# Maybank2u.com

**Malayan Banking Berhad (Maybank)**

**Statement of Work for Maybank Philippines Inc., (MPI) Internet Banking Development – Phase 1**

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# Statement of Work

## Purpose

The purpose of this Statement of Work (“SOW”) describes the scope of work and effort to deliver to Maybank a new Internet Banking framework which will runs on enterprise Java application servers i.e. Weblogics, Webshpere, etc while retaining the existing application codes and business flows of Maybank2U (“M2U”).

MPI Internet Banking Phase 1 project will be delivered as part of this SOW. The functional scope for MPI is described in Appendix A Deliverable of this SOW.

## Scope of Work

**Major project activities**

Migrating existing functions developed in C++ located in the Broadvision FI server to industry-standard Java Message Services (“JMS”).

Develop and customize a new Administration Module to replace the existing Broadvision DCC and CCCP module.

Customize M2U service layer to integrate between the Administration, Authentication and JMS modules.

Develop a new J2EE session to replace Broadvision Session Layer.

Quality Assurance activities including System Integration Test, User Acceptance Test, Load Test and Application Implementation to ensure completeness and readiness prior to system launch.

##

# Existing M2U Internet Banking Framework

Currently, M2U Internet Banking framework is divided into 2 portions running in parallel namely 1. Information Site and 2.Transacational Site (also name as Secured Site). The M2U Internet Banking framework is developed and runs on Broadvision One-to-One Enterprise Platform. All the M2U business logics in Secured Site are written and used Broadvision APIs to manage user session, user profile, site navigation, contents, alert message and the Finance Server component. The aim of this SOW is to design, develop and deploy a new Internet Banking framework for M2U to runs on enterprise application server platform.

The below diagram shows all the BV dependencies:-



Figure M2U System BV Dependencies Diagram

The diagram shows that M2U business logic is tightly couple with BV components and components are managed by BV administration module, named DCC.

##

The below table show all the dependent modules and the usage:-

|  |  |
| --- | --- |
| **No** | **Description** |
|  | Integration Layer dependency* M2U is using BV FI as the communication channel with the host
 |
|  | BV Content dependency (DCC)* M2U is using BV content APIs to retrieve and maintain the site Service Note, Payee Corporations and other parameters
 |
|  | Navigation dependency (DCC)* M2U is using BV Navigation APIs to control and maintain the site navigation menu
 |
|  | Alert message dependency (DCC)* M2U is using the BV Alert APIs and BV Qualifier to push message to targeted user
 |
|  | User profile dependency (DCC)* M2U is using BV User tables and APIs to maintain user profile
 |
|  | Session object dependency* M2U is using BV Session manager
 |

Table BV Module Dependency

# Delivery of New Components

In view of the purpose of this SOW, the following table depicts the components are to be replace and effort to customise for the new Internet Banking framework for M2U.

|  |  |  |
| --- | --- | --- |
| **Description** | **Existing** | **New** |
| Integration Layer | BV FI Server | Use Java Message Services (JMS) |
| Administration | DCC* Maintain Service Note
* Maintain Payee Corporation
* Maintain site Navigation
* Send Alert Message
* Maintain parameter setting
* Maintain user profile

CCPP* View customer internet transaction history
* Inquire audit log
* View SMS details
 | OnlineApps Administration Module* Maintain Service Note (Service up & down time (display on/off, accessibility on/off))
* Maintain Payee Corporation, Interbank, etc.
* Maintain site Navigation time (display on/off, accessibility on/off))
* Maintain user Access Matrix (for SME)
* Maintain Check/Maker (for SME Authorization process)
* Maintain Tier Pricing and limit
* Maintain others parameter setting
* Maintain user profile
* Audit log enquiry and download
* Enquire internet transaction history
 |
| Session | BV Session | Java session |
| Application Server | BV Application Server | Oracle WebLogic Application Server |

Table BV Dependencies Replacement

**Authentication System:-**

|  |  |  |
| --- | --- | --- |
| **Description** | **Existing** | **New** |
| Authentication | LDAP | UPASS Identity & Authentication System  |

Table Authentication System

For MPI project, we recommend to use OnlineApps UPASS Identity & Authentication solution to cater for the username/password management and two-factor (2FA) authentication requirement.

## New Components for MPI

Below diagram shows all the BV components replaced with the new components.



