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## About this Document

<table>
<thead>
<tr>
<th>Scope</th>
<th>The scope of this document includes all functionality a user must know in order to effectively operate the USSD GW application. It does not include detailed design of the service.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audience</td>
<td>This guide is written primarily for USSD GW System Administrators. However, the overview sections of the document may be useful to anyone requiring an introduction to the application.</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>Although there are no prerequisites for using this guide, familiarity with the target platform would be an advantage. This manual describes system tasks that should only be carried out by suitably trained operators.</td>
</tr>
<tr>
<td>Related documents</td>
<td>The following documents are related to this document:</td>
</tr>
<tr>
<td></td>
<td>• USSD GW Technical Guide</td>
</tr>
<tr>
<td></td>
<td>• CPE User's Guide</td>
</tr>
<tr>
<td></td>
<td>• SLEE Technical Guide</td>
</tr>
<tr>
<td></td>
<td>• SMS User's Guide</td>
</tr>
<tr>
<td></td>
<td>• SMS Technical Guide</td>
</tr>
</tbody>
</table>
## Document Conventions

The following terms and typographical conventions are used in NCC documentation.

<table>
<thead>
<tr>
<th>Formatting convention</th>
<th>Type of information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Special Bold</strong></td>
<td>Items you must select, such as names of tabs. Names of database tables and fields.</td>
</tr>
<tr>
<td><strong>Italics</strong></td>
<td>Name of a document, chapter, topic or other publication. Emphasis within text.</td>
</tr>
<tr>
<td><strong>Button</strong></td>
<td>The name of a button to click or a key to press. Example: To close the window, either click Close, or press Esc.</td>
</tr>
<tr>
<td><strong>Key+Key</strong></td>
<td>Key combinations for which the user must press and hold down one key and then press another. Example: Ctrl+P, or Alt+F4.</td>
</tr>
<tr>
<td><strong>Monospace</strong></td>
<td>Text that you must type and examples of code or standard output.</td>
</tr>
<tr>
<td><strong>variable</strong></td>
<td>Used to indicate variables or text that should be replaced.</td>
</tr>
<tr>
<td><strong>menu option &gt; menu option &gt;</strong></td>
<td>Used to indicate the cascading menu option to be selected, or the location path of a file. Example: Operator Functions &gt; Report Functions. Example: /IN/html/SMS/HelpText/</td>
</tr>
<tr>
<td><strong>hypertext link</strong></td>
<td>Used to indicate a hypertext link on an HTML page.</td>
</tr>
</tbody>
</table>

Specialized terms and acronyms are defined in the Glossary at the end of this guide.

### Icons

The following icons are used in NCC guides as visual cues to draw attention to important information.

- **Note:** Indicates useful and complementary information, such as an explanation, comment, or short expansion of the text object that is intended to catch your attention.

- **Tip:** Indicates practical but non-essential information that makes the solution easier to use or operate (for example, a keyboard shortcut, or alternative way to perform a step in a procedure).

- **Warning:** Indicates a caution. If this information is ignored, it could possibly cause irreversible damage to the equipment, data, or software.
System Overview

Introduction

Purpose

This chapter describes the USSD Gateway and the basic functionality of the system.

In this chapter

This chapter contains the following topics.

What is USSD Gateway? ................................................................. 2
Callback....................................................................................... 4
Handset Interaction ..................................................................... 7
Performance Reports ................................................................. 8
What is USSD Gateway?

Introduction

The USSD GW provides the following functions:

- interaction using USSD messages between the subscriber's handset and the platform:
  - processing fast access, single string (typeahead) requests
  - presenting information to mobile users using USSD messages
  - complex interaction through navigation of menus based on user input (interactive USSD)
- IMSI Management:
  - different services can be configured for different IMSI prefixes
  - barring by IMSI or IMSI prefix
  - logging forbidden attempts to use the service, and
  - tracing for all calls from an IMSI or IMSI prefix
  - CDR Viewing screen provides full information about a call and provides EDR searching
- support for both USSD phase 1 / MAP1 and USSD phase 2 / MAP2, and
- roaming USSD Session Control:
  - separate control plans for charging and call monitoring, and
  - with Location Capabilities Pack, session can be initiated directly back to a roaming subscriber.

Control plans

Advanced Control Services (ACS) and the ACS Control Plan Editor (CPE) provide GUI tools to create control plans for USSD-based services. You can use a rich suite of feature nodes in USSD control plans, which enable decision making, interactive dialogue and more.

For more information on managing control plans, see CPE User's Guide. For more information about the USSD GW feature nodes, see NCC Feature Nodes Reference Guide.

UIS and UPC

USSD GW is provided in two main parts:

- UIS
- UPC

USSD Interactive Services Gateway

The USSD Interactive Services Gateway (UIS) enables operators to provide interactive menu-based portal services to end users.

UIS translates between the network USSD messages received from handsets to the INAP messages used to communicate with ACS. UIS also determines the service that should handle in the incoming service initiation request.

UIS enables operators to provide a range of services using USSD messages from (and to) a subscriber's handset. Interaction is configured using ACS control plans. UIS can also process fast access, single-string requests to trigger platform functionality, including:

- Subscriber account detail reports (with CCS)
- Voucher recharges (with CCS), and
- USSD Roaming call back.

Continued on next page
USSD Gateway Portal Service

USSD GW’s USSD Portal Service (UPC) is an optional part of USSD GW that provides extended interactivity through the UPC Portal Screens and USSD GW feature nodes.

The UPC Portal Screens (on page 83) are used to extend the interactive USSD menus created using the UIS screens (for example by providing menu branching).

Handset integration

USSD GW uses the USSD protocol as defined by GSM phase 1 & 2. This means the majority of subscribers can use the menus without needing to upgrade their handsets.

This approach is an alternative delivery mechanism to WAP, as WAP support is still limited to middle- and higher-tier handsets.

Triggering to different services

Using the USSD GW SMS screens, you can configure USSD GW to trigger USSD messages containing different trigger prefixes to different services. Each trigger corresponds to a different service in ACS.

This table shows an example of setting up calls from different prefixes to trigger different ACS services.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | In the USSD Gateway Base Configuration Screens, Trigger Prefix (on page 21) tab, configure two records:  
1. Trigger1 has a prefix of *123*.  
2. Trigger2 has a prefix of *124*. |
| 2    | In the USSD Gateway Service Configuration Screen (on page 39), configure two records:  
1. ServiceTrigger1 uses Trigger1 and has a Dest Service Key of 123.  
2. ServiceTrigger2 uses Trigger2 and has a Dest Service Key of 124. |
| 3    | In SLEE.cfg, ensure there are SERVICE and SERVICEKEY entries for both service keys.  
Example:  
SERVICEKEY=INTEGER 123 CallBack  
SERVICEKEY=INTEGER 124 CollectCall  
SERVICE=CallBack 1 slee_acs CallBack  
SERVICE=CollectCall 1 slee_acs CollectCall  
APPLICATION=slee_acs slee_acs /IN/service_packages/ACS/bin/  
1 1 |
| 4    | In acs.conf, ensure there are ServiceEntry lines for each service key.  
Example:  
acsChassis  
ServiceEntry (CallBack,ccsSvcLibrary.so)  
ServiceEntry (CollectCall,ccsSvcLibrary.so) |

Notes:  
- These ServiceEntry lines do not show the source selection configuration which would be expected for a CallBack or CollectCall service. For more information about source selection, see ACS Technical Guide.  
- For more information about how the service entries are processed by CCS, see CCS User’s Guide, Capabilities tab.
Callback

Introduction
USSD GW can be used to enable USSD message-initiated call back. There are a number of ways this can be configured, but the main elements are:

1. subscriber initiates the call back using a USSD message
2. the system initiates the A leg of the call, then
3. the system completes the call by initiating the B leg.

Callback initiation
The subscriber can initiate a callback using:

- a single string which is parsed by the ussdgw process, or
- an initial message followed by interaction defined in a control plan.

A leg
A-leg call initiation is done from a control plan using ACS's Call Initiation feature node. The Call Initiation node attempts to establish the A leg of the call by:

- arming the switch to inform the platform when the A party answers the call (by sending an RRBCSM (oAnswer)), and
- sending an Initiate Call Attempt (ICA) to the switch (the switch then sets up the call).

Note: The Call Initiation node can initiate a call with any destination number using any profile block or a hard coded value. The A leg is selected using the Call Initiation node's configuration.

Because the A leg setup is done in a control plan, any function which is available in the control plan can be used, including:

- checking subscriber's account state or balance, and
- normalising the calling party number.

After Call Initiation node is called, initiating control plan continues when the A leg has answered and the IDP been sent. Further processing should continue in the new call generated by the IDP.

For more information about the Call Initiation feature node, see NCC Feature Nodes Reference Guide.

B leg
When the A party answers, the switch returns an ERBCSM (oAnswer) to the control plan and a new forked control plan starts. The new call can use any control plan functionality, including:

- monitoring the new call, and
- using a retrieved details (including MSRN) for charging.

The new forked call is responsible for connecting to the B leg (for example, by using an AT or a UATB node).

Continued on next page
Control plan example

Here is an example of a control plan which provides a very simple call back based on a fast-access USSD string.

**Note:** This control plan only shows the call back functionality. To complete any validation or billing functions, additional configuration will be required.

The Call Initiation node will start a simple control plan which connects the A leg based on the CLI. A second control plan is started when the A leg answers and a new IDP arrives at slee_acs with the service key from the Call Initiation node. The second control plan connects the B leg normally (for example by using an Attempt Terminate node).

For information about the message flows produced by this control plan, see *USSD GW Technical Guide.*
Here is an example of a control plan which could be used to set up a collect call, including checking the B party balance before the A leg is established.

Collect call back example
### Handset Interaction

#### Introduction

Menus are created by presenting information to mobile users using USSD messages. The user navigates the menus by selecting options and sending back USSD messages (interactive USSD). Service can send specific messages for different services statuses.

Menus can be set up quickly using wizards. Menus can come from a number of sources, including ACS and CPE control plans. Advanced Control Services (ACS) and the ACS Control Plan Editor (CPE) provide GUI tools which enable the user to use a rich suite of Feature Nodes to define menus which enable decision making, interactive dialogue and more.

#### Language selection

Users can select the language they want to use for the call from a list of available languages which is defined by the operator.

#### Status messages

USSD GW can send status messages to a handset when:

- a subscriber's session is ended by the gateway (session cut off).
- a session is put in suspended mode (reconnect) (except when the handset is entering MAP 1 disconnect mode)

**Notes:**

- If there is no other status cause when the session ends, the display message will have a status cause that maps to “session ending”.
- When a session is suspended, the last display must be preserved otherwise it will always be overwritten with the status display.

#### UPS menus

In general, to use the concept of menu IDs within ACS, menu sets are provided which allow menus to be grouped together in a logical block that may represent a service or a type of service.

- USSD GW feature nodes control extended interaction (including menu branching) and other specific functions.
- Menu sets enable menus to be grouped in logical blocks.
Performance Reports

Description
Performance Reports are generated by the USSD GW application on the SCP. They are single line events that are only output as NOTICE-type Alarm messages. These reports are designed to have minimal impact on the performance of the SCP. This includes the ability for the output of these reports to be disabled or only activated for specific USSD Trigger Prefixes.

Report timing
The report must be consistently aligned with the system clock on the SLC. To achieve this, only an integer value that can be computed to be a factor of 60 or 3600, must be used.

Example: 30 or 300

See Example values (on page 8) for a list of allowed values that can be specified to accurately align reports generation to the SLC system clock.

Warning: A warning message will be displayed if a value NOT divisible by 60 or 3600 is entered. This means the report is not aligned to the system clock and hence reports cannot be generated at fixed intervals.

Example values
This table highlights a list of example values for the Performance Report Period field on the Trigger Prefix tab and the corresponding time interval they will produce.

<table>
<thead>
<tr>
<th>Value</th>
<th>Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>30 seconds</td>
</tr>
<tr>
<td>60</td>
<td>1 minute</td>
</tr>
<tr>
<td>300</td>
<td>5 minutes</td>
</tr>
<tr>
<td>900</td>
<td>15 minutes</td>
</tr>
<tr>
<td>1800</td>
<td>30 minutes</td>
</tr>
<tr>
<td>3600</td>
<td>1 hour (use for hourly reports)</td>
</tr>
</tbody>
</table>

Accessing performance reports
Performance reports are generated as single-line alarm messages that can be viewed on one of the following:

- SMS in Operator Functions -> Alarm Management Panel
- SLC in the ussdgw log file

Example
Here are a few examples of Performance Report.

