

Software Requirements Specification

for

DOST Facilities and Equipment Information System

Version 1.0

Prepared by

eDOST Infosys Data Gathering Committee

January 25, 2010

Revision History

Name	Date	Reason For Changes	Version
	03/24/10	Incorporation of comments from focal group	1.0

	Approved by	
<Name of Project Manager>	Signature:	Date:
<Name of Project Manager>	Signature:	Date:

1. INTRODUCTION

1.1 Purpose

This document describes the Department of Science and Technology (DOST) Facilities and Equipment Information System version 1.0 Software Requirements Specification. The specification covers the scope and limitations, data, features, functions, and validation requirements of the system.

It is intended to be used by the development team who will implement the system and by the quality assurance team who will verify the system's correctness and performance.

1.2 Project Scope

Goal

DOST Facilities and Equipment Information System will provide an online Information System that enables the DOST agencies to manage their technical assets, particularly R&D equipment and facilities. It includes information essential for determining the type, quantity, quality, and status of equipment or facilities procured/acquired. It incorporates information needed for both preventive and corrective maintenance, competitive diagnosis, and better resource planning.

Objectives

The main objective of this project is to make the DOST equipment and facilities information accessible through the Internet anytime and anywhere to DOST users. Specifically, it aims to:

- provide a complete set of information about the agency's facilities and equipment;
- allows DOST agencies Property Officer to update the agency's equipment records;
- present a list of equipment and facilities available for use/lend to other system agencies;
- provide a list of equipment and facilities under maintenance; and
- provides generation/printing of report in PDF format.

Scope and Limitation

The system is designed for DOST agencies use only and for the purpose of accountability and transparency to DOST.

The system will not include items under SETUP. It only covers equipment under R&D Projects.

1.3 Definition, Acronyms, and Abbreviations

- Facility - a building or place that provides a particular service or is used for a particular industry.
- Equipment -an instrumentality needed for an undertaking or to perform a service.
- DOST User – includes DOST Personnel and Executive Officers.
- Property Officer – manages equipment list, preventive maintenance schedule, and status/diagnosis of equipment under maintenance.

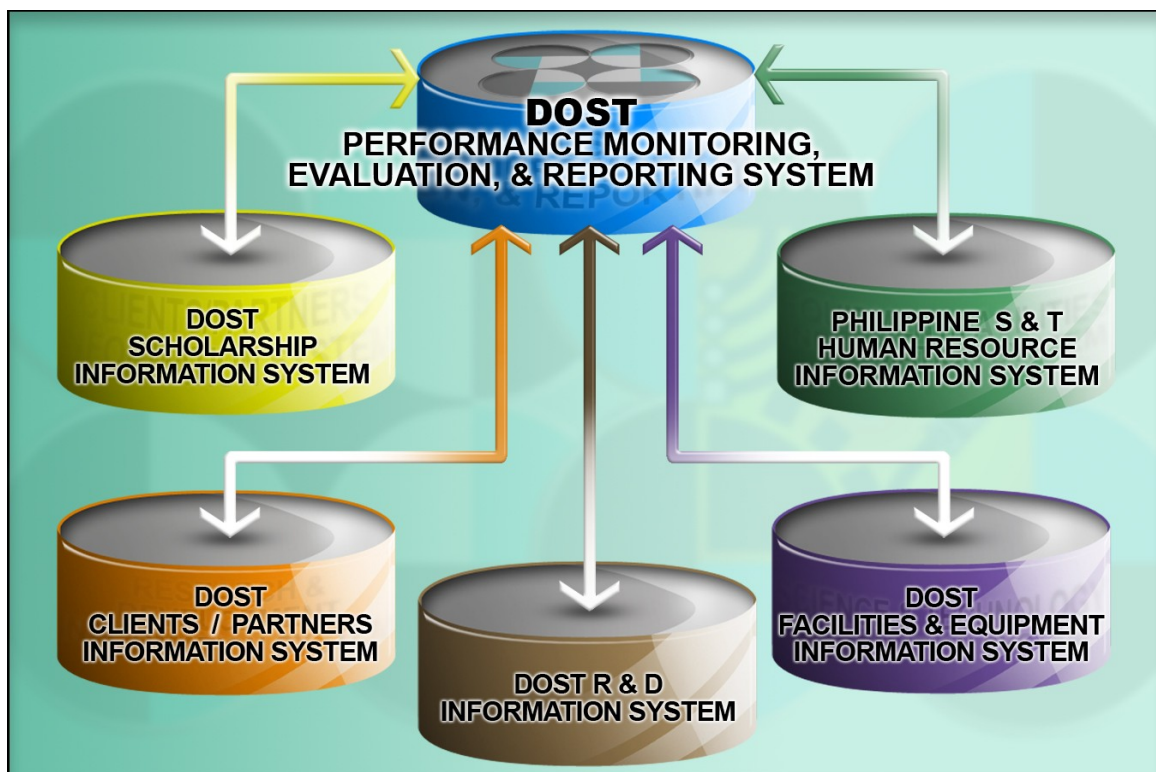
1.4 References

- EDOST Information System project proposal
- Data Gathering References
- <http://wordnetweb.princeton.edu/perl/webwn>
- wordnetweb.princeton.edu/perl/webwn

2. OVERALL DESCRIPTION

2.1 Product Perspective

DOST Facilities and Equipment Information System is a subproject of the eDOST Infosys Project under eDOST Program (please refer to eDOST Program Proposal Document). It aims to strengthen the DOST Management Information System by enhancing and integrating existing systems specific to some supporting DOST agencies; and by providing a centralized Information System suited for all agencies still in need of such System for updating, lending and monitoring of DOST Facilities and Equipment.



2.2 Product Features and Functions

- **F-01: Security of Access**
 - **UC-01: Login**
- **F-02: Acknowledgement Receipt of Equipment/Management Receipt Management**
 - **UC-02: Assign ARE/MR**
 - **To Implementing Agency**
 - **To End User**
 - **UC-03: Update ARE/MR**
- **F-03: Facility and Equipment Management**
 - **UC-04: Add Facility/Equipment**
 - **UC-05: Update Facility/Equipment**
 - **UC-06: Remove Facility/Equipment**
 - **UC-07: Set status**
- **F-04: Transfers and Donations Management**
 - **UC-08: Inspect equipment**
 - **UC-09: Create endorsement/donation**
- **F-05: Report Management**
 - **UC-10: Generate Reports**
 - **UC-11: Print Reports**
 - **UC-12: View List of Facilities and/or Equipment**
- **F-06: User Account Management**
 - **UC-13: Add New Account**
 - **UC-14: View Accounts**
 - **UC-15: Reset Password**
 - **UC-16: Activate Account**
 - **UC-17: Deactivate Account**
 - **UC-18: Change User Role**
- **F-07: Preventive/Corrective Maintenance**
 - **UC-19: Set schedule**
 - **UC-20: Input equipment diagnosis**
 - **UC-21: Set status**

2.3 User Classes and Characteristics

Listed are the user classes each described with their corresponding accessible features.

Super Administrator

- Manages User Accounts
- Represented by approved system owner
- Accessible features:
 - Account management
 - Create accounts of DOST Agency Property Officer
 - Deactivate accounts of DOST Agency Property Officer
 - Activate accounts of DOST Agency Property Officer

- Reset password
- Notification management
- Management log views
- Synchronization from existing system to central database
- Personal User Account Management

DOST Agency System Administrator

- Manages Agency's User
- Accessible features:
 - Manage users
 - Add user
 - Set user role
 - Set user privileges
 - Set user status
 - Activate user
 - Deactivate user

DOST Agency Property Officer

- Manages Agency's Facilities and Equipment
- Accessible features:
 - Manage Facilities and Equipment
 - View list of facilities and/or equipment
 - Add facility and/or equipment
 - Edit facility and/or equipment
 - Remove facility/equipment from list
 - Update status of facility and/or equipment
 - Preventive/corrective maintenance diagnosis
 - Generate/print reports
 - Receive/request to use equipment of other DOST Agency
 - Notification management
 - Personal User Account Management

General DOST user

- Accessible features:
 - View list of equipment (All the agency equipment and some DOST agencies equipment available for lending)
 - Generate/print report
 - Request to use equipment of other DOST Agency
 - Personal User Account Management

2.4 Operating Environment

- The web application will be using a database server and will be deployed in an application server both to be installed on a Linux platform.
- The web application shall operate over the Internet and will be accessed through specified Internet browsers (*see browser compatibility section*).

2.5 Design and Implementation Constraints

Browser Compatibility

Since the application will operate over the Internet and will be accessed through an Internet browser, one of the main concerns for the developers is the issue on browser compatibility of the user interface to be developed. In order to resolve the issue, the developers will research on technologies that will provide user interface solutions that are compatible with specified browsers. Currently, the GUI technology used for development is known to work well on the following Internet browsers:

- Mozilla Firefox 1.5 and up
- MSIE 6.0 and up
- Opera
- Google Chrome Beta
- Safari

Site Security Certificate

Phishing, a kind of web attack by Internet crackers, is a security issue handled by web browsers. In order for a web application to be free from this type of insecurity, web applications must register for a digital certificate to third party certificate authorities(e.g., VeriSign) which are known to the browsers. If a web application is not digitally signed, the web browser prompts the end-user for an option to continue but will and can only recommend not to do so.

- Initially, the application will be self-signed, but eventually will be digitally signed.