Figure M2U System Free from BV Modules Diagram

## Phase 1 – Functional Requirements for MPI Retail Banking

Table below shows all the required Phase 1 Retail Internet banking features:-

|  |  |  |
| --- | --- | --- |
| **No** | **Feature** | **Description** |
|  |  Account Inquiry | Support for SA, CA, FCA, Loans, Time Deposits |
|  | Transaction History / M2U History | Enquire last 90 days history |
|  | Bill Payment | Riding on BancNet billers (through ATM)Includes Government Payments |
|  | Intrabank Funds Transfer | Own or 3rd party accountsCurrent or future dated |
|  | Interbank Funds Transfer | To BancNet member banks |
|  | Time Deposit Placement & Enquiry | Capture request – branch to process  |
|  | Cheque Services | Cheque book re-order, stop Cheque, Cheque status inquiry, Cheque warehousing inquiry  |
|  | Cash / eCard Top Up | Call to host |
|  | Two Factor Authentication | TAC & SMS (host), RSA |
|  | Loan  | Account Enquiry and Hire Purchase & Loan Application form |
|  | Access Module | Login, Logout and Logout Summary, Reset Password, Forgot Password, Change Password, Account management |
|  | Session management services | Single session, idle session and user session management |

Table Retail Banking Features

Please see Appendix A for details.

## Phase 1 – Functional Requirements for MPI SME Banking

Table below shows all the required Phase 1 SME Internet banking features:-

|  |  |  |
| --- | --- | --- |
| **No** | **Feature** | **Description** |
|  |  Account Inquiry | With OD limit, Unauthorized Limit (depending on core banking) |
|  | Cheque Services | Cheque status inquiry, stop cheque, Cheque book re-order, cheque cutting inquiry, Cheque warehousing inquiry |
|  | Access Module | Login, Logout and Logout Summary, Reset Password, Forgot Password, Change Password, Account management |
|  | Session management services | Single session, idle session and user session management |

Table SME Banking Features

Please see Appendix A for more details.

## BV FI Server replacement with Java Message Service (JMS) handling

In replacing BV FI with JMS, administrator can configures and administers JMS objects in Java Naming and Directory Interface (JNDI) API namespace. The administrative task can be performed through standard J2EE SDK tool, ***j2eeadmin***, to monitor the message queues.

The same configuration, monitoring and administration also can be performed through the Application Server like Oracle WebLogic Administration Console. Please see section 8.4 on the details.

## Application Server replacement

The proposed solution is required to run on an enterprise J2EE Application Server. We recommend Maybank to using Oracle Weblogics Application Server in replacement of BroadVision Application Server.

## Administration module replacement for DCC and CCPP

DCC and CCPP will be replaced with the OnlineApps Administration module which shall consolidate all the maintenance services for the administration module and the MPI Internet Banking System. The administration module can be used by eChannel, ISD, Call Center, Branches, etc.

Figure 3 demonstrate the administration module can be used by different stakeholders and accessing different services.

Figure OnlineApps Administration Module Diagram

## M2U Components to Be Upgraded

All the components in the dotted line box will be upgraded to support for the new changes. In short, for the MPI project, only the M2U Service Layer is required to revamp to support the new JMS, UPASS and Administration module.

##

Figure M2U for MPI Component Diagram

## MPI Internet Banking System Components

After replaced all the BV components, the MPI Internet Banking System components is demonstrated as in Figure 5 which consist of the MPI Internet Banking System, OnlineApps Administration, UPASS Authentication and JMS.

Figure MPI Internet Banking System Components

# Schedule Overview

|  |
| --- |
| **Estimated Project Completion Days:**  |
| **Major Milestones**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Summary in number of day**

| **Activity** | **Day** |
| --- | --- |
| Analysis & System Design  | 25 |
| Customization & Development | 55 |
| SIT | 15 |
| UAT | 15 |
| Deployment | 5 |
| Training | 4 |

 | **Summary in number of man/day**

| **Activity** | **Man/Day** |
| --- | --- |
| Analysis & System Design | 15 |
| Customization & Development | 260 |
| SIT | 12 |
| UAT | 12 |
| Deployment | 4 |
| Training | 4 |

 |

 |

##

# Stakeholder Analysis

|  |  |
| --- | --- |
| **Name & Role** | **Major Responsibility or Contribution** |
| eChannels Business Analyst | Define business and functional requirements for MAYBANK PHILLIPINES portal Work together with Penril team to document and understand business and functional requirements. |
| eChannels Content Team | Manage editorial and marketing contentAdvise and offer consultation on editorial process |
| Penril Team  | Project Management, Design, Develop, Quality Assurance, Deployment, & Support Internet Banking Application. |
| Maybank Technical Team | Provide technical consultation on implementation and integration to third party application and back end, e.g. BancNet, SMS Gateway, etc. |

