Oracle® Communications Network Charging and Control

USSD Gateway User's Guide

Release 15.2

January 2026

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About This Document

Scope

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.

Audience

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.

Prerequisites

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.

Related Documents

The following documents are related to this document:

- *USSD GW Technical Guide*
- *CPE User's Guide*
- *SLEE Technical Guide*
- *SMS User's Guide*
- *SMS Technical Guide*

Document Conventions

Typographical Conventions

The following terms and typographical conventions are used in the Oracle Communications Network Charging and Control (NCC) documentation.

Formatting Convention	Type of Information
Special Bold	Items you must select, such as names of tabs. Names of database tables and fields.
Italics	Name of a document, chapter, topic or other publication. Emphasis within text.
Button	The name of a button to click or a key to press. **Example:** To close the window, either click **Close**, or press **Esc**.
Key+Key	Key combinations for which the user must press and hold down one key and then press another. Example: **Ctrl+P** or **Alt+F4**.
`Monospace`	Examples of code or standard output.
`Monospace Bold`	Text that you must enter.
variable	Used to indicate variables or text that should be replaced with an actual value.
menu option > menu option >	Used to indicate the cascading menu option to be selected. Example: **Operator Functions > Report Functions**
hypertext link	Used to indicate a hypertext link.

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

Chapter 1

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? 1
Callback 3
Handset Interaction 5
Performance Reports 6

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
  - 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
  - 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 *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.

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 71) 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.

Step	Action
1	In the USSD Gateway Base Configuration Screens, *Trigger Prefix* (on page 16) tab, configure two records: ▪ Trigger1 has a prefix of *123*. ▪ Trigger2 has a prefix of *124*.
2	In the *USSD Gateway Service Configuration Screen* (on page 33), configure two records: ▪ ServiceTrigger1 uses Trigger1 and has a Dest Service Key of 123. ▪ 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
```

Step	Action
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 *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:

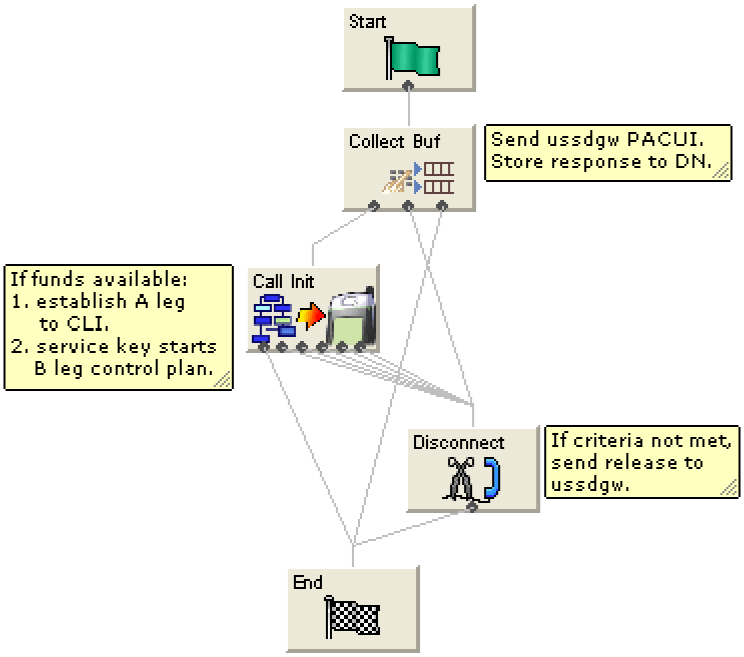
- monitoring the new call, and
- using a retrieved details (including MSRN) for charging.

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

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.

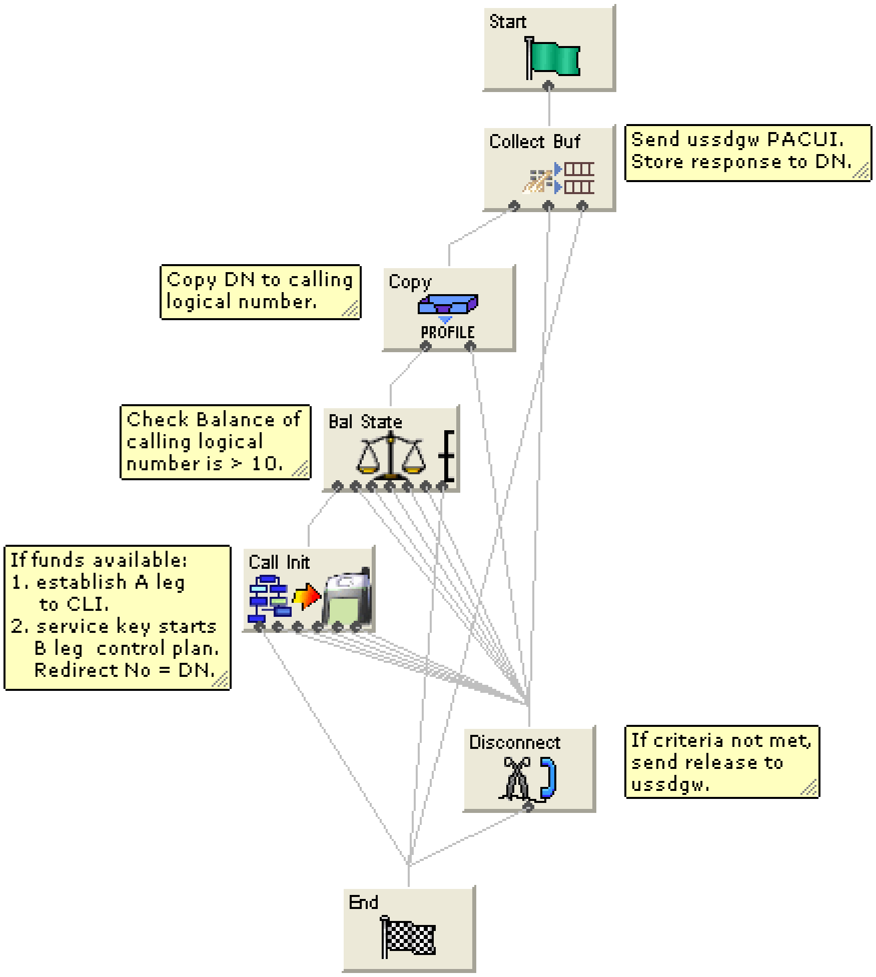

Start
Collect Buf
Send ussdgw PACUI. Store response to DN.
If funds available:
1. establish A leg to CLI.
2. service key starts B leg control plan.
Call Init
Disconnect
If criteria not met, send release to ussdgw.
End

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*.

Collect call back example

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.



Send ussdgw PACUI. Store response to DN.

Copy DN to calling logical number.

Check Balance of calling logical number is > 10.

If funds available:
1. establish A leg to CLI.
2. service key starts B leg control plan. Redirect No = DN.

If criteria not met, send release to ussdgw.

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 6) 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.

Value	Interval
30	30 seconds
60	1 minute
300	5 minutes

Value	**Interval**
900	15 minutes
1800	30 minutes
3600	1 hour (use for hourly reports)

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:
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

Chapter 2

Getting Started

Overview

Purpose

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

In this chapter

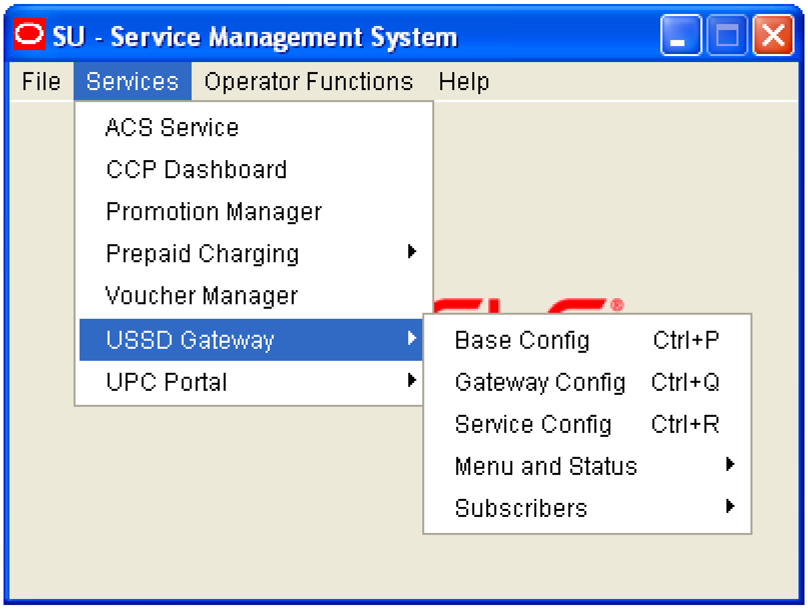
This chapter contains the following topics.

Accessing USSD Gateway 9
Accessing UPC Portal 11
Common Buttons and Fields 11
Using the Find Screens 12

Accessing USSD Gateway

Procedure

Follow these steps to access the USSD Gateway screens.

Step	Action
1	From the Service Management System screen, select the **Services** menu. 
2	Select **USSD Gateway**.
3	Select the screen you want to use.

SU - Service Management System
File
Services
Operator Functions
Help
ACS Service
CCP Dashboard
Promotion Manager
Prepaid Charging
Voucher Manager
USSD Gateway
UPC Portal
Base Config Ctrl+P
Gateway Config Ctrl+Q
Service Config Ctrl+R
Menu and Status
Subscribers

USSD Gateway menu options

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

Menu	**Description**
Base Config	Provides access to the creation and maintenance screens for base USSD Gateway configuration.
Gateway Config	Provides access to the creation and maintenance screens for global USSD Gateway configuration.
Service Config	Provides access to the creation and maintenance screens for USSD Gateway services.
Menu and Status	Provides access to the creation and maintenance screens for menus and statuses of USSD Gateway.
Subscribers	Provides access to the creation and maintenance screens for subscribers.

Base Config screen

The USSD Gateway Base Configuration Screen contains four tabs:

- *Trigger Prefix* (on page 16)
- *Language* (on page 18)
- *Service Interface* (on page 21)
- *Operator* (on page 23)

Gateway Config screen

The USSD Gateway Configuration screen contains one tab:

- *Gateway Configuration* (on page 28)

Service Config screen

The USSD Gateway Service Configuration screen contains one tab:

- *Service Trigger* (on page 34)

Menu and Status screens

The Menu and Status option contains three sub menus:

- Wizard - This option contains two screens:
  - *Menu Wizard* (on page 40)
  - *Status Wizard* (on page 44)
- Config - The USSD Gateway Menu Configuration Screens contains two tabs:
  - *Menu Info* (on page 46)
  - *Status Info Configuration* (on page 49)
- Display - The USSD Gateway Menu Display Screens contains two tabs:
  - *Menu Language* (on page 51)
  - *Status Language* (on page 55)

Subscribers screens

The Subscribers menu option contains the screens:

- *Access Control Screen* (on page 62)

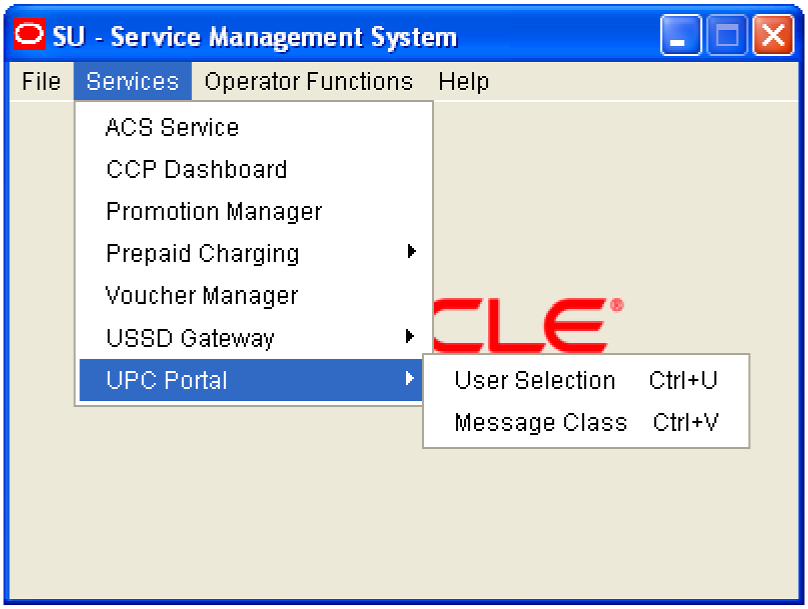
- *IMSI Tracing* (on page 64)
- *CDR Viewer* (on page 66)
- *UPC CDR Viewer Screen* (on page 70)

Accessing UPC Portal

Procedure

Follow these steps to open the UPC Portal screens.

Step	Action
1	From the Service Management System screen, select **Services**.


SU - Service Management System
File
Services
Operator Functions
Help
ACS Service
CCP Dashboard
Promotion Manager
Prepaid Charging
Voucher Manager
USSD Gateway
UPC Portal
User Selection Ctrl+U
Message Class Ctrl+V

Step	Action
2	Select **UPC Portal**.
3	Select the entry for the screen you want to use.

UPC Portal menu options

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

Menu	Description
User Selection	Provides access to the creation and maintenance screens for User Selection.
Message Class	Provides access to the creation and maintenance screens for Message Classes.

Refer to the chapter, *UPC Portal Screens* (on page 71), for details about using these screens.

Common Buttons and Fields

On-screen buttons

This application uses a set of buttons to start specific actions within each screen.

The table below describes the function of each button.

Button	**Function**
Find	Opens the Find window, enabling you to find records that match the search criteria.
Save	Saves any changes to the record on the current screen to the database.
Clear	Clears all entries from the screen, enabling you to clear the screen before adding a new record.
Close	Closes the current screen and returns you to the previous screen in the screen hierarchy. **Note:** Any changes that have been made on-screen will not be saved (unless **Save** has been clicked previously).
Search	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.
Delete	Removes the selected record from the database.
Help	Opens context-sensitive Help containing information about the functionality available in the current screen.

Common fields

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

Field	**Description**
Comment	For adding a comment for the record.
Term	The terminal that the session is using to log on.
Date	Date of last change to record.
User	User who last changed the record.

Data entry

Follow the steps below to enter a new Gateway configuration.

Step	**Action**
1	Click **Clear** to clear the screen of previous data.
2	Enter new data and click **Save**. **Result:** The new Gateway configuration is saved.

Using the Find Screens

Introduction

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

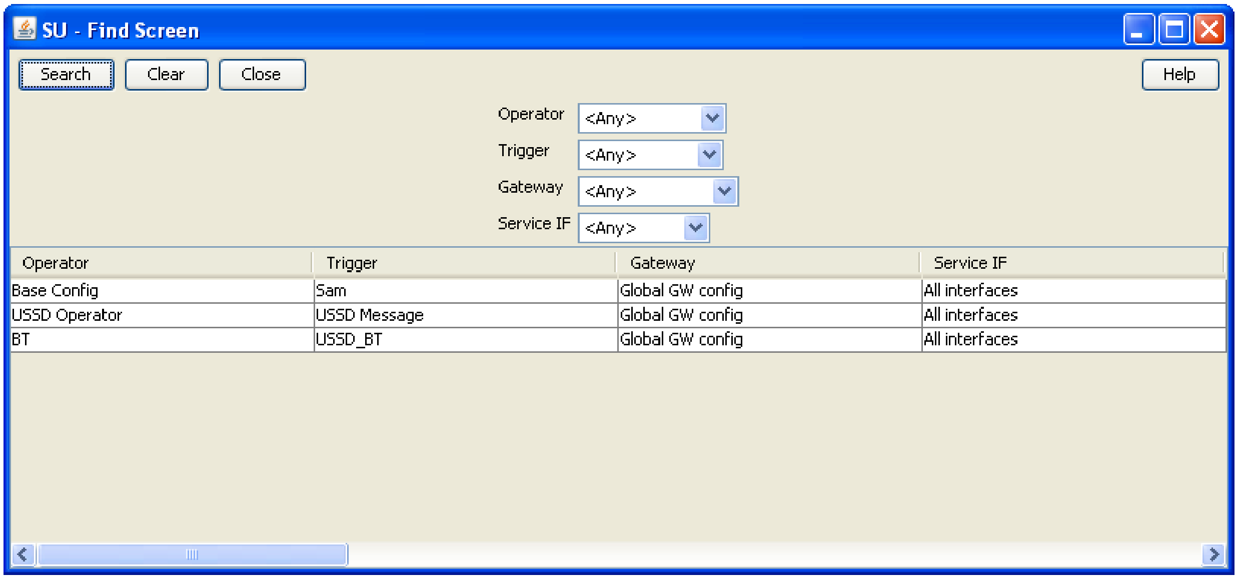
Accessing a find screen

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

Example find screen

Here is an example Find Screen.

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



Operator <Any>
Trigger <Any>
Gateway <Any>
Service IF <Any>

Operator	Trigger	Gateway	Service IF
Base Config	Sam	Global GW config	All interfaces
USSD Operator	USSD Message	Global GW config	All interfaces
BT	USSD_BT	Global GW config	All interfaces

Editing records

Follow the steps below to edit a record.

Step	Action
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.

Searching the database

Follow these steps to search the database.

Step	Action
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, the search retrieves 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 table at the bottom of the screen. **Example:** If you enter 123 in a query field, the system returns records such as 123, 1234, and 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

Introduction

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

In this chapter

This chapter contains the following topics.

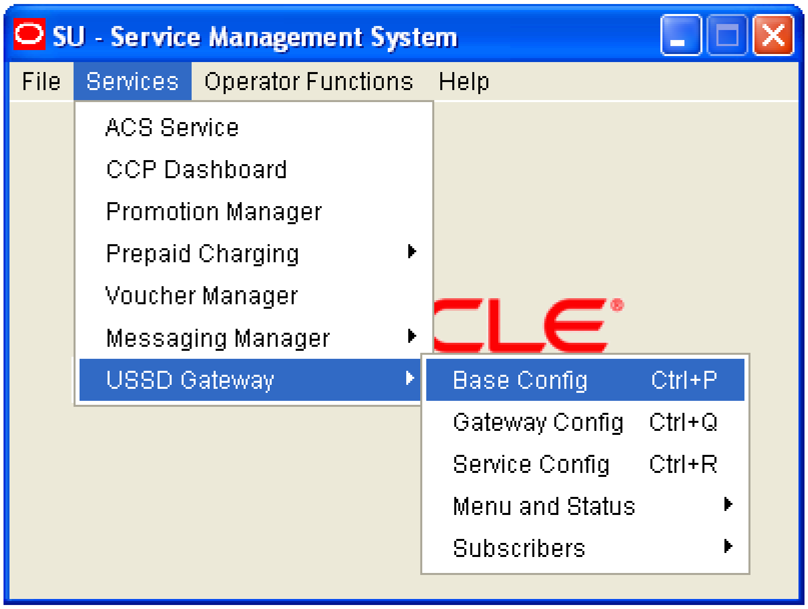
USSD Gateway Base Configuration Screen 15
Trigger Prefix 16
Language 18
Service Interface 21
Operator 23

USSD Gateway Base Configuration Screen

Accessing USSD Gateway Base Configuration screen

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

Step	Action
1	From the Service Management System screen, select the **Services** menu.


SU - Service Management System
File
Services
Operator Functions
Help
ACS Service
CCP Dashboard
Promotion Manager
Prepaid Charging
Voucher Manager
Messaging Manager
USSD Gateway
Base Config Ctrl+P
Gateway Config Ctrl+Q
Service Config Ctrl+R
Menu and Status
Subscribers

Step	Action
2	Select **USSD Gateway > Base Config**, or use the **Ctrl+P** shortcut keys.

Trigger Prefix

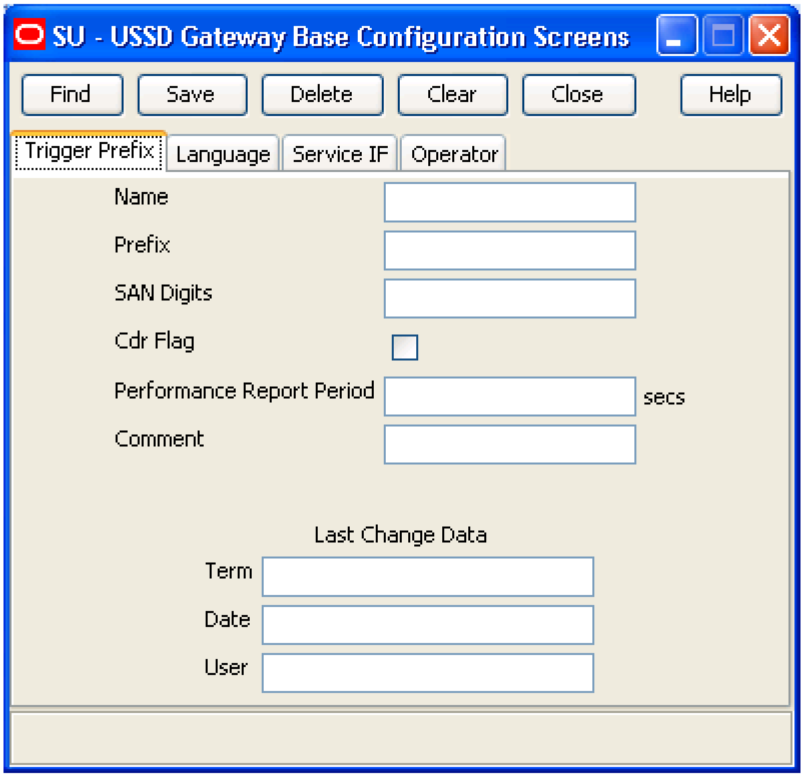
Introduction

The **Trigger Prefix** configuration tab allows you to name Trigger Prefixes and set up 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.


SU - USSD Gateway Base Configuration Screens
Find
Save
Delete
Clear
Close
Help
Trigger Prefix
Language
Service IF
Operator
Name
Prefix
SAN Digits
Cdr Flag
Performance Report Period
secs
Comment
Last Change Data
Term
Date
User

Fields

Here is a description of the fields.

Field	Description
Name	Unique name of this Trigger Prefix. Required. **Allowed values:** • Alphanumeric string up to 30 characters in length.

Field	Description
Prefix	The Prefix that prefixes the IMSI that can trigger a particular service interface. This prefix is used in the Service Configuration screen. Required. **Allowed values:** • Alphanumeric string up to 10 characters in length.
SAN Digits	The number of digits that should be sent to the Service Interface as the Service Access Number for this session. Optional. **Allowed values:** • 0 to 99.
Cdr Flag	Selecting this check box will enable EDR generation for this Trigger Prefix. **Note:** The global CDR Flag on the *Gateway Configuration tab* (on page 29) must also be checked before the USSD GW application on the SLC can begin to generate EDRs.
Performance Report Period	The interval (in seconds) after which the USSD GW application on the SLC will generate performance reports. **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.

Data entry - trigger prefix

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.**

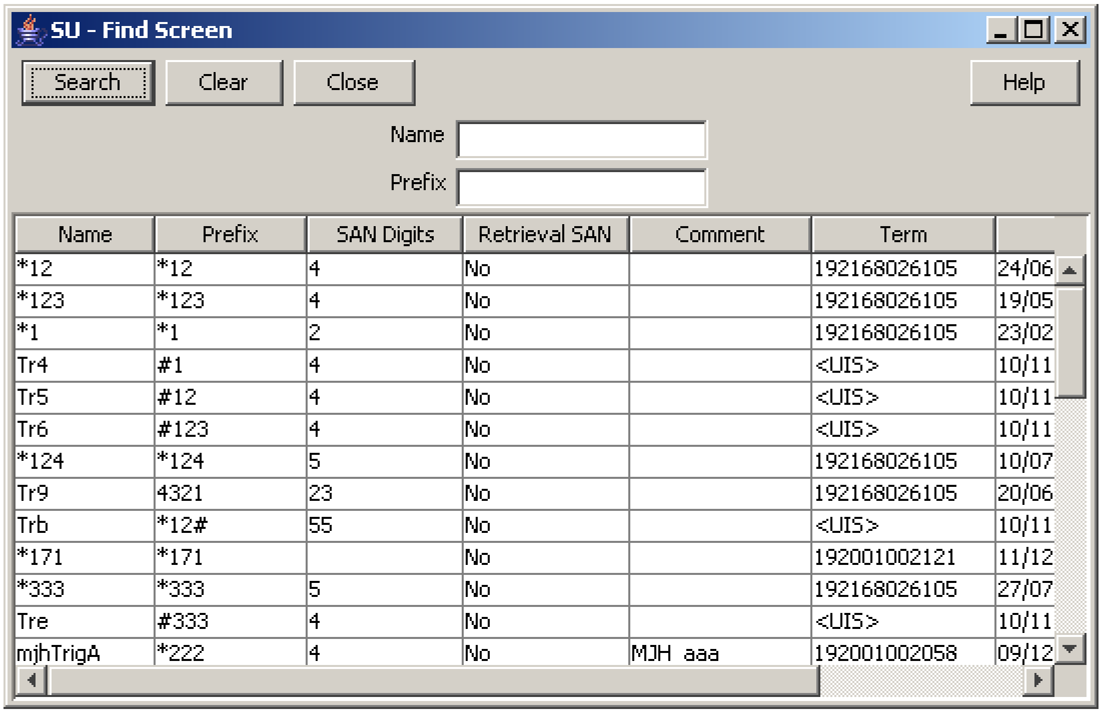
Buttons and other fields

For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 11).

Clicking **Find** displays the Find screen.

Find Screen

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



Name

Prefix

Name	Prefix	SAN Digits	Retrieval SAN	Comment	Term	
*12	*12	4	No		192168026105	24/06
*123	*123	4	No		192168026105	19/05
*1	*1	2	No		192168026105	23/02
Tr4	#1	4	No		<UIS>	10/11
Tr5	#12	4	No		<UIS>	10/11
Tr6	#123	4	No		<UIS>	10/11
*124	*124	5	No		192168026105	10/07
Tr9	4321	23	No		192168026105	20/06
Trb	*12#	55	No		<UIS>	10/11
*171	*171		No		192001002121	11/12
*333	*333	5	No		192168026105	27/07
Tre	#333	4	No		<UIS>	10/11
mjhTrigA	*222	4	No	MJH aaa	192001002058	09/12

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 12).

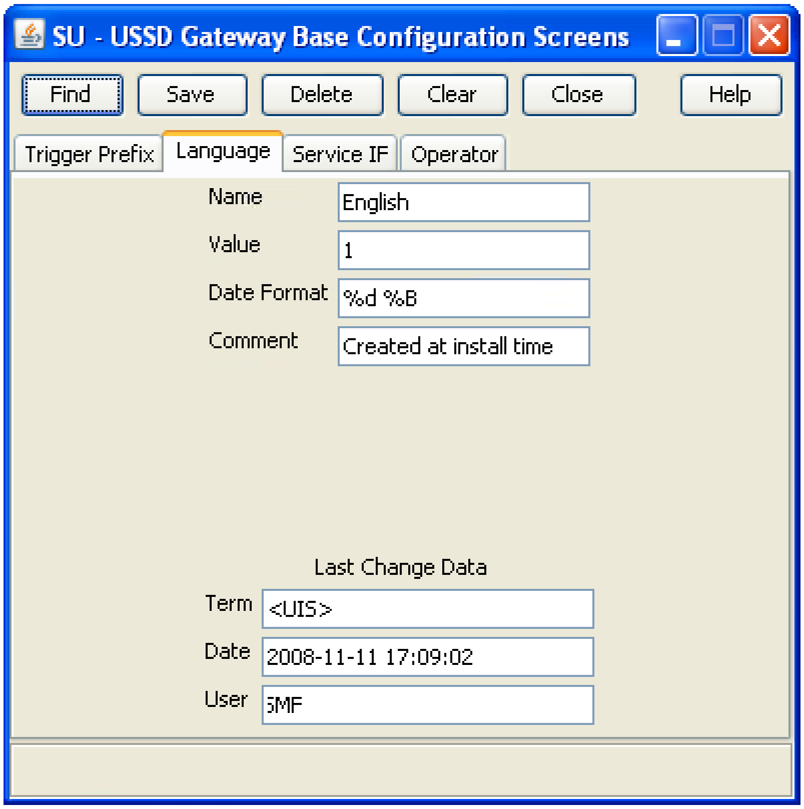
Language

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.


SU - USSD Gateway Base Configuration Screens
Find
Save
Delete
Clear
Close
Help
Trigger Prefix
Language
Service IF
Operator

Name: English

Value: 1

Date Format: %d %B

Comment: Created at install time

Last Change Data

Term: <UIS>

Date: 2008-11-11 17:09:02

User: MF

Fields

Here is a description of the fields.

Field	**Description**
Name	The language, such as English or French. Alphanumeric field up to 20 characters in length. This field is mandatory.
Value	A unique value that is viewed externally and sent to the gateway interface. Numeric field, valid values 0 – 19. This field is mandatory.

Date Format	The format for date variables when put into a message. This field is mandatory. Valid format tokens are shown below. You can separate tokens with spaces, commas, dashes, slashes, or backslashes. • %a – Three-character day of the week. For example, Mon, Tue, Wed, Thu, Fri. • %A – Full name for the day of the week. For example, Monday. • %b – Three-character month. For example, Jan. • %B – Full name for the month. For example, January. • %d – Two-digit day of the month. For example, 30. • %y – Two-digit year. For example, 15 for 2015. • %Y – Four-digit year. For example, 2015. • %m – Two-digit month. For example, 01 for January. For example, to specify a date format like 04 September 2015, set **Date Format** to %d %B %Y, or to specify a date format like 04-09-15, set **Date Format** to %d-%m-%y.

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 fields must match the SRF ID in the ACS configuration. This means that if the SRF ID of 1 corresponds to English in the ACS configuration, the language entry on this tab must match.

For example:

```
ACS configuration
English, MSG=2, SRF=1

USSD configuration
Name: English  Value: 1 Date Format=%d %B %Y
```

Data entry

Follow these steps to enter a new Language configuration.

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

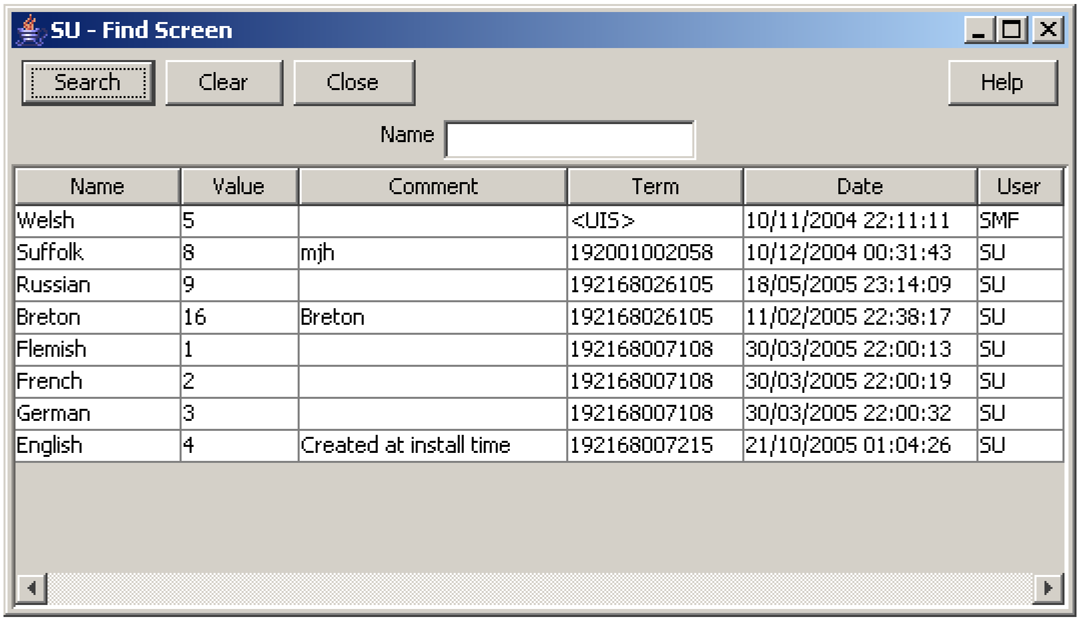
Buttons and other fields

For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 11).

Clicking **Find** displays the Find screen.

Find Screen

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



Name	Value	Comment	Term	Date	User
Welsh	5		<UIS>	10/11/2004 22:11:11	SMF
Suffolk	8	mjh	192001002058	10/12/2004 00:31:43	SU
Russian	9		192168026105	18/05/2005 23:14:09	SU
Breton	16	Breton	192168026105	11/02/2005 22:38:17	SU
Flemish	1		192168007108	30/03/2005 22:00:13	SU
French	2		192168007108	30/03/2005 22:00:19	SU
German	3		192168007108	30/03/2005 22:00:32	SU
English	4	Created at install time	192168007215	21/10/2005 01:04:26	SU

Using the find screen

You can search on:

- Name

For more information about searching and editing records, see *Using the Find Screens* (on page 12).

Service Interface

Introduction

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.

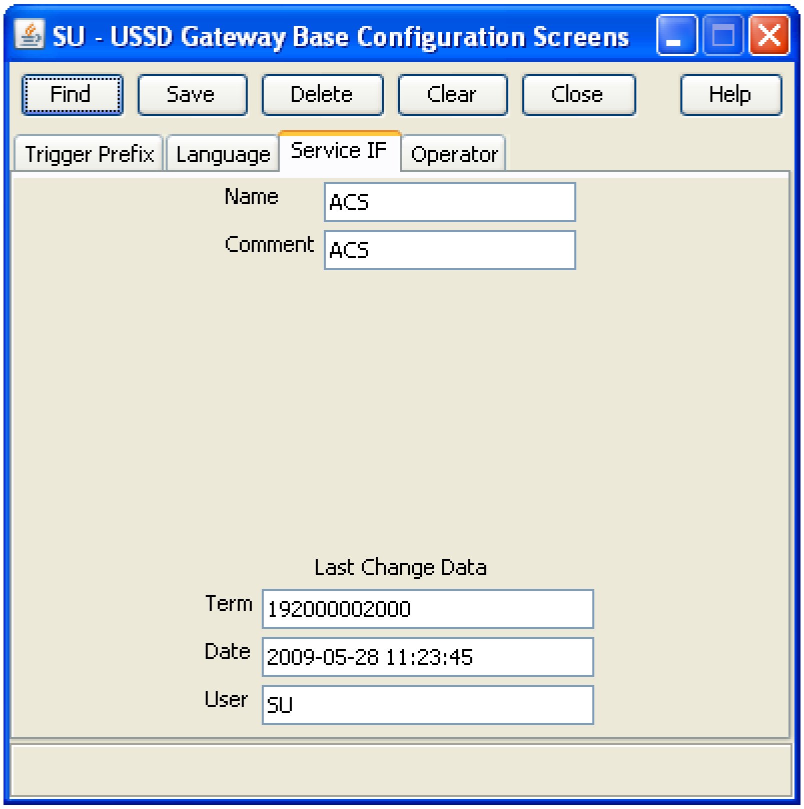
You can partition your menus to a finer resolution (for example: “ACS-mini-News”, “ACS-Weather” and so on). These are entered in the Service Interface tab. You must also configure an associated trigger prefix to uniquely identify the service (not just a service group) and both these entries must be referenced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

Service IF tab

Here is an example **Service IF** tab.


SU - USSD Gateway Base Configuration Screens
Find
Save
Delete
Clear
Close
Help
Trigger Prefix
Language
Service IF
Operator
Last Change Data

Name: ACS

Comment: ACS

Term: 192000002000

Date: 2009-05-28 11:23:45

User: SU

Fields

Here is a description of the fields.

Field	Description
Name	Unique name for this Service Interface. Required. **Allowed values:** • Alphanumeric field up to 20 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 Service Interface configuration.

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

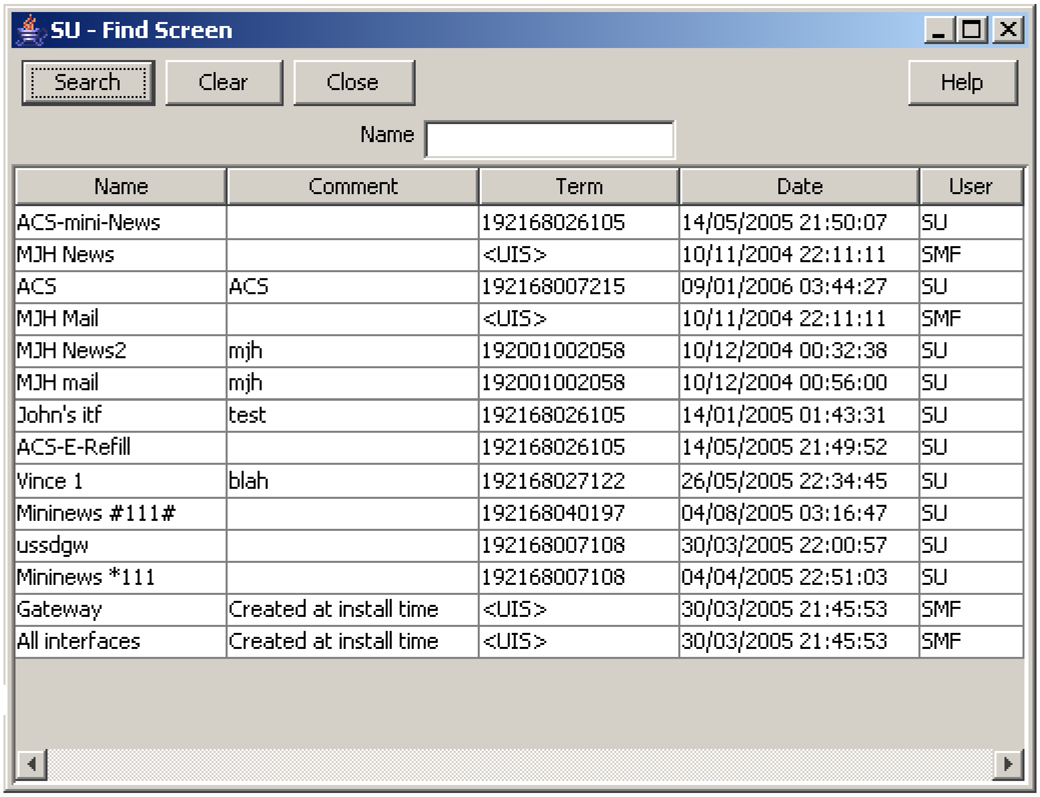
Buttons and other fields

For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 11).

Clicking **Find** displays the Find screen.

Find Screen

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



Name	Comment	Term	Date	User
ACS-mini-News		192168026105	14/05/2005 21:50:07	SU
MJH News		<UIS>	10/11/2004 22:11:11	SMF
ACS	ACS	192168007215	09/01/2006 03:44:27	SU
MJH Mail		<UIS>	10/11/2004 22:11:11	SMF
MJH News2	mjh	192001002058	10/12/2004 00:32:38	SU
MJH mail	mjh	192001002058	10/12/2004 00:56:00	SU
John's itf	test	192168026105	14/01/2005 01:43:31	SU
ACS-E-Refill		192168026105	14/05/2005 21:49:52	SU
Vince 1	blah	192168027122	26/05/2005 22:34:45	SU
Mininews #111#		192168040197	04/08/2005 03:16:47	SU
ussdgw		192168007108	30/03/2005 22:00:57	SU
Mininews *111		192168007108	04/04/2005 22:51:03	SU
Gateway	Created at install time	<UIS>	30/03/2005 21:45:53	SMF
All interfaces	Created at install time	<UIS>	30/03/2005 21:45:53	SMF

Using the find screen

You can search on:

- Name

For more information about searching and editing records, see *Using the Find Screens* (on page 12).

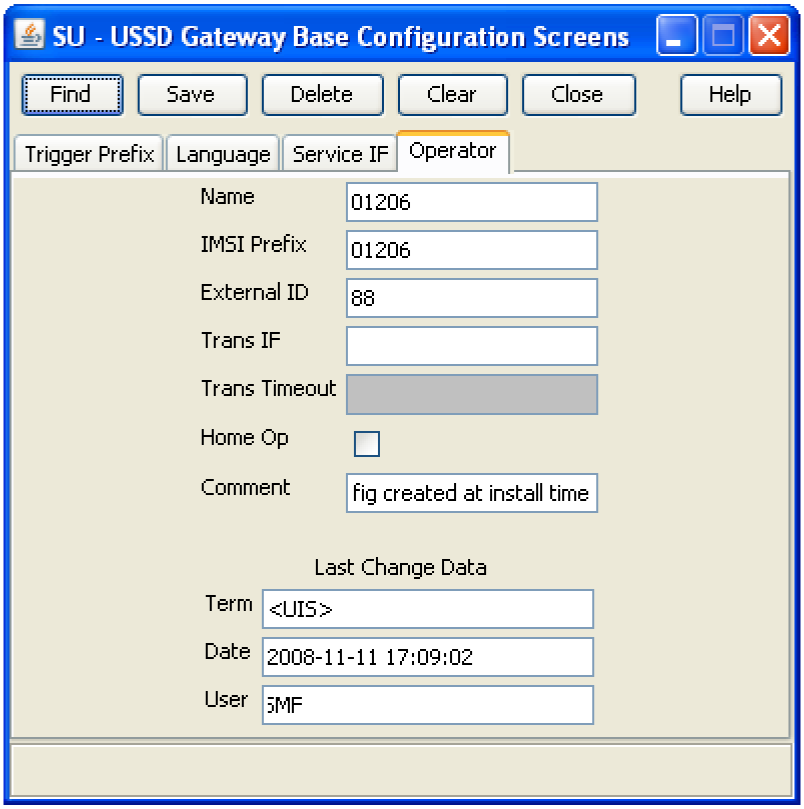
Operator

Introduction

The **Operator** tab allows you to set up different operators against different IMSI prefixes and using different IMSI to MSISDN mapping interfaces.

Operator tab

Here is an example **Operator** tab.


SU - USSD Gateway Base Configuration Screens
Find
Save
Delete
Clear
Close
Help
Trigger Prefix
Language
Service IF
Operator
Last Change Data

Name: 01206
IMSI Prefix: 01206
External ID: 88
Trans IF:
Trans Timeout:
Home Op: ☐
Comment: fig created at install time

Last Change Data
Term: <UIS>
Date: 2008-11-11 17:09:02
User: SMF

Fields

Here is a description of the fields.

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

Field	Description
Home Op	If ticked, this operator is the home operator.

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.

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

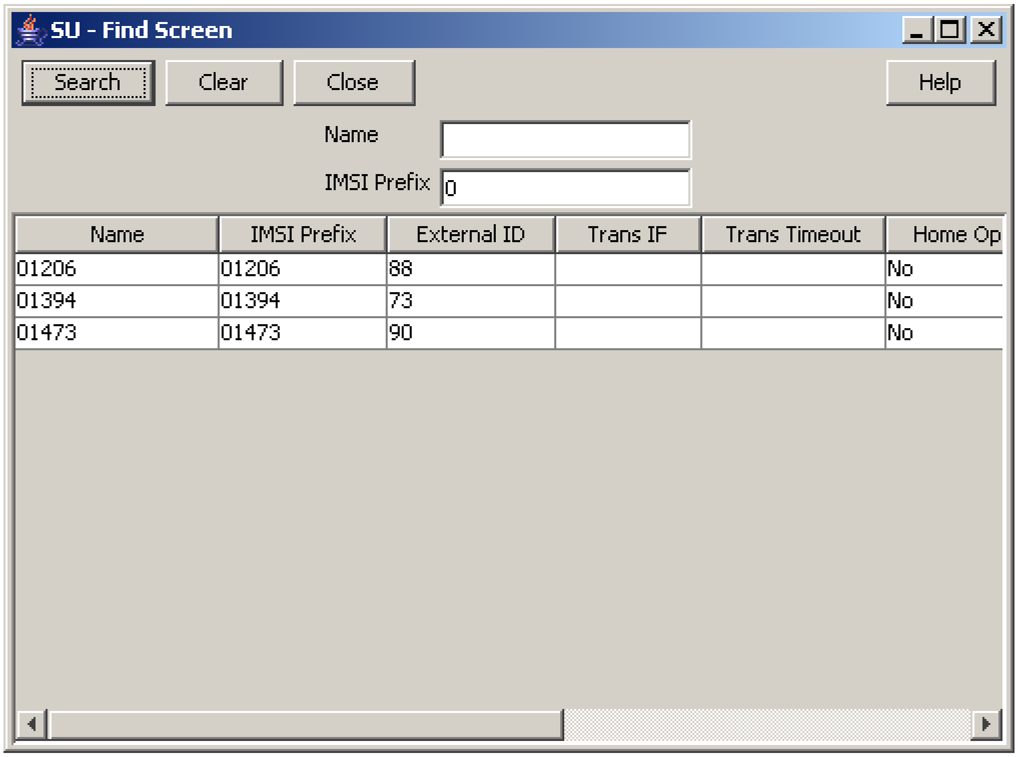
Buttons and other fields

For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 11).

Clicking **Find** displays the Find screen.

Find Screen

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



Name

IMSI Prefix 0

Name	IMSI Prefix	External ID	Trans IF	Trans Timeout	Home Op
01206	01206	88			No
01394	01394	73			No
01473	01473	90			No

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 12).

Chapter 4

USSD Gateway Configuration Screen

Overview

Introduction

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

In this chapter

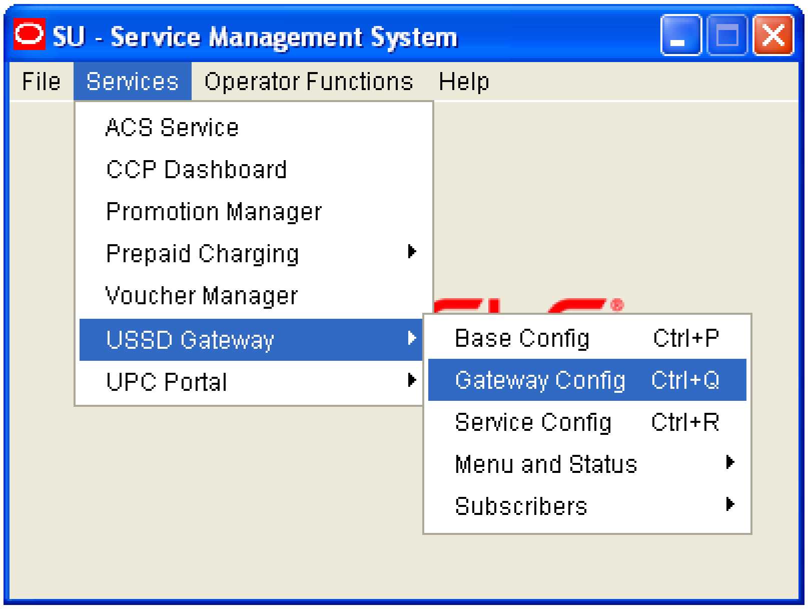
This chapter contains the following topics.

USSD Gateway Menu Configuration Screen 27
Gateway Configuration Screen 28

USSD Gateway Menu Configuration Screen

Accessing USSD Gateway Configuration screen

Follow these steps to access the USSD Gateway Configuration Screen.

Step	Action
1	From the Service Management System screen, select the **Services** menu.  SU - Service Management System File Services Operator Functions Help ACS Service CCP Dashboard Promotion Manager Prepaid Charging Voucher Manager USSD Gateway UPC Portal Base Config Ctrl+P Gateway Config Ctrl+Q Service Config Ctrl+R Menu and Status Subscribers
2	Select **USSD Gateway > Gateway Config**, or use the **Ctrl+Q** shortcut keys.

Gateway Configuration Screen

Introduction

The USSD Gateway Configuration 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.

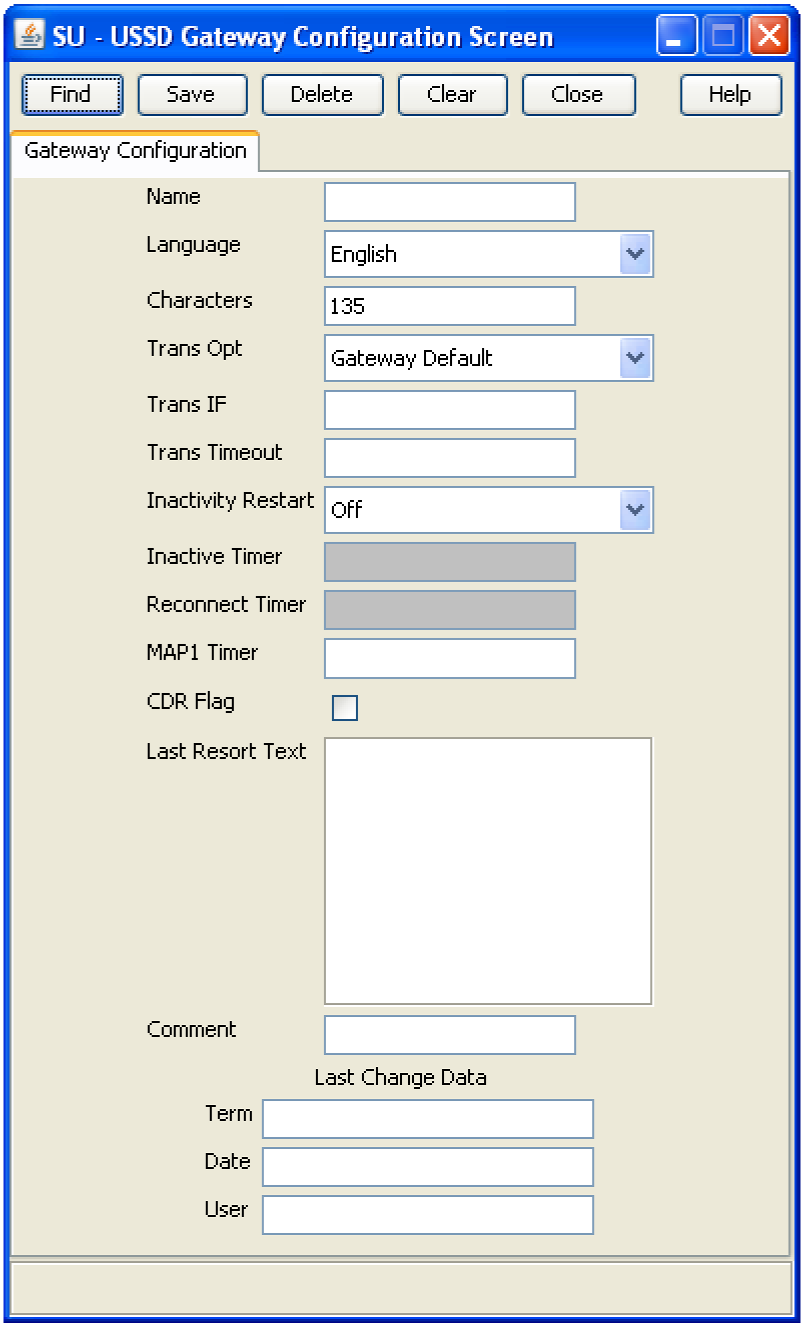
Important: reloading the configuration

If the USSD 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*.

Gateway Configuration tab

Here is an example **Gateway Configuration** tab.


SU - USSD Gateway Configuration Screen
Find
Save
Delete
Clear
Close
Help
Gateway Configuration

Name
Language: English
Characters: 135
Trans Opt: Gateway Default
Trans IF
Trans Timeout
Inactivity Restart: Off
Inactive Timer
Reconnect Timer
MAP1 Timer
CDR Flag ☐
Last Resort Text
Comment

Last Change Data

Term
Date
User

Fields

Here is a description of the fields.

Field	Description
Name	Unique name of this gateway interface.

Field	Description
Language	Default language of the gateway interface when no usable user preference is available. This list is populated by the entries in the *Language* (on page 18) tab in the USSD Gateway Base Configuration Screen.
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.

Field	Description
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 selected, 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.

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

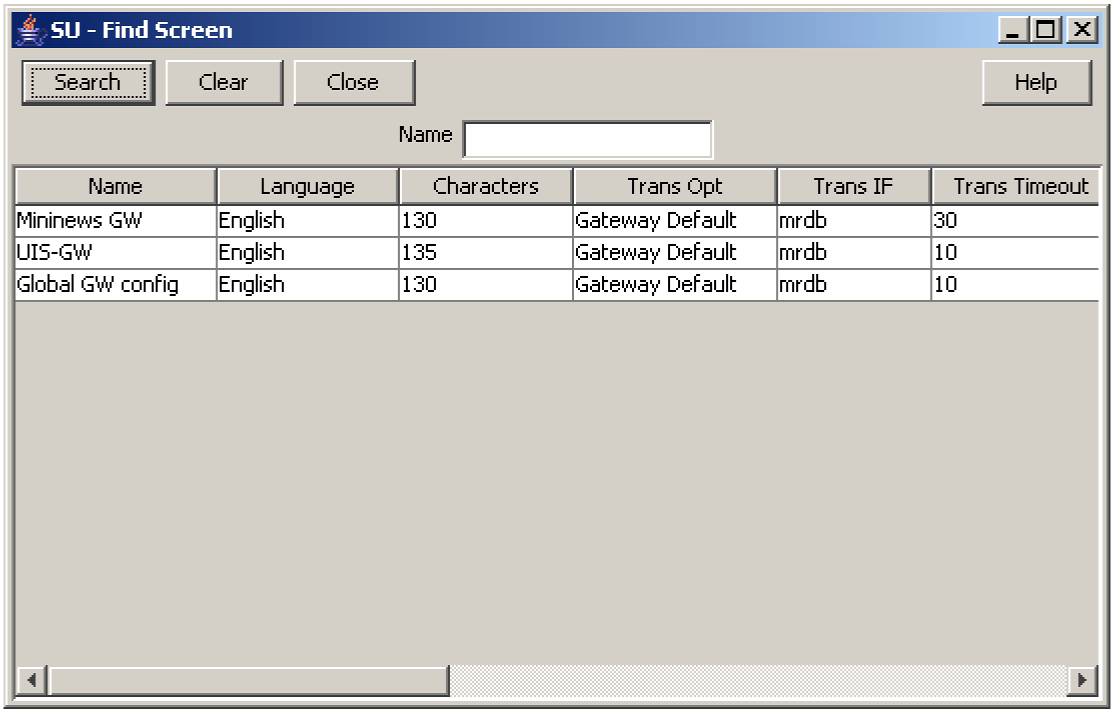
Buttons and other fields

For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 11).

Clicking **Find** displays the Find screen.

Find Screen

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



Name	Language	Characters	Trans Opt	Trans IF	Trans Timeout
Mininews GW	English	130	Gateway Default	mrdb	30
UIS-GW	English	135	Gateway Default	mrdb	10
Global GW config	English	130	Gateway Default	mrdb	10