Development Tools and Technologies

The following summarizes all the development tools and technologies that will be used for the database, controllers and graphical user interface of the application. These will help the clients in identifying the criteria for hiring developers in case there is a need for revisions after the application has been turned over.

- Specific Technologies (Software only)
 - Servers
 - Linux OS Platform
 - Sun Java System Application Server (Glass Fish v2)
 - MySQL 5.x database server
 - Development Tools

- NetBeans 5.5.1 Integrated Development Environment
- Programming Language
 - Java 1.6 Standard Development Kit
- Java Application Programming Technologies
 - Database
 - Java Persistence API
 - Toplink JPA Implementation
 - Controllers
 - JavaServer Faces
 - GUI
 - JavaServer Pages, Servlets,
 - JavaServer Faces
 - RichFaces 3.3.1
 - Mojarra Scales 1.2
 - PrimeFaces1.0.0RC
 - Testing Tools
 - Unit Testing
 - Jmockit
 - TestNG
 - Functional Testing
 - Selenium
 - Performance Testing
 - JMeter

2.6 User Documentation

- User's Manual
- Technical Documentation

2.7 Assumptions and Dependencies

The System process will only cover the lending, updating and management of DOST Facilities and Equipment.

3. SYSTEM FEATURES

Listed are all the features(F) accessible to each user class. Most features provides CRUD(Create, Read, Update, Delete) privilege functions for management and viewing. Each user class has one or more of these privileges. Moreover, each of these functions provides different behavior for each of the user class. Each of these behaviors are identified clearly by its corresponding use-case(UC).

F-01: Security of Access	
Priority:	Essential
Effort:	Months
Risk:	Safe (?)
Functional area(s):	
Use case(s):	UC-01
Description:	This feature allows any user class to securely manage data information by requiring authentication to the system. The system then detects its user class and assign privileges of access to the system.
Notes and Questions:	

UC-01: Login	
Summary:	The user is asked for his registered user name and password. Each password character will be substituted with asterisk character as it is typed thus will not be visible to anyone.
Priority:	Essential
Use Frequency:	Always
Direct Actors:	Anonymous users
Stakeholders:	
Prerequisites:	Login page should be provided
Main Success Scenario:	<ol style="list-style-type: none"> 1. Anonymous user visits the site. 2. Click on the “Login” link for the login panel to appear. <ul style="list-style-type: none"> ○ user name <ul style="list-style-type: none"> ▪ user name must be unique ○ password <ul style="list-style-type: none"> ▪ password must be at least six characters in length 3. The user clicks on the “Login” button. 4. The system detects the authority of the user and directs the user to its corresponding home page.
Alternative Scenario Extensions:	
Notes and Questions:	

F-02: Acknowledgement Receipt of Equipment/Management Receipt Management

Priority:	Essential
Effort:	Months
Risk:	Safe (?)
Functional area(s):	
Use case(s):	UC-02, UC-03
Description:	
Notes and Questions:	

UC-02: Assign ARE/MR	
Summary:	Property Officers of Implementing Agency can assign ARE/MR's for equipments
Priority:	Essential (?)
Use Frequency:	Seldom
Direct Actors:	Property Officers of Implementing Agency
Stakeholders:	
Prerequisites:	User must be logged on
Main Success Scenario:	<ol style="list-style-type: none"> 1. Navigate to ARE/MR Management page 2. Click "Assign ARE/MR" 3. Select whether to assign to Implementing Agency or End-user 4. Select an Equipment / Facility 5. Select an Implementing Agency or End-user 6. Click "Assign" button"
Alternative Scenario Extensions:	<ol style="list-style-type: none"> 1. Navigate to Equipment/Facility page 2. Click on a Equipment/Facility 3. Click "Assign ARE/MR' 4. Select whether to assign to Implementing Agency or End-user 5. Select an Implementing Agency or End-user <p>Click "Assign" button"</p>
Notes and Questions:	

UC-03: Update ARE/MR	
Summary:	Property Officers of Implementing Agency can update ARE/MR information of equipments
Priority:	Essential (?)
Use Frequency:	Seldom
Direct Actors:	Property Officers of Implementing Agency
Stakeholders:	
Prerequisites:	User must be logged on
Main Success Scenario:	<ol style="list-style-type: none"> 1. Navigate to ARE/MR Management page 2. Select an ARE/MR 3. Click "Update ARE/MR" 4. Update the required fields 5. Click "Save" button"
Alternative Scenario Extensions:	

Notes and Questions:	
-----------------------------	--

F-03: Facilities and Equipment Management

Priority:	Essential
Effort:	Months
Risk:	Safe (?)
Functional area(s):	
Use case(s):	
Description:	
Notes and Questions:	

UC-04: Add Facility/Equipment

Summary:	Property Officers can add equipment to the system database
Priority:	Essential (?)
Use Frequency:	Seldom
Direct Actors:	Property Officer
Stakeholders:	
Prerequisites:	User must be logged on
Main Success Scenario:	<ol style="list-style-type: none"> 1. Click “Add Facility/Equipment” button for the Add equipment Panel to appear. <ul style="list-style-type: none"> ○ Input required fields ○ Select a category (Facility/Equipment/Vehicles/Etc) 2. The Property Officer clicks “Save” button 3. The system will save the information and redirect Property Officer to the previous page.
Alternative Scenario Extensions:	
Notes and Questions:	

UC-05: Update Facility/Equipment

Summary:	Property Officers are enabled to update equipment information on the system database.
Priority:	Essential (?)

Use Frequency:	Rarely
Direct Actors:	Property Officers
Stakeholders:	
Prerequisites:	User must be logged on
Main Success Scenario:	<ol style="list-style-type: none"> 1. Click “Update facility/equipment” link for the Update facility/equipment Panel to appear. <ul style="list-style-type: none"> ○ Update the required fields 2. The Property Officer clicks “Save” button 3. The system will save the info and redirect Property Officer to the previous page.
Alternative Scenario Extensions:	
Notes and Questions:	

UC-06: Remove Facility/Equipment	
Summary:	The Property Officers are allowed to remove facility/equipment from the system database
Priority:	Essential (?)
Use Frequency:	Rarely
Direct Actors:	Property Officers
Stakeholders:	
Prerequisites:	User must be logged on
Main Success Scenario:	<ol style="list-style-type: none"> 1. Click the “Delete button” adjacent to the facility/equipment entry from the list. 2. Confirm “Yes” on the confirmation message. 3. The system will delete the equipment entry
Alternative Scenario Extensions:	
Notes and Questions:	

UC-07: Set Status	
Summary:	The Property Officers are allowed to set the status of the Equipment or Facility
Priority:	Essential (?)
Use Frequency:	Rarely
Direct Actors:	Property Officers

Stakeholders:	
Prerequisites:	User must be logged on
Main Success Scenario:	<ol style="list-style-type: none"> 1. Click the “Set status” adjacent to the equipment entry from the list. 2. Select which status is the equipment or facility on currently. 3. Click “Save”
Alternative Scenario Extensions:	
Notes and Questions:	

F-04: Transfers and Donations Management

Priority:	Essential
Effort:	Months
Risk:	Safe (?)
Functional area(s):	
Use case(s):	
Description:	
Notes and Questions:	

UC-08: Inspect Equipment/Facility

Summary:	Property Officers of Monitoring Agency can inspect an equipment / facility that is currently on the Implementing Agency
Priority:	Essential (?)
Use Frequency:	Seldom
Direct Actors:	Property Officers of Monitoring Agency
Stakeholders:	
Prerequisites:	User must be logged on
Main Success Scenario:	<ol style="list-style-type: none"> 1. Navigate to Transfers and Donations page

	<ol style="list-style-type: none"> 2. Click “Inspect Monitored Equipment / Facilities” 3. Select an item from the monitored equipment / facilities list that you want to inspect 4. View the details 5. Click “Back to the page” when done
Alternative Scenario Extensions:	
Notes and Questions:	

UC-09: Create Endorsement or Donation	
Summary:	Property Officers of Monitoring Agency can create endorsements / donations to the Implementing Agency
Priority:	Essential (?)
Use Frequency:	Seldom
Direct Actors:	Property Officers of Implementing Agency
Stakeholders:	
Prerequisites:	User must be logged on
Main Success Scenario:	<ol style="list-style-type: none"> 1. Navigate to Transfers and Donations page 2. Click “Inspect Monitored Equipment / Facilities” 3. Select an item from the monitored equipment / facilities list that you want to inspect 4. Click “Create Endorsement / Donation to Implementing Agency” 5. Fill-up the fields needed 6. Attach important documents 7. Click “Create”
Alternative Scenario Extensions:	
Notes and Questions:	

F-05 : Report Management	
Priority:	Essential
Effort:	Months (?)
Risk:	Safe (?)
Functional area(s):	
Use case(s):	

Description:	This feature grants all DOST users registered in the system to view equipment and facilities and to generate and print reports.
Notes and Questions:	

UC-10 : Generate Reports	
Summary:	Users are enabled to generate equipment and facility status reports
Priority:	Essential
Use Frequency:	Often (?)
Direct Actors:	All user classes
Stakeholders:	
Prerequisites:	User must be logged on.
Main Success Scenario	<ol style="list-style-type: none"> 1. User is redirected to user's home page 2. User clicks "Equipment and Facility Reports" 3. Input type of report and other filters 4. User clicks "Generate report" 5. A PDF will be generated and is available for download 6. User downloads the generated PDF file
Alternative Scenario Extensions:	
Notes and Questions:	

UC-11 : Print Reports	
Summary:	Users are enabled to print the generated reports
Priority:	Essential
Use Frequency:	Often (?)
Direct Actors:	User
Stakeholders:	
Prerequisites:	User must be logged on, reports are generated
Main Success Scenario:	<ol style="list-style-type: none"> 1. See UC-13 to generate report 2. Click "Print" button to print the generated PDF
Alternative Scenario Extensions:	
Notes and Questions:	

UC-12: View equipment/Facilities Listing	
Summary:	Users are enabled to view the equipment and facilities listing

Priority:	Essential
Use Frequency:	Often (?)
Direct Actors:	User
Stakeholders:	
Prerequisites:	User must be logged on.
Main Success Scenario:	<ol style="list-style-type: none"> 1. User clicks on view Equipment/Facilities Listing 2. The user will input filters for the listing <ul style="list-style-type: none"> ○ Agency ○ Equipment/Facility ○ Etc 3. Click “View Listing” button 4. The user will be redirected to a page where there is a list of equipment and/or facilities depending on the filters
Alternative Scenario Extensions:	
Notes and Questions:	

F-06 : Account Management	
Priority:	Essential
Effort:	Months (?)
Risk:	Safe (?)
Functional area(s):	
Use case(s):	
Description:	This feature provides management functions to the logged on user's personal account
Notes and Questions:	

UC-13 : Add User Account	
Summary:	Administrators are able to add new accounts for access to the information system
Priority:	Essential
Use Frequency:	Rarely (?)