# Assumptions

|  |  |
| --- | --- |
| **Assumption:** | **Impact if assumption is incorrect:** |
| SMS Gateway for TAC shall be provided by Maybank. | Project timeline and resource requirement will need to be re-assessed. |
| Bill Payment Engine shall be provided by Maybank. | Project timeline and resource requirement will need to be re-assessed |
| Mobile prepaid and Cash / eCard To Up services shall be provided by Maybank. | Project timeline and resource requirement will need to be re-assessed. |
| Maybank to ensure that development environment is already pre-loaded with data for development and testing purposes. | May cause development and testing delay. |
| All the Host messaging format shall be provided on time for development. | Project timeline will need to be re-assessed. |
| Maybank will furnish the Up–to-date M2U source code to Penril | Project timeline will need to be re-assessed. |
| Host integration messaging format shall be provided by Maybank | Project timeline will need to be re-assessed. |
| Maybank will furnish documentation on business, functional, and technical requirements of the MPI Internet Banking. | Project timeline will need to be re-assessed. |
| Readiness of hardware, network, and software installation assume by Maybank. | Project timeline will need to be re-assessed. |
| Complete Internet Banking design templates and guidelines to be provided by Maybank. Only current existing M2U design templates are to be implemented for this project. Changes to design templates will not be covered in this SOW. | Project timeline will need to be re-assessed. |

# Bill Of Materials

|  |  |
| --- | --- |
| **Item** | **Description** |
| 1 | OnlineApps Internet Banking System Administration Software License |
| 2 | OnlineApps UPASS Identity & Authentication Software License |
| 3 | Weblogics Application Server Licenses |
| 4 | Oracle Database  |

# Appendix A - Deliverables (Functional)

## Retail Banking Online Transactions

| **No** | **Feature** | **Description** | **Data Source** |
| --- | --- | --- | --- |
|  | CASA Balance Enquiry | 1. List of CASA accounts for viewing
 | Maybank Host (CICS) |
| 1. List of account activities recent and transaction history (90 days); limited to 15 transaction per page
 | Maybank Host (CICS) |
| 1. View Account Details
 | Maybank Host (CICS) |
| 1. List of M2U transactions done via Internet Banking including re-print receipt.
 | Database |
|  |  |  |  |
|  | Bill Payment | 1. One-time payment (TAC required)
 | Maybank Host (CICS) |
| 1. Favourite Payment
 | Maybank Host (CICS) |
| 1. Favourite Bills Management
 | Maybank Host (CICS) |
| 1. Future dated payment
 | Maybank Host (CICS) |
|  |  |
|  |  | 1) Own Account Transfer | Maybank Host (CICS) |
|  | Own Account Transfer | 2) Future dated Transfer | Maybank Host (CICS) |
|  |  |
|  |  | 1) Open Transfer (TAC required) | Maybank Host (CICS) |
|  | 3rd Party Account Transfer | 2) Favourite Transfer | Maybank Host (CICS) |
| 3) Favourite Account Maintenance | Maybank Host (CICS) |
| 4) Future dated Transfer enquiry & cancel | Maybank Host (CICS) |
| 5) Email to beneficiary | Mail Server |
|  |  |
|  |  |  |  |
|  |  |  | Maybank Host (CICS) |
|  | Interbank Funds Transfer | 1) Open Transfer (TAC required) | Maybank Host (CICS) |
| 2) Favourite Transfer | Maybank Host (CICS) |
| 3) Favourite Account Maintenance |  |
|  |  |  | Maybank Host (CICS) |
|  | Check Services | 1) Check Status | Maybank Host (CICS) |
| 2) Stop Cheque | Maybank Host (CICS) |
| 3) Check book re-order | Maybank Host (CICS) |
| 4) Check Warehousing |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  | Maybank Host (CICS) |
|  | Cash / eCard Top Up | Reload value in the cash cards or eCards |  |
|  |  |  | Maybank Host (CICS)  |
|  | Time Deposit | 1) Online placement. Request is rout to branch to process (via back office). | Maybank Host (CICS) |
|  |  | 2) Online enquiries  | Maybank Host (CICS) |
|  |  |  |  |
|  | Loan Services | 1) Submit application form | Maybank Host (CICS) |
| 2) Account enquiry |  |
|  |  |  |  |

## Corporate Customer Online Transactions

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Feature** | **Description** | **Data Source** |
|  | Account Enquiry | 1. List of CASA accounts viewing
 | Maybank Host (CICS) |
| 1. List of account recent activities and transaction history (90 days)
 | Maybank Host (CICS) |
| 1. Account detail viewing
 | Maybank Host (CICS) |
| 1. List of M2U transactions done via Internet Banking including re-print receipt.
 | Database |
|  |  |  |  |
|  | Check Services | 1) Check Status | Maybank Host (CICS) |
| 2) Stop Cheque | Maybank Host (CICS) |
| 3) Check book re-order | Maybank Host (CICS) |
| 4) Check Warehousing | Maybank Host (CICS) |
| 5) Check Cutting Inquiry | Maybank Host (CICS) |
|  |  |  |  |