Using the find screen

You can search on:

- Name

For more information about searching and editing records, see *Using the Find Screens* (on page 12).

Chapter 5

USSD Gateway Service Configuration Screen

Overview

Introduction

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

In this chapter

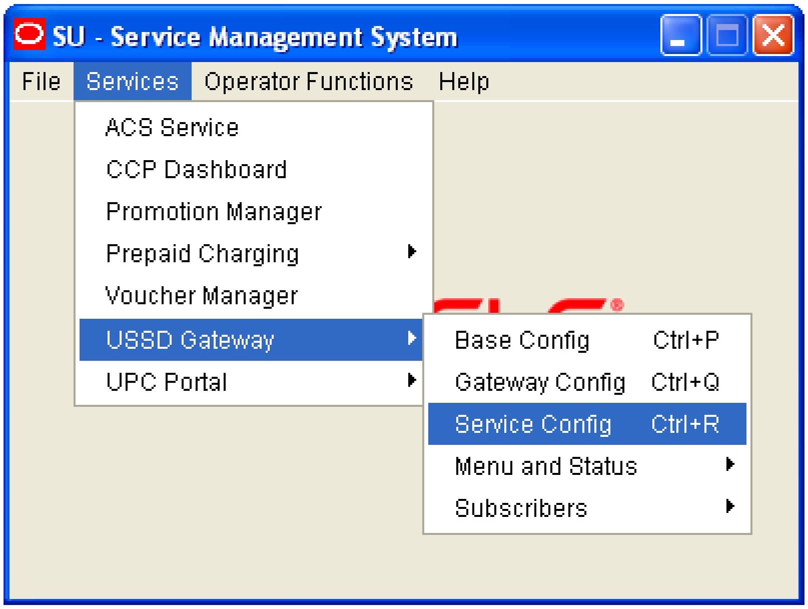
This chapter contains the following topics.

USSD Gateway Service Configuration Screen 33
Service Trigger 34

USSD Gateway Service Configuration Screen

Accessing USSD Gateway Service configuration screen

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

Step	Action
1	From the Service Management System screen, select the **Services** menu.  SU - Service Management System File Services Operator Functions Help ACS Service CCP Dashboard Promotion Manager Prepaid Charging Voucher Manager USSD Gateway UPC Portal Base Config Ctrl+P Gateway Config Ctrl+Q Service Config Ctrl+R Menu and Status Subscribers
2	Select **USSD Gateway > Service Config**, or use the **Ctrl+R** shortcut keys.

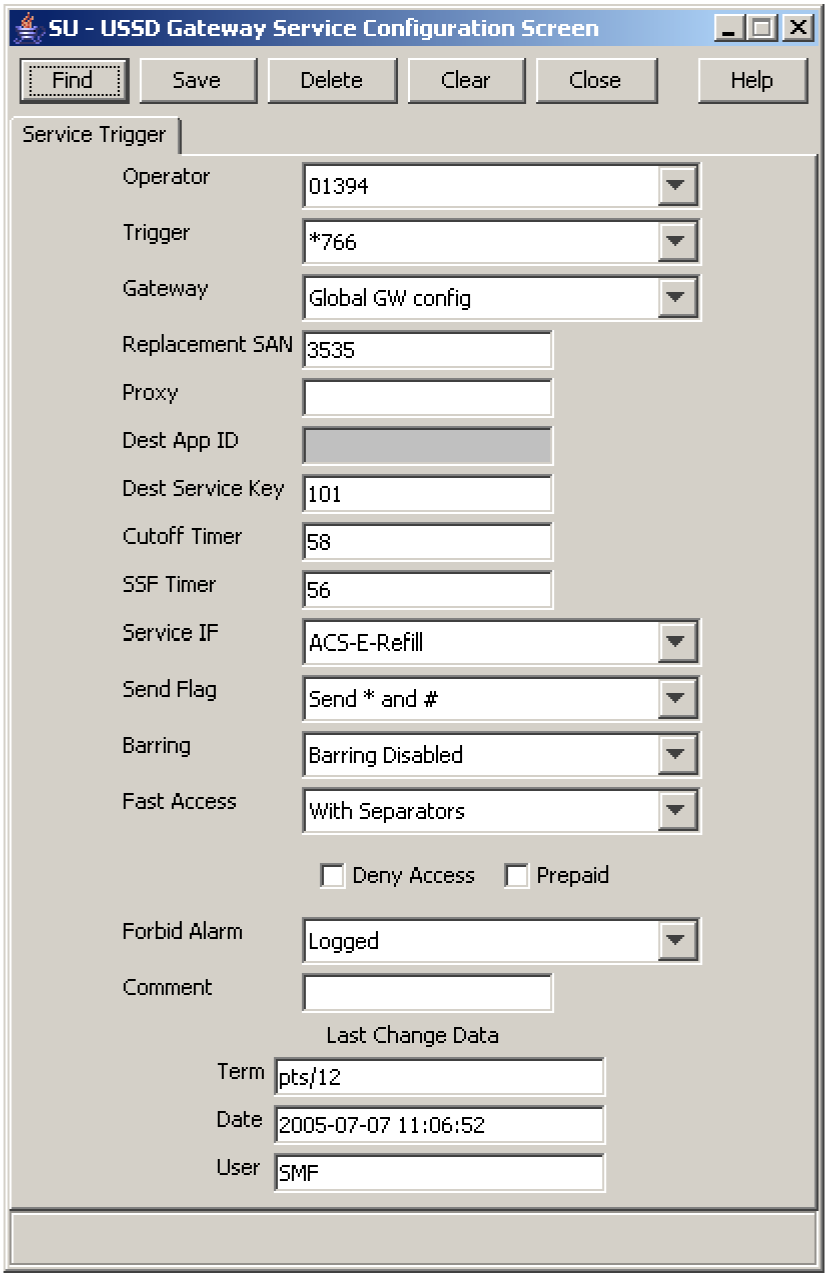
Service Trigger

Introduction

The **Service Trigger** 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.

Service Trigger tab

Here is an example **Service Trigger** tab.


SU - USSD Gateway Service Configuration Screen
Find
Save
Delete
Clear
Close
Help
Service Trigger

Operator	01394
Trigger	*766
Gateway	Global GW config
Replacement SAN	3535
Proxy	
Dest App ID	
Dest Service Key	101
Cutoff Timer	58
SSF Timer	56
Service IF	ACS-E-Refill
Send Flag	Send * and #
Barring	Barring Disabled
Fast Access	With Separators

☐ Deny Access ☐ Prepaid

Forbid Alarm	Logged
Comment	

Last Change Data

Term	pts/12
Date	2005-07-07 11:06:52
User	SMF

Service Trigger fields

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.

Field	**Description**
Operator	The operator this service trigger is set up for. This field is populated by the USSD Gateway Base Configuration Screen *Operator* (on page 23) 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 16) 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 28) 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.
Cutoff Timer	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 "Session cut off timer expiry"). Required. This timer cannot be reset. **Allowed values:** • Numeric field up to 9 digits in length.

Field	Description
SSF Timer	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 "SSF timer expiry"). If a response is received before the timer expires, the timer is stopped. **Allowed values:** • 1-999999999
Service IF	The service interface triggered by this service trigger. Dictates the menus that are required for the service. This field is populated by the *Service Interface* (on page 21) 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".
Send Flag	Whether '*' or '#' characters should be sent to the service interface for responses to PACUIs. If set to "Send '*' 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.
Barring	Contains the following text and database values: • "Barring Disabled" – value of 0 • "Barring IMSI" – value of 1, and • "Barring MSISDN" – value of 2.
Fast Access	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
Deny Access	Selecting this check box unconditionally bars all users from the service that meet the trigger criteria.
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.

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

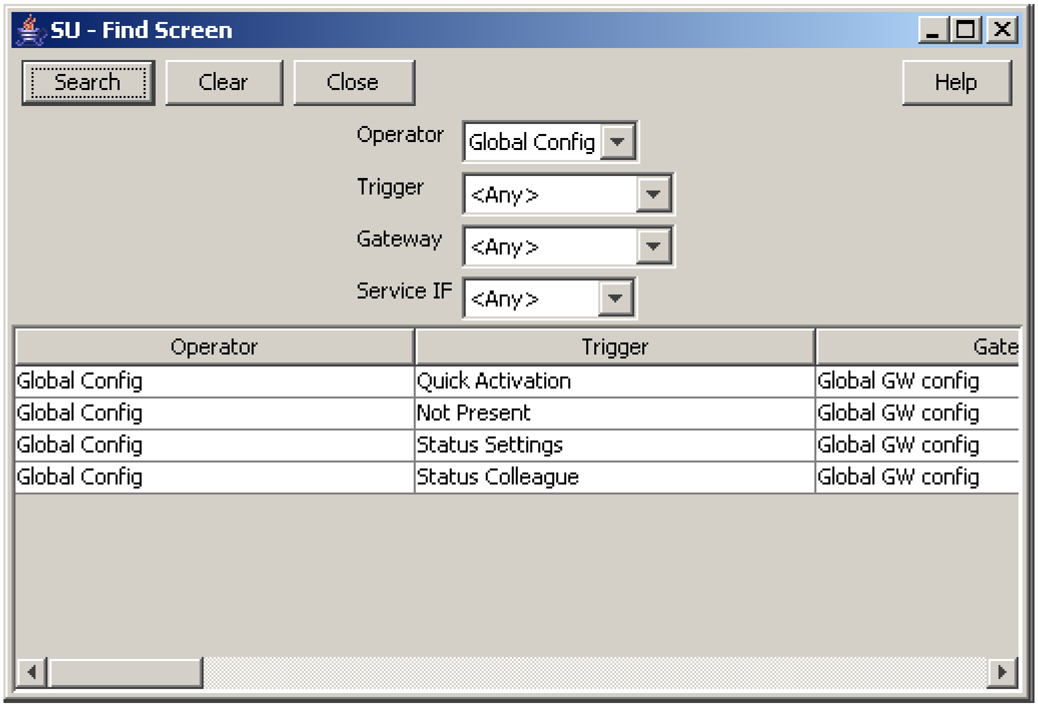
Buttons and other fields

For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 11).

Clicking **Find** displays the Find screen.

Find Screen

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



Operator: Global Config
Trigger: <Any>
Gateway: <Any>
Service IF: <Any>

Operator	Trigger	Gate
Global Config	Quick Activation	Global GW config
Global Config	Not Present	Global GW config
Global Config	Status Settings	Global GW config
Global Config	Status Colleague	Global GW config

Using the find screen

You can search on:

- Operation
- Trigger
- Gateway
- Service IF

For more information about searching and editing records, see *Using the Find Screens* (on page 12).

Chapter 6

Menu and Status Screens

Overview

Introduction

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

In this chapter

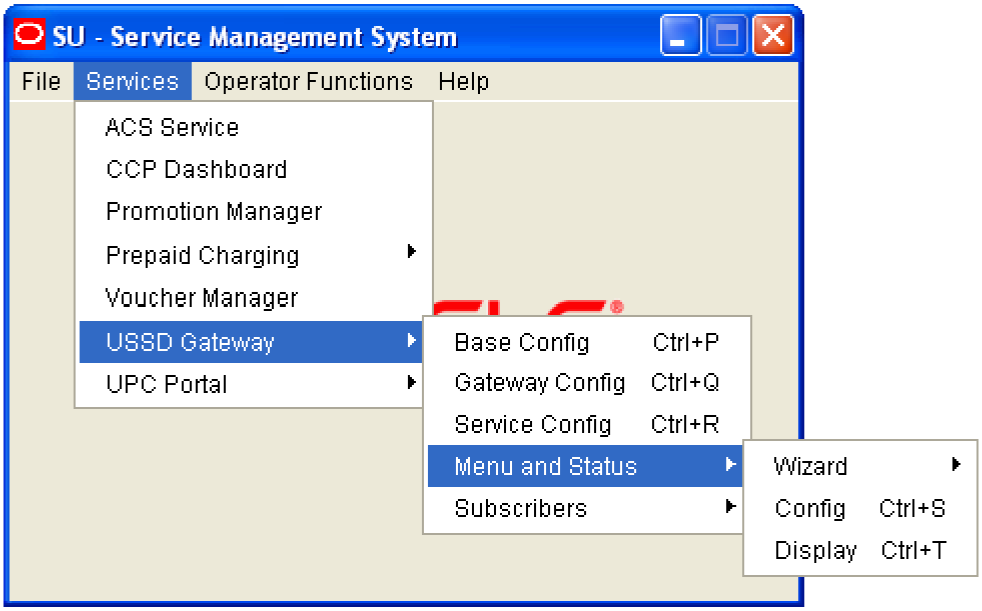
This chapter contains the following topics.

USSD Gateway Menu Configuration Screen 39
Menu Wizard 40
Status Wizard 44
Menu Info Configuration 46
Status Info Configuration 49
Menu Language Display 51
Status Language Display 55

USSD Gateway Menu Configuration Screen

Accessing USSD Gateway Menu configuration screens

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

Step	Action
1	From the Service Management System screen, select the **Services** menu. 
2	Select **USSD Gateway**, then **Menu and Status**.

SU - Service Management System
File
Services
Operator Functions
Help
ACS Service
CCP Dashboard
Promotion Manager
Prepaid Charging
Voucher Manager
USSD Gateway
UPC Portal
Base Config Ctrl+P
Gateway Config Ctrl+Q
Service Config Ctrl+R
Menu and Status
Subscribers
Wizard
Config Ctrl+S
Display Ctrl+T

Step	Action
3	Select the screen you want to use.

Menu Wizard

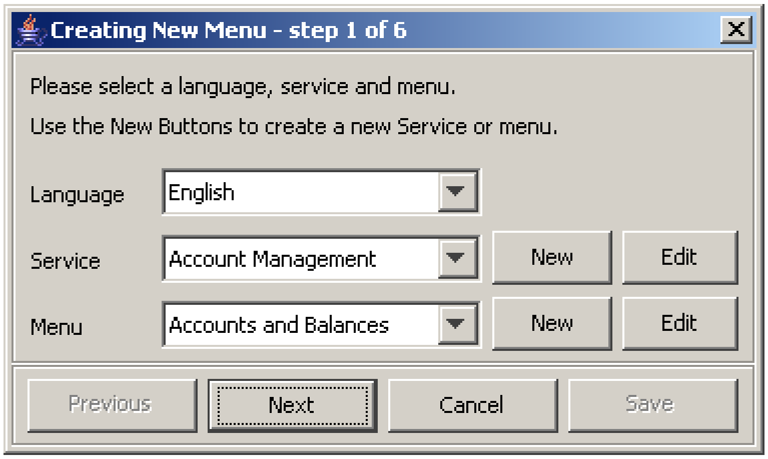
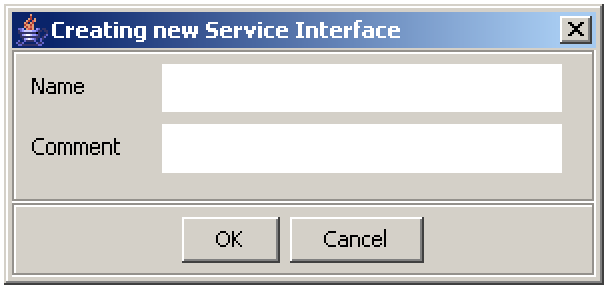
Introduction

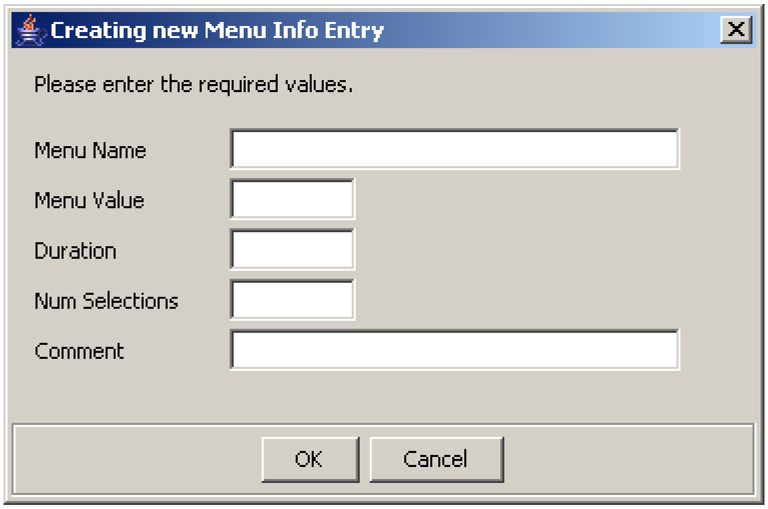
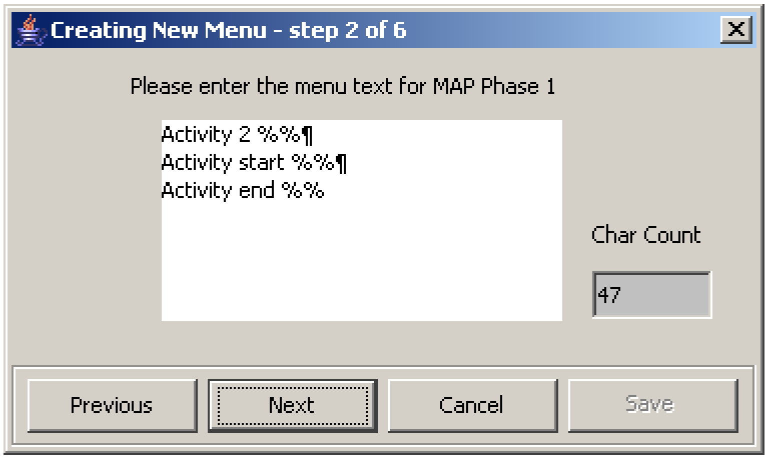
The Menu Wizard allows you to set up menus easily, by allowing you to select and update the Service Interface and Menu Info Entry data, then enter the menu text for MAP 1 and MAP 2. If configuring menus for the *User Selection* (on page 90) node, you will also define a keyword for each branch.

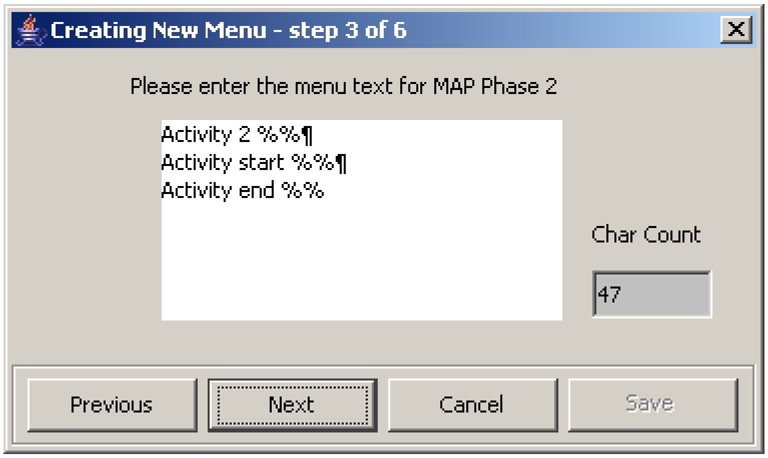
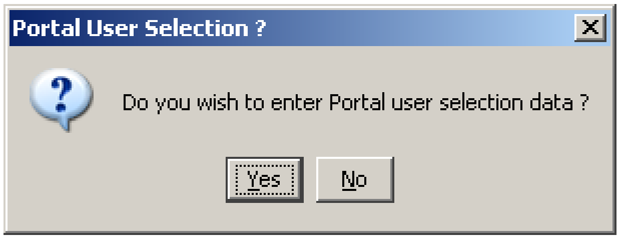
Setting up menus

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.

Step	Action
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 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 New Edit New Edit Previous 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 Name Comment Fill in the fields, as described in *Service Interface* (on page 21) and click **OK**. **Result:** The database is updated.

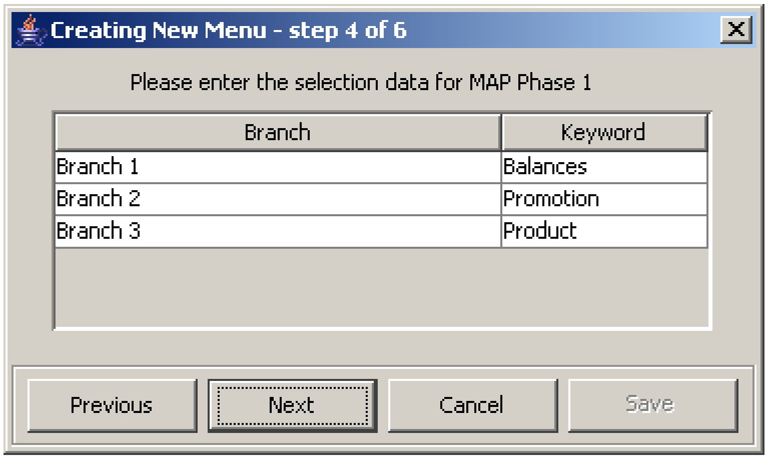
Step	Action
4	Select an existing Menu information entry from the drop down list. You can click **Edit** if you need to change the details. If you require a new Menu information entry, create a new one by clicking **New** to the right of the **Menu** field. **Result:** You see the Creating new Menu Info Entry screen.  Creating new Menu Info Entry Menu Name Menu Value Duration Num Selections Comment OK Cancel Please enter the required values. Fill in the fields, as described in *Menu Info Configuration* (on page 46) 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 Char Count Previous Next Cancel Save Please enter the menu text for MAP Phase 1 Activity 2 %%¶ Activity start %%¶ Activity end %% Char Count: 47 **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 51) tab. The menu text can also be edited using this tab.
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%"

Step	Action