Direct Actors:	Administrators
Stakeholders:	
Prerequisites:	User must be logged on.
Main Success Scenario:	<ol style="list-style-type: none"> 1. Administrator clicks “Add user account” 2. Input Account details <ul style="list-style-type: none"> ○ Email ○ Password ○ Access level ○ Name ○ Etc 3. Click “Submit button” button 4. The system will add the new account to the database
Alternative Scenario Extensions:	
Notes and Questions:	

UC-14 : View Accounts	
Summary:	Administrators are able to view all user accounts in the system
Priority:	Essential
Use Frequency:	Rarely (?)
Direct Actors:	Administrator
Stakeholders:	
Prerequisites:	User must be logged on.
Main Success Scenario:	<ol style="list-style-type: none"> 1. Administrator clicks “View all user accounts” 2. The system will display a page with all user accounts that is recorded in the database.
Alternative Scenario Extensions:	
Notes and Questions:	

UC-15 : Reset User Password	
Summary:	Administrators are able to view all user accounts in the system and reset user's password.
Priority:	Essential
Use Frequency:	Rarely (?)

Direct Actors:	Administrator
Stakeholders:	
Prerequisites:	User must be logged on. View accounts
Main Success Scenario:	<ol style="list-style-type: none"> 1. See UC-14: View Accounts 2. Click on Reset Password link adjacent to the account name 3. The system will reset the password of the account name
Alternative Scenario Extensions:	
Notes and Questions:	

UC-16 : Activate Account	
Summary:	Administrators can activate deactivated user accounts.
Priority:	Essential
Use Frequency:	Rarely (?)
Direct Actors:	Administrator
Stakeholders:	
Prerequisites:	User must be logged on. Account must be deactivated. View accounts
Main Success Scenario:	<ol style="list-style-type: none"> 1. See UC-14: View Accounts 2. Click on Activate Account link adjacent to the account name 3. The system will activate the deactivated account.
Alternative Scenario Extensions:	
Notes and Questions:	

UC-17 : Deactivate Account	
Summary:	Administrators can deactivate user accounts
Priority:	Essential
Use Frequency:	Rarely (?)
Direct Actors:	User
Stakeholders:	
Prerequisites:	User must be logged on. View Accounts
Main Success Scenario:	<ol style="list-style-type: none"> 1. See UC-14: View Accounts

	<ol style="list-style-type: none"> 2. Click on Deactivate Account link adjacent to the account name 3. Input details <ol style="list-style-type: none"> 1. Reason 2. Etc 4. The system will deactivate the user account
Alternative Scenario Extensions:	
Notes and Questions:	

UC-18 : Change User Role	
Summary:	User change their Post status
Priority:	Essential
Use Frequency:	Rarely (?)
Direct Actors:	User
Stakeholders:	
Prerequisites:	User must be logged on. View accounts
Main Success Scenario:	<ol style="list-style-type: none"> 1. See UC-14 View Accounts 2. Click on Change User Role link adjacent to the account name 3. Input new user role <ol style="list-style-type: none"> 1. Property Officer 2. DOST Staff 4. The system will reset the password of the account name
Alternative Scenario Extensions:	
Notes and Questions:	

F-07 : Preventive/Corrective Maintenance	
Priority:	Essential
Effort:	Months (?)
Risk:	Safe (?)
Functional area(s):	
Use case(s):	
Description:	This feature grants Property Officers to schedule and document preventive

	and corrective maintenance procedures in the system.
Notes and Questions:	

UC-19 : Set Schedule	
Summary:	Property Officers are enabled to set schedule of the preventive/corrective maintenance of equipment and facilities.
Priority:	Essential
Use Frequency:	Often (?)
Direct Actors:	Property Officer
Stakeholders:	
Prerequisites:	User must be logged on.
Main Success Scenario:	<ol style="list-style-type: none"> 1. User clicks “Preventive & Corrective Maintenance” menu item 2. User clicks “Set new schedule” 3. Input schedule details <ul style="list-style-type: none"> ○ Date ○ Interval ○ Etc. 4. Click “Save” 5. The schedule will be saved in the system
Alternative Scenario Extensions:	
Notes and Questions:	

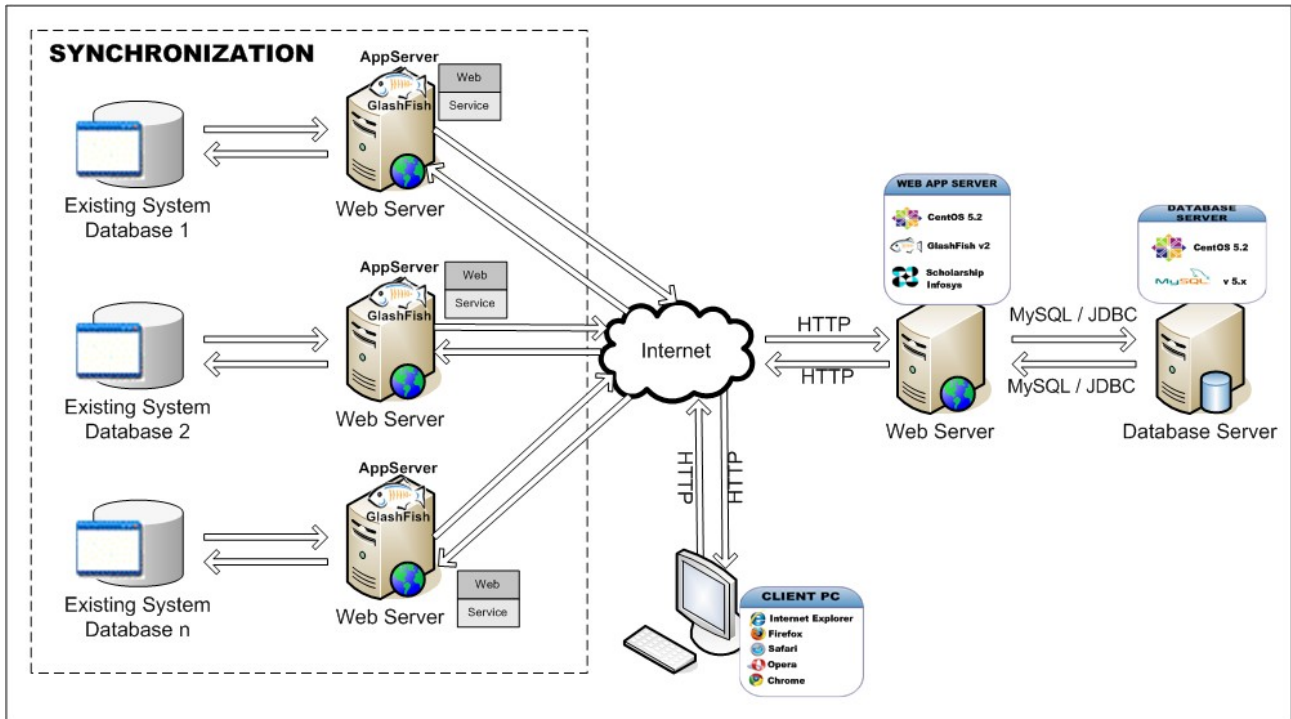
UC-20 : Input Equipment Diagnosis	
Summary:	Property Officers are enabled to set schedule of the preventive/corrective maintenance of equipment and facilities.
Priority:	Essential
Use Frequency:	Often (?)
Direct Actors:	Property Officers
Stakeholders:	
Prerequisites:	User must be logged on, reports are generated
Main Success Scenario:	<ol style="list-style-type: none"> 1. View equipment/Facilities listing with filtering “Under Maintenance” 2. Property Officer clicks “Upload Equipment/ Facility diagnosis” adjacent to the equipment/facility entry in the list.

