Functional Requirements Document (FRD)
On Tax Rate Configuration Management

23rd August 2021

Version 1.0

Contents

1 Document Revisions

Version Number	Description	Date
1.0	Initial Draft	23-08-2021
1.1	Version 1.1	23-08-2021

2 Approvals

Role	Name	Signature	Date
Scrum Master	Neha Sharma		23-08-2021
Business Analyst	Yuvraj Goneka		23-08-2021
Project Manager	Mooev Arrow		23-08-2021
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QA Manager	Tom Billings		23-08-2021

3 Stakeholders

Name	Stakeholder Type
Neha Sharma	Internal
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Mooev Arrow	Internal
Andrew Macron	Internal
Tom Billings	Internal

4 Introduction

4.1   Project details

Project Name	Tax Rate Configuration Management
Project Type	Web Based Application
Project Start Date	01st November, 2021
Project End Date	30th November, 2021
Department	ASP.NET Development

4.2   Project Summary

This is a requirement to add a Tax information when we perform a wholesale re-rating to our customers' TAPOUT files. Currently, we are sending CDRS re-rated with no zero rate and no tax nodes. The other party (Roaming Operator) is rejecting, and we must have to accept RAPIN files. There is also a need for a configuration report on the portal in File Configuration Report to allow team to configure the TAX information. This new functionality can be used by both non-TAP and TAP Creation Customers.

4.3   Scope of the Project

The web-based application is meant to be used by Internal Stakeholders of the company. Any employee having SME-Advanced, and SME Access will be available to access this new functionality. Tax rate can be added, updated, or deleted as per the requirements. The registered user can input tax rates based on "MOC Except SMS", "MOC SMS", "MTC SMS", "GPRS", "LTE-GPRS", "Vo-LTE". Different tax rates based on National, State, Regional and City can be applied in the report. Tax rate can be fixed, or variable based on VPMN's Location. Tax rate will also start and end date. If any CDR are passed with incorrect or NULL tax rate, they can be updated in Tax Configuration Report.

4.4   Intended Audience

The customers using the portal will have read-only access. The registered company's users will have full read-write (777) permissions to this new functionality. This document is intended to all the internal and external stakeholders mentioned in section 3.

5   Overall Description- System Perspective

5.1   Technology

Back End	ASP.NET
Front End	HTML5, CSS
Database	ADO.NET

5.2   Assumptions

- The users have must be already have been registered to the website and he is able to do login in the system.
- The user has SME-Advanced user access to add, update, delete and view the Tax Configuration report.
- The system is capable of handling multiple update requests at the same time.

5.3   Constraints

- The system should not allow to input multiple entries for a single VPMN+HPMN pair. Doing so, the system will not be able to recognize which tax rate needs to be applied in TAPOUT files.
- VPMN, HPMN, Start Date, End Date, Call Type, Tax-Type and Tax Rated Fixed should be the mandatory and unique fields.
- The system should not allow to update tax rate of TAPOUT files older than 365 days.
- Tax Rate should be between 0-1000%.

6   Business Process Overview

6.1   Current Business Process (As-Is)

Currently, we are sending CDRS re-rated with no zero rate and no tax nodes. The other parties and Roaming Partners of our client operators are rejecting, and we are accepting the RAP files.

6.2   Proposed Business Process (To-Be)

Wherever the system performs wholesale re-rating to a CDR that has zero charge, and the re-rated value is not zero and there is no TAX information node available, the system must automatically add the missing tax node according to already defined tax percentage (using the configuration report below). If the VPMN has TAX defined in the RAEX OPDATA.

If the Tax information is missing in Account Info, it must be created.

- Create a new configuration report in File Configuration Centre that can be used by the team to enter the tax information % of our customers and their roaming partners.
- The new report must be in File Configuration Centre > Configuration reports
- The report must be called 'Tax Configuration Report'
- The report must have the following columns:
    - Client Operator: Client Operator Tadig code (Mandatory)
        - The list must include 'All' By Default
    - Roaming Operator: Roaming Operator Tadig code (Mandatory)
        - The list must include 'All' By Default
    - File Type: File Type (TAPIN, TAPOUT, TAPIN & TAPOUT) (Mandatory)
    - Start Date: Start date (Mandatory)
    - End date: End date (Mandatory)
    - Call Type: Call Type (ALL/MOC EXCEPT SMS/MOC SMS/MTC SMS/ALL MTC EXCEPT MT SMS /GPRS) (Mandatory)
    - Tax type: TAX Type (National/State/Regional/Country/Local) (Mandatory)
    - Tax rate fixed: Yes/No
        - If yes, there must be a column available
            - The column must be called 'Tax Fixed Rate %'
            - The column must be mandatory
        - If No, there must be two columns:
            - 'Tax rate range start %'
            - 'Tax rate range end %'
        - The Tax rate range must only be used for validation only to ensure the system is able to accept any TAX between TAX rate range start % and TAX rate range end %.
        - If No, the Tax Correction option below must not be available
    - Tax correction Required: Yes/No
        - If yes, there must be two columns available:
            - Tax corrections start date
            - Tax correction end Date
        - If yes, it must be possible to correct the tax as defined in Tax Rate Fixed column
        - If yes, the Tax node must be added to the tap file if missing
        - If No, any rate defined in Tax Rate Fixed column must be used for validation only