7	Click **Next**. **Result:** You see the Step 3 screen.  Creating New Menu - step 3 of 6 Please enter the menu text for MAP Phase 2 Activity 2 %%¶ Activity start %%¶ Activity end %% Char Count: 47
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 ? Do you wish to enter Portal user selection data ?

Step	Action
10	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.**

Result: You see the Step 4 screen.



Creating New Menu - step 4 of 6

Please enter the selection data for MAP Phase 1

Branch	Keyword
Branch 1	Balances
Branch 2	Promotion
Branch 3	Product

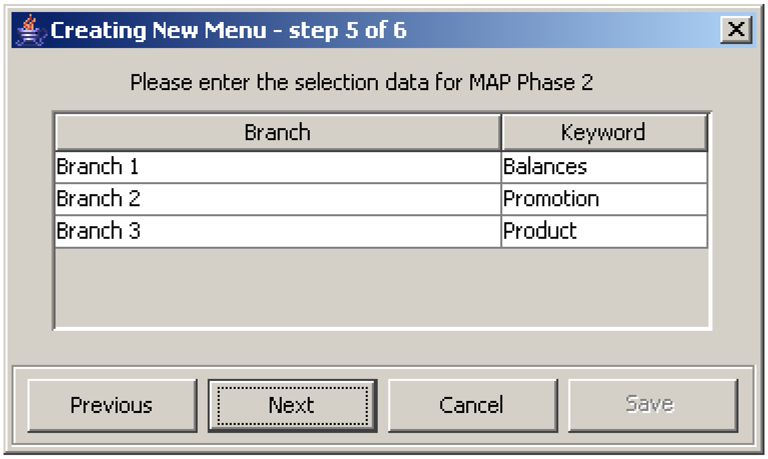
Note: This branch-keyword mapping table is the same as the one accessed on the *User Selection screen* (on page 71).

Otherwise, click **No** to go to the Final Step screen.

11 Select each Keyword cell and type in the selection data for MAP 1.

12 Click **Next**.

Result: You see the Step 5 screen.



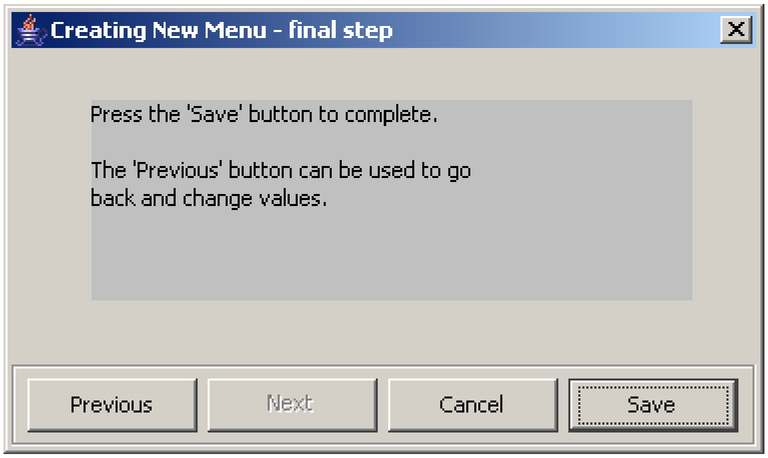
Creating New Menu - step 5 of 6

Please enter the selection data for MAP Phase 2

Branch	Keyword
Branch 1	Balances
Branch 2	Promotion
Branch 3	Product

13 Select each Keyword cell and type in the selection data for MAP 2.

Step	Action
14	Click **Next**. **Result:** You see the Final Step screen.


Creating New Menu - final step
Previous
Next
Cancel
Save

Press the 'Save' button to complete.

The 'Previous' button can be used to go back and change values.

Step	Action
15	To complete the menu creation, click **Save**.

Status Wizard

Introduction

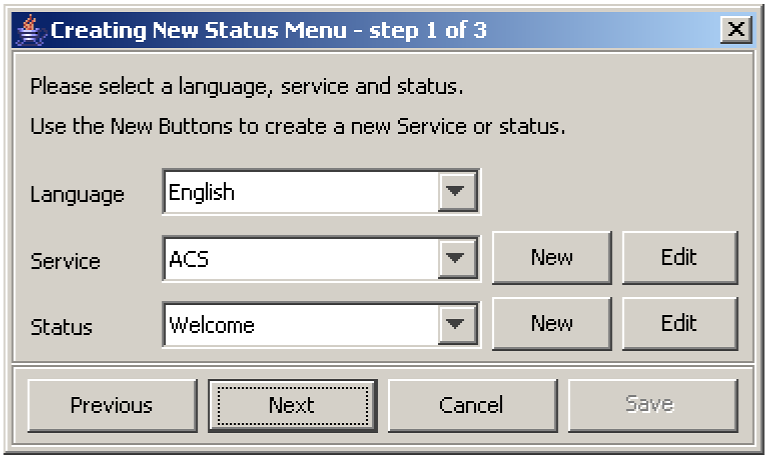
The Status Wizard allows you to set up status menus easily, by allowing you to select and update the Service Interface and Status Info Entry data, then enter the status text for a specific language.

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.

Step	Action
1	Select **Status Wizard** from the **Menu and Status** option. **Result:** You see the Creating New Status Menu - step 1 of 3 screen.


Creating New Status Menu - step 1 of 3
New
Edit
New
Edit
Previous
Next
Cancel
Save

Please select a language, service and status.

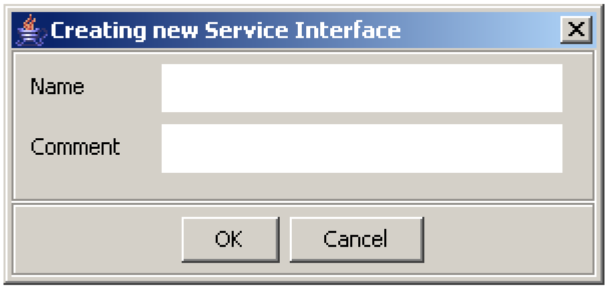
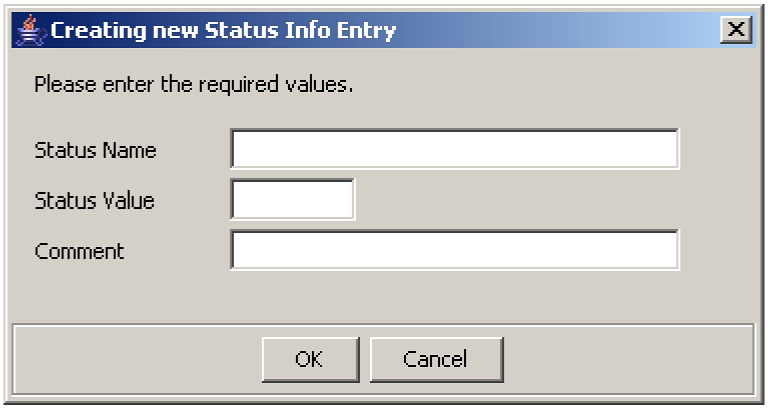
Use the New Buttons to create a new Service or status.

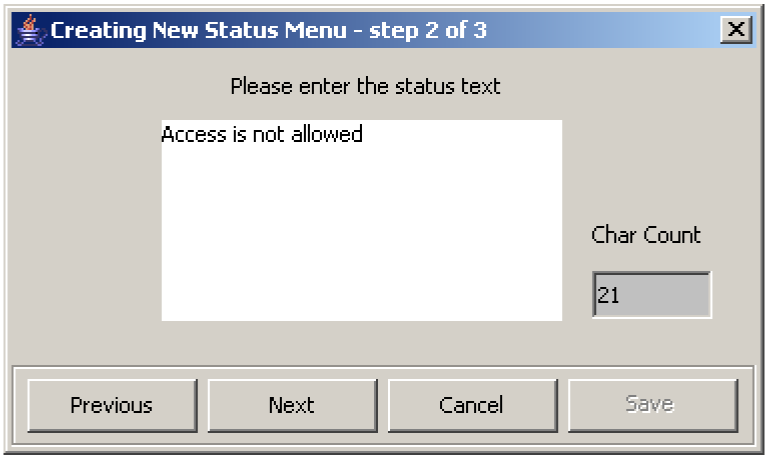
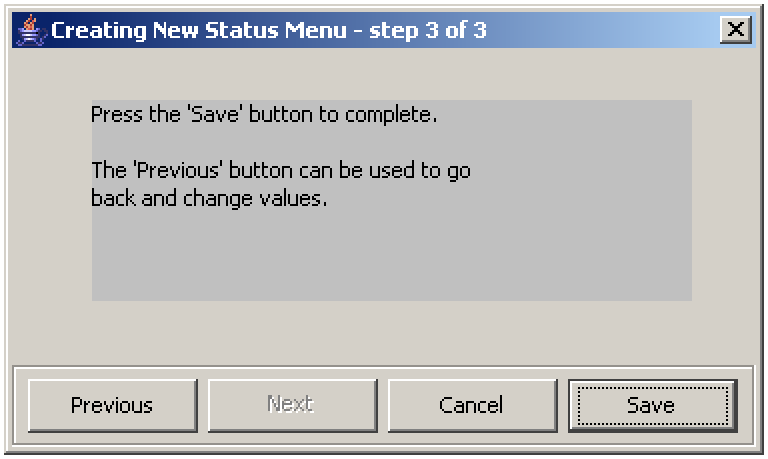
Language: English

Service: ACS

Status: Welcome

Step	Action
2	Select the **Language** from the drop down list.

Step	**Action**
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 Name Comment OK Cancel Fill in the fields, as described in *Service Interface* (on page 21) and click **OK**. **Result:** The database is updated.
4	Select an existing Status information entry from the drop down list. You can click **Edit** if you need to change the details. If you require a new Status information entry, create a new one by clicking **New** to the right of the **Menu** field. **Result:** You see the Creating new Status Info Entry screen.  Creating new Status Info Entry Status Name Status Value Comment OK Cancel Please enter the required values. Fill in the fields, as described in *Status Info Configuration* (on page 49) and click **OK**. **Result:** The database is updated.

Step	Action
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.  Creating New Status Menu - step 2 of 3 Please enter the status text Access is not allowed Char Count 21 **Note:** The status text can also be edited using the *Status Language* (on page 55) tab.
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 Press the 'Save' button to complete. The 'Previous' button can be used to go back and change values.
7	To complete the status text creation, click **Save**.

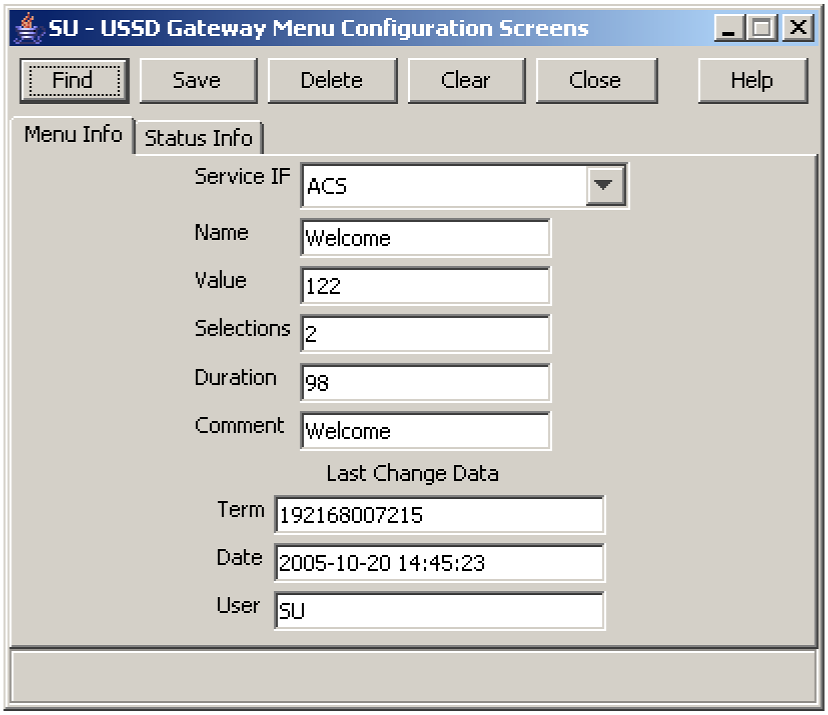
Menu Info Configuration

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 51).

Menu Info tab

Here is an example **Menu Info** tab.



Service IF: ACS

Name: Welcome

Value: 122

Selections: 2

Duration: 98

Comment: Welcome

Last Change Data

Term: 192168007215

Date: 2005-10-20 14:45:23

User: SU

Fields

Here is a description of the fields.

Field	**Description**
Service IF	The list of service interfaces. **Note:** These are set up on the USSD Gateway Base Configuration Screen *Service Interface* (on page 21) 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.
Duration	Specifies the length of time the display will be present to the user. Numeric field, valid values 1 to 99. Optional.

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 11).

Clicking **Find** displays the Find screen.

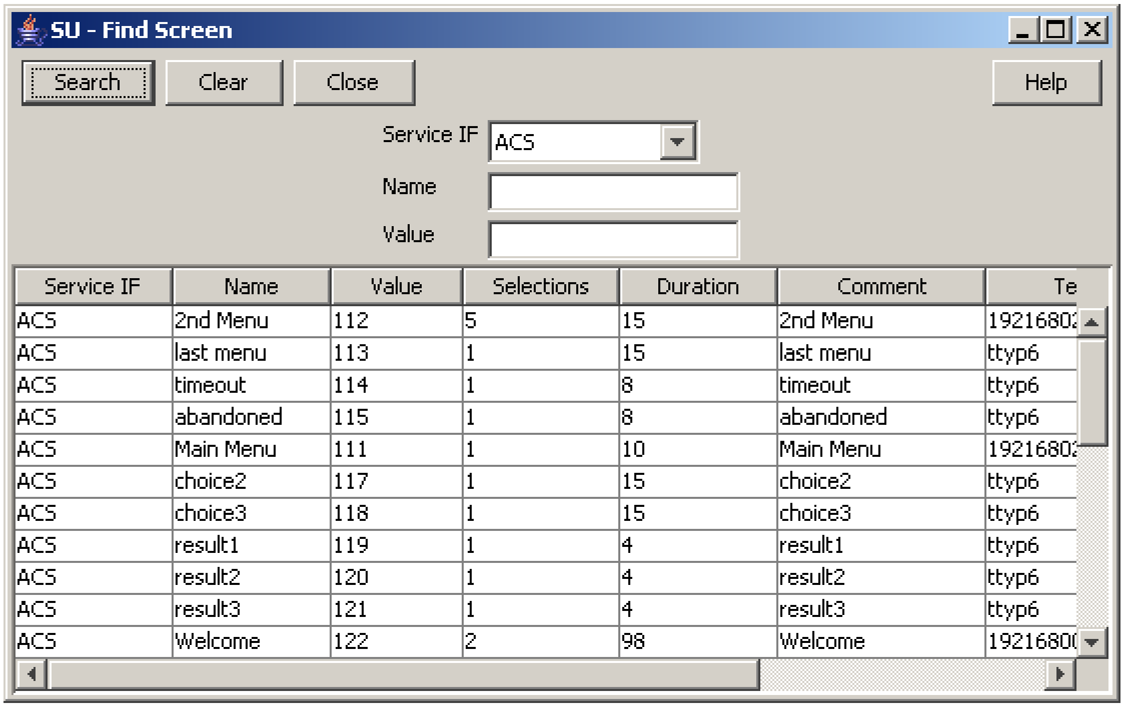
Data entry

Follow these steps to enter a new menu Info.

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

Find Screen

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



Service IF: ACS

Name:

Value:

Service IF	Name	Value	Selections	Duration	Comment	Te
ACS	2nd Menu	112	5	15	2nd Menu	1921680
ACS	last menu	113	1	15	last menu	ttyp6
ACS	timeout	114	1	8	timeout	ttyp6
ACS	abandoned	115	1	8	abandoned	ttyp6
ACS	Main Menu	111	1	10	Main Menu	1921680
ACS	choice2	117	1	15	choice2	ttyp6
ACS	choice3	118	1	15	choice3	ttyp6
ACS	result1	119	1	4	result1	ttyp6
ACS	result2	120	1	4	result2	ttyp6
ACS	result3	121	1	4	result3	ttyp6
ACS	Welcome	122	2	98	Welcome	1921680

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 12).

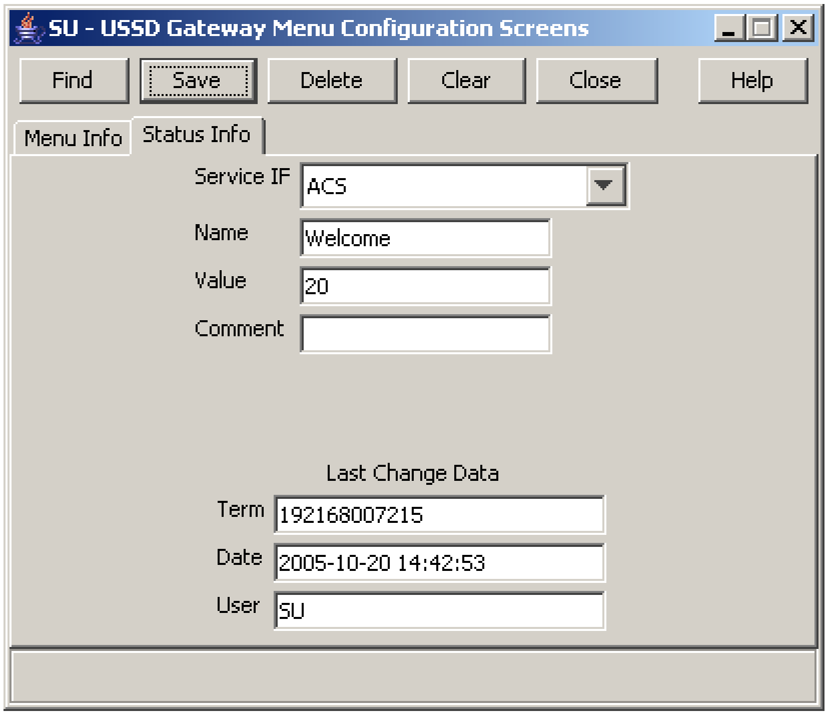
Status Info Configuration

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.


SU - USSD Gateway Menu Configuration Screens
Find
Save
Delete
Clear
Close
Help
Menu Info
Status Info
Last Change Data

Service IF ACS

Name Welcome

Value 20

Comment

Term 192168007215

Date 2005-10-20 14:42:53

User SU

Fields

Here is a description of the fields.

Field	Description
Service IF	The service interface this status info entry will be used for. **Note:** These are set up on the USSD Base Configuration Screen *Service Interface* (on page 21) tab.
Name	Name of this status cause for the selected service interface. Required. **Allowed values:** • Alphanumeric field up to 50 characters in length.

Field	**Description**
Value	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.

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

Data entry

Follow these steps to enter a new status info.

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

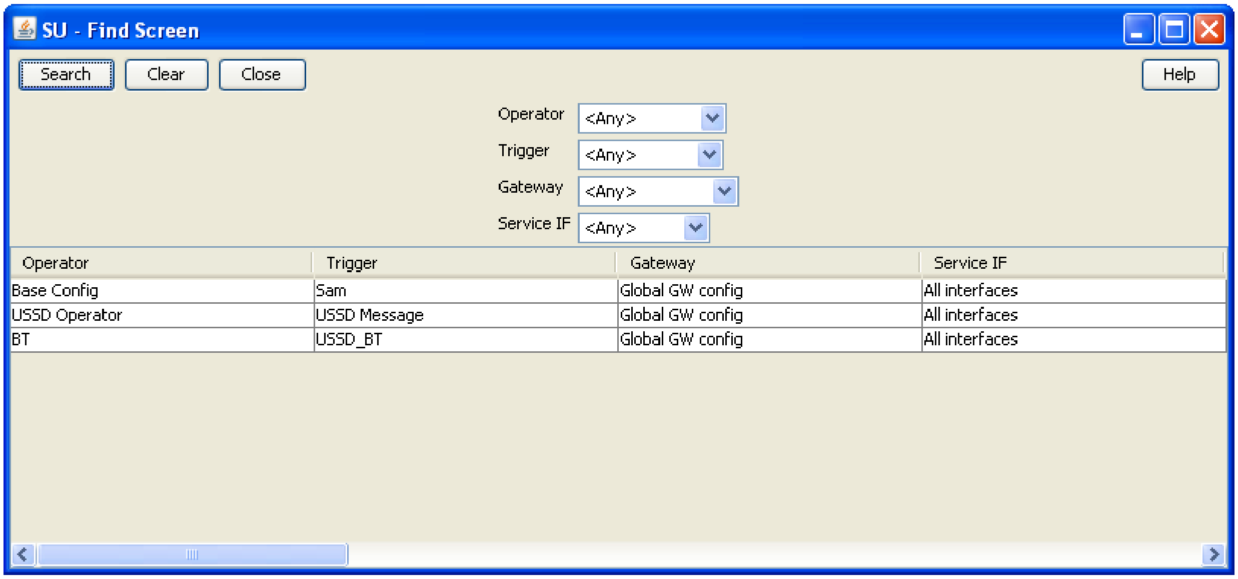
Buttons and other fields

For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 11).

Clicking **Find** displays the Find screen.

Find Screen

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



Operator <Any>
Trigger <Any>
Gateway <Any>
Service IF <Any>

Operator	Trigger	Gateway	Service IF
Base Config	Sam	Global GW config	All interfaces
USSD Operator	USSD Message	Global GW config	All interfaces
BT	USSD_BT	Global GW config	All interfaces

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 12).

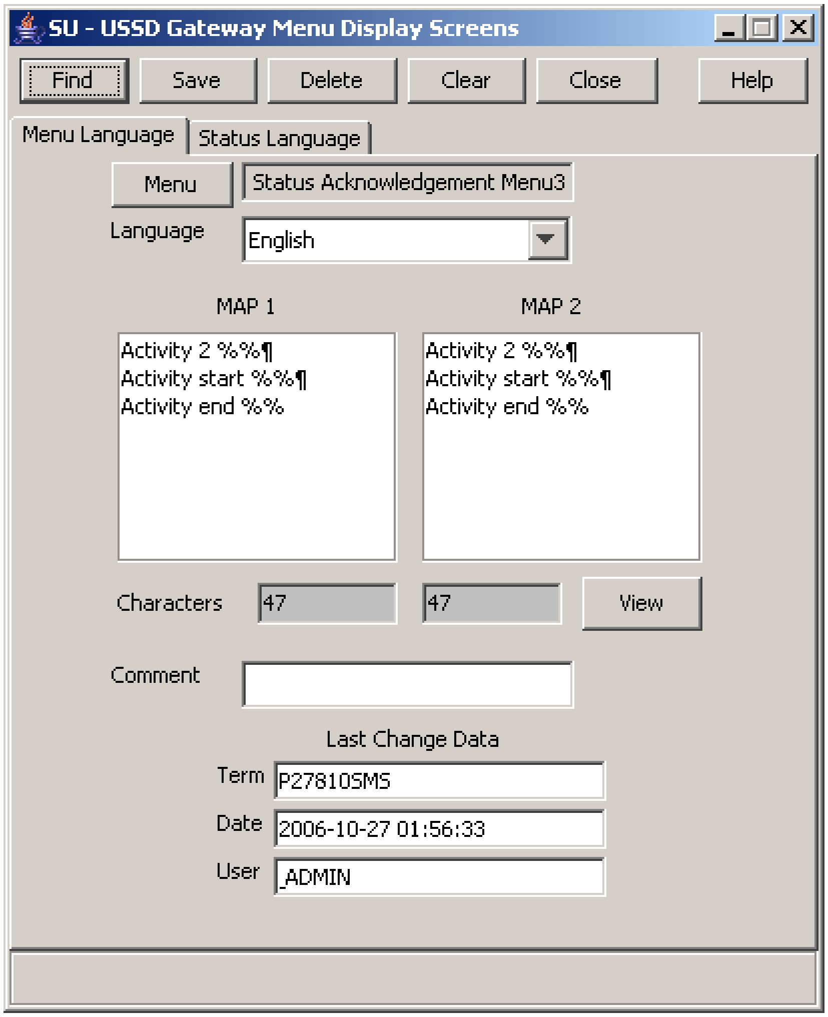
Menu Language Display

Introduction

The **Menu Language** tab allows you to enter language specific text for a given menu. MAP 1 and MAP 2 text can be different.

Menu Language tab

Here is an example **Menu Language** tab.


SU - USSD Gateway Menu Display Screens
Find
Save
Delete
Clear
Close
Help
Menu Language
Status Language
Menu
View

Menu: Status Acknowledgement Menu3

Language: English

MAP 1

