|  |
| --- |
|  |

|  |
| --- |
| **Financial Proposal for Remittance Software of AB Bank** |
|  |
|  |
| **Date: 18-Oct-2018** |
|  |
|  |
|  |
|  |



Table of Contents

[1. Introduction 5](#_Toc532915804)

[2. Background and Existing Remittance System 5](#_Toc532915805)

[2.1 Basic remittance operation 5](#_Toc532915806)

[2.2 Current Practice in AB Bank 5](#_Toc532915807)

[3. Requirement in Proposed software 6](#_Toc532915808)

[3.1 Retrieving remittance information from Exchange house 6](#_Toc532915809)

[3.1.1 Retrieving Transactions from exchange house API 6](#_Toc532915810)

[3.1.2 Transmitting Transaction using ABBL API 6](#_Toc532915811)

[3.1.3 No file receive through email 6](#_Toc532915812)

[3.1.4 Notify when system receive any transaction 6](#_Toc532915813)

[3.1.5 Retrieve remittance info from BEFTN 6](#_Toc532915814)

[3.1.6 Notify if any duplicate transaction is received 6](#_Toc532915815)

[3.1.7 Retrieve remittance info by providing interface 6](#_Toc532915816)

[3.2 Transaction mapping 7](#_Toc532915817)

[3.2.1 Map transaction by Route number 7](#_Toc532915818)

[3.2.2 Map transaction with corresponding bank branch and account holder name and account 7](#_Toc532915819)

[3.2.3 Manual mapping should be an option 7](#_Toc532915820)

[3.2.4 Software will show record which transactions are not matched 7](#_Toc532915821)

[3.2.5 Update Exchange house for unmatched transaction 7](#_Toc532915822)

[3.2.6 Software will automatically segregate own bank, EFT and RTGS transactions 7](#_Toc532915823)

[3.2.7 Software will generate EFT, RTGS file 7](#_Toc532915824)

[3.2.8 Access BEFTN for sending EFT transactions 7](#_Toc532915825)

[3.2.9 Calculate amount to be transferred for EFT transactions 7](#_Toc532915826)

[3.2.10 System should notify for split transaction 7](#_Toc532915827)

[3.2.11 System should notify for high value transaction 8](#_Toc532915828)

[3.2.12 Manage Branch information with route number (update bulk info) 8](#_Toc532915829)

[3.3 Executes own bank transactions 8](#_Toc532915830)

[3.3.1 Validate beneficiary and account information 8](#_Toc532915831)

[3.3.2 Authorization required for non-individual account 8](#_Toc532915832)

[3.3.3 Check balance before payment execution 8](#_Toc532915833)

[3.3.4 Calculate amount in BDT by converting currency 8](#_Toc532915834)

[3.3.5 Islamic banking account 8](#_Toc532915835)

[3.3.6 Transaction Cancellation 8](#_Toc532915836)

[3.3.7 Check balance before payment execution 8](#_Toc532915837)

[3.3.8 Reversal of transaction 8](#_Toc532915838)

[3.3.9 Dormant account handling 9](#_Toc532915839)

[3.3.10 SMS alert option 9](#_Toc532915840)

[3.3.11 Update exchange house about payment status 9](#_Toc532915841)

[3.4 Executes other bank transactions 9](#_Toc532915842)

[3.4.1 Software will process BEFTN file provided by Bangladesh Bank 9](#_Toc532915843)

[3.4.2 Software will generate EFT, RTGS file 9](#_Toc532915844)

[3.4.3 Access BEFTN for sending EFT transactions 9](#_Toc532915845)

[3.4.4 Access BEFTN for getting for any rejection information 9](#_Toc532915846)

[3.4.5 Acknowledge exchange house about cancellation 9](#_Toc532915847)

[3.5 Cash over the Counter Transaction (COCT) 10](#_Toc532915848)

[3.5.1 Software will create customer 10](#_Toc532915849)

[3.5.2 Transaction information entry 10](#_Toc532915850)