    - Updated by and when (User ID and Date)

7   Flow Diagrams

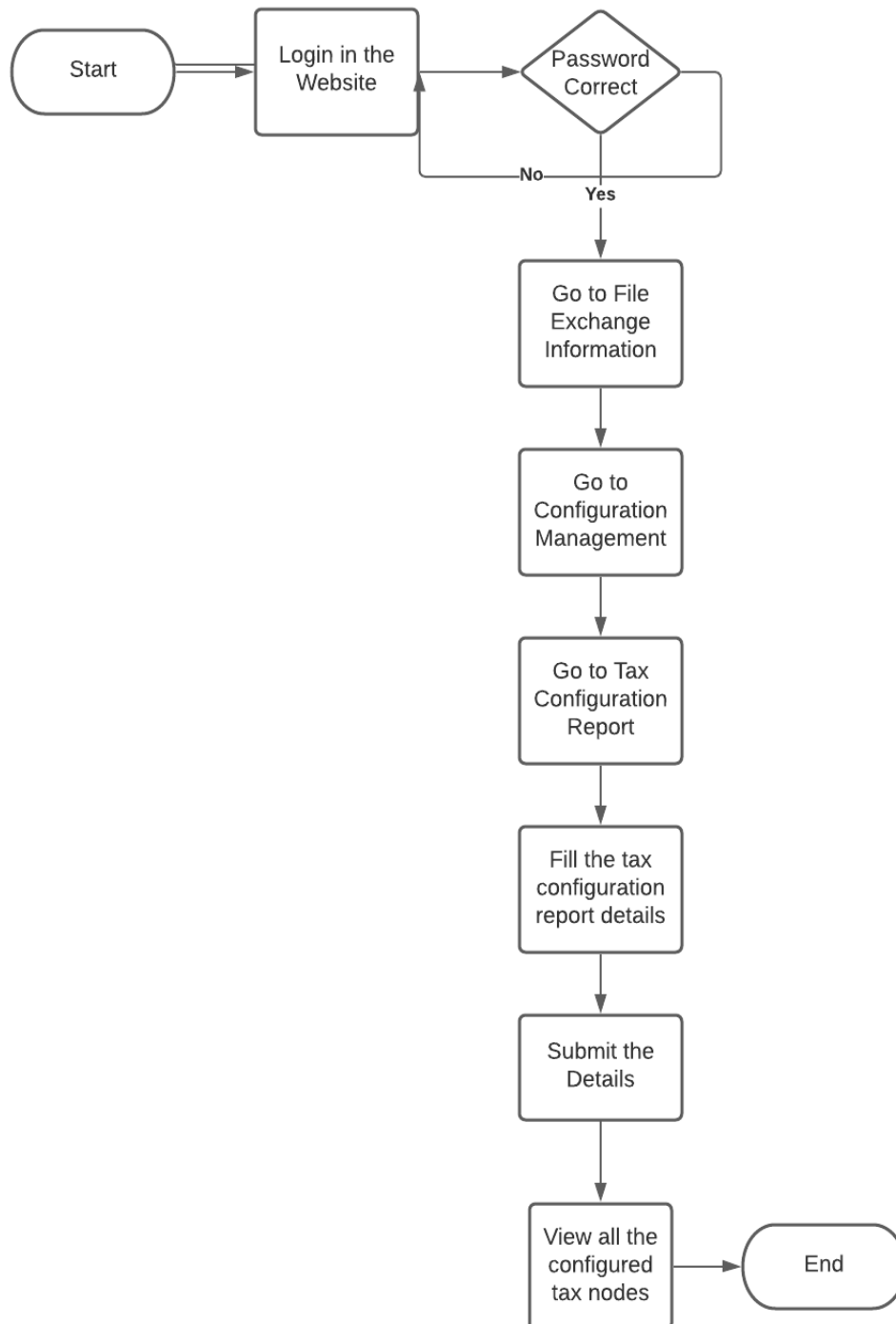The below is the basic flow diagram of tax configuration report.

