Design

The database for the system is developed using ORACLE. The table and fields created can be referred as below in SAP R/3 using transaction SE11. Refer Appendix D for more table and fields.

Figure 4.5.1: Table and Fields

4.5.2 Structure Chart

The structure chart for DMS revolves around several activities. This process involves three modules and several functionality and will illustrates in Figure 4.5.2.
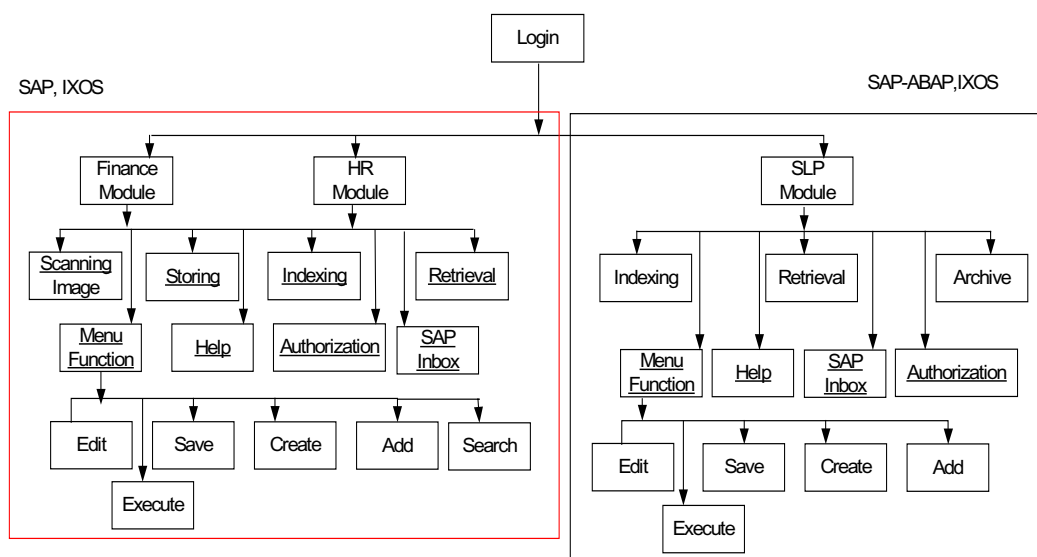
Figure 4.5.2: Structure Chart Document Management System

4.5.3   User Interface Design

Below is user interface proposed screen layout design to meet user and process requirements of the system.

i.   Screen Layout User ID
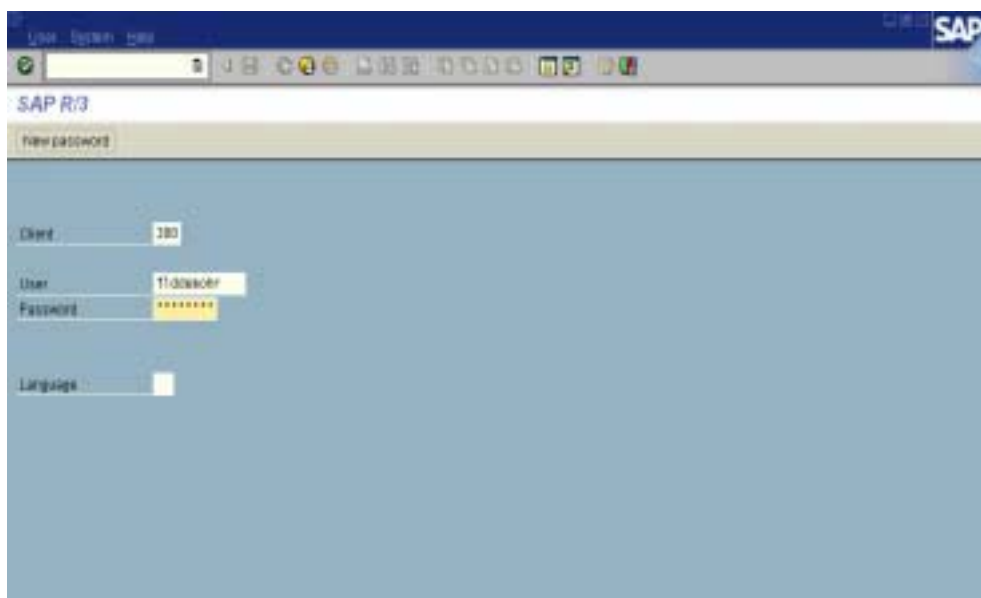
Precondition	User with authorized only.
Features	User will be able to access and use the SAP with authorized access.
Input	Valid Login Valid Password
Expected Outcome	System displays the screen where options for user will be available.
Error Response	Invalid Access Information.

ii.   SAP Screen
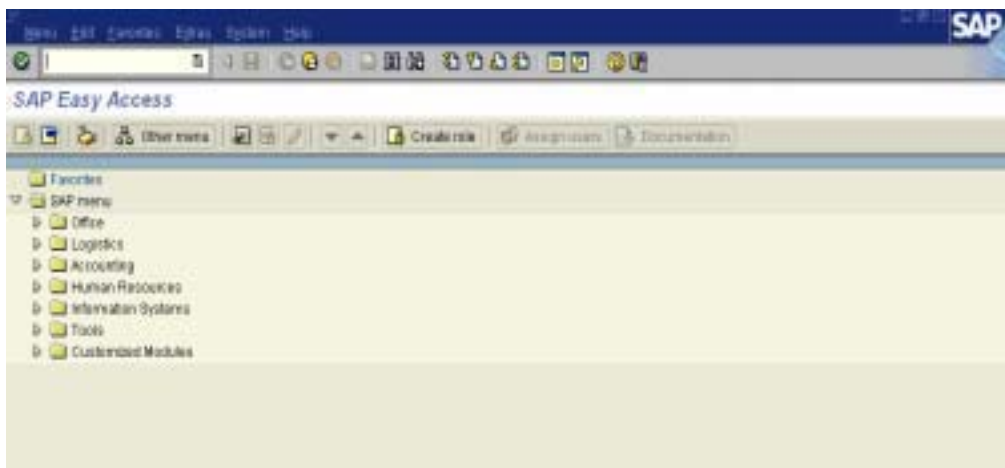
Precondition	User with authorized only.
Features	User will be able to access and use the SAP options with authorized access.
Input	Type the transaction to run Document Management System. (Example PA20 for HR module)
Expected Outcome	System displays the screen
Error Response	N/A

iii.   HR screen
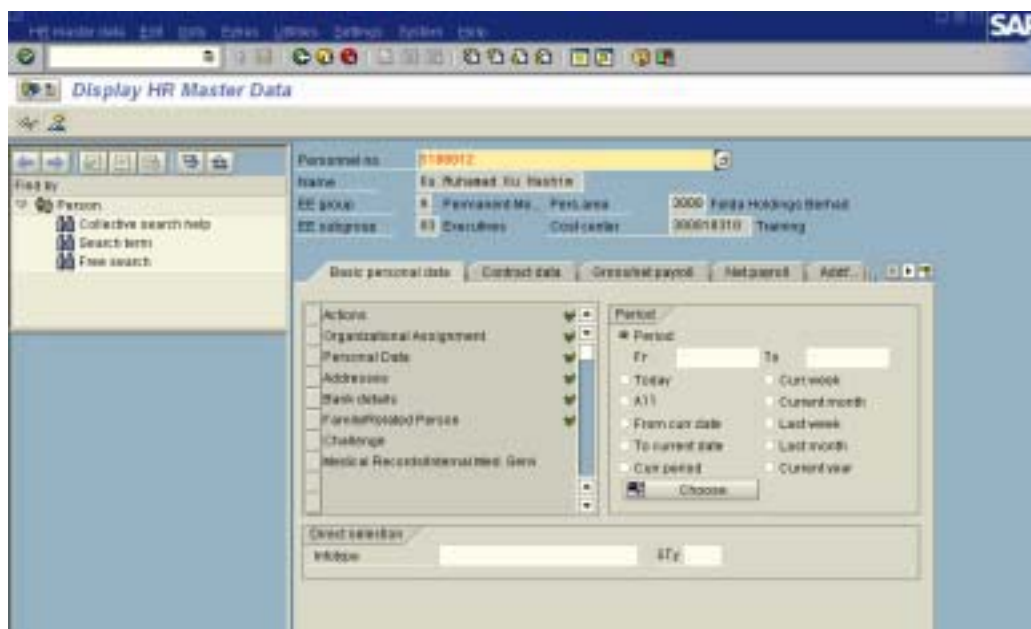
iv.   Settler & Land Plantation Screen

4.6   Hardware Requirement

These are the hardware requirements for Document Management System:-

(i)   Archiving server (IXOS) and WORM jukebox

Pentium III MHz NT server

~ 700/100Mhz Pentium III Xeon processor with 2048KB L2 cache (X2)

~ 4GB 100 MHz ECC SDRAM RDIMM

~ 9.1GB 10000 rpm Ultra 160 SCSI Hot-swap SL-HDD RAID 1 (9.1GB X 10)

~ ServeRAID-4M Ultra 160 SCSI Controller card

~ Gigabit and Integrated 10/100 Ethernet Controller Card

~ CD-ROM Drive Internal 40X max-17Xmin

~ 1.44MB 3.5" Standard Diskette Drive

~ 20/40 GB DLT SCSI Internal Tape Drive

~ 500W + 250W Hot-Swap Redundant Power Supply

~ S3 Trio 3D Graphics – 4 MB SGRAM

~ Basic Key Rubber Dome Keyboard, mouse 2 button, 15" monitor

~ MS Windows NT server (c/w 5 CAL), service Pack 6a (latest), MS internet Explorer 5.5

~ Jukebox – Model 3995C64 – 540 GB capacity c/w PCI Wide Ultra SCSI diff Adapter

(ii)   PC and scanner for IXOS Application

Desktop Pentium III 800MHz

~ Pentium III 800/133 MHz Processor/ 256KB L2 Cache

~ 128 MB 133 MHz SDRAM DIMM

~ 3.5" 1.44MB standard Diskette Drive

~ 20 GB Ultra ATA/66 W SMART II

~ Intel 815 e integrated Video 2D/3D Graphic AGP 2X

~ PCI wide Ultra SCSI adapter

~ P260W 21" NH Colour Monitor

~Mouse (2 button), Standard 104 keyboard

~ Software: Windows 2000 Professional NT with recovery

Fujitsu Scanner – M4097D Fujitsu Document A3 Image Scanner

~ Up to A3 size

~ 50–ppm simplex, 90-ipm Duplex

~ 100 sheets auto document feeder

~ SCSI – 2 interface & RS232C + Video Interface

~ Adaptec 32 bits SCSI card c/w Ext. SCSI cable

4.7   Test Plan

This test, which is planned to ensures that the system operates in the manner expected. The follow table 4.7, 4.8 and 4.9 to show the test plan for Finance, Human Resource and Settler & Land Plantation modules.

Table 4.7: Test Plan – Finance Module

No.	BUSINESS PROCESS STEPS	TRANS. CODE	INPUT DATA / SPECIAL INFORMATION
1	Ensure the IXOS-Enterprise Scan is opened. If not, execute it from menu bar: Start→ Programs → IXOS-Archive → Enterprise Scan.		
2	From Enterprise-Scan, select the appropriate profile.		Invoice (Non-PO)
3	Place the invoices on the scanner and click on ⬇️ (scan) button.		
4	Logon to SAP Client User Id Password start archiving of invoices Wrong Transaction – Error message "Transaction OWSS not exists".	OAWD	If wrong client and password log in message "Name & Password is incorrect, Please re-enter" will appear. Choose the appropriate company folder, and choose document type – 📅 Incoming Invoice (Non-PO). Invoke Enterprise Scan screen and choose invoice document that you want to process. Invoke back to SAP screen and process the invoice by clicking ▮ icon.
5	Process the invoice at SAP work place (Inbox – Workflow)	SBWP	Expand Inbox and click on Workflow. Double click on selected item. After verified the invoice, click on ▮ to process it. Enter the company code to do a posting.
6	Retrieve the image (invoice)	FBL1N	Invoice number

Table 4.7: Test Plan – HR Module

No.	BUSINESS PROCESS STEPS	TRANS. CODE	INPUT DATA / SPECIAL INFORMATION
1	Ensure the IXOS-Enterprise Scan is opened. If not, execute it from menu bar: Start→ Programs → IXOS-Archive → Enterprise Scan.		
2	From Enterprise-Scan, select the appropriate profile.		HR
3	Place the document on the scanner and click on (scan) button.		
4	Logon to SAP Client User Id Password		If wrong client and password log in message "Name & Password is incorrect, Please re-enter".
	To archive the documents.	OAWD	Choose the "Human Resource" folder and choose any document type – for archiving. Invoke Enterprise Scan screen and choose document that you want to archive. Invoke back to SAP screen and process the document by clicking icon.
5	Retrieve the image (HR document)	PA20	Enter a Personnel Number
	Retrieve the image (HR document) by Electronic Employee Folder	J6NY	Expand Solution Packages: ElectronicEmpolyee Folder.Click on Personal Folder.Click on Selection Master Data.Then, enter a Personal Number and click to accept the selection.

Table 4.8: Test Plan – Settler & Land Plantation Module

No.	BUSINESS PROCESS STEPS	TRANS. CODE	INPUT DATA / SPECIAL INFORMATION
1	Logon to SAP Client User Id Password		If wrong client log in – error message will appear "Client 840 is not available" Wrong User id & password log in message "Name & Password is incorrect, Please re-enter" will appear in SAP screen.
2.	Archive Settler Report		Enter Data Selection
3	Retrieve the document (SLP document) Wrong Transaction – Error message "Transaction J6NYY not exists.	J6NY	Click on Settler Folder. Select Report Then, enter a date, month or Company code as requested. Click navigation arrow to access archived document

4.8   Summary

This chapter is discusses about analysis system design and shows how the system will fulfilled the objective of project. The current system, proposed system diagram, physical design and test plan are also explained in this chapter.

CHAPTER 5

SYSTEM IMPLEMENTATION AND TESTING

5.1   Introduction

Implementation involves customization for IXOS Document Management Solution. This task is to configure SAP, IXOS Enterprise Scan and the IXOS client for document management, coding and system testing. The implementation activities are covered in this stage that includes the Finance Module, Human Resource and Settler & Land Plantation. The coding task involves ABAP programming to extract all the archive reports.

System testing is generally focused on two areas: internal efficiency and external effectiveness. This phase includes User Acceptance Test and IXOS will ride on the testing schedule for each business processes that have been chosen for IXOS implementation. Settler & Land Plantation testing will be done separately but in the same timeline. This will involve the group of users from Felda HQ.

5.2   User Manual for Administrator

This administrator manual is a procedure for customizing of finance module, human resource module and Settler & Land Plantation modules. This task also involves user authorization, programming which is using ABAP programming and installation procedure.

5.2.1   Configuration and Customization of Settler & Land Plantation & *ABAP* Programming.

5.2.1.1 *ABAP* Programming

ABAP is a programming language for SAP proprietary. The latest version, *ABAP* Objects, is object-oriented programming. SAP will run applications written using ABAP/4, the earlier ABAP version, as well as applications using *ABAP* Objects. *ABAP* syntax is similar with SQL statement.

5.2.1.2 SLP Data need to be archived

a) List of Program Involved

1. ZUSTP030_ARC - Pengiraan Dividen Kelapa Sawit

2. ZUSTS200 - Pengiraan Bayaran Hasil Pertama Bulan

3. ZUSTP010_ARC - Pengiraan Pendapatan Getah Kawasan Tambahan

4. ZUSTP090_ARC - Laporan Penyata Pendapatan Peneroka (Payslip)

5. ZUSTP020_ARC -Pengiraan Pendapatan Getah Kawasan Utama

6. ZUSTP040_ARC - Pengiraan Pendapatan Sawit Kawasan Tambahan

b) Create Table

1. ZARC001C -For calculation program

MANDT	MANDT	CLNT	3	PK	Client
KURZTEXT	SAETEXT	CHAR	40	PK	SAP ArchiveLink: Text information field
NAME	PROGRAMM	CHAR	40		Program Name
ZTAHUN	ZTAHUN	NUMC	4		Tahun
ZBULAN	ZBULAN	CHAR	2		Bulan
ZBUKRS	ZBUKRS	CHAR	4		Kod Syarikat
ZREGCD	ZREGCD	CHAR	2		Kod Wilayah
VERSION	SAEVERSION	NUMC	4		Version no

2. ZARC001R - For report program

MANDT	MANDT	CLNT	3	PK	Client
KURZTEXT	SAETEXT	CHAR	40	PK	SAP ArchiveLink: Text information field
NAME	PROGRAMM	CHAR	40		Program Name
ZTAHUN	ZTAHUN	NUMC	4		Tahun
ZBULAN	ZBULAN	CHAR	2		Bulan
ZBUKRS	ZBUKRS	CHAR	4		Kod Syarikat
ZREGCD	ZREGCD	CHAR	2		Kod Wilayah
ZKDRGI	ZKDRGI	CHAR	1		Indikator untuk Rancangan
ZKDRGN	ZKDRGN	CHAR	3		Kod Rancangan

c)   Program Modifications

These programs extracting from existing system (SLP System) and will be modified for archiving purposes.

i) List of program using table ZARC001C:-

1. ZUSTS200_ARC
2. ZUSTP010_ARC
3. ZUSTP030_ARC
4. ZUSTS200
5. ZUSTP040_ARC

ii) List of program using table ZARC001R:-

1. ZUSTP090_ARC

```
*------------------------------------------------------------------------*
* Program Name : ZUSTP030_ARC                                            *
* Program Title: Pengiraan Dividen Kepala Sawit - Archive                *
*------------------------------------------------------------------------*
report  zustp030_arc no standard page heading
        line-size 132  line-count 65.


*------------------------------------------------------------------------*
* TABLES                                                                 *
*------------------------------------------------------------------------*
tables: zarc001c,   "For calculation program
        zldmrg2,    "Jadual Maklumat Rancangan
        zsttpbn,    "Jadual Bulan Penyata Pendapatan Peneroka Diproses
        zldmpkt,    "Jadual Maklumat Peringkat
        zldmblk.    "Jadual Maklumat Blok


*------------------------------------------------------------------------*
* INTERNAL TABLES & DATA DEFINITION
*------------------------------------------------------------------------*

data: begin of itab occurs 0,
        zbukrs like zsttnbf-zbukrs,
        zregcd like zldmrg2-zregcd, "Region Code
*       zkdrgi like zsttpbp-zkdrgi,  "Rancangan ind
*       zkdrgn like zsttpbp-zkdrgn,  "Rancangan
     end of itab.
```

The detail coding could be referred in Appendix A

5.2.1.3 Process Indexing

Process of indexing involves various steps as below:

1.   Create Document Type

i) TAC OAC2 – define document type

Doc. Type	Doc. Type Text	Doc. Class
ZARC001C	Calculation Program	ALF
ZARC001R	Report program	ALF

ii) TAC OAC3 – link to content repository and SAP object

Object. Type	Doc. Type	S.	Content R.	Link	Ret. per
DRAW	ZARC001C	X	D2	TOA01	
DRAW	ZARC001R	X	D2	TOA01	

iii) Create View on Index and link table

Database View = ZVZUSTP090 (TAC SE11)
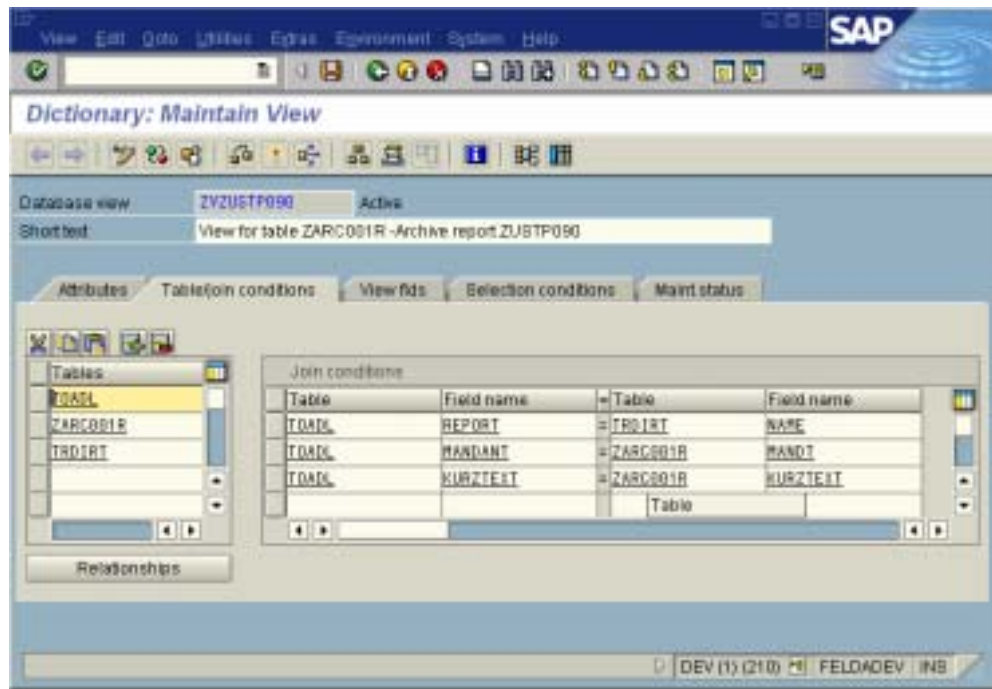
5.2.1.4 Process Retrieving

1. Create IXOS-DocuLink view (*TAC J6NP*)

IXOS-DocuLink is used to retrieve archived documents. *DocuLink* Views are configured to enable this access.
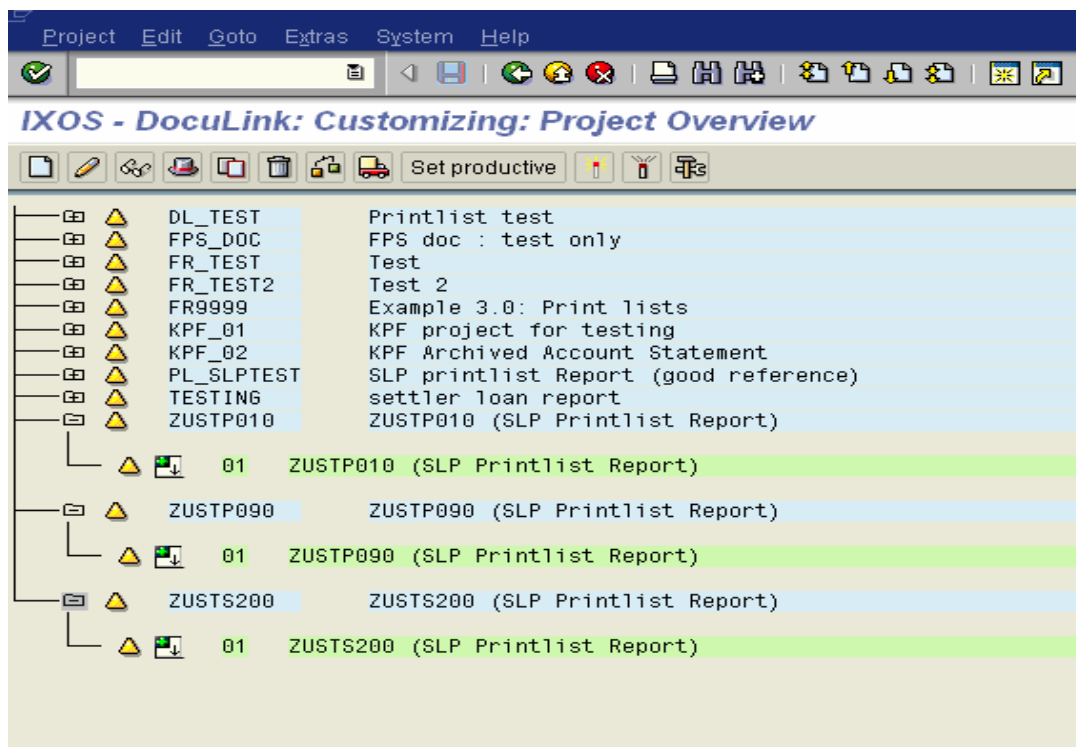
Create a new project for one SLP report. (In this example **ZUSTTEST**)

Double click on that project.

Create a new view of this project. (See below)

Double click on the view tab.

Create a new **Document Selection**. (See as picture below)
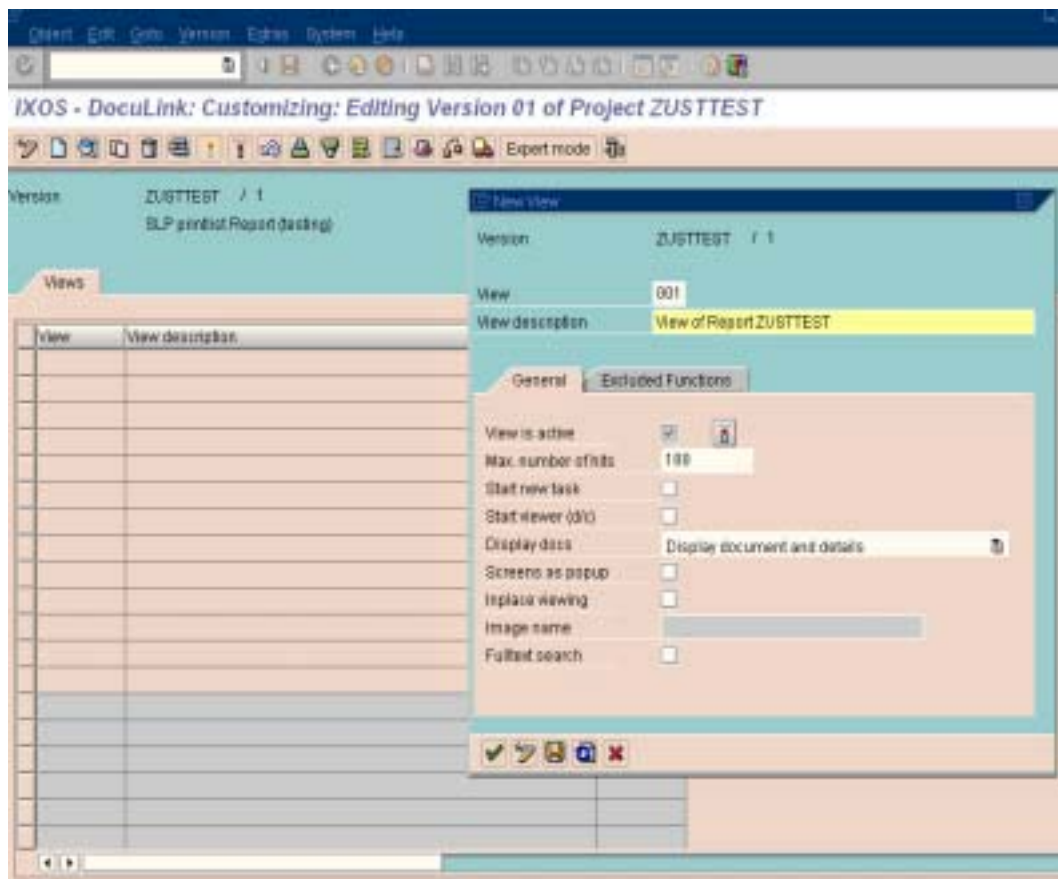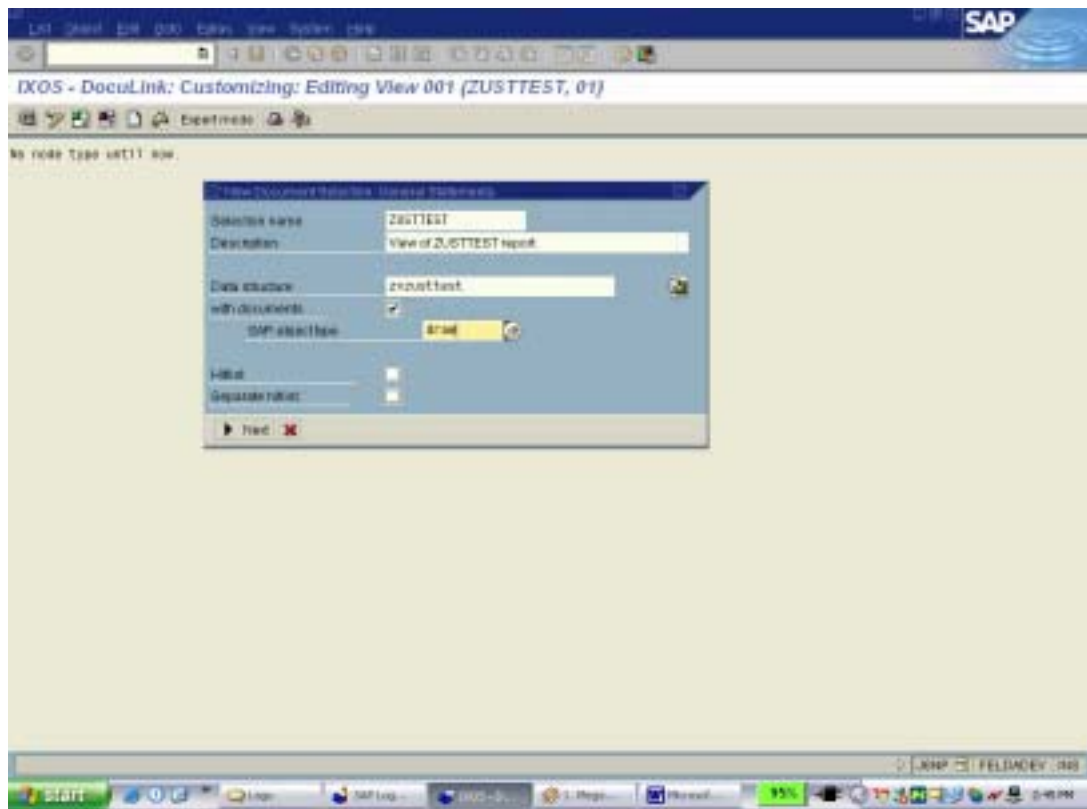
Choose and select **Selection Screen**. (as example below)

  - ZTAHUN

  - ZBULAN

  - ZBUKRS

  - ZREGCD

  - ZKDRGI

  - ZKDRGN

Choose and select **Single Attributing** (dynamics node). (as example below)

  - 1 ZBUKRS

  - 2 ZTAHUN

  - 3 ZBULAN

  - 4 ZREGCD

Choose and select **Multiple Attributing** (table node). (As example below)

    - REPORT

    - DATUM

    - AR_TIME

Then, Generate.

Click on **Expert Mode** button.