[3.5.3 Check balance of exchange house account 10](#_Toc532915851)

[3.5.4 Voucher generation 10](#_Toc532915852)

[3.5.5 Update Exchange house about COCT 10](#_Toc532915853)

[3.5.6 Keep record in a file 10](#_Toc532915854)

[3.6 Manage Exchange house information 10](#_Toc532915855)

[3.6.1 Basic information 10](#_Toc532915856)

[3.6.2 Revise deed 10](#_Toc532915857)

[3.6.3 Fund Posting 10](#_Toc532915858)

[3.6.4 Fund Reversal 11](#_Toc532915859)

[3.7 Commission Calculation of Exchange House 11](#_Toc532915860)

[3.7.1 Commission Setup 11](#_Toc532915861)

[3.7.2 Commission calculation 11](#_Toc532915862)

[3.8 Commission Calculation of Agent 11](#_Toc532915863)

[3.8.1 Commission Setup 11](#_Toc532915864)

[3.8.2 Commission calculation 11](#_Toc532915865)

[4. Requirements of Reports 11](#_Toc532915866)

[4.1 Fixed Report 12](#_Toc532915867)

[4.2 Dynamic Report Builder 12](#_Toc532915868)

[5. Requirements of Security 12](#_Toc532915869)

[5.1 Role based security 12](#_Toc532915870)

[5.2 Transactional security 13](#_Toc532915871)

[5.3 Security document reference 13](#_Toc532915872)

[6. Technology Hardware and Software 13](#_Toc532915873)

[6.1 Software 13](#_Toc532915874)

[6.1.1 Application 13](#_Toc532915875)

[6.1.2 Hosting 14](#_Toc532915876)

[6.2 Hardware 14](#_Toc532915877)

[6.3 Deliverables 14](#_Toc532915878)

[7. High Level Schedule 15](#_Toc532915879)

Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| Ver. | Date | Author | Remarks |
| 1.0 | 10-Aug-2018 | Rahima Shaheen | Document Creation |
| 1.0 | 12-Aug-2018 | Sazzad Munir | Document Review |
| 1.1 | 13-Sep-2018 | Rahima Shaheen | Client Review Feedback Implementation:  See Sections: 3.1.6, 3.1.7, 3.2.10, 3.2.11, 3.2.12, 3.3.4, 3.5.1, 3.3.8, 3.3.9, 3.3.11, 3.6.2, 3.6.3, 3.6.4, 5.1 |

# Introduction

This document briefly describes the requirement of remittance business of AB bank

# Background and Existing Remittance System

AB Bank is known as one of the leading banks of the country since its commencement. It deals foreign remittance with different money exchange organizations for many years. This section describes the basic remittance operation and existing practice of AB bank.

## Basic remittance operation

* Receive/ retrieve remittance info from exchange houses
* Process remittance info according to bank branch info
* Use BEFTN for sending remittance info to other bank and retrieving remittance info from other bank.
* Execute transaction for own bank/ branch/ other bank / Islamic banking and cash transaction with all validation
* Handle amendment, cancellation of transactions.
* Generating money receipt for cash transaction(COTC)
* Provide a regular feedback to money exchange about each or group of transactions

## Current Practice in AB Bank

At present AB bank execute their remittance business with some in house software and in manually. The way they currently performed:

They retrieve remittance information by

* Collect remittance info in different ways
* Excel file through email
* From interface provided by exchange houses
* Manually map remittance info with bank and branch name
* Segregate own bank remittance and other bank remittance
* Use BEFTN for sending remittance info to other bank
* Send email with excel file to agent like Bureau ?
* Use BEFTN for getting remittance info from other bank ?
* Remittance update info are sent to exchange house by email
* Generate money receipt for cash flow by accessing user interface of exchange house
* Update exchange house about transaction by excel file using email

# Requirement in Proposed software

AB Bank likes to bring all operations under single software. They will do basic remittance operation by conforming Bangladesh Bank rules and regulations.