```
Activity 2 %%¶
Activity start %%¶
Activity end %%
```

MAP 2

```
Activity 2 %%¶
Activity start %%¶
Activity end %%
```

Characters: 47 47

Comment:

Last Change Data

Term: P27810SMS

Date: 2006-10-27 01:56:33

User: _ADMIN

Fields

Here is a description of the fields.

Field	Description
Menu	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.
Language	The list of available languages. **Note:** These are set up on the USSD Base Configuration Screen *Language* (on page 18) tab.
MAP 1 and MAP 2	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 86) node). Enter each variable part as a pair of percentage symbols (%%). **Note:** The MAP 1 and MAP 2 text may be different, but both must contain the same number of variables.
Characters	Displays the number of characters in the MAP 1 and MAP 2 display screens.

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

Buttons

Here is a description of the buttons.

Button	Description
Menu	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.
View	Clicking this button displays the Text Display Viewer screen, which displays the text and the number of characters. See *Viewing menu text* (on page 53).

Data entry

Follow these steps to enter a new menu language.

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

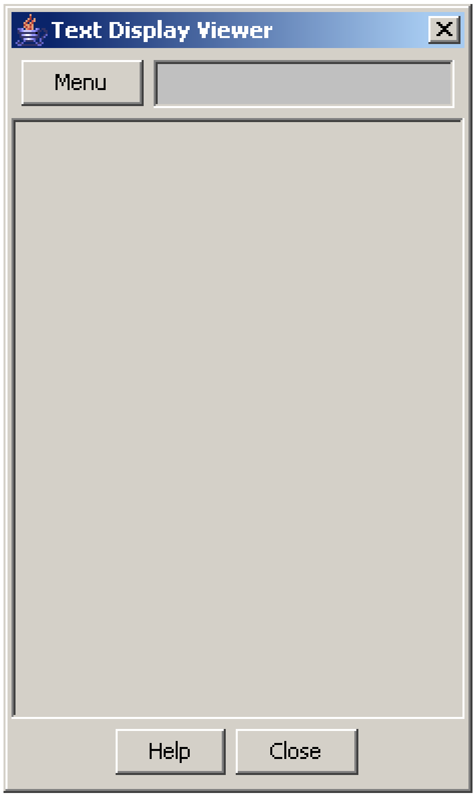
Buttons and other fields

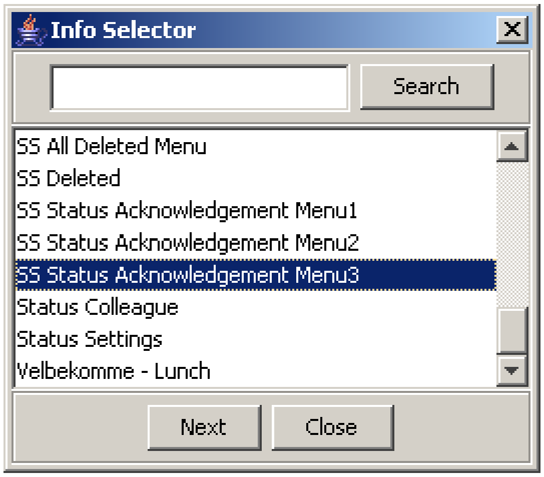
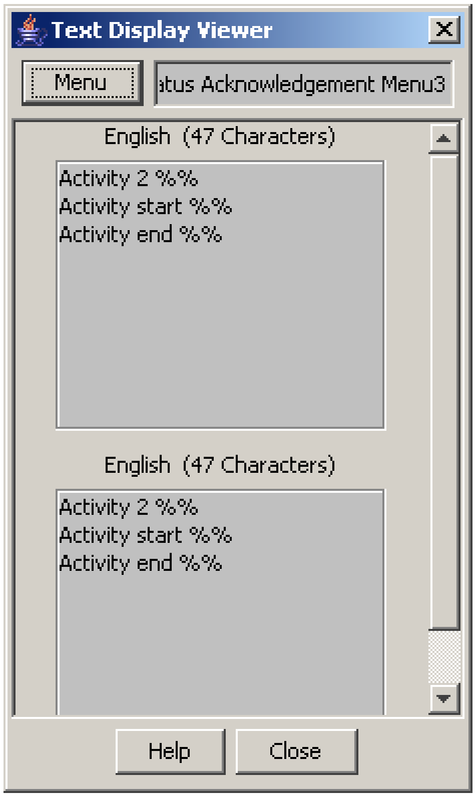
For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 11).

Clicking **Find** displays the Find screen.

Viewing menu text

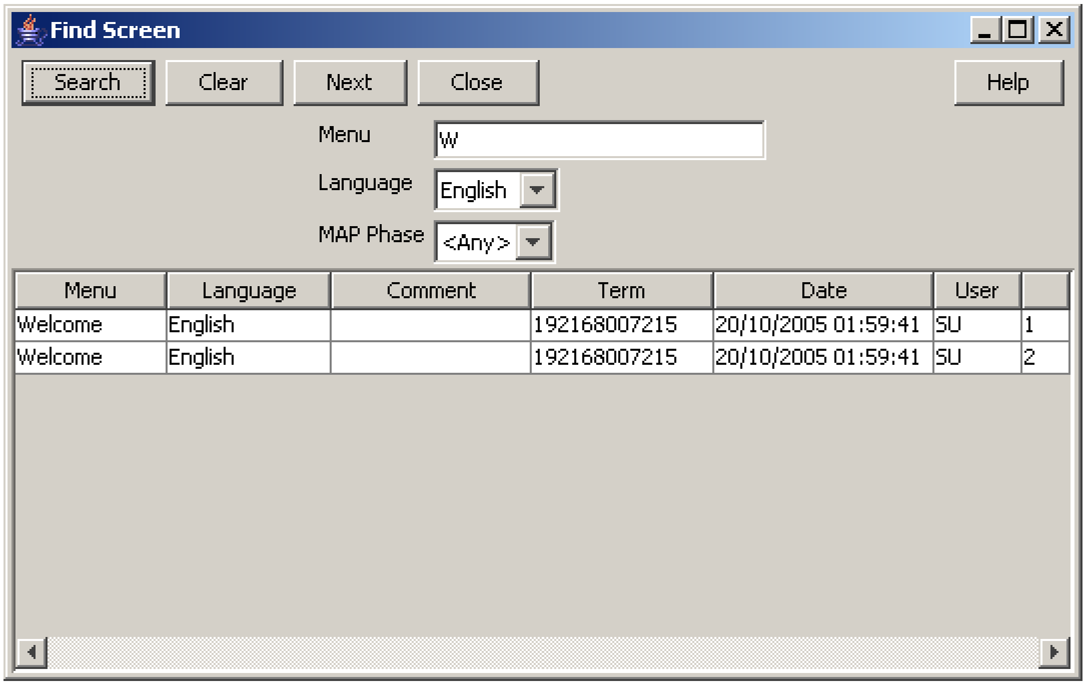
Follow these steps to view menu text.

Step	Action
1	On the **Menu Language** tab, click **View**. **Result:** 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. 
2	Click **Menu**. **Result:** You see the Info Selector, displaying the menus.

Step	Action
	 Info Selector Search SS All Deleted Menu SS Deleted SS Status Acknowledgement Menu1 SS Status Acknowledgement Menu2 SS Status Acknowledgement Menu3 Status Colleague Status Settings Velbekomme - Lunch Next Close 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 Menu Help Close atus Acknowledgement Menu3 English (47 Characters) Activity 2 %% Activity start %% Activity end %% English (47 Characters) Activity 2 %% Activity start %% Activity end %%
4	To close the text display viewer, in the Info Selector, click **Close**, then in the Text Display Viewer, click **Close**.

Find Screen

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



Menu: W

Language: English

MAP Phase: <Any>

Menu	Language	Comment	Term	Date	User	
Welcome	English		192168007215	20/10/2005 01:59:41	SU	1
Welcome	English		192168007215	20/10/2005 01:59:41	SU	2

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 12).

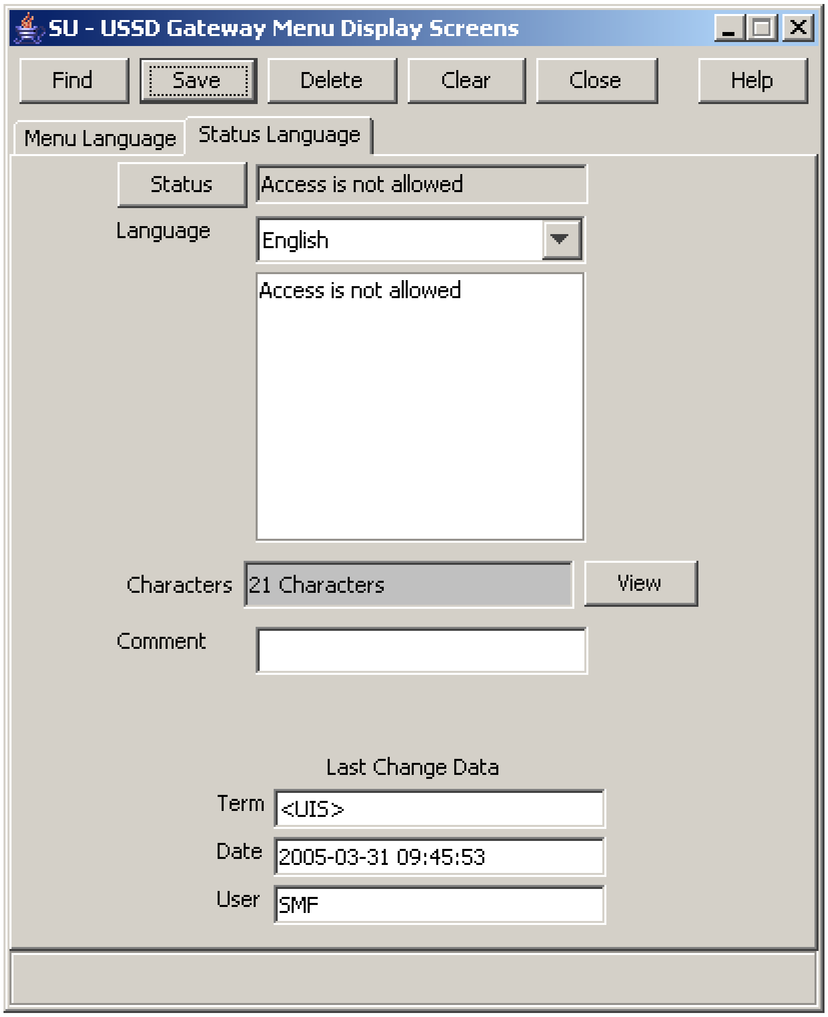
Status Language Display

Introduction

The **Status Language** tab allows you to set language specific status text for a given status.

Status Language tab

Here is an example **Status Language** tab.


SU - USSD Gateway Menu Display Screens
Find
Save
Delete
Clear
Close
Help
Menu Language
Status Language
Status
View

Status: Access is not allowed

Language: English

Access is not allowed

Characters: 21 Characters

Comment:

Last Change Data

Term: <UIS>

Date: 2005-03-31 09:45:53

User: SMF

Fields

Here is a description of the fields.

Field	**Description**
Status	Displays status info name once selected, created by the USSD Gateway Menu Configuration Screen *Status Info Configuration* (on page 49) tab. You cannot edit this field directly. See **Status** button below.
Language	The list of available languages. **Note**: These are set up on the USSD Base Configuration Screen *Language* (on page 18) tab.
Text box	This represents the display screen of a mobile phone
Characters	Displays the number of characters in the message in the field above.

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

Buttons

Here is a description of the buttons.

Button	Description
Status	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.
View	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 57).

Data entry

Follow these steps to enter a new status language.

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

Buttons and other fields

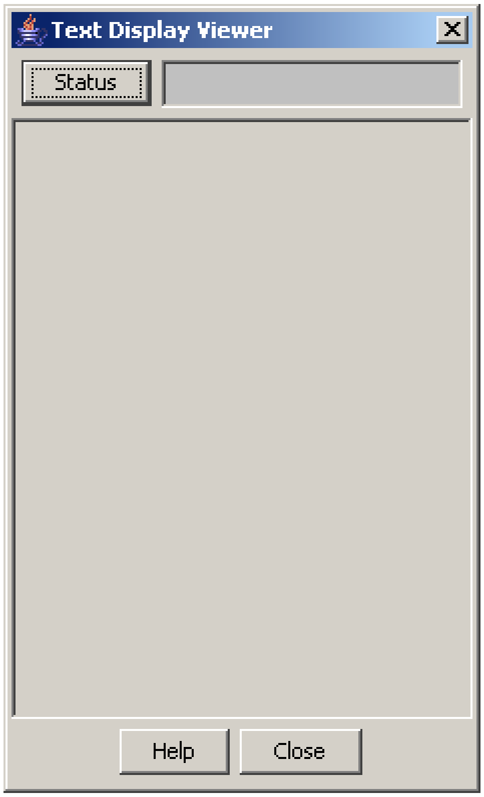
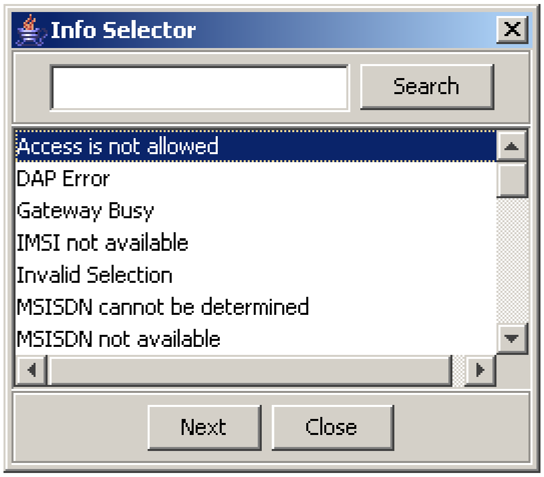
For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 11).

Clicking **Find** displays the Find screen.

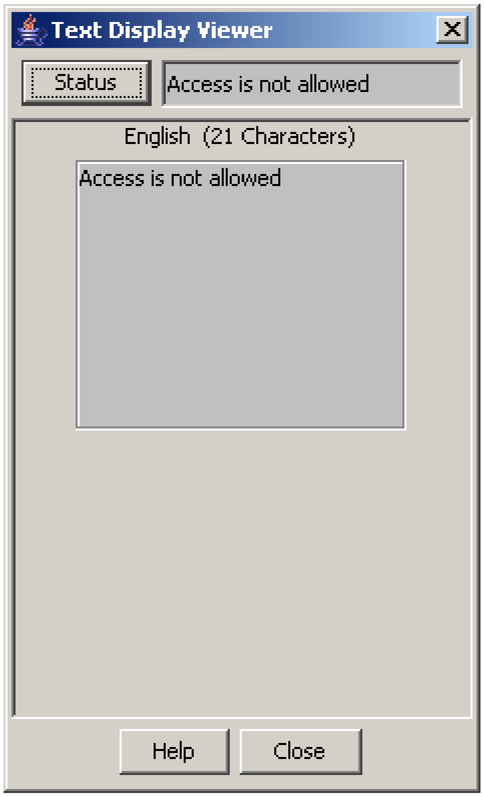
Viewing status text

Follow these steps to view status text.

Step	Action
1	On the **Status Language** tab, click **View**. **Result:** 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.

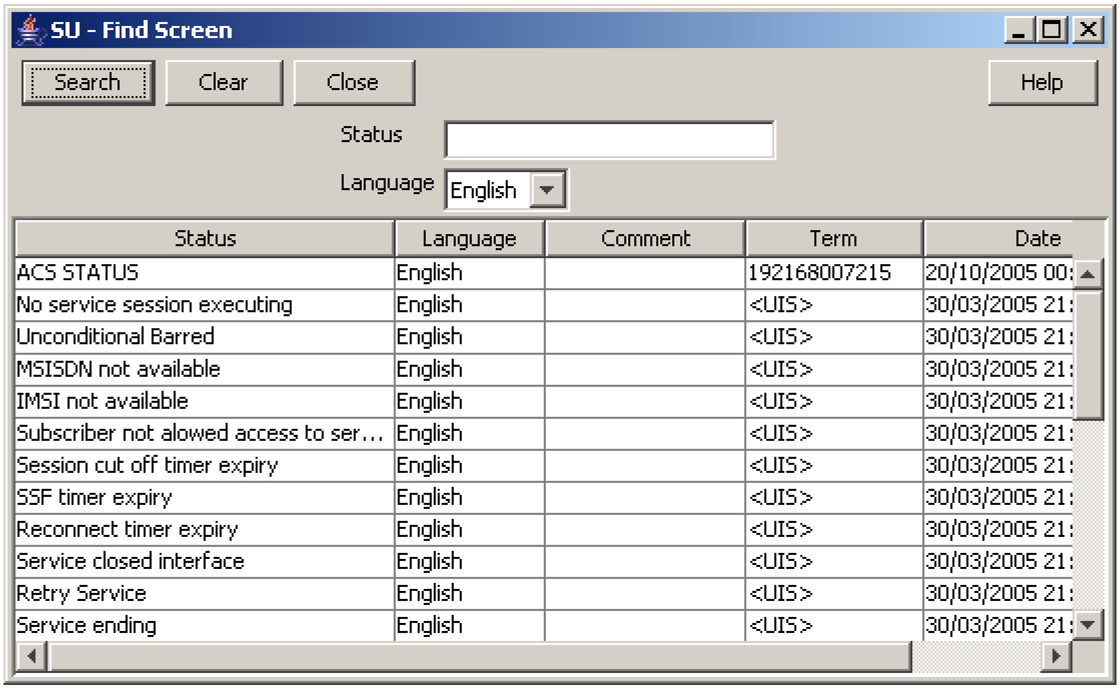
Step	Action
	
2	Click **Menu**. **Result:** You see the Info Selector, displaying the status info names.  You can search for status info names by entering search criteria in the box and clicking **Search**.
3	Select the required menu from the list. **Result:** The Status text is displayed in the Text Display Viewer.

Text Display Viewer
Status
Help
Close
Info Selector
Search
Access is not allowed
DAP Error
Gateway Busy
IMSI not available
Invalid Selection
MSISDN cannot be determined
MSISDN not available
Next
Close

Step	Action
	 Text Display Viewer Status Help Close Access is not allowed English (21 Characters) Access is not allowed
4	To close the text display viewer, in the Info Selector, click **Close**, then in the Text Display Viewer, click **Close**.

Find Screen

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



Status

Language English

Status	Language	Comment	Term	Date
ACS STATUS	English		192168007215	20/10/2005 00:
No service session executing	English		<UIS>	30/03/2005 21:
Unconditional Barred	English		<UIS>	30/03/2005 21:
MSISDN not available	English		<UIS>	30/03/2005 21:
IMSI not available	English		<UIS>	30/03/2005 21:
Subscriber not alowed access to ser…	English		<UIS>	30/03/2005 21:
Session cut off timer expiry	English		<UIS>	30/03/2005 21:
SSF timer expiry	English		<UIS>	30/03/2005 21:
Reconnect timer expiry	English		<UIS>	30/03/2005 21:
Service closed interface	English		<UIS>	30/03/2005 21:
Retry Service	English		<UIS>	30/03/2005 21:
Service ending	English		<UIS>	30/03/2005 21:

Using the find screen

You can search on:

- Status
- Language

For more information about searching and editing records, see *Using the Find Screens* (on page 12).

Chapter 7

Subscribers Screens

Overview

Introduction

This chapter explains the contents of the Subscribers screens.

In this chapter

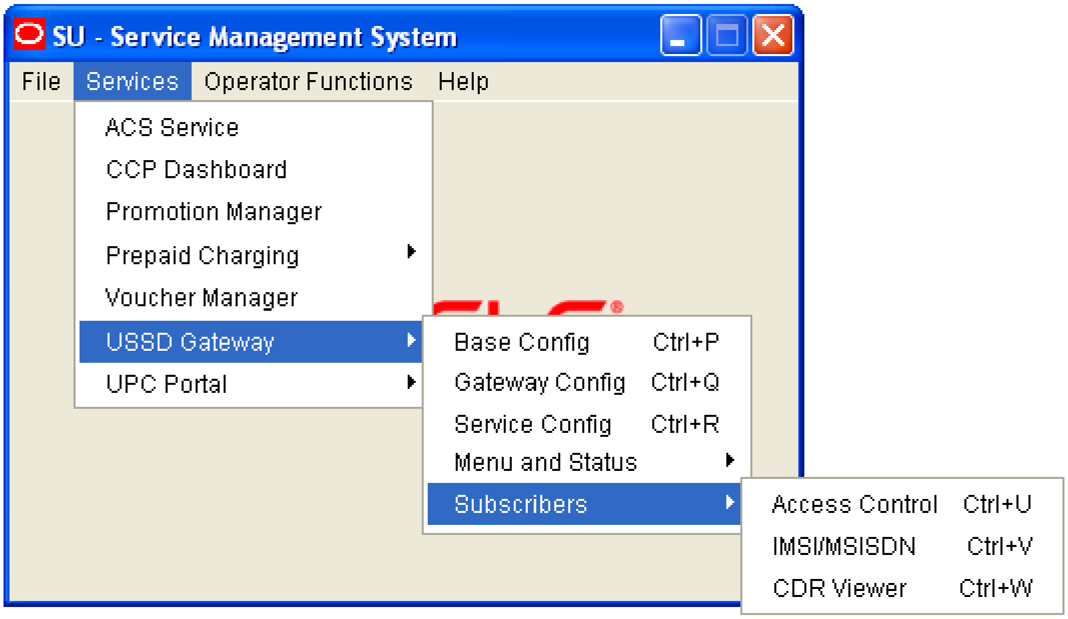
This chapter contains the following topics.

USSD Gateway Subscribers Screens 61
Access Control Screen 62
IMSI Tracing Screen 64
CDR Viewer Screen 66
UPC CDR Viewer Screen 70

USSD Gateway Subscribers Screens

Accessing USSD Gateway Subscribers screens

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

Step	Action
1	From the Service Management System screen, select the **Services** menu.  SU - Service Management System File Services Operator Functions Help ACS Service CCP Dashboard Promotion Manager Prepaid Charging Voucher Manager USSD Gateway UPC Portal Base Config Ctrl+P Gateway Config Ctrl+Q Service Config Ctrl+R Menu and Status Subscribers Access Control Ctrl+U IMSI/MSISDN Ctrl+V CDR Viewer Ctrl+W
2	Select **USSD Gateway**, then **Subscribers**.
3	Select the screen you want to use.

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

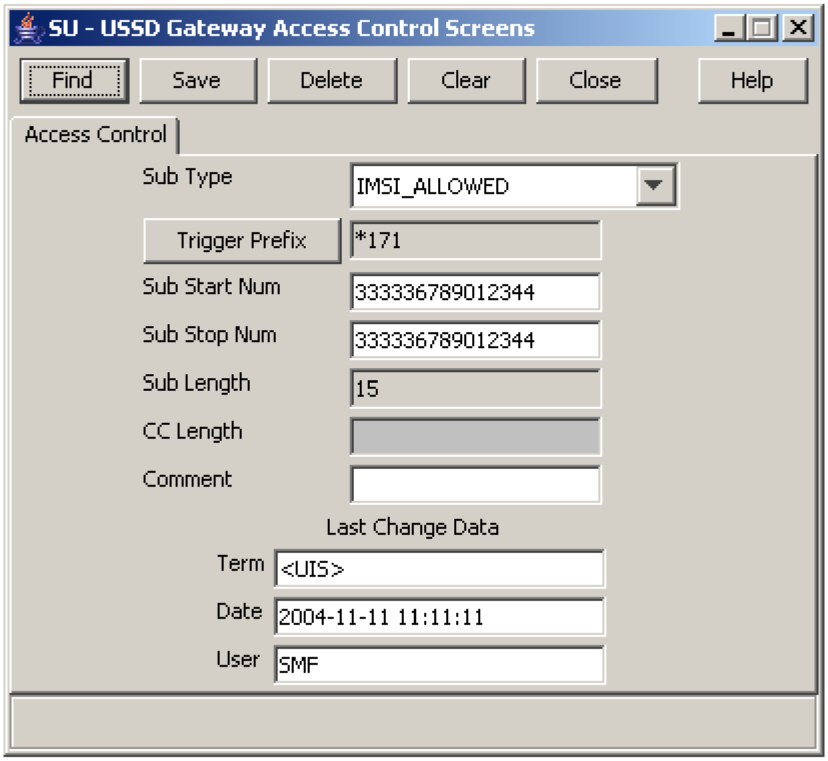
For a customer to have access to the service, if barring is set to:

- 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.


SU - USSD Gateway Access Control Screens
Find
Save
Delete
Clear
Close
Help
Access Control
Trigger Prefix
Last Change Data

Sub Type: IMSI_ALLOWED
Trigger Prefix: *171
Sub Start Num: 333336789012344
Sub Stop Num: 333336789012344
Sub Length: 15
