**DMND0009366 Launch regional pricing or Geo Locking capability for Prepaid**

High Level Design Document

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# Introduction

## Purpose and Scope

This document defines requirements and high-level solution of Geo Locking capability for Prepaid.

## Related Documentation

|  |  |  |  |
| --- | --- | --- | --- |
| **Type** | **Title** | **Date Updated** | **Attachment** |
| SRS | OC\_Amdocs\_PH\_Location\_Retrieval\_API\_SRS\_WLE\_ED0138910\_1.0.1.docx | September 8 |  |
|  |  |  |  |

## Terms and Definitions

| Term | Definition |
| --- | --- |
| LACCI | Location information from HLR.  Location Area Code and Cell ID |

## 

## HLD Checklist

|  |  |
| --- | --- |
| **Items / Response** | **Response** |
| LOB | Wireless |
| Impacted Brands | Prepaid Brands, Retailer |
| Audience / End User | Subscribers, Retailer |
| Impacted System(s) | USSD, UWS2.0, AIA |
| Vendor(s) | Open Code |
| CSOG Required? | No |
| CRS / PPD Frozen | N/A |
| Mockup's Shared? | N/A |
| Spiels Shared? | N/A |
| Potential Traffic | Not yet provided |
| Capacity Assessment Done | N/A |
| Impact on Operation Checked | No |
| T/F Impact | No |
| T/F SA Name | N/A |
| T/F Estimations | N/A |
| Support in Drop 5.2-day 1 | N/A |
| UAT Duration | Not yet provided. |
| For Digital Supported web browsers | N/A |

# Requirements

## Requirements

Enable Smart to launch specific offers in attack areas to increase market share in competitor dominated areas

* Get location information from Network (HLR) and use location information to identify offers for the subscriber based on locations.
  + Location information (LACCI) shall be obtained from USSD, sent to UWS2.0, then to AIA.

## Current Functionality

### Current Functionality

### Reasons for Change

Enable Smart to launch specific offers in attack areas to increase market share in competitor dominated areas

### Business Impact

### Business Value

## Requirements Traceability Matrix (RTM)

# Overall Solution

## Impacted Components

* USSD
* UWS2.0
* AIA

## Assumptions, Constraints & Dependencies

### Project Assumptions

* For Subscriber-initiated Availment via USSD, offers to be displayed shall be based on subscriber’s location.
* For Retailer to Subscriber Availment via USSD, offers to be displayed shall be based on retailer’s location.
* Geo-lock offers will be available to all prepaid subscribers (no consideration of consent)
* Menu update and offer configuration shall be handled on a separate CR.

### Testing Assumptions

### Constraints

### Dependencies

* Build Dependency
  1. Reference table for geo-lock offers with LAC, CI/Province/Municipality/ Barangay from Smart.
* Completion of development / configuration in Network.
* Capacity assessment

## High-Level Solution

### Solution Overview

Development in USSD to inquire location from HLR

Development in USSD, UWS2.0 and AIA to handle location information.

### Related Use cases

#### **Subscriber-Initiated Availment via USSD**

Chart, box and whisker chart

Description automatically generated

1. Subscriber dials \*123, then #. HLR receives the request via MSC, validates, then routes to USSD.
2. USSD inquires location from HLR and performs service validation (validate MIN if Prepaid or Postpaid) then triggers GetMenu API in UWS2.0.
   * USSD also sends location information to UWS2.0
3. UWS2.0 triggers GetProposal API in AIA
   * UWS2.0 also sends location information to AIA
4. AIA returns list of Geo-lock offers based on subscriber’s location
5. USSD displays available offers to subscriber.
6. Subscriber selects an offer from the menu.
7. USSD forward the registration request to UREG via DP
8. UREG triggers charging and package creation to OOCS
9. OOCS credits subscription and debit subscriber’s account. OCS generates CDR
10. UREG sends sms notification to subscriber’s via SMSC.

#### **Retailer to Susbcriber Availment via USSD**

Chart

Description automatically generated

1. Retailer dials \*343, then #. HLR receives the request via MSC, validates, then routes to USSD.
2. USSD inquires location from HLR and performs service validation (validate MIN if Prepaid or Postpaid) then triggers GetMenu API in UWS2.0.
   * USSD also sends retailer’s location information to UWS2.0
3. UWS2.0 triggers GetProposal API in AIA
   * UWS2.0 also sends retailer’s location information to AIA
4. AIA returns list of Geo-lock offers based on retailer’s location
5. USSD displays available offers to the retailer.
6. Retailer selects an offer from the menu.
7. USSD forward the registration request to EVC.
8. EVC validates the request and triggers UREG.
9. UREG triggers charging and package creation to OOCS.
10. OOCS credits subscription and debit subs account. OCS generates CDR
11. UREG sends sms notification to subs via SMSC.