## Retrieving remittance information from Exchange house

Retrieving remittance information from different exchange should be done through the software. It will be done in any of the following ways:

### Retrieving Transactions from exchange house API

The exchange houses that have respective API for providing remittance transaction information, the software will have provision to retrieve remittance info using API of the exchange house from software. At phase the software will support only RIA.

### Transmitting Transaction using ABBL API

The software will expose API so that exchange houses can send their remittance information through API.

### No file receive through email

AB bank will not accept any file for remittance transaction through email.

### Notify when system receive any transaction

The software will notify exchange house (if they have API) when remittance transaction is received.

### Retrieve remittance info from BEFTN

The software will able to access BEFTN software to retrieve remittance info where AB bank is other bank.

### Notify if any duplicate transaction is received

The software will notify when any duplicate remittance transaction is received. Software will halt that transaction. Moreover when a transaction has been settled but that require amendment or re issue, in those cases software will prompt for proper validation and will say current status of the transaction. As an example, if a transaction returns to exchange house and again requested for posting the remittance just correcting beneficiary account, then if one user of bank has completed the operation, then another user cannot repost on same transaction.

### Retrieve remittance info by providing interface

The software will provide interface so that exchange house can send their remittance info.

## Transaction mapping

After retrieving remittance information, AB bank maps information with respective bank and branch.

### Map transaction by Route number

The software will be able to map respective bank with branch route number primarily.

### Map transaction with corresponding bank branch and account holder name and account

If route number is not available then Bank and branch number must be match with transaction info. Software will further map with account holder name and account number. Exact much is required in this case.

### Manual mapping should be an option

There must be a provision of manual mapping. Sometimes account name or beneficiary name are not exact matched, so user will match transaction info with human intelligence.

### Software will show record which transactions are not matched

The software will populate record if any/more transactions are not matched.

### Update Exchange house for unmatched transaction

The software will update record if exchange house provides API or create file to send exchange houses about this unmatched information

### Software will automatically segregate own bank, EFT and RTGS transactions

The software will segregate own bank transactions, EFT and RTGS for other bank transactions

### Software will generate EFT, RTGS file

The software will generate EFT, RTGS file according to Bangladesh Bank guideline.

### Access BEFTN for sending EFT transactions

The software will provide facility to access BEFTN for sending EFT file to other bank and own branches.

### Calculate amount to be transferred for EFT transactions

The software will calculate total amount for EFT transactions.

### System should notify for split transaction

In case of split transactions, system should notify. If a single beneficiary has multiple remittance info in same day, the system will prompt for this issue. There may be required some documents to allow transaction. It is not required keep attachments, but user will check if the documents are received.

### System should notify for high value transaction

In case of high volume of transactions, system should notify. There may be required some documents like KYC document to allow transaction. It is not required to keep attachments, but user will check if the documents are received.

### Manage Branch information with route number (update bulk info)

This software will always update new branch information and route number. It should be possible to update bulk information at a time.

## Executes own bank transactions

AB bank follows following steps to execute transactions for own bank account

### Validate beneficiary and account information

The software will validate account status, number, account type etc. with own bank info account list. Also system will check beneficiary name with account name.

### Authorization required for non-individual account

There must be an authorization required, i.e, authorize person will approve then payment will be required

### Check balance before payment execution

Check exchange house account balance before posting any payment.

### Calculate amount in BDT by converting currency

If remitter pays different currency, then the software will deal with USD or respective currency account not with NRTA account.

### Islamic banking account

The software will identify that the account is of Islamic banking account. The software will keep a different code for them.

### Transaction Cancellation

Transaction cancellations should be possible into the system.

### Check balance before payment execution

If transaction is going to be paid after an amendment, software has to keep the detail of amendments.

### Reversal of transaction

If transaction has already been posted, but required to reverse, then that must be done with proper validation and with core banking system. System will keep note about this transaction.