Click on + sign in front of selection node (**S_ZUSTTEST**). This will show the sub tree of selection node as below.
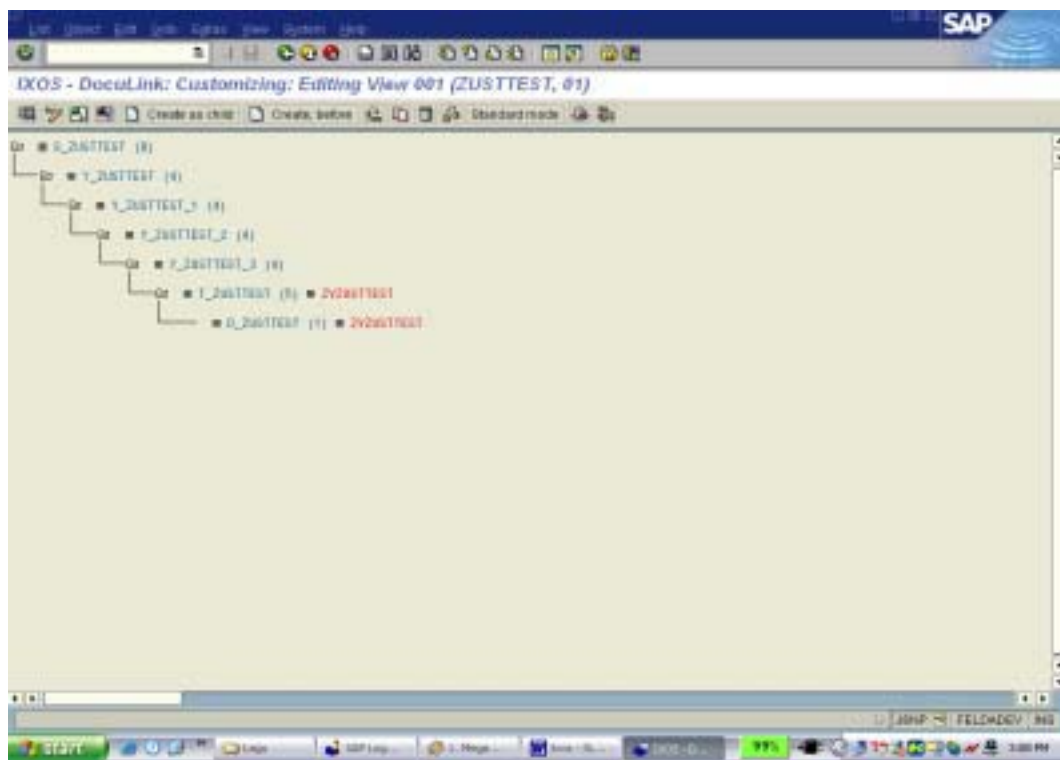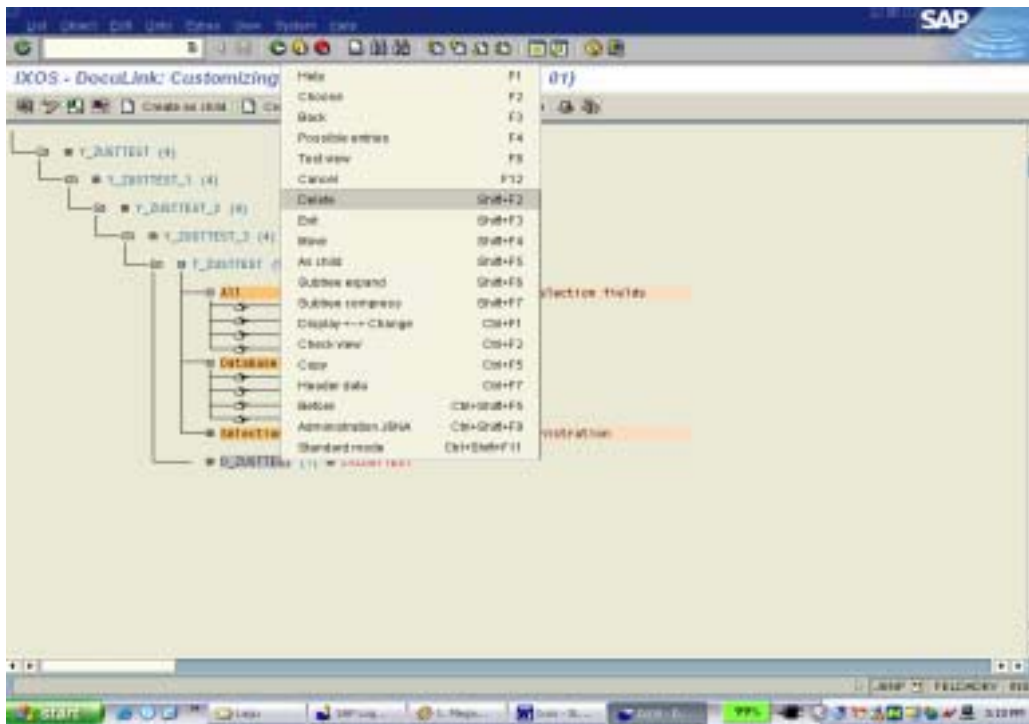
Click Yes twicely to accept the deletion.

Double click on sub tree **T_ZUSTTEST (5).** (See as below)

Change the **Selection Type** from **5-Valuetab** to **1-Document**.

In **Insert/Delete/Change** tab, uncheck **Insert Allowed** box.

Save and close.

See as below
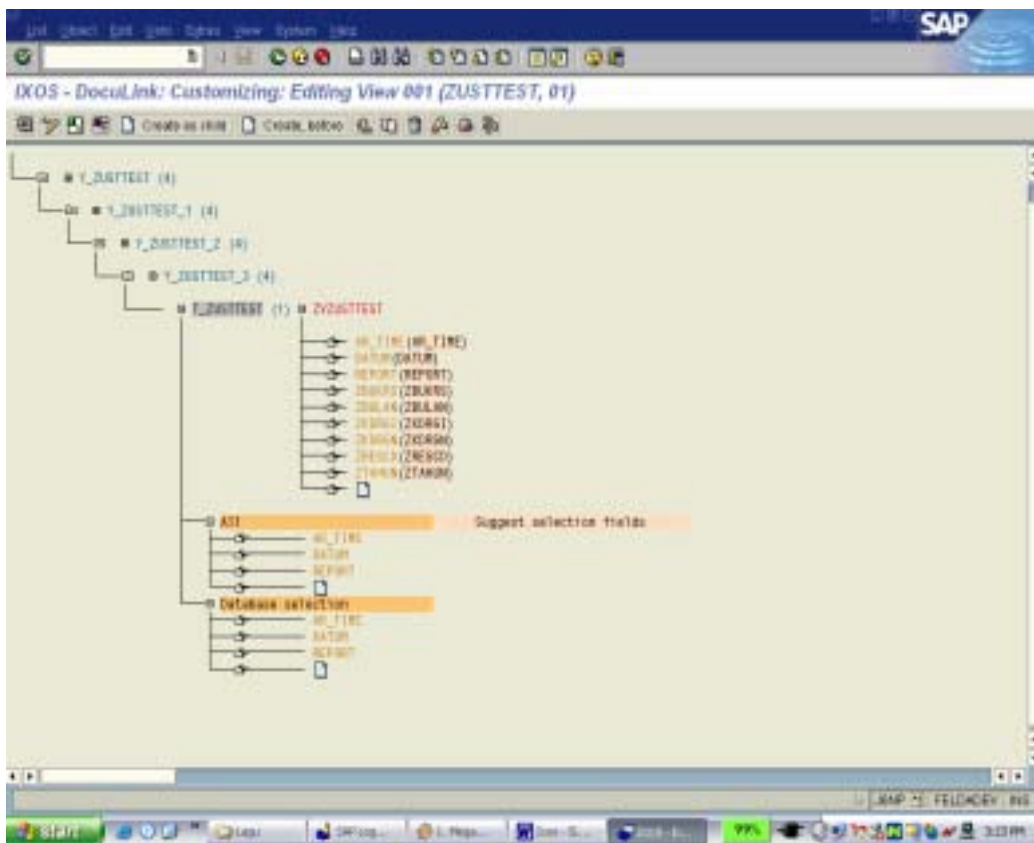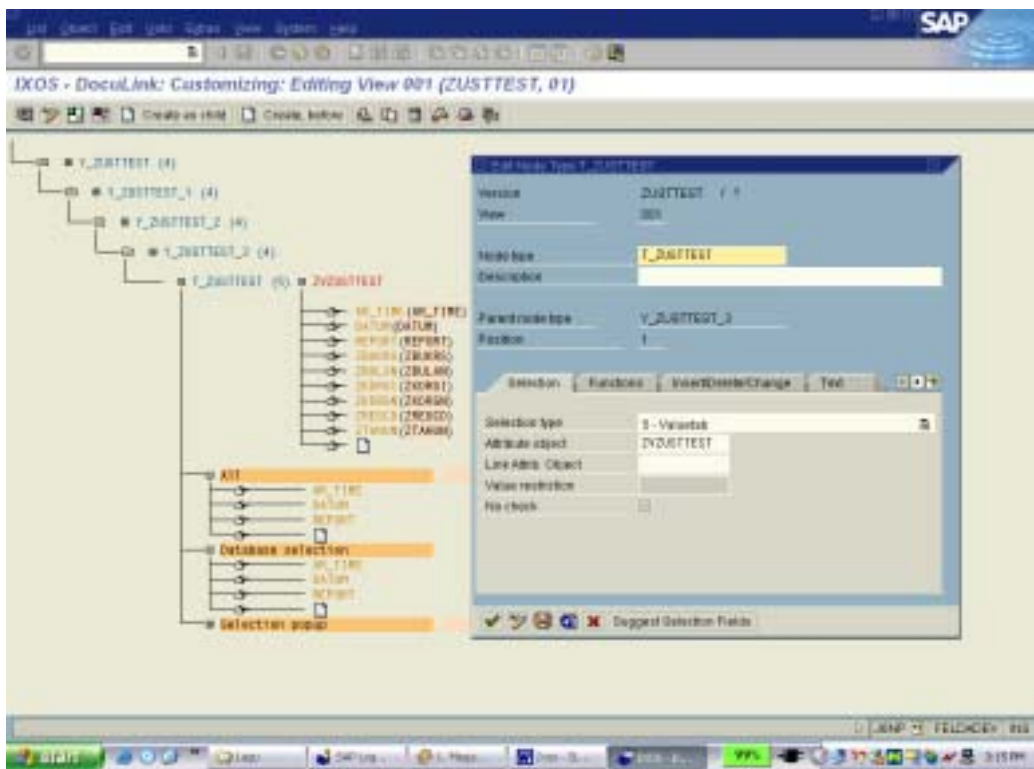
Go to **Attribute Objects** tab.

Double click on attribute object (in this example **ZVZUSTTEST**). See as below.
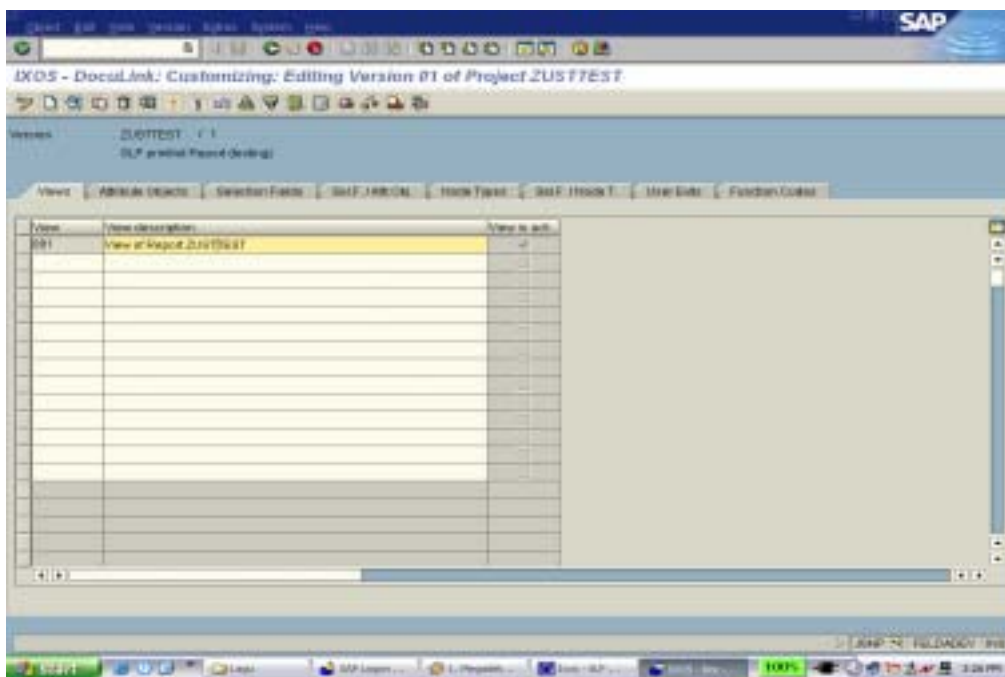
Key in **Document Type**. In this example: **ZARC001R**.

Check **Internal document. Type** box.

Save and close.
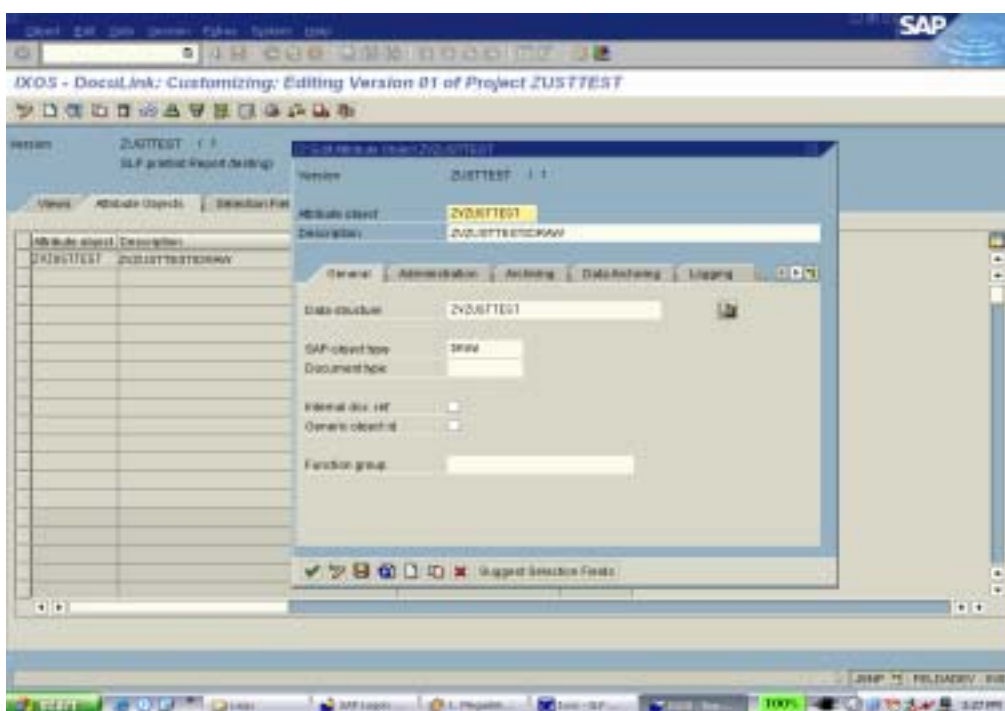
Go to **Selection Fields** tab.

Add selection fields.

@ARC_DOC_ID

@ARCHIV_ID

See as below.
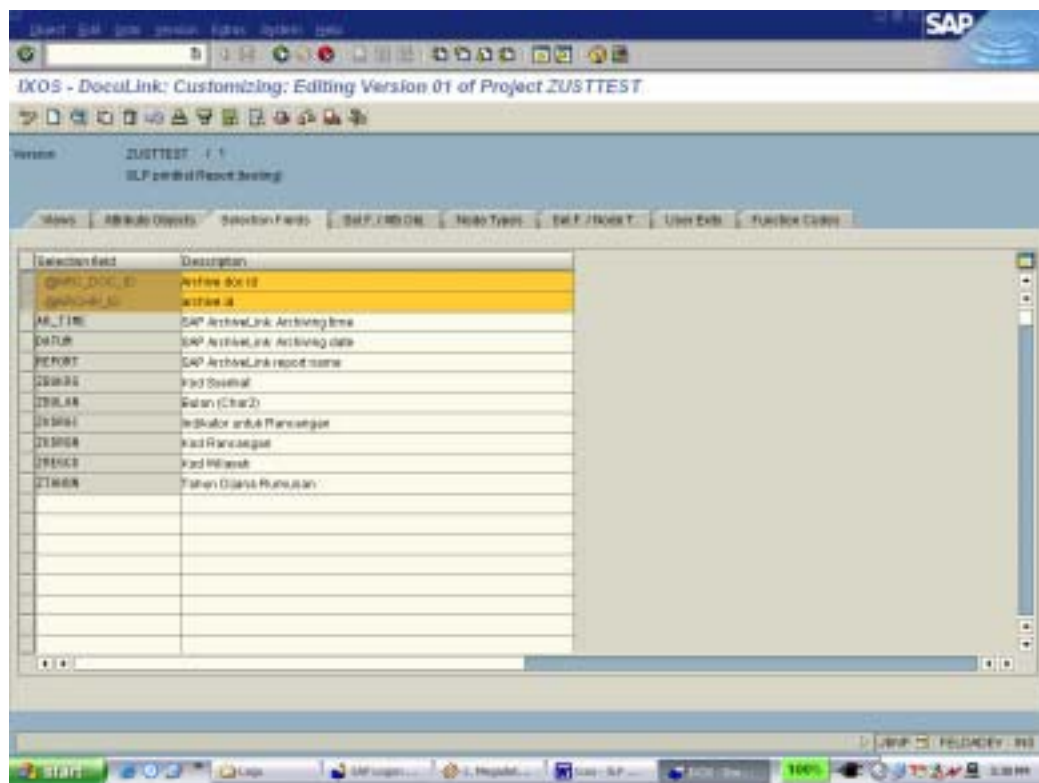
Add two more entry. See table below.

Attribute Object	Selection Field	Field Name
ZVZUSTTEST	@ARC_DOC_ID	ARC_DOC_ID
ZVZUSTTEST	@ARCHIV_ID	ARCHIV_ID

Select these two entries
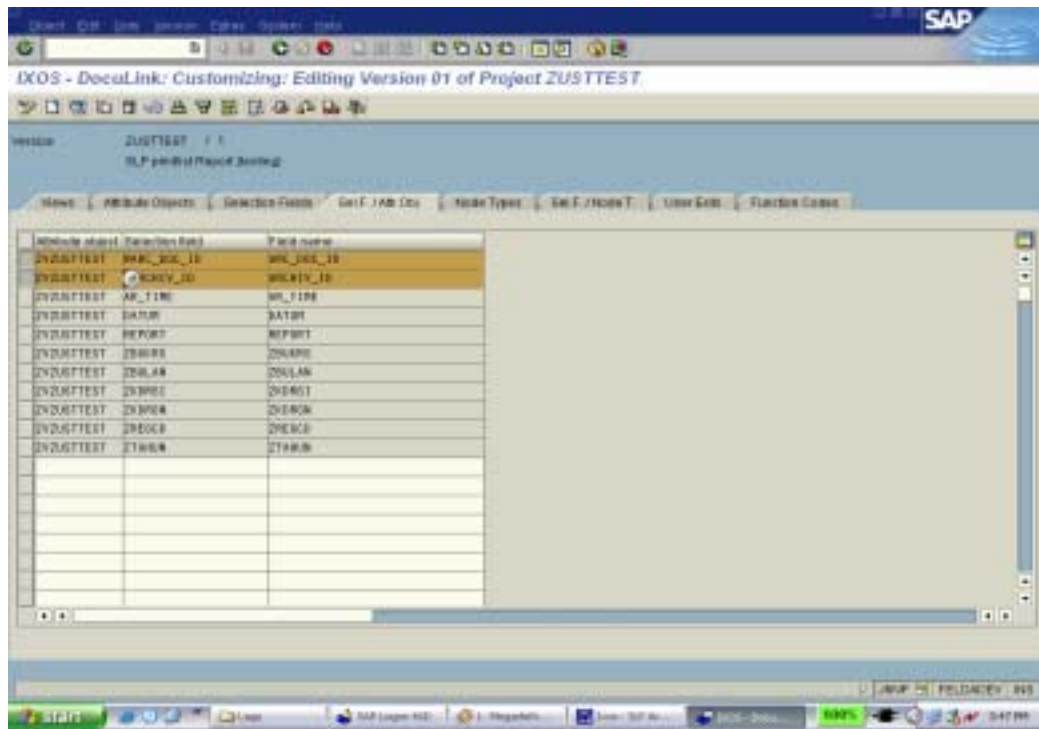
Go to **Node Types** tab. (No changes here)
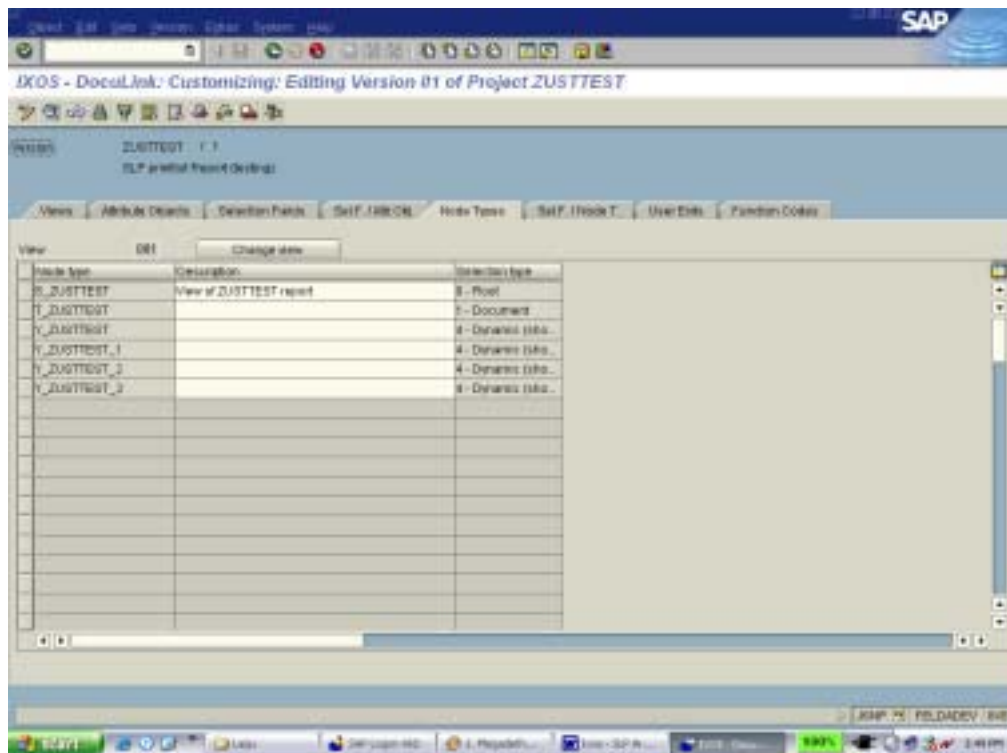
Go to **Selection Field/Node Types** tab.

Add two more entry in this tab. See table below.

Node Type	Selection Field	Database	Selection
T_ZUSTTEST	@ARC_DOC_ID	√	
T_ZUSTTEST	@ARCHIV_ID	√	

After added these two entries, see as picture below.
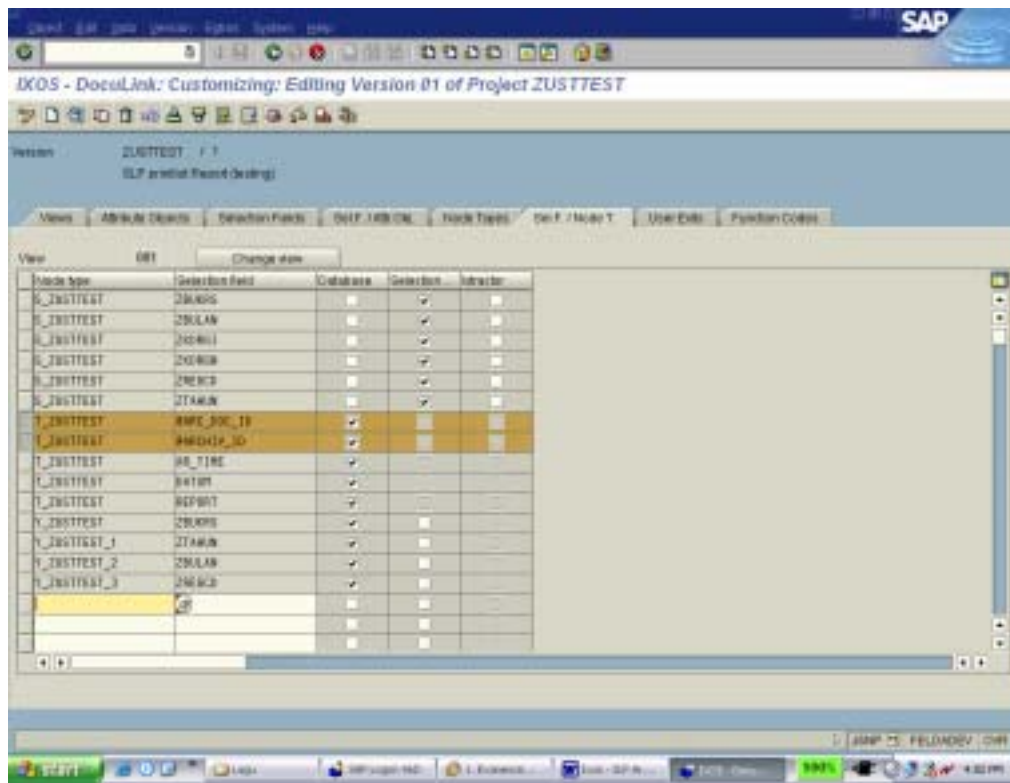
Now, configurations and settings are completed. Then can test view to see whether the configurations and settings are correct.

This is the screen that user will entry the data and retrieves the SLP document.
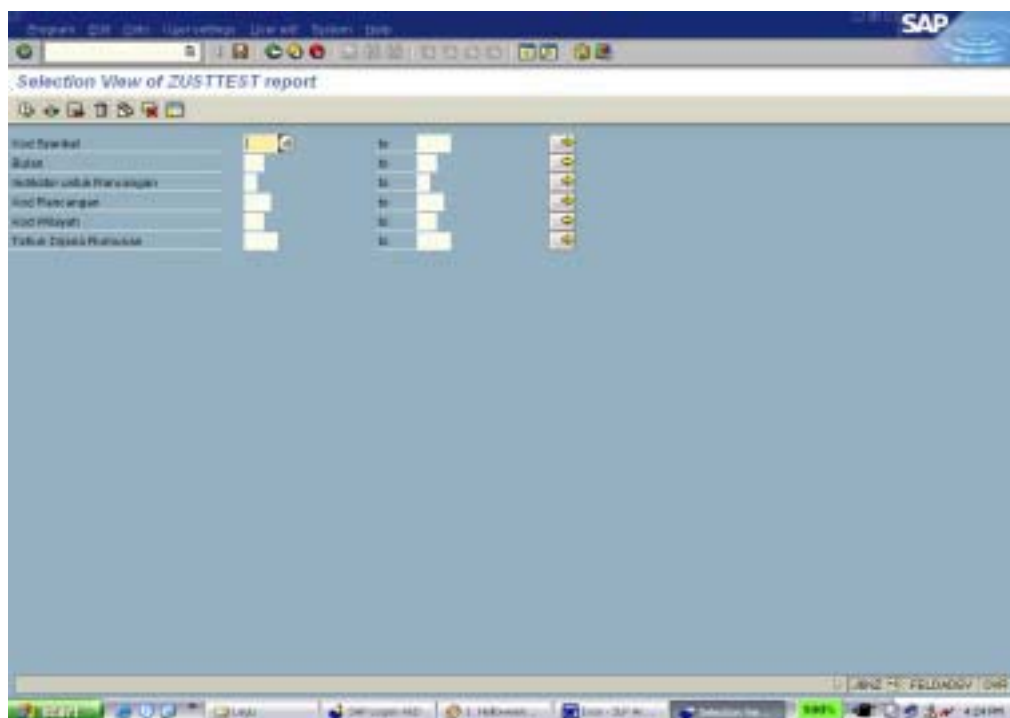
5.2.1.5 User Authorizations

This task is to define who is allowed to use this system SAP authorization object includes:

S_TCODE   - Check for transaction

S_WFAR_OBJ   - SAP ArchiveLink: document access

J_8AG_PROJ   - Project and View

J_8AG_DATA   - Customizing, change and administration.

AUTH_CHECK   - Customer specific checks

5.2.2   Configuration for Finance Module

The configuration of Finance Module involves several activities. The activities are:

5.2.2.1 Define Document Type – Transaction OAC2

First step is to define Document Type for the types of documents that Felda is using.
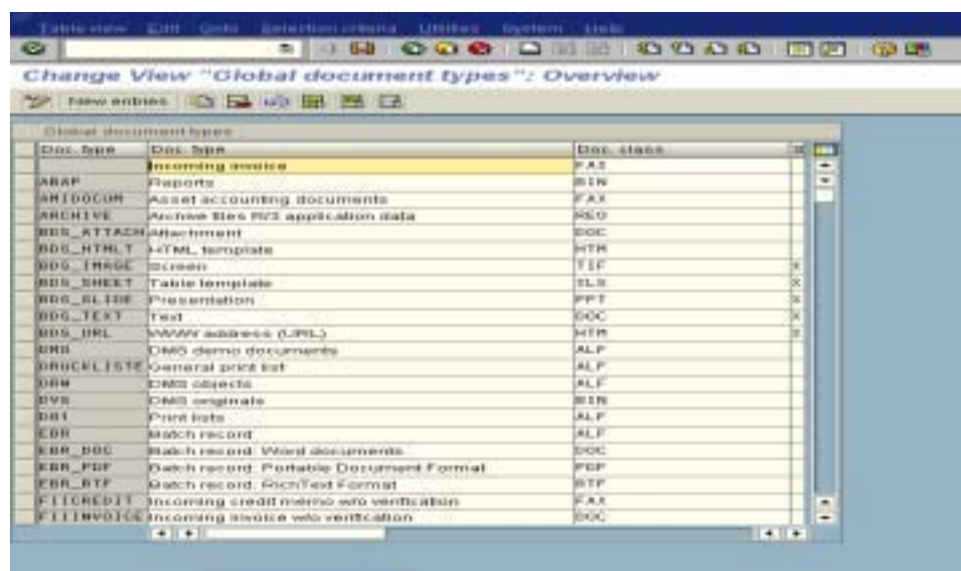
The above are the **Document Types**.
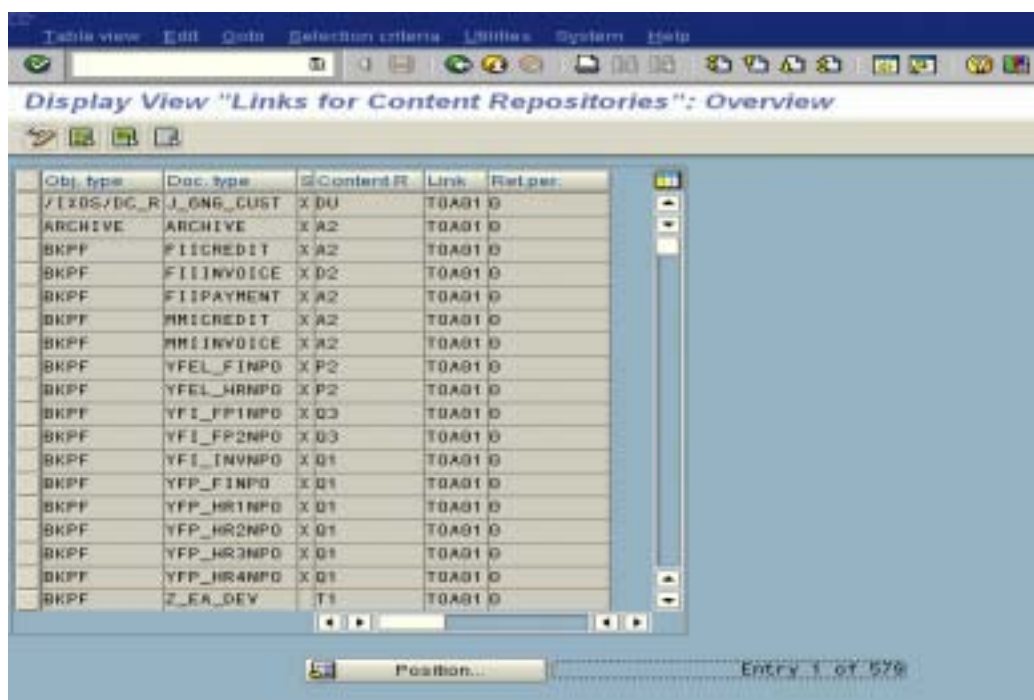
To create a new type, click on the "**New entries**" button

Document Type: Starts with "Y".

Document Class: FAX for all scanned documents. DOC for MS Word document

5.2.2.2 Link the Document Type – Transaction OAC3

The second step is to create a link to the Document Type. This step is to define the **Object Type, Content Repository,** and **link table** that the Document Type is using.

Object Type

HR document is **PREL**;

FI Invoice is **BKPF**;

Status

Mark as "X" to activate it.