Example 1:
Feb 23 22:23:30.007958 cmnError(24758) NOTICE: USSD Performance: Trigger Prefix '*999#' Period=11; Requests=5; Responses=5; Timeouts=0; Others=0; Latency: Min=0.158024, Mean=0.165843, Max=0.177295

Example 2:
Feb 23 22:24:00.033720 cmnError(24758) NOTICE: USSD Performance: Trigger Prefix '*999#' Period=30; Requests=23; Responses=22; Timeouts=0; Others=0; Latency: Min=0.137390, Mean=0.161867, Max=0.219761

Example 3:
Feb 23 22:24:30.002919 cmnError(24758) NOTICE: USSD Performance:
Example (continued)

Trigger Prefix '999#' Period=30; Requests=2; Responses=3;
Timeouts=0; Others=0;
Latency: Min=0.137340, Mean=0.152989, Max=0.174586

Example 4:
Feb 23 22:25:00.001234 cmnError(24758) NOTICE: USSD Performance:
Trigger Prefix '999#' Period=30; Requests=12; Responses=12;
Timeouts=1; Others=0;
Latency: Min=0.122345, Mean=0.154529, Max=0.174236

Result:
On the Trigger Prefix tab screen, the Performance Report Period is set to 30
seconds for each of the above examples. Therefore, the following timestamps are
generated by the respective alarm message:

- Example 1: 22:23:30.007958
- Example 2: 22:24:00.033720
- Example 3: 22:24:30.002919
- Example 4: 22:25:00.001234
Overview

Purpose

This chapter explains how to access the USSD Gateway and describes the contents of the main screens.

In this chapter

This chapter contains the following topics.

- Accessing USSD Gateway ................................................................. 12
- Accessing UPC Portal ........................................................................ 14
- Common Buttons and Fields ............................................................... 15
- Using the Find Screens ...................................................................... 16
Accessing USSD Gateway

Follow these steps to access the USSD Gateway screens.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From the Service Management System screen, select the Services menu.</td>
</tr>
<tr>
<td>2</td>
<td>Select <strong>USSD Gateway</strong>.</td>
</tr>
<tr>
<td>3</td>
<td>Select the screen you want to use.</td>
</tr>
</tbody>
</table>

This table describes the menu options accessible from the USSD Gateway menu option.

<table>
<thead>
<tr>
<th>Menu</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Config</td>
<td>Provides access to the creation and maintenance screens for base USSD Gateway configuration.</td>
</tr>
<tr>
<td>Gateway Config</td>
<td>Provides access to the creation and maintenance screens for global USSD Gateway configuration.</td>
</tr>
<tr>
<td>Service Config</td>
<td>Provides access to the creation and maintenance screens for USSD Gateway services.</td>
</tr>
<tr>
<td>Menu and Status</td>
<td>Provides access to the creation and maintenance screens for menus and statuses of USSD Gateway.</td>
</tr>
<tr>
<td>Subscribers</td>
<td>Provides access to the creation and maintenance screens for subscribers.</td>
</tr>
</tbody>
</table>

The USSD Gateway Base Configuration Screen contains four tabs:

- **Trigger Prefix** (on page 21)
- **Language** (on page 24)
- **Service IF** (see "Service Interface" on page 26)
- **Operator** (on page 28)

*Continued on next page*
| **Gateway Config screen** | The USSD Gateway Configuration screen contains one tab:  
  - *Gateway Configuration* (on page 33) |
|--------------------------|--------------------------------------------------------------------------------------------------|
| **Service Config screen** | The USSD Gateway Service Configuration screen contains one tab:  
  - *Service Trigger* (on page 41) |
| **Menu and Status screens** | The Menu and Status option contains three sub menus:  
  - Wizard - This option contains two screens:  
    - *Menu Wizard* (on page 49)  
    - *Status Wizard* (on page 54)  
  - Config - The USSD Gateway Menu Configuration Screens contains two tabs:  
    - *Menu Info* (on page 57)  
    - *Status Info* (see "Status Info Configuration" on page 59)  
  - Display - The USSD Gateway Menu Display Screens contains two tabs:  
    - *Menu Language* (on page 61)  
    - *Status Language* (on page 66) |
| **Subscribers screens** | The Subscribers menu option contains the screens:  
  - *Access Control* (see "Access Control Screen" on page 73)  
  - *IMSI Tracing* (on page 76)  
  - *CDR Viewer* (on page 78)  
  - *UPC CDR Viewer* (see "UPC CDR Viewer Screen" on page 81) |
Accessing UPC Portal

Follow these steps to open the UPC Portal screens.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From the Service Management System screen, select Services.</td>
</tr>
<tr>
<td>2</td>
<td>Select UPC Portal.</td>
</tr>
<tr>
<td>3</td>
<td>Select the entry for the screen you want to use.</td>
</tr>
</tbody>
</table>

This table describes the menu options accessible from the UPC Portal menu option.

<table>
<thead>
<tr>
<th>Menu</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Selection</td>
<td>Provides access to the creation and maintenance screens for User Selection.</td>
</tr>
<tr>
<td>Message Class</td>
<td>Provides access to the creation and maintenance screens for Message Classes.</td>
</tr>
</tbody>
</table>

Refer to the chapter, *UPC Portal Screens* (on page 83), for details about using these screens.
Common Buttons and Fields

This application uses a set of buttons to start specific actions within each screen. The table below describes the function of each button.

<table>
<thead>
<tr>
<th>Button</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find</td>
<td>Opens the Find window, enabling you to find records that match the search criteria.</td>
</tr>
<tr>
<td>Save</td>
<td>Saves any changes to the record on the current screen to the database.</td>
</tr>
<tr>
<td>Clear</td>
<td>Clears all entries from the screen, enabling you to clear the screen before adding a new record.</td>
</tr>
<tr>
<td>Close</td>
<td>Closes the current screen and returns you to the previous screen in the screen hierarchy. <strong>Note:</strong> Any changes that have been made on-screen will not be saved (unless Save has been clicked previously).</td>
</tr>
<tr>
<td>Search</td>
<td>Appears on Find screens and allows you to search the database. This will trigger an Oracle Like% query that returns the first 100 records that begin with the selection criteria. For example, if you enter 123 in the Query field, the system will return records such as 123, 1234, 12345, etc.</td>
</tr>
<tr>
<td>Delete</td>
<td>Removes the selected record from the database.</td>
</tr>
<tr>
<td>Help</td>
<td>Opens context-sensitive Help containing information about the functionality available in the current screen.</td>
</tr>
</tbody>
</table>

Common fields

The following fields are displayed at the bottom of each screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comment</td>
<td>For adding a comment for the record.</td>
</tr>
<tr>
<td>Term</td>
<td>The terminal that the session is using to log on.</td>
</tr>
<tr>
<td>Date</td>
<td>Date of last change to record.</td>
</tr>
<tr>
<td>User</td>
<td>User who last changed the record.</td>
</tr>
</tbody>
</table>

Data entry

Follow the steps below to enter a new Gateway configuration.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Click <strong>Clear</strong> to clear the screen of previous data.</td>
</tr>
<tr>
<td>2</td>
<td>Enter new data and click <strong>Save</strong>.</td>
</tr>
<tr>
<td></td>
<td><strong>Result:</strong> The new Gateway configuration is saved.</td>
</tr>
</tbody>
</table>
Using the Find Screens

The find screen enables you to find records that match the selection criteria. All find screens in the system contain the following areas:

- Buttons
- Query fields
- Display grid

To access the context sensitive find screen for a screen or tab, click Find.

Here is an example Find Screen.

**Note:** Each Find Screen has entry boxes for that particular find, with differing grid column headings.

## Follow the steps below to edit a record.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | In the Find screen, select the row you want to edit.  
**Result:** The associated screen is populated with this data, which you can edit. |
| 2    | On the editing screen, make the changes to the data. |
| 3    | Click **Save**.  
**Result:** The edited screen is saved. |
Follow these steps to search the database.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Enter selection criteria in one or more query fields at the top of the screen and click **Search**.  
If a field is left empty, then the search will retrieve all instances of that field.  
**Result:** This triggers an Oracle Like% query that returns the first 100 records that begin with the selection criteria. These are displayed in the display grid at the bottom of the screen.  
**Example:** If you enter 123 in a query field, the system will return records such as 123, 1234, 12345.  
**Note:** These are the first 100 records entered in the database, and they display in no particular order. If you do not find the record you are searching for, you need to conduct a more specific search. |
| 2    | To display the record in the main screen, select the record line and click **Close**. |
Chapter 3

USSD Gateway Base Configuration Screens

Overview

This chapter explains the contents of the Gateway Base Configuration Screens.

This chapter contains the following topics.

- USSD Gateway Base Configuration Screen .................................. 20
- Trigger Prefix .............................................................................. 21
- Language .................................................................................. 24
- Service Interface ........................................................................ 26
- Operator .................................................................................... 28

Introduction
Follow these steps to access the USSD Gateway Base Configuration Screens.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From the Service Management System screen, select the <strong>Services</strong> menu.</td>
</tr>
<tr>
<td>2</td>
<td>Select <strong>USSD Gateway &gt; Base Config</strong>, or use the <strong>Ctrl+P</strong> shortcut keys.</td>
</tr>
</tbody>
</table>
**Trigger Prefix**

**Introduction**

The **Trigger Prefix** configuration tab allows you to name Trigger Prefixes and setup the length of the SAN digit.

As part of the installation of USSD GW, a Trigger Prefix is created that represents “all triggers”. It is used for the barring function. This entry has a trigger prefix of “#.#.#.#.#.#.#.

**Trigger Prefix tab**

Here is an example of the **Trigger Prefix** tab.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Unique name of this Trigger Prefix. Required.</td>
</tr>
<tr>
<td></td>
<td><strong>Allowed values:</strong></td>
</tr>
<tr>
<td></td>
<td>• Alphanumeric string up to 30 characters in length.</td>
</tr>
<tr>
<td>Prefix</td>
<td>The Prefix that prefixes the IMSI that can trigger a particular service interface. This prefix is used in the Service Configuration screen. Required.</td>
</tr>
<tr>
<td></td>
<td><strong>Allowed values:</strong></td>
</tr>
<tr>
<td></td>
<td>• Alphanumeric string up to 10 characters in length.</td>
</tr>
<tr>
<td>SAN Digits</td>
<td>The number of digits that should be sent to the Service Interface as the Service Access Number for this session. Optional.</td>
</tr>
<tr>
<td></td>
<td><strong>Allowed values:</strong></td>
</tr>
<tr>
<td></td>
<td>• 0 to 99.</td>
</tr>
</tbody>
</table>

Continued on next page
### Fields (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cdr Flag</td>
<td>Selecting this check box will enable EDR generation for this Trigger Prefix.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> The global CDR Flag on the Gateway Configuration tab (on page 34) must also be checked before the USSD GW application on the SLC can begin to generate EDRs.</td>
</tr>
<tr>
<td>Performance Report</td>
<td>The interval (in seconds) after which the USSD GW application on the SLC will generate performance reports.</td>
</tr>
</tbody>
</table>
| Period                 | **Allowed values:**  
|                        | - An integer value that is a factor of 60 or 3600.                                                                                                                                                       |
|                        | **Note:** A value of zero means that no performance reports will be generated.                                                                                                                               |
| Comment                | This field is used to add any comments required for this Trigger Prefix.                                                                                                                                     |
| Last Change Data       | Shows the following details of when this record was last modified:  
|                        | - Term: For how long was the last change active.                                                                                                                                                     |
|                        | - Date: Last modified/created date.                                                                                                                                                                       |
|                        | - User: Login ID of the user.                                                                                                                                                                             |

**Note:** For example text for each field, refer to the Find screen in this topic.

Follow the steps below to enter a new Trigger Prefix configuration.

**Step** | **Action**
--- | ---
1 | Click **Clear** to clear the screen of previous data.
2 | Enter new data and click **Save**.

For information about the buttons and fields at the bottom of the screen, see **Common Buttons and Fields** (on page 15).

Clicking **Find** displays the Find screen.

*Continued on next page*
Find Screen

Here is an example Find Screen for the Trigger Prefix tab.

<table>
<thead>
<tr>
<th>Name</th>
<th>Prefix</th>
<th>SIDN Digits</th>
<th>Retrieval SIDN</th>
<th>Comment</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;12&quot;</td>
<td>&quot;12&quot;</td>
<td>4</td>
<td>No</td>
<td></td>
<td>24/05</td>
</tr>
<tr>
<td>&quot;123&quot;</td>
<td>&quot;123&quot;</td>
<td>4</td>
<td>No</td>
<td></td>
<td>19/05</td>
</tr>
<tr>
<td>&quot;14&quot;</td>
<td>&quot;14&quot;</td>
<td>2</td>
<td>No</td>
<td></td>
<td>23/02</td>
</tr>
<tr>
<td>T-S</td>
<td>T-S</td>
<td>4</td>
<td>No</td>
<td></td>
<td>10/11</td>
</tr>
<tr>
<td>T-1C</td>
<td>&quot;123&quot;</td>
<td>4</td>
<td>No</td>
<td></td>
<td>10/11</td>
</tr>
<tr>
<td>&quot;124&quot;</td>
<td>&quot;124&quot;</td>
<td>5</td>
<td>No</td>
<td></td>
<td>10/07</td>
</tr>
<tr>
<td>T-5</td>
<td>125</td>
<td>23</td>
<td>No</td>
<td></td>
<td>20/05</td>
</tr>
<tr>
<td>T-5C</td>
<td>&quot;125&quot;</td>
<td>55</td>
<td>No</td>
<td></td>
<td>10/11</td>
</tr>
<tr>
<td>T-171</td>
<td>T-171</td>
<td>No</td>
<td>19201002121</td>
<td>11/12</td>
<td></td>
</tr>
<tr>
<td>333</td>
<td>333</td>
<td>5</td>
<td>No</td>
<td></td>
<td>27/07</td>
</tr>
<tr>
<td>T-6</td>
<td>T-6</td>
<td>4</td>
<td>No</td>
<td></td>
<td>10/11</td>
</tr>
<tr>
<td>T-M1Q</td>
<td>&quot;224&quot;</td>
<td>4</td>
<td>No</td>
<td>MDH 500</td>
<td>19201032058</td>
</tr>
</tbody>
</table>

Using the Find Screen

You can search on:

- Name
- Prefix

For more information about searching and editing records, see Using the Find Screens (on page 16).
Language

Introduction

The Language configuration tab allows you to set up languages and give them specific values. The language value needs to correspond to the language values in the portal.