CC Length:
Comment:
Term: <UIS>
Date: 2004-11-11 11:11:11
User: SMF

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.

Field	**Description**
Trigger Prefix	Displays the trigger prefix. You cannot edit this field directly. See **Trigger Prefix** button.
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** field. • 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 format as for **Sub Start Num** and 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.

Button	**Description**
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 16) 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 11).

Clicking **Find** displays the Find screen.

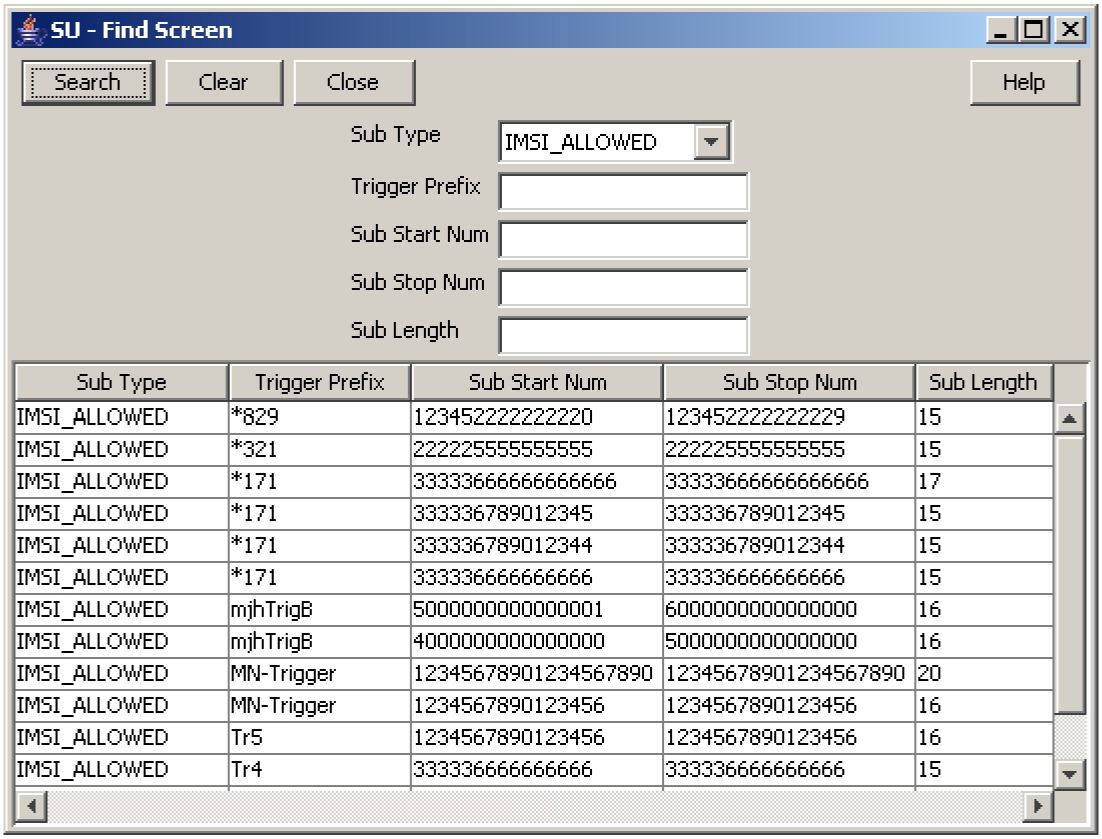
Data entry

Follow these steps to enter a new access control.

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

Find Screen

Here is an example Find Screen for the **Access Control** tab.



Sub Type: IMSI_ALLOWED
Trigger Prefix:
Sub Start Num:
Sub Stop Num:
Sub Length:

Sub Type	Trigger Prefix	Sub Start Num	Sub Stop Num	Sub Length
IMSI_ALLOWED	*829	123452222222220	123452222222229	15
IMSI_ALLOWED	*321	222225555555555	222225555555555	15
IMSI_ALLOWED	*171	33333666666666666	33333666666666666	17
IMSI_ALLOWED	*171	333336789012345	333336789012345	15
IMSI_ALLOWED	*171	333336789012344	333336789012344	15
IMSI_ALLOWED	*171	333336666666666	333336666666666	15
IMSI_ALLOWED	mjhTrigB	5000000000000001	6000000000000000	16
IMSI_ALLOWED	mjhTrigB	4000000000000000	5000000000000000	16
IMSI_ALLOWED	MN-Trigger	12345678901234567890	12345678901234567890	20
IMSI_ALLOWED	MN-Trigger	1234567890123456	1234567890123456	16
IMSI_ALLOWED	Tr5	1234567890123456	1234567890123456	16
IMSI_ALLOWED	Tr4	333336666666666	333336666666666	15

Using the find screen

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 12).

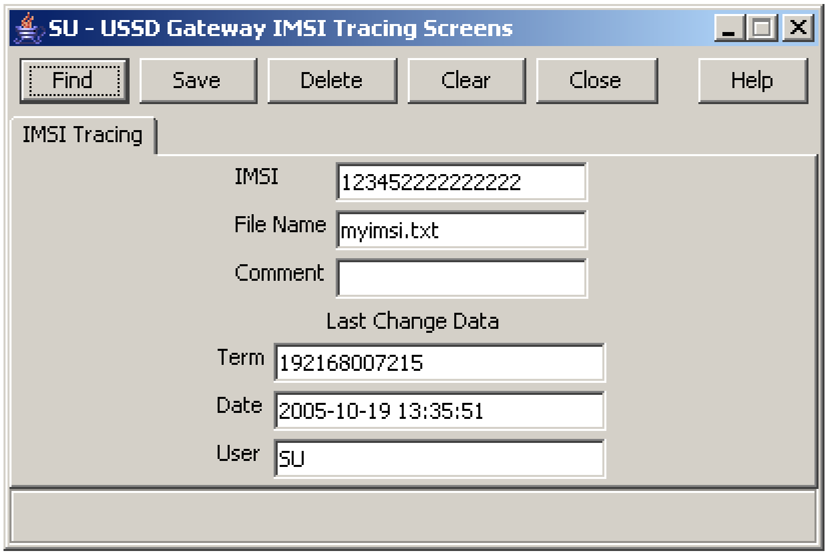
IMSI Tracing Screen

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.


SU - USSD Gateway IMSI Tracing Screens
Find
Save
Delete
Clear
Close
Help
IMSI Tracing
Last Change Data

IMSI 123452222222222
File Name myimsi.txt
Comment
Term 192168007215
Date 2005-10-19 13:35:51
User SU

Fields

Here is a description of the fields.

Field	Description
IMSI	The full IMSI number to be traced. Numeric field of between 15 and 20 digits, mandatory field.
File Name	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.

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 11).

Clicking **Find** displays the Find screen.

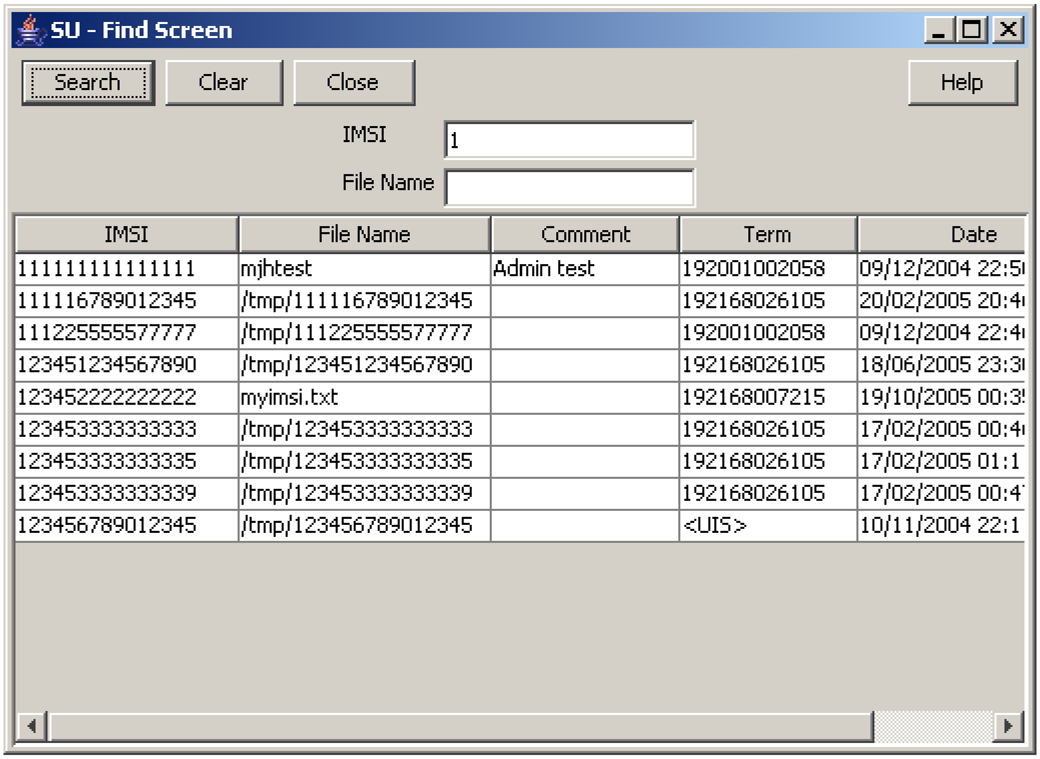
Data entry

Follow these steps to enter a new IMSI tracing.

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

Find Screen

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



IMSI: 1

File Name:

IMSI	File Name	Comment	Term	Date
111111111111111	mjhtest	Admin test	192001002058	09/12/2004 22:5
111116789012345	/tmp/111116789012345		192168026105	20/02/2005 20:4
111225555577777	/tmp/111225555577777		192001002058	09/12/2004 22:4
123451234567890	/tmp/123451234567890		192168026105	18/06/2005 23:3
123452222222222	myimsi.txt		192168007215	19/10/2005 00:3
123453333333333	/tmp/123453333333333		192168026105	17/02/2005 00:4
123453333333335	/tmp/123453333333335		192168026105	17/02/2005 01:1
123453333333339	/tmp/123453333333339		192168026105	17/02/2005 00:4
123456789012345	/tmp/123456789012345		<UIS>	10/11/2004 22:1

Using the find screen

You can search on:

- IMSI
- File Name

For more information about searching and editing records, see *Using the Find Screens* (on page 12).

CDR Viewer Screen

Introduction

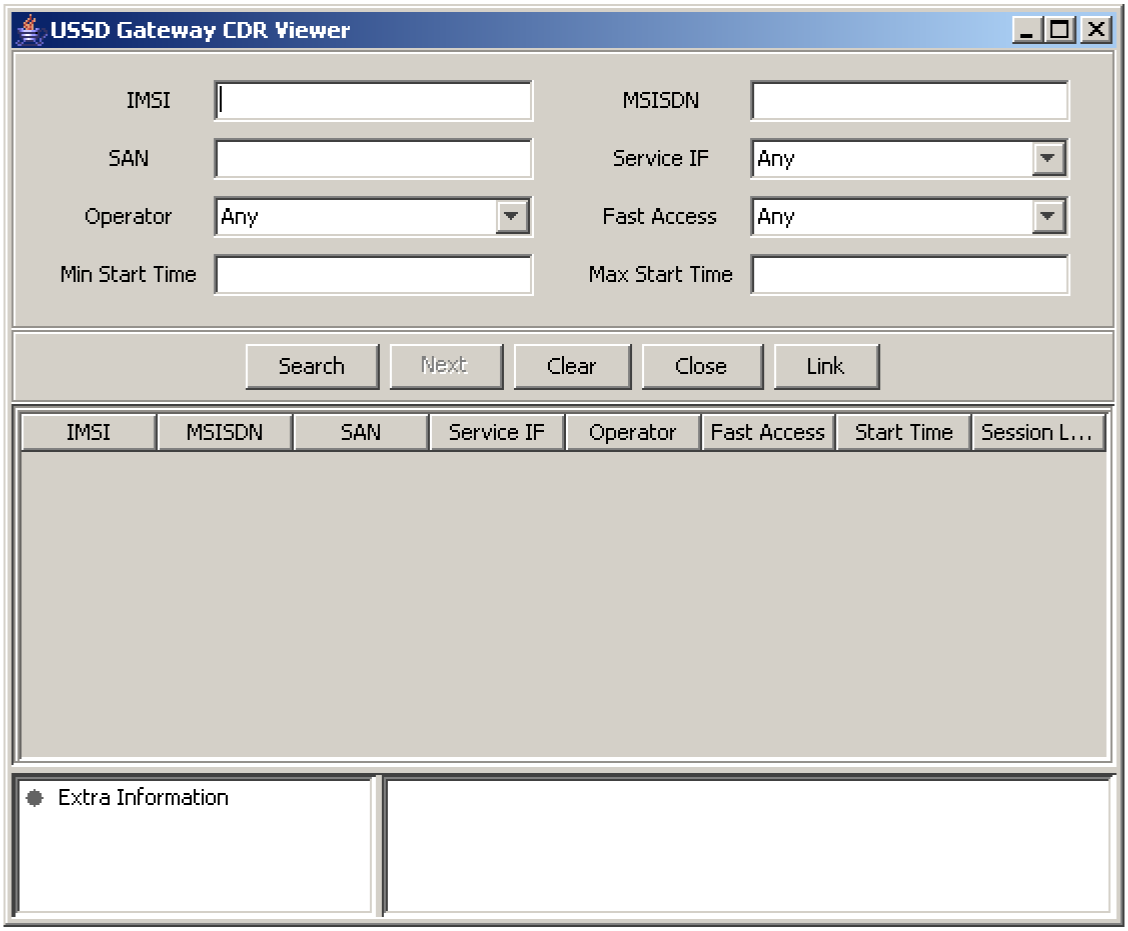
The CDR Viewer screen allows you to view EDRs.

Note: For the EDRs to be logged during calls, the **CDR Flag** check box must be ticked on the *Gateway Configuration screen* (on page 28). You must restart the SLEE after selecting 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.


USSD Gateway CDR Viewer
IMSI
MSISDN
SAN
Min Start Time
Max Start Time
Search
Next
Clear
Close
Link
IMSI
MSISDN
SAN
Service IF
Operator
Fast Access
Start Time
Session L...
Extra Information

Service IF: Any
Operator: Any
Fast Access: Any

Fields

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

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

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

Buttons and other fields

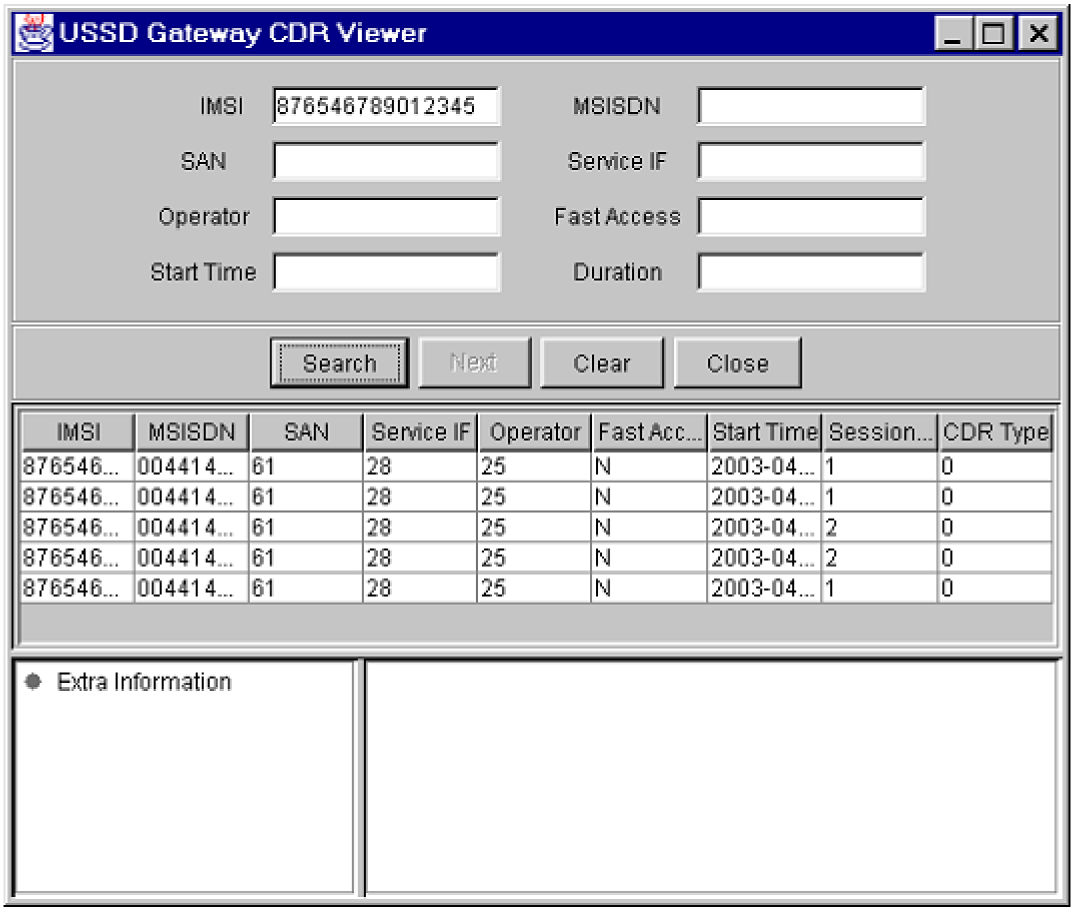
This table describes the function of each field.

Field	Description
Search	Displays all records that correspond to the search criteria entered.
Next	Displays the next CDR.
Link	Only available if the UPC CDR Viewer screen is available.

For information about the buttons and fields at the bottom of the screen, see *Common Buttons and Fields* (on page 11).

Find screen

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


USSD Gateway CDR Viewer
MSISDN
SAN
Service IF
Operator
Fast Access
Start Time
Duration
Search
Next
Clear
Close
Extra Information

IMSI 876546789012345

IMSI	MSISDN	SAN	Service IF	Operator	Fast Acc...	Start Time	Session...	CDR Type
876546...	004414...	61	28	25	N	2003-04...	1	0
876546...	004414...	61	28	25	N	2003-04...	1	0
876546...	004414...	61	28	25	N	2003-04...	2	0
876546...	004414...	61	28	25	N	2003-04...	2	0
876546...	004414...	61	28	25	N	2003-04...	1	0

Extra information

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

- General
- Time outs
- Alarms

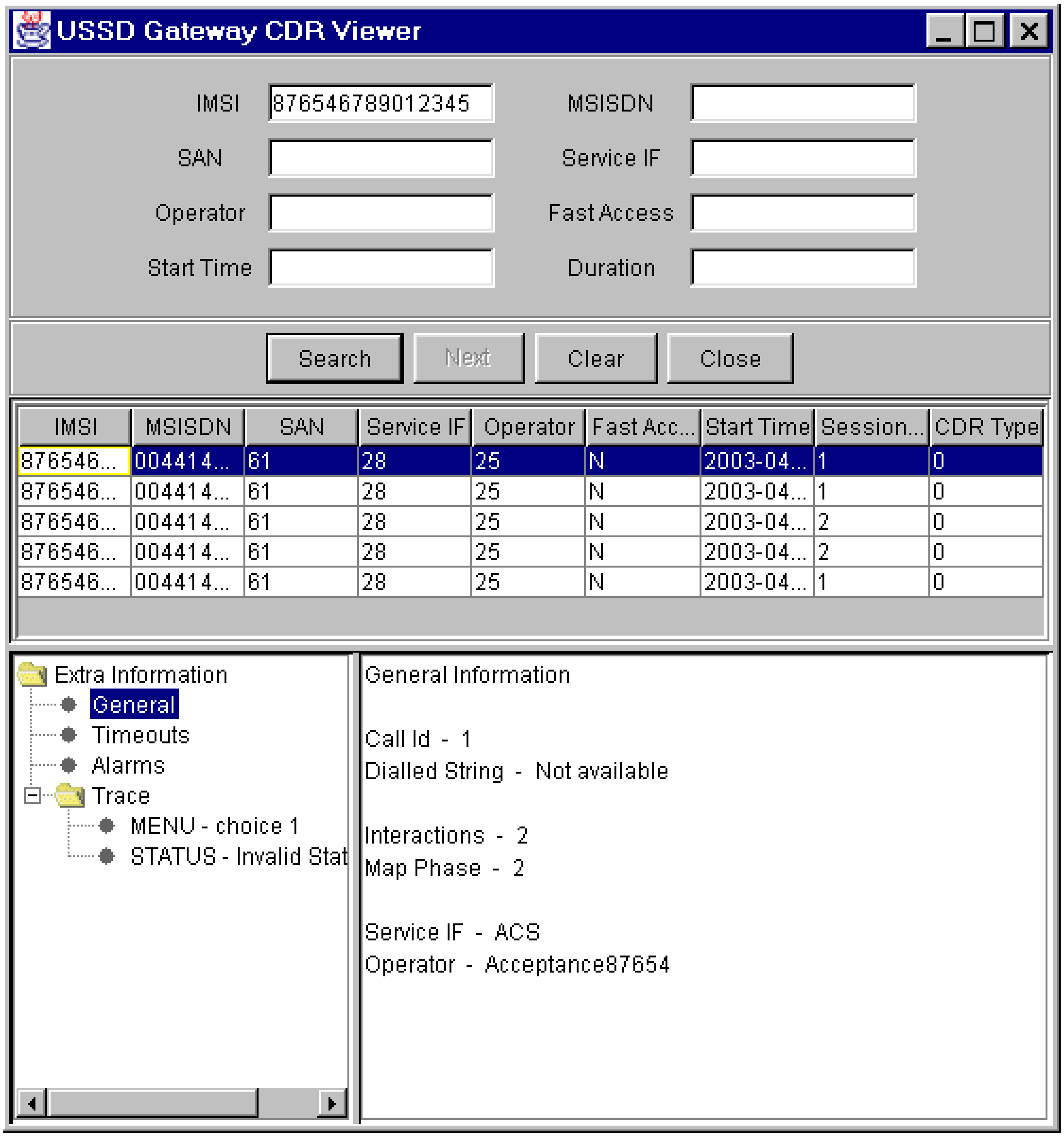
Trace

Also brought up are the trace details for the call:

- Menu
- Status

Available details

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



USSD Gateway CDR Viewer
MSISDN
SAN
Service IF
Operator
Fast Access
Start Time
Duration
Search
Next
Clear
Close
Extra Information
General
Timeouts
Alarms
Trace
MENU - choice 1
STATUS - Invalid Stat

IMSI 876546789012345

IMSI	MSISDN	SAN	Service IF	Operator	Fast Acc...	Start Time	Session...	CDR Type
876546...	004414...	61	28	25	N	2003-04...	1	0
876546...	004414...	61	28	25	N	2003-04...	1	0
876546...	004414...	61	28	25	N	2003-04...	2	0
876546...	004414...	61	28	25	N	2003-04...	2	0
876546...	004414...	61	28	25	N	2003-04...	1	0

General Information

Call Id - 1
Dialled String - Not available

Interactions - 2
Map Phase - 2

Service IF - ACS
Operator - Acceptance87654

UPC CDR Viewer Screen

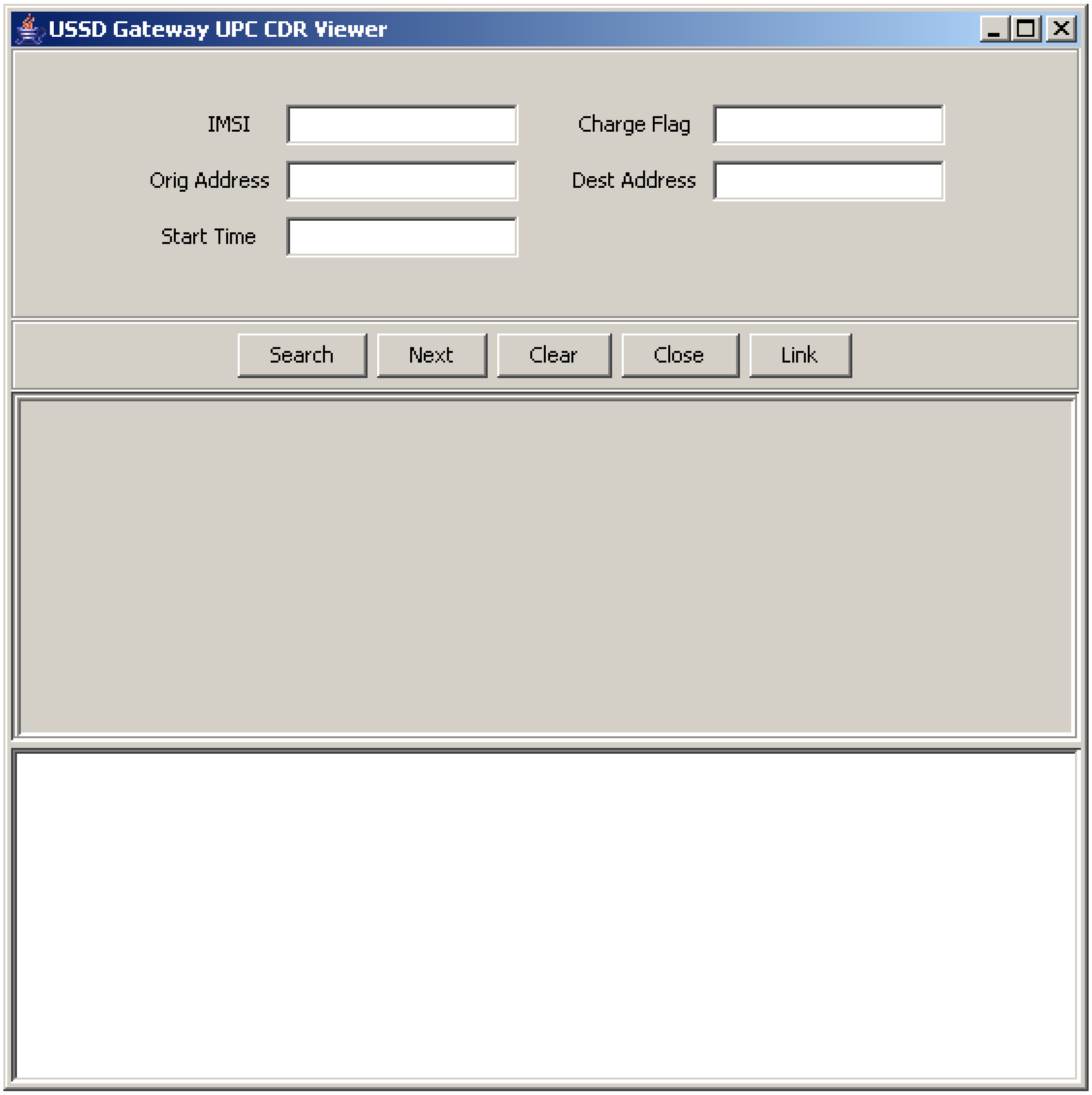
Introduction

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.

USSD Gateway UPC CDR Viewer screen

Here is an example USSD Gateway UPC CDR Viewer screen.


USSD Gateway UPC CDR Viewer
IMSI
Charge Flag
Orig Address
Dest Address
Start Time
Search
Next
Clear
Close
Link

Chapter 8

UPC Portal Screens

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 71
USSD Portal Message Class Screens 74

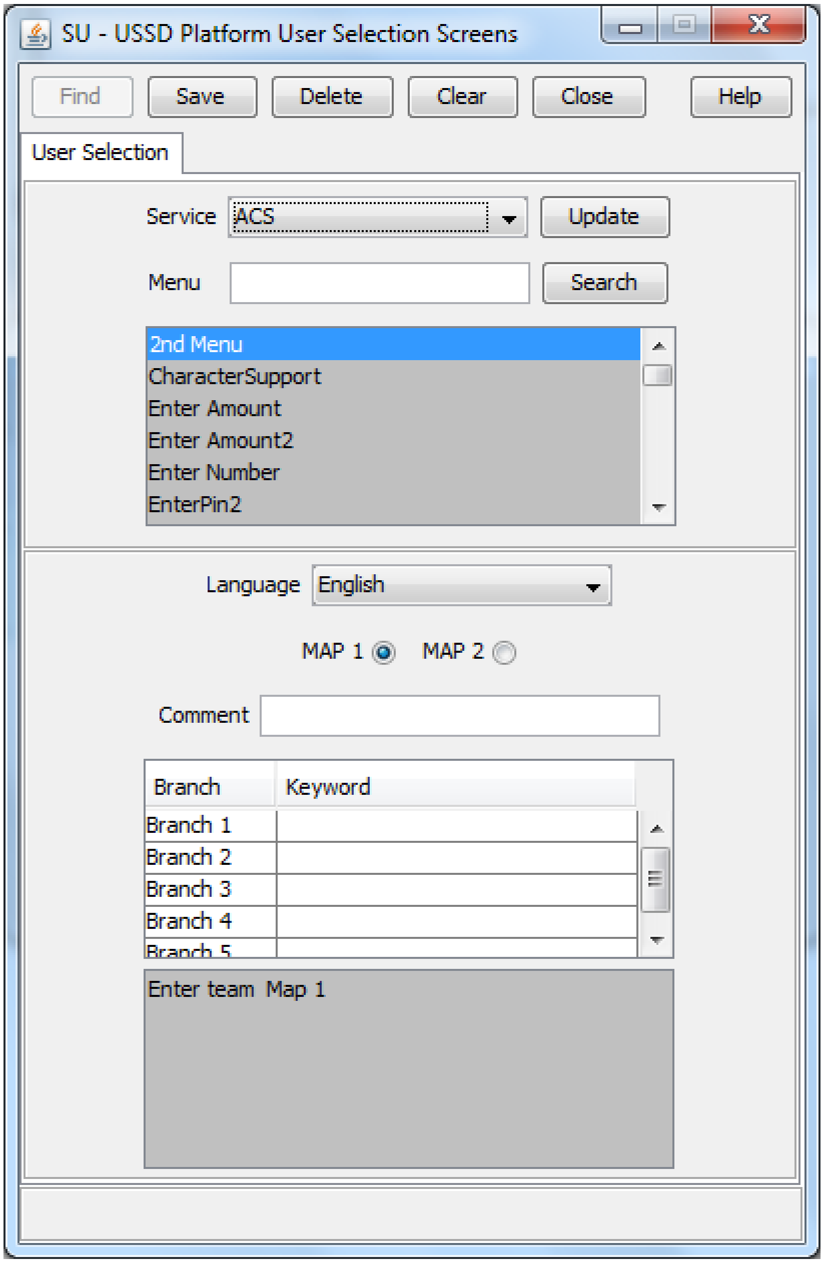
USSD Platform User Selection Screens

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 90) node.

User Selection tab

Here is an example **User Selection** tab.


SU - USSD Platform User Selection Screens
Find
Save
Delete
Clear
Close
Help
User Selection
Update
Search

Service ACS

Menu

2nd Menu
CharacterSupport
Enter Amount
Enter Amount2
Enter Number
EnterPin2

Language English

MAP 1 ● MAP 2 ○

Comment

Branch	Keyword
Branch 1	
Branch 2	
Branch 3	
Branch 4	
Branch 5	

Enter team Map 1

Fields

Here is a description of the fields.

Field	Description
Service	This field is populated with all the NAMEs created by the USSD Gateway Base Configuration Screen *Service Interface* (on page 21) tab. By selecting a Service, all the menus associated with this Service populates the Menu field.
Menu	By selecting a Service, all the menus associated with this Service populate this field.

Field	Description
Language	This is populated with the language associated with the selected menu.
MAP 1 MAP 2 options	Selecting MAP 1 or MAP 2 shows which keyword corresponds to which MAP version.
Branch	After selecting the menu in the Menu field, this field is populated by the branch number.