Content Repository used in development system (DEV) is T1. Different SAP machine will have different Content Repository, and different group of documents will normally assign to different Content Repository. It is advisable to check with the archive server system administrator before customization. In this project, two Content Repositories are recommended:

Content Repository 1: For Invoices

Content Repository 2: For HR Documents
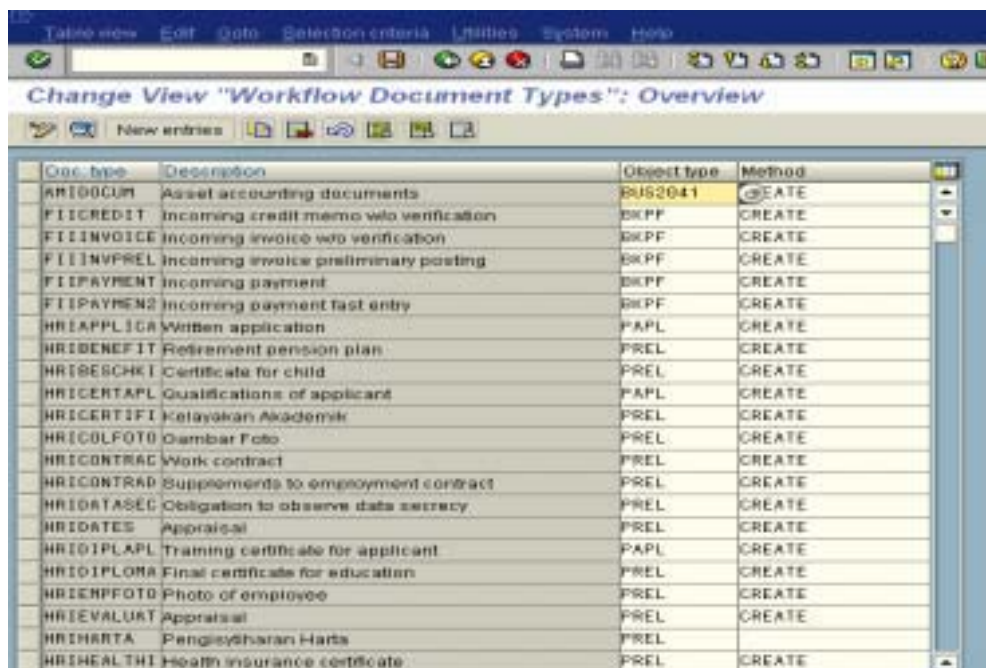
Link Table

Invoices are **TOA01**

HR documents are **TOAHR**

5.2.2.3 Create Workflow Document Type – Transaction SOA0

This step is to check link between Document Type and Object Type.

5.2.3 Human resource Module

Transaction Code: SPRO ->SAP Reference IMG -> Personnel Management -> Personnel Administration -> Tools -> Optical Archiving -> Set Up Optical Archiving in HR

In Human Resource (HR) module, any documents can be stored on IXOS and link it to the HR master. However, for this implementation, only the following documents are included.

Documents	(InfoType/Subtype)
Photo	(0002)
Education	(0022)

         - SPM (MCE - Malaysia Certificate Education)

           - diploma

           - first degree

           - post degree

           - other qualifications

bond or contract	(0016)
confirmation letter	(0016)
promotion letter	(0000)
increment letter	(0008)
warning letter	(035/04)
company rewards	(035/03)
IC	(0185/01)
Passport	(0185/02)

5.2.4 How to Setup Profile for Scanning Document

No.	Steps Description	Menu Path / Action	Result / Output
1.	Open Profile Setup properties	- Profile -> Add/Remove…	Profiles properties opened
2.	Create new profile for scanning document	- Click on Create button	
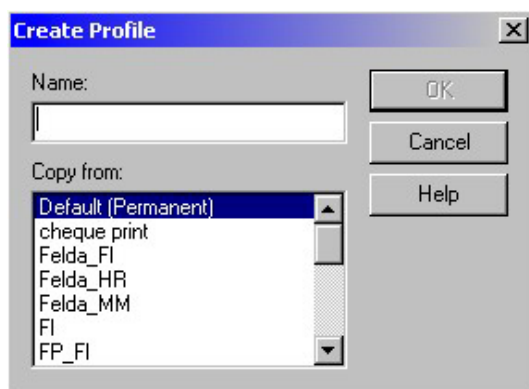
No	Steps Description	Menu Path / Action	Result / Output
		- Type in the name of profile you want to create. Example: FPS_FI means scanning profile for company FPS and specifically for FI documents (invoices). - Click OK to create the new profile.	New profile created
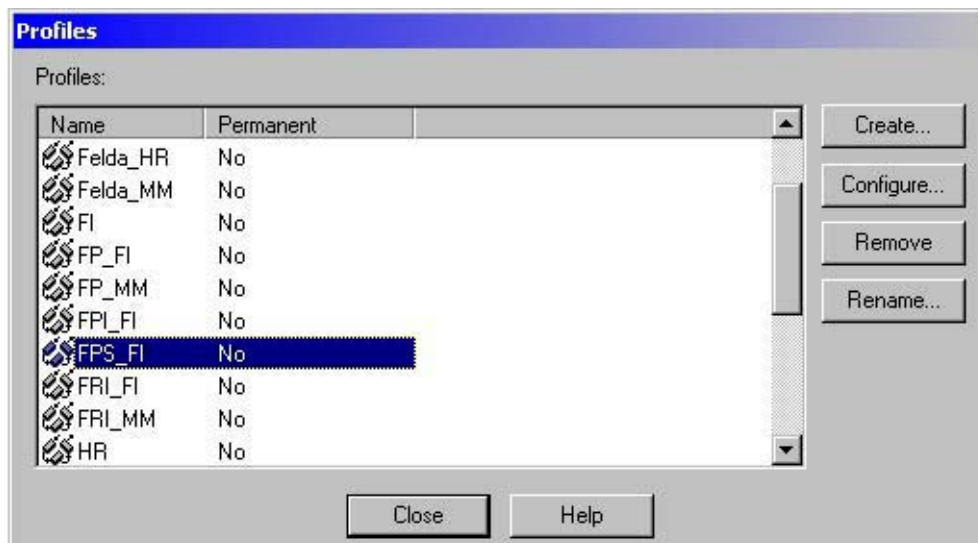
No	Steps Description	Menu Path / Action	Result / Output
	Configure the new profile	- Click on Configure button	

5.2.5   Installation Procedure

IXOS-ARCHIVE Archive Administration Clients include:

- ▪ Archive Admin   -used to process **COLD** jobs.
- ▪ Document Pipeline   -used to monitor the progress of **COLD** jobs.

From *IXOS-eCONserver* product CD, Launch '*IXOS-ARCHIVE* Setup'

- Choose 'Archive Server'

- When the following dialog appears, select 'Archive Administration Client (Admin, Monitor, Pipeline)', then Next.
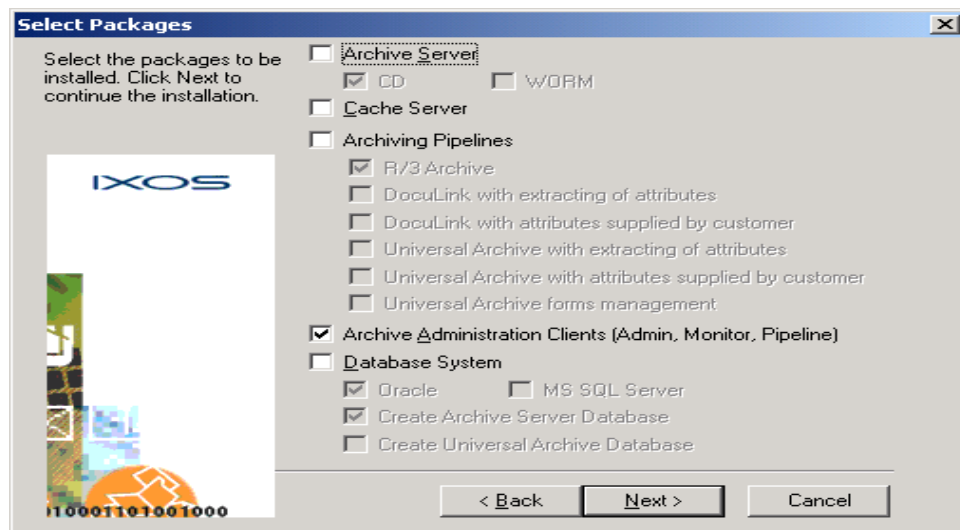
- Install COLD R/3 from IXOS-eCONserver CD

  i. '*IXOS-ARCHIVE* COLD R/3 Pipeline' is required to be installed on the archive server to process R/3 COLD documents.

  ii. From *IXOS-eCONserver* product CD, Launch '*IXOS-ARCHIVE* Setup'

- Select 'Archiving Pipeline -> DocuLink with extracting of attributes':
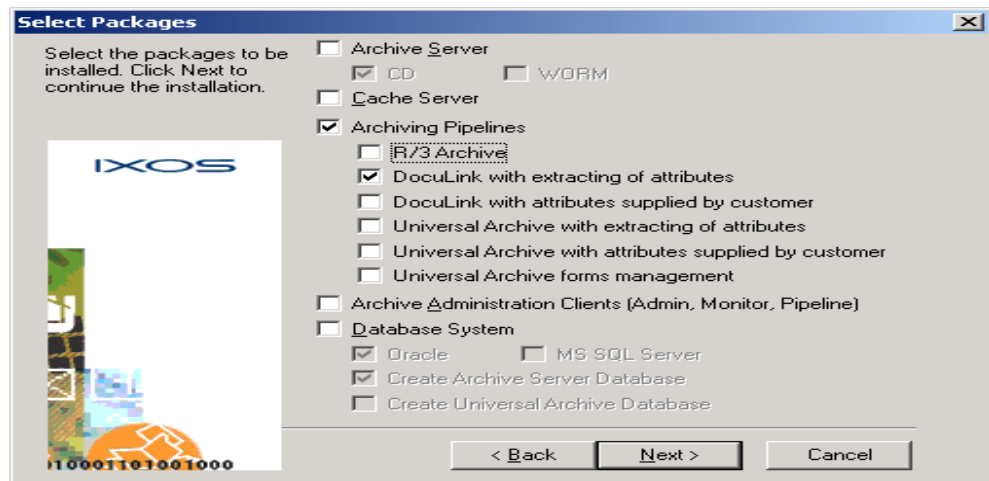
- Two additional directories on the Archive Server are created:
  a) Batchimport   config files
  b) COR3Data   host files

a) Batchimport directory:
  c) commands   R/3 destination, R/3 doc type, technical information
  d) filter_op   technical format of the host file
  e) form_info   assignment of form overlay (not used)

5.3 Test Result/System Evaluation

System testing covers testing of the Document Management System. This is to ensure that the system is able to communicate between the servers to ensure that document management system operates effectively. The administrator and users further test the system during pilot testing. Detailed testing will ensure the system's stability before installation for production usage. Outlined below are the main test types that will be performed for this release.

i)   User Authentication Test

There are 2 types of authentication test. The first authentication is done when a user logs in to the system. This will check the user's credentials against the database to determine if that user has the right to access the information.

The second authentication is authorization. This is where it determines what details the accessible user has control of. Example, both the administrative and manager have to access to it. But both have a different level of access to right to it. The administrator has Full Access Authority over it whereas the Manager has Read Only Access right to it.

ii)   User Management Test

This part involves to testing every each module where it determine each modules are successfully to access. Also it includes the administrator's role in cases where they have to update the user profiles. Example suspend user id, activate the user id and deactivate the user id, etc.

iii)   User Acceptance Test

This test, which is to ensures that the system operates in the manner expected, and any supporting material such as procedures, forms etc. are accurate and suitable for the purpose intended. It is high level testing, ensuring that there are no gaps in functionality.

iv)   Security Testing

Security testing is conducted by login as user and admin to verify the features enabled of each users.

v)   Integration Testing

An Integration testing ensures that all settings are correct, that the corresponding customizing is maintained correctly, and that the relevant programs run without errors. The test data should be defined clearly so that the results can be checked.

vi)   Test Result - Evaluation

A set of questionnaire has been prepared and attached in appendix B and table 5.4 shows the evaluation scale for each question in the questionnaire.

Table 5.4: Questionnaire evaluation scale

Scale	Very Poor	Poor	Fair	Good	Excellent
Value	1	2	3	4	5

Generally, questionnaire question divided into several categories as follows:

1) Interface
2) Performance
3) Usability
4) Suitable

Figure 5.4.1: Bar Chart of evaluation scale
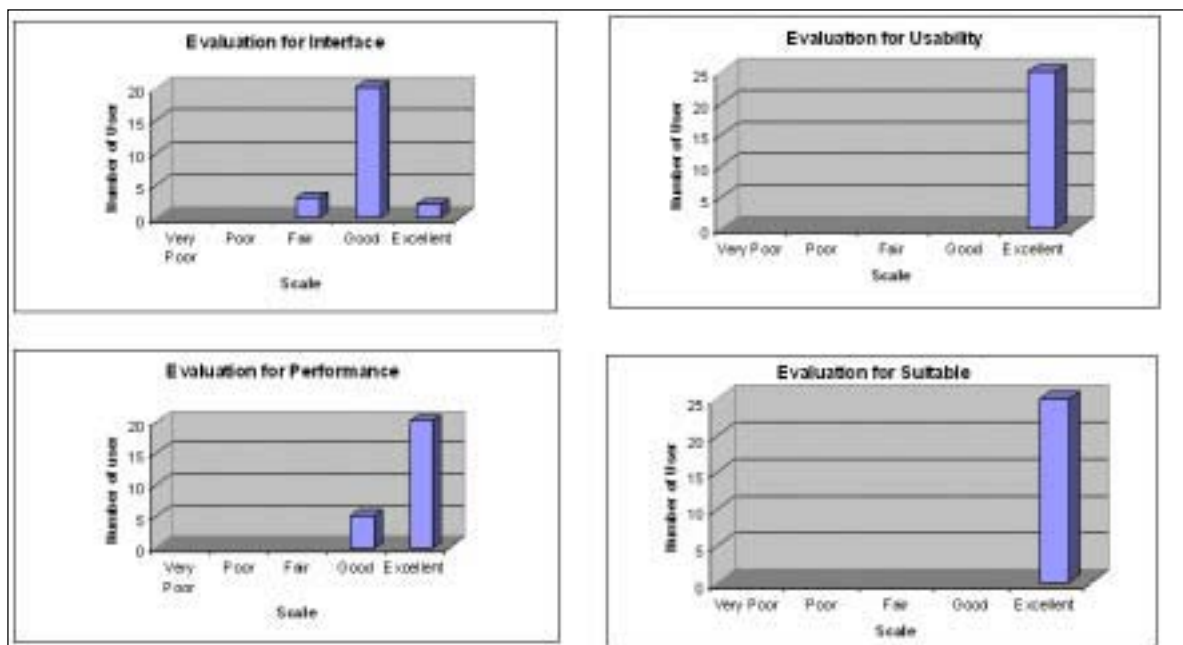
For interface category, user commentary is very useful to ensure that the user interface is suitable, simple, easy to use and yet user friendly. Usability category purpose is to examine Felda Document Management System (DMS) usability whether it is suitable and meet the user requirements. Suitable category purpose is to ensure that only appropriate document is available in the system and assist user to manage the documents through this system. User manual is provided during the user acceptance test to guide and explain the DMS functionality.

Several questions have been created for each category to seek respond from the system. Respond from users are collected and analyses using Microsoft Excel to get bar chart of evaluation scale. Figure 5.4.1 shows the graph value for each question in the questionnaire.

Based on figure 5.4.1, majority of the users have an excellent perception on the DMS on performance, usability and suitable. In conclusion, the result shows that user agrees to manage their documents using this system as a part of daily activity and their responds are very encouraging. This result also shows that the DMS can eliminate paper handling and easy document retrieval from *SAP* R/3.

vii)   Test Result – Checklist

Below table 5.5, 5.6 and 5.7 are checklist test result for module Finance, Human Resource and Settler & Land Plantation.

Table 5.5: Test Result Checklist – Finance Module

No.	BUSINESS PROCESS STEPS	TRANS. CODE	OK / ERROR
1	Ensure the IXOS-Enterprise Scan is opened. If not, execute it from menu bar: Start→ Programs → IXOS-Archive → Enterprise Scan.		OK
2	From Enterprise-Scan, select the appropriate profile.		OK
3	Place the invoices on the scanner and click on (scan) button.		OK
3	Logon to SAP Client User Id Password To start archiving of invoices Wrong Transaction – Error message "Transaction OWSS not exists".	OAWD	OK OK
4	Process the invoice at SAP work place (Inbox – Workflow)	SBWP	OK
5	Retrieve the image (invoice)	FBL1N	OK

Table 5.6: Test Result Checklist – HR Module

No.	BUSINESS PROCESS STEPS	TRANS. CODE	OK / ERROR
1	Ensure the IXOS-Enterprise Scan is opened. If not, execute it from menu bar: Start→ Programs → IXOS-Archive → Enterprise Scan.		OK
2	From Enterprise-Scan, select the appropriate profile.		OK
3	Place the document on the scanner and click on (scan) button.		OK
4	Logon to SAP Client User Id Password If wrong client log in – error message will appear "Client 840 is not available" Wrong User id & password log in message "Name & Password is incorrect, Please re-enter" will appear in SAP screen. To archive the documents. Wrong Transaction – Error message "Transaction OWSS not exists".	OAWD	OK OK
5	Retrieve the image (HR document)	PA20	OK
	Retrieve the image (HR document) by Electronic Employee Folder	J6NY	OK

Table 5.7: Test Result Checklist – SLP Module

No.	BUSINESS PROCESS STEPS	TRANS. CODE	OK / ERROR
1	Logon to SAP Client User Id Password If wrong client log in – error message will appear "Client 840 is not available" Wrong User id & password log in message "Name & Password is incorrect, Please re-enter" will appear in SAP screen.		OK
2.	Archive Report		OK OK
3.	Retrieve the document (SLP document) Wrong Transaction – Error message "Transaction J6NYY not exists.	J6NY	

viii)   System Documentation

The user, administrator and system documentations are important for users' review since they will be the ones managing the system after implementation. The documentation created has to be user friendly and simple for review and system management purposes.

ix)   User Documentation

User documentation provides a walkthrough of Document Management System. The user documentation provides information on how to use the system. The user documentation can be referred to Appendix C.

5.4   Conclusion

In conclusion, this chapter has entirely discussed about the procedure and process in implementing the system and testing of DMS. The programs codes include in this chapter are only parts in the overall system implementation, the details coding will include in appendix. The table 5.8 below shows the activities and process in implementation and testing phase.

Table 5.8: Activities and Process Implementation

Activity/Tool	Process	Value Added
Report Generation	Using ABAP. ABAP is a programming language for developing applications for the SAP R/3 system ABAP is using to extract the SLP report for archiving process.	Easy to retrieve from the SAP R/3 system
Table Entity Relationship Diagram	In System Design (Chapter 4)	-
Paper & Non paper	Scan Process indexing involves 4 categories: a) Create table or key b) Create business object c) Create ArchiveLink Link d) Define document (DOC, ALF for printlist, FAX, PDF).	Complementing document process.

CHAPTER 6

ORGANIZATIONAL STRATEGY

6.1   Change Management

To meet the present and future challenges, Felda is focusing to develop plantation areas in a productive way by adopting effective agricultural management practice such as good field maintenance, maximizing production, and lower cost of production. Felda also encourage the development of a progressive, productive and disciplined settlers' community.

Strategic information systems change the goals, operations, products, services or environmental relationships of organizations to help them gain a competitive advantage. Thus, Felda has decided to have a document management system that can help organization to reduce consolidation and maintenance cost. This system is design that can optimize SAP processes which include core business processes such as invoice verification, incoming order management or customer request resolution and to increase profit.

6.1.1 Change Management Scope

The aim of the Change Management Plan is to support the implementation of the DMS. The scope of the change management includes the following:

a) To ensure successful technology assimilation by the users.

b) To develop Change Management skills for developer to ensure success of the DMS project and help realise the Project benefits.

d) To change the mindsets of users to accept the DMS.

e) To communicate change and win commitment of developer towards sustainable positive results.

6.1.2 Change Management Objectives

The change management objectives is identify as follows:

a) To build understanding and commitment to changes towards implementation of the system and its effective utilization

b) To align the people and behaviour to support the desired change

c) To enable continuous performance to sustain the change.

6.1.3　Change Management Strategies

The key change management strategies are as follows:

a) Communicate openly to the users of the DMS system

b) Help people envision how the future will be better with the DMS system

c) Understand the concerns and resistance to change

d) Develop change management activities to address concerns and overcome resistance

e) Develop change leadership to help in the implementation of DMS system.

6.1.4　Risk Management

Risk Management is the process of planning, leading, and controlling the resources and activities of an organization in order to mitigate its risk of loss effectively. The key to a good risk management program is to balance the risk of loss from unexpected causes against the economic cost of protection.

Below is a number of risk management that management concern to cater in Felda organization:

a)   IT Infrastructure, procedure and documentation

Standard of Procedure is provided in installation of PC equipments, printers, VSAT, LAN and user manual so that the system will operates in proper way.

b)   IT Security Policy

Security can be defined as "the state of being free from unacceptable risk". The risk concerns the following categories of losses:

   i.   Confidentiality of Information
   ii. Integrity of data
   iii. Efficient and Appropriate Use
   iv. System Availability
   v.   Confidentiality refers to the privacy of personal or corporate information. This includes issues of copyright.
   vi. Authorization

c)   Disaster Recovery Plan for Felda

Disaster recovery is corporate strategy designed to ensure business continuity when disaster situation occur. The benefits that can be derived from Disaster Recovery Planning are:

   i.   When a disaster occurs, employees know what to do
   ii. Recovering from a disaster would be a smooth and efficient process
   iii. Time saving during recovery operations
   iv. Minimize the economic impact of disaster
   v.   Prevention if disaster occurrences
   vi. Assurance of business survival

6.2   Expected Organizational Benefit

a) Improve personal productivity and corporate agility

How much time workers spend looking for the information that they need to do their jobs? When they find it, is it the right version? By providing a single authoritative repository with sophisticated search and retrieval technology, IXOS for Document Management reduces the time wasted looking for information and ensures that they find the right information. Employees spend more time acting on quality information and can respond more quickly, improving their personal productivity and overall corporate agility.

b) Reduce corporate risk through good governance practices

Good corporate governance requires the strict management and control of the electronic documents in which the information proving regulatory compliance is contained. By providing a comprehensive document management system, IXOS for Document Management provides with a framework for implementing good corporate governance practices, thereby reducing the risk associated with non-compliance with government regulations. Generally the purpose of this project is to implement the document management system in order to reduce time consuming, reduce cost and to increase profit.

c) Integration with SAP Records Management

The IXOS-DocuLink folder structure can be integrated into SAP Records Management by a system integrator. The user can use the entire IXOS-DocuLink functionality. The user can also access a file from SAP Records Management directly using a link from the IXOSDocuLink folder structure.

d) Keep archived data on a safe media.

High data security during archiving and makes master data easier to handle and to keep up to date. This will help this organization to keep their documents in safe place and easy to retrieve.

6.3   Implementation Strategy – First Roll-out Work Plan

The purposes of implementation strategy of first roll out work plan to ensure the project will be beneficial to the company. Below is roll-out plan:-

i. Provide go live & support – post implementation support for 2 month to ensure the project going smooth.

ii. System Health Check – administrator must check the system every day to ensure the system performance go well.

iii. Employs a parallel conversion approach for the implementation of DMS. Under this approach, both the manual system and the new system are operated for some time period. This is done to ensure that all major problems in new system have been solved before the current manual system is discarded. The final cut over can either abrupt or gradual, as portions of the new system is deemed adequate. This strategy minimizes the risk of major flaws in the new system causing irreparable harm to Felda.

iv. To offer on job training for practical trainee or contract staffs for scanning task, sorting the documents according to print quality, paper type and paper color and this will reduce wages.

v. Transfer the MIMIX Backup system to IBM DR Center for disaster recovery plan for this system. This plan is to minimize the risk if anything happen or disaster occurs.

vi. Staffing the helpdesk with the right individuals is vital to its success. Not only must they have appropriate technical expertise, but they also must have excellent interpersonal and telephone skills. They have to be adept at diagnosing problem based on at telephone skills. To make sure all this things going smooth, training will be provided to educate staff how to handle a complaint from user.

vii. Train the trainers. The functional team will train the trainers will subsequently train the end users. The trainers are required to have the following skills criteria to perform the end user training.

  a. SAP R/3 knowledge in the functional modules and the functions to be used in the system, and at least overview and integration understanding capabilities.

  b. Good understanding of project scope, functionalities being implemented, integrations and interfaces.

  c. Computer skills

  d. Good understanding of the business process

  e. Good presentation skills

  f. Able to manage and understand issues

6.4 Conclusion

In conclusion, this chapter has entirely discussed about organizational strategy which includes change management, implementation roll-out strategy and expected organizational benefit.

CHAPTER 7

SUMMARY & DISCUSSION

7.1   Introduction

This chapter is summarization of what has been completed and a review analysis of the project. It is important to analyse and discuss the project implementation as a "post-mortem" report.

During implementation stage of the Felda Document Management System, some problems had arisen due to limitation of the time. Organizational strategies is analysed to encourage Felda to use the system.

7.2   Project Objectives Review

The project mission is to implement a Document Management System that will helping Felda organization to use this system as tool to manage their documents and all related documents are securely stored in an electronic archive and data cannot be altered. The accomplishment of this project highly depends on the project objectives that have been identified in Chapter 1.

1) To conduct a study on system that can provide an easy access of Finance, Personnel and Settler Document for Finance Department, Settler & Land Plantation and Human Resource Department.

2) To develop a pilot/prototype system of a document management system that can avoid loss and damage of document for Felda.

3) To design and built applications that can provide settler information at one place in the right context so that employee will get information immediately.

4) To formulate a management strategies in producing policies and procedures with regards to Felda.

5) The first objective had been achieved when the existing system constraints and limitation were highlighted in chapter 1.The prototype system was developed to improve efficiency and the system was tested to ensure reliability of the system. The system also able to prevent lost documents, saves storage space, manages records easily, finds document quickly and eliminates the need for file cabinets.

7.3   Project System Review

Project system is highly dependent on the project deliverables. The system designs, development and implementation have its own advantages and disadvantages. The advantages and disadvantages are highlighted based on the comments gathered from users who assisted in user acceptance test.

7.4   System Strength

The system strengths are highlighted to encourage users to use the system which will help them to manage their document or to avoid loss document.

1. The system is secure and integrated solutions for archiving. The *IXOS* ArchiveLink enables business documents to be automatically integrated into *SAP* applications.

2. The system is able to manage any type of electronic document in any file format. The system allows user to organize electronic documents into hierarchies of folders.

3. The system is scalable in term of handling the large volume of documents.

4. The system enable user to create, access, manage, and archive documents directly in *SAP* system.

7.5   Constraints and Challenges

During the implementation period, some constraints had been identified. However, these constraints do not affect the Document Management System implementation process as they are still considered to be manageable. Based on the testing, users and the administrator feedback, the constraints had been identified in table 7.5.

Table 7.5: Constraints and Challenges

Challenges	Constraints
1) Moderate experienced in programming language *ABAP*, It is a challenge to understand environment of *SAP* system, *IXOS* software in term of configuration and customization. 2) A challenge for developer to understand the principle of Archiving and to understand the Document Management System.	1) Time management was not handled professionally resulting in the delay documentation preparation. 2) Due to *IXOS* software is integrated in SAP system, the system is depending on *SAP* system. If the *SAP* system performance is slow, this will affect the DMS. In this case *SAP* System administrator needs to monitor the system performance so that the system runs smoothly

7.6   Suggestion.

The developed Document Management System would be more effective and efficient if there were improvements made. Some suggestions to improve the DMS system include:-

1. The system should be able to implement by Web based using *SAP* NetWeaver application so that the business process can execute in Web Browser.

2. The system should be able implemented in house development using Open Source software and integrate with *SAP* system to reduce implementation and maintenance costs.

3. The system should be able to implement more workflow system into DMS such as Transport Management System and archive more *SAP* data (Material Management, Sales Distribution, Plant Management), Non *SAP* data (Rangkaian Maklumat Ladang (RML), Pertanian, Koperasi Permodalan Felda), and etc.

7.7   Conclusion

This chapter has discussed about the summary of the project system which includes about project objective review, system review and the system strength. In conclusion, this system offers a wide range of features such as organize and share electronic document into hierarchies of folders, audit trail functionality and etc. Otherwise, Document Management System reduces the time spent looking for information and ensures that the employee will find correct information. This will enhances and improve their personal productivities.

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```
*----------------------------------------------------------------------*
* Program Name : ZUSTS200_ARC                                          *
* Program Title: Pengiraan Hasil Bayaran Pertama Bulan - Archive       *
* Description  : Process to archive the calculation report online.     *
*----------------------------------------------------------------------*
* Change History Log                                                   *
*----------------------------------------------------------------------*
report zusts200_arc no standard page heading
                    line-count 65 line-size 132.


*----------------------------------------------------------------------*
* TABLES                                                               *
*----------------------------------------------------------------------*
tables: zarc001c,   "For calculation program
        zldmrg2,    "Jadual Maklumat Rancangan
        zsttmpt,
        zstthhs,
        zldmpkt,
        zldmblk,
        t001.       "Kod Syarikat(input)


*----------------------------------------------------------------------*
* INTERNAL TABLES & DATA DEFINITION
*----------------------------------------------------------------------*
data: begin of itab occurs 0,
        zbukrs like zsttpbp-zbukrs,
        zregcd like zldmrg2-zregcd,   "Region
*        zkdrgi like zsttpbp-zkdrgi,   "Rancangan ind
*        zkdrgn like zsttpbp-zkdrgn,   "Rancangan
      end of itab.

data: pripar like pri_params, "Print parameters, output device
      arcpar like arc_params, "SAP ArchiveLink: Obj type of business obj
      val,
      wa_text(40) type c.
DATA  w_name(40) type c.


*----------------------------------------------------------------------*
* SELECT-OPTIONS
*----------------------------------------------------------------------*
selection-screen: begin of block b2 with frame title text-001.
parameters:
  p_zbukrs like zldmrg2-zbukrs
                  memory id zbukrs obligatory,
  p_bln    like zsttmpt-zblnmu                      "bulan pemprosesan
                  memory id zblnmu obligatory,
  p_bayar  like zstthhs-ztrdat                      "tarikh pendahuluan
                default sy-datum obligatory memory id zstthhs-ztrdat.
selection-screen: uline.
select-options:
  s_zregcd for zldmrg2-zregcd obligatory, "Region
  s_zkdrgi for zldmrg2-zkdrgi obligatory,"Rancangan ind
  s_zkdrgn for zldmrg2-zkdrgn obligatory,"Rancangan
  s_zkdpkt for zldmpkt-zkdpkt,                      "Kod Peringkat
  s_zkdpk2 for zldmpkt-zkdpk2,                      "Kod Sub Peringkat
  s_zkdblk for zldmblk-zkdblk.                      "Kod Blok
selection-screen: uline.
selection-screen begin of line.
selection-screen comment 1(31) text-010.
parameters pa_test as checkbox default 'X'.        "Larian Ujian
selection-screen end of line.
```

```
parameters:
*p_dest(8) default 'T6100_01',

**COMMENTED OUT BY FIFI 28.12.2004
*           p_dest  like pripar-pdest default 'T601' obligatory,
*           p_aart  like rspols-layout default 'X_65_132' obligatory.

     p_dest  like pripar-pdest default 'T601' MODIF ID SC1,
     p_aart  like rspols-layout default 'X_65_132' MODIF ID SC1.

selection-screen: end of block b2.

*----------------------------------------------------------------------*
*AT SELECTION SCREEN
*----------------------------------------------------------------------*

at selection-screen output.
  loop at screen.

    if screen-group1 = 'SC1'.
      screen-input = '0'.
      modify screen.
    endif.

  endloop.

at selection-screen.
* Check Date Parameters
  if p_bln ne p_bayar(6).
    message e000(zst) with 'Tarikh pendahuluan mestilah'
                           'dalam bulan yang sama !'.
  endif.

  if p_bayar+6(2) lt '15'.
    write: / 'Tarikh Pendahuluan mestilah lebih daripada 15 haribulan'.
  endif.

*if pa_test eq ' ' and ( p_dest eq ' ' or p_aart eq space ).
*write:/ 'Sila masukkan
*endif.
*----------------------------------------------------------------------*
*START OF SELECTION.
*----------------------------------------------------------------------*
start-of-selection.
* get entries from Jadual Maklumat Rancangan base on sel screen
  select * into corresponding fields of table itab from zldmrg2
      where  zbukrs  =  p_zbukrs
      and    zkdrgi  in s_zkdrgi
      and    zkdrgn  in s_zkdrgn
      and    zregcd  in s_zregcd.
  sort itab.

  delete adjacent duplicates from itab.