	<ol style="list-style-type: none"> 3. Property Officer uploads diagnosis (mandatory) 4. Property Officer clicks “Save”
Alternative Scenario Extensions:	
Notes and Questions:	

UC-21: Set Status	
Summary:	Property Officers are enabled to set status of the equipment/facility that is being checked-up.
Priority:	Essential
Use Frequency:	Often (?)
Direct Actors:	Property Officers
Stakeholders:	
Prerequisites:	User must be logged on.
Main Success Scenario:	<ol style="list-style-type: none"> 1. View equipment/Facilities listing with filtering “Under Maintenance” 2. Property Officer clicks “Set status” button 3. Property Officer changes the status from the list <ul style="list-style-type: none"> ○ Available ○ Repair in-progress ○ For disposal ○ Etc 4. Property Officer clicks “Save”
Alternative Scenario Extensions:	
Notes and Questions:	

4. EXTERNAL INTERFACE REQUIREMENTS

System Interfaces



The figure shows the hardware and software interaction of the system. Each hardware is provided with a software capable of sending, receiving, and processing of information .

User Interfaces

Pls see [Appendix A: Analysis Models](#)

Communications Interfaces

For communications which involve transmission of indelicate information, the application will use non-secured socket (http).

For communications which involve transmission of private information (e.g. username, password), the application will use a secured socket (https) in which information is encrypted first before transmission.

Operations

Interactive Operations

Facilities and Equipment Management and lending.
Manual synchronization from existing system to central database and vice versa.

Unattended Operations

Automated nightly synchronization of existing system information to central database
Automated conflict detection and notification

Data processing support Operations

Generation of graphical and tabular summary of information

Backup and Recovery Operations

Facility for recovery after a system crash (?)

4.6 Site Adaptation Requirements

Requirements:

- Internet Browsing
- Digital Signatures

5. OTHER NONFUNCTIONAL REQUIREMENTS

5.1 Performance Requirements

<This subsection should specify both the static and the dynamic numerical requirements placed on the software or on human interaction with the software as a whole. Static numerical requirements may include:

- a) the number of terminals to be supported*
- b) the number of simultaneous users to be supported*
- c) Amount and type of information to be handled.*

If there are performance requirements for the product under various circumstances, state them here and explain their rationale, to help the developers understand the intent and make suitable design choices. Specify the timing relationships for real time systems. Make such requirements as specific as possible. You may need to state performance requirements for individual functional requirements or features.>

5.2 Safety Requirements

<Specify those requirements that are concerned with possible loss, damage, or harm that could result from the use of the product. Define any safeguards or actions that must be taken, as well as actions that must be prevented. Refer to any external policies or regulations that state safety issues that affect the product's design or use. Define any safety certifications that must be satisfied.>

5.3 Security Requirements

The safety of the client and partners information from malicious attacks relies heavily on the confidentiality of the management account user name and password. The information system provides an encryption feature during login to avoid crackers from getting the login information during the the process.

It is the responsibility of the account owner to keep his/her login information and not share it with others. All the management activities are recorded in the database therefore automatically makes the recorded user account accountable.

- *username/password*
- *Awareness on web attacks and how to keep your web site from them*

5.4 Software Quality Attributes

Reliable

The software should provide the agency administrator management features of clients and partner and profiles.

Complete

All required information is expected to be reflected on the database.

Unique (redundancy check/conflict detection)

Synchronization of existing database information to the central database poses serious threat to the reliability of the central database information. Through conflict detection and resolution, the database information is ensured protection from being redundant and corrupted.

Easy- to-use (intuitive and interactive)

For basic use, the system is expected to be used without external help. For advanced use, The system will provide a brief and concise user's manual.

Fast

Secure (authorization and authentication mechanism)

The system will provide a login page to ensure access restrictions to the different features of the system.

Robust/scalable

The system is assured capable of storing large amount of data and handle errors accordingly. The technology used provides ease for development should the client decide to further extend its features.

Up and running 24/7 (on-line web application)

Since it is a web application, the system is expected to be accessible 24/7, except during maintenance

Up-to-date (depends on the synchronization process)

The system's management features ensures that the information stored can be updated to it's latest status.

Transparent (activity logs)

All management activities are recorded in the database for resolving issues on accountability.

6. OTHER REQUIREMENTS

<Define any other requirements not covered elsewhere in the SRS. This might include database requirements, internationalization requirements, legal requirements, reuse objectives for the project, and so on. Add any new sections that are pertinent to the project.>