### Dormant account handling

If any transaction is for any dormant account, then immediately it will be halt and notify that it is a dormant account. Later system will deposit amount and as AB bank handles dormant account in different way so system should use those api to deposit remittance of dormant account and update remittance status

### SMS alert option

SMS will be sent to each account owner whenever transaction is done. (It may done by core banking)

### Update exchange house about payment status

The software will update payment information to exchange house in any of following ways

* Accessing exchange house api.
* prepare list each day’s payment clearance information and will expose an api, so that exchange houses can retrieve it with proper authentication
* Provide an interface where exchange house can login and can see each day transaction status.

## Executes other bank transactions

AB bank follows following steps for other bank transactions

### Software will process BEFTN file provided by Bangladesh Bank

The software will receive ‘Other Bank Transactions’ info through BEFTN from Bangladesh Bank. Then the software will process these files for 3.4.2.

### Software will generate EFT, RTGS file

The software will generate file for BEFTN according to Bangladesh Bank guideline.

### Access BEFTN for sending EFT transactions

The software will provide facility to access BEFTN for sending EFT file to other bank and own branches.

### Access BEFTN for getting for any rejection information

The software will provide facility to access BEFTN for getting any rejection of remittance info.

### Acknowledge exchange house about cancellation

The software will notify this cancellation information to exchange house by accessing exchange house api or will expose API about cancellation per bank.

## Cash over the Counter Transaction (COCT)

Cash transactions are not found from exchange house. Customer comes to bank with pin number for remittance.

### Software will create customer

The software will create customer information. Along with some general information software must keep Customer identification number, DOB and mobile number. Customer information can be retrieve by DOB, Mobile no, NID no etc.

### Transaction information entry

Software will be able to transaction detail information

### Check balance of exchange house account

Software will check balance and credit to customer account if sufficient balance.

### Voucher generation

A voucher will be generated from software.

### Update Exchange house about COCT

Update exchange about the transaction by accessing their APIs.

### Keep record in a file

The software will keep this record in an excel file, so that AB bank can send it exchange house. How??

## Manage Exchange house information

AB bank likes to keep all exchange house details to which they do dealing.

### Basic information

Software should keep basic information of exchange house, like name address, contact ino, contact address, date of business with AB bank, duration, current status, bank guarantee, , minimum Balance, AML Questioner received Date, Exchange House License Expire Date, Approval Date of Bangladesh Bank , Authorized Signatures Book List & **others.**

### Revise deed

Software will provide facility to update deed with exchange house with effective date. The detail information will be provided by AB bank, in detail discussion.

### Fund Posting

Bank deposits fund to exchange house account from the corresponding NOSTRO account of each exchange house. NOSTRO account is usually a foreign currency account. Bank converts money to taka according to their current dealing rate. Core banking has information of all NOSTRO account and each exchange house account information in own bank. Here the software will keep record how much fund deposit in each day and with what rate along with latest balance.

### Fund Reversal

Exchange house will reverse their fund. Software will keep track of this information. Details of how will be known from AB bank.

## Commission Calculation of Exchange House

According to deed, commissions are calculated for each exchange house and provided:

### Commission Setup

The software will provide an interface where it is possible to commission will be calculated for an exchange house. Like, it can be on number of transactions or volume of transactions, and there may be different rate.

### Commission calculation

Based on the setup, commissions are provided to exchange house. It can be either monthly or quarterly or half yearly or yearly, based on the deed.

## Commission Calculation of Agent

According to deed, commissions are calculated for agent (i.e. bureau) and provided:

### Commission Setup

The software will provide an interface where it is possible to commission will be calculated for bureau. The setup can be on number of transactions or volume of transactions, and there may be different rate.

### Commission calculation

Based on the setup, commissions are provided to bureau. It can be either monthly or quarterly or half yearly or yearly, based on the deed. Software will keep track how much are provided to bureau.

# Requirements of Reports

Along with the features described in section 3 , the software will provide a number of reports and some of fixed reports.