* check the function for paarameter passing
  perform get_print_param.

  if pa_test = 'X'.              "Test Run
    perform test_run.
  else.
    perform archive_actual_run.  "Actual Run
```

```
   endif.

*-------------------------------------------------------------------*
*END OF SELECTION
*-------------------------------------------------------------------*
end-of-selection.

*&------------------------------------------------------------------*
*&      Form  get_print_param
*&------------------------------------------------------------------*
form get_print_param.

   call function 'GET_PRINT_PARAMETERS'
     exporting
*      ARCHIVE_ID                 = C_CHAR_UNKNOWN
       archive_info               = '---'
*      ARCHIVE_MODE               = C_CHAR_UNKNOWN
       archive_text               = '------'
*      AR_OBJECT                  = C_CHAR_UNKNOWN
*      ARCHIVE_REPORT             = C_CHAR_UNKNOWN
*      AUTHORITY                  = C_CHAR_UNKNOWN
*      COPIES                     = C_NUM3_UNKNOWN
*      COVER_PAGE                 = C_CHAR_UNKNOWN
*      DATA_SET                   = C_CHAR_UNKNOWN
*      DEPARTMENT                 = C_CHAR_UNKNOWN
       destination                = p_dest                "T6100_01
*      EXPIRATION                 = C_NUM1_UNKNOWN
*      IMMEDIATELY                = C_CHAR_UNKNOWN
*      in_archive_parameters      = arcpar
*      in_parameters              = pripar
       layout                     = p_aart                "X_65_132'
*      LINE_COUNT                 = C_INT_UNKNOWN
*      LINE_SIZE                  = C_INT_UNKNOWN
*      LIST_NAME                  = C_CHAR_UNKNOWN
*      LIST_TEXT                  = C_CHAR_UNKNOWN
*      MODE                       = ' '
*      NEW_LIST_ID                = C_CHAR_UNKNOWN
       no_dialog                  = 'X'
*      RECEIVER                   = C_CHAR_UNKNOWN
*      RELEASE                    = C_CHAR_UNKNOWN
*      REPORT                     = C_CHAR_UNKNOWN
*      SAP_COVER_PAGE             = C_CHAR_UNKNOWN
*      HOST_COVER_PAGE            = C_CHAR_UNKNOWN
*      PRIORITY                   = C_NUM1_UNKNOWN
*      SAP_OBJECT                 = C_CHAR_UNKNOWN
*      TYPE                       = C_CHAR_UNKNOWN
*      USER                       = SY-UNAME
*      DRAFT                      = C_CHAR_UNKNOWN
       DRAFT                      = 'X'      "++fifi 23122004

     importing
       out_archive_parameters     = arcpar
       out_parameters             = pripar
       valid                      = val
     exceptions
       archive_info_not_found     = 1
       invalid_print_params       = 2
       invalid_archive_params     = 3
       others                     = 4.
* Error -- display message
   if sy-subrc <> 0.
```

```
      message id sy-msgid type sy-msgty number sy-msgno
             with sy-msgv1 sy-msgv2 sy-msgv3 sy-msgv4.
    endif.

    if val <> space.
*      MESSAGE i000(zst) with 'OK - ' pripar-paart.
    else.
      message id sy-msgid type sy-msgty number sy-msgno
             with sy-msgv1 sy-msgv2 sy-msgv3 pripar-paart.
    endif.

* SAP ArchiveLink: Obj type of business obj
    move 'DRAW' to arcpar-sap_object.    "SAP ArchiveLink: Object type of
    "business object
    move 'ZARC001C' to arcpar-ar_object. "Document type/table to update
*   move p_dest to pripar-pdest.
*   move p_aart to pripar-paart.
    move '2' to pripar-armod.         "Print: Archiving mode
    move 'X' to pripar-primm.         "Print parameters, print immediate
    move ' ' to pripar-prrel.         "Print parameters, delete after print
    move 'X' to pripar-prnew.         "Print parameters, new spool request
    move sy-datum to arcpar-datum.    "SAP ArchiveLink: Archiving date
    move sy-uname to arcpar-arcuser.  "Data element for user
    move sy-mandt to arcpar-mandant.  "Client

endform.                    " get_print_param
*&---------------------------------------------------------------------*
*&      Form  test_run
*&---------------------------------------------------------------------*
form test_run.

* Checking Back Ground processes
  if sy-batch eq space.

    submit zusts200
        with p_zbukrs eq p_zbukrs
        with p_bln    eq p_bln
        with p_bayar  eq p_bayar
*       with s_zregcd in s_zregcd    "Region  "--FIZAHS 24112004
        WITH S_REG    IN S_ZREGCD    "++FIZAHS 24112004

        with s_zkdrgi in s_zkdrgi    "Rancangan ind
        with s_zkdrgn in s_zkdrgn    "Rancangan
        with s_zkdpkt in s_zkdpkt
        with s_zkdpk2 in s_zkdpk2
        with s_zkdblk in s_zkdblk
        with pa_test  eq pa_test

      and return.
  else.
    move '1' to pripar-armod.       "Print: Print Only mode
    move ' ' to pripar-primm.       "Print parameters
    move ' ' to pripar-prrel.       "Print parameters,del. after print
    move 'X' to pripar-prnew.       "Print parameters, new spool request

    call function 'GET_PRINT_PARAMETERS'
      exporting
        destination                = p_dest              "T6100_01
*       IMMEDIATELY                = C_CHAR_UNKNOWN
*       in_archive_parameters      = arcpar
*       in_parameters              = pripar
```

```
              layout                          = p_aart                        "X_65_132'
              no_dialog                     = 'X'
           importing
              out_archive_parameters      = arcpar
              out_parameters              = pripar
              valid                       = val
           exceptions
              archive_info_not_found      = 1
              invalid_print_params        = 2
              invalid_archive_params      = 3
              others                      = 4.

       if val <> space.
*        MESSAGE i000(zst) with 'OK - ' pripar-paart.
       else.
          message id sy-msgid type sy-msgty number sy-msgno
                 with sy-msgv1 sy-msgv2 sy-msgv3 pripar-paart.
       endif.

**++fizahs 28.10.2004
       concatenate sy-cprog sy-datum sy-uzeit into w_name separated
       by space.

       move w_name to pripar-prtxt.     "Print: Print title
       move 'X' to pripar-prnew.        "New spool
**end fizahs

       submit zusts200 to sap-spool
               with p_zbukrs eq p_zbukrs
               with p_bln    eq p_bln
               with p_bayar  eq p_bayar
*              with s_zregcd eq itab-zregcd    "Region
*          with s_zregcd in s_zregcd    "Region  "--FIZAHS 24112004
           WITH S_REG    IN S_ZREGCD     "++FIZAHS 24112004

               with s_zkdrgi in s_zkdrgi   "Rancangan ind
               with s_zkdrgn in s_zkdrgn   "Rancangan
               with s_zkdpkt in s_zkdpkt
               with s_zkdpk2 in s_zkdpk2
               with s_zkdblk in s_zkdblk
               with pa_test  eq pa_test
                   spool parameters pripar
                   archive parameters arcpar
                   without spool dynpro

           and return.

     endif.
     if sy-subrc <> 0.
       write: / ' SY-SUBRC = ' , sy-subrc.
       write: / ' SY-SUBRC = 4: Job scheduling terminated by user'.
       write: / ' SY-SUBRC = 8: Error in job scheduling (JOB_SUBMIT)'.
       write: / ' SY-SUBRC = 12: Error in internal number assignment'.
     endif.

endform.                    " test_run
*&---------------------------------------------------------------------*
*&      Form  archive_actual_run
*&---------------------------------------------------------------------*
form archive_actual_run.
```

```
    loop at itab.

        concatenate sy-repid p_zbukrs p_bln itab-zregcd
                    sy-datum sy-uzeit into wa_text.

        call function 'GET_PRINT_PARAMETERS'
          exporting
*               ARCHIVE_ID                  = C_CHAR_UNKNOWN
            archive_info                = 'ASR'
            archive_mode                = '2'
            archive_text                = wa_text
*               AR_OBJECT                   = C_CHAR_UNKNOWN
*               ARCHIVE_REPORT              = C_CHAR_UNKNOWN
*               AUTHORITY                   = C_CHAR_UNKNOWN
*               COPIES                      = C_NUM3_UNKNOWN
*               COVER_PAGE                  = C_CHAR_UNKNOWN
*               DATA_SET                    = C_CHAR_UNKNOWN
*               DEPARTMENT                  = C_CHAR_UNKNOWN
*               DESTINATION                 = 'T601'
*               EXPIRATION                  = C_NUM1_UNKNOWN
            immediately                 = 'X'
            in_archive_parameters       = arcpar
            in_parameters               = pripar
*               LAYOUT                      = C_CHAR_UNKNOWN
*               LINE_COUNT                  = C_INT_UNKNOWN
*               LINE_SIZE                   = C_INT_UNKNOWN
*               LIST_NAME                   = C_CHAR_UNKNOWN
*               LIST_TEXT                   = C_CHAR_UNKNOWN
*               MODE                        = '2'
*               NEW_LIST_ID                 = 'X'
            no_dialog                   = 'X'
*               RECEIVER                    = C_CHAR_UNKNOWN
*               RELEASE                     = C_CHAR_UNKNOWN
*               REPORT                      = C_CHAR_UNKNOWN
*               SAP_COVER_PAGE              = C_CHAR_UNKNOWN
*               HOST_COVER_PAGE             = C_CHAR_UNKNOWN
*               PRIORITY                    = C_NUM1_UNKNOWN
*               SAP_OBJECT                  = C_CHAR_UNKNOWN
*               TYPE                        = C_CHAR_UNKNOWN
*               USER                        = SY-UNAME
*               DRAFT                       = C_CHAR_UNKNOWN
            DRAFT                       = 'X'     "++fifi 23122004


          importing
            out_archive_parameters      = arcpar
            out_parameters              = pripar
            valid                       = val
          exceptions
            archive_info_not_found      = 1
            invalid_print_params        = 2
            invalid_archive_params      = 3
            others                      = 4.

*       if sy-subrc <> 0.
      if val <> space.
*         MESSAGE i000(zst) with 'OK - ' pripar-paart.
      else.
        message id sy-msgid type sy-msgty number sy-msgno
                with pripar-paart.
```

```
      endif.

**++fizahs 28.10.2004
      concatenate sy-cprog sy-datum sy-uzeit into w_name separated
      by space.

      move w_name to pripar-prtxt.    "Print: Print title
      move 'X' to pripar-prnew.       "New spool
**end fizahs

      submit zusts200 to sap-spool
              with p_zbukrs eq p_zbukrs
              with p_bln    eq p_bln
              with p_bayar  eq p_bayar
*             with s_zregcd eq itab-zregcd   "Region
*         with s_zregcd in s_zregcd    "Region  "--FIZAHS 24112004
              WITH S_REG    IN S_ZREGCD    "++FIZAHS 24112004

              with s_zkdrgi in s_zkdrgi    "Rancangan ind
              with s_zkdrgn in s_zkdrgn    "Rancangan
              with s_zkdpkt in s_zkdpkt
              with s_zkdpk2 in s_zkdpk2
              with s_zkdblk in s_zkdblk
              with pa_test  eq pa_test
              spool parameters pripar
*             store parameters arcpar
              archive parameters arcpar
              without spool dynpro
       and return.

      if sy-subrc eq 0.
        clear zarc001c.
        select single * from  zarc001c
                where   name      = sy-repid
                and     ztahun    = p_bln(4)
                and     zbulan    = p_bln+4(2)
                and     zbukrs    = p_zbukrs
                and     zregcd    = itab-zregcd.

        if sy-subrc = 0.
          move-corresponding itab to zarc001c.
          move sy-repid to zarc001c-name.
          move wa_text to zarc001c-kurztext.
          zarc001c-version = zarc001c-version + 1.
          modify zarc001c.
        else.
          clear zarc001c.
          move-corresponding itab to zarc001c.
          move p_bln(4) to zarc001c-ztahun.
          move p_bln+4(2) to zarc001c-zbulan.
          move sy-repid to zarc001c-name.
          move wa_text to zarc001c-kurztext.
          zarc001c-version = zarc001c-version + 1.
          modify zarc001c.
        endif.

        message i000(zst) with 'Laporan telah diarchieve'.
      endif.

    endloop.
```

```
*----------------------------------------------------------------------*
* Program Name : ZUSTP010_ARC                                          *
* Program Title: Pengiraan Pendapatan Getah Kawasan Tambahan- Archive  *
* Description  : Process to archive the calculation report online.     *
*              - Paysheet Getah Kawasan Tambahan                       *
*----------------------------------------------------------------------*
* Change History Log                                                   *
*----------------------------------------------------------------------*
report zustp010_arc no standard page heading
                    line-count 65 line-size 132.


*----------------------------------------------------------------------*
* TABLES                                                               *
*----------------------------------------------------------------------*
tables: zarc001c,   "For calculation program
        zldmrg2,    "Jadual Maklumat Rancangan
        zldmpkt,
        zldmblk,
        zsttpbn,
        t001.       "Kod Syarikat(input)


*----------------------------------------------------------------------*
* INTERNAL TABLES & DATA DEFINITION
*----------------------------------------------------------------------*
data: begin of itab occurs 0,
        zbukrs like zsttpbp-zbukrs,
        zregcd like zldmrg2-zregcd,   "Region
*       zkdrgi like zsttpbp-zkdrgi,   "Rancangan ind
*       zkdrgn like zsttpbp-zkdrgn,   "Rancangan
      end of itab.

data: pripar like pri_params, "Print parameters, output device
      arcpar like arc_params, "SAP ArchiveLink: Obj type of business obj
      val,
      wa_text(40) type c.
DATA  w_name(40) type c.


*----------------------------------------------------------------------*
* SELECT-OPTIONS
*----------------------------------------------------------------------*
selection-screen: begin of block b2 with frame title text-001.
* Selection Parameters
parameters:     p_zbnppp like zsttpbn-zbnppp default sy-datum(6)
                            obligatory.
parameters:     p_test default 'X' as checkbox, " Simulation Run
                p_trac default ' '  no-display. " Trace Processing

selection-screen: uline.
parameters:     p_zbukrs  like zsttpbn-zbukrs memory id buk
                            obligatory.

select-options: s_zregcd for zldmrg2-zregcd, " Region
```

```
               s_zkdrgi for zldmrg2-zkdrgi,  " Rancangan Indicator
               s_zkdrgn for zldmrg2-zkdrgn,  " Rancangan
               s_zkdpkt for zldmpkt-zkdpkt,  " Peringkat
               s_zkdpk2 for zldmpkt-zkdpk2,  " Peringkat (Sub)
               s_zkdblk for zldmblk-zkdblk,  " Blok
               s_zsetid for zsttpbn-zsetid.
parameters:       p_tpul   as checkbox. " Pulangan
selection-screen: uline.
selection-screen begin of line.
selection-screen end of line.
parameters:
*p_dest(8) default 'T6100_01',


             p_dest  like pripar-pdest default 'T601' MODIF ID SC1,
             p_aart  like rspols-layout default 'X_65_132' MODIF ID SC1.

selection-screen: end of block b2.

*-----------------------------------------------------------------------*
*AT SELECTION SCREEN
*-----------------------------------------------------------------------*
at selection-screen OUTPUT.
  loop at screen.

    if screen-group1 = 'SC1'.
      screen-input = '0'.
      modify screen.
    endif.

  endloop.


*-----------------------------------------------------------------------*
*START OF SELECTION.
*-----------------------------------------------------------------------*
start-of-selection.
* get entries from Jadual Maklumat Rancangan base on sel screen
  select * into corresponding fields of table itab from zldmrg2
       where   zbukrs  =  p_zbukrs
       and     zkdrgi  in s_zkdrgi
       and     zkdrgn  in s_zkdrgn
       and     zregcd  in s_zregcd.
  sort itab.

  delete adjacent duplicates from itab.

* check the function for parameter passing
  perform get_print_param.

  if p_test = 'X'.               "Test Run
    perform test_run.
  else.
    perform archive_actual_run.   "Actual Run
  endif.

*-----------------------------------------------------------------------*
*END OF SELECTION
*-----------------------------------------------------------------------*
end-of-selection.
```

```
*&---------------------------------------------------------------------*
*&      Form  get_print_param
*&---------------------------------------------------------------------*
form get_print_param.

  call function 'GET_PRINT_PARAMETERS'
    exporting
*     ARCHIVE_ID                  = C_CHAR_UNKNOWN
      archive_info                = '---'
*     ARCHIVE_MODE                = C_CHAR_UNKNOWN
      archive_text                = '------'
*     AR_OBJECT                   = C_CHAR_UNKNOWN
*     ARCHIVE_REPORT              = C_CHAR_UNKNOWN
*     AUTHORITY                   = C_CHAR_UNKNOWN
*     COPIES                      = C_NUM3_UNKNOWN
*     COVER_PAGE                  = C_CHAR_UNKNOWN
*     DATA_SET                    = C_CHAR_UNKNOWN
*     DEPARTMENT                  = C_CHAR_UNKNOWN
      destination                 = p_dest                 "T6100_01
*     EXPIRATION                  = C_NUM1_UNKNOWN
*     IMMEDIATELY                 = C_CHAR_UNKNOWN
*     in_archive_parameters       = arcpar
*     in_parameters               = pripar
      layout                      = p_aart                 "X_65_132'
*     LINE_COUNT                  = C_INT_UNKNOWN
*     LINE_SIZE                   = C_INT_UNKNOWN
*     LIST_NAME                   = C_CHAR_UNKNOWN
*     LIST_TEXT                   = C_CHAR_UNKNOWN
*     MODE                        = ' '
*     NEW_LIST_ID                 = C_CHAR_UNKNOWN
      no_dialog                   = 'X'
*     RECEIVER                    = C_CHAR_UNKNOWN
*     RELEASE                     = C_CHAR_UNKNOWN
*     REPORT                      = C_CHAR_UNKNOWN
*     SAP_COVER_PAGE              = C_CHAR_UNKNOWN
*     HOST_COVER_PAGE             = C_CHAR_UNKNOWN
*     PRIORITY                    = C_NUM1_UNKNOWN
*     SAP_OBJECT                  = C_CHAR_UNKNOWN
*     TYPE                        = C_CHAR_UNKNOWN
*     USER                        = SY-UNAME
*     DRAFT                       = C_CHAR_UNKNOWN
      DRAFT                       = 'X'       "++fifi23122004


    importing
      out_archive_parameters      = arcpar
      out_parameters              = pripar
      valid                       = val
    exceptions
      archive_info_not_found      = 1
      invalid_print_params        = 2
      invalid_archive_params      = 3
      others                      = 4.
* Error -- display message
  if sy-subrc <> 0.
    message id sy-msgid type sy-msgty number sy-msgno
            with sy-msgv1 sy-msgv2 sy-msgv3 sy-msgv4.
  endif.

  if val <> space.
*    MESSAGE i000(zst) with 'OK - ' pripar-paart.
```

```
          else.
            message id sy-msgid type sy-msgty number sy-msgno
                    with sy-msgv1 sy-msgv2 sy-msgv3 pripar-paart.
          endif.

* SAP ArchiveLink: Obj type of business obj
  move 'DRAW' to arcpar-sap_object.    "SAP ArchiveLink: Object type of
  "business object
  move 'ZARC001C' to arcpar-ar_object. "Document type/table to update
*  move p_dest to pripar-pdest.
*  move p_aart to pripar-paart.
  move '2' to pripar-armod.            "Print: Archiving mode
  move 'X' to pripar-primm.            "Print parameters, print immediate
  move ' ' to pripar-prrel.            "Print parameters, delete after print
  move 'X' to pripar-prnew.            "Print parameters, new spool request
  move sy-datum to arcpar-datum.       "SAP ArchiveLink: Archiving date
  move sy-uname to arcpar-arcuser.     "Data element for user
  move sy-mandt to arcpar-mandant.     "Client

endform.                    " get_print_param
*&---------------------------------------------------------------------*
*&      Form   test_run
*&---------------------------------------------------------------------*
form test_run.

* Checking Back Ground processes
  if sy-batch eq space.

    submit zustp010
       with p_zbnppp eq p_zbnppp  " Bulan Prosesan
       with p_test eq p_test      " Simulation Run
       with p_trac eq p_trac      " Trace Processing
       with p_zbukrs eq p_zbukrs
       with s_zregcd in s_zregcd  " Region
       with s_zkdrgi in s_zkdrgi  " Rancangan Indicator
       with s_zkdrgn in s_zkdrgn  " Rancangan
       with s_zkdpkt in s_zkdpkt  " Peringkat
       with s_zkdpk2 in s_zkdpk2  " Peringkat (Sub)
       with s_zkdblk in s_zkdblk  " Blok
       with s_zsetid in s_zsetid
       with p_tpul eq p_tpul      " Pulangan

     and return.
    else.
      move '1' to pripar-armod.        "Print: Print Only mode
      move ' ' to pripar-primm.        "Print parameters
      move ' ' to pripar-prrel.        "Print parameters,del. after print
      move 'X' to pripar-prnew.        "Print parameters, new spool request

      call function 'GET_PRINT_PARAMETERS'
        exporting
          destination                = p_dest              "T6100_01
*         IMMEDIATELY                = C_CHAR_UNKNOWN
*         in_archive_parameters      = arcpar
*         in_parameters              = pripar
          layout                     = p_aart              "X_65_132'
          no_dialog                  = 'X'
        importing
          out_archive_parameters     = arcpar
          out_parameters             = pripar
          valid                      = val
```

```
      exceptions
         archive_info_not_found      = 1
         invalid_print_params        = 2
         invalid_archive_params      = 3
         others                      = 4.

      if val <> space.
*       MESSAGE i000(zst) with 'OK - ' pripar-paart.
      else.
        message id sy-msgid type sy-msgty number sy-msgno
                with sy-msgv1 sy-msgv2 sy-msgv3 pripar-paart.
      endif.

**++fizahs 22.10.2004
      concatenate sy-cprog sy-datum sy-uzeit into w_name separated
      by space.

      move w_name to pripar-prtxt.    "Print: Print title
      move 'X' to pripar-prnew.       "New spool
**end fizahs

      submit zustp010 to sap-spool
         with p_zbnppp eq p_zbnppp   " Bulan Prosesan
         with p_test eq p_test       " Simulation Run
         with p_trac eq p_trac       " Trace Processing
         with p_zbukrs eq p_zbukrs
         with s_zregcd in s_zregcd   " Region
         with s_zkdrgi in s_zkdrgi   " Rancangan Indicator
         with s_zkdrgn in s_zkdrgn   " Rancangan
         with s_zkdpkt in s_zkdpkt   " Peringkat
         with s_zkdpk2 in s_zkdpk2   " Peringkat (Sub)
         with s_zkdblk in s_zkdblk   " Blok
         with s_zsetid in s_zsetid
         with p_tpul eq p_tpul       " Pulangan
             spool parameters pripar
             archive parameters arcpar
             without spool dynpro

         and return.

   endif.
   if SY-SUBRC <> 0.
     write: / ' SY-SUBRC = ' , SY-SUBRC.
     write: / ' SY-SUBRC = 4: Job scheduling terminated by user'.
     write: / ' SY-SUBRC = 8: Error in job scheduling (JOB_SUBMIT)'.
     write: / ' SY-SUBRC = 12: Error in internal number assignment'.
   endif.

endform.                      " test_run
*&---------------------------------------------------------------------*
*&      Form  archive_actual_run
*&---------------------------------------------------------------------*
form archive_actual_run.


   loop at itab.

     concatenate sy-repid p_zbukrs p_zbnppp itab-zregcd
                 sy-datum sy-uzeit into wa_text.

     call function 'GET_PRINT_PARAMETERS'
```

```
        exporting
*           ARCHIVE_ID                  = C_CHAR_UNKNOWN
          archive_info                = 'ASR'
          archive_mode                = '2'
          archive_text                = wa_text
*           AR_OBJECT                   = C_CHAR_UNKNOWN
*           ARCHIVE_REPORT              = C_CHAR_UNKNOWN
*           AUTHORITY                   = C_CHAR_UNKNOWN
*           COPIES                      = C_NUM3_UNKNOWN
*           COVER_PAGE                  = C_CHAR_UNKNOWN
*           DATA_SET                    = C_CHAR_UNKNOWN
*           DEPARTMENT                  = C_CHAR_UNKNOWN
*           DESTINATION                 = 'T601'
*           EXPIRATION                  = C_NUM1_UNKNOWN
          immediately                 = 'X'
          in_archive_parameters       = arcpar
          in_parameters               = pripar
*           LAYOUT                      = C_CHAR_UNKNOWN
*           LINE_COUNT                  = C_INT_UNKNOWN
*           LINE_SIZE                   = C_INT_UNKNOWN
*           LIST_NAME                   = C_CHAR_UNKNOWN
*           LIST_TEXT                   = C_CHAR_UNKNOWN
*           MODE                        = '2'
*           NEW_LIST_ID                 = 'X'
          no_dialog                   = 'X'
*           RECEIVER                    = C_CHAR_UNKNOWN
*           RELEASE                     = C_CHAR_UNKNOWN
*           REPORT                      = C_CHAR_UNKNOWN
*           SAP_COVER_PAGE              = C_CHAR_UNKNOWN
*           HOST_COVER_PAGE             = C_CHAR_UNKNOWN
*           PRIORITY                    = C_NUM1_UNKNOWN
*           SAP_OBJECT                  = C_CHAR_UNKNOWN
*           TYPE                        = C_CHAR_UNKNOWN
*           USER                        = SY-UNAME
*           DRAFT                       = C_CHAR_UNKNOWN
            DRAFT                       = 'X'      "++fifi 23122004

        importing
          out_archive_parameters      = arcpar
          out_parameters              = pripar
          valid                       = val
        exceptions
          archive_info_not_found      = 1
          invalid_print_params        = 2
          invalid_archive_params      = 3
          others                      = 4.

*       if sy-subrc <> 0.
      if val <> space.
*         MESSAGE i000(zst) with 'OK - ' pripar-paart.
      else.
        message id sy-msgid type sy-msgty number sy-msgno
                with pripar-paart.
      endif.

      concatenate sy-cprog sy-datum sy-uzeit into w_name separated
      by space.

      move w_name to pripar-prtxt.    "Print: Print title
      move 'X' to pripar-prnew.       "New spool
```

```
        submit zustp010 to sap-spool
          with p_zbnppp eq p_zbnppp   " Bulan Prosesan
          with p_test eq p_test       " Simulation Run
          with p_trac eq p_trac       " Trace Processing
          with p_zbukrs eq p_zbukrs
          with s_zregcd in s_zregcd   " Region
          with s_zkdrgi in s_zkdrgi   " Rancangan Indicator
          with s_zkdrgn in s_zkdrgn   " Rancangan
          with s_zkdpkt in s_zkdpkt   " Peringkat
          with s_zkdpk2 in s_zkdpk2   " Peringkat (Sub)
          with s_zkdblk in s_zkdblk   " Blok
          with s_zsetid in s_zsetid
          with p_tpul  eq p_tpul        " Pulangan
                spool parameters pripar
*                 store parameters arcpar
                archive parameters arcpar
                without spool dynpro
        and return.

      if sy-subrc eq 0.
        clear zarc001c.
        select single * from  zarc001c
                where   name       = sy-repid
                and     ztahun     = p_zbnppp(4)
                and     zbulan     = p_zbnppp+4(2)
                and     zbukrs     = p_zbukrs
                and     zregcd     = itab-zregcd.

        if sy-subrc = 0.
          move-corresponding itab to zarc001c.
          move sy-repid to zarc001c-name.
          move wa_text to zarc001c-kurztext.
          zarc001c-version = zarc001c-version + 1.
          modify zarc001c.
        else.
          clear zarc001c.
          move-corresponding itab to zarc001c.
          move p_zbnppp(4) to zarc001c-ztahun.
          move p_zbnppp+4(2) to zarc001c-zbulan.
          move sy-repid to zarc001c-name.
          move wa_text to zarc001c-kurztext.
          zarc001c-version = zarc001c-version + 1.
          modify zarc001c.
        endif.

        message i000(zst) with 'Laporan telah di archieve'.

      endif.

    endloop.
```

```
*---------------------------------------------------------------*
* Program Name : ZUSTP030_ARC                                   *
* Program Title: Pengiraan Dividen Kepala Sawit - Archive        *
* Description  : The purpose of this Program :-                  *
*                This program will update the the following table:*
*                This program will update the the following table:*
*                     1) ZSTTPB2 - Paysheet Header Info.         *
*                     2) ZSTTPBN - Paysheet items               *
*                     3) ZSTTSDM - Paysheet Balance/Summary      *
*                The main input is come from the following table: *
*                     1) ZSTTSMD - Monthly Income/Deduction.     *
*                     2) ZSTTSDM - Rumsan Pendapatan/Potongan     *
* This Program can be run many times in simulation mode. It always*
* update  table ZSTTPBP and ZSTTPBN in this mode.               *
* The actual run can be run only once, it will update the balance *
* in the paysheet balance in table ZSTTSDM.                     *
*---------------------------------------------------------------*
* Change History Log                                            *
*---------------------------------------------------------------*
report  zustp030_arc no standard page heading
        line-size 132  line-count 65.


*---------------------------------------------------------------*
* TABLES                                                        *
*---------------------------------------------------------------*
tables: zarc001c,   "For calculation program
        zldmrg2,    "Jadual Maklumat Rancangan
        zsttpbn,    "Jadual Bulan Penyata Pendapatan Peneroka Diproses
        zldmpkt,    "Jadual Maklumat Peringkat
        zldmblk.    "Jadual Maklumat Blok


*---------------------------------------------------------------*
* INTERNAL TABLES & DATA DEFINITION                            *
*---------------------------------------------------------------*

data: begin of itab occurs 0,
        zbukrs like zsttnbf-zbukrs,
        zregcd like zldmrg2-zregcd, "Region Code
*       zkdrgi like zsttpbp-zkdrgi,  "Rancangan ind
*       zkdrgn like zsttpbp-zkdrgn,  "Rancangan
    end of itab.

data: pripar like pri_params, "Print parameters, output device
      arcpar like arc_params, "SAP ArchiveLink: Obj type of business obj
      val,
      wa_text(40) type c.
DATA  w_name(40) type c.
```

```
*-----------------------------------------------------------------------*
* SELECT-OPTIONS
*-----------------------------------------------------------------------*
parameters:        p_zbnppp like zsttpbn-zbnppp default sy-datum(6)
                              obligatory.
parameters:        p_test default 'X' as checkbox, " Simulation Run
                   p_trac default ' '  no-display. " Trace Processing

selection-screen: uline.
parameters:        p_zbukrs  like zsttpbn-zbukrs memory id buk
                              obligatory.

select-options: s_zregcd for zldmrg2-zregcd
                              , " Region
                   s_zkdrgi for zldmrg2-zkdrgi, " Rancangan Indicator
                   s_zkdrgn for zldmrg2-zkdrgn, " Rancangan
                   s_zkdpkt for zldmpkt-zkdpkt, " Peringkat
                   s_zkdpk2 for zldmpkt-zkdpk2, " Peringkat (Sub)
                   s_zkdblk for zldmblk-zkdblk. " Blok
selection-screen: skip.

parameters:
*p_dest(8) default 'T6100_01',

     p_dest  like pripar-pdest default 'T601' MODIF ID SC1,
     p_aart  like rspols-layout default 'X_65_132' MODIF ID SC1.

*selection-screen end of line.

*-----------------------------------------------------------------------*
*AT SELECTION SCREEN
*-----------------------------------------------------------------------*
at selection-screen output.
  loop at screen.

    if screen-group1 = 'SC1'.
      screen-input = '0'.
      modify screen.
    endif.

  endloop.

*-----------------------------------------------------------------------*
*START OF SELECTION.
*-----------------------------------------------------------------------*
start-of-selection.
* get entries from Jadual Maklumat Rancangan base on sel screen
  select * into corresponding fields of table itab from zldmrg2
      where  zbukrs  =  p_zbukrs
      and    zkdrgi  in s_zkdrgi
      and    zkdrgn  in s_zkdrgn
      and    zregcd  in s_zregcd.
  sort itab.

  delete adjacent duplicates from itab.

* check the function for parameter passing
  perform get_print_param.

  if p_test = 'X'.                "Test Run
```

```
      perform test_run.
   else.
      perform archive_actual_run.   "Actual Run
   endif.


*----------------------------------------------------------------------*
*END OF SELECTION
*----------------------------------------------------------------------*
end-of-selection.