Keyword	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.

Buttons

Here is a description of the buttons.

Field	Description
Update	Has no function in this case.
Search	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.

Data entry

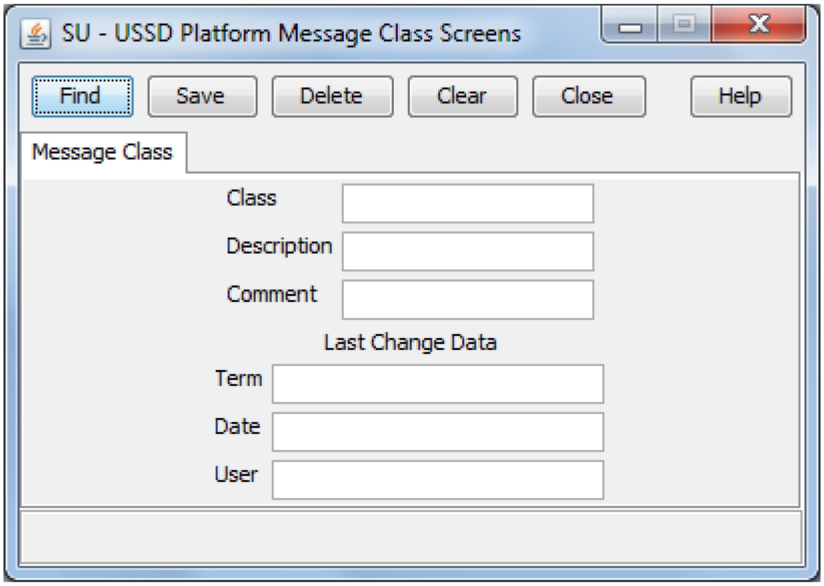
Follow these steps to update a menu.

Step	Action
1	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.
2	Enter new data and click **Save**. **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.


SU - USSD Platform Message Class Screens
Find
Save
Delete
Clear
Close
Help
Message Class
Class
Description
Comment
Last Change Data
Term
Date
User

Fields

This table describes the function of each field.

Field	Description
Class	Specifies the SMS message class type. This field is mandatory. The valid values are described below: • 0 – Class 0 SMS message class type. This message type is only displayed on the mobile screen. It is not saved in the message store or on the SIM card, unless explicitly saved by the user. • 1 – Class 1 SMS message class type. This message type is stored in the device memory or on the SIM card, depending on available memory. • 2 – Class 2 SMS message class type. This message type carries SIM card data. • 3 – Class 3 SMS message class type. This message type is forwarded from the receiving entity to an external device.
Description	Describes the SMS message class. This field is mandatory.

Creating a message class

Follow these steps to create a message class.

Step	Action
1	On the **Message Class** tab, click **Clear** to clear the screen of previous data.
2	In the **Class** field, enter a value of 0, 1, 2, or 3.
3	In the **Description** field, enter a description for this message class.
4	In the **Comment** field, optionally enter a comment for this message class.

Step	Action
5	Click **Save**. **Result**: The new message class is saved.

Editing records

Follow the steps below to edit a record.

Step	Action
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.

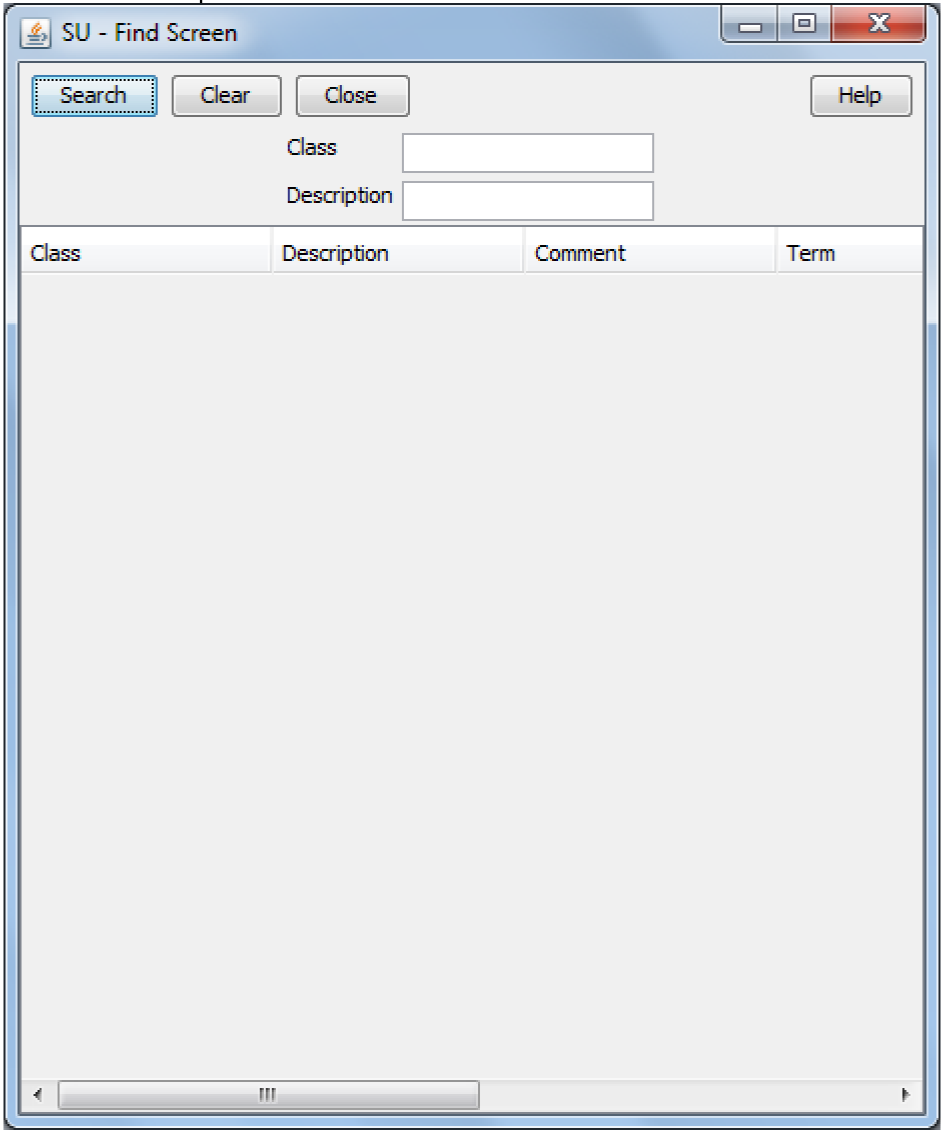
Finding a message class

Follow these steps to find a message class.

Step	Action
1	On the **Message Class** tab, click **Find**. **Result:** The *Find Screen* (See example on page 76) is displayed.
2	Enter a search query string in the **Class** or **Description** field and click **Search**. **Result:** The grid will display all records matching the query. **Note:** Leaving both fields blank will return all records.
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.


SU - Find Screen
Search
Clear
Close
Help
Class
Description
Class
Description
Comment
Term

Chapter 9

UPC Portal Nodes

Overview

Introduction

This chapter explains the contents of the Gateway Portal nodes provisioning screens.

In this chapter

This chapter contains the following topics.

Control Plan Editor Screen 77
Making Nodes Available 78
Available Feature Nodes 79
Language Setting 80
Send Buffer 83
User Input 86
User Selection 90
Version Branching 94

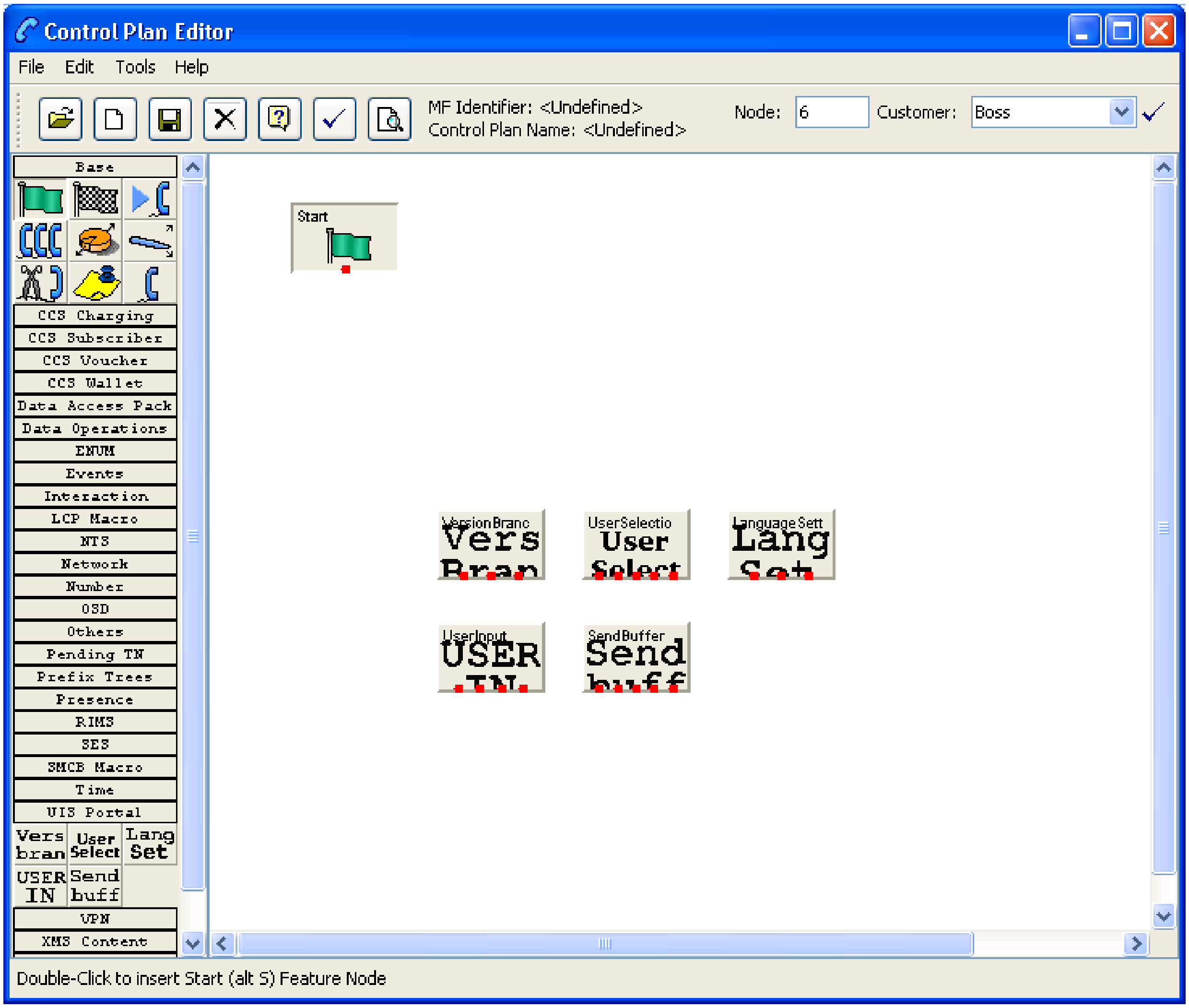
Control Plan Editor Screen

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.



Control Plan Editor
File
Edit
Tools
Help
Base
CCS Charging
CCS Subscriber
CCS Voucher
CCS Wallet
Data Access Pack
Data Operations
ENUM
Events
Interaction
LCP Macro
NTS
Network
Number
OSD
Others
Pending TN
Prefix Trees
Presence
RIMS
SES
SMCB Macro
Time
UIS Portal
Vers bran
User Select
Lang Set
USER IN
Send buff
VPN
XMS Content
Start
VersionBranc
UserSelectio
LanguageSett
UserInput
SendBuffer

MF Identifier: <Undefined>
Control Plan Name: <Undefined>
Node: 6
Customer: Boss

Double-Click to insert Start (alt S) Feature Node

Making Nodes Available

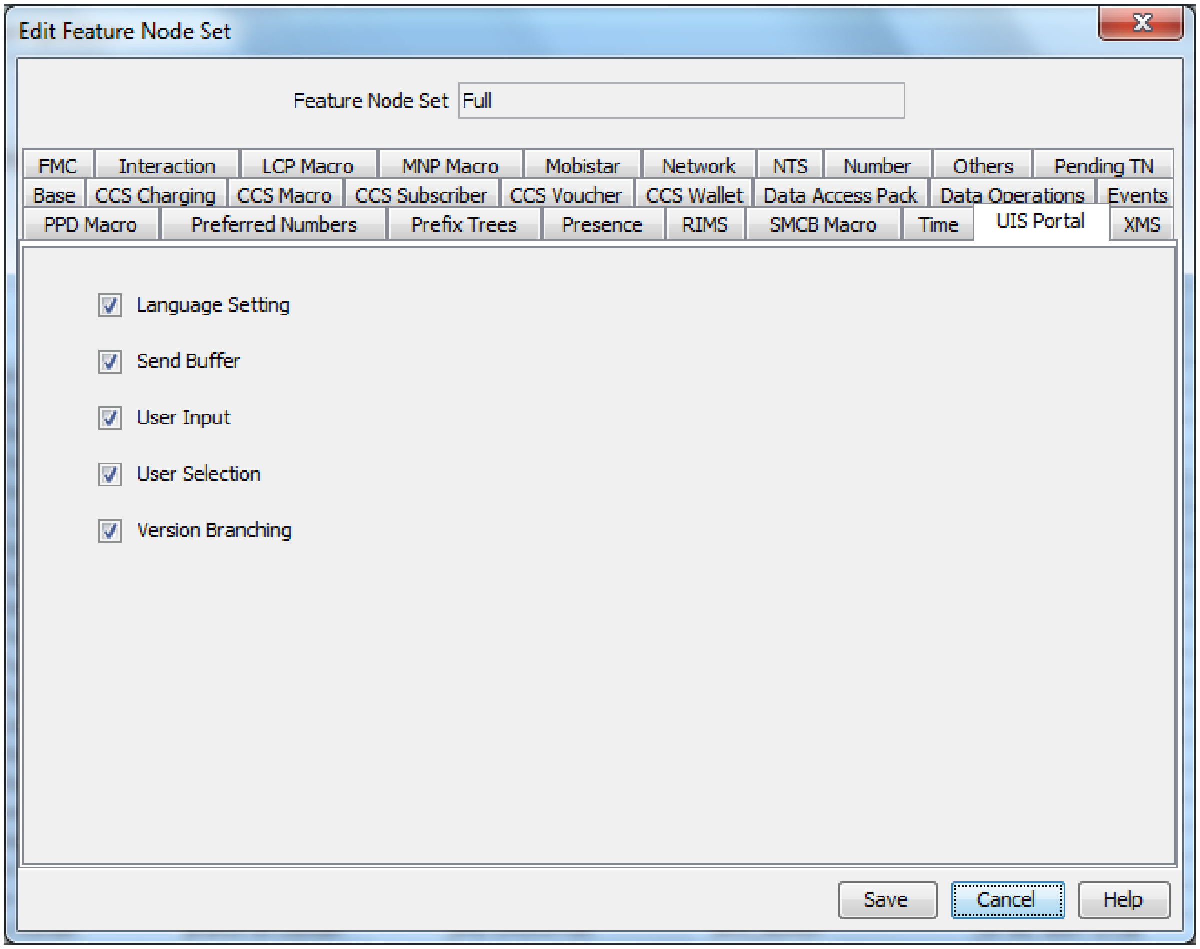
Introduction

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.

Step	Action
1	From the Procedure, 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.

Step	Action
3	Select the **UIS Portal** tab. 
4	Tick the nodes to be available and click **Save**.

Edit Feature Node Set

Feature Node Set: Full

FMC
Interaction
LCP Macro
MNP Macro
Mobistar
Network
NTS
Number
Others
Pending TN
Base
CCS Charging
CCS Macro
CCS Subscriber
CCS Voucher
CCS Wallet
Data Access Pack
Data Operations
Events
PPD Macro
Preferred Numbers
Prefix Trees
Presence
RIMS
SMCB Macro
Time
UIS Portal
XMS

☑ Language Setting

☑ Send Buffer

☑ User Input

☑ User Selection

☑ Version Branching

Save
Cancel
Help

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.

Node name	Node icon	Node description	Reference
Language Setting		Enables the caller to select the language they want to use for this service.	*Language Setting* (on page 80)

Node name	**Node icon**	**Node description**	**Reference**
Send Buffer	SendBuffer Send	Sends data to the SMSC.	*Send Buffer* (on page 83)
User Input	UserInput USER	Collects input from the calling party.	*User Input* (on page 86)
User Selection	UserSelectio User	Enables user selection from a menu.	*User Selection* (on page 90)
Version Branching	VersionBranc Vers	Branches on the Version of MAP used.	*Version Branching* (on page 94)

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

LanguageSett
Lang

Restrictions

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

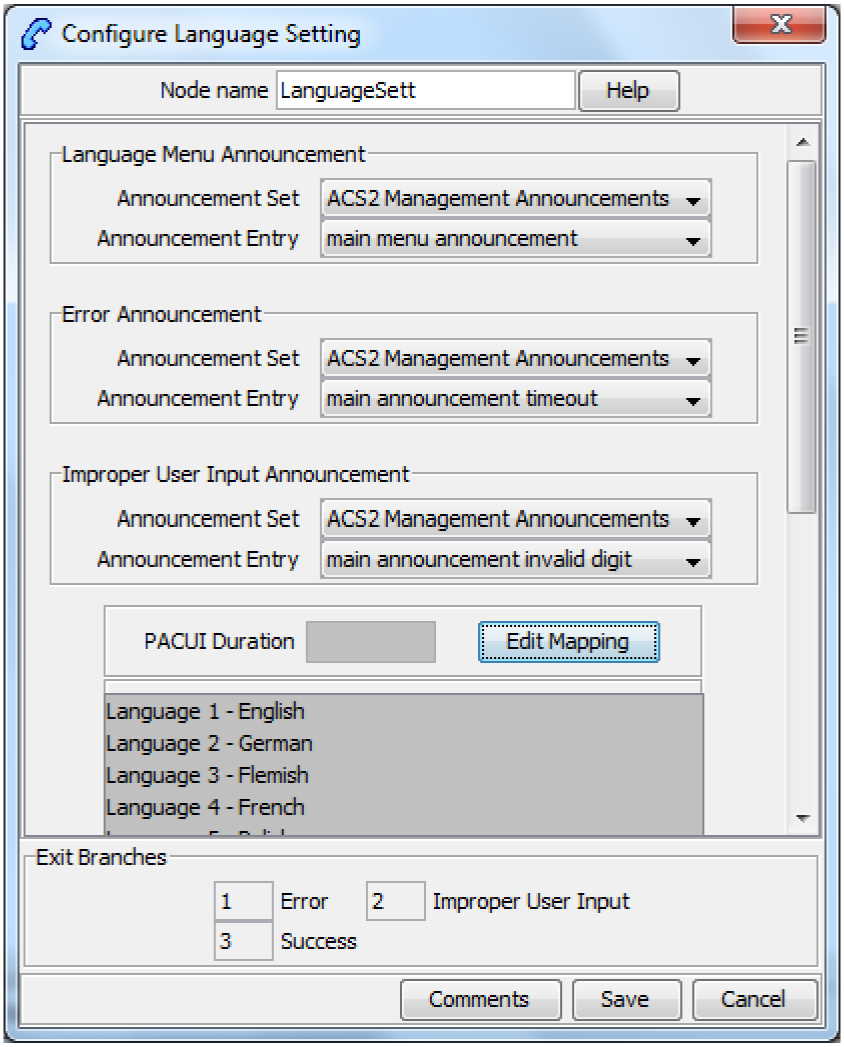
Node exits

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

Exit	**Cause**	**Description**
1	Error	Node encountered an error during execution. The Error or Timeout announcement will be played.
2	Improper User Input	User entered a digit which does not map to a language.
3	Success	Temporary profile updated with selected language.

Configuration screen

Here is an example Configure Language Setting screen.



Configure Language Setting

Node name: LanguageSett

Language Menu Announcement
- Announcement Set: ACS2 Management Announcements
- Announcement Entry: main menu announcement

Error Announcement
- Announcement Set: ACS2 Management Announcements
- Announcement Entry: main announcement timeout

Improper User Input Announcement
- Announcement Set: ACS2 Management Announcements
- Announcement Entry: main announcement invalid digit

PACUI Duration:

Language 1 - English
Language 2 - German
Language 3 - Flemish
Language 4 - French

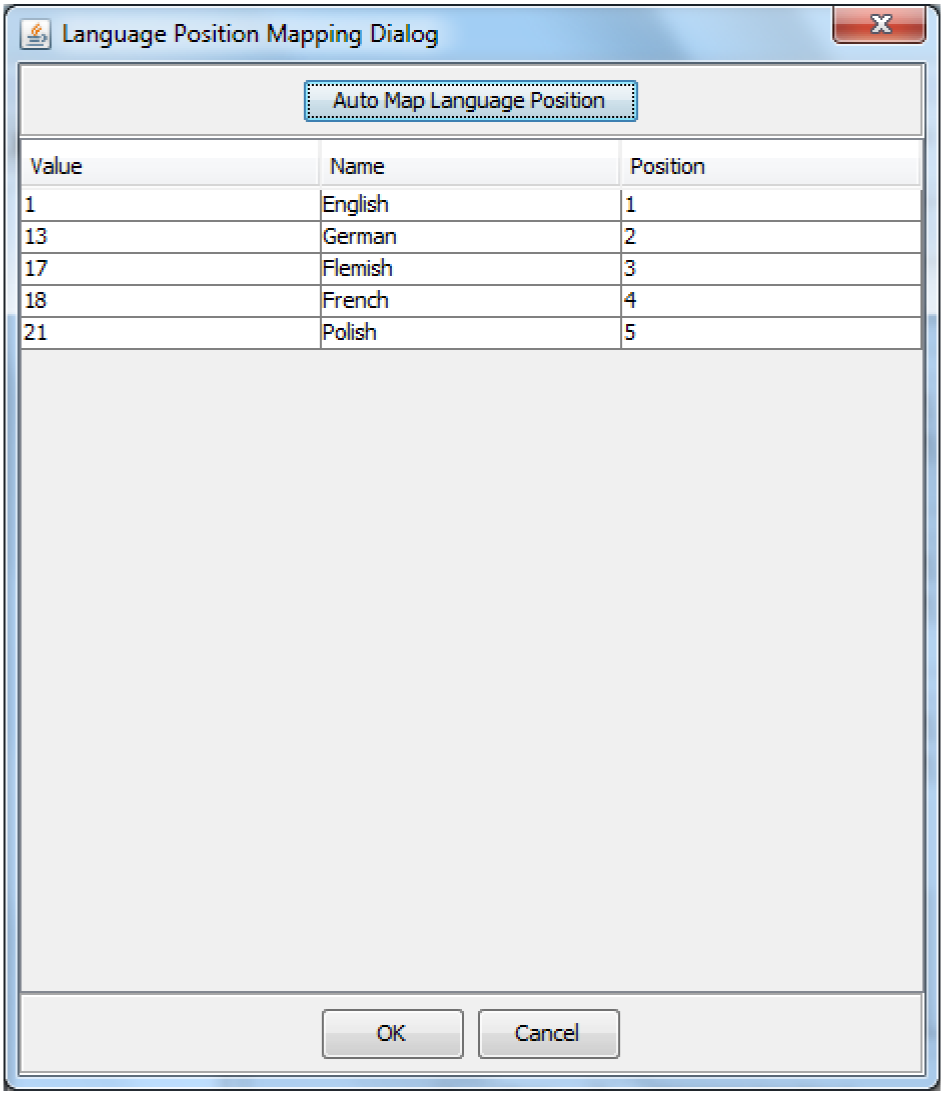
Exit Branches
- 1 Error
- 2 Improper User Input
- 3 Success

Configuring the node

Follow these steps to edit the node configuration.

Step	Action
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.

Step	Action
6	Click **Edit Mapping**. **Result:** You see the Language Position Mapping Dialog.


Language Position Mapping Dialog
Auto Map Language Position
OK
Cancel

Value	Name	Position
1	English	1
13	German	2
17	Flemish	3
18	French	4
21	Polish	5

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: a. Click on the Position cell in the row for the language. b. Type the number in the cell c. Repeat for each language. To automatically map the language positions: a. 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
Send
buff

Restrictions

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

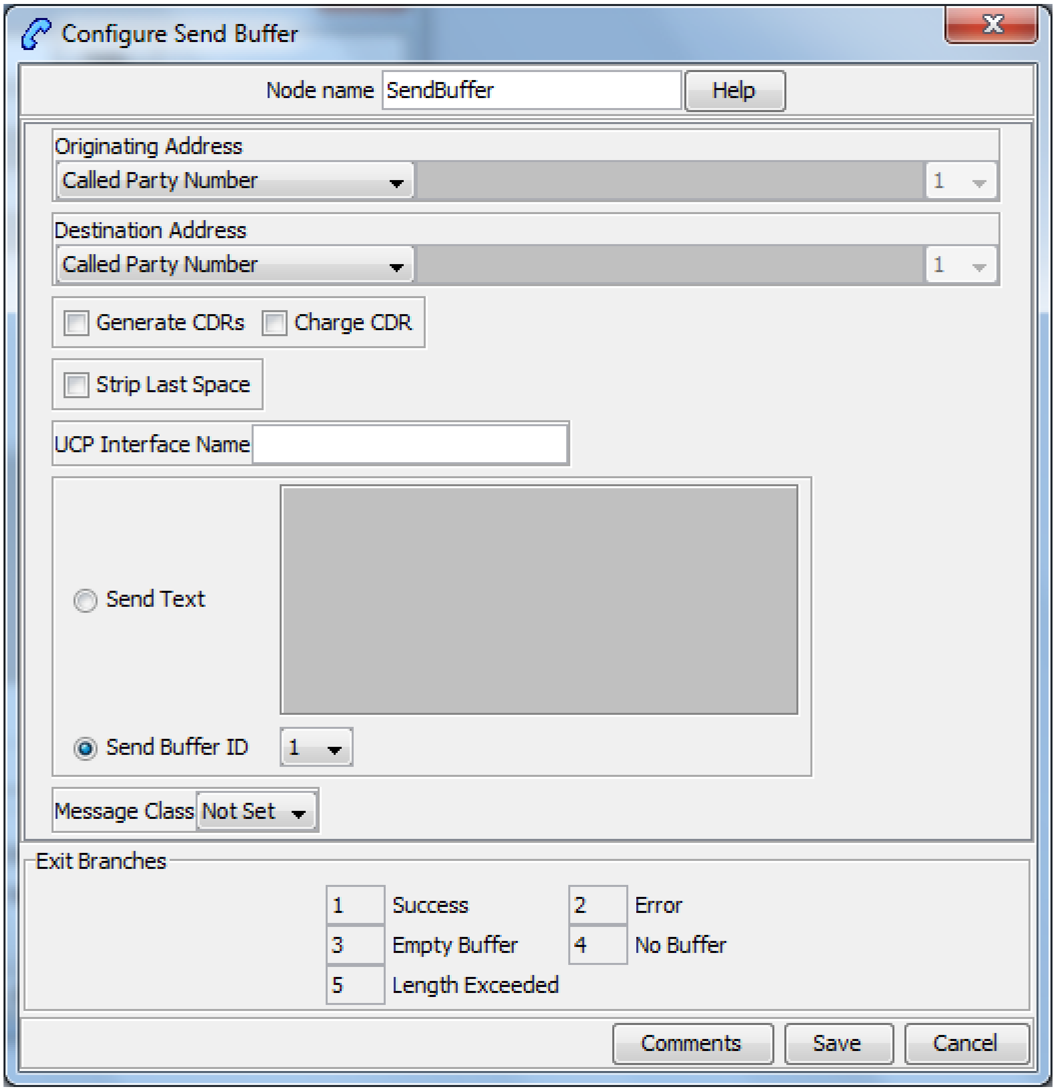
Node exits

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

Exit	Cause	Description
1	Success	Both the final selection buffer, and the CDR have been successfully sent.
2	Error	Node encountered an error receiving or sending data.
3	Empty Buffer	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.
4	No Buffer	Final selection buffer does not exist. Suggests a configuration error in the CPE.
5	Length Exceeded	Received buffer length exceeded 255 characters.

Configuration screen

Here is an example Configure Send Buffer screen.



Node name: SendBuffer

Originating Address: Called Party Number, 1

Destination Address: Called Party Number, 1

☐ Generate CDRs ☐ Charge CDR

☐ Strip Last Space

UCP Interface Name:

○ Send Text

● Send Buffer ID: 1