Language tab

Here is an example Language tab.

![Language Tab Example](image)

Here is a description of the fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The name of the language. Alphanumeric field up to 20 characters in length, mandatory field.</td>
</tr>
<tr>
<td>Value</td>
<td>A unique value that is viewed externally and sent to the gateway interface. Numeric field, valid values 0 – 19, mandatory field</td>
</tr>
</tbody>
</table>

Notes:
- For example text for each field, refer to the Find screen in this topic.
- If ACS is being used as a service interface, the language id/value fields match the language ids ACS is using. This means that if the language id of 1 corresponds to French in the ACS language tab then this should also be the case for the language entry on this tab.

Data entry

Follow these steps to enter a new Language configuration.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Click <strong>Clear</strong> to clear the screen of previous data.</td>
</tr>
</tbody>
</table>
**Data entry** (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Enter new data and click <strong>Save</strong>.</td>
</tr>
</tbody>
</table>

**Buttons and other fields**

For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 15).

Clicking **Find** displays the Find screen.

**Find Screen**

Here is an example Find Screen for the **Language** tab.

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Comment</th>
<th>Term</th>
<th>Date</th>
<th>User</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welsh</td>
<td>5</td>
<td>USA</td>
<td>10/11/2004 22:11:11</td>
<td>SMP</td>
<td></td>
</tr>
<tr>
<td>Suffolk</td>
<td>8</td>
<td>English</td>
<td>10/12/2004 00:31:43</td>
<td>SU</td>
<td></td>
</tr>
<tr>
<td>Russian</td>
<td>9</td>
<td>English</td>
<td>10/12/2004 00:31:43</td>
<td>SU</td>
<td></td>
</tr>
<tr>
<td>Breton</td>
<td>16</td>
<td>Breton</td>
<td>11/02/2005 22:30:17</td>
<td>SU</td>
<td></td>
</tr>
<tr>
<td>Flemish</td>
<td>1</td>
<td>Flemish</td>
<td>30/03/2005 22:00:13</td>
<td>SU</td>
<td></td>
</tr>
<tr>
<td>French</td>
<td>2</td>
<td>French</td>
<td>30/03/2005 22:00:13</td>
<td>SU</td>
<td></td>
</tr>
<tr>
<td>German</td>
<td>3</td>
<td>German</td>
<td>30/03/2005 22:00:13</td>
<td>SU</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>4</td>
<td>Created at install time</td>
<td>21/10/2005 01:04:25</td>
<td>SU</td>
<td></td>
</tr>
</tbody>
</table>

**Using the find screen**

You can search on:

- Name

For more information about searching and editing records, see *Using the Find Screens* (on page 16).
Service Interface

The Service IF tab allows you to name the different service interfaces.

Service interfaces can define their own set of menus and status displays using the same menu ids or status cause values as other service interfaces. For example: menu id 1 could result in the display “enter birthday” when sent by service interface 1 and could result in the display “password?” when sent by service interface 2.

You can partition your menus to a finer resolution (for example: “ACS-mini-News”, “ACS-Weather” and so on). These are entered in the Service Interface tab. You must also configure an associated trigger prefix to uniquely identify the service (not just a service group) and both these entries must be referenced in the Service Triggers.

Two Service Interfaces are configured when USSD GW is installed:

- Gateway - used by the gateway to retrieve displays for error or/and service ending conditions that are generated within the gateway itself and not a service interface
- All interfaces - enables service interfaces to share their menus

Here is an example Service IF tab.

Continued on next page
Here is a description of the fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Unique name for this Service Interface. Required.</td>
</tr>
<tr>
<td></td>
<td><strong>Allowed values:</strong></td>
</tr>
<tr>
<td></td>
<td>• Alphanumeric field up to 20 characters in length.</td>
</tr>
</tbody>
</table>

**Note:** For example text for each field, refer to the Find screen in this topic.

Follow these steps to enter a new Service Interface configuration.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Click <strong>Clear</strong> to clear the screen of previous data.</td>
</tr>
<tr>
<td>2</td>
<td>Enter new data and click <strong>Save</strong>.</td>
</tr>
</tbody>
</table>

For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 15). Clicking **Find** displays the Find screen.

Here is an example Find Screen for the **Service IF** tab.

You can search on:

- Name

For more information about searching and editing records, see *Using the Find Screens* (on page 16).
The Operator tab allows you to set up different operators against different IMSI prefixes and using different IMSI to MSISDN mapping interfaces.

Here is an example Operator tab.

Here is a description of the fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Unique name of the operator. Required. Allowed values:</td>
</tr>
<tr>
<td></td>
<td>• Alphanumeric string, up to 20 characters in length.</td>
</tr>
<tr>
<td>IMSI Prefix</td>
<td>Unique IMSI Prefix. Must be 5 digits. 3 digits for MCC - Mobile Country Code</td>
</tr>
<tr>
<td></td>
<td>• 2 digits for the MNC - Mobile Network Code</td>
</tr>
<tr>
<td>External ID</td>
<td>Unique External ID. Required. If a service is located on an external system</td>
</tr>
<tr>
<td></td>
<td>this ID is used when internal TCAP messages are sent to the external system</td>
</tr>
<tr>
<td>Trans IF</td>
<td>The SLEE ID of the interface which does the IMSI-MSISDN translation. Optional.</td>
</tr>
<tr>
<td></td>
<td>For information about SLEE IDs, see SLEE Technical Guide.</td>
</tr>
</tbody>
</table>
Fields (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trans Timeout</td>
<td>Milliseconds ussdgw process will wait for a response to the IMSI to MSISDN translation request. Required if a Trans IF value is provided. Allowed values: 0 – 99</td>
</tr>
<tr>
<td>Home Op</td>
<td>If ticked, this operator is the home operator.</td>
</tr>
</tbody>
</table>

Note: For example text for each field, refer to the Find screen in this topic.

Data entry

Follow these steps to enter a new Operator configuration.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Click <strong>Clear</strong> to clear the screen of previous data.</td>
</tr>
<tr>
<td>2</td>
<td>Enter new data and click <strong>Save</strong>.</td>
</tr>
</tbody>
</table>

Buttons and other fields

For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 15).

Clicking **Find** displays the Find screen.

Find Screen

Here is an example Find Screen for the **Operator** tab.

Using the find screen

You can search on:

- Name
- IMSI Prefix

For more information about searching and editing records, see *Using the Find Screens* (on page 16).
## Overview

<table>
<thead>
<tr>
<th>Introduction</th>
<th>This chapter explains the contents of the USSD Gateway Configuration screen.</th>
</tr>
</thead>
<tbody>
<tr>
<td>In this chapter</td>
<td>This chapter contains the following topics.</td>
</tr>
<tr>
<td></td>
<td>USSD Gateway Menu Configuration Screen .............................................32</td>
</tr>
<tr>
<td></td>
<td>Gateway Configuration Screen ....................................................................33</td>
</tr>
</tbody>
</table>
## USSD Gateway Menu Configuration Screen

Follow these steps to access the USSD Gateway Configuration Screen.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From the Service Management System screen, select the <strong>Services</strong> menu.</td>
</tr>
<tr>
<td>2</td>
<td>Select <strong>USSD Gateway &gt; Gateway Config</strong>, or use the <strong>Ctrl+Q</strong> shortcut keys.</td>
</tr>
</tbody>
</table>
Gateway Configuration Screen

This screen allows you to:

- Change the default Gateway Interface Configuration (Global GW config)
- Add new Gateway interfaces

Setting up different Gateway configurations enables you to configure different gateways to have different service triggers defined. This enables the treatment of service triggers to be handled differently by different gateways.

You do not have to set up different Gateway configuration for each gateway.

If the Gateway Configuration Screen is updated, the SLEE must to be restarted for these changes to take effect.

For instructions about how to restart the SLEE, see SLEE Technical Guide.

Continued on next page
Here is an example Gateway Configuration tab.

[Image of Gateway Configuration tab]

Here is a description of the fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Unique name of this Gateway Interface.</td>
</tr>
<tr>
<td>Language</td>
<td>Default language of the Gateway Interface when no usable user preference is available. This list is populated by the entries in the <strong>Language</strong> (on page 24) tab in the USSD Gateway Base Configuration Screen.</td>
</tr>
</tbody>
</table>

*Continued on next page*
### Fields (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Characters** | Maximum number of characters to send to handset. Required. This is used to truncate the number of characters in the display sent to the end user to a particular number of digits.  
**Allowed values:**  
- 90 to 185 |
| **Trans Opt** | How the IMSI to MSISDN mapping should be performed.  
**Allowed values:**  
- Gateway default. Use the routine specified in the Trans IF field on this screen.  
- Operator specific. The translation interface specified in the Trans IF field of the operator's Operator record will be used to perform the translation. |
| **Trans IF** | SLEE id of interface that translates the IMSI to MSISDN.  
If an id is not specified this functionality will not be performed by the gateway.  
To allow the default mapping functionality to be performed, the SLEE id of the default interface must be specified.  
Only available if Trans Opt is set to Gateway default. |
| **Trans Timeout** | Milliseconds gateway will wait for a response to the IMSI to MSISDN translation request. Required when Trans IF is set. |
| **Inactivity Restart** | If set to:  
- OFF, the Inactive Timer is disabled.  
- Each User Activity, the Inactive Timer is reset whenever a message is received from the handset.  
- TC-BEGIN Rec'd, the Inactive Timer is reset whenever a TC-BEGIN is received from a handset. |
| **Inactive Timer** | Maximum seconds to wait between messages from the mobile network before:  
- Returning a TC-END  
- Setting the session to RECONNECT state  
Optional.  
**Allowed values:**  
- 1 to 9999  
- 0 = disabled. |

*Continued on next page*
Fields (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| Reconnect Timer  | Maximum seconds gateway will wait for the handset to send a message after the session has entered RECONNECT state.  
This timer is stopped if the user reconnects to the service before it expires.  
The gateway interface can determine if the user is reconnecting to the service if the handset returns the SAN of the currently active service.  
If the user reconnects, the Reconnect timer will be stopped and the service session can return to its normal mode of operation.  
The Inactive Timer will be restarted.  
Required (must be 1 or above if Inactive Timer is not equal to 0.  
**Allowed values:**  
- 1 to 9999  
- 0 = disabled. |
| MAP1 Timer       | Seconds gateway will wait when a MAP 1 user enters the RECONNECT state.  
This timer is stopped if the user reconnects to the service before it expires.  
A numeric field, valid values 0 to 9999 which represent time in seconds, optional field. |
| CDR Flag         | If this check box is ticked, CDRs will be generated.                                                                                       |
| Last Resort Text | This is the text the gateway will use if no other menus have been configured or defined.  
Alphanumeric field up to 185 characters in length. |

**Note:** For example text for each field, refer to the Find screen in this topic.

Data entry

Follow these steps to enter a new Gateway configuration.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Click Clear to clear the screen of previous data.</td>
</tr>
<tr>
<td>2</td>
<td>Enter new data and click Save.</td>
</tr>
</tbody>
</table>

Buttons and other fields

For information about the buttons and fields at the bottom of the screen, see Common Buttons and Fields (on page 15).

Clicking Find displays the Find screen.
Here is an example Find Screen for the **Gateway Configuration** tab.

<table>
<thead>
<tr>
<th>Name</th>
<th>Language</th>
<th>Characters</th>
<th>Trans Opt</th>
<th>Trans IF</th>
<th>Trans Timeout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Win32 GW</td>
<td>English</td>
<td>130</td>
<td>Gateway Default</td>
<td>nrb</td>
<td>30</td>
</tr>
<tr>
<td>USB-GW</td>
<td>English</td>
<td>135</td>
<td>Gateway Default</td>
<td>nrb</td>
<td>10</td>
</tr>
<tr>
<td>Global GW config</td>
<td>English</td>
<td>130</td>
<td>Gateway Default</td>
<td>nrb</td>
<td>10</td>
</tr>
</tbody>
</table>

You can search on:
- Name

For more information about searching and editing records, see *Using the Find Screens* (on page 16).
Overview

This chapter explains the contents of the USSD Gateway Service Configuration screen.

In this chapter

This chapter contains the following topics.

USSD Gateway Service Configuration Screen ........................................40
Service Trigger Screen.................................................................41
## USSD Gateway Service Configuration Screen

Follow these steps to access the USSD Gateway Service Configuration Screen.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From the Service Management System screen, select the Services menu.</td>
</tr>
<tr>
<td>2</td>
<td>Select <strong>USSD Gateway &gt; Service Config</strong>, or use the <strong>Ctrl+R</strong> shortcut keys.</td>
</tr>
</tbody>
</table>
Service Trigger Screen

This tab on this screen allows you to set up Service Triggers. A Service Trigger is a combination of Operator, Trigger and Gateway. The same Trigger can be set against different operators or different gateways giving a different service.