*&---------------------------------------------------------------------*
*&      Form  get_print_param
*&---------------------------------------------------------------------*
*       text
*----------------------------------------------------------------------*
*  -->  p1        text
*  <--  p2        text
*----------------------------------------------------------------------*
form get_print_param.
   call function 'GET_PRINT_PARAMETERS'
      exporting
*     ARCHIVE_ID                  = C_CHAR_UNKNOWN
         archive_info            = '---'
*     ARCHIVE_MODE                = C_CHAR_UNKNOWN
         archive_text            = '------'
*     AR_OBJECT                   = C_CHAR_UNKNOWN
*     ARCHIVE_REPORT              = C_CHAR_UNKNOWN
*     AUTHORITY                   = C_CHAR_UNKNOWN
*     COPIES                      = C_NUM3_UNKNOWN
*     COVER_PAGE                  = C_CHAR_UNKNOWN
*     DATA_SET                    = C_CHAR_UNKNOWN
*     DEPARTMENT                  = C_CHAR_UNKNOWN
         destination             = p_dest              "T6100_01
*     EXPIRATION                  = C_NUM1_UNKNOWN
*     IMMEDIATELY                 = C_CHAR_UNKNOWN
*     in_archive_parameters       = arcpar
*     in_parameters               = pripar
         layout                  = p_aart              "X_65_132'
*     LINE_COUNT                  = C_INT_UNKNOWN
*     LINE_SIZE                   = C_INT_UNKNOWN
*     LIST_NAME                   = C_CHAR_UNKNOWN
*     LIST_TEXT                   = C_CHAR_UNKNOWN
*     MODE                        = ' '
*     NEW_LIST_ID                 = C_CHAR_UNKNOWN
         no_dialog               = 'X'
*     RECEIVER                    = C_CHAR_UNKNOWN
*     RELEASE                     = C_CHAR_UNKNOWN
*     REPORT                      = C_CHAR_UNKNOWN
*     SAP_COVER_PAGE              = C_CHAR_UNKNOWN
*     HOST_COVER_PAGE             = C_CHAR_UNKNOWN
*     PRIORITY                    = C_NUM1_UNKNOWN
*     SAP_OBJECT                  = C_CHAR_UNKNOWN
*     TYPE                        = C_CHAR_UNKNOWN
*     USER                        = SY-UNAME
*     DRAFT                       = C_CHAR_UNKNOWN
         DRAFT                   = 'X'      "++fifi23122004

      importing
         out_archive_parameters  = arcpar
         out_parameters          = pripar
```

```
        valid                          = val
     exceptions
        archive_info_not_found         = 1
        invalid_print_params           = 2
        invalid_archive_params         = 3
        others                         = 4.
* Error -- display message
  if sy-subrc <> 0.
    message id sy-msgid type sy-msgty number sy-msgno
          with sy-msgv1 sy-msgv2 sy-msgv3 sy-msgv4.
  endif.

  if val <> space.
*    MESSAGE i000(zst) with 'OK - ' pripar-paart.
  else.
    message id sy-msgid type sy-msgty number sy-msgno
          with sy-msgv1 sy-msgv2 sy-msgv3 pripar-paart.
  endif.

* SAP ArchiveLink: Obj type of business obj
  move 'DRAW' to arcpar-sap_object.     "SAP ArchiveLink: Object type of
  "business object
  move 'ZARC001C' to arcpar-ar_object. "Document type/table to update
*  move p_dest to pripar-pdest.
*  move p_aart to pripar-paart.
  move '2' to pripar-armod.        "Print: Archiving mode
  move 'X' to pripar-primm.        "Print parameters, print immediate
  move ' ' to pripar-prrel.        "Print parameters, delete after print
  move 'X' to pripar-prnew.        "Print parameters, new spool request
  move sy-datum to arcpar-datum.   "SAP ArchiveLink: Archiving date
  move sy-uname to arcpar-arcuser. "Data element for user
  move sy-mandt to arcpar-mandant. "Client

endform.                     " get_print_param
*&---------------------------------------------------------------------*
*&      Form   test_run
*&---------------------------------------------------------------------*
*       text
*----------------------------------------------------------------------*
*  -->  p1        text
*  <--  p2        text
*----------------------------------------------------------------------*
form test_run.

* Checking Back Ground processes
  if sy-batch eq space.

    submit zustp030
          with p_zbnppp eq p_zbnppp  " Bulan Penyata
          with p_test   eq p_test    " Simulation Run
          with p_zbukrs eq p_zbukrs  " Kod Syarikat
          with s_zregcd in s_zregcd  " Kod Region / Wilayah
          with s_zkdrgi in s_zkdrgi  " Indikator Rancangan
          with s_zkdrgn in s_zkdrgn  " Kod Rancangan
          with s_zkdpkt in s_zkdpkt  " Kod Peringkat
          with s_zkdpk2 in s_zkdpk2  " Kod Sub Peringkat
          with s_zkdblk in s_zkdblk  " Kod Blok

          and return.

  else.
```

```
        move '1' to pripar-armod.      "Print: Print Only mode
        move ' ' to pripar-primm.      "Print parameters
        move ' ' to pripar-prrel.      "Print parameters,del. after print
        move 'X' to pripar-prnew.      "Print parameters, new spool request


        call function 'GET_PRINT_PARAMETERS'
          exporting
            destination                    = p_dest              "T6100_01
*           IMMEDIATELY                    = C_CHAR_UNKNOWN
*           in_archive_parameters          = arcpar
*           in_parameters                  = pripar
            layout                         = p_aart              "X_65_132'
            no_dialog                      = 'X'
          importing
            out_archive_parameters         = arcpar
            out_parameters                 = pripar
            valid                          = val
          exceptions
            archive_info_not_found         = 1
            invalid_print_params           = 2
            invalid_archive_params         = 3
            others                         = 4.

      if val <> space.
*        MESSAGE i000(zst) with 'OK - ' pripar-paart.
      else.
         message id sy-msgid type sy-msgty number sy-msgno
                with sy-msgv1 sy-msgv2 sy-msgv3 pripar-paart.
      endif.

**++fizahs 22.10.2004
      concatenate sy-cprog sy-datum sy-uzeit into w_name separated
      by space.

      move w_name to pripar-prtxt.   "Print: Print title
      move 'X' to pripar-prnew.      "New spool
**end fizahs

*     submit zustp030 to sap-spool
*          with p_zbukrs eq p_zbukrs  " Kod Syarikat
*          with p_zbnppp eq p_zbnppp  " Bulan Pemprosesan (MM/YYYY)
*          with s_zkdrgi in s_zkdrgi  " Kod Rancangan Indicator
*          with s_zkdrgn in s_zkdrgn  " Kod Rancangan
*          with s_zkdpkt in s_zkdpkt  " Kod Peringkat
*          with s_zkdpk2 in s_zkdpk2  " Kod Sub Peringkat
*          with p_test eq p_test      " Simulation Run

      submit zustp030 to sap-spool
           with p_zbnppp eq p_zbnppp  " Bulan Penyata
           with p_test   eq p_test    " Simulation Run
           with p_zbukrs eq p_zbukrs  " Kod Syarikat
           with s_zregcd in s_zregcd  " Kod Region / Wilayah
           with s_zkdrgi in s_zkdrgi  " Indikator Rancangan
           with s_zkdrgn in s_zkdrgn  " Kod Rancangan
           with s_zkdpkt in s_zkdpkt  " Kod Peringkat
           with s_zkdpk2 in s_zkdpk2  " Kod Sub Peringkat
           with s_zkdblk in s_zkdblk  " Kod Blok

                   spool parameters pripar
                   archive parameters arcpar
                   without spool dynpro
```

```
            and return.

   endif.

   if sy-subrc <> 0.
     write: / ' SY-SUBRC = ' , sy-subrc.
     write: / ' SY-SUBRC = 4:  Job scheduling terminated by user'.
     write: / ' SY-SUBRC = 8:  Error in job scheduling (JOB_SUBMIT)'.
     write: / ' SY-SUBRC = 12: Error in internal number assignment'.
   endif.


endform.                    " test_run
*&---------------------------------------------------------------------*
*&      Form  archive_actual_run
*&---------------------------------------------------------------------*
*       text
*----------------------------------------------------------------------*
*  -->  p1        text
*  <--  p2        text
*----------------------------------------------------------------------*
form archive_actual_run.
  loop at itab.

    concatenate sy-repid p_zbukrs p_zbnppp itab-zregcd
                sy-datum sy-uzeit into wa_text.

    call function 'GET_PRINT_PARAMETERS'
      exporting
*          ARCHIVE_ID                 = C_CHAR_UNKNOWN
        archive_info                 = 'ASR'
        archive_mode                 = '2'
        archive_text                 = wa_text
*          AR_OBJECT                  = C_CHAR_UNKNOWN
*          ARCHIVE_REPORT             = C_CHAR_UNKNOWN
*          AUTHORITY                  = C_CHAR_UNKNOWN
*          COPIES                     = C_NUM3_UNKNOWN
*          COVER_PAGE                 = C_CHAR_UNKNOWN
*          DATA_SET                   = C_CHAR_UNKNOWN
*          DEPARTMENT                 = C_CHAR_UNKNOWN
*          DESTINATION                = 'T601'
*          EXPIRATION                 = C_NUM1_UNKNOWN
        immediately                  = 'X'
        in_archive_parameters        = arcpar
        in_parameters                = pripar
*          LAYOUT                     = C_CHAR_UNKNOWN
*          LINE_COUNT                 = C_INT_UNKNOWN
*          LINE_SIZE                  = C_INT_UNKNOWN
*          LIST_NAME                  = C_CHAR_UNKNOWN
*          LIST_TEXT                  = C_CHAR_UNKNOWN
*          MODE                       = '2'
*          NEW_LIST_ID                = 'X'
        no_dialog                    = 'X'
*          RECEIVER                   = C_CHAR_UNKNOWN
*          RELEASE                    = C_CHAR_UNKNOWN
*          REPORT                     = C_CHAR_UNKNOWN
*          SAP_COVER_PAGE             = C_CHAR_UNKNOWN
*          HOST_COVER_PAGE            = C_CHAR_UNKNOWN
*          PRIORITY                   = C_NUM1_UNKNOWN
*          SAP_OBJECT                 = C_CHAR_UNKNOWN
```

```
*           TYPE                        = C_CHAR_UNKNOWN
*           USER                        = SY-UNAME
*           DRAFT                       = C_CHAR_UNKNOWN
          DRAFT                      = 'X'     "++fifi23122004

          importing
            out_archive_parameters       = arcpar
            out_parameters               = pripar
            valid                        = val
          exceptions
            archive_info_not_found       = 1
            invalid_print_params         = 2
            invalid_archive_params       = 3
            others                       = 4.

*        if sy-subrc <> 0.
        if val  <> space.
*           MESSAGE i000(zst) with 'OK - ' pripar-paart.
          else.
            message id sy-msgid type sy-msgty number sy-msgno
                   with pripar-paart.
          endif.

        concatenate sy-cprog sy-datum sy-uzeit into w_name separated
        by space.

        move w_name to pripar-prtxt.    "Print: Print title
        move 'X' to pripar-prnew.        "New spool

        submit zustp030 to sap-spool
          with p_zbukrs eq p_zbukrs   " Kod Syarikat
          with p_zbnppp eq p_zbnppp   " Bulan Pemprosesan (MM/YYYY)
          with s_zkdrgi in s_zkdrgi   " Kod Rancangan Indicator
          with s_zkdrgn in s_zkdrgn   " Kod Rancangan
          with s_zkdpkt in s_zkdpkt   " Kod Peringkat
          with s_zkdpk2 in s_zkdpk2   " Kod Sub Peringkat
          with p_test eq p_test       " Simulation Run

                  spool parameters pripar
*                 store parameters arcpar
              archive parameters arcpar
              without spool dynpro
         and return.

        if sy-subrc eq 0.
          clear zarc001c.
          select single * from  zarc001c
                  where   name      = sy-repid
                  and     ztahun    = p_zbnppp(4)
                  and     zbulan    = p_zbnppp+4(2)
                  and     zbukrs    = p_zbukrs
                  and     zregcd    = itab-zregcd.

          if sy-subrc = 0.
            move-corresponding itab to zarc001c.
            move sy-repid to zarc001c-name.
            move wa_text to zarc001c-kurztext.
            zarc001c-version = zarc001c-version + 1.
            modify zarc001c.
          else.
            clear zarc001c.
```

```
            move-corresponding itab to zarc001c.
            move p_zbnppp(4) to zarc001c-ztahun.
            move p_zbnppp+4(2) to zarc001c-zbulan.
            move sy-repid to zarc001c-name.
            move wa_text to zarc001c-kurztext.
            zarc001c-version = zarc001c-version + 1.
            modify zarc001c.
          endif.

          message i000(zst) with 'Laporan telah diarchive'.

        endif.

      endloop.




*----------------------------------------------------------------*
* Program Name : ZUSTS030                                        *
* Program Title: Pengiraan Hasil Pertama Bulan                   *
* Title Lama   : Pengiraan Pendahuluan Tunai Sawit               *
* Description  : To Process the calculation of the Pendahuluan Tunai *
*                To be Paid to every Settler for Sawit Scheme.   *
*----------------------------------------------------------------*
* Change History Log                                             *
*----------------------------------------------------------------*
report zusts200 no standard page heading line-count 65 line-size 132.


constants: c_zjstnm(2) value 'KS', " Kelapa Sawit
*            c_zdfxco_b like zstcrup-zdfxco value 'SPTBLK02',
*            c_zdfxco_i like zstcrup-zdfxco value 'SPTIND01',
           pcode like zbcccfg-zscode value 'ZSTPT',
           pcode1 like zbcccfg-zscode value 'ZSTPM',
           c_kws(1) value 'U'.

* List Of Used Tables (Input)
tables: zldmrg2, " Maklumat Rancangan
        zldmpkt, " Maklumat Peringkat
        zldmblk, " Maklumat Blok
        zstthhs, " Hasil Harian Sawit.
        zsttkpb, " Kadar Kos Pengangkutan BTB. (input)
        zsttsmd, " Potongan Bulanan
        zldmlot, " Lot Master
        zstmset, " Settler Master
        zsttmpt,
        zldcreg,
        zbcccfg,
        zstkptd,
        t001.    " Kod Syarikat(input)

* List Of Used Tables (Output)
tables: zsttphg. " Pendahuluan

* Internal table for Master Data
data:
```

```
*        i_rg2 like zldmrg2 occurs 0 with header line,

        i_pkt like zldmpkt occurs 0 with header line,
        i_blk like zldmblk occurs 0 with header line.
data:        begin of i_rg2 occurs 0,
              zbukrs like zldmrg2-zbukrs,
              zregcd like zldmrg2-zregcd,
              zkdrgi like zldmrg2-zkdrgi,
              zkdrgn like zldmrg2-zkdrgn,
              znmrgn like zldmrg2-znmrgn,
          end of i_rg2.

data :        i_mpt like zsttmpt occurs 0 with header line. " Kadar
data :   ws_pec like zsttmpt-zperct,
        ws_max like zsttmpt-znilai.


* Internal Table for Table ZSTTPHG Update
data: i_phg like zsttphg occurs 0 with header line. " Pend. Harian
data  ws_mnam type char40.
data  ws_title like sy-title.
data  ws_val2 like  dd07v-domvalue_l.

* Internal Table for Table ZSTKPTD Update
*data : ikptd like zstkptd occurs 0 with header line.

* List Of Settler For reporting (For each Rancangan)
* Nilai_ind = Nilai Bersih    (System Individu)
*           = Nilai Bersih / Jumlah Peneroka (Sistem Blk)
data: begin of i_res occurs 0,
        zkdpkt type zkdpkt,
        zkdpk2 type zkdpk2,
        zkdblk type zkdblk,
        zsetid type zsetid,
        zsname type zsname,
        berat_hasil   type p decimals 2,
        nilai_kasar   type p decimals 2,
        nilai_potong  type p decimals 2,
        nilai_bersih  type p ,
        nilai_bayaran type p decimals 2,
        nilai_ind     type p decimals 2,
        max_nil       type p decimals 2,
        mbb           type p decimals 2,
        cash          type p decimals 2,
      end of i_res.
data: begin of isum occurs 0,
        zbukrs like zsttphg-zbukrs,
        zregcd like zldmrg2-zregcd,
        berat_hasil   type p decimals 2,
        nilai_kasar   type p decimals 2,
        nilai_potong  type p decimals 2,
        nilai_bersih  type p ,
        nilai_bayaran type p decimals 2,
        nilai_ind     type p decimals 2,
        max_nil       type p decimals 2,
        mbb           type p decimals 2,
        cash          type p decimals 2,
      end of isum.

* Internal table ZSTTHHS - Hasil Harian Sawit
data : begin of i_hhs occurs 0,
```

```
                zparas like zstthhs-zparas,
                zbbuln like zstthhs-zbbuln,
*                zmlcod like zstthhs-zmlcod, " Mill Code
                zntton like zstthhs-zntton, " Berat
                zyival like zstthhs-zyival, " Nilai
            end of i_hhs.

* Load Deduction From SMD
data:  begin of i_smd occurs 0,
            zpenpo like zsttsmd-zpenpo,
            zddeco like zsttsmd-zddeco,
            zblnmu like zsttsmd-zblnmu,
            zjlhpo like zsttsmd-zjlhpo,
            zjenki like zsttsmd-zjenki,
            end of i_smd.

* List of Settlers In The Blok
data:  begin of i_lot occurs 0,
            zsetid like zldmlot-zsetid, " = Space for Block System
            zlslot like zldmlot-zlslot, " Luas Lot / Luas Lot
        end of i_lot.
data:  i_lot2 like i_lot occurs 0 with header line.

* Variables
data:  ws_tabix like sy-tabix. " Internal Table Counter
data:  ws_key like zstskey.
data:  ws_paras.    " 3 Blok / 4 Individu
data:  ws_zidmhn like zstkptd-zidmhn,
        p_start like zstthhs-ztrdat,
        p_last  like zstthhs-ztrdat.

* Title of Third line.
data   ws-titleline3 like sy-title.
data:  ws_thawal(10), " Date
        wa_trhakhir(10). " Date ws_thawal.

data   pa_bln type zbbuln.
data:  ws_zstpen. " Indicator
data   ws_max_ccfg like zbcccfg-zvalue..
data   ws_pec_ccfg like zbcccfg-zvalue..
*      For Debuging Set this field to 'X' after actual run

* Selection screen
selection-screen: begin of block b2 with frame title text-001.
parameters: p_zbukrs like zldmrg2-zbukrs memory id zbukrs obligatory,
            p_bln    like zsttmpt-zblnmu memory id zblnmu obligatory,
            p_bayar  like zstthhs-ztrdat default sy-datum obligatory
memory id              zstthhs-ztrdat.
selection-screen: uline.
select-options:
            s_reg for zldmrg2-zregcd,
            s_zkdrgi for zldmrg2-zkdrgi obligatory memory id zkdrgi,
            s_zkdrgn for zldmrg2-zkdrgn obligatory memory id zkdrgn,
            s_zkdpkt for zldmpkt-zkdpkt,
            s_zkdpk2 for zldmpkt-zkdpk2,
            s_zkdblk for zldmblk-zkdblk.

selection-screen: uline.

*parameters: p_start  like sy-datum,
*            p_last   like sy-datum ,
```

```
*              p_bayar  like sy-datum default sy-datum.
selection-screen begin of line.
selection-screen comment 1(31) text-010.
parameters pa_test as checkbox default 'X'.
selection-screen end of line.
selection-screen: end of block b2.

at selection-screen.
  perform check_paydt.

* Initialization
initialization.
*  p_start = sy-datum.
*  p_start+6(2) = '01'.
*  p_last = sy-datum.
*  p_last+6(2) = '15'.

* Start Of Selection
start-of-selection.

* Set Report Title
*  write: p_start to ws_thawal.
*  write: p_last  to wa_trhakhir.

  call function 'Z_GET_MONTH_NAME'
      exporting
            bulanyyyymm   = p_bln
            long_or_short = 'L'
      importing
            output        = ws_mnam.
*  concatenate  'Bagi' ws_mnam into sy-title separated by ' '.

  concatenate 'Bagi Hasil' ws_mnam
   into ws-titleline3 separated by space.
  if pa_test eq space.
    concatenate ws-titleline3 '- Larian Sebenar'
       into ws-titleline3 separated by space.
  else.
    concatenate ws-titleline3 '- Larian Ujian'
       into ws-titleline3 separated by space.
  endif.

* Read Company Code
  select single * from  t001 where  bukrs = p_zbukrs.

* Read ZBCCCFG to get vendor code
  clear zbcccfg.
  select single * from zbcccfg where zscode = pcode.
  ws_pec_ccfg = zbcccfg-zvalue.
  clear zbcccfg.
  select single * from zbcccfg where zscode = pcode1.
  ws_max_ccfg = zbcccfg-zvalue.
* Check Date Parameters
  if p_bln ne p_bayar(6).
    write: / 'Tarikh Mestilah mula dan Akhir mestilah dalam',
             'bulan yang sama !'.
    exit.
  endif.
*  if p_bayar lt sy-datum.
*    write: / 'Tarikh Bayaran mestilah hari ini atau',
*             'tarikh yang akan datang !'.
```

```
*     exit.
*   endif.
    if p_bayar+6(2) lt '15'.
      write: / 'Tarikh Pendahuluan mestilah lebih daripada 15 haribulan'.

      exit.
    endif.
    p_start+0(6) = p_bln.
    p_start+6(2) = '01'.
    p_last+0(6)  = p_bln.
    p_last+6(2)  = '15'.


* Load all Rancangan Codes for processing
    select * from zldmrg2
    into corresponding fields of table i_rg2
       where  zbukrs eq t001-bukrs
          and  zkdrgi in s_zkdrgi
          and  zkdrgn in s_zkdrgn
          and  zregcd in s_reg
          and  zzstat eq space.

* Proses All Rgn
    sort i_rg2.
    clear i_rg2.
    loop at i_rg2.

*    Check Rancangan - Authorization
      move-corresponding i_rg2 to ws_key.
      call function 'ZSLP_AUTH_ERROR_MSG'
          exporting
                import = ws_key
                ztxact = '50'.

*    Proses One Rancangan
      perform proses_rgn.
      at end of zregcd.
        read table isum with key zbukrs = i_rg2-zbukrs
                                  zregcd = i_rg2-zregcd.
        if sy-subrc = 0.
          uline.
          perform print_total1 using 'Jumlah Wilayah:'.
        endif.
      endat.
      at last.
        clear isum.
        loop at isum.
          at end of zbukrs.
            sum.
            uline.
            perform print_total1 using 'Jumlah Keseluruhan:'.
          endat.
        endloop.
      endat.


    endloop.

* To print the standard footer and page numbering
    perform report_footer in program zzbctpge using sy-linsz.
    perform page_total    in program zzbctpge using ' ' sy-linsz.
```

```
*--------------------------------------------------------------------*
*          TOP-OF-PAGE                                               *
*--------------------------------------------------------------------*
top-of-page.
  perform report_header in program zzbctpge
       using ' ' sy-linsz sy-cprog t001-butxt sy-title ws-titleline3.
  clear zldcreg.
  select single zregtx from zldcreg into zldcreg-zregtx
  where zbukrs = i_rg2-zbukrs
  and   zregcd = i_rg2-zregcd.
  write: / 'Kod Wilayah       :', i_rg2-zregcd,(50) zldcreg-zregtx.
  write: / 'Kod Rancangan     :',  i_rg2-zkdrgi no-gap,
                                    i_rg2-zkdrgn, (50) i_rg2-znmrgn.

  write: / 'Peringkat         :',  i_blk-zkdpkt, i_blk-zkdpk2.
  write: / 'Blok              :',  i_blk-zkdblk.
  if i_blk-zjsblk = '2'.
    write: '(Jenis Blok = 2)'.
  else.
    write: '(Jenis Blok = 3)'.
  endif.
  write: 95 'Pendahuluan Pada:', p_bayar.
  uline.
*  if i_blk-zjsblk = '3'.
  write: /68(12) 'Jumlah ', (12) 'Nilai ',
            (12) ' Nilai', (12) ' ', (12) ' '.
  write:  /68(12) 'Hasil ', (12) 'Pecahan ',
            (12) 'Bayaran ', (12) 'Catatan ', (12) ' '.
  write: / 'No   K/P Peneroka      Nama'.
  write:  68(12) ' ', (12) ' ',
            (12) '(RM) ', (12) ' ', (12) ' '.
  uline.
*  endif.

*&-------------------------------------------------------------------*
*&      Form  proses_rgn
*&-------------------------------------------------------------------*
form proses_rgn.

  clear:  i_res, i_phg.
  refresh: i_res, i_phg.

* Read ZLDMPKT
  refresh i_pkt.
  select * from zldmpkt appending
    corresponding fields of table i_pkt
      where   zbukrs = i_rg2-zbukrs
        and   zkdrgi = i_rg2-zkdrgi
        and   zkdrgn = i_rg2-zkdrgn
        and   zkdpkt in s_zkdpkt
        and   zkdpk2 in s_zkdpk2
        and   zjstnm = c_zjstnm
        and   zindpt = space
        and   zzstat eq space.
  check sy-subrc eq 0.
  sort i_pkt.

* Copy Kadar Pengangkutan BTB for each Rancangan for all
* Level (1) Rancangan  (2) Peringkat  (3) Blok
```

```
      refresh i_mpt.
      select * from zsttmpt appending table i_mpt
             where  zparas  = '1'
               and   zbukrs = i_rg2-zbukrs
               and   zkdrgi = i_rg2-zkdrgi
               and   zkdrgn = i_rg2-zkdrgn
               and   zblnmu  le p_bln
               and   zerend  ge p_bln
               and   zzstat  eq space.
      select * from zsttmpt appending table i_mpt
             where  zparas  = '2'
               and   zbukrs = i_rg2-zbukrs
               and   zkdrgi = i_rg2-zkdrgi
               and   zkdrgn = i_rg2-zkdrgn
                 and   zblnmu  le p_bln
               and   zerend  ge p_bln
               and   zzstat  eq space.
      select * from zsttmpt appending table i_mpt
             where  zparas  = '3'
               and   zbukrs = i_rg2-zbukrs
               and   zkdrgi = i_rg2-zkdrgi
               and   zkdrgn = i_rg2-zkdrgn
                and   zblnmu  le p_bln
               and   zerend  ge p_bln
             and   zzstat  eq space.
      sort i_mpt by zparas zbukrs zkdrgi
           zkdrgn zkdpkt zkdpk2 zkdblk  ascending
           zblnmu descending.

*  Proses all selected Blok in the Scheme
      refresh i_blk.
      select * from zldmblk appending
         corresponding fields of table i_blk
         for all entries in i_pkt
             where zbukrs = i_rg2-zbukrs
               and zkdrgi = i_rg2-zkdrgi
               and zkdrgn = i_rg2-zkdrgn
               and zkdpkt = i_pkt-zkdpkt
               and zkdpk2 = i_pkt-zkdpk2
               and zkdblk in s_zkdblk
               and zjskws = c_kws
               and zzstat eq space.
      sort i_blk.

* Prosess All seleted Peringkat
      clear i_pkt.
      loop at i_pkt.

*    Proses All Blok
        clear i_blk.
        loop at i_blk
          where zbukrs = i_pkt-zbukrs
            and zkdrgi = i_pkt-zkdrgi
            and zkdrgn = i_pkt-zkdrgn
            and zkdpkt = i_pkt-zkdpkt
            and zkdpk2 = i_pkt-zkdpk2.

          perform proses_blok.

        endloop.  " i_blk
      endloop.    " i_pkt
```

```
* Produce Report for each Rancangan
  perform produce_report.

* Perform Actual Update for each Rancangan
  if pa_test = ' '.
    modify zsttphg from table i_phg.
*    modify zstkptd from table ikptd.
    commit work.
  endif.

endform.                          " proses_rgn

*--------------------------------------------------------------------*
*         FORM proses_blok                                           *
*--------------------------------------------------------------------*
form proses_blok.


* Sistem Individu - Terima Hakmilik.
  if i_blk-zjsblk = '3' or  i_blk-zjsblk = '5'.
    ws_paras = '4'.
    perform proses_blk3.

* Blok Sistem - Belum Terima Hakmilik.
  elseif i_blk-zjsblk = '2'.
    ws_paras = '3'.
    perform proses_blk2.

* Blok Sistem - Sudah Terima Hakmilik.
  elseif i_blk-zjsblk = '4'.
    ws_paras = '3'.
    perform proses_blk2.
  endif.

endform.

*&-------------------------------------------------------------------*
*&      Form   proses_blk3
*&-------------------------------------------------------------------*
form proses_blk3.

* Read Lot Data
  perform read_lot_data.

* Proses all settler-id
  clear i_lot.
  loop at i_lot.
    clear i_res.

*    Read Hasil Info
    perform read_deduction_and_hasil.
    check not i_res-nilai_potong is initial.

    perform move_2_phg.

  endloop.   "i_lot

endform.                          " proses_blk3

*&-------------------------------------------------------------------*
```

```
*&       Form  proses_blk2
*&---------------------------------------------------------------------*
form proses_blk2.
  data: ws_bil_set like sy-index. " Bil Peneroka
  clear i_res.
* Proses Per Blok (Clear i_lot)
  i_lot-zsetid = space.                        " No ID for Blok
  i_lot-zlslot = i_blk-zldltp + i_blk-zldltf. " Luas Blok

* Read Hasil Info
  perform read_deduction_and_hasil.
  check not i_res-nilai_potong is initial.

* Deduction Calculation
*  perform calculate_deduction using c_zdfxco_b.

* Read Lot Data
  perform read_lot_data.

* Get Jumlah Peneroka
  describe table i_lot lines ws_bil_set.
  check ws_bil_set gt 0.

* Get Value based On table
* The check Value is based on the Pro-rate value by total
* number of settler in the blok.
  i_res-nilai_potong = i_res-nilai_potong / ws_bil_set.
  if not ws_max is initial.
    if i_res-nilai_potong gt ws_max.
      i_res-nilai_potong = ws_max.
      i_res-max_nil = ws_max.
    endif.
  else.
    if i_res-nilai_potong gt ws_max_ccfg.
      i_res-nilai_potong = ws_max_ccfg.
      i_res-max_nil = ws_max_ccfg.
    endif.
  endif.


* Update PHG
  clear i_lot.
  loop at i_lot.
    perform move_2_phg.
  endloop.                          " i_lot.

endform.                            " proses_blk2


*---------------------------------------------------------------------*
*        FORM read_kpb                                                 *
*---------------------------------------------------------------------*
*        Read Kadar pengangkutan BTB.                                  *
*---------------------------------------------------------------------*
form read_kpb.
  clear : i_mpt,ws_pec,ws_max.
  loop at i_mpt
    where zparas = '3'                        " Kadar Blok
      and zbukrs = i_rg2-zbukrs
      and zkdrgi = i_rg2-zkdrgi
```

```
              and zkdrgn = i_rg2-zkdrgn
              and zkdpkt = i_pkt-zkdpkt
              and zkdpk2 = i_pkt-zkdpk2
              and zkdblk = i_blk-zkdblk
*             and zklsaw = i_hhs-zmlcod
              and zblnmu le i_hhs-zbbuln.
         exit.
      endloop.
      if sy-subrc ne 0.
        clear i_mpt.
        loop at i_mpt
          where zparas = '2'                      " Kadar Peringkat
            and zbukrs = i_rg2-zbukrs
            and zkdrgi = i_rg2-zkdrgi
            and zkdrgn = i_rg2-zkdrgn
            and zkdpkt = i_pkt-zkdpkt
            and zkdpk2 = i_pkt-zkdpk2

            and zblnmu le i_hhs-zbbuln.
          exit.
        endloop.
        if sy-subrc ne 0.
          clear i_mpt.
          loop at i_mpt
            where zparas = '1'                      " Kadar Rancangan
              and zbukrs = i_rg2-zbukrs
              and zkdrgi = i_rg2-zkdrgi
              and zkdrgn = i_rg2-zkdrgn

              and zblnmu le i_hhs-zbbuln.
            exit.
          endloop.
          if sy-subrc = 0.
            ws_pec = i_mpt-zperct.
            ws_max = i_mpt-znilai.

          endif.
        else.
          ws_pec = i_mpt-zperct.
          ws_max = i_mpt-znilai.
        endif.
      else.
        ws_pec = i_mpt-zperct.
        ws_max = i_mpt-znilai.

      endif.
    endform.