Figure 1 Flow diagram of tax configuration report.
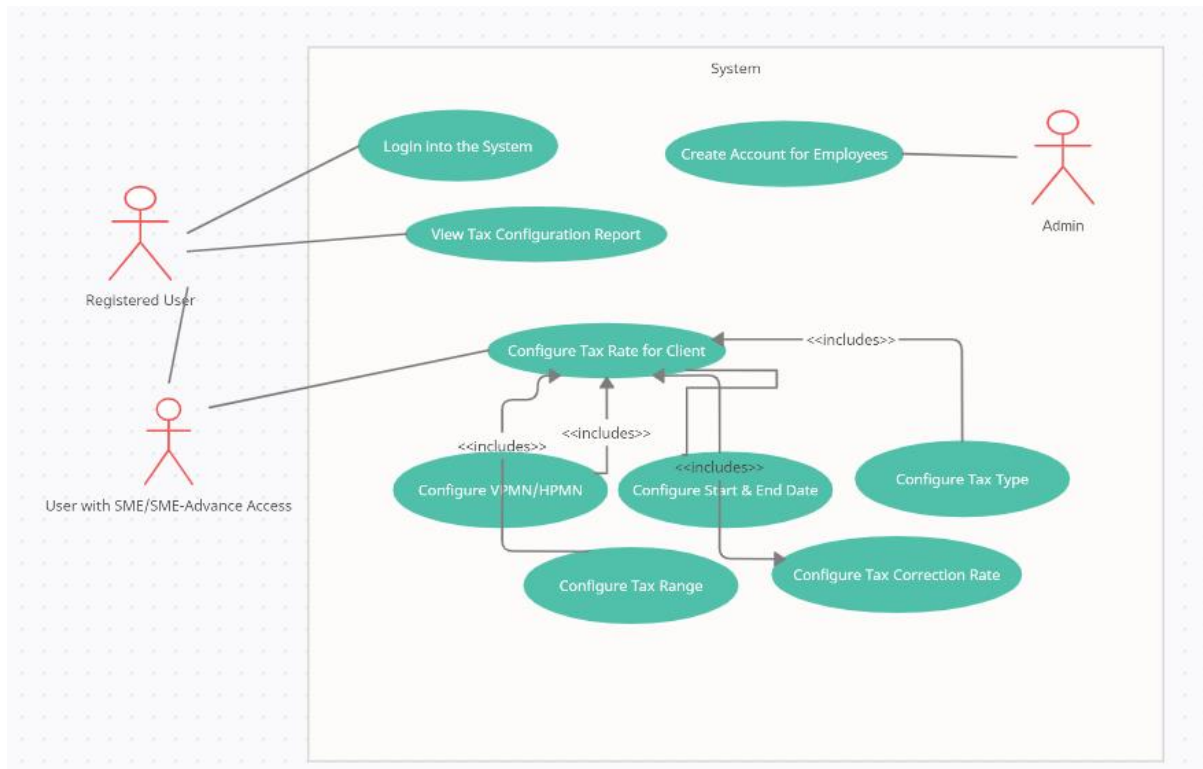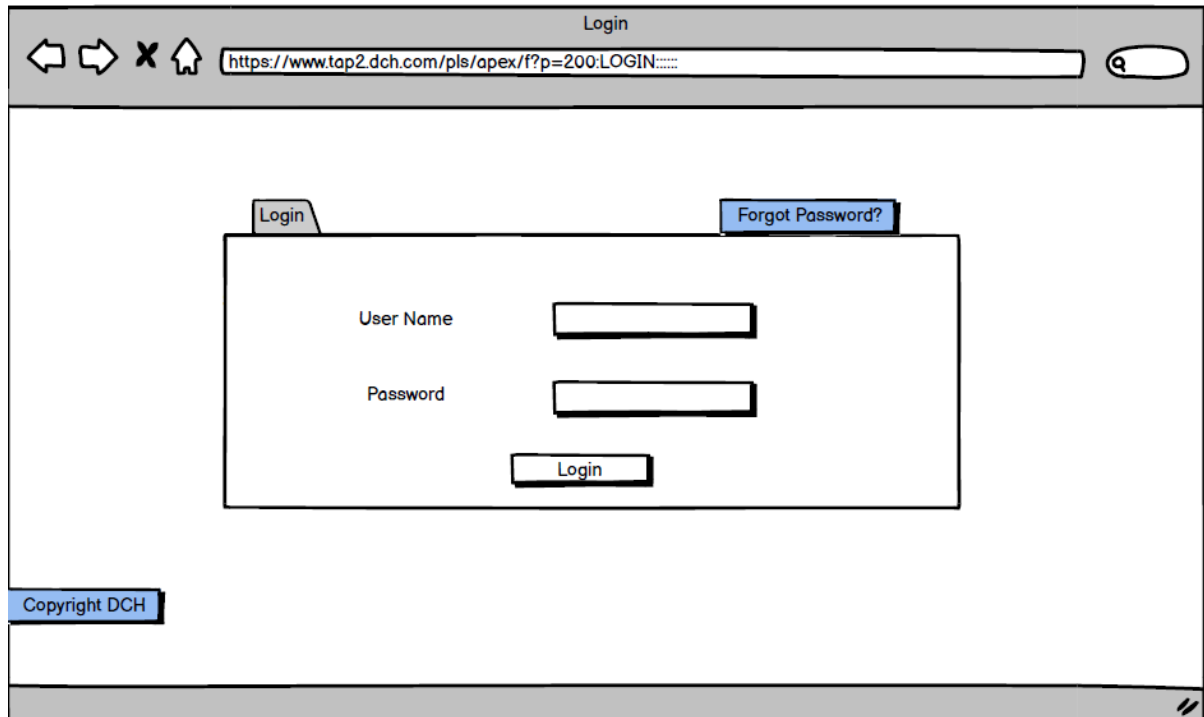
8   Use Case Diagram

