Copyright

Copyright © 2013, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.
Contents

About This Document .................................................................................................................. v
Document Conventions .............................................................................................................. vi

Chapter 1

System Overview ....................................................................................................................... 1
  Overview ............................................................................................................................... 1
  What is Location Capabilities Pack? .................................................................................... 1

Chapter 2

LCP Administration Screens and Tasks ....................................................................................... 5
  Overview ............................................................................................................................... 5
  Getting Started .................................................................................................................... 5
  Plugins ................................................................................................................................ 8
  Mappings .............................................................................................................................. 10
  Conversions ........................................................................................................................ 12
  Zones .................................................................................................................................. 15

NCC Glossary of Terms .......................................................................................................... 17

Index .................................................................................................................................... 21
About This Document

Scope

The scope of this document includes all functionality a user must know in order to effectively operate the Oracle Communications Network Charging and Control Location Capabilities Pack (LCP) application. It does not include detailed design of the service.

Audience

This guide is written primarily for LCP administrators. However, the overview sections of the document are useful to anyone requiring an introduction.

Prerequisites

Although it is not a prerequisite to 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 document is related to this document:

- Oracle Communications Network Charging and Control LCP Technical Guide
Document Conventions

Typographical Conventions

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

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

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

Introduction

This chapter provides a high-level overview of the application. It explains the basic functionality of the system and lists the main components.

It is not intended to advise on any specific Oracle Communications Network Charging and Control (NCC) network or service implications of the product.

In this chapter

This chapter contains the following topics.

What is Location Capabilities Pack?

What is Location Capabilities Pack?

Introduction

The Oracle Communications Network Charging and Control Location Capabilities Pack (LCP) is a set of software components used by other applications to look up the location of mobile devices.

Usage scenarios

There are several current and future scenarios for using LCP.

Location-based billing

Through location-based billing, a subscriber can establish zones with special billing rates for different zones. Typical example zones are “home”, or “work”.

A user or subscriber can set further zones to cover a subscriber’s particular preferences.

Differential billing can be the result of one of the following:

- A call made by a subscriber located in one of their zones
- A call made between subscribers when both are located in one of their zones

Emergency services

With location-enhanced emergency services, the location information can be used in two different ways:

- To dispatch the closest appropriate authorities
- To relay accurate location information to emergency services

Both help with the speedy arrival to an accurate location.

Tracking

Tracking enables fleet applications (and service companies) to track vehicles so the owning company knows where a vehicle and/or operator are.

Note: To provide this service, the operator must offer real-time and accurate tracking functionality.
Callback and collect call locations

LCP can be used to establish the location of a subscriber who is outside the network. This enables a subscriber who is visiting a foreign network to use callback functionality to establish a roaming call.

To implement this feature, the LCP Store My Location node is used before the final billing node performs the charge.

For more information about callback and collect call features, see NCC USSD GW Technical Guide.

Other possible scenarios
The LCP may also be used for:

- Mobile blind dating (for example, two subscribers who have signed up for this service and are in the same area can arrange to meet up).
- Looking up the nearest service facility (for example, a pharmacy or restaurant).

Definitions
This table describes some important terms used by the LCP:

<table>
<thead>
<tr>
<th>Button</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone</td>
<td>A zone is collection of zone shapes. Currently it is used for billing purposes.</td>
</tr>
<tr>
<td>Zone Shape</td>
<td>A zone shape is an area of a certain shape (for example: circular, rectangular, etc.). Currently, as these are defined by radius, they can only be circular. Example: A work zone could contain three shapes representing three separate offices or three zone shapes representing one single office with a more complex overall shape.</td>
</tr>
<tr>
<td>Zone Type</td>
<td>What the zone represents (for example: home, work).</td>
</tr>
<tr>
<td>Location</td>
<td>Position of a subscriber.</td>
</tr>
<tr>
<td>Location Server</td>
<td>A location server is the entity that the location services clients query to obtain location information (for example: HLR, GMLC).</td>
</tr>
</tbody>
</table>

Components

The LCP consists of these components:

- Location Module (locApp)
- MAP ATI plug-in
- IS-41 POSREQ plug-in
- SRI-MSRN plug-in
- SRI-IMSI plug-in
- LCP ACS components (four feature nodes and one action handler)
- Database tables
- Management screens

Location Module

The key component of the LCP is the Location Module. The calling application passes the MSISDN of a mobile device to the Location Module. The Location Module looks up the current location of the mobile device and returns its locational reference to the calling application as a Cell ID/Area ID or as a circle of uncertainty.
Plug-ins
The Location Module uses modular communication plug-ins to communicate with Location Servers on customer networks. It provides the following plug-ins:

- MAP ATI
- IS-41 POSREQ
- SRI-MSRN
- SRI-IMSI

Provisioning and management
Additional SMS management screens are delivered as part of the LCP to allow the provisioning and management of locational entities in the database (for example: converting data from Cell ID to circles of uncertainty in X,Y,R format).

Feature nodes
The LCP also enables you to use the Location Module from ACS-based customer applications by providing the following additional feature nodes:

- Set My Zone sets a subscriber’s Home and Work zones.
- In The Zone checks if a mobile device is currently in a pre-defined zone.
- Store My Location stores locational data for use by other nodes.
- Store My Network ID stores the IMSI retrieved for a supplied MSISDN.