*&---------------------------------------------------------------------*
*&      Form  read_deduction_and_hasil
*&---------------------------------------------------------------------*
form read_deduction_and_hasil.

* Load Jumlah Hasil for Blok/Settler
  refresh i_hhs.
  select * from zstthhs appending
    corresponding fields of table i_hhs
      where   zbbuln = p_bln
        and   zparas = ws_paras
        and   zbukrs = i_rg2-zbukrs
        and   zkdrgi = i_rg2-zkdrgi
```

```
                and   zkdrgn = i_rg2-zkdrgn
                and   zkdpkt = i_pkt-zkdpkt
                and   zkdpk2 = i_pkt-zkdpk2
                and   zsetid = i_lot-zsetid
                and   ztrdat between p_start and p_last
                and   zkdblk = i_blk-zkdblk
                and   zstpen = ws_zstpen.

     check sy-subrc eq 0.
     sort i_hhs.
     clear i_hhs.
*    clear: i_res-nilai_potong,                        " Potongan
*           i_res-nilai_kasar,                         " Jumlah Nilai Hasil
*           i_res-berat_hasil.                         " Jumlah Berat Hasil
*
     loop at i_hhs.
       at new zbbuln.
         sum.

*        Nilai Potongan Untuk Pengkutan BTS
         perform read_kpb.
         if ws_pec is initial.
           i_res-nilai_potong = ( i_hhs-zyival  ) * ( ws_pec_ccfg / 100 )
            .
           i_res-nilai_bersih  = ws_pec_ccfg. " pecahan pembahagian

         else.
           i_res-nilai_potong = ( i_hhs-zyival  ) * ( ws_pec / 100 ).
           i_res-nilai_bersih  = ws_pec. " pecahan pembahagian
         endif.
         i_res-nilai_kasar    = i_hhs-zyival. "Berat hasil
         if i_hhs-zparas = '3'.
         else.
           if not ws_max is initial.
             if i_res-nilai_potong gt ws_max.
               i_res-nilai_potong = ws_max.
               i_res-max_nil = ws_max.
             endif.
           else.
             if i_res-nilai_potong gt ws_max_ccfg.
               i_res-nilai_potong = ws_max_ccfg.
               i_res-max_nil = ws_max_ccfg.
             endif.
           endif.
         endif.


       endat.
     endloop.

* Update The Status for Hasil Harian. This To protect Running
* the program more than once.
     if pa_test eq space.
       update zstthhs  set zstpen = 'X'
            where    zbbuln = p_start(6)
                and   zparas = ws_paras
                and   zbukrs = i_rg2-zbukrs
                and   zkdrgi = i_rg2-zkdrgi
                and   zkdrgn = i_rg2-zkdrgn
                and   zkdpkt = i_pkt-zkdpkt
                and   zkdpk2 = i_pkt-zkdpk2
```

```
            and  zsetid = i_lot-zsetid
            and  ztrdat between p_start and p_last
            and  zkdblk = i_blk-zkdblk
            and  zstpen = space.

*            and  zstaxy = space.
   endif.

endform.                          " read_deduction_and_hasil



*&---------------------------------------------------------------------*
*&      Form  read_lot_data
*&---------------------------------------------------------------------*
form read_lot_data.
* 1) Get Settler from zldmlot.
  refresh: i_lot, i_lot2.
  select * from zldmlot appending
     corresponding fields of table i_lot2
        where   zbukrs = i_rg2-zbukrs
            and  zkdrgi = i_rg2-zkdrgi
            and  zkdrgn = i_rg2-zkdrgn
            and  zkdpkt = i_pkt-zkdpkt
            and  zkdpk2 = i_pkt-zkdpk2
            and  zkdblk = i_blk-zkdblk
            and  zlokth = 'L'              " Ladang
            and  zjslot = 'P'              " Peneroka
            and  zzstat = space.
  check sy-subrc eq 0.
  clear i_lot2.
  loop at i_lot2.
    move i_lot2 to i_lot.
    collect i_lot.
  endloop.
  sort i_lot.

endform.                       " read_lot_data

*&---------------------------------------------------------------------*
*&      Form  move_2_phg
*&---------------------------------------------------------------------*
form move_2_phg.

* Get Settler Info
  clear: i_res-zsname,zstmset.

  select single * from zstmset
                                where zsetid = i_lot-zsetid.
  move i_lot-zsetid    to i_res-zsetid. " Settler-ID
  i_res-nilai_potong = floor( i_res-nilai_potong ).
  i_res-zsname = zstmset-zsname.
  i_res-zkdpkt = i_pkt-zkdpkt.
  i_res-zkdpk2 = i_pkt-zkdpk2.
*  i_res-nilai_bersih = i_res-nilai_potong.
  i_res-nilai_bayaran = i_res-nilai_potong.
  i_res-zkdblk = i_blk-zkdblk.
*  append i_res.

* Update PHG
*  check pa_test = ' '.
  i_phg-mandt  = sy-mandt.
```

```
        i_phg-zbukrs = i_rg2-zbukrs.
        i_phg-zkdrgi = i_rg2-zkdrgi.
        i_phg-zkdrgn = i_rg2-zkdrgn.
        i_phg-zkdpkt = i_pkt-zkdpkt.
        i_phg-zkdpk2 = i_pkt-zkdpk2.
        i_phg-zhtatr = p_bayar.
        i_phg-zkdblk = i_blk-zkdblk.
        i_phg-zsetid = i_lot-zsetid.
        i_phg-zjskws = i_blk-zjskws.
        i_phg-zjstnm = c_zjstnm.
        i_phg-zpnipe = i_res-nilai_potong.
        i_phg-zpntdi = i_res-nilai_potong.
        i_phg-zpstpr = 'P'.
        i_phg-zztmid = sy-uname.
        i_phg-zztmth = sy-datum.
        i_phg-zztmms = sy-uzeit.
        append i_phg.
        perform insert_kptd.
        append i_res.

endform.                          " move_2_phg

*&---------------------------------------------------------------------*
*&      Form  produce_report
*&---------------------------------------------------------------------*
form produce_report.

* Produce Report For Printing for each Rancangan.
* New Page for each Block.

    clear i_res.
    sort i_res.
    loop at i_res.
      at new zkdblk.
        clear ws_tabix.
        clear i_blk.
        read table i_blk with key
             mandt  = sy-mandt
             zbukrs = i_rg2-zbukrs
             zkdrgi = i_rg2-zkdrgi
             zkdrgn = i_rg2-zkdrgn
             zkdpkt = i_res-zkdpkt
             zkdpk2 = i_res-zkdpk2
             zkdblk = i_res-zkdblk binary search.
        new-page.
      endat.

      add 1 to ws_tabix.
      if i_blk-zjsblk = '2' or i_blk-zjsblk = '4'.
        if ws_tabix = 1.
          write:  / 'Nilai Untuk Blok'.
          write:  65(12) i_res-nilai_kasar,      " Jumlah Berat Hasil
                    (12) i_res-nilai_bersih.      " Jumlah Nilai Kasar
*                   (12) ' ',
*                   (12) i_res-nilai_bersih.
          uline.
        endif.
      endif.

      write:   /(4) ws_tabix, i_res-zsetid,
                (40) i_res-zsname.
```

```
      if i_blk-zjsblk = '3' or i_blk-zjsblk = '5'.
        write:   65(12) i_res-nilai_kasar ,     " Jumlah Berat Hasil
                    (12) i_res-nilai_bersih.     " Jumlah Nilai Kasar
*                    (12) i_res-nilai_bayaran,
*                    (12) ' '.
      endif.
      write:      90(12) i_res-nilai_bayaran. " Nilai Bayaran
      if not i_res-max_nil is initial.
        write :108 'Nilai Maksima-' no-gap,(10)i_res-max_nil
left-justified.
      endif.
      at end of zkdblk.
        sum.
        uline.
        perform print_total using 'Jumlah Blok:'.
      endat.

      at end of zkdpk2.
        sum.
        uline.
*        clear i_blk.
        perform print_total using 'Jumlah Peringkat:'.
      endat.

      at last.
        clear isum.
        sum.
        move-corresponding i_res to isum.
        isum-zbukrs = p_zbukrs.
        isum-zregcd = i_rg2-zregcd.
        collect isum.
        uline.
        perform print_total using 'Jumlah Rancangan:'.
      endat.

    endloop.
endform.                          " produce_report

*---------------------------------------------------------------------*
*       FORM print_total                                              *
*---------------------------------------------------------------------*
form print_total using p_txt.
  write:   / p_txt.
  if i_blk-zjsblk = '3' or i_blk-zjsblk eq space or i_blk-zjsblk = '5'.
    write:  65(12) i_res-nilai_kasar,      " Jumlah Berat Hasil
               (12) ' ',       " Jumlah Nilai Kasar
               (12) ' ',
               (12) ' '.
  endif.
  write: 90(12) i_res-nilai_bayaran.       " Nilai Bayaran
*  write:/ 'Nilai MBB :' ,117(12) i_res-mbb.
*  write:/ 'Nilai Tunai:', 117(12) i_res-cash.
endform.
*&---------------------------------------------------------------------*
*&      Form  check_paydt
*&---------------------------------------------------------------------*
*       text
*----------------------------------------------------------------------*
*  -->  p1        text
*  <--  p2        text
```

```
*----------------------------------------------------------------------*
form check_paydt.
*   if p_start gt p_last.
*      message e000(zst) with 'Tarikh Mula lebih besar dari tarikh tamat'.
*   endif.
*   if  p_bayar lt p_last.
*      message e000(zst) with 'Tarikh bayar lebih kecil dari tarikh tamat'
*.
*   endif.
*   if  p_bayar(6) ne p_last(6).
*      message e000(zst)
*         with 'Bulan bayaran tidak sama dengan tarikh tamat'.
*   endif.
*   if p_last+6(2) > 15.
*      message e000(zst) with
*      'Tarikh Akhir Hantar Hasil Lebih Besar Drpd 15 Haribulan'.
*   endif.
endform.                          " check_paydt
*&---------------------------------------------------------------------*
*&      Form  insert_kptd
*&---------------------------------------------------------------------*
*       text
*----------------------------------------------------------------------*
*  -->  p1        text
*  <--  p2        text
*----------------------------------------------------------------------*
form insert_kptd.
  clear : ws_zidmhn,i_res-mbb,i_res-cash.
  ws_zidmhn = i_phg-zbukrs.
  ws_zidmhn+4(1) = i_phg-zkdrgi.
  ws_zidmhn+5(3) = i_phg-zkdrgn.
  ws_zidmhn+8(3) = i_phg-zkdpk2.
  ws_zidmhn+11(1) = i_phg-zkdpk2.

*   move-corresponding i_phg to ikptd.
*   ikptd-ztrkpr = p_bayar.
*   ikptd-zpenpo = '8'.
*   ikptd-zddeco = 'PT'.
*   ikptd-zktgby = 'Bayaran Hasil Pertama Bulan'.
*   ikptd-ztkmhn = sy-datum.
*   ikptd-zjlhlu = i_phg-zpnipe.
*   ikptd-zsttpe = '2'.
*   ikptd-zidlls = sy-repid.
*   ikptd-ztrklu = sy-datum.
*   ikptd-zbyran = '2'.
*   ikptd-zjsmsk = '1'.
*   ikptd-zidmhn = ws_zidmhn.
*   if zstmset-zacno1 is initial.
*     ikptd-zbklpn = i_rg2-zkdven.
*     i_res-cash = i_phg-zpnipe.
*   else.
*     ikptd-zktgby = 'Bayaran Hasil Pertama Bulan(MBB)'.
*     ikptd-zbklpn = zbcccfg-zvalue.
*     i_res-mbb    = i_phg-zpnipe.
*   endif.
*
*   append ikptd.

endform.                          " insert_kptd
*&---------------------------------------------------------------------*
*&      Form  print_total1
```

```
*&---------------------------------------------------------------------*
*       text
*----------------------------------------------------------------------*
*       -->P_0646   text
*----------------------------------------------------------------------*
form print_total1 using   p_txt.
  write:   / p_txt.
*  if i_blk-zjsblk = '3' or i_blk-zjsblk eq space or i_blk-zjsblk = '5'.
*    write:  65(12) i_res-nilai_kasar,     " Jumlah Berat Hasil
*               (12) ' ',     " Jumlah Nilai Kasar
*               (12) ' ',
*               (12) ' '.
*  endif.
  write: 90(12) isum-nilai_bayaran.     " Nilai Bayaran

endform.                         " print_total1
```

```
*----------------------------------------------------------------------*
* Program Name : ZUSTP040_ARC                                          *
* Program Title: Pengiraan Pendapatan Sawit Kawasan Tambahan -archive  *
* Description  : The purpose of this Program :-                         *
*                Mengira Pendapatan Getah Kawasan Tambahan.            *
*                This program will update the the following table:     *
*                    1) ZSTTPBP - Paysheet Header Info.                *
*                    2) ZSTTPB2 - Paysheet Header Info.                *
*                    3) ZSTTPBN - Paysheet items                       *
*                    4) ZSTTSDM - Paysheet Balance/Summary             *
*                The main input is come from the following table:      *
*                    1) ZSTTSMD - Monthly Income/Deduction.            *
*                    2) ZSTTSDM - Rumsan Pendapatan/Potongan           *
* This Program can be run many times in simulation mode. It always     *
* update  table ZSTTPBP and ZSTTPBN in this mode.                      *
* The actual run can be run only once, it will update the balance      *
* in the paysheet balance in table ZSTTSDM.                            *
*----------------------------------------------------------------------*
* Change History Log                                                   *
*----------------------------------------------------------------------*
report  zustp040_arc no standard page heading
        line-size 132  line-count 65.
```

```
*--------------------------------------------------------------------*
* TABLES                                                             *
*--------------------------------------------------------------------*
tables: zarc001c,  "For calculation program
        zldmrg2,   "Jadual Maklumat Rancangan
        zldmpkt,
        zldmblk,
        zldmlot,
        zsttpbn,
        t001.      "Kod Syarikat(input)


*--------------------------------------------------------------------*
* INTERNAL TABLES & DATA DEFINITION
*--------------------------------------------------------------------*
data: begin of itab occurs 0,
        zbukrs like zsttpbp-zbukrs,
        zregcd like zldmrg2-zregcd,  "Region
*        zkdrgi like zsttpbp-zkdrgi,  "Rancangan ind
*        zkdrgn like zsttpbp-zkdrgn,  "Rancangan
      end of itab.

data: pripar like pri_params, "Print parameters, output device
      arcpar like arc_params, "SAP ArchiveLink: Obj type of business obj
      val,
      wa_text(40) type c.
DATA  w_name(40) type c.


*--------------------------------------------------------------------*
* selection screen                                                  *
*--------------------------------------------------------------------*
selection-screen: begin of block b2 with frame title text-001.

parameters:       p_zbnppp like zsttpbn-zbnppp default sy-datum(6)
                             obligatory.
parameters:       p_test default 'X' as checkbox, " Simulation Run
                  p_trac default ' '  no-display. " Trace Processing

selection-screen: uline.
parameters:       p_zbukrs  like zsttpbn-zbukrs memory id buk
                             obligatory.

select-options: s_zregcd for zldmrg2-zregcd
                            , " Region
                s_zkdrgi for zldmrg2-zkdrgi, " Rancangan Indicator
                s_zkdrgn for zldmrg2-zkdrgn, " Rancangan
                s_zkdpkt for zldmpkt-zkdpkt, " Peringkat
                s_zkdpk2 for zldmpkt-zkdpk2, " Peringkat (Sub)
                s_zkdblk for zldmblk-zkdblk. " Blok
*select-options: s_zsetid for zldmlot-zsetid. " Settler-id
*parameters:       p_tpul   as checkbox. " Pulangan

selection-screen: uline.

parameters:
**p_dest(8) default 'T6100_01',
*          p_dest  like pripar-pdest default 'T601',
*          p_aart  like rspols-layout default 'X_65_132'.

   p_dest  like pripar-pdest default 'T601' modif id SC1,
   p_aart  like rspols-layout default 'X_65_132' modif id SC1.
```

```
selection-screen: end of block b2.

*selection-screen end of line.
*----------------------------------------------------------------------*
*AT SELECTION SCREEN
*----------------------------------------------------------------------*
at selection-screen.

at selection-screen output.
loop at screen.

  if screen-group1 = 'SC1'.
    screen-input = '0'.
    modify screen.
  endif.

endloop.


*----------------------------------------------------------------------*
*START OF SELECTION.
*----------------------------------------------------------------------*
start-of-selection.
* get entries from Jadual Maklumat Rancangan base on sel screen
  select * into corresponding fields of table itab from zldmrg2
      where zbukrs  = p_zbukrs
      and   zkdrgi  in s_zkdrgi
      and   zkdrgn  in s_zkdrgn
      and   zregcd  in s_zregcd.
  sort itab.

  delete adjacent duplicates from itab.

* check the function for paarameter passing
  perform get_print_param.

  if p_test = 'X'.              "Test Run
    perform test_run.
  else.
    perform archive_actual_run.  "Actual Run
  endif.

*----------------------------------------------------------------------*
*END OF SELECTION
*----------------------------------------------------------------------*
end-of-selection.

*&---------------------------------------------------------------------*
*&      Form  get_print_param
*&---------------------------------------------------------------------*
form get_print_param.

  call function 'GET_PRINT_PARAMETERS'
    exporting
*     ARCHIVE_ID               = C_CHAR_UNKNOWN
      archive_info             = '---'
*     ARCHIVE_MODE             = C_CHAR_UNKNOWN
      archive_text             = '------'
*     AR_OBJECT                = C_CHAR_UNKNOWN
*     ARCHIVE_REPORT           = C_CHAR_UNKNOWN
*     AUTHORITY                = C_CHAR_UNKNOWN
```

```
*       COPIES                       = C_NUM3_UNKNOWN
*       COVER_PAGE                   = C_CHAR_UNKNOWN
*       DATA_SET                     = C_CHAR_UNKNOWN
*       DEPARTMENT                   = C_CHAR_UNKNOWN
        destination                  = p_dest                 "T6100_01
*       EXPIRATION                   = C_NUM1_UNKNOWN
*       IMMEDIATELY                  = C_CHAR_UNKNOWN
*       in_archive_parameters        = arcpar
*       in_parameters                = pripar
        layout                       = p_aart                 "X_65_132'
*       LINE_COUNT                   = C_INT_UNKNOWN
*       LINE_SIZE                    = C_INT_UNKNOWN
*       LIST_NAME                    = C_CHAR_UNKNOWN
*       LIST_TEXT                    = C_CHAR_UNKNOWN
*       MODE                         = ' '
*       NEW_LIST_ID                  = C_CHAR_UNKNOWN
        no_dialog                    = 'X'
*       RECEIVER                     = C_CHAR_UNKNOWN
*       RELEASE                      = C_CHAR_UNKNOWN
*       REPORT                       = C_CHAR_UNKNOWN
*       SAP_COVER_PAGE               = C_CHAR_UNKNOWN
*       HOST_COVER_PAGE              = C_CHAR_UNKNOWN
*       PRIORITY                     = C_NUM1_UNKNOWN
*       SAP_OBJECT                   = C_CHAR_UNKNOWN
*       TYPE                         = C_CHAR_UNKNOWN
*       USER                         = SY-UNAME
*       DRAFT                        = C_CHAR_UNKNOWN
        DRAFT                        = 'X'      "++fifi23122004

    importing
        out_archive_parameters       = arcpar
        out_parameters               = pripar
        valid                        = val
    exceptions
        archive_info_not_found       = 1
        invalid_print_params         = 2
        invalid_archive_params       = 3
        others                       = 4.
* Error -- display message
  if sy-subrc <> 0.
    message id sy-msgid type sy-msgty number sy-msgno
            with sy-msgv1 sy-msgv2 sy-msgv3 sy-msgv4.
  endif.

  if val <> space.
*     MESSAGE i000(zst) with 'OK - ' pripar-paart.
  else.
    message id sy-msgid type sy-msgty number sy-msgno
            with sy-msgv1 sy-msgv2 sy-msgv3 pripar-paart.
  endif.

* SAP ArchiveLink: Obj type of business obj
  move 'DRAW' to arcpar-sap_object.    "SAP ArchiveLink: Object type of
  "business object
  move 'ZARC001C' to arcpar-ar_object. "Document type/table to update
*  move p_dest to pripar-pdest.
*  move p_aart to pripar-paart.
  move '2' to pripar-armod.           "Print: Archiving mode
  move 'X' to pripar-primm.           "Print parameters, print immediate
  move ' ' to pripar-prrel.           "Print parameters, delete after print
  move 'X' to pripar-prnew.           "Print parameters, new spool request
```

```
    move sy-datum to arcpar-datum.    "SAP ArchiveLink: Archiving date
    move sy-uname to arcpar-arcuser.  "Data element for user
    move sy-mandt to arcpar-mandant.  "Client

endform.                    " get_print_param
*&---------------------------------------------------------------------*
*&      Form  test_run
*&---------------------------------------------------------------------*
form test_run.

* Checking Back Ground processes
    if sy-batch eq space.

      submit zustp040
          with p_zbnppp eq p_zbnppp  " Bulan Prosesan
          with p_test eq p_test      " Simulation Run
          with p_trac eq p_trac      " Trace Processing
          with p_zbukrs eq p_zbukrs
          with s_zregcd in s_zregcd  " Region
          with s_zkdrgi in s_zkdrgi  " Rancangan Indicator
          with s_zkdrgn in s_zkdrgn  " Rancangan
          with s_zkdpkt in s_zkdpkt  " Peringkat
          with s_zkdpk2 in s_zkdpk2  " Peringkat (Sub)
          with s_zkdblk in s_zkdblk  " Blok
*         with s_zsetid in s_zsetid
*         with p_tpul eq p_tpul          " Pulangan

          and return.

    else.
      move '1' to pripar-armod.      "Print: Print Only mode
      move ' ' to pripar-primm.      "Print parameters
      move ' ' to pripar-prrel.      "Print parameters,del. after print
      move 'X' to pripar-prnew.      "Print parameters, new spool request

      call function 'GET_PRINT_PARAMETERS'
        exporting
          destination              = p_dest               "T6100_01
*         IMMEDIATELY              = C_CHAR_UNKNOWN
*         in_archive_parameters    = arcpar
*         in_parameters            = pripar
          layout                   = p_aart               "X_65_132'
          no_dialog                = 'X'
        importing
          out_archive_parameters   = arcpar
          out_parameters           = pripar
          valid                    = val
        exceptions
          archive_info_not_found   = 1
          invalid_print_params     = 2
          invalid_archive_params   = 3
          others                   = 4.

      if val <> space.
*       MESSAGE i000(zst) with 'OK - ' pripar-paart.
      else.
        message id sy-msgid type sy-msgty number sy-msgno
                with sy-msgv1 sy-msgv2 sy-msgv3 pripar-paart.
      endif.

      concatenate sy-cprog sy-datum sy-uzeit into w_name separated
```

```
        by space.

        move w_name to pripar-prtxt.    "Print: Print title
        move 'X' to pripar-prnew.        "New spool
        submit zustp040 to sap-spool
                with p_zbnppp eq p_zbnppp  " Bulan Prosesan
                with p_test eq p_test      " Simulation Run
                with p_trac eq p_trac      " Trace Processing
                with p_zbukrs eq p_zbukrs
                with s_zregcd in s_zregcd  " Region
                with s_zkdrgi in s_zkdrgi  " Rancangan Indicator
                with s_zkdrgn in s_zkdrgn  " Rancangan
                with s_zkdpkt in s_zkdpkt  " Peringkat
                with s_zkdpk2 in s_zkdpk2  " Peringkat (Sub)
                with s_zkdblk in s_zkdblk  " Blok
*          with s_zsetid in s_zsetid
*          with p_tpul eq p_tpul         " Pulangan
           spool parameters pripar
                    archive parameters arcpar
                    without spool dynpro

            and return.

      endif.
      if sy-subrc <> 0.
        write: / ' SY-SUBRC = ' , sy-subrc.
        write: / ' SY-SUBRC = 4: Job scheduling terminated by user'.
        write: / ' SY-SUBRC = 8: Error in job scheduling (JOB_SUBMIT)'.
        write: / ' SY-SUBRC = 12: Error in internal number assignment'.
      endif.
endform.                        " test_run
*&---------------------------------------------------------------------*
*&      Form  archive_actual_run
*&---------------------------------------------------------------------*
form archive_actual_run.


  loop at itab.

     concatenate sy-repid p_zbukrs p_zbnppp itab-zregcd
                 sy-datum sy-uzeit into wa_text.

     call function 'GET_PRINT_PARAMETERS'
       exporting
*          ARCHIVE_ID                = C_CHAR_UNKNOWN
          archive_info              = 'ASR'
          archive_mode              = '2'
          archive_text              = wa_text
*          AR_OBJECT                 = C_CHAR_UNKNOWN
*          ARCHIVE_REPORT            = C_CHAR_UNKNOWN
*          AUTHORITY                 = C_CHAR_UNKNOWN
*          COPIES                    = C_NUM3_UNKNOWN
*          COVER_PAGE                = C_CHAR_UNKNOWN
*          DATA_SET                  = C_CHAR_UNKNOWN
*          DEPARTMENT                = C_CHAR_UNKNOWN
*          DESTINATION               = 'T601'
*          EXPIRATION                = C_NUM1_UNKNOWN
          immediately               = 'X'
          in_archive_parameters     = arcpar
          in_parameters             = pripar
*          LAYOUT                    = C_CHAR_UNKNOWN
```

```
*           LINE_COUNT                = C_INT_UNKNOWN
*           LINE_SIZE                 = C_INT_UNKNOWN
*           LIST_NAME                 = C_CHAR_UNKNOWN
*           LIST_TEXT                 = C_CHAR_UNKNOWN
*           MODE                      = '2'
*           NEW_LIST_ID               = 'X'
          no_dialog                   = 'X'
*           RECEIVER                  = C_CHAR_UNKNOWN
*           RELEASE                   = C_CHAR_UNKNOWN
*           REPORT                    = C_CHAR_UNKNOWN
*           SAP_COVER_PAGE            = C_CHAR_UNKNOWN
*           HOST_COVER_PAGE           = C_CHAR_UNKNOWN
*           PRIORITY                  = C_NUM1_UNKNOWN
*           SAP_OBJECT                = C_CHAR_UNKNOWN
*           TYPE                      = C_CHAR_UNKNOWN
*           USER                      = SY-UNAME
*           DRAFT                     = C_CHAR_UNKNOWN
          DRAFT                       = 'X'     "++fifi 23122004

       importing
         out_archive_parameters      = arcpar
         out_parameters              = pripar
         valid                       = val
       exceptions
         archive_info_not_found      = 1
         invalid_print_params        = 2
         invalid_archive_params      = 3
         others                      = 4.

*        if sy-subrc <> 0.
       if val <> space.
*          MESSAGE i000(zst) with 'OK - ' pripar-paart.
       else.
         message id sy-msgid type sy-msgty number sy-msgno
                 with pripar-paart.
       endif.

       concatenate sy-cprog sy-datum sy-uzeit into w_name separated
       by space.

       move w_name to pripar-prtxt.    "Print: Print title
       move 'X' to pripar-prnew.       "New spool

       submit zustp040 to sap-spool
         with p_zbnppp eq p_zbnppp  " Bulan Prosesan
         with p_test eq p_test      " Simulation Run
         with p_trac eq p_trac      " Trace Processing
         with p_zbukrs eq p_zbukrs
         with s_zregcd in s_zregcd  " Region
         with s_zkdrgi in s_zkdrgi  " Rancangan Indicator
         with s_zkdrgn in s_zkdrgn  " Rancangan
         with s_zkdpkt in s_zkdpkt  " Peringkat
         with s_zkdpk2 in s_zkdpk2  " Peringkat (Sub)
         with s_zkdblk in s_zkdblk  " Blok
*        with s_zsetid in s_zsetid
*        with p_tpul eq p_tpul        " Pulangan
             spool parameters pripar
*              store parameters arcpar
             archive parameters arcpar
             without spool dynpro
       and return.
```

```
    if sy-subrc eq 0.
      clear zarc001c.
      select single * from  zarc001c
             where   name      = sy-repid
             and     ztahun    = p_zbnppp(4)
             and     zbulan    = p_zbnppp+4(2)
             and     zbukrs    = p_zbukrs
             and     zregcd    = itab-zregcd.

      if sy-subrc = 0.
        move-corresponding itab to zarc001c.
        move sy-repid to zarc001c-name.
        move wa_text to zarc001c-kurztext.
        zarc001c-version = zarc001c-version + 1.
        modify zarc001c.
      else.
        clear zarc001c.
        move-corresponding itab to zarc001c.
        move p_zbnppp(4) to zarc001c-ztahun.
        move p_zbnppp+4(2) to zarc001c-zbulan.
        move sy-repid to zarc001c-name.
        move wa_text to zarc001c-kurztext.
        zarc001c-version = zarc001c-version + 1.
        modify zarc001c.
      endif.

      message i000(zst) with 'Laporan telah diarchieve'.

    endif.

  endloop.

endform.                          " archive_actual_run

** Constants for Fixed Values, Used for All program
*constants: c_zjstnm(2) value 'KS', " Kelapa Sawit
*           c_zjsrcd    value '1'.  " Jenis Record
*
*constants: c_form(30) value 'CAL_SAWIT_RES', " Main Subroutine
*           c_report(10) value 'ZUSTP040',      " Main Program
*           c_zdfxco like zstcrup-zdfxco value 'PYKSRZID'. " Prg-ID
*
** The value is Contanst only for Getah.
** If Jenis tanaman is Kelapa Sawit, it extracted from Blok Master (BLK)
*data:      c_zjskws    value 'T'. " Kawasan Tambahan
*data       c_zparas    value '4'.  " Paras
*data:      c_zlokth    value 'L'.  "Lokasi Tanah
*
** General Include For Calculation
*include zzstp000. " Data Declaration and selection Screen
*select-options: s_zsetid for zldmlot-zsetid no-display. " Settler-id
*include zzstp010. " Main Proses (Rancangan / Peringkat / Blok)
*include zzstp040. " Sub Prosess
*include zzstp050. " Detail Proses (Deduction)
*
**----------------------------------------------------------------------*
**         FORM CAL_SAWIT_RES                                           *
**----------------------------------------------------------------------*
*form cal_sawit_res.
** Tolak penerimaan tunai
```

```
*   perform exe_rumus_blok using c_zdfxco '0100'.
*
*   perform cleate_sy1 using '9' wa_bakitunai_zvalue changing wa_sys.
*
** DIVIDEN / PENDAPATAN KASAR Kawasan Tambahan
*   perform exe_rumus_blok using c_zdfxco '0500'.  " Pend. Kasar
*
*   perform exe_rumus_blok using c_zdfxco '1000'.  " Potongan
*
** TOLAK Baja Semasa
*   perform exe_rumus_blok using c_zdfxco '2000'.  " Baja Semasa
*
** Update Status (Must Executed after Gross Income calculation)
*   perform update_status.
*
** Reserve The Pendapatan Minima (ws_rese)
*   move wa_sys to: ws_old1.   " Keep Old Value
*   move wa_sys to: ws_rese.   " Deduction based On This Value
*
** Check If there is any lebihan
*   clear ws_lebih.                    " Reserve = 0 (Default)
*   if st-income_more600 = 'X'.  " Income More than Minima
*     ws_lebih-zjlhpo = ws_old1-zjlhpo - zstcmpm-zpdmin.
*     ws_rese-zjlhpo  = ws_old1-zjlhpo - ws_lebih-zjlhpo.
*   endif.
*
** Amaunt only for lebihan
*   move ws_lebih to wa_sys.       " Use Lebihan for Calculation
*   perform exe_rumus_blok using c_zdfxco '3000'.  " Potongan
*
** Calculete Pecahan
*   ws_pec1-zjlhpo = i_mpp-zpeptm * wa_sys-zjlhpo.
*   ws_pec2-zjlhpo = wa_sys-zjlhpo - ws_pec1-zjlhpo.
*
** Execute Deduction Pecahan 1
*   move wa_sys to ws_old1.                          " Save Old Code
*   move ws_pec1 to wa_sys.
*   perform exe_rumus_blok using c_zdfxco '4000'.             " Pecahan
*1
*   move wa_sys to ws_pec1.
*
** Get back the actual Amount
*   move ws_old1 to wa_sys.    " Original Ded. Code
*   wa_sys-zjlhpo = ws_pec1-zjlhpo + ws_pec2-zjlhpo.
*
** Add the reserve Amt to Baki Tunai
*   add ws_rese-zjlhpo to wa_sys-zjlhpo.
*
*
** To create PD when no more Baki Tunai (Only if Adjustment)
*   perform check_create_pd.
*
** Produce Report and Save
*   perform gen_report_and_save.
*endform.