Appendix A: Analysis Models

6.1 Appendix A: Analysis Models

6.1.1 Use Case Diagrams

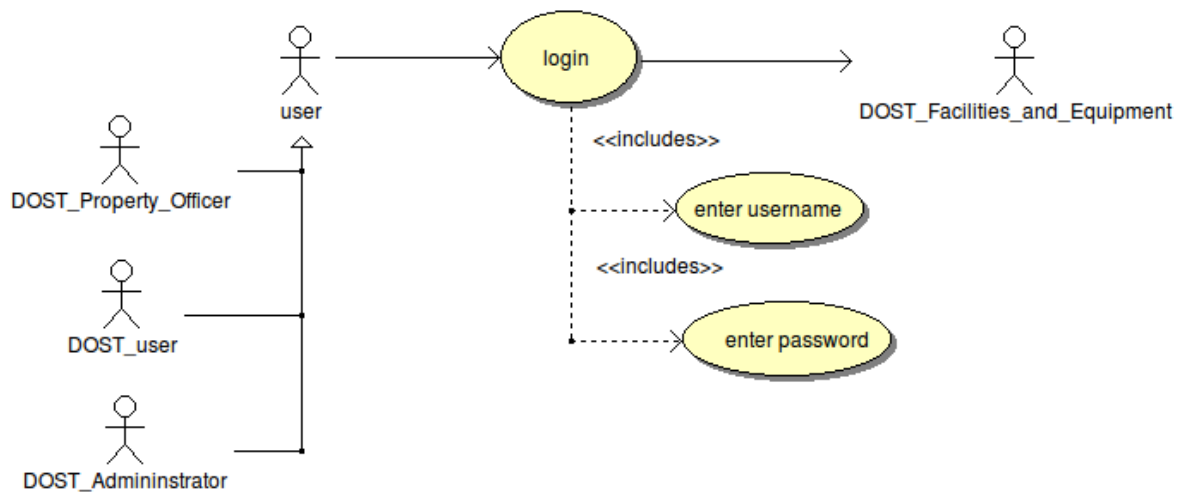


Figure 1: Login Use Case Diagram

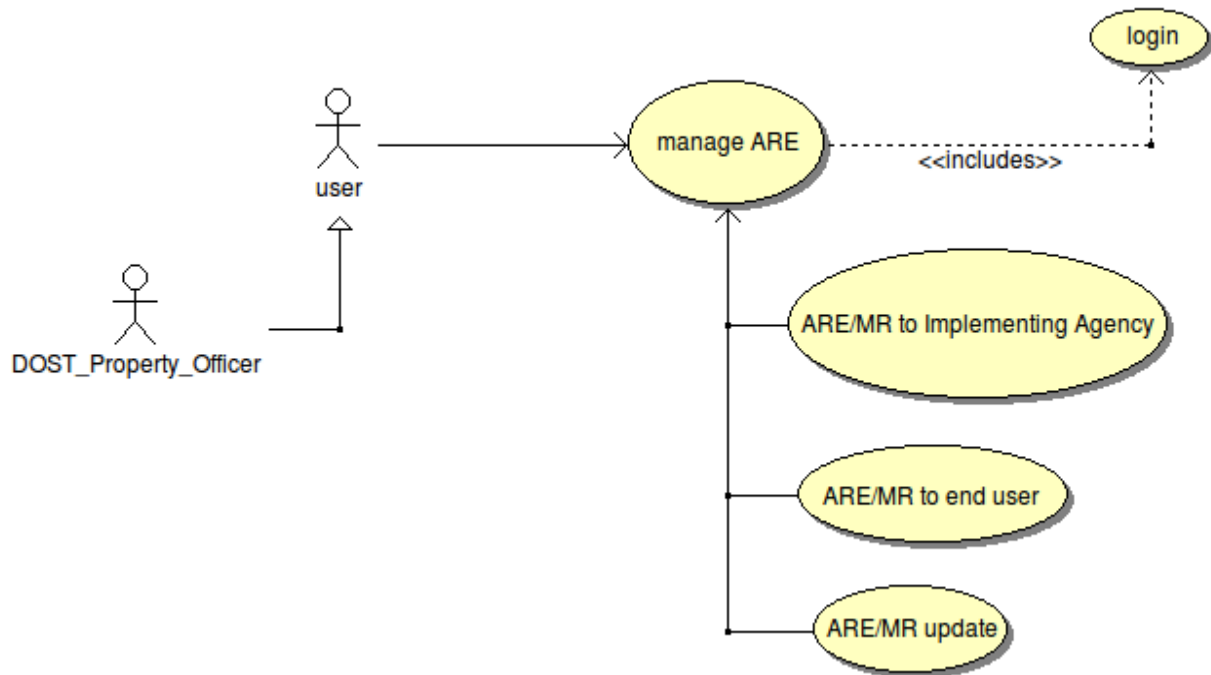


Figure 2: ARE Management Use Case Diagram

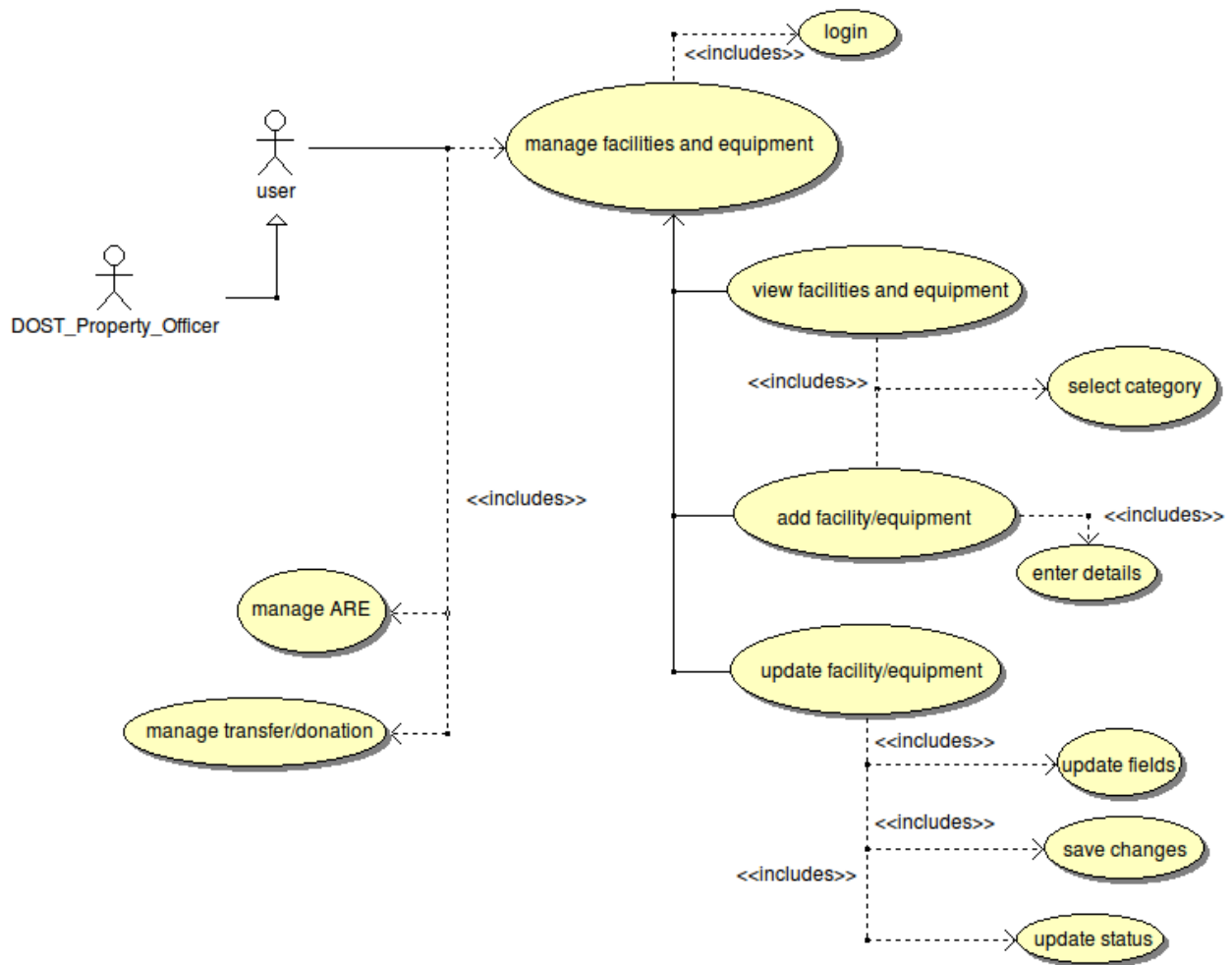


Figure 3: Facilities and Equipment Management Use Case Diagram

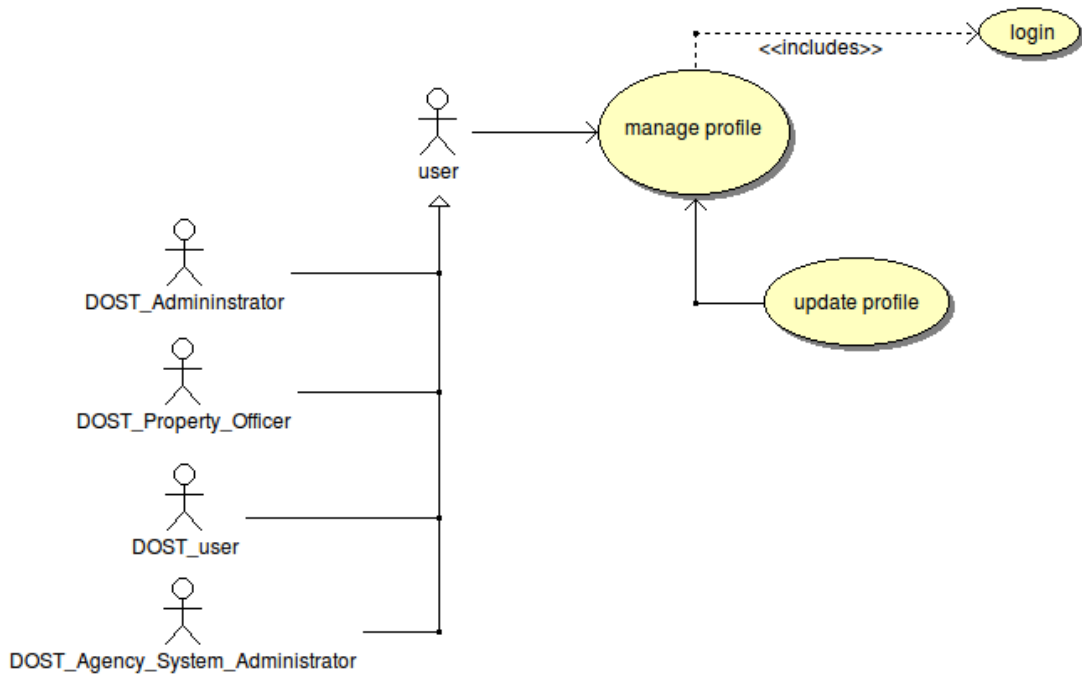


Figure 4: Personal Profile Management Use Case Diagram

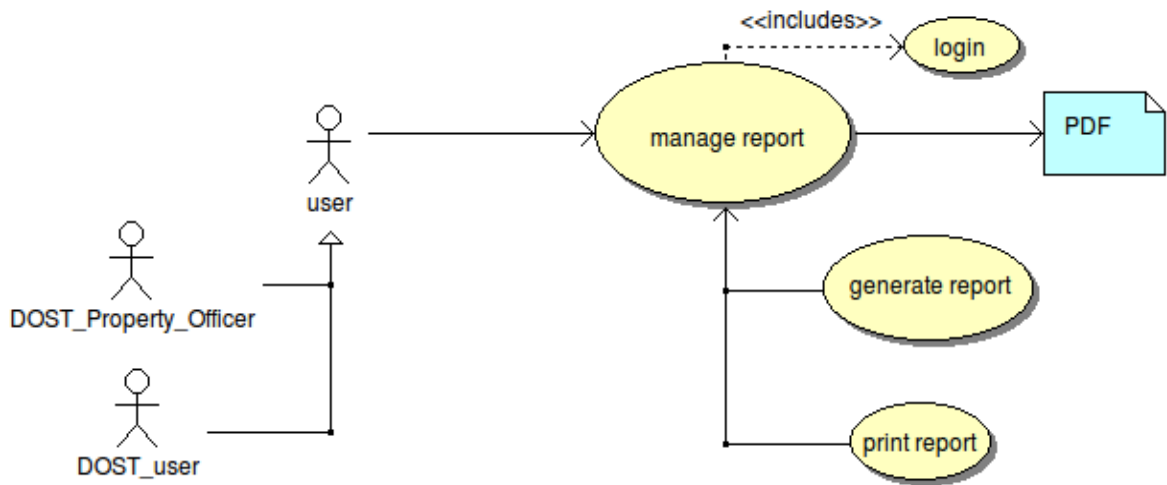


Figure 5: Report Management Use Case Diagram

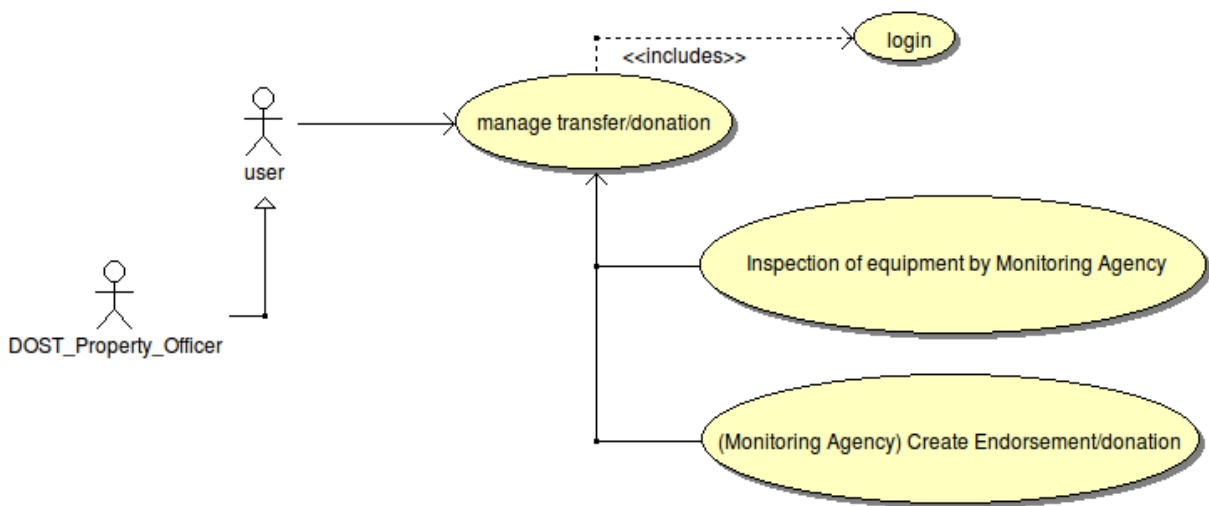


Figure 6: Transfer and Donation Use Case Diagram

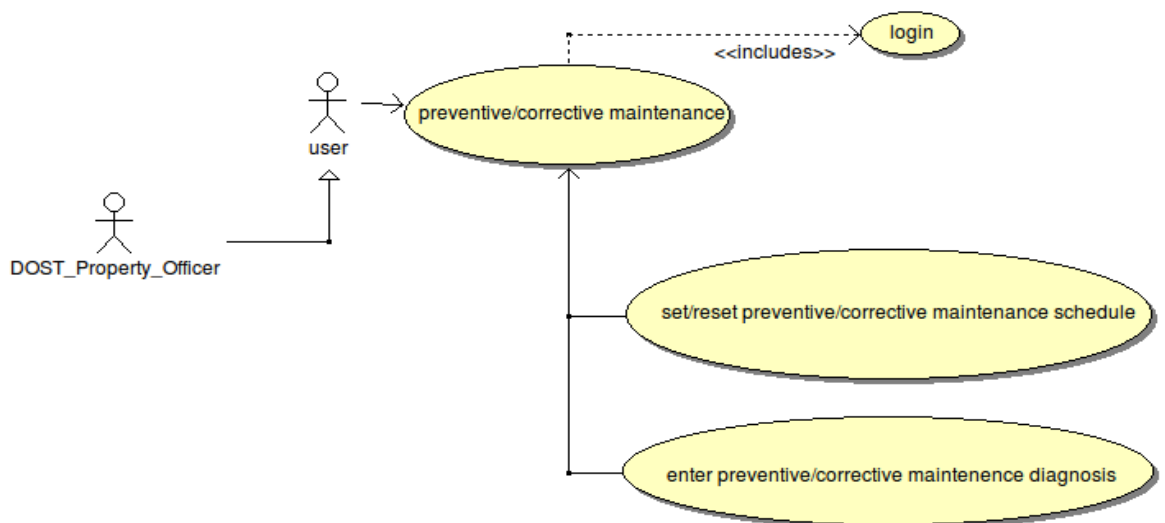


Figure 7: Preventive/Corrective Maintenance Use Case Diagram

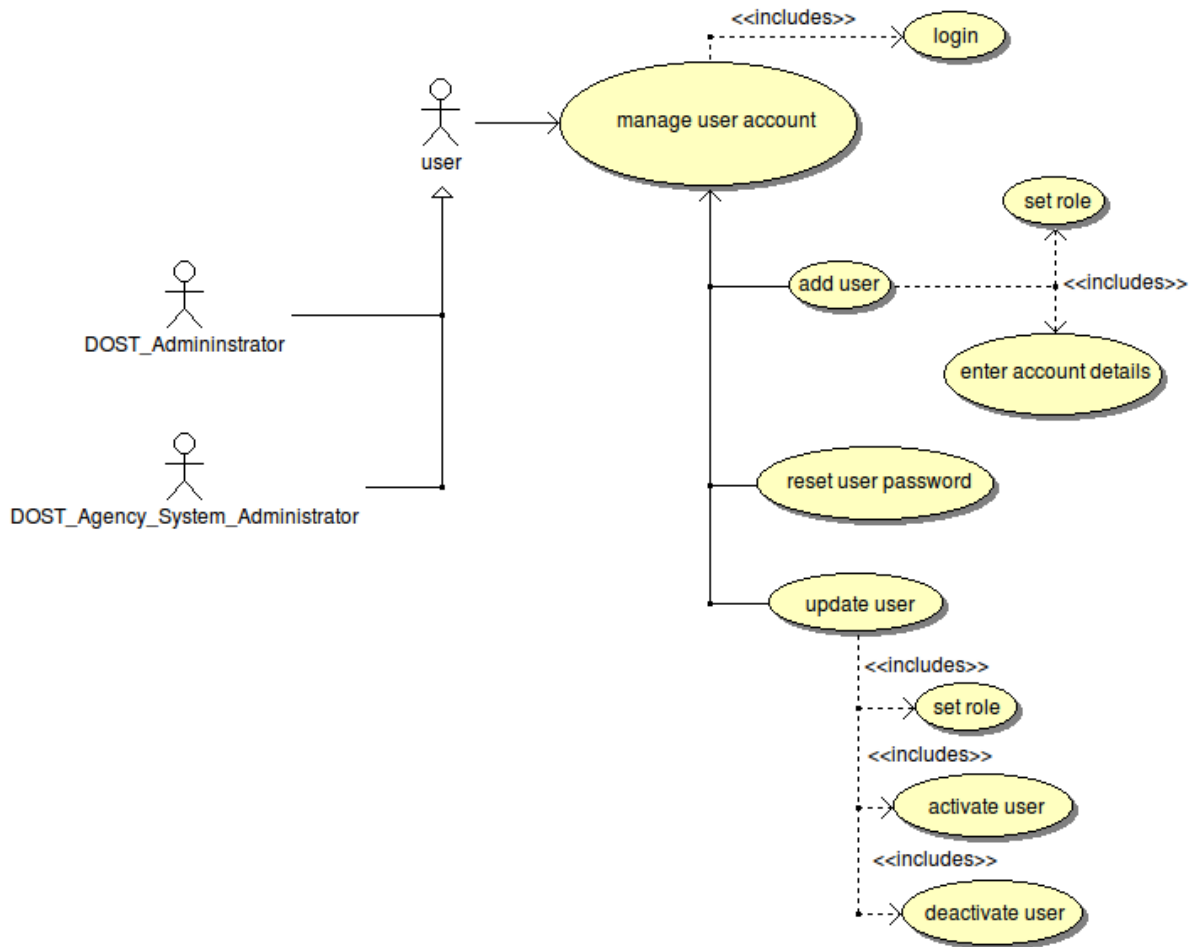


Figure 8: Account Management Use Case Diagram

6.1.2 Activity Diagrams

Facilities & Equipment Management

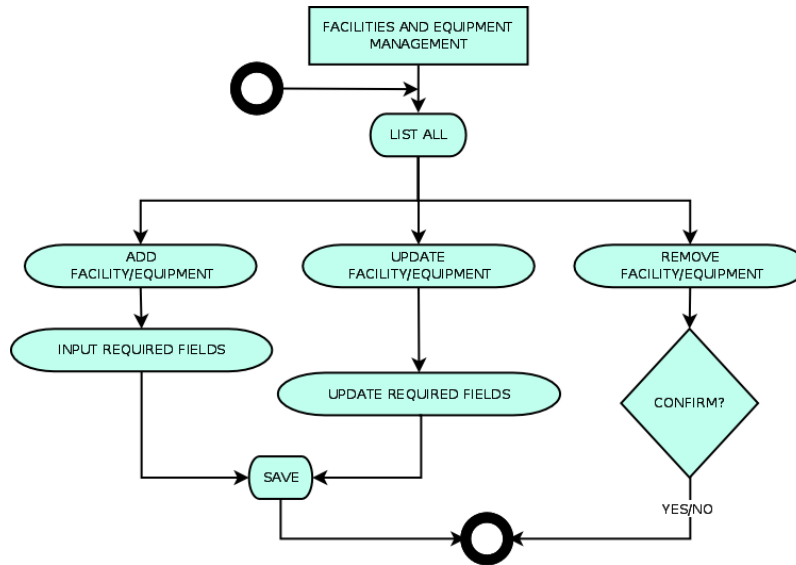


Illustration 1: Facilities & Equipment Management Activity Diagram

Report Management

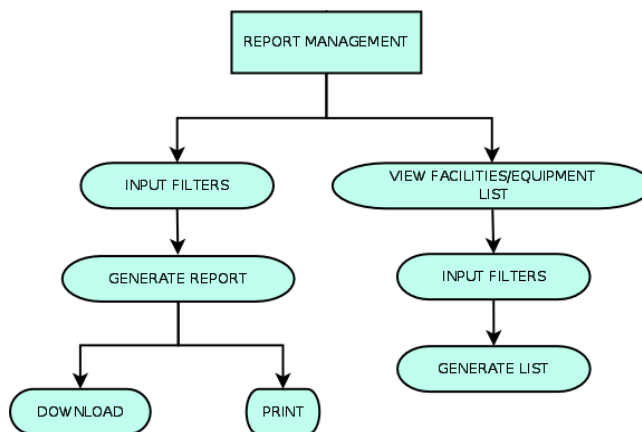


Illustration 2: Report Management Activity Diagram

Account Management

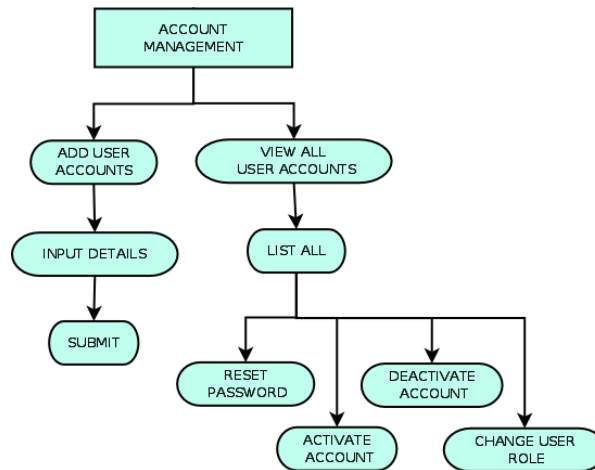