## Other Internet Banking Services

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Feature** | **Description** | **Data Source** |
|  | Login | 1) Authenticate user2) Single session support (One active session at a time)3) 2FA – integrate with RSA server for second authentication | Authentication Server RSA Server |
|  |  |  |  |
|  | Logout | 1) Logout user from the Authentication server2) Logout summary page | Authentication ServerDatabase |
|  |  |  |  |
|  | First Time Login | Authenticate user and register user online | 1. Maybank Host (CICS)
2. Authentication Server
 |
|  |  |  |  |
|  | Reset Password | Reset password if user forgot their first time password | Authentication Server |
|  |  |  |  |
|  | Forgot Password | Allow user to reset password when forgot password (self service) | Authentication Server |
|  |  |  |  |
|  | Change Password | Allow user to change password  | Authentication Server |
|  |  |  |  |
|  | Request TAC | Allow user to request for TAC (Retail banking only) | Maybank Host (CICS) |
|  |  |  |  |
|  | Online Application Forms | Submit online application form to backend host. | Maybank Host (CICS) |
|  |  |  |  |
|  | Single Session | When there is a concurrent login, the first customer’s session will be logged out upon the next click of the first customer in MPI’s transactional site.  | Session |
|  |  |  |  |
|  | Idle Session | When customer is on idle mode, the session will be forced logout after five minutes. | Session |
|  |  |  |  |
|  | Business Hour | There will be system maintenance at 23:50 to 00:15 on daily basis. | Database |
|  |  |  |  |
|  | Account Maintenance | To maintain customer accounts, to link or unlink accounts | Maybank Host (CICS)Database |
|  |  |  |  |

### Administration Module

| **No** | **Feature** | **Description** | **Data Source** |
| --- | --- | --- | --- |
|  | Login | Authenticate admin user | Authentication Server  |
|  |  |  |  |
|  | Logout | Logout user from the Authentication server  | Authentication Server |
|  |  |  |  |
|  | Change Password | Allow user to Change password | Authentication Server |
|  |  |  |  |
|  | Service Note Maintenance | Maintain site service notes | Database |
|  |  |  |  |
|  | Product Info Maintenance | Maintain bank production information | Database |
|  |  |  |  |
|  | Charges Maintenance | To maintain different charges for SME and corporate account | Database |
|  |  |  |  |
|  | Payee Corporation Maintenance | Maintain Payee Corporation information | Database |
|  |  |  |  |
|  | Site Navigation Maintenance | Maintain site navigation information | Database |
|  |  |  |  |
|  | Funds Transfer Limit Maintenance | Maintain funds transfer limit | Database |
|  |  |  |  |
|  | Interbank Maintenance | Maintain participating banks for interbank funds transfer | Database |
|  |  |  |  |
|  | Access Matrix for Administration and M2U users | Maintain M2U servicesMaintain M2U User GroupsMaintain Admin User GroupsMaintain Administration services | Database |
|  |  |  |  |
|  | User Profile Maintenance | Maintain admin module user and M2U users | Authentication ServerDatabase |
|  |  |  |  |
|  | Audit Log | Enquiry and download audit log  | Database |
|  |  |  |  |
|  | Housekeeping | Provide housekeeping APIs | Database |
|  |  |  |  |

## Java Message Services

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Feature** | **Description** | **Data Source** |
|  | sendRequest | Send request message to Request Queue | WebLogic  |
|  |  |  |  |
|  | getResponse | Get response message from Response Queue  | WebLogic |
|  |  |  |  |
|  | processRequest | Get message from Request Queue, process the request, call to host, get response message from host and then put the response message to Response Queue | WebLogic |
|  |  |  |  |
|  | Host messages | Build host messages to support all the features listed above | WebLogic |
|  |  |  |  |

The below diagram demonstrate how the JMS queues works.

M2U Service will drop a request message to the JMS Response Queue and then wait at the JMS Response Queue for the response. Once the response message is received, the message will be processed at the M2U Service Layer.

At the JMS Process layer, the Request MCB will pick up a message from the JMS Request Queue, convert it to host message format and drop the message to CICS through socket. The Request MCB will get the response from CICS and then drop the message to the JMS Response Queue to complete the task.



# Appendix B – Documentation Deliverables

|  |  |
| --- | --- |
| **No** | **Document** |
|  | Administration User Guide |
|  | SIT & UAT Test Plan |
|  | SIT & UAT Test Script |
|  | MPI Retail and Corporate Banking Business Requirement Specification |
|  | Administration Technical Document |
|  | Integration Layer Technical Document |
|  | MPI Retail & Corporate Banking Technical Document |
|  | MPI System Design Document |

----- END -----