*-------------------------------------------------------------------*
* Program Name : ZUSTPO90_ARC                                       *
* Program Title: Program mencetak Penyata pendapatan Peneroka.      *
* Description  : The purpose of this Program :-                     *
```

```
*                   Menjana Penyata Pendapatan Peneroka (Getah/Sawit)   *
*                   This program will get the data from table:          *
*                        1) ZSTTPBP  - Paysheet Header Info.            *
*                        2) ZLDMRG2  - Jadual Maklumat Rancangan        *
*                        3) ZARC001R - Archive table for report program *
*-----------------------------------------------------------------*
* Change History Log                                                    *
*-----------------------------------------------------------------*
report ZUSTP090_ARC no standard page
heading line-size 132 line-count 65.

tables: zldmrg2,
        zarc001r,
        zsttpbp.

data  : begin of i_sta occurs 0,
         zbukrs like zsttpbp-zbukrs,
         zregcd like zldmrg2-zregcd,
         zkdrgi like zsttpbp-zkdrgi,
         zkdrgn like zsttpbp-zkdrgn,
        end of i_sta.

DATA i_arc like zarc001r occurs 0 with header line.
DATA i_pbp like zsttpbp occurs 0 with header line.

Data wa_tabix like sy-tabix.
data ws_count type p.
data ws_count1 type p.

data  : pripar like pri_params,
        arcpar like arc_params,
        val.

data  wa_text(40) type c.
data : ws_answer.                        "For user choice

* Selection Parameters
parameters:  p_zbnppp like zsttpbn-zbnppp default sy-datum(6)
                              obligatory.
selection-screen: uline.
parameters:      p_zbukrs  like zsttpbn-zbukrs memory id buk
                              obligatory.

select-options:
s_zregcd for zldmrg2-zregcd obligatory, " Region
s_zkdrgi for zsttpbp-zkdrgi, " Rancangan Indicator
s_zkdrgn for zsttpbp-zkdrgn. " Rancangan

parameter: rb_hsl as checkbox.
parameters:      p_dest  like pripar-PDEST default 'T601'.
parameters:      p_aart  like rspols-layout default 'X_65_255'.

selection-screen: uline.
parameter: rb_arc as checkbox.
parameter: rb_old as checkbox.


*-----------------------------------------------------------------
*
*    INCLUDE ZSTTP010
*
*-----------------------------------------------------------------
```

```
* Start of Processing

start-of-selection.

  select * into corresponding fields of table i_sta from  zldmrg2
        where  zbukrs  = p_zbukrs
        and    zkdrgi  in s_zkdrgi
        and    zkdrgn  in s_zkdrgn
        and    zregcd  in s_zregcd.

  select * into corresponding fields of table i_arc from  zarc001r
        where  zbukrs  = p_zbukrs
        and    zkdrgi  in s_zkdrgi
        and    zkdrgn  in s_zkdrgn
        and    zregcd  in s_zregcd.

  sort i_sta.
  sort i_arc.

  call function 'GET_PRINT_PARAMETERS'
   exporting
*    ARCHIVE_ID                = C_CHAR_UNKNOWN
     archive_info              = '---'
*    ARCHIVE_MODE              = C_CHAR_UNKNOWN
     archive_text              = '------'
*    AR_OBJECT                 = C_CHAR_UNKNOWN
*    ARCHIVE_REPORT            = C_CHAR_UNKNOWN
*    AUTHORITY                 = C_CHAR_UNKNOWN
*    COPIES                    = C_NUM3_UNKNOWN
*    COVER_PAGE                = C_CHAR_UNKNOWN
*    DATA_SET                  = C_CHAR_UNKNOWN
*    DEPARTMENT                = C_CHAR_UNKNOWN
destination                    = p_dest                  " 'T601'
*    EXPIRATION                = C_NUM1_UNKNOWN
*    IMMEDIATELY               = C_CHAR_UNKNOWN
*       in_archive_parameters     = arcpar
*       in_parameters             = pripar
   LAYOUT                       = p_aart
*    LINE_COUNT                = C_INT_UNKNOWN
*    LINE_SIZE                 = C_INT_UNKNOWN
*    LIST_NAME                 = C_CHAR_UNKNOWN
*    LIST_TEXT                 = C_CHAR_UNKNOWN
*    MODE                      = ' '
*    NEW_LIST_ID               = C_CHAR_UNKNOWN
     no_dialog                 = 'X'
*    RECEIVER                  = C_CHAR_UNKNOWN
*    RELEASE                   = C_CHAR_UNKNOWN
*    REPORT                    = C_CHAR_UNKNOWN
*    SAP_COVER_PAGE            = C_CHAR_UNKNOWN
*    HOST_COVER_PAGE           = C_CHAR_UNKNOWN
*    PRIORITY                  = C_NUM1_UNKNOWN
*    SAP_OBJECT                = C_CHAR_UNKNOWN
*    TYPE                      = C_CHAR_UNKNOWN
*    USER                      = SY-UNAME
*    DRAFT                     = C_CHAR_UNKNOWN
   importing
     out_archive_parameters    = arcpar
     out_parameters            = pripar
     valid                     = val
   exceptions
     archive_info_not_found    = 1
```

```
        invalid_print_params          = 2
        invalid_archive_params        = 3
        others                        = 4
                  .
   if sy-subrc <> 0.
     MESSAGE ID SY-MSGID TYPE SY-MSGTY NUMBER SY-MSGNO
             WITH SY-MSGV1 SY-MSGV2 SY-MSGV3 SY-MSGV4.
   endif.

   IF VAL <> SPACE.
   ELSE.
     MESSAGE ID SY-MSGID TYPE SY-MSGTY NUMBER SY-MSGNO
             WITH SY-MSGV1 SY-MSGV2 SY-MSGV3 pripar-paart.
   endif.

   move 'DRAW' to arcpar-sap_object.
   move 'ZARC001R' to arcpar-ar_object.
*  move p_dest to pripar-pdest.
*  move p_aart to pripar-paart.
   move '2' to pripar-armod.
   move 'X' to pripar-primm.
   move ' ' to pripar-prrel.
   move 'X' to pripar-prnew.
   move sy-datum to arcpar-datum.
   move sy-uname to arcpar-arcuser.
   move sy-mandt to arcpar-mandant.

   if rb_arc = 'X'.
     loop at i_arc.

       if i_arc-name   eq sy-repid and
          i_arc-ztahun eq p_zbnppp+0(4) and
          i_arc-zbulan eq p_zbnppp+4(2) and
          i_arc-zbukrs eq p_zbukrs and
          i_arc-zregcd in s_zregcd and
          i_arc-zkdrgi in s_zkdrgi and
          i_arc-zkdrgn in s_zkdrgn.

          MESSAGE e000(zst) with 'Rekod Archive sudah wujud.' .

       endif.

     endloop.
   endif.


   if rb_arc = 'X' or rb_old = 'X'.

     loop at i_sta.

* concatenate sy-datum sy-uzeit sy-repid into wa_text.
       concatenate sy-repid p_zbukrs i_sta-zregcd i_sta-zkdrgi
       i_sta-zkdrgn sy-datum sy-uzeit into wa_text.


       call function 'GET_PRINT_PARAMETERS'
                exporting
*    ARCHIVE_ID                    = C_CHAR_UNKNOWN
                 archive_info              = 'ASR'
                 archive_mode              = '2'
                 archive_text              = wa_text
```

```
*    AR_OBJECT                      = C_CHAR_UNKNOWN
*    ARCHIVE_REPORT                 = C_CHAR_UNKNOWN
*    AUTHORITY                      = C_CHAR_UNKNOWN
*    COPIES                         = C_NUM3_UNKNOWN
*    COVER_PAGE                     = C_CHAR_UNKNOWN
*    DATA_SET                       = C_CHAR_UNKNOWN
*    DEPARTMENT                     = C_CHAR_UNKNOWN
*    DESTINATION                    = 'T601'
*    EXPIRATION                     = C_NUM1_UNKNOWN
              IMMEDIATELY                    = 'X'
                     in_archive_parameters   = arcpar
                     in_parameters           = pripar
*    LAYOUT                         = C_CHAR_UNKNOWN
*    LINE_COUNT                     = C_INT_UNKNOWN
*    LINE_SIZE                      = C_INT_UNKNOWN
*    LIST_NAME                      = C_CHAR_UNKNOWN
*    LIST_TEXT                      = C_CHAR_UNKNOWN
*    MODE                           = '2'
*    NEW_LIST_ID                    = 'X'
                     no_dialog                       = 'X'
*    RECEIVER                       = C_CHAR_UNKNOWN
*    RELEASE                        = C_CHAR_UNKNOWN
*    REPORT                         = C_CHAR_UNKNOWN
*    SAP_COVER_PAGE                 = C_CHAR_UNKNOWN
*    HOST_COVER_PAGE                = C_CHAR_UNKNOWN
*    PRIORITY                       = C_NUM1_UNKNOWN
*    SAP_OBJECT                     = C_CHAR_UNKNOWN
*    TYPE                           = C_CHAR_UNKNOWN
*    USER                           = SY-UNAME
*    DRAFT                          = C_CHAR_UNKNOWN
                importing
                   out_archive_parameters   = arcpar
                   out_parameters           = pripar
                   valid                    = val
                exceptions
                   archive_info_not_found   = 1
                   invalid_print_params     = 2
                   invalid_archive_params   = 3
                   others                   = 4.

* if sy-subrc <> 0.
     IF VAL <> SPACE.
     ELSE.
       MESSAGE ID SY-MSGID TYPE SY-MSGTY NUMBER SY-MSGNO
               WITH pripar-paart.
     endif.

** check table zsttpbp if record exist.
     select count( * ) from zsttpbp into ws_count
         where    zjsrcd  = '1'
            and   zbnppp  = p_zbnppp
            and   zbukrs  = p_zbukrs
            and   zkdrgi  eq i_sta-zkdrgi
            and   zkdrgn  eq i_sta-zkdrgn.

*     select single * from zsttpbp into zsttpbp
*        where    zbnppp = p_zbnppp
*           and   zbukrs = p_zbukrs
*           and   zkdrgi  eq i_sta-zkdrgi
*           and   zkdrgn  eq i_sta-zkdrgn.
```

```
*        describe table  i_pbp lines wa_tabix.
        if ws_count gt 0.
*          if sy-subrc eq 0.
*
*            if i_sta-zkdrgi eq zsttpbp-zkdrgi and
*               i_sta-zkdrgn eq zsttpbp-zkdrgn.


          submit zustp090 to sap-spool
                  with p_zbnppp eq p_zbnppp
                  with p_zbukrs eq p_zbukrs
                  with s_zkdrgi eq i_sta-zkdrgi
                  with s_zkdrgn eq i_sta-zkdrgn
                  with s_zregcd eq i_sta-zregcd
                  spool parameters pripar
*                  store parameters arcpar
                  archive parameters arcpar
                  without spool dynpro
          and return.

           if sy-subrc eq 0.

             if rb_old = 'X'.

               delete from zarc001r where name = sy-repid
                                     and ztahun eq p_zbnppp+0(4)
                                     and zbulan eq p_zbnppp+4(2)
                                     and zbukrs eq p_zbukrs
                                     and zregcd eq i_sta-zregcd
                                     and zkdrgi eq i_sta-zkdrgi
                                     and zkdrgn eq i_sta-zkdrgn.
             endif.

             move-corresponding i_sta to ZARC001R.
             move sy-repid to ZARC001R-name.
             move p_zbnppp+0(4) to ZARC001R-ztahun.
             move p_zbnppp+4(2) to ZARC001R-zbulan.
             move wa_text to ZARC001R-kurztext.
             modify ZARC001R.

           endif.

        else.
          continue.
        endif.

        move ws_count to ws_count1.

      endloop.


      if ws_count1 ne 0.
        write:/ 'Rekod telah disimpan dan dikemaskini.'.
      else.
        write:/ 'Tiada data untuk diproses!'.
      endif.


    else.