For more information, see NCC Feature Nodes Reference Guide.
Overview diagram

Here is an overview of how the LCP functions (interaction with the HLR). The Location Application sends location queries to the HLR.
Overview

Introduction

This chapter explains the functionality on the Oracle Communications Network Charging and Control Location Capabilities Pack screen and other administrative tasks.

In this chapter

This chapter contains the following topics.

- Getting Started
- Plugins
- Mappings
- Conversions
- Zones

Getting Started

Accessing LCP

Follow these steps to access the Location Capabilities Pack.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From the SMS Services menu, select LCP.</td>
</tr>
</tbody>
</table>

Result: You see the Location Capabilities Pack screen.
Location Capabilities Pack screen

Here is an example Location Capabilities Pack screen.

![Location Capabilities Pack screen](image)

**Tabs**

The Location Capabilities Pack screen contains the following tabs:

- **Plugins** (on page 8)
- **Mappings** (on page 10)
- **Conversions** (on page 12)

Refer to *What is Location Capabilities Pack?* (on page 1) for an overview of how these tabs are used in LCP.

**Selecting tabs**

Follow these steps to navigate between tabs on a screen.

<table>
<thead>
<tr>
<th>To...</th>
<th>Press the...</th>
</tr>
</thead>
<tbody>
<tr>
<td>select a tab title using the mouse</td>
<td>left mouse button with the cursor placed over the tab title.</td>
</tr>
<tr>
<td>navigate across the tab titles</td>
<td>left or right arrow key (if a tab is already selected)</td>
</tr>
</tbody>
</table>

**Navigating between fields and buttons**

Follow these steps to navigate between fields and buttons on a tab or screen.

<table>
<thead>
<tr>
<th>To...</th>
<th>Press...</th>
</tr>
</thead>
<tbody>
<tr>
<td>navigate to the next field or button</td>
<td>Tab</td>
</tr>
<tr>
<td>save screen changes or activate the selected button</td>
<td>Enter</td>
</tr>
</tbody>
</table>
Deleting a record

Follow these steps to delete a record from the database.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | From the table on the tab, select the record to delete. Click **Delete**.  
     **Result:** You see the Confirm Deletion dialog. |  |
| 2    | Click **Yes** to delete the record. |  |

Searching for records

Each tab on the Location Capabilities Pack screen contains a search area. The search area consists of fields in which you can enter search criteria, which will return records matching the criteria in the grid.

The search facility supports the Oracle wildcards:

- % (any character) and
- _ (one character).

**Search example**

Here is an example search procedure for conversions on the **Conversions** tab.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Construct a search query by entering criteria in the fields at the top of the **Conversions** tab.  
     • In the top field, enter either the Cell ID, or Area ID, depending on which option you have selected to the left of the field.  
     • Longitude: The longitude coordinate to search for.  
     • Latitude: The latitude coordinate to search for.  
     • Radius: The radius to search for. |  |
| 2    | To execute the search, click **Search**.  
     **Result:** Searching for a blank Cell ID returns all the records in the database. |  |
Plugins

Introduction

This Plugins tab of the Location Capabilities Pack screen displays the list of existing plug-ins. The table will allow a maximum of 10 entries.

Plugins tab

Here is an example Plugins tab.

Note: You can remove all search criteria by clicking Clear.
Plugins tab fields

This table describes the function of each field.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Description of this plug-in. This field can hold a maximum of 2000 characters.</td>
</tr>
<tr>
<td>Library Name</td>
<td>The name of the shared library that contains the location plug-in functionality.</td>
</tr>
<tr>
<td>Use Current</td>
<td>Defines whether or not to use current location (MAP Cell ID, or MAP Geographical Information, or INAP Location Number).</td>
</tr>
<tr>
<td>Group Requests</td>
<td>Defines whether or not to send Grouped Requests.</td>
</tr>
</tbody>
</table>

Warning: This string must match the filename of the library and that file must be in the LCP’s library directory on the SLCs. (The default location is `/IN/service_packages/LCP/lib`). This field can hold a maximum of 1024 characters. For more information about the available libraries, see NCC LCP Technical Guide.

Notes:

- This is only relevant where there is a supported plug-in. Setting to yes, groups requests from a macro node to a plug-in to save bandwidth. This functionality is not currently supported in either the macro nodes or the plug-ins, so this field should be set to No.
- After you save this record, you cannot change this setting.

Plugin Definition screen

Here is an example Plugin Definition screen.

Adding a plug-in definition

Follow these steps to create a plug-in definition.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>On the Plugins tab of the Locations Capabilities Pack screen, click New. <strong>Result:</strong> You see the New Plugin Definition screen (See example on page 9).</td>
</tr>
<tr>
<td>2</td>
<td>Configure this record by entering data in the fields on this screen.</td>
</tr>
</tbody>
</table>
Editing a plug-in definition

Follow these steps to edit a plug-in definition.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | From the table on the Plugins tab of the Location Capabilities Pack screen, select the record. Click Edit.  
Result: You see the Edit Plugin Definition screen (See example on page 9). |
| 2    | Edit the fields to reflect the changes you need to make.  