Illustration 3: Account Management Activity Diagram

Transfers and Donations

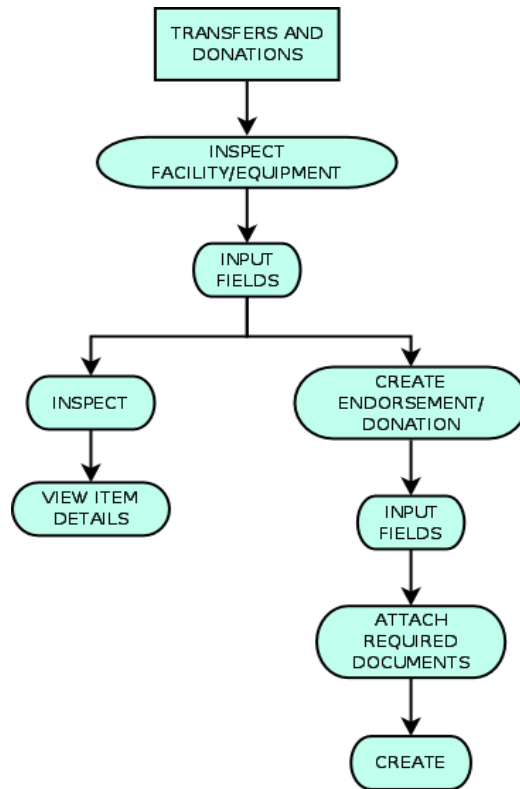


Illustration 4: Transfers and Donations Activity Diagram

Preventive/Corrective Maintenance

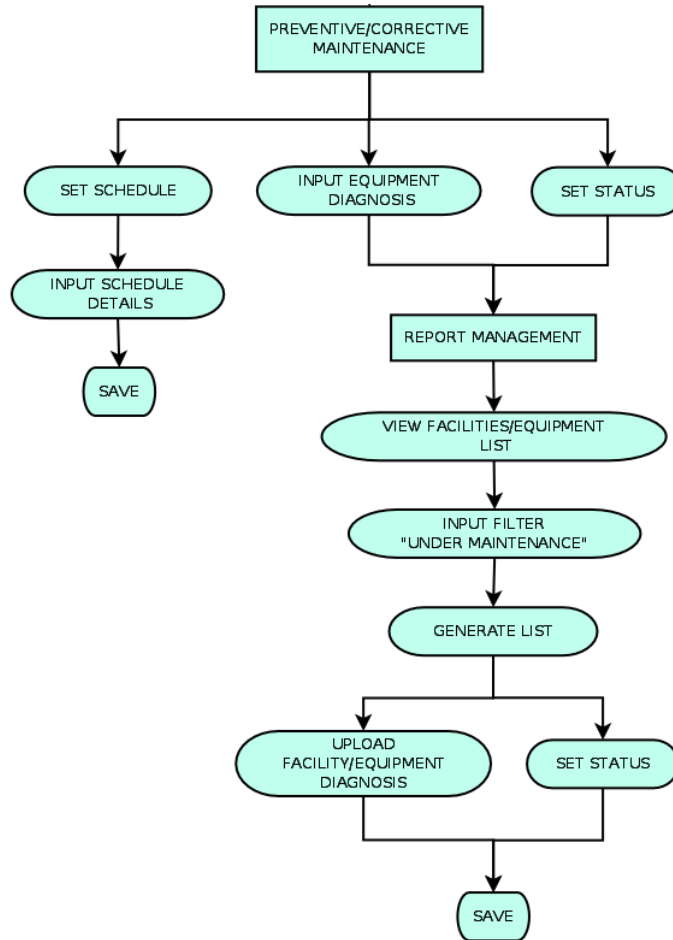


Illustration 5: Preventive/Corrective Maintenance Activity Diagram

View Facilities and/or Equipment

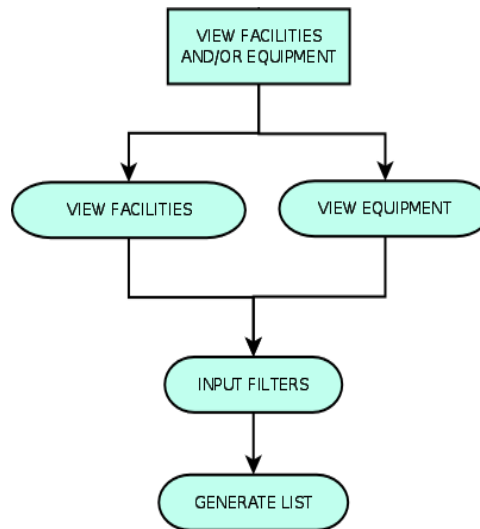


Illustration 6: View Facilities and/or Equipment Activity Diagram

6.1.3 Sample Screen shots

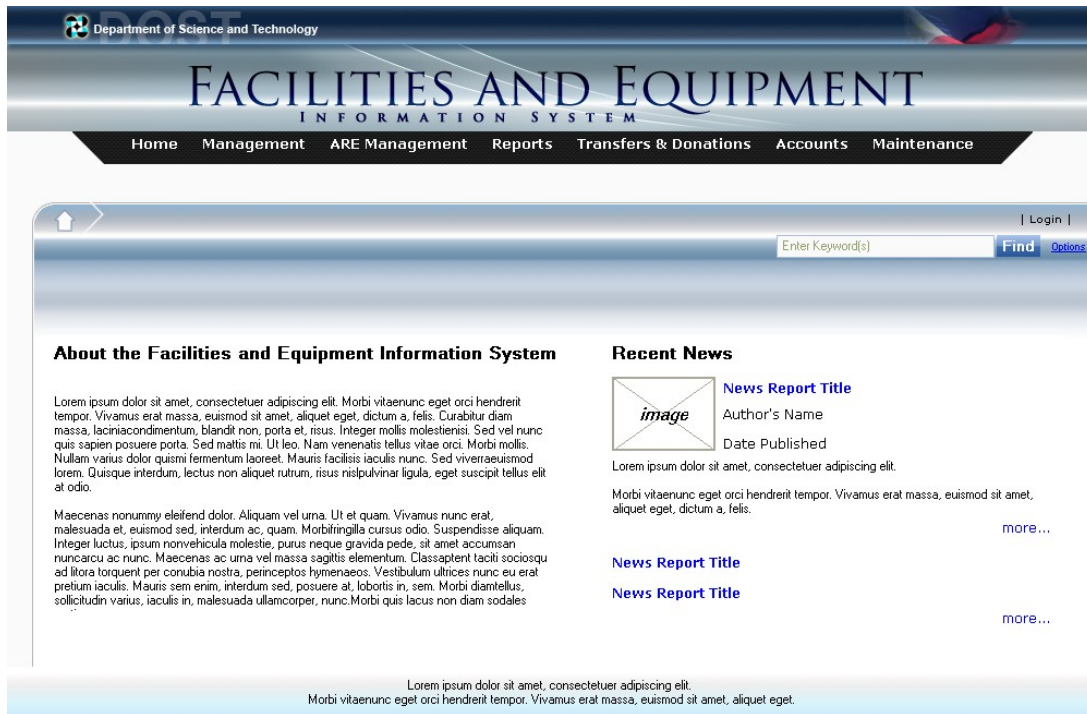


Illustration 7: Public Home Page



Illustration 8: Public Home Page with Login



Illustration 9: ARE Management



Illustration 10: ARE Management: Assign ARE



Illustration 11: ARE Management: Update ARE



Illustration 12: Facilities and Equipment Management



Illustration 13: Facilities and Equipment Management: Search



Illustration 14: Facilities and Equipment Management: List

The screenshot shows the 'Add Equipment' form within the 'Facilities and Equipment Management' section. The header includes the DOST logo and navigation links: Home, Management, ARE Management, Reports, Transfers & Donations, Accounts, and Maintenance. The user is logged in as 'Property Officer'.

Add Equipment

Inventory ID : <input type="text"/>	Status : <input type="text"/>
Item Number : <input type="text"/>	Accountable Person : <input type="text"/>
Item Category : <input type="text"/>	Agency : <input type="text" value="ASTI"/>
Property Number : <input type="text"/>	Date Acquired : <input type="text"/>
Equipment Code : <input type="text"/>	Mode of Acquisition : <input type="text"/>
Equipment Name : <input type="text"/>	Funding Source : <input type="text"/>
Description : <input type="text"/>	Supplier : <input type="text"/>
Accessories : <input type="text"/>	PO Number : <input type="text"/>
Description : <input type="text"/>	PO Date : <input type="text"/>
Estimated Useful Life : <input type="text"/>	Invoice Number : <input type="text"/>
Equipment Condition : <input type="text"/>	Invoice Date : <input type="text"/>
Equipment Location : <input type="text"/>	OR Number : <input type="text"/>
Remarks : <input type="text"/>	OR Date : <input type="text"/>

Placeholder text at the bottom: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi vitae nunc eget orci hendrerit tempor. Vivamus erat massa, euismod sit amet, aliquet eget.