Introduction

Service Trigger tab

Here is an example Service Trigger tab.

![Service Trigger Configuration Screen](image-url)

Operator: 01394
Trigger: *766
Gateway: Globel GW config
Replacement SAPI: 0835
Proxy: 
Dest App ID: 
Dest Service Key: 101
Cutoff Timer: 5a
SF Timer: 86
Service ID: ACS-E-refill
Send Flag: Send * and #
Barring: Barring Disabled
First Access: With Separators
Forbid Alarm: Logged
Comment: 

Last Change Data
Term: 2012
Date: 2005-07-27 11:06:52
User: EMP

Continued on next page
Here is a description of the fields on the **Service Trigger** tab.

**Note:** The combination of Operator, Trigger Prefix and Gateway must form a unique entry.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Operator** | The operator this Service Trigger is set up for.  
This field is populated by the USSD Gateway Base Configuration Screen *Operator* (on page 28) tab. |
| **Trigger** | The Trigger Prefix  
This field is populated with the Names of all the Trigger Prefixes created by the USSD Gateway Base Configuration Screen *Trigger Prefix* (on page 21) tab. |
| **Gateway** | The gateway this record belongs to.  
This field enables multi-Gateway configurations to be deployed across various SLCs.  
This type of configuration may result in different triggers being configured for the different gateway.  
This field is populated by the USSD *Gateway Configuration* (on page 33) screen. |
| **Replacement SAN** | The code that will be sent in the called party number field of the InitialDP instead of the derived Service Access Number from the Trigger Prefix.  
Optional.  
If specified, between 1 to 20 hexadecimal digits.  
These digits will be BCD encoded. |
| **Proxy** | Proxy SLEE ID.  
Optional.  
This field should only be populated if the destination service could require a service handover (possibly resulting in a voice call initiation) as this would require the Proxy to perform the handover.  
**Allowed values:**  
- Alphanumeric field up to 20 characters in length. |
| **Dest App ID** | SLEE ID for the destination application.  
If the application is on a remote machine, this should contain the address of the local TCRelay application.  
**Allowed values:**  
- Numeric field up to 10 digits in length.  
For more information about SLEE IDs, see *SLEE Technical Guide*.  
**Note:** This field cannot be used with the Dest Service Key field. |
| **Dest Service Key** | Service key for the destination application.  
This service key is placed in the InitialDP used to trigger the application.  
Required if Dest Service Key is not set.  
**Allowed values:**  
- Alphanumeric field up to 20 characters in length. |

*Continued on next page*
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutoff Timer</td>
<td>The amount of time after a session is started before the USSD GW will end the session and send a message to the handset (corresponds to the status of &quot;Session cut off timer expiry&quot;). Required. This timer cannot be reset. Allowed values: • Numeric field up to 9 digits in length.</td>
</tr>
<tr>
<td>SSF Timer</td>
<td>Time to wait for a response from the service interface or Portal. Required. If no response is received within this period, the session is ended and USSD GW sends the handset a message (corresponds to the status of &quot;SSF timer expiry&quot;). If a response is received before the timer expires, the timer is stopped. Allowed values: • 1-999999999</td>
</tr>
<tr>
<td>Service IF</td>
<td>The Service Interface triggered by this Service Trigger. Dictates the menus that are required for the service. This field is populated by the Service IF (see &quot;Service Interface&quot; on page 26) tab on the USSD Gateway Base Configuration Screen. Example: For Triggers that initiate ACS-Weather control plans, this is must reference the entry in the Service IF tab that has the name of “ACS-Weather”.</td>
</tr>
<tr>
<td>Send Flag</td>
<td>Whether ‘<em>’ or '#' characters should be sent to the service interface for responses to PACUIs. If set to “Send ‘</em>’ and ‘#’”, the characters will be encoded as BCD ‘c’ and ‘d’ respectively. The terminating ‘#’ character will never be used as a selection character. This field is populated at startup.</td>
</tr>
<tr>
<td>Barring</td>
<td>Contains the following text and database values: • “Barring Disabled” – value of 0 • “Barring IMSI” – value of 1, and • “Barring MSISDN” – value of 2.</td>
</tr>
<tr>
<td>Fast Access</td>
<td>Indicates whether the “fast access” (also known as dial/type ahead) feature should be enabled for sessions which use this Service Trigger. Fast access causes excess characters to be stored in a buffer and be used as input to subsequent user input requests. This field is populated when USSD GW is installed. It contains the following options: • Fast Access Disabled • Always send max • With Separators • Always send max and current buffer • With Separators and current buffer</td>
</tr>
</tbody>
</table>

Continued on next page
Service Trigger fields (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deny Access</td>
<td>Ticking this check box unconditionally bars all users from the service that meet the trigger criteria.</td>
</tr>
</tbody>
</table>
| Prepaid      | Enables service interfaces to determine whether the service uses prepaid checking or not. Allowed values:  
|              | • ticked = prepaid checking is required.  
|              | • clear = prepaid checking is not required.  |
| Forbid Alarm | Specifies whether barred attempts should generate alarms. This box has two values:  
|              | • Logged  
|              | • Not Logged |

Note: For example text for each field, refer to the Find screen in this topic.

Data entry

Follow these steps to enter a new Service configuration.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Click <strong>Clear</strong> to clear the screen of previous data.</td>
</tr>
<tr>
<td>2</td>
<td>Enter new data and click <strong>Save</strong>.</td>
</tr>
</tbody>
</table>

Buttons and other fields

For information about the buttons and fields at the bottom of the screen, see Common Buttons and Fields (on page 15).

Clicking **Find** displays the Find screen.

Find Screen

Here is an example Find Screen for the Service Trigger tab.
You can search on:

- Operation
- Trigger
- Gateway
- Service IF

For more information about searching and editing records, see *Using the Find Screens* (on page 16).
# Menu and Status Screens

## Overview

**Introduction**

This chapter explains the contents of the USSD Gateway Menu and Status screens.

**In this chapter**

This chapter contains the following topics.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>USSD Gateway Menu Configuration Screen</td>
<td>48</td>
</tr>
<tr>
<td>Menu Wizard</td>
<td>49</td>
</tr>
<tr>
<td>Status Wizard</td>
<td>54</td>
</tr>
<tr>
<td>Menu Info Configuration</td>
<td>57</td>
</tr>
<tr>
<td>Status Info Configuration</td>
<td>59</td>
</tr>
<tr>
<td>Menu Language Display</td>
<td>61</td>
</tr>
<tr>
<td>Status Language Display</td>
<td>66</td>
</tr>
</tbody>
</table>
### USSD Gateway Menu Configuration Screen

Follow these steps to access the USSD Gateway Menu configuration screens.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From the Service Management System screen, select the <strong>Services</strong> menu.</td>
</tr>
<tr>
<td>2</td>
<td>Select <strong>USSD Gateway</strong>, then <strong>Menu and Status</strong>.</td>
</tr>
<tr>
<td>3</td>
<td>Select the screen you want to use.</td>
</tr>
</tbody>
</table>
Menu Wizard

Introduction

The Menu Wizard allows you to set up menus easily, by allowing you to select and update the Service Interface and Menu Info Entry data, then enter the menu text for MAP 1 and MAP 2. If configuring menus for the User Selection (on page 105) node, you will also define a keyword for each branch.

Setting up menus

Follow these steps to set up a menu.

Note: You can select Previous to go back through the screens and change any values before saving.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Select Menu Wizard from the Menu and Status option.  
     | Result: You see Step 1 of the Creating New Menu screens. |
|      | ![Creating New Menu - step 1 of 6](image) |
|      | Please select a language, service and menu.  
     | Use the New Buttons to create a new Service or menu. |
|      | Language: English  
     | Service: Account Management  
     | Menu: Accounts and Balances  
     | ![Next]  
     | ![Cancel]  
     | ![Save]  
| 2    | Select the Language from the drop down list.  
| 3    | Select an existing Service Interface from the drop down list. You can click Edit if you need to change the details.  
     | If you require a new Service interface, create a new one by clicking New to the right of the Service field.  
     | Result: You see the Creating new Service Interface screen. |
|      | ![Creating new Service Interface](image) |
|      | Name  
     | Comment  
     | ![OK]  
     | ![Cancel]  
|      | Fill in the fields, as described in Service Interface (on page 26) and click OK.  
     | Result: The database is updated. |

Continued on next page
Setting up menus (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Select an existing Menu information entry from the drop down list. You can click Edit if you need to change the details. If you require a new Menu information entry, create a new one by clicking New to the right of the Menu field. <strong>Result:</strong> You see the Creating new Menu Info Entry screen.</td>
</tr>
</tbody>
</table>

![Creating new Menu Info Entry](image)

Fill in the fields, as described in Menu Info Configuration (on page 57) and click OK. **Result:** The database is updated, and the step 1 of 6 screen redisplays.

5  
Click Next. **Result:** You see the Step 2 screen. If this is for a new menu info entry, the screen is blank. Otherwise it will contain the existing menu text.

![Creating New Menu - step 2 of 6](image)

**Note:** In this example, the text contains variables (%%). Refer to the description of the MAP 1 and MAP 2 fields for the Menu Language (on page 61) tab. The menu text can also be edited using this tab.

Continued on next page
### Setting up menus (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 6    | Type in the menu display text for MAP 1.  
**Tip:** The percent symbol (%) is not valid. To include a % type \% where the % is required.  
For example, if the text was defined as "Your usage is %%.%%\%", the result on the mobile would appear as "Your usage is 23.23%" |
| 7    | Click **Next**.  
**Result:** You see the Step 3 screen.  
![Creating New Menu - step 3 of 6](exampleimage) |
| 8    | Type in the menu display text for MAP 2.  
**Tip:** The percent symbol (%) is not valid. To include a % type \% where the % is required.  
For example, if the text was defined as "Your usage is %%.%%\%", the result on the mobile would appear as "Your usage is 23.23%" |
| 9    | Click **Next**.  
**Result:** You see the following dialog box.  
![Portal User Selection](exampleimage) |

*Continued on next page*
Setting up menus (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>The UPC package must be loaded to create menus for the User Selection nodes. If the UPC package is loaded, you can enter Portal Selection data. To continue, click Yes. <strong>Result:</strong> You see the Step 4 screen.</td>
</tr>
</tbody>
</table>

![Creating New Menu - step 4 of 6](image)

**Note:** This branch-keyword mapping table is the same as the one accessed on the User Selection screen (on page 84). Otherwise, click No to go to the Final Step screen.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Select each Keyword cell and type in the selection data for MAP 1.</td>
</tr>
<tr>
<td>12</td>
<td>Click Next. <strong>Result:</strong> You see the Step 5 screen.</td>
</tr>
</tbody>
</table>

![Creating New Menu - step 5 of 6](image)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Select each Keyword cell and type in the selection data for MAP 2. <strong>Continued on next page</strong></td>
</tr>
</tbody>
</table>
Setting up menus (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 14   | Click **Next**.  

**Result:** You see the Final Step screen.

![Creating New Menu - Final step](image)

Press the 'Save' button to complete.
The 'Previous' button can be used to go back and change values.

15  
To complete the menu creation, click **Save**.
**Status Wizard**

**Introduction**

The Status Wizard allows you to set up status menus easily, by allowing you to select and update the Service Interface and Status Info Entry data, then enter the status text for a specific language.

**Setting up status menus**

Follow these steps to set up a status menu.

*Note: You can click Previous to go back through the screens and change any values before saving.*

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Select Status Wizard from the Menu and Status option.  
Result: You see the Creating New Status Menu - step 1 of 3 screen. |
| 2    | Select the Language from the drop down list. |
| 3    | Select an existing Service Interface from the drop down list. You can click Edit if you need to change the details.  
If you require a new Service interface, create a new one by clicking New to the right of the Service field.  
Result: You see the Creating new Service Interface screen. |

Fill in the fields, as described in Service Interface (on page 26) and click OK.  
Result: The database is updated.
Setting up status menus (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Select an existing Status information entry from the drop down list. You can click <strong>Edit</strong> if you need to change the details. If you require a new Status information entry, create a new one by clicking <strong>New</strong> to the right of the <strong>Menu</strong> field. <strong>Result:</strong> You see the Creating new Status Info Entry screen. Fill in the fields, as described in <em>Status Info Configuration</em> (on page 59) and click <strong>OK</strong>. <strong>Result:</strong> The database is updated.</td>
</tr>
</tbody>
</table>

| 5    | Fill in the fields with the required options from the drop-down boxes and click **Next**. **Result:** You see the Step 2 of 3 screen. If this is for a new status, the screen is blank. Otherwise it will contain the existing status text. Note: The status text can also be edited using the *Status Language* (on page 66) tab. |

*Continued on next page*
### Setting up status menus (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 6    | Type in the status text and click **Next**.  
     | **Result:** You see the Step 3 of 3 screen. |

![Creating New Status Menu - step 3 of 3](image)

### 7
To complete the status text creation, click **Save**.
Menu Info Configuration

Introduction
The Menu Info tab allows you to set up menus with names and values against service interfaces. The menu information is language independent. See menu language (on page 61).

Menu Info tab
Here is an example Menu Info tab.