Figure 2 Use Case Diagram for Tax Configuration Report

9   Sketches of the System

9.1   Login Screen

Any registered user will be able to do login.

9.2   Registration Screen

Any user with the admin access rights to be able to create an account.

9.3 Tax Configuration Report Screen

Any registered user will be able to view the reports. The user with SME and SME Advanced can add, edit, update, and delete the tax configuration Report.

10 Business Requirements

10.1 Functional Requirements

Functional Requirement ID	Functionality Name	Description	Is Field Mandatory for Tax Rate Generation?
Functional_F1	VPMN	It is dropdown menu. The user should access to PMN Code to configure its tax. This is for Client Operator	Yes
Functional_F2	HPMN	It is dropdown menu. The user will be able to select only that HPMN where the agreement between VPMN and HPMN Exists	Yes
Functional_F3	Start Date/End Date	The user needs to provide the start and end date for tax configuration. Start date and end date of tax configuration should lie between operator agreement start date and end date	Yes
Functional_F4	Call Type	It is drop down menu. The user needs to be input one of the options from them. By default, tax rate will be applied to all call types	Yes
Functional_F5	Tax Type	It is drop down menu. The user needs to be input one of the options from them. By default, tax rate will be applied to National	Yes
Functional_F6	Tax Rate Fixed	It is radio button field. Tax rate can be fixed or in range. If the users opt for fixed tax rate, then the user needs to fill Fixed tax rate else the user needs to be fill Tax range	Yes
Functional_F7	Tax Fixed Rate	The user needs to enter Tax rate percentage. The value accepted for this field is between 0-1000%	Yes, if Tax rate is Fixed
Functional_F8	Tax Rate Start/End Range	The user needs to enter Tax rate start and end range percentage. The value accepted for this field is between 0-1000%	Yes, if Tax rate is not Fixed
Functional_F9	Tax Correction Required	If the user wants to recycle any TAP file, then this option is required.	Yes
Functional_F10	Correction Start/End Date	The user will be able to add correction start date and end date for recycling TAP Files	Yes, if Tax Correction is required
Functional_F11	View Tax Configuration Report	The button will show all the existing tax rate configuration. The report can be edited, updated, or deleted as per the access rights assigned to the user.	No

10.2 Non-Functional Requirements

The following tables shows non-functional requirement of the Tax Configuration Report.

NFR ID	Priority	Description
NonFunctional_NF1	High	The input form should be loaded without facing delay.
NonFunctional_NF2	Medium	The system should at least accommodate 10 million tax rate entries.
NonFunctional_NF3	High	There should not be an issue in fetching the data on the frontend.
NonFunctional_NF4	Medium	There should not be an issue in downloading the tax rate report.
NonFunctional_NF5	Medium	Caching should be enabling for previously input data. Dropbox should contain the fetched data.
NonFunctional_NF6	High	All the input data should be properly backup in the database.
NonFunctional_NF7	Critical	The tax configuration data should be viewable only to the registered users.

11 Glossary

11.1   List of Acronyms

Acronyms	Full Form
ADO.NET	ActiveX Data Object
ASP	Active Server Page
CDR	Call Data Record
CSS	Cascading Style Sheets
GPRS	General Packet Radio Service
HPMN	Home Public Mobile Network
HTML	hypertext markup language
LTE	Long-Term Evolution
MOC	Mobile Originated Call
MTC	Mobile Terminated Call
RAP	Returned Account Procedure
SME	Subject Matter Expert
SME-Advanced	Subject Matter Expert-Advanced
SMS	Short Message Service
TAP	Transferred Account Procedure
Vo-LTE	Voice over Long-Term Evolution
VPMN	Visited Public Mobile Network