### Solution Description per Functional Area

|  |  |  |
| --- | --- | --- |
| **Use Case** | **System** | **Work Effort** |
| Susbcriber Initiated Availment via USSD | USSD (OC) | Development to inquire location information (LACCI) from HLR  (Please refer to the attached SRS in Section 1.2) |
| Retailer to Subscriber Availment via USSD) | USSD (CA) | Development in USSD to add new logic to cater **LAC & CI** as new placeholder in USSD. ***\*LAC -****Location Area Code.*  *\*****CI -*** *Cell ID.*  Update Action Address for GetMenu & GetRetailerMenu (new API URL is c/o UWS2)  **RETAILER** > 3 Action Address (REGULAR\_TO\_UWS2, OFFERS\_TO\_UWS2, OFFERS\_TO\_EXSUN) **CONSUMER** > SMART FLP - 1 (SMART\_FLP\_MENU) > SMARTBRO - 1 (SmartBro\_Menu) > SPP TAIL\_DYNAMIC - 1 (MAIN) > TNT TAIL\_DYNAMIC - 1 (MAIN) **Impacted SC: 121/123** & **343** |
| UWS2.0 | Update existing UWS 2.0 AIA Consumer MS, AIA Retailer MS, CORE consumer façade & Retailer facade flow:   * 1. Development on Core Consumer Facade to read additional USSD get menu parameter for location and Pass to AIA Consumer MS.   2. Development on AIA consumer MS with integration to AIA get proposal API to add additional parameter (LACCI).   3. Development on Retailer Facade to read additional USSD get menu parameter for location and Pass to AIA Retailer MS.   4. Development on AIA Retailer MS with integration to AIA get proposal API to add additional parameter (LACCI). |
| AIA  (To be updated) | Development to Create reference table for geo-lock offers with LAC CI/Province/Municipality/Barangay  *Note: reference table will be provided by Data Tech.* |
| Development to add LACCI in GetProposals API.  *Note: LACCI shall be used to identify location based offers that will be returned to UWS2.0* |

### Fallout/Error Handling/Retry Mechanism

* If no LAC and CI received from HLR, no location-based offer shall be displayed

### Database changes

N/A

### Implementation Instructions if any

N/A

## Effort Details

### Bucket A : Total DCUT & Testing

|  |  |  |
| --- | --- | --- |
| **Project Execution Items** | **Bucket A** | **Remarks** |
| **Actual Effort (MD)** |
| Development and Unit Testing (DCUT) |  |  |
| Testing (SAT/IAT/UAT/PPT) |  |  |
| Total |  |  |

### Bucket A: Breakdown of DCUT Efforts

|  |  |
| --- | --- |
| **System** | **Mandays** |
| USSD (CA) | 5 |
| UWS2.0 | 20 |
| AIA |  |
| **Total** |  |

### Bucket B: Breakdown of Efforts

|  |  |  |
| --- | --- | --- |
| **Service** | **Metric** | **Quantity** |
| SRS Preparation | Manday | 1 |
| Feature Development | Manday | 4 |
| Integration | Manday | 2 |
| Internal Testing | Manday | 0 |
| OpenCode QA | Manday | 2 |
| **Total** | | **9** |

### Breakdown of Testing Efforts

### Overall Efforts

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Project Execution Items** | **Bucket A** | | **Bucket B** | **Remarks** |
| **Est. Model Effort** | **Actual Effort** |  |
| Development and Unit Testing (DCUT) | 25+ |  | 9 |  |
| Scoping, Impact Assessment and High Level Design |  |  |  |  |
| System Acceptance Testing (SAT) |  |  |  |  |
| SAT Application Support |  |  |  |  |
| Integration Acceptance Testing (IAT) |  |  |  |  |
| IAT Application Support (Dev + SI) |  |  |  |  |
| Data preparation (SAT/IAT/UAT) |  |  |  |  |
| UAT- Operational support |  |  |  |  |
| UAT - Application Support |  |  |  |  |
| Quality and Release Management |  |  |  |  |
| Project Management |  |  |  |  |
| Deployment Application/PPT Support (\*) |  |  |  |  |
| Post Production Test (PPT) |  |  |  |  |
| Production Stabilization |  |  |  |  |
| Ongoing Maintenance |  |  |  |  |
| **Bucket Total Effort** |  |  |  |  |
| Total Effort |  | | |  |

## Timeline

|  |  |
| --- | --- |
| **Item** | **Timeline** |
| Development and Unit Testing (DCUT) |  |
| System Acceptance Testing & Support (SAT) |  |
| Integration Acceptance Testing & Support (IAT) |  |
| Deployment |  |
| Post Production Testing and Support |  |

# Other Impacts

## Impacted Interfaces

## Hardware/Third-party Software Impact

## Impact on Performance

## Impact on Operation

## Impact on Security

## Impact on Training

## Impact on Migration

## Impact on Production (System Downtime and Data)

# Risks

| # | Risk | Impact Severity | Mitigation / Solution | Owner | Status | Comments |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | Retailer may be able to sell to subscribers that are not in the attack area. | High | For business acceptance. | Kim | Open |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |

# Open Issues

| # | Open Item | Impact | Type of Open Item | Owner | Status | Due Date | Comments |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
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# Document Release Information

Every change made to the document following the initial delivery MUST be shown in detail in this table

| Doc Ver. | Editor/Author | Edit Date | Changes |
| --- | --- | --- | --- |
| 0.1 | Marian Tolibas | Jun 20, 2022 | Initial Release |
| 0.2 | Marian Tolibas | Jun 22, 2022 | Added dev and TA assessment  Added overall effort table  Added requirement to update TNT Lvl 1 header  Added in testing scope validation of TNT Lvl 1 header  Updated UMB template version attachment (v3)  All updates are highlighted in yellow |
| 0.3 | Marian Tolibas | Jun 28, 2022 | Updated testing scope  Added 1MD for IAT  All updates are highlighted in yellow |

# Appendix