Fields
Here is a description of the fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| Service IF | The list of service interfaces.  
  Note: These are set up on the USSD Gateway Base Configuration Screen Service IF (see "Service Interface" on page 26) tab. |
| Name      | Name of the menu for that service interface. Alphanumeric field up to 40 characters in length, mandatory field. |
| Value     | The announcement id in the PA or PACUI received from slee_acs which will be translated into this message. This record must have an announcement with this id specified in an interaction node used in a control plan or it will not ever be used. For more information about how PAs and PACUIs are used in generating menus, see USSD GW Technical Guide.  
  Numeric field up to 7 digits in length, mandatory value. |
| Selections| The number of selections that the menu will have. Numeric field, valid values are 0 to 20, mandatory field. |

Continued on next page
Fields (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration</td>
<td>Specifies the length of time the display will be present to the user. Numeric field, valid values 1 to 99. Optional.</td>
</tr>
</tbody>
</table>

Note: For example text for each field, refer to the Find screen in this topic.

Buttons and other fields

For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 15).

Clicking Find displays the Find screen.

Data entry

Follow these steps to enter a new Menu Info.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Click Clear to clear the screen of previous data.</td>
</tr>
<tr>
<td>2</td>
<td>Enter new data and click Save.</td>
</tr>
</tbody>
</table>

Find Screen

Here is an example Find Screen for the Menu Info tab.

You can search on:

- Service IF
- Name
- Value

For more information about searching and editing records, see *Using the Find Screens* (on page 16).
Status Info Configuration

Introduction
The Status Info tab allows you to map status values to more meaningful status messages. The majority of them are created at install time.

Status Info tab
Here is an example Status Info tab.

Fields
Here is a description of the fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service IF</td>
<td>The service interface this status info entry will be used for. Note: These are set up on the USSD Base Configuration Screen Service IF (see &quot;Service Interface&quot; on page 26) tab.</td>
</tr>
<tr>
<td>Name</td>
<td>Name of this status cause for the selected service interface. Required. Allowed values:  • Alphanumeric field up to 50 characters in length.</td>
</tr>
<tr>
<td>Value</td>
<td>The value that placed in the release cause field of the RELEASE INAP operation sent to the gateway. Required. Allowed values:  • Numeric field up to 7 digits in length. Note: If a status entry is for a service interface other than “Gateway”, you can only enter values between 0 and 127 for this field. This is the range of value allowed for the release cause within an INAP RELEASE operation.</td>
</tr>
</tbody>
</table>

Note: For example text for each field, refer to the Find screen in this topic.

Continued on next page
Data entry

Follow these steps to enter a new Status Info.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Click <strong>Clear</strong> to clear the screen of previous data.</td>
</tr>
<tr>
<td>2</td>
<td>Enter new data and click <strong>Save</strong>.</td>
</tr>
</tbody>
</table>

Buttons and other fields

For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 15).

Clicking **Find** displays the Find screen.

Find Screen

Here is an example Find Screen for the **Status Info** tab.

Using the find screen

You can search on:

- Service IF
- Name
- Value

For more information about searching and editing records, see *Using the Find Screens* (on page 16).
The Menu Language tab allows you to enter language specific text for a given menu. MAP 1 and MAP 2 text can be different.

Here is an example Menu Language tab.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menu</td>
<td>The menu selected from the list provided when the button is selected. Text screens for MAP 1 and 2 - text to be sent to the mobile hand set. You cannot edit this field directly. See Menu button below.</td>
</tr>
<tr>
<td>Language</td>
<td>The list of available Languages. Note: These are set up on the USSD Base Configuration Screen Language (on page 24) tab.</td>
</tr>
</tbody>
</table>
Fields (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAP 1 and MAP 2</td>
<td>There are separate fields for both MAP 1 and MAP 2. The fields represent the display screen of a mobile phone. The text may contain variable parts, which are assigned using the Variable Part Announcement Dialog (See the User Input (on page 100) node). Enter each variable part as a pair of percentage symbols (%%).&lt;br&gt;Note: The MAP 1 and MAP 2 text may be different, but both must contain the same number of variables.</td>
</tr>
<tr>
<td>Characters</td>
<td>Displays the number of characters in the MAP 1 and MAP 2 display screens.</td>
</tr>
</tbody>
</table>

Note: For example text for each field, refer to the Find screen in this topic.

Buttons

Here is a description of the buttons.

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menu</td>
<td>Clicking this button displays the Menu Selector screen, allowing you to search for and select a menu value, which will be entered into the Menu field.</td>
</tr>
<tr>
<td>View</td>
<td>Clicking this button displays the Text Display Viewer screen, which displays the text and the number of characters. See Viewing menu text (on page 63).</td>
</tr>
</tbody>
</table>

Data entry

Follow these steps to enter a new Menu Language.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Click <strong>Clear</strong> to clear the screen of previous data.</td>
</tr>
<tr>
<td>2</td>
<td>Enter new data and click <strong>Save</strong>.</td>
</tr>
</tbody>
</table>

Buttons and other fields

For information about the buttons and fields at the bottom of the screen, see Common Buttons and Fields (on page 15).

Clicking **Find** displays the Find screen.

Continued on next page
Follow these steps to view menu text.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>On the <strong>Menu Language</strong> tab, click <strong>View</strong>. <strong>Result:</strong> You see the Text Display Viewer. If this is the first time you have used the text display viewer during the current session, the screen will display the text in the MAP 1 and MAP 2 text fields on the tab. If no menu has been selected, the field will be blank. If you have already used the text display viewer, you will see the last menu text you viewed before.</td>
</tr>
</tbody>
</table>

Continued on next page
### Viewing menu text (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Click <strong>Menu</strong>. <strong>Result:</strong> You see the Info Selector, displaying the menus.</td>
</tr>
</tbody>
</table>

![Info Selector]

You can search for menus by entering search criteria in the box and clicking **Search**.

| 3    | Select the required menu from the list. **Result:** The Menu text is displayed in the Text Display Viewer. |

![Text Display Viewer]

| 4    | To close the text display viewer, in the Info Selector, click **Close**, then in the Text Display Viewer, click **Close**. |

*Continued on next page*
Here is an example Find Screen for the **Menu Language** tab.

![Find Screen](image)

**Using the find screen**

You can search on:
- Menu
- Language
- MAP Phase

For more information about searching and editing records, see *Using the Find Screens* (on page 16).
The Status Language tab allows you to set language specific status text for a given status.

Here is an example Status Language tab.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>Displays status info name once selected, created by the USSD Gateway Menu Configuration Screen Status Info (see &quot;Status Info Configuration&quot; on page 59) tab. You cannot edit this field directly. See Status button below.</td>
</tr>
<tr>
<td>Language</td>
<td>The list of available Languages. &lt;note&gt; These are set up on the USSD Base Configuration Screen Language (on page 24) tab. &lt;/note&gt;</td>
</tr>
<tr>
<td>Text box</td>
<td>This represents the display screen of a mobile phone</td>
</tr>
</tbody>
</table>

Continued on next page
Fields (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characters</td>
<td>Displays the number of characters in the message in the field above.</td>
</tr>
</tbody>
</table>

Note: For example text for each field, refer to the Find screen in this topic.

Buttons

Here is a description of the buttons.

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>Clicking this button displays the Status Selector screen, allowing you to search for and select a value, which will be entered into the Status field.</td>
</tr>
<tr>
<td>View</td>
<td>Clicking this button displays the Text Display Viewer, which allows you to view the text of a status, its language and number of characters. See Viewing status text (on page 68).</td>
</tr>
</tbody>
</table>

Data entry

Follow these steps to enter a new Status Language.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Click Clear to clear the screen of previous data.</td>
</tr>
<tr>
<td>2</td>
<td>Enter new data and click Save.</td>
</tr>
</tbody>
</table>

Buttons and other fields

For information about the buttons and fields at the bottom of the screen, see Common Buttons and Fields (on page 15).

Clicking Find displays the Find screen.

Continued on next page
Follow these steps to view status text.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>On the <strong>Status Language</strong> tab, click <strong>View</strong>. <strong>Result:</strong> You see the Text Display Viewer. If this is the first time you have used the text display viewer during the current session, the screen will display the text in the field in the tab. If no status has been selected, the field will be blank. If you have already used the text display viewer, you will see the last text you viewed before.</td>
</tr>
</tbody>
</table>

![Text Display Viewer](image)

Continued on next page
### Viewing status text (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 2    | Click **Menu**.  
   **Result:** You see the Info Selector, displaying the status info names. |

![Info Selector](image1)

You can search for status info names by entering search criteria in the box and clicking **Search**.

| 3    | Select the required menu from the list.  
   **Result:** The Status text is displayed in the Text Display Viewer. |

![Text Display Viewer](image2)

| 4    | To close the text display viewer, in the Info Selector, click **Close**, then in the Text Display Viewer, click **Close**.  
   **Continued on next page** |
Here is an example Find Screen for the **Status Language** tab.

![Find Screen Example](image)

You can search on:

- **Status**
- **Language**

For more information about searching and editing records, see **Using the Find Screens** (on page 16).
# Subscribers Screens

## Overview

<table>
<thead>
<tr>
<th>Introduction</th>
<th>This chapter explains the contents of the Subscribers screens.</th>
</tr>
</thead>
<tbody>
<tr>
<td>In this chapter</td>
<td>This chapter contains the following topics.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>USSD Gateway Subscribers Screens</td>
<td>72</td>
</tr>
<tr>
<td>Access Control Screen</td>
<td>73</td>
</tr>
<tr>
<td>IMSI Tracing Screen</td>
<td>76</td>
</tr>
<tr>
<td>CDR Viewer Screen</td>
<td>78</td>
</tr>
<tr>
<td>UPC CDR Viewer Screen</td>
<td>81</td>
</tr>
</tbody>
</table>
Follow these steps to access the USSD Gateway Subscribers configuration screens.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From the Service Management System screen, select the <strong>Services</strong> menu.</td>
</tr>
<tr>
<td>2</td>
<td>Select <strong>USSD Gateway</strong>, then <strong>Subscribers</strong>.</td>
</tr>
<tr>
<td>3</td>
<td>Select the screen you want to use.</td>
</tr>
</tbody>
</table>
Access Control Screen

Introduction

The Access Control screen controls access to the services. Its use is dependent on whether barring is set up on each particular service trigger. Barring can be set to:

- Disabled, in which case this screen becomes irrelevant
- IMSI
- MSISDN

For a customer to have access to the service, if barring is set to:

- IMSI, it must be provided with sub_type of IMSI_allowed
- MSISDN, it must be provided with sub_type of MSISDN_allowed.

For these customers then to be barred they must again be provisioned in this screen with IMSI_barred or MSISDN_barred.

Access Control tab

Here is an example Access Control tab.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub Type</td>
<td>This field is populated with all of the NAME values from the UIS_SUB_TYPE table.</td>
</tr>
<tr>
<td>Trigger Prefix</td>
<td>Displays the Trigger Prefix. You cannot edit this field directly. See Trigger Prefix button below.</td>
</tr>
</tbody>
</table>

Fields

Here is a description of the fields.

Field | Description
--- | ---
Sub Type | This field is populated with all of the NAME values from the UIS_SUB_TYPE table.

Note: These values are created at installation time.

Trigger Prefix | Displays the Trigger Prefix. You cannot edit this field directly. See Trigger Prefix button below.

Continued on next page
## Fields (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| Sub Start Num | Numeric field and is a mandatory field. The number of digits that must be entered in this field is dependent on the value selected in the Sub Type box.  
  - IMSI_ALLOWED or IMSI_BARRED – length must be between 15 and 20 characters  
  - MSISDN_ALLOWED or MSISDN_BARRED – length must be between 10 and 15 characters |
| Sub Stop Num  | Same as for Sub Num Stop, must contain the same number of digits.                                 |
| Sub Length    | This field is automatically populated by the screen during a save operation. The user cannot modify this value. The field will contain the number of digits in the Sub Start/Stop number field. |
| CC Length     | Numeric field used to indicate how many digits are used to represent the Country Code in the Start and Stop number fields, and is a mandatory field. |

**Note:** For example text for each field, refer to the Find screen in this topic.

## Buttons

Here is a description of the buttons.

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
</table>
| Trigger Prefix| Clicking this button displays the Trigger Selector screen, allowing you to search for and then select a value to set a Trigger Prefix for the Access Control entry. To select, click on the entry in the list and click **Close**.  
  **Note:** These are set up on the USSD Base Configuration Screen **Trigger Prefix** (on page 21) tab. |

## Buttons and other fields

For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 15).

Clicking **Find** displays the Find screen.

## Data entry

Follow these steps to enter a new Access Control.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Click <strong>Clear</strong> to clear the screen of previous data.</td>
</tr>
<tr>
<td>2</td>
<td>Enter new data and click <strong>Save</strong>.</td>
</tr>
</tbody>
</table>
Here is an example Find Screen for the **Access Control** tab.

You can search on:

- Sub Type
- Trigger Prefix
- Sub Start Num
- Sub Stop Num
- Sub Length

For more information about searching and editing records, see *Using the Find Screens* (on page 16).
**IMSI Tracing Screen**

**Introduction**

The IMSI Tracing configuration screen is used to set up technical tracing on individual IMSIs.

**IMSI Tracing tab**

Here is an example **IMSI Tracing** tab.