      submit zustp090
```

```
                with p_zbnppp eq p_zbnppp
                with p_zbukrs eq p_zbukrs
                with s_zkdrgi in s_zkdrgi
                with s_zkdrgn in s_zkdrgn
                with s_zregcd in s_zregcd
        and return.
      endif.
*endprg.                          " end of program
```

Sistem Pengurusan Dokumen bagi Ibu Pejabat Felda

Borang Soal Selidik Kebolehgunaan DMS

Soal selidik ini bertujuan untuk menguji kebolehgunaan DMS yang dibangunkan. Responden dikehendaki melengkapkan ke semua soalan pada borang soal selidik ini dengan berpandukan kepada jadual skala di bawah untuk menunjukkan tahap penerimaan kepada DMS.

Skala	*Sangat Lemah*	*Lemah*	*Sederhana*	*Baik*	*Sangat Baik*
Nilai	1	2	3	4	5

A)   Antara Muka

    1.   Secara keseluruhannya, antaramuka yang disediakan

        ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5

B)   Kebolehgunaan

    2.   Tahap ramah pengguna

        ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5

    3.   Tahap kesenangan Penggunaan

        ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5

    4.   Anda memahami cara mengguna sistem ini

        ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5

    5.   DMS membantu kerja-kerja dokumen harian anda

        ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5

C)   Kesesuaian

    6.   Dokumen-dokumen yang telah di "scan" atau di "archive" membantu mempercepatkan kerja harian anda

        ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5

7. Fungsi-fungsi "scan", "store", "archive" dan capai adalah bersesuaian dan selamat kepada pengguna.

☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5

8. Secara keseluruhannya, DMS ini amat memudahkan kerja dan meningkatkan produktiviti harian pengguna.

☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5

D)   Tahap Respon Sistem DMS

9. Masa respon sistem

☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5

######################### Terima Kasih Atas Kerjasama Anda ##################

This user manual is a guideline for user how to use the system.This user manual consists of HR module and Finance module and SLP module.

i)   Finance Module

   1.   Scan in the documents

- Execute IXOS IXOS-EnterpriseScan

- To scan a document into the scan queue, put the document into the scanner, select the relevant group on the IXOS-EnterpriseScan and then click on the button.   Depending on how many documents are in the scanner, these documents will now appear in the scan 'queue'. These documents are now ready to be processed and linked to SAP. In the example below, 2 documents are on the IXOS-EnterpriseScan.

- Highlight the document that the user wants to attach by placing the cursor on it.
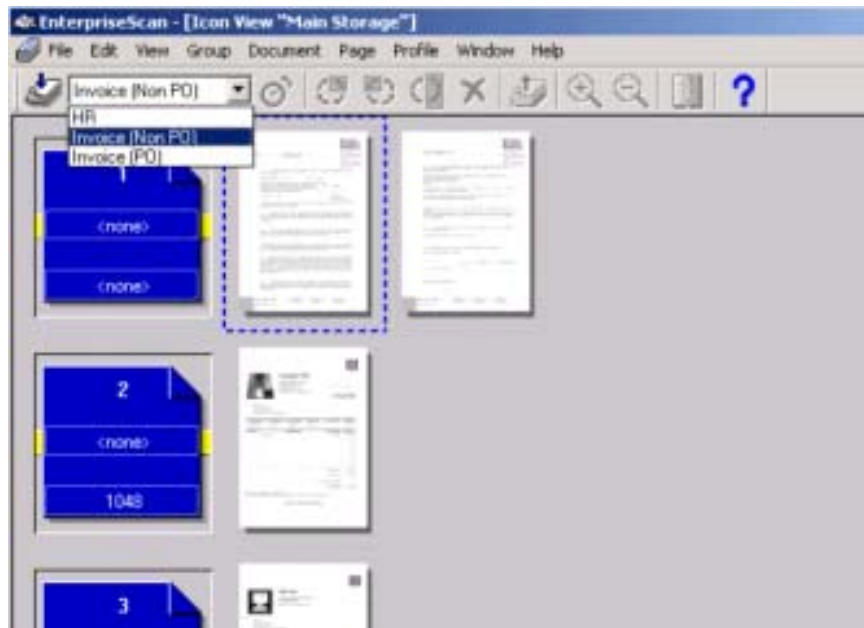
2.   Archiving of Invoice with Purchase Order (PO)

- Logon to SAP, and execute transaction OAWD
- Select the relevant company by clicking on the "+" sign.

- Click on the icon ![icon] which is Incoming Invoice (PO) to start the archiving. The following screen will appear.
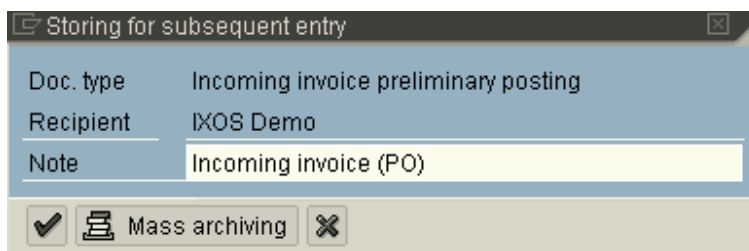
- Click the on the popup window. This will cause SAP to access the IXOS-EnterpriseScan, and send the document (that is highlighted on EnterpriseScan) to IXOS for storing.
- Alternatively, if you chick on the button , all documents on the EnterpriseScan will be sent to IXOS for storing

- The message 'Work item xxxxxxxxxxxx was created' should appear at the bottom of SAPGUI like below:
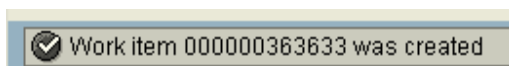
At this point in time, the SAP workitem has been created and sent to the recipient (who is responsible to do invoice verification with the Purchase Order (PO)).

- If you check in IXOS-EnterpriseScan, the selected document was removed from the queue.
- To continue with the archiving, select the document on EnterpriseScan, and click the on the SAP popup window.
- Otherwise, click on button, to abort the operation.

3.   Archiving of Invoice with Non-Purchase Order (Non-PO)

- Logon to SAP, and execute transaction OAWD
- Select the relevant company by clicking on the "+" sign.
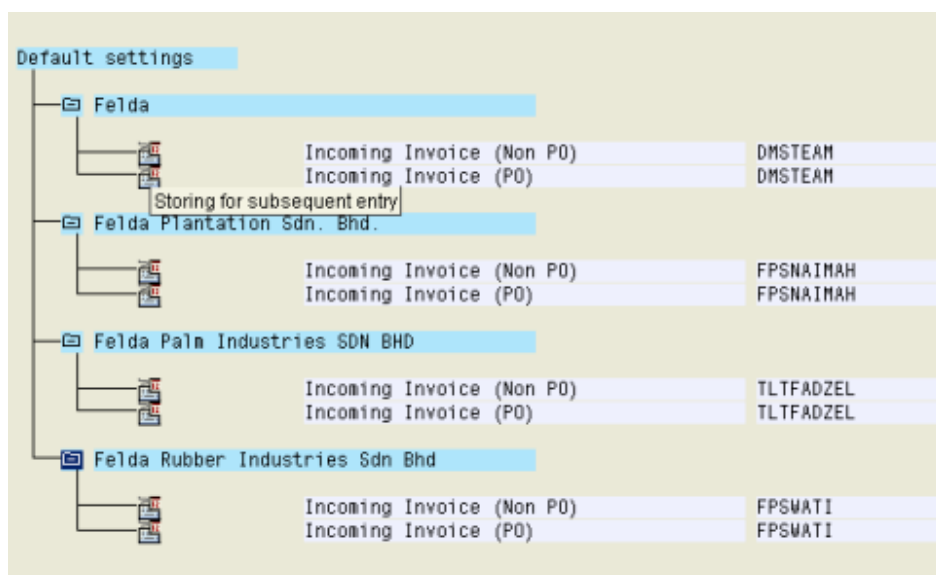
- Click on the icon which is Incoming Invoice (Non-PO) to start the archiving. The following screen will appear.
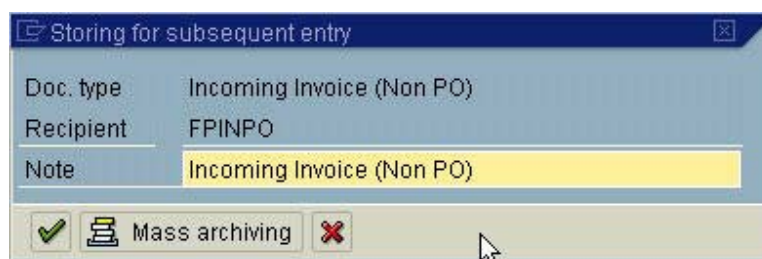
- Click the on the popup window. This will cause SAP to access the IXOS-EnterpriseScan, and send the document that is highlighted to IXOS for storing.
- Alternatively, if you chick on the button Mass archiving , all documents on the EnterpriseScan will be sent to IXOS for storing.

- The message 'Work item xxxxxxxxxxxx was created' should appear at the bottom of SAPGUI like below:

At this point in time, the SAP workitem has created and sent to the recipient already (who is responsible to do invoice verification with the Non-Purchase Order (Non-PO)).

- If you check in IXOS-EnterpriseScan, the selected document was removed from the queue.
- To continue with the archiving, select the document on EnterpriseScan, and click the on the SAP popup window.
- Otherwise, click on button, to abort the operation.

3. **Execution of Workitem for Invoice Verification with Purchase Order (PO)**

- Go into Office→Workplace→Inbox. A list of workitems to be executed is displayed in the Workflow.
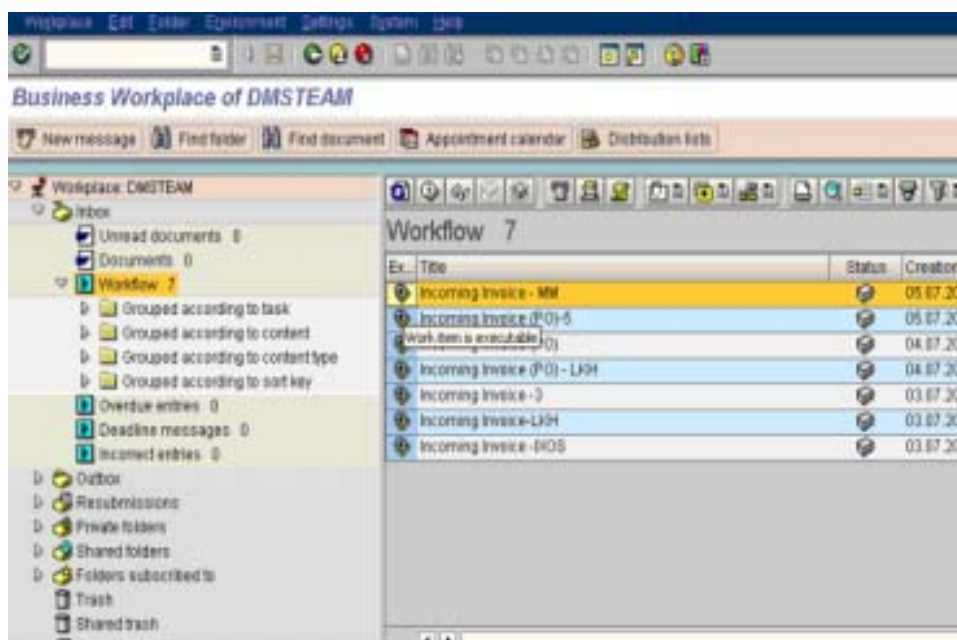
- To execute the workitem, select the workitem and click on the button.

- The image of the invoice will popup automatically, and the following SAP screen will apear.

- Click on the ✔ button to process the invoice or ✖ to cancel the operation.
- Once the invoice has been processed, the workitem will be removed from the inbox.

4. **Execution of Workitem for Invoice Verification with Non-Purchase Order (Non-PO)**

- Go into Office→Workplace→Inbox. A list of workitems to be executed is displayed in the Workflow.

- To execute the workitem, select the workitem and click on the ⊕ button.

- The image of the invoice will popup automatically, and the following SAP screen will apear.
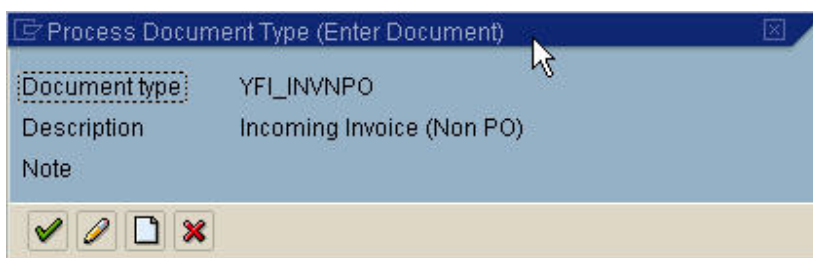
- Click on the ✔ button to process the invoice or ✖ to cancel the operation.
- Once the invoice has been processed, the workitem will be removed from the inbox.

5. Retrieval

- Go to the display document screen (FB03 / MIR4). Enter the document number. At the right top hand corner of the SAPGUI. Click on the 🗎 button, and select option "Attachment List".
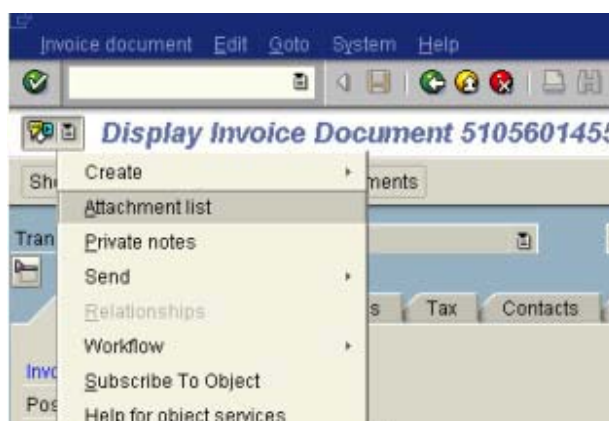
- The Attachment list screen will apear. To view the image, just double click on the item.
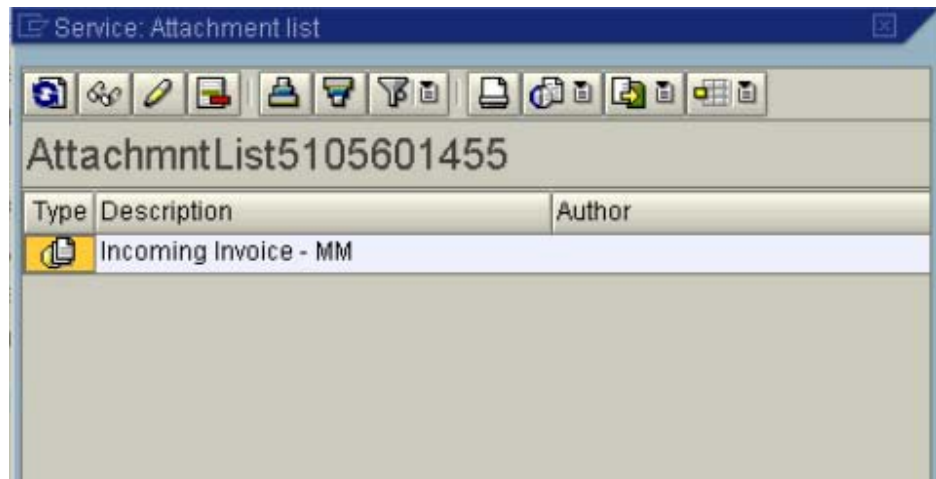
ii) Human Resource Documents

1. Scan in the documents

- Execute IXOS IXOS-EnterpriseScan

- To scan a document into the scan queue, put the document into the scanner, select the "**HR**" on the IXOS-EnterpriseScan and then click on the ![button] button. Depending on how many documents were in the scanner, these documents will now appear in the scan 'queue'. These documents are now ready to be processed and linked to SAP. In the example below, 2 documents are on the IXOS-EnterpriseScan.

- Highlight the document that the user wants to attach by placing the cursor on it.
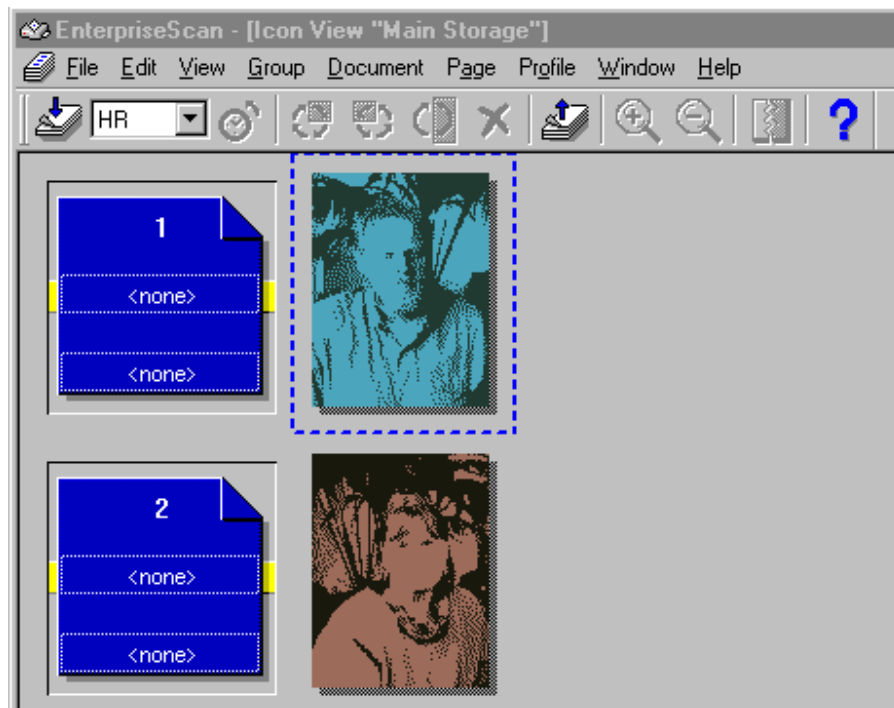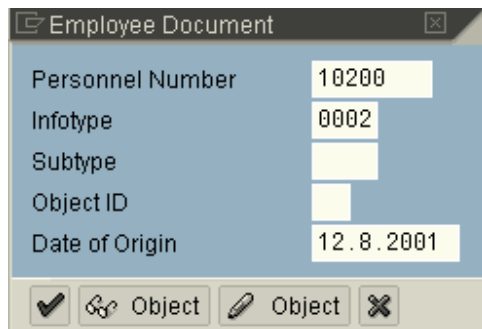
2. Archiving

▪ Logon to SAP, and execute transaction OAWD
▪ Select the relevant company by clicking on the "+" sign.
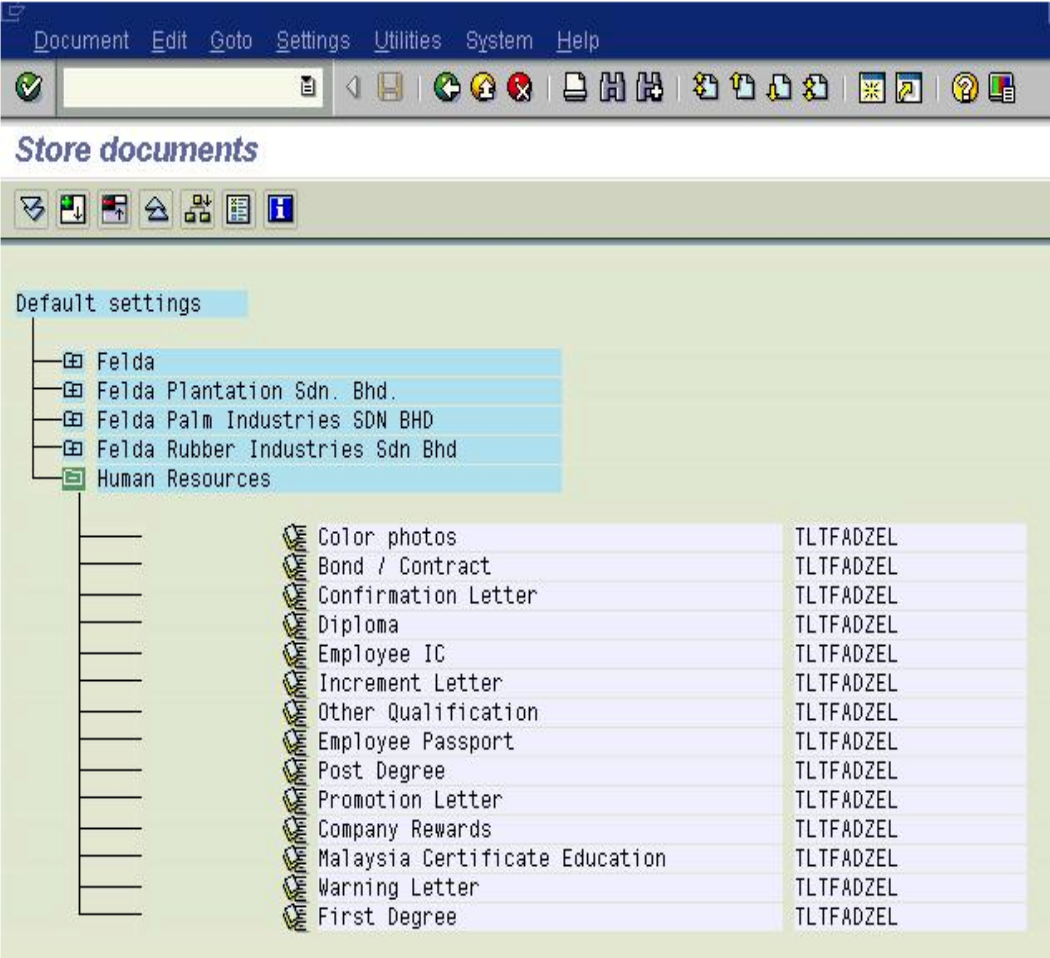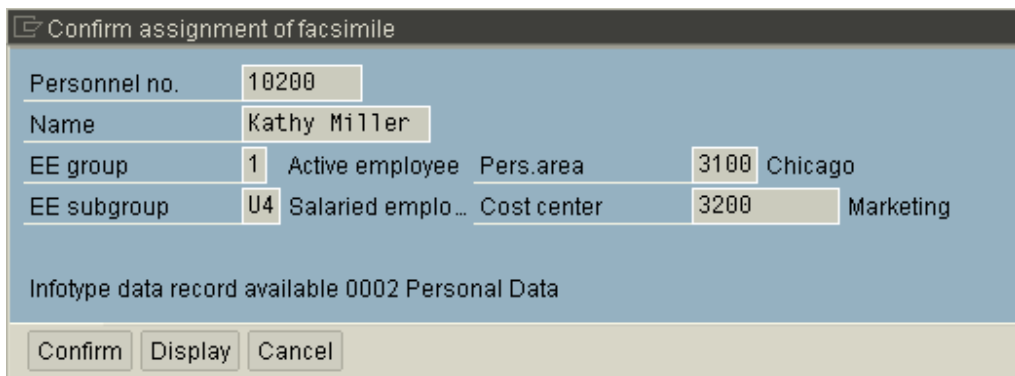
▪ To start the archiving, click on the icon next to appropriate document type.

- The following screen will appear. Enter only the *Personnel Number* and the *Data of Origin* (of the image). Click ✔.

- SAP will show the confirmation screen. Click Confirm to proceed.

- The following message will appear at the bottom of the SAPGUI if the operation is successful.
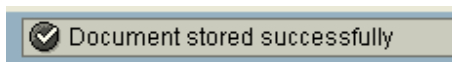
3. **Retrieval**

i) **OPTION 1 – Using SAP Standard retreival**

▪ Go to HR master maintenace screen (PA20 /PA30)
▪ Select from menu Extras→ Display all facsimiles.
▪ All images/documents that are linked to this personnel number will be shown
  on screen.
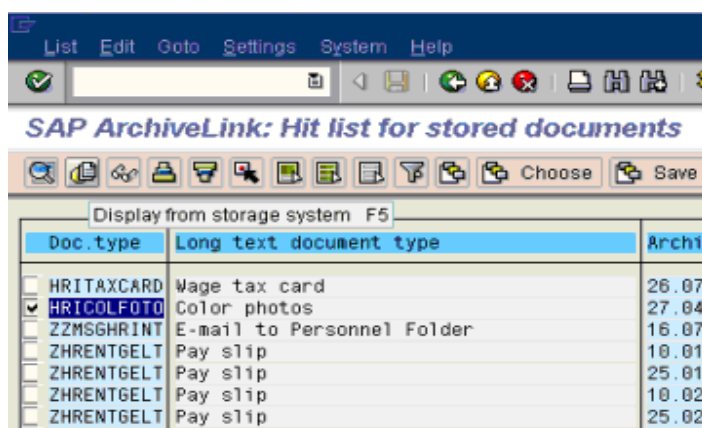
- Select the document(s) that you want to view and click on the retrieval button

ii) **OPTION 2 – Using IXOS Electronic Employee Folder**

▪ Go to IXOS DocuLink (J6NY)

▪ Click on the "Personnel folder" .
▪ Chick on the "Selection Master Data", and key in your criteria.
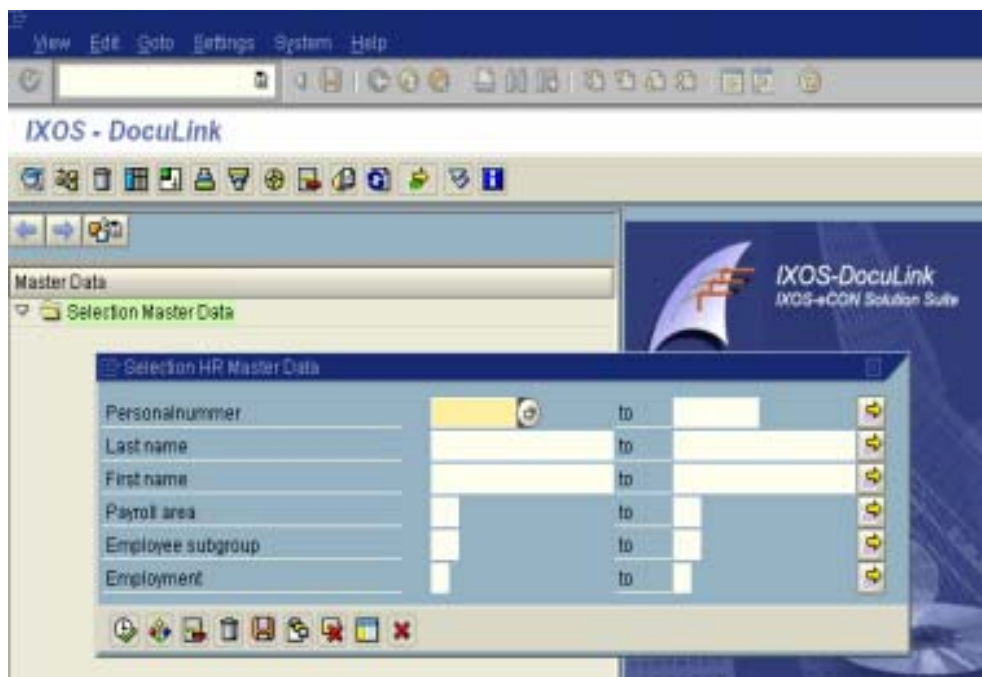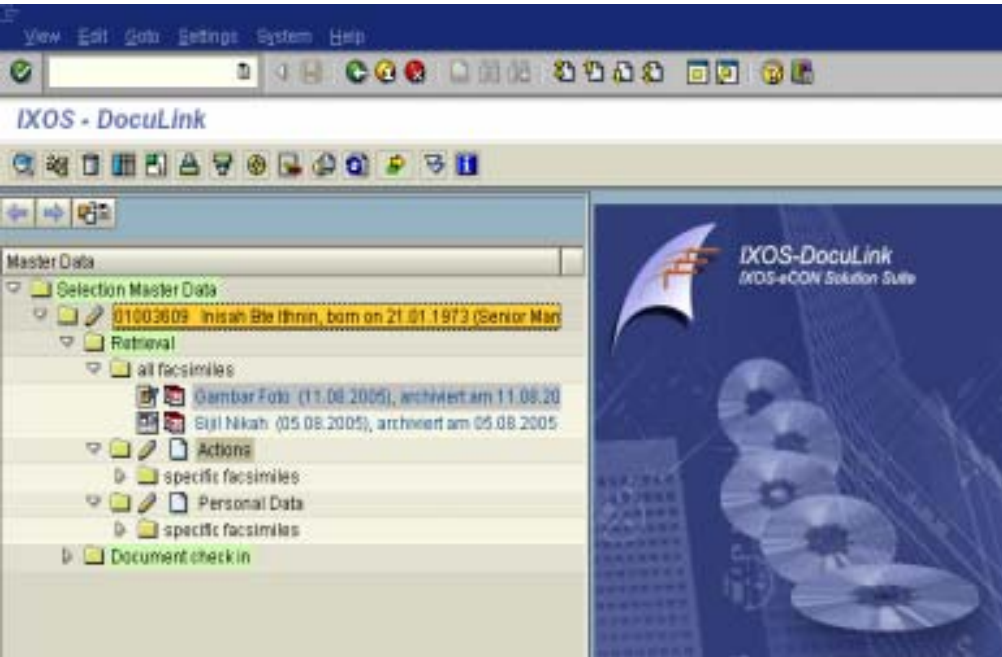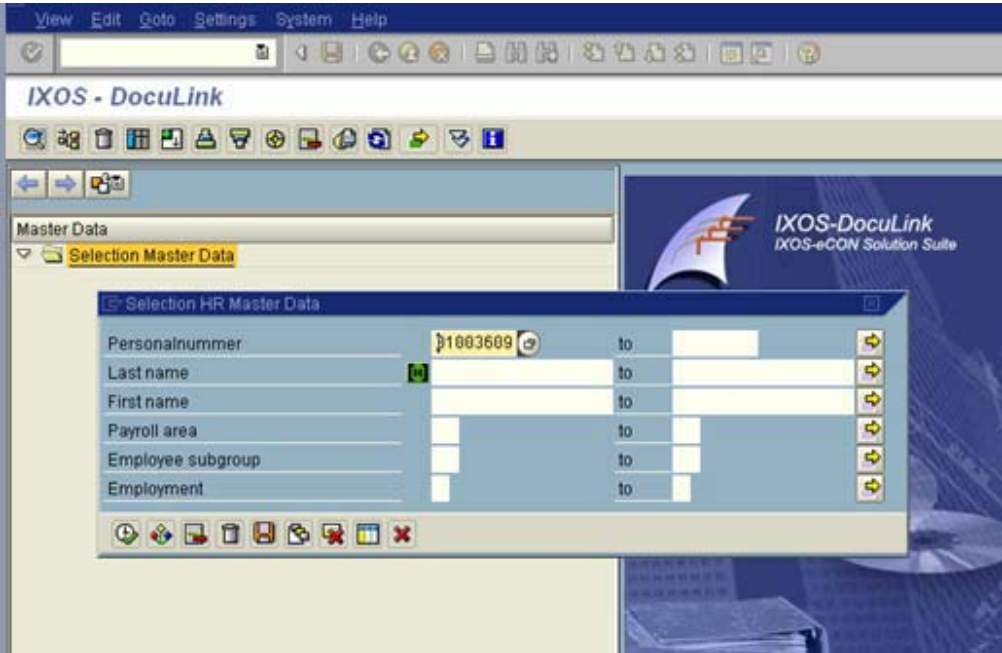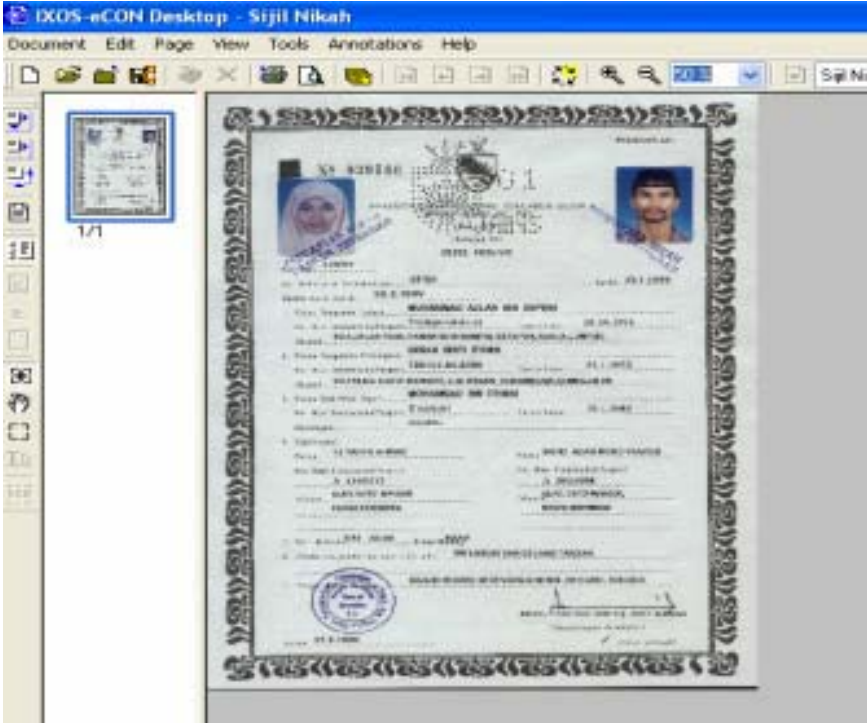
iii) Settler & Land Plantation Module

- Logon to SAP
- Select Report Settler to archive
- Enter data selection
- "Larian Ujian"
- Archive
- Use transaction *J6NY* to display *IXOS DocuLink* screen.

- Select the report and key in the data.
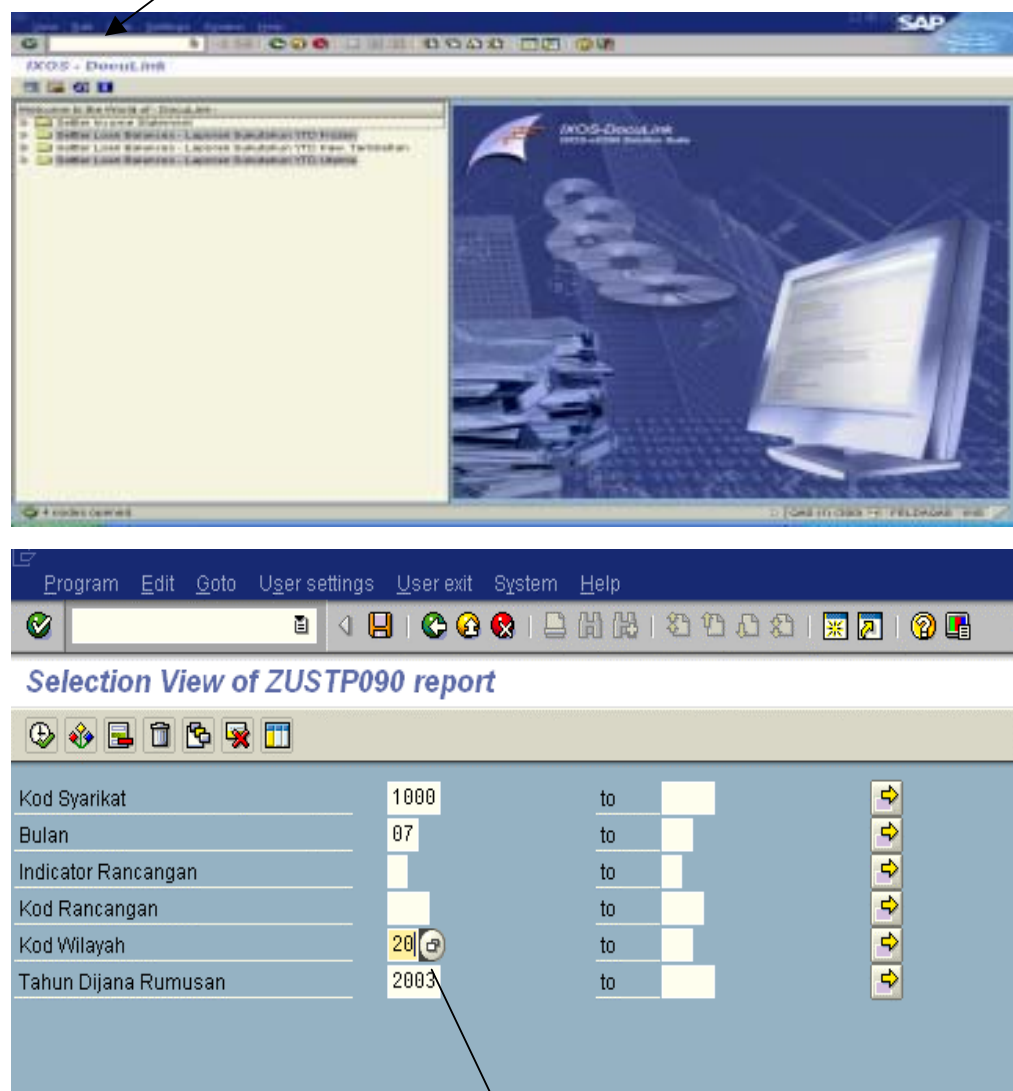
Button Search

More screens will appear when user click search button to find "Kod Wilayah" as example.
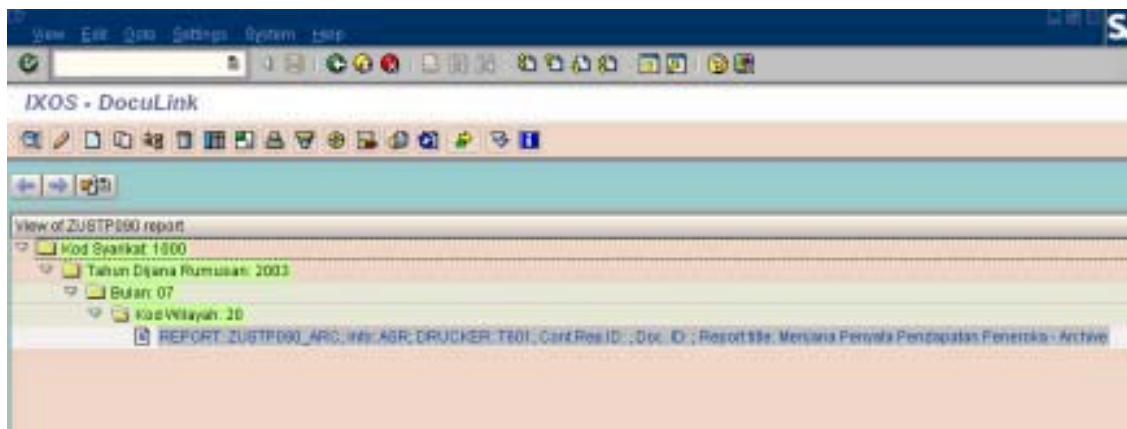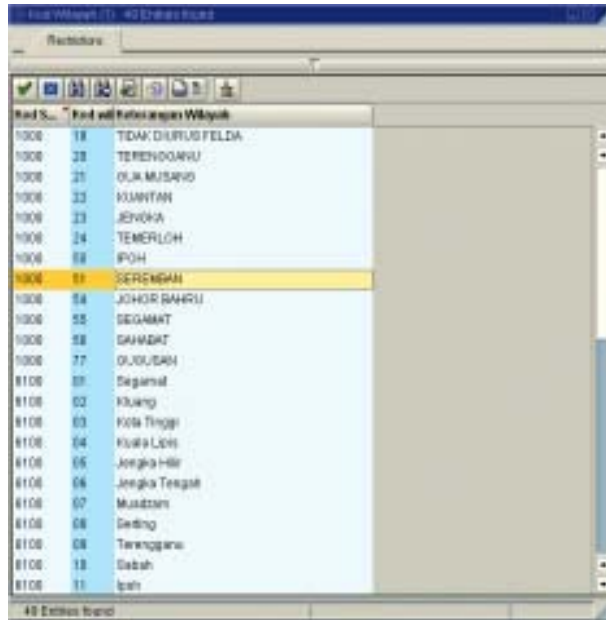
- Click folder and select the report.

Survey: Felda Document Management System

Q01. Name: …………………………………………………………………..

Q 2: Your Professional

     Legislators ☐

     Editors ☐

     Administrators ☐

     Manager ☐

     Executive ☐

     Clerk ☐

Q03. Sector of work involvement

     Engineering ☐

     Services ☐

     Human Resource ☐

     Agricultural ☐

     Management ☐

     Finance ☐

     Others ☐

Q4: Do you have experience managing file and document?

     Yes ☐

     No ☐

Q5   What are the problems that you face while managing the file and document?

    ………..

    ………..

Q6   Have you heard a Document Management System (DMS) before?

Yes   ☐

No   ☐

If Yes, what is your opinion about this system ……………………………………………………………………

……

Q7   Do you think DMS system is suitable to your company?

Yes   ☐

No   ☐

If yes why: …….

………

Q8. What features do you think should be included in the system?

File Sharing   ☐

Email   ☐

Audit Trail Functionality   ☐

Import million documents   ☐

Others   ☐

If you choose others please specify   ……………………………………………………………………………………

……….

Q9. Does your current system satisfy you?

Yes   ☐

No   ☐

IF you choose No please specify it here

……..

……

ID	Task Name	Duration	Start	Finish
1	**Proposal System**	**18 days?**	**Tue 07/12/04**	**Tue 28/12/04**
2	Submit Borang Tajuk proposal	1 day?	Tue 07/12/04	Tue 07/12/04
3	Project Title Review	1 day?	Tue 07/12/04	Tue 07/12/04
4	Problem formulation	1 day?	Sat 18/12/04	Sat 18/12/04
5	Prepare Mini Proposal	8 days?	Mon 20/12/04	Tue 28/12/04
6	**Literature Review**	**48 days?**	**Wed 29/12/04**	**Wed 23/02/05**
7	Meeting with Project Supervisor-Prof Wardah	1 day?	Wed 29/12/04	Wed 29/12/04
8	Fact finding	11 days?	Thu 20/01/05	Wed 02/02/05
9	Prepare questionaires/survey	4 days?	Thu 03/02/05	Mon 07/02/05
10	Meeting with project supervisor-Prof Wardah	1 day?	Tue 08/02/05	Tue 08/02/05
11	Prepare Literature study documentation	15 days?	Tue 08/02/05	Wed 23/02/05
12	**Research Design**	**9 days?**	**Thu 24/02/05**	**Fri 04/03/05**
13	Prepare Research Design study documentation	6 days?	Thu 24/02/05	Tue 01/03/05
14	Progress presentation with supervisor & examiner	1 day?	Thu 24/02/05	Thu 24/02/05
15	Meeting with Prof Wardah	1 day?	Wed 02/03/05	Wed 02/03/05
16	Submit Project 1 draft report	1 day?	Thu 24/02/05	Thu 24/02/05
17	Review Literature Study & Research design	9 days	Thu 24/02/05	Fri 04/03/05
18	Submit Project 1 Report	2 days?	Fri 25/02/05	Sat 26/02/05
19	**Project 1 Final Presentation**	**10 days?**	**Fri 04/03/05**	**Tue 15/03/05**
20	Submit Project 1 Final Report	1 day?	Fri 04/03/05	Fri 04/03/05
21	Ammend Final Report after Presentation	6 days?	Sun 06/03/05	Fri 11/03/05
22	Submit Final Report 1	1 day?	Tue 15/03/05	Tue 15/03/05

Project: GanttChart1
Date: Fri 18/11/05

Task	Progress	Summary	External Tasks	Deadline
Split	Milestone	Project Summary	External Milestone	

Page 1

09 Jan '05 | 16 Jan '05 | 23 Jan '05 | 30 Jan '05 | 06 Feb '05 | 13 Feb '05 | 20 Feb '05 | 27 Feb '05 | 06 Mar '05 | 13 Mar '05
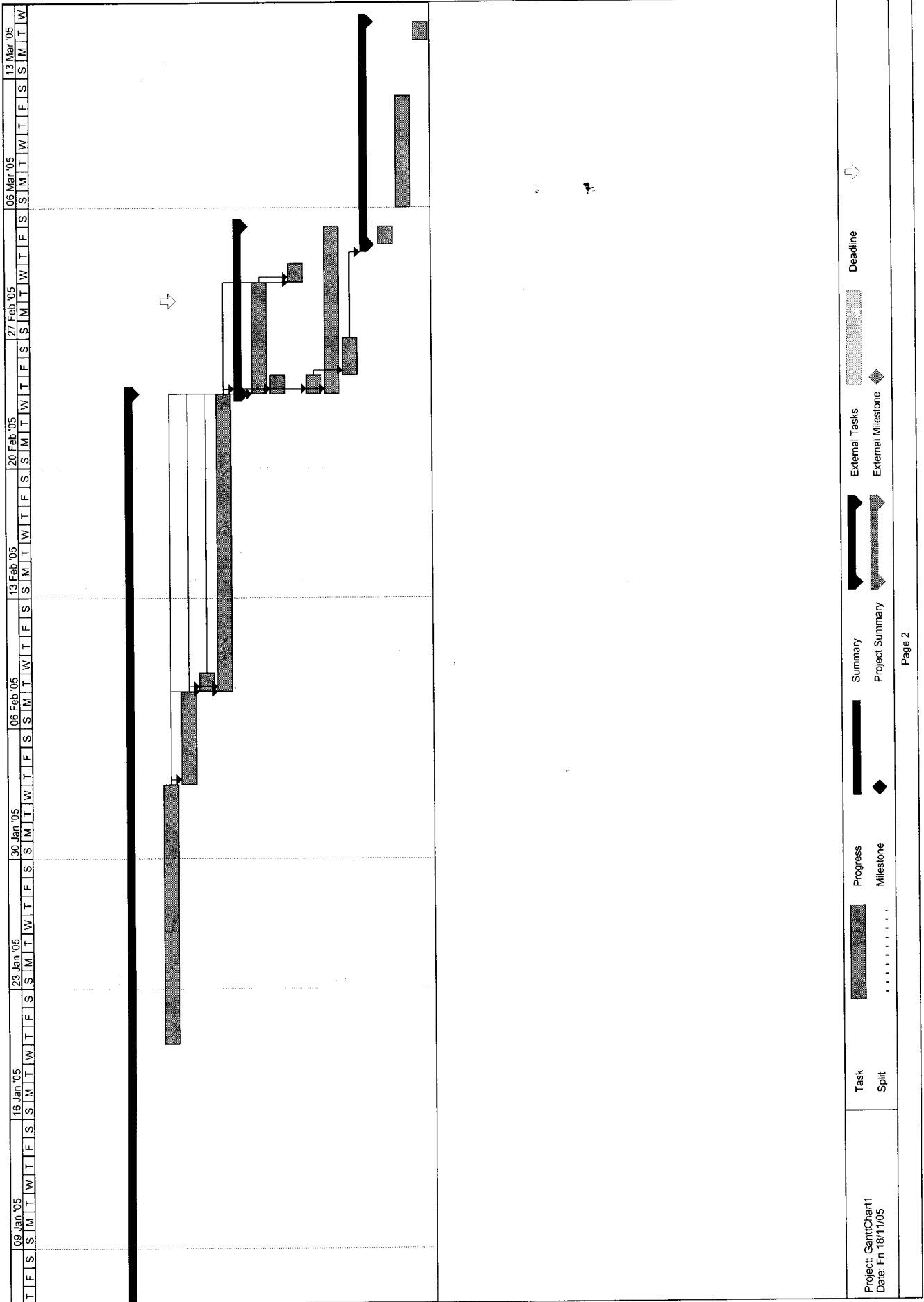
	Task		Progress		Summary		External Tasks		Deadline
	Split		Milestone		Project Summary		External Milestone		

Project: GanttChart1
Date: Fri 18/11/05

ID		Task Name	Duration	Start	Finish
1		**Research Design**	**66 days?**	**Fri 01/04/05**	**Fri 01/07/05**
2		Analysis design	16 days?	Fri 01/04/05	Fri 22/04/05
3		Meeting with Prof Wardah and Puan Suzana	1 day?	Thu 21/04/05	Thu 21/04/05
4		Submit Draft to AITI	1 day?	Fri 20/05/05	Fri 20/05/05
5		Submit Draft to Prof Wardah Chapter 1,2,3 and 4	1 day?	Wed 25/05/05	Wed 25/05/05
6		Ammend Report Chapter 4 - analysis design	22 days?	Thu 02/06/05	Fri 01/07/05
7		**Implementation - Configuration & Customization**	**96 days?**	**Mon 25/04/05**	**Sun 04/09/05**
8		Configuration & Customization	70 days?	Mon 25/04/05	Fri 29/07/05
9		Progress Presentation & meeting with Prof Wardah	1 day?	Mon 23/05/05	Mon 23/05/05
10		Prepare Report Implementation & System Testing	47 days?	Fri 01/07/05	Sun 04/09/05
11		Meeting - Prof Wardah and submit draft Chapter 4, 5 & 6	1 day?	Wed 01/06/05	Wed 01/06/05
12		Email progress report to Prof Wardah	1 day?	Tue 19/07/05	Tue 19/07/05
13		**Testing**	**31 days?**	**Mon 01/08/05**	**Fri 09/09/05**
14		User Acceptance Test	5 days?	Mon 01/08/05	Fri 05/08/05
15		Prepare Report for Chapter 5 & 6	5 days?	Mon 08/08/05	Fri 12/08/05
16		Meeting with Prof Wardah	1 day?	Mon 15/08/05	Mon 15/08/05
17		Ammend report Chapter 4, 5 and 6	14 days?	Tue 16/08/05	Sat 03/09/05
18		Meeting with Prof Wardah	1 day?	Sun 04/09/05	Sun 04/09/05
19		Test Plan	1 day?	Tue 06/09/05	Tue 06/09/05
20		Test Result Checklist	5 days?	Mon 05/09/05	Fri 09/09/05
21		**Installation**	**3 days?**	**Mon 26/09/05**	**Wed 28/09/05**
22		Installation SapGui	3 days	Mon 26/09/05	Wed 28/09/05
23		Installation IXOS Software, Enterprise Scan	3 days?	Mon 26/09/05	Wed 28/09/05
24		**Report Project 2 - Finale**	**54 days?**	**Tue 13/09/05**	**Mon 21/11/05**
25		Progress Report Chapter 7 - Discussion & Summary	7 days?	Tue 13/09/05	Tue 20/09/05
26		Progress Present with Prof Wardah/Dr Harihodin/Raja Baha	1 day?	Sat 17/09/05	Sat 17/09/05
27		Ammend Report	2 days?	Sat 17/09/05	Mon 19/09/05
28		User Manual	3 days?	Sat 17/09/05	Tue 20/09/05
29		Meeting with Prof Wardah	1 day?	Fri 23/09/05	Fri 23/09/05
30		Final Preparation Report DMS	6 days?	Mon 26/09/05	Sun 02/10/05
31		Presentation Day	2 days?	Sat 08/10/05	Sun 09/10/05
32		Ammend Final Report	11 days?	Wed 12/10/05	Wed 26/10/05
33		Submit Final Report	1 day?	Mon 21/11/05	Mon 21/11/05
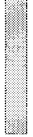
Project: Project2
Date: Fri 18/11/05

Task		Milestone	♦	Summary	Project Summary	External Tasks	Deadline
Split		Progress				External Milestone ♦	

Page 1

| | 01 May '05 | | 08 May '05 | | 15 May '05 | | 22 May '05 | | 29 May '05 | | 05 Jun '05 | | 12 Jun '05 | |

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| Task | | Progress | | Summary | | External Tasks | | Deadline |
| Split | | Milestone | ◆ | Project Summary | | External Milestone | ◆ | |

19 Jun '05	26 Jun '05	03 Jul '05	10 Jul '05	17 Jul '05	24 Jul '05	31 Jul '05	07 Aug '0

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Task	Progress	Summary	External Tasks	Deadline
Split	Milestone	Project Summary	External Milestone	

Task	Progress	Summary	External Tasks	Deadline
Split	Milestone	Project Summary	External Milestone	

Project: Project2
Date: Fri 18/11/05

02 Oct '05							09 Oct '05							16 Oct '05							23 Oct '05							30 Oct '05							06 Nov '05							13 Nov '05							20 Nov '05	
S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T

Project: Project2
Date: Fri 18/11/05

Task		Progress		Summary		External Tasks		Deadline
Split		Milestone		Project Summary		External Milestone		