Illustration 15: Facilities and Equipment Management: Add

Department of Science and Technology

FACILITIES AND EQUIPMENT INFORMATION SYSTEM

Home Management ARE Management Reports Transfers & Donations Accounts Maintenance

Facilities and Equipment Management > Update Equipment

Welcome Juan. Logged in as Property Officer. | Logout | X

Enter Keyword(s) Find Options

Update Equipment

Inventory ID : 1111

Item Number : 4

Item Category : Electronics - Computer Acces

Property Number : 7765

Equipment Code : 123

Equipment Name : A4 Tech USB Mouse

Description : Peripherals - Mouse

Accessories :

Description :

Estimated Useful Life : 10 Years

Equipment Condition : Excellent

Equipment Location : CSD, ASTI

Remarks :

Status : In Use

Accountable Person : Juan Dela Cruz

Agency : ASTI

Date Acquired : 02/05/2010

Mode of Acquisition : Purchase

Funding Source : e-DOST INFOSYS

Supplier : CD-R King

PO Number : 1-3232-5456

PO Date : 01/09/2010

Invoice Number : 00987

Invoice Date : 02/04/2010

OR Number : 122-3232

OR Date : 02/04/2010

Date	Diagnosis

Upload Diagnosis

Save Cancel

Placeholder text: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi vitae nunc eget orci hendrerit tempor. Vivamus erat massa, euismod sit amet, aliquet eget.

Illustration 16: Facilities and Equipment Management: Update

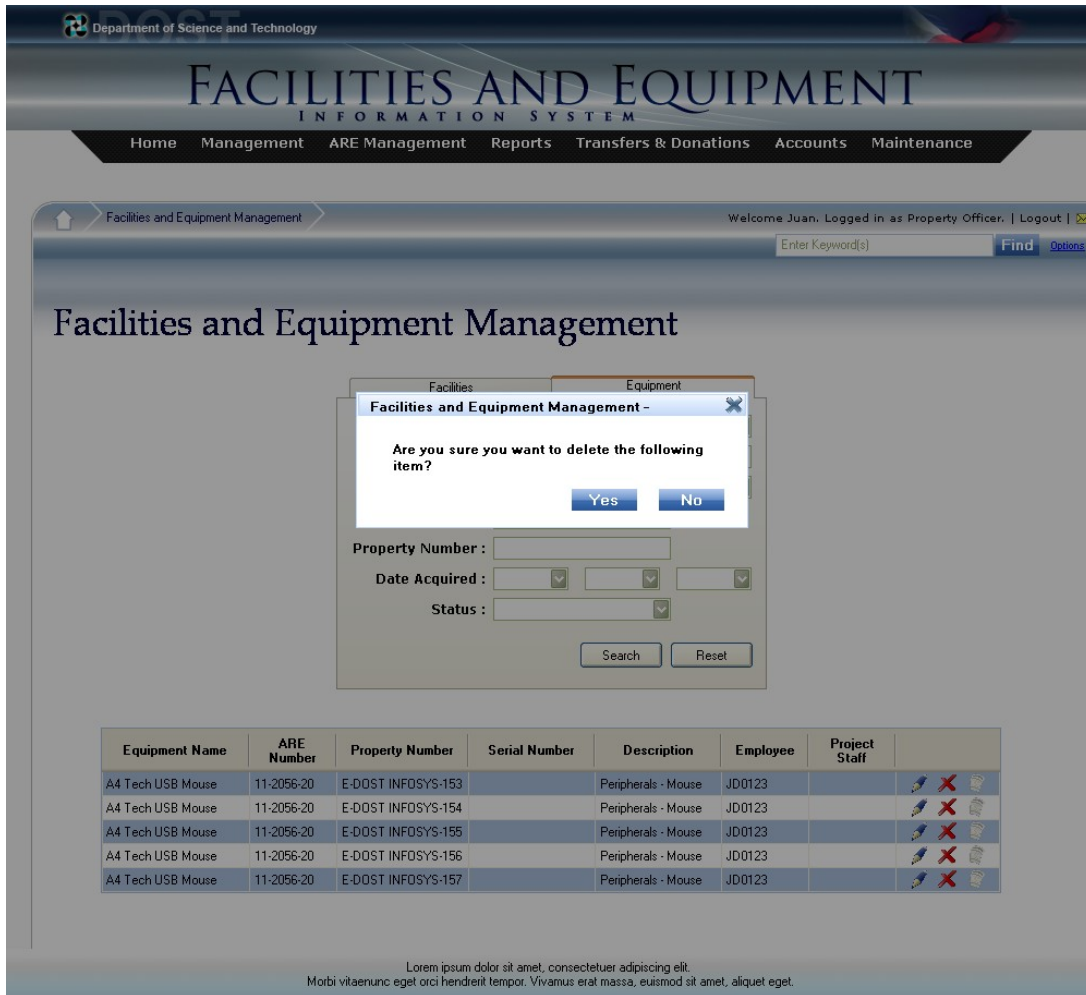


Illustration 17: Facilities and Equipment Management: Delete



Illustration 18: Transfers and Donations



Illustration 19: Transfers and Donations: Inspect Monitored Facilities/Equipment



Illustration 20: Transfers and Donations: Create Endorsement/Donation to Implementing Agency



Illustration 21: Report Management: Search



Illustration 22: Report Management: List

The screenshot shows the 'Add User Account' page of the DOST Facilities and Equipment Information System. The page header includes the DOST logo and the text 'Department of Science and Technology'. The main title is 'FACILITIES AND EQUIPMENT INFORMATION SYSTEM'. A navigation menu contains 'Home', 'Management', 'ARE Management', 'Reports', 'Transfers & Donations', 'Accounts', and 'Maintenance'. The breadcrumb trail shows 'Account Management' > 'Add User Account'. The user is logged in as 'Agency Administrator'. A search bar is present with the text 'Enter Keyword(s)' and buttons for 'Find' and 'Options'. The main heading is 'Add User Account'. The form fields are: Last Name, First Name, Middle Name, Extension Name, E-mail, Password, and Confirm Password. The User Role section has two radio buttons: 'Equipment Officer' (selected) and 'DOST Staff'. At the bottom of the form are 'Save' and 'Cancel' buttons. A footer contains placeholder text: 'Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi vitae nunc eget orci hendrerit tempor. Vivamus erat massa, euismod sit amet, aliquet eget.'

Illustration 23: Accounts Management: Add



Illustration 24: Accounts Management: List



Illustration 25: Preventive/Corrective Maintenance: List

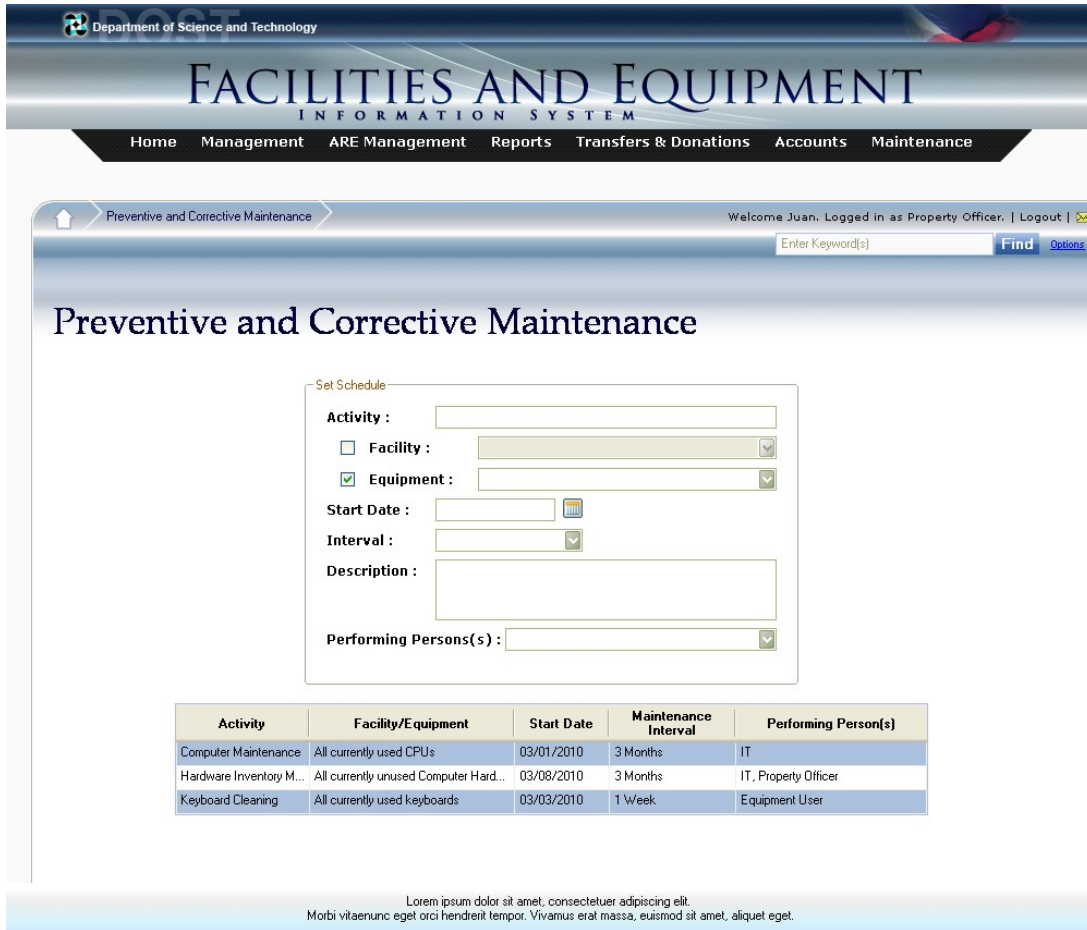


Illustration 26: Preventive/Corrective Maintenance: Set Schedule



Illustration 27: View Facilities/Equipment Listing: Search



Illustration 28: View Facilities/Equipment Listing: View