![IMSI Tracing Tab](image)

**Fields**

Here is a description of the fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMSI</td>
<td>The full IMSI number to be traced. Numeric field of between 15 and 20 digits, mandatory field.</td>
</tr>
<tr>
<td>File Name</td>
<td>Name and path of the logging file, may be up to 100 characters in length and is a required field. The file name must have a valid path name.</td>
</tr>
</tbody>
</table>

**Note:** For example text for each field, refer to the Find screen in this topic.

**Buttons and other fields**

For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 15).

Clicking **Find** displays the Find screen.

**Data entry**

Follow these steps to enter a new IMSI Tracing.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Click <strong>Clear</strong> to clear the screen of previous data.</td>
</tr>
<tr>
<td>2</td>
<td>Enter new data and click <strong>Save</strong>.</td>
</tr>
</tbody>
</table>

*Continued on next page*
Find Screen

Here is an example Find Screen for the IMSI Tracing tab.

You can search on:

- IMSI
- File Name

For more information about searching and editing records, see Using the Find Screens (on page 16).
CDR Viewer Screen

Introduction

The CDR Viewer screen allows you to view EDRs.

Note: For the EDRs to be logged during calls, the CDR Flag check box must be ticked on the Gateway Configuration screen (on page 33). You must restart the SLEE after ticking this box.

If cross-linking is enabled, this viewer will search for any Gateway EDRs generated during the same session as the selected item in the UPC CDR Viewer screen.

USSD Gateway CDR Viewer screen

Here is an example USSD Gateway CDR Viewer screen.

Here is a description of the fields that you can use to search on.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMSI</td>
<td>Numeric field of between 15 and 20 digits</td>
</tr>
<tr>
<td>MSISDN</td>
<td>Numerical field of between 10 and 15 characters</td>
</tr>
<tr>
<td>SAN</td>
<td>Service Activation Number Numerical field up to 10 digits</td>
</tr>
<tr>
<td>Service IF</td>
<td>Numerical field</td>
</tr>
<tr>
<td>Operator</td>
<td>Numerical field</td>
</tr>
<tr>
<td>Fast Access</td>
<td>Y or N</td>
</tr>
<tr>
<td>Start Time</td>
<td>In the format 2003-04-09 16:31:02.0</td>
</tr>
<tr>
<td>Duration</td>
<td>Length of the call</td>
</tr>
</tbody>
</table>

Note: For example text for each field, refer to the Find screen in this topic.

Continued on next page
### Buttons and other fields

This table describes the function of each field.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search</td>
<td>Displays all records that correspond to the search criteria entered.</td>
</tr>
<tr>
<td>Next</td>
<td>Displays the next CDR.</td>
</tr>
<tr>
<td>Link</td>
<td>Only available if the UPC CDR Viewer screen is available.</td>
</tr>
</tbody>
</table>

For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 15).

### Find screen

Here is an example CDR Viewer screen where the IMSI has been used to search for entries.

![USSD Gateway CDR Viewer](image)

### Extra information

Select the entry you require extra information for. Highlight the line to bring up the extra information details:

- General
- Time outs
- Alarms

### Trace

Also brought up are the trace details for the call:

- Menu
- Status

*Continued on next page*
Available details

Clicking on any of the sub headings brings up the available details.

[Image of USSD Gateway CDR Viewer interface]

[Table]

[Text]

- Call Id - 1
- Dialed String - Not available
- Interactions - 2
- Map Phase - 2
- Service IF - ACO
- Operator - Acceptance07654

[Menubar and menus]

[Text]

- General
- Timetags
- Alarms
- Trace
  - MENU - choice 1
  - STATUS - invalid State
The UPC CDR Viewer screen enables you to search for and view EDRs created by the Send Buffer feature node.

If the UPC CDR Viewer is available, it can register as a listener to the CDR Viewer to allow cross-linking between the two.

Here is an example USSD Gateway UPC CDR Viewer screen.
Overview

Introduction

This chapter explains the contents of the UPC Portal screens.

In this chapter

This chapter contains the following topics.

USSD Platform User Selection Screens .......................................................... 84
USSD Portal Message Class Screens .............................................................. 86
USSD Platform User Selection Screens

Introduction
The User Selection configuration screen allows you to enter keyword specific text for a given menu exit branch. MAP 1 and MAP 2 keywords can be different. This screen is used with the User Selection (on page 105) node.

User Selection tab
Here is an example User Selection tab.
Here is a description of the fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>This field is populated with all the NAMEs created by the USSD Gateway Base Configuration Screen Service IF (see &quot;Service Interface&quot; on page 26) tab. By selecting a Service, all the menus associated with this Service populates the Menu field.</td>
</tr>
<tr>
<td>Menu</td>
<td>By selecting a Service, all the menus associated with this Service populate this field.</td>
</tr>
<tr>
<td>Language</td>
<td>This is populated with the language associated with the selected menu.</td>
</tr>
<tr>
<td>MAP 1 MAP 2</td>
<td>Selecting MAP 1 or MAP 2 shows which keyword corresponds to which MAP version.</td>
</tr>
<tr>
<td>options</td>
<td></td>
</tr>
<tr>
<td>Branch</td>
<td>After selecting the menu in the Menu field, this field is populated by the branch number.</td>
</tr>
<tr>
<td>Keyword</td>
<td>This field is populated by the keyword for that branch. You can edit this field and modify an existing entry or create a new one.</td>
</tr>
</tbody>
</table>

Here is a description of the buttons.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update</td>
<td>Has no function in this case.</td>
</tr>
<tr>
<td>Search</td>
<td>Entering a menu name in the menu field and clicking the Search button will display the menu for the selected service, if it exists in the database.</td>
</tr>
</tbody>
</table>

Follow these steps to update a menu.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Click Clear to clear the screen of previous data. By selecting a Service, all the menus associated with this Service will populate the Menu listing box. After selecting the menu in the Menu field, you can enter keywords associated for each branch.</td>
</tr>
<tr>
<td>2</td>
<td>Enter new data and click Save.</td>
</tr>
</tbody>
</table>

Note: When editing keywords, you must Save before selecting the other MAP version to edit.
USSD Portal Message Class Screens

Message Class tab

Here is an example Message Class tab.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>On the Message Class tab, click Clear to clear the screen of previous data.</td>
</tr>
<tr>
<td>2</td>
<td>Enter new data and click Save.</td>
</tr>
</tbody>
</table>

Creating a message class

Follow these steps to create a message class.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the Find screen, select the row you want to edit.</td>
</tr>
<tr>
<td></td>
<td><strong>Result:</strong> The associated screen is populated with this data, which you can edit.</td>
</tr>
<tr>
<td>2</td>
<td>On the editing screen, make the changes to the data.</td>
</tr>
<tr>
<td>3</td>
<td>Click Save.</td>
</tr>
<tr>
<td></td>
<td><strong>Result:</strong> The edited screen is saved.</td>
</tr>
</tbody>
</table>

Editing records

Follow the steps below to edit a record.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>On the Message Class tab, click Find.</td>
</tr>
<tr>
<td></td>
<td><strong>Result:</strong> The Find Screen (See example on page 87) is displayed.</td>
</tr>
<tr>
<td>2</td>
<td>Enter a search query string in the Class or Description field and click Search.</td>
</tr>
<tr>
<td></td>
<td><strong>Result:</strong> The grid will display all records matching the query.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Leaving both fields blank will return all records.</td>
</tr>
</tbody>
</table>

Finding a message class

Follow these steps to find a message class.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>On the Message Class tab, click Find.</td>
</tr>
<tr>
<td></td>
<td><strong>Result:</strong> The Find Screen (See example on page 87) is displayed.</td>
</tr>
<tr>
<td>2</td>
<td>Enter a search query string in the Class or Description field and click Search.</td>
</tr>
<tr>
<td></td>
<td><strong>Result:</strong> The grid will display all records matching the query.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Leaving both fields blank will return all records.</td>
</tr>
</tbody>
</table>

Continued on next page
Finding a message class (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 3    | Select the record in the grid.  
**Result:** The record is displayed on the **Message Class** tab. |
| 4    | Click **Close**. |

Find Screen  
Here is an example Find Screen.
# UPC Portal Nodes

## Overview

<table>
<thead>
<tr>
<th>Introduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>This chapter explains the contents of the Gateway Portal nodes provisioning screens.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>In this chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>This chapter contains the following topics.</td>
</tr>
<tr>
<td>Control Plan Editor Screen .......................................................... 90</td>
</tr>
<tr>
<td>Making Nodes Available ................................................................. 91</td>
</tr>
<tr>
<td>Available Feature Nodes ................................................................. 92</td>
</tr>
<tr>
<td>Language Setting ........................................................................... 93</td>
</tr>
<tr>
<td>Send Buffer ......................................................................................... 97</td>
</tr>
<tr>
<td>User Input ............................................................................................ 100</td>
</tr>
<tr>
<td>User Selection .................................................................................... 105</td>
</tr>
<tr>
<td>Version Branching ................................................................................ 110</td>
</tr>
</tbody>
</table>
Control Plan Editor Screen

Introduction

You can select the portal nodes from the ACS Control Plan Editor screen, as shown below. Double click on the node icon to open the node configuration screen.

Screen

Here is an example Control Plan Editor screen, showing the portal nodes.
Making Nodes Available

Introduction
The portal nodes can be added to the Full Feature Node using the ACS Configuration option. Once selected these macro nodes become available to use in the CPE for the configured user.

Procedure
Follow these steps to make the macro nodes available.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | From the ACS main screen, select **Configuration**.  
**Result:** You see the ACS Configuration screen. |
| 2    | Select the **Feature Sets** tab and click **Edit Set**.  
**Result:** You see the Edit Feature Node Set screen. |
| 3    | Select the **UIS Portal** tab. |
| 4    | Tick the nodes to be available and click **Save**. |
# Available Feature Nodes

## Introduction

This topic lists all the feature nodes that may be available within the CPE. In some cases, additional nodes may have been created and installed to fit a specific customer need. These custom (and ACS) nodes do not appear in this list.

## Node list

This table lists all the available USSD Gateway feature nodes.

<table>
<thead>
<tr>
<th>Node name</th>
<th>Node icon</th>
<th>Node description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Setting</td>
<td><img src="image" alt="Language Setting" /></td>
<td>Enables the caller to select the language they want to use for this service.</td>
<td>Language Setting (on page 93)</td>
</tr>
<tr>
<td>Send Buffer</td>
<td><img src="image" alt="Send Buffer" /></td>
<td>Sends data to the SMSC.</td>
<td>Send Buffer (on page 97)</td>
</tr>
<tr>
<td>User Input</td>
<td><img src="image" alt="User Input" /></td>
<td>Collects input from the calling party.</td>
<td>User Input (on page 100)</td>
</tr>
<tr>
<td>User Selection</td>
<td><img src="image" alt="User Selection" /></td>
<td>Enables user selection from a menu.</td>
<td>User Selection (on page 105)</td>
</tr>
<tr>
<td>Version Branching</td>
<td><img src="image" alt="Version Branching" /></td>
<td>Branches on the Version of MAP used.</td>
<td>Version Branching (on page 110)</td>
</tr>
</tbody>
</table>
**Language Setting**

**Node description**
The Language Setting node enables the subscriber to select one of a set of configured languages.

This node plays an announcement to the user, prompting them to select a language to use for the USSD call. This user’s temporary profile is updated with the selected language.

**Note:** The selection only lasts for the duration of the call.

**Node icon**

![Language Set] (Lang Set)

**Restrictions**
This node may be used any number of times within a control plan.

**Node exits**
This node has one entry and three exits. The number of exits cannot be changed.

<table>
<thead>
<tr>
<th>Exit</th>
<th>Cause</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Error</td>
<td>Node encountered an error during execution. The Error or Timeout announcement will be played.</td>
</tr>
<tr>
<td>2</td>
<td>Improper User Input</td>
<td>User entered a digit which does not map to a language.</td>
</tr>
<tr>
<td>3</td>
<td>Success</td>
<td>Temporary profile updated with selected language.</td>
</tr>
</tbody>
</table>
Here is an example Configure Language Setting screen.

Follow these steps to edit the node configuration.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | In the Language Menu Announcement area, select the Announcement Set which contains the language menu announcement you want to play to the caller.  

**Result:** The Announcement Entry field is populated with the entries for the selected set. |
| 2    | From the Announcement Entry drop-down list, select the announcement you want to play to the caller. |
| 3    | In the Error Announcement area, select the Announcement Set and Announcement Entry you wish to play for an error. |
| 4    | In the Improper User Input Announcement area, select the Announcement Set and Announcement Entry you wish to play if the user has input incorrectly. |
| 5    | In the PACUI Duration field type the number of seconds’ duration to play announcement and collect user information. |

Continued on next page
Configuring the node (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Click <strong>Edit Mapping</strong>.</td>
</tr>
</tbody>
</table>

**Result:** You see the Language Position Mapping Dialog.

![Language Position Mapping Dialog](image)

Continued on next page
Step | Action
--- | ---
7 | Use the Language Position Mapping Dialog screen to construct a list of ordered languages. This screen displays a grid populated with all of the available languages. The grid has three columns:
- **Value** - This column contains the language id / value that is sent to the gateway interface. This value will a number between 0 and 19. Any changes you make to this column will be ignored.
- **Name** - The language name, for example English, French, or German. Any changes you make to this column will be ignored.
- **Position** - The position column is used to determine which languages will be included in the list and in what order.