Message Class: Not Set

Exit Branches

1	Success	2	Error
3	Empty Buffer	4	No Buffer
5	Length Exceeded		

Configuring the node

Follow these steps to edit the node configuration.

Step	Action
1	In the **Originating Address** field, select an address from the list: ▪ Called Party Number ▪ Calling Party Number ▪ Normalised Called Party Number ▪ Normalised Calling Party Number ▪ Pending TN Buffer ▪ Application Buffer ▪ Manually Inserted For details on normalization, refer to either the *USSD Gateway*, or the *ACS Technical Guide*.

Step	Action
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.
3	In the **Destination Address** 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.
4	Select 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 70).
5	Select the **Charge CDR** check box if you wish to charge CDRs.
6	Select 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.
10	The **Message Class** drop-down menu selects "Not Set". **Note:** This feature is for future enhancements.
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

UserInput
USER
IN

Restrictions

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

Node exits

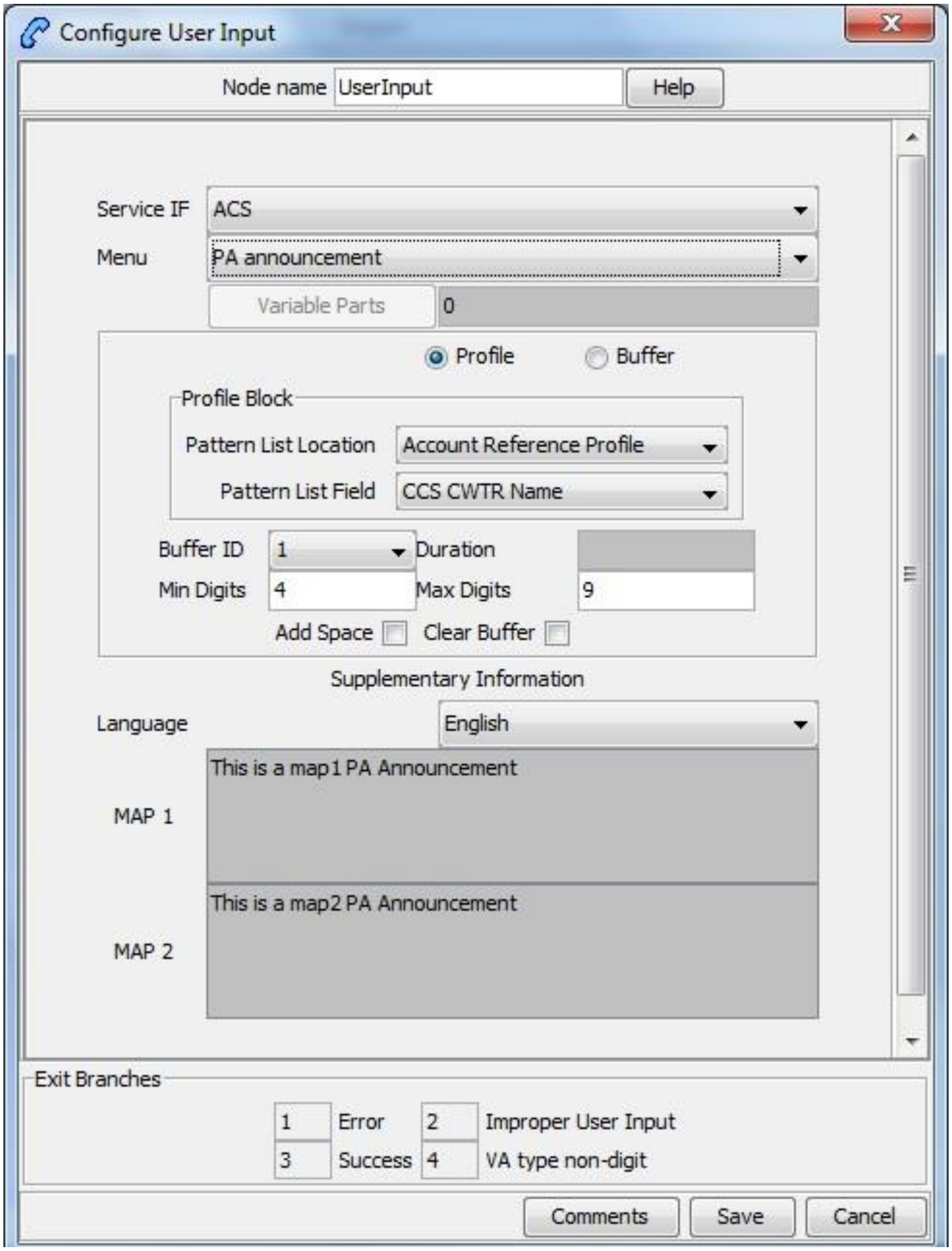
This node has one entry and four exits. The number of exits cannot be changed.

Exit	Cause	Description
1	Error	Node encountered an error during execution.
2	Improper User Input	There was a problem with the user's input.

Exit	Cause	Description
3	Success	Node processed correctly.
4	VA type non-digit	Problem using the Variable Part Announcements configuration.

Configuration screen

Here is an example Configure User Input screen.



Node name: UserInput

Service IF: ACS

Menu: PA announcement

Variable Parts: 0

● Profile ○ Buffer

Profile Block

Pattern List Location: Account Reference Profile

Pattern List Field: CCS CWTR Name

Buffer ID: 1

Duration:

Min Digits: 4

Max Digits: 9

Add Space ☐ Clear Buffer ☐

Supplementary Information

Language: English

MAP 1: This is a map1 PA Announcement

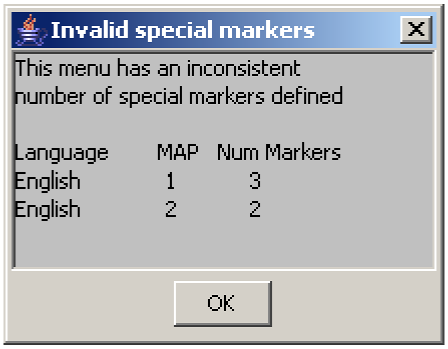
MAP 2: This is a map2 PA Announcement

Exit Branches

1	Error	2	Improper User Input
3	Success	4	VA type non-digit

Configuring the node

Follow these steps to edit the node configuration.

Step	Action
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 Interface* (on page 21) 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 46) 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:  This menu has an inconsistent number of special markers defined Language MAP Num Markers English 1 3 English 2 2 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 51) 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 51) 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 89).
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.
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.

If the duration in the node is set to 0, and the Menu used in the node as described above in step 2 is also configured with duration as 0, node will just play an announcement to the user and will not prompt for any input. Node will take 'improper user input' exit in this case.

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 18) tab.

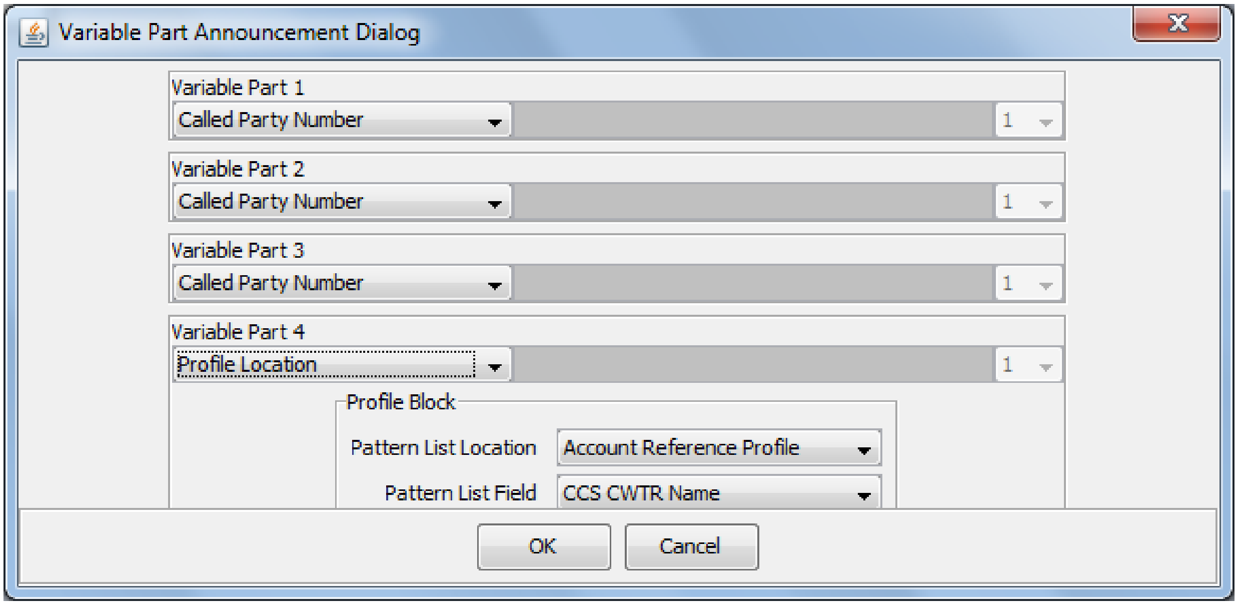
The **MAP 1** and **MAP 2** fields will display the text information presented to the user using a MAP1 or MAP2 version device, in the selected language.

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.

Here is an example Variable Part Announcement Dialog.



Variable Part 1
Called Party Number 1

Variable Part 2
Called Party Number 1

Variable Part 3
Called Party Number 1

Variable Part 4
Profile Location 1

Profile Block
Pattern List Location: Account Reference Profile
Pattern List Field: CCS CWTR Name

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.

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

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

UserSelectio
User
Select

Restrictions

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

Node exits

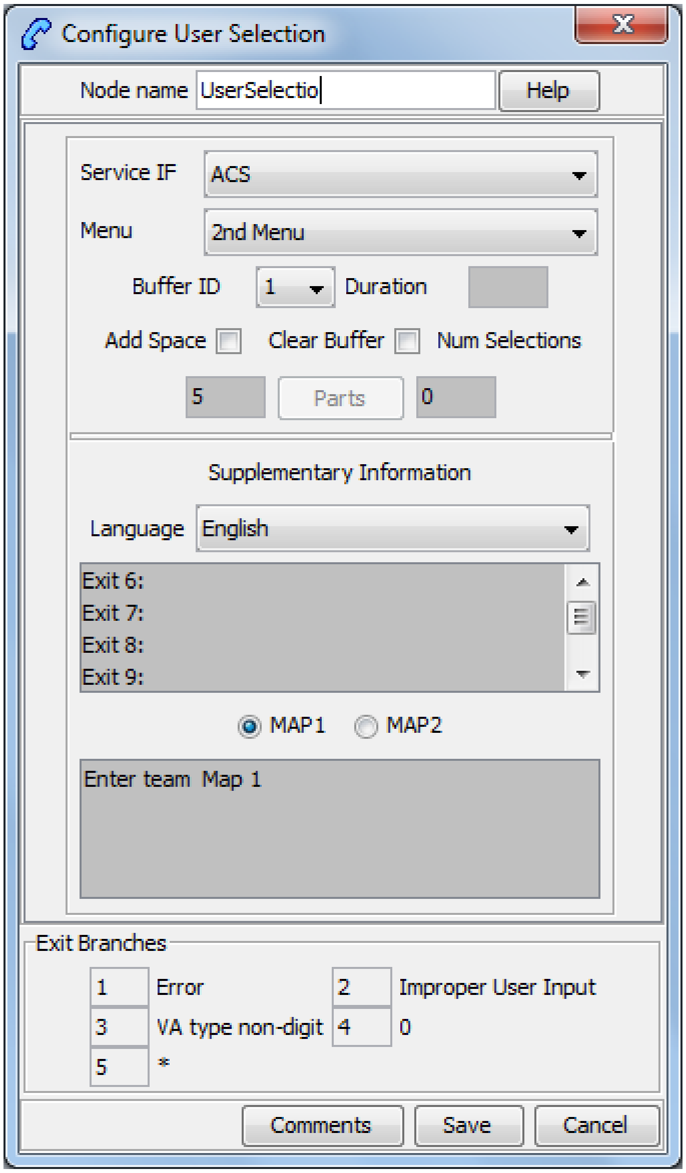
The User Selection node has one entry and may have 5 through 25 exits. Each exit is mapped to a day of week range, and must be connected to an appropriate node. You can configure the number of exits using the *Editing the number of exit branches* (on page 93).

Exit	Cause	Description
1	Error	Node encountered an error during execution.
2	Improper User Input	User Selection doesn't match keyword choice.
3	VA type non-digit	Problem using the Variable Part Announcements configuration.

Exit	Cause	Description
4	0	User selected 0.
5	*	User selected *.

Configuration screen

Here is an example Configure User Selection screen.


Configure User Selection
Help
Parts
Supplementary Information
Comments
Save
Cancel

Node name: UserSelectio

Service IF: ACS

Menu: 2nd Menu

Buffer ID: 1

Duration:

Add Space ☐ Clear Buffer ☐ Num Selections

5 Parts 0

Language: English

Exit 6:
Exit 7:
Exit 8:
Exit 9:

● MAP1 ○ MAP2

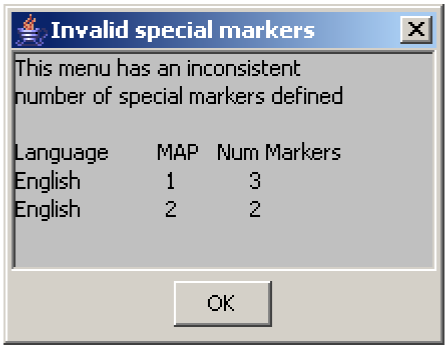
Enter team Map 1

Exit Branches

1	Error	2	Improper User Input
3	VA type non-digit	4	0
5	*		

Configuring the node

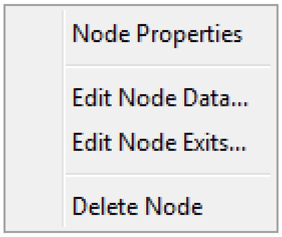
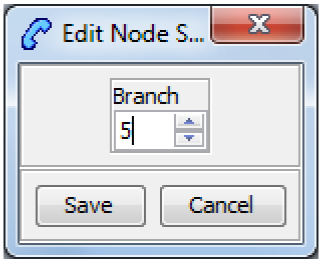
Follow these steps to edit the node configuration.

Step	Action
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 Interface* (on page 21) 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 51) 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:  This menu has an inconsistent number of special markers defined Language MAP Num Markers English 1 3 English 2 2 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 51) 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 71) 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 93).

Step	Action
8	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 51) 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 94).
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 18) 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

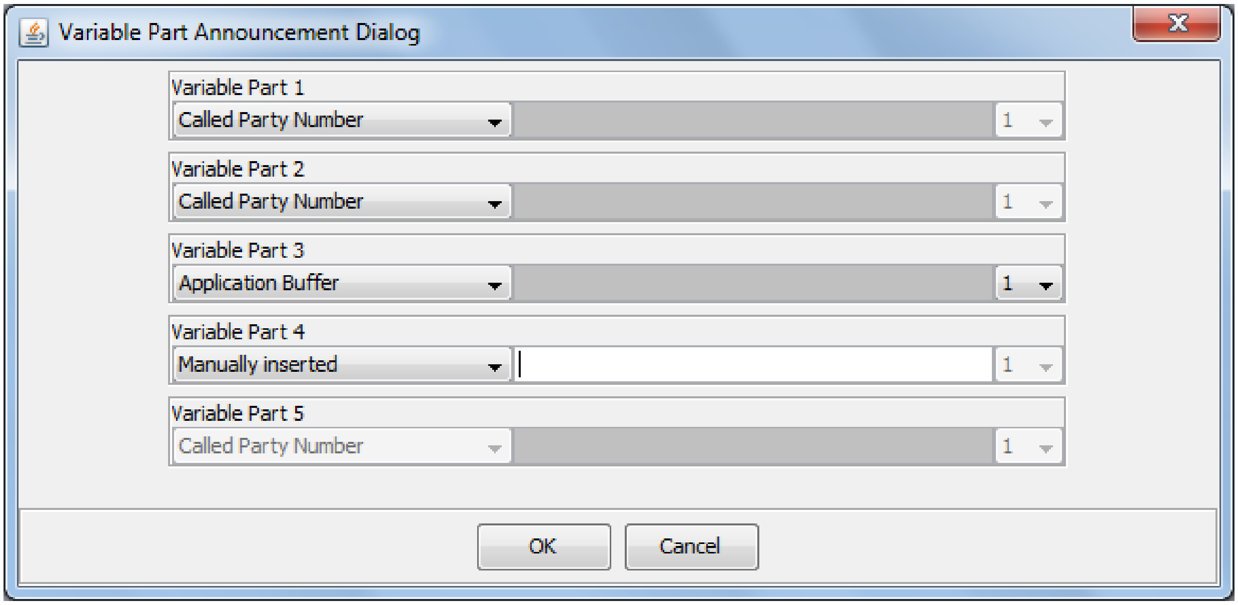
Follow these steps to edit the number of exit branches of a node.

Step	Action
1	Ensure Call Plan Editor is in Graphical mode.
2	Right-click on node you want to change the number exits for. **Result:** You see a shortcut menu.  Node Properties Edit Node Data... Edit Node Exits... Delete Node
3	Click **Edit Node Exits**. **Result:** You see the Edit Node Structure screen.  Branch 5
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.

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.

Here is an example Variable Part Announcement Dialog.


Variable Part Announcement Dialog
Variable Part 1
Called Party Number
1
Variable Part 2
Called Party Number
1
Variable Part 3
Application Buffer
1
Variable Part 4
Manually inserted
1
Variable Part 5
Called Party Number
1
OK
Cancel

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.

Buffer	Action
Called Party Number Calling Party Number Normalised Called Party Number Normalised Calling Party Number Pending TN Buffer	No further action required
Application Buffer	Select the buffer used to store the user input in the drop down list
Manually inserted	Type a value in the text field.

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

Version Branc
Vers
Bran

Restrictions

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

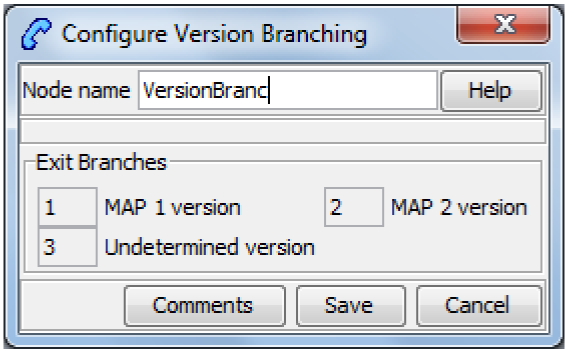
Node exits

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

Exit	Cause	Description
1	MAP 1 version	Call is using MAP1.
2	MAP 2 version	Call is using MAP2.
3	Undetermined version	MAP version could not be determined.

Configuration screen

Here is an example Configure Version Branching screen.



Node name VersionBranc

1 MAP 1 version
2 MAP 2 version
3 Undetermined version

Configuring the node

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

Click **Save** to save the node.