## Fixed Report

Following fixed reports are required in the proposed software

* Transaction inquiry All type
* Transaction Details Report (AB,EFT,RTGS,CASH)
* Branch Summary /Details Report (date , year)
* Transaction Summary Report (cash, ac, eft, rtgs) (date , year)
* Transaction Report (base on amount Parameter )
* Transaction Report -Exchange house wise (base date, year Parameter )
* Transaction Report -User wise (base date, year Parameter )
* Transaction Report -Amount wise (greater or less than or equivalent) segregations Report
* Transaction Report -Beneficiary wise (base date, year Parameter )
* Transaction Report -Remitter wise (base date, year Parameter )
* Transaction Report -District wise remittance report as prescribe by Bangladesh Bank (base date, year Parameter )
* Country wise remittance report as prescribe by BB (base date, year Parameter )
* Exchange house wise fund receive/execution report (base date, year Parameter )
* FCS-7 report
* Fiscal year report.
* Cover Fund Received form Exchange Houses (base date, year Parameter )
* Exchange House Related Permission and Security Deposit
* Statement of Payment Against Cover Fund Received form Exchange Houses
* Information Regarding Drawing Arrangement with Foreign Exchange Houses

and Statement of Wage Earners' Remittance date parameter

## Dynamic Report Builder

AB bank requires a dynamic report builder for creating many more reports when they need.

# Requirements of Security

AB bank requires two types’ securities in their required software.

* Role based security and
* transactional security

## Role based security

Different level of user can view and manage different operation. System will provide facility to create different role and user and manage their task dynamically. These users are:

* Administrator
* Remittance Hub User
* Remittance Hub Authorizer
* Treasury User
* Branch User
* Branch Authorizer
* Exchange house user
* Exchange House Authorizer with OTP facility

## Transactional security

As AB bank wants to expose their banking API to exchange house and some other body, so they like to impose some transactional security in their API. Their preference is

* Implementation of IP white listing
* Use token in each transaction
* Use OTP for transaction.

## Security document reference

A detail of a security document can be used as reference. Document name: ‘***Web Service Security Concept***’.

# Technology Hardware and Software

This is a web-based application. The application will be developed on **ASP.Net MVC**. User interfaces are the interaction points of users for data entry and report generation. The details about technology usage for different parts are listed below:

## Software

### Application

AccenTech will follow following software, architecture and hardware environment for developing this project:

**Architecture:** AccenTech defined architecture will be used in this project. During designing phase, the architecture will be finalized based on the project need. Latest technology and usability features are also considered during this phase

**Front end:** Angular JS, Html

**Back end (BO and data object):** C #, .Net Framework, MVC- 6

**Database:** MS SQL Server

**Client Platform:** Windows 7,8,10

**Server Platform:** Windows 2008 or later

**Browser compatibility:** This application will support latest browser of Chrome and Firefox.

AB Bank is responsible for arranging the required software, license (if required), and should install these prior to deploying the application in production.

### Hosting

AB Bank defined hosting space.

## Hardware

Client will posses necessary hardware for operating software and managing server. AB Bank is solely responsible to purchase/collect these. These could be part of hosting environment which they (AB Bank) will use.

## Deliverables

Following are the deliverables of the application

* Deployment package
* Operational Instructions or training

# High Level Schedule

We have identified the volume of the project, time for development & implementation and therefore total project will take **11 months after** sign up the contract.

A high level schedule of deliverables:

|  |  |
| --- | --- |
| **Item** | **Tentative schedule** |
| **Phase -1** | **4 months** |
| 3.1 Retrieving remittance information from Exchange house |  |
| 3.6 Manage Exchange house information |  |
| 3.2 Transaction mapping |  |
| 3.3 Executes own bank transactions |  |
| **Phase -2** | **4 months** |
| 3.4 Executes other bank transactions |  |
| 3.5 Cash over the Counter Transaction (COCT) |  |
| 5. Requirements of Security |  |
| 4.1 Fixed Report |  |
| 3.7 Commission Calculation of Exchange House |  |
| 3.8 Commission Calculation of Agent |  |
| **Phase -3** | **2 months** |
| 4.2 Dynamic Report Builder |  |
| Integration |  |
| Acceptance Testing in client side | 1 months |
| **Total** | **11 months** |