A valid list will contain:
- At least one language (starting at position 1)
- The positions numbered consecutively, for example. 1, 2 and 3
- No more than one language for any given position. If more than one language is mapped to the same position then an error will be generated when OK is clicked

You can map the positions of the languages in one of the following ways:
- Manually
- Automatically

8 | To manually map the languages:
1 | Click on the Position cell in the row for the language.
2 | Type the number in the cell
3 | Repeat for each language.

To automatically map the language positions:

1 | Click **Auto Map Language Position**.

**Result:** A list will be generated which contains all of the available languages, positioned in the order that they are stored in the system database. You can subsequently manually edit this configuration if required.

9 | Click **OK**.

**Result:** Validation checks are carried out to determine whether or not the criteria detailed above has been met. If not, you will be informed via an error dialog. If the validation checks are successful, then the dialog box will close, and the language list on the Configure Language Setting screen will be updated.
**Send Buffer**

**Node description**
The Send Buffer node sends the final selection buffer that has been built through the various Menu Selection and User Entry macro nodes to an SMSC through the UCP Interface.

Once the final selection buffer has been sent, the Send Buffer node writes an EDR to record the transaction.

**Node icon**

- ![SendBuffer](SendBuffer.png)

**Restrictions**
This node may be used any number of times within a control plan.

**Node exits**
This node has one entry and five exits. The number of exits cannot be changed.

<table>
<thead>
<tr>
<th>Exit</th>
<th>Cause</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Success</td>
<td>Both the final selection buffer, and the CDR have been successfully sent.</td>
</tr>
<tr>
<td>2</td>
<td>Error</td>
<td>Node encountered an error receiving or sending data.</td>
</tr>
<tr>
<td>3</td>
<td>Empty Buffer</td>
<td>Final selection buffer retrieved from the configured ProfileTag has been allocated but is empty. This situation will occur if the previous node in the call plan was a menu selection node that was set to clear the buffer.</td>
</tr>
<tr>
<td>4</td>
<td>No Buffer</td>
<td>Final selection buffer does not exist. Suggests a configuration error in the CPE.</td>
</tr>
<tr>
<td>5</td>
<td>Length Exceeded</td>
<td>Received buffer length exceeded 255 characters.</td>
</tr>
</tbody>
</table>

Continued on next page
Here is an example Configure Send Buffer screen.

Follow these steps to edit the node configuration.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | In the **Originating Address** field, select an address from the list:  
| 1    | Called Party Number  
| 2    | Calling Party Number  
| 3    | Normalised Called Party Number  
| 4    | Normalised Calling Party Number  
| 5    | Pending TN Buffer  
| 6    | Application Buffer  
| 7    | Manually Inserted  

For details on Normalisation, refer to either the *USSD Gateway*, or the ACS Technical Guide.

2    If you selected:  
- Application Buffer, select the buffer value from the drop down list to the far right of the field.  
- Manually Inserted, type the originating address in the text field to the right of the field. Maximum of 31 characters.
### Configuring the node (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>In the <strong>Destination Address</strong> field, select an address from the list. This will normally contain the MSISDN of the subscriber using the service. The available options are the same as for the Originating Address.</td>
</tr>
</tbody>
</table>
| 4    | Tick the **Generate CDRs** check box if you wish to generate CDRs.  
**Note:** You can view these CDRs on the *UPC CDR Viewer Screen* (on page 81). |
| 5    | Tick the **Charge CDR** check box if you wish to charge CDRs. |
| 6    | Tick the **Strip Last Space** check box if you wish to strip the last space from the buffer. |
| 7    | Type the name of the UCP interface to be used. This alphanumeric field can be populated with up to 19 characters. |
| 8    | The **Send Text** option allows you to enter hard coded text, in the text field, which is sent to the UCP interface at run time. |
| 9    | The **Send Buffer ID** option allows you to select the buffer, in the drop down box, in which data is collected.  
**Note:** This feature is for future enhancements. |
| 10   | The **Message Class** drop-down menu selects "Not Set". |
| 11   | Click **Save**. |
**User Input**

**Node description**
This node plays an announcement to the subscriber which prompts them for input. It then collects the input and appends it to the configured selection buffer.

**Node icon**
![User Input Icon]

**Restrictions**
This node may be used any number of times within a control plan.

**Node exits**
This node has one entry and four exits. The number of exits cannot be changed.

<table>
<thead>
<tr>
<th>Exit</th>
<th>Cause</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Error</td>
<td>Node encountered an error during execution.</td>
</tr>
<tr>
<td>2</td>
<td>Improper User Input</td>
<td>There was a problem with the user's input.</td>
</tr>
<tr>
<td>3</td>
<td>Success</td>
<td>Node executed correctly.</td>
</tr>
<tr>
<td>4</td>
<td>VA type non-digit</td>
<td>Problem using the Variable Part Announcements configuration.</td>
</tr>
</tbody>
</table>

*Continued on next page*
Here is an example Configure User Input screen.
Follow these steps to edit the node configuration.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | In the **Service IF** field, select the service from the drop down list.  
**Note:** The list is populated with all the Service Interface names created by the USSD Gateway Base Configuration screen, **Service IF** (see "Service Interface" on page 26) tab. |
| 2    | In the **Menu** field, select the menu from the drop down list.  
The list is populated with all the Menu names created by the USSD Gateway Menu Configuration screen, **Menu Info** (on page 57) tab which was created for a particular Service Interface.  
**Note:** If the menu has been set up containing variable parts, but a different number of variables have been set up in the text for MAP 1 and MAP 2, you will see an error, for example: |
|      | ![Invalid special markers](image)  
In this example, the MAP 1 menu has 3 variables, but the MAP 2 has only 2.  
You must correct this using the **Menu Language** (on page 61) tab before you can select the menu. |
| 3    | The field to the right of the Variable Parts button displays the number of variable parts contained within the selected menu.  
If the value displayed in the field is not 0, then the menu item contains variable parts. These are displayed in the MAP 1 and MAP 2 text display boxes, as pairs of percentage symbols (%%). See **Menu Language** (on page 61) for details.  
You must click **Variable Parts** to open the Variable Part Announcement screen and insert substitutions for each variable part in the message. See **Setting Variable Part Announcements** (on page 103). |
| 4    | Select the option of where to store the user input:  
- **Profile** - This allows you to select Profile Blocks and Primary Tags  
- **Buffer** - This allows you to enter information into a buffer. |

*Continued on next page*
Configuring the node (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 5    | If you selected:  
|      | • Profile option, select the:  
|      |   • Pattern List Profile Block and  
|      |   • Pattern List Primary Tag.  
|      | For the USSD Gateway service, the following profiles are writable to the database:  
|      |   • Customer  
|      |   • Call Plan  
|      |   • CLI Subscriber  
|      |   • Service Number  
|      | In addition the following is specified as a temporary profile, stored in memory:  
|      |   • Application Specific 7  
|      | For more information on Profile Blocks and tags, refer to the CPE User's Guide.  
|      | • Buffer option - fill in the following field:  
|      |   • Buffer ID - This drop-down menu allows you to select which buffer to use to store the user input.  
|      |   Note: The USSD Gateway Portal run-time system uses ten data buffers to store data. |
| 6    | In the Duration field, set the length of time, in seconds that the user has to enter their selection.  
|      | Note: Optional |
| 7    | In the Min Digits and Max Digits fields, set the minimum and maximum number of digits the user is required to input. |
| 8    | Ticking the Add Space check box will add a space at the end of the string entered into the buffer. |
| 9    | Ticking the Clear Buffer check box will clear any value entered into the buffer before any selection has been entered. |
| 10   | In the Language field, select the language to use.  
|      | This is populated with the language names created by the USSD Gateway Base Configuration screen, Language (on page 24) tab.  
|      | The MAP 1 and MAP 2 fields will display the text information presented to the user using a MAP1 or MAP2 version device, in the selected language. |
| 11   | Click Save. |

Setting Variable Part Announcements  
If the menu contains one or more variable announcement parts, use the Variable Part Announcement screen to define each variable part.  
  
Continued on next page
**Setting Variable Part Announcements** (continued)

Here is an example Variable Part Announcement Dialog.

![Variable Part Announcement Dialog](image)

This example contains four variable parts, each illustrating a different option from the list of buffers.

**Buffers**

Here are the buffers available in the Variable Part Announcements Dialog and the action to perform when the buffer is selected.

<table>
<thead>
<tr>
<th>Buffer</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Called Party Number</td>
<td>No further action required</td>
</tr>
<tr>
<td>Calling Party Number</td>
<td></td>
</tr>
<tr>
<td>Normalised Called Party Number</td>
<td></td>
</tr>
<tr>
<td>Normalised Calling Party Number</td>
<td></td>
</tr>
<tr>
<td>Pending TN Buffer</td>
<td></td>
</tr>
<tr>
<td>Application Buffer</td>
<td>Select the buffer used to store the user input in the drop down list</td>
</tr>
<tr>
<td>Manually inserted</td>
<td>Type a value in the text field.</td>
</tr>
<tr>
<td>Profile Location.</td>
<td>Select the:</td>
</tr>
<tr>
<td></td>
<td>• Pattern List Profile Block and</td>
</tr>
<tr>
<td></td>
<td>• Pattern List Primary Tag.</td>
</tr>
<tr>
<td></td>
<td>For more information on Profile Blocks and tags, refer to CPE User’s Guide.</td>
</tr>
</tbody>
</table>

For a description of the buffers, refer to *CPE User’s Guide*. 
User Selection

Node description
The User Selection node displays a menu and collects the user's choice. The node matches the choice to a keyword in the UPC menu string. If a keyword matches, it is appended to the final selection buffer.

Node icon
User Selection

Restrictions
This node may be used any number of times within a control plan.

Node exits
The User Selection node has one entry and may have 5 through 25 exits. Each exit is mapped to a day of week range, and must be connected to an appropriate node. You can configure the number of exits using the Edit Node Exits screen (see "Editing the number of exit branches" on page 108).

<table>
<thead>
<tr>
<th>Exit</th>
<th>Cause</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Error</td>
<td>Node encountered an error during execution.</td>
</tr>
<tr>
<td>2</td>
<td>Improper User</td>
<td>User Selection doesn't match keyword choice.</td>
</tr>
<tr>
<td></td>
<td>Input</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>VA type non-digit</td>
<td>Problem using the Variable Part Announcements configuration.</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>User selected 0.</td>
</tr>
<tr>
<td>5</td>
<td>*</td>
<td>User selected *.</td>
</tr>
</tbody>
</table>

Continued on next page
Here is an example Configure User Selection screen.

Continued on next page
Follow these steps to edit the node configuration.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | In the Service IF field, select the service from the drop down list.  
**Note:** The list is populated with all the Service Interface names created by the USSD Gateway Base Configuration screen, Service IF (see "Service Interface" on page 26) tab. |
| 2    | In the Menu field, select the menu from the drop down list.  
The list is populated with all the Menu names created by the USSD Gateway Menu Display screen, Menu Language (on page 61) tab which was created for a particular Service Interface.  
**Note:** If the menu has been set up containing variable parts, but a different number of variables have been set up in the text for MAP 1 and MAP 2, you will see an error, for example: |

![Invalid special markers](image)

This menu has an inconsistent number of special markers defined  

<table>
<thead>
<tr>
<th>Language</th>
<th>MAP</th>
<th>Num Markers</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>English</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

In this example, the MAP 1 menu has 3 variables, but the MAP 2 has only 2.  
You must correct this using the Menu Language (on page 61) tab before you can select the menu. |
| 3    | Fill in the Buffer ID field. This drop-down menu allows you to select which buffer that the user input has been stored in.  
**Note:** The USSD Gateway Portal run-time system uses ten data buffers to store data. |
| 4    | In the Duration field, set the length of time, in seconds that the user has to enter their selection.  
**Note:** Optional |
| 5    | Ticking the Add Space check box will add a space at the end of the string entered into the buffer. |
| 6    | Ticking the Clear Buffer check box will clear any value entered into the buffer before any selection has been entered. |
| 7    | The field to the left of the Parts button displays the number of exits listed in the field below the Language field, which displays the Exit-Keyword mapping set up in the User Selection (on page 84) tab.  
**Note:** To make these exits available, you must add the required number of exits to the node. See Editing the number of exit branches (on page 108). |

Continued on next page
Configuring the node (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>The field to the right of the Parts button (Num Selections) displays the number of variable parts contained within the selected menu. If the value displayed in the field is not 0, then the menu item contains variable parts. These are displayed in the MAP 1 and MAP 2 text display boxes, as pairs of percentage symbols (%%). See Menu Language (on page 61) for details. You must click Parts to open the Variable Part Announcement screen and insert substitutions for each variable part in the message. See Setting Variable Part Announcements (on page 109).</td>
</tr>
</tbody>
</table>

9    | In the Language field, select the language to use. This is populated with the language names created by the USSD Gateway Base Configuration screen, Language (on page 24) tab. |

10   | Selecting the MAP 1 and MAP 2 options will display, in the field below, the text information presented to the user using a MAP1 or MAP2 version device, in the selected language. |

11   | Click Save. |

### Editing the number of exit branches

Follow these steps to edit the number of exit branches of a node.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ensure Call Plan Editor is in Graphical mode.</td>
</tr>
<tr>
<td>2</td>
<td>Right-click on node you want to change the number exits for. Result: You see a shortcut menu.</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Node Properties" /></td>
<td><img src="image" alt="Edit Node Data" /></td>
</tr>
<tr>
<td><img src="image" alt="Edit Node Exits..." /></td>
<td><img src="image" alt="Delete Node" /></td>
</tr>
</tbody>
</table>

3    | Click Edit Node Exits. Result: You see the Edit Node Structure screen. |

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Edit Node Structure" /></td>
<td><img src="image" alt="Branch" /></td>
</tr>
</tbody>
</table>

4    | Use the arrows to change the number displayed. The up arrow will increase the displayed number and the down arrow will decrease the displayed number. The number of exits on the node will now reflect the number that was entered into the Edit Node Structure screen. |

5    | Click Save. Result: The Edit Node Structure screen will close. |

Continued on next page
If the menu contains one or more variable announcement parts, use the Variable Part Announcement screen to define each variable part.

Here is an example Variable Part Announcement Dialog.

This example contains four variable parts, each illustrating a different option from the list of buffers.

**Buffers**
Here are the buffers available in the Variable Part Announcements Dialog and the action to perform when the buffer is selected.

<table>
<thead>
<tr>
<th>Buffer</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Called Party Number</td>
<td>No further action required</td>
</tr>
<tr>
<td>Calling Party Number</td>
<td></td>
</tr>
<tr>
<td>Normalised Called Party Number</td>
<td></td>
</tr>
<tr>
<td>Normalised Calling Party Number</td>
<td></td>
</tr>
<tr>
<td>Pending TN Buffer</td>
<td></td>
</tr>
<tr>
<td>Application Buffer</td>
<td>Select the buffer used to store the user input in the drop down list</td>
</tr>
<tr>
<td>Manually inserted</td>
<td>Type a value in the text field.</td>
</tr>
</tbody>
</table>

For a description of the buffers, refer to *CPE User's Guide*. 
Version Branching

**Node description**
The Version Branching node attempts to determine which version of MAP is being used for the call. It branches on MAP version or takes a default exit if a version cannot be determined.

The node determines the subscriber’s MAP version by querying the Additional Calling Party Number using the IDP Query action.

**Node icon**

**Restrictions**
This node may be used any number of times within a control plan.

**Node exits**
This node has one entry and three exits. The number of exits cannot be changed.

<table>
<thead>
<tr>
<th>Exit</th>
<th>Cause</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MAP 1 version</td>
<td>Call is using MAP1.</td>
</tr>
<tr>
<td>2</td>
<td>MAP 2 version</td>
<td>Call is using MAP2.</td>
</tr>
<tr>
<td>3</td>
<td>Undetermined</td>
<td>MAP version could not be determined.</td>
</tr>
</tbody>
</table>

**Configuration screen**
Here is an example Configure Version Branching screen.

**Configuring the node**
This node may have a Tracking String added. It does not require any other configuration.

Click **Save** to save the node.
Appendix

Overview

In this appendix

This appendix contains the following topics.

Glossary of Terms .............................................................................................................. 113
Index .................................................................................................................................... 117
## Glossary of Terms

**AAA**

**ACS**
Advanced Control Services configuration platform.

**ANI**
Automatic Number Identification - Term used in the USA by long distance carriers for CLI.

**BCSM**
Basic Call State Model - describes the basic processing steps that must be performed by a switch in order to establish and tear down a call.

**CAMEL**
Customized Applications for Mobile network Enhanced Logic. This is a 3GPP (Third Generation Partnership Project) initiative to extend traditional IN services found in fixed networks into mobile networks. The architecture is similar to that of traditional IN, in that the control functions and switching functions are remote. Unlike the fixed IN environment, in mobile networks the subscriber may roam into another PLMN (Public Land Mobile Network), consequently the controlling function must interact with a switching function in a foreign network. CAMEL specifies the agreed information flows that may be passed between these networks.

**CC**
Country Code. Prefix identifying the country for a numeric international address.

**CCS**
1) Charging Control Services (or Prepaid Charging) component.
2) Common Channel Signalling. A signalling system used in telephone networks that separates signalling information from user data.

**CDR**
Call Data Record

**CLI**
Calling Line Identification - the telephone number of the caller. Also referred to as ANI.

**CPE**
Control Plan Editor (previously Call Plan Editor) - software used to define the logic and data associated with a call -for example, "if the subscriber calls 0800 nnnnnn from a phone at location xxx then put the call through to bb bbb bbbb".

**Diameter**
A feature rich AAA protocol. Utilises SCTP and TCP transports.

**DP**
Detection Point

**EDR**
Event Detail Record

**FDA**
First Delivery Attempt - the delivery of a short message directly to the SME rather than relaying it via the MC.

**GPRS**
General Packet Radio Service - employed to connect mobile cellular users to PDN (Public Data Network- for example the Internet).
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSM</td>
<td>Global System for Mobile communication. It is a second generation cellular telecommunication system. Unlike first generation systems, GSM is digital and thus introduced greater enhancements such as security, capacity, quality and the ability to support integrated services.</td>
</tr>
<tr>
<td>GUI</td>
<td>Graphical User Interface</td>
</tr>
<tr>
<td>HLR</td>
<td>The Home Location Register is a database within the HPLMN (Home Public Land Mobile Network). It provides routing information for MT calls and SMS. It is also responsible for the maintenance of user subscription information. This is distributed to the relevant VLR, or SGSN (Serving GPRS Support Node) through the attach process and mobility management procedures such as Location Area and Routing Area updates.</td>
</tr>
<tr>
<td>HPLMN</td>
<td>Home PLMN</td>
</tr>
<tr>
<td>HTML</td>
<td>HyperText Markup Language, a small application of SGML used on the World Wide Web. It defines a very simple class of report-style documents, with section headings, paragraphs, lists, tables, and illustrations, with a few informational and presentational items, and some hypertext and multimedia.</td>
</tr>
<tr>
<td>ICA</td>
<td>InitiateCallAttempt. A CAMEL/INAP operation sent by the SLC to an SSP request that a voice call is started.</td>
</tr>
<tr>
<td>IDP</td>
<td>INAP message: Initial DP (Initial Detection Point)</td>
</tr>
<tr>
<td>IMSI</td>
<td>International Mobile Subscriber Identifier. A unique identifier allocated to each mobile subscriber in a GSM and UMTS network. It consists of a MCC (Mobile Country Code), a MNC (Mobile Network Code) and a MSIN (Mobile Station Identification Number). The IMSI is returned by the HLR query (SRI-SM) when doing FDA. This tells the MSC exactly who the subscriber is that the message is to be sent to.</td>
</tr>
<tr>
<td>IN</td>
<td>Intelligent Network</td>
</tr>
<tr>
<td>INAP</td>
<td>Intelligent Network Application Part - a protocol offering real time communication between IN elements.</td>
</tr>
<tr>
<td>Initial DP</td>
<td>Initial Detection Point - INAP Operation. This is the operation that is sent when the switch reaches a trigger detection point.</td>
</tr>
<tr>
<td>ISDN</td>
<td>Integrated Services Digital Network - set of protocols for connecting ISDN stations.</td>
</tr>
<tr>
<td>ITU</td>
<td>International Telecommunication Union</td>
</tr>
<tr>
<td>MAP</td>
<td>Mobile Application Part - a protocol which enables real time communication between nodes in a mobile cellular network. A typical usage of the protocol would be for the transfer of location information from the VLR to the HLR.</td>
</tr>
<tr>
<td>MC</td>
<td>Message Centre. Also known as SMSC.</td>
</tr>
<tr>
<td><strong>MCC</strong></td>
<td>Mobile Country Code. In the location information context, this is padded to three digits with leading zeros. Refer to ITU E.212 (&quot;Land Mobile Numbering Plan&quot;) documentation for a list of codes.</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>MNC</strong></td>
<td>Mobile Network Code. The part of an international address following the mobile country code (MCC), or at the start of a national format address. This specifies the mobile network code, that is, the operator owning the address. In the location information context, this is padded to two digits with a leading zero. Refer to ITU E.212 (&quot;Land Mobile Numbering Plan&quot;) documentation for a list of codes.</td>
</tr>
<tr>
<td><strong>MS</strong></td>
<td>Mobile Station</td>
</tr>
<tr>
<td><strong>MSC</strong></td>
<td>Mobile Switching Centre. Also known as a switch.</td>
</tr>
<tr>
<td><strong>MSIN</strong></td>
<td>Mobile Station Identification Number.</td>
</tr>
<tr>
<td><strong>MSISDN</strong></td>
<td>Mobile Station ISDN number. Uniquely defines the mobile station as an ISDN terminal. It consists of three parts; the country code (CC), the national destination code (NDC) and the subscriber number (SN).</td>
</tr>
<tr>
<td><strong>MSRN</strong></td>
<td>Mobile Station Roaming Number</td>
</tr>
<tr>
<td><strong>MT</strong></td>
<td>Mobile Terminated</td>
</tr>
<tr>
<td><strong>Oracle</strong></td>
<td>Oracle Corporation</td>
</tr>
<tr>
<td><strong>PACUI</strong></td>
<td>Play Announcement and Collect User Information</td>
</tr>
<tr>
<td><strong>PLMN</strong></td>
<td>Public Land Mobile Network</td>
</tr>
<tr>
<td><strong>RRBCSM</strong></td>
<td>Request Report BCSM.</td>
</tr>
<tr>
<td><strong>SAN</strong></td>
<td>Service Access Number</td>
</tr>
<tr>
<td><strong>SCP</strong></td>
<td>Service Control Point. Also known as SLC.</td>
</tr>
<tr>
<td><strong>SCTP</strong></td>
<td>Stream Control Transmission Protocol. A transport-layer protocol analogous to the TCP or User Datagram Protocol (UDP). SCTP provides some similar services as TCP (reliable, in-sequence transport of messages with congestion control) but adds high availability.</td>
</tr>
<tr>
<td><strong>Session</strong></td>
<td>Diameter exchange relating to a particular user or subscriber access to a provided service (for example, a telephone call).</td>
</tr>
<tr>
<td><strong>SGML</strong></td>
<td>Standard Generalized Markup Language. The international standard for defining descriptions of the structure of different types of electronic document.</td>
</tr>
<tr>
<td><strong>SGSN</strong></td>
<td>Serving GPRS Support Node</td>
</tr>
<tr>
<td><strong>SLC</strong></td>
<td>Service Logic Controller (formerly UAS).</td>
</tr>
<tr>
<td><strong>SLEE</strong></td>
<td>Service Logic Execution Environment</td>
</tr>
<tr>
<td><strong>SME</strong></td>
<td>Short Message Entity - an entity which may send or receive Short Messages. It may be located in a fixed network, a mobile, or an SMSC.</td>
</tr>
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**Oracle Corporation**

**Play Announcement and Collect User Information**

**Public Land Mobile Network**

**Request Report BCSM.**

**Service Access Number**

**Service Control Point. Also known as SLC.**

**Stream Control Transmission Protocol.** A transport-layer protocol analogous to the TCP or User Datagram Protocol (UDP). SCTP provides some similar services as TCP (reliable, in-sequence transport of messages with congestion control) but adds high availability.

**Diameter exchange relating to a particular user or subscriber access to a provided service (for example, a telephone call).**

**Standard Generalized Markup Language. The international standard for defining descriptions of the structure of different types of electronic document.**

**Serving GPRS Support Node**

**Service Logic Controller (formerly UAS).**

**Service Logic Execution Environment**

**Short Message Entity - an entity which may send or receive Short Messages. It may be located in a fixed network, a mobile, or an SMSC.**
### SMS
Depending on context, can be:
- Short Message Service
- Service Management System platform
- NCC Service Management System application

### SMSC
Short Message Service Centre - stores and forwards a short message to the indicated destination subscriber number.

### SN
Service Number

### SRI
Send Routing Information - This process is used on a GSM network to interrogate the HLR for subscriber routing information.

### SSF
Sub Service Field.

### SSP
Service Switching Point

### Switching Point
Anything that can send and receive C7 messages.

### System Administrator
The person(s) responsible for the overall set-up and maintenance of the IN.

### TCAP
Transaction Capabilities Application Part – layer in protocol stack, message protocol.

### TCP
Transmission Control Protocol. This is a reliable octet streaming protocol used by the majority of applications on the Internet. It provides a connection-oriented, full-duplex, point to point service between hosts.

### UIS
USSD Interactive Services

### UPC
USSD Portal Components

### USSD
Unstructured Supplementary Service Data - a feature in the GSM MAP protocol that can be used to provide subscriber functions such as Balance Query and Friends and Family Access.

### VLR
Visitor Location Register - contains all subscriber data required for call handling and mobility management for mobile subscribers currently located in the area controlled by the VLR.

### WAP
Wireless Application Protocol. A standard designed to allow the content of the Internet to be viewed on the screen of a mobile device such as mobile phones, personal organisers and pagers. It also overcomes the processing limitation of such devices. The information and services available are stripped down to their basic text format.
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### USSD Portal Message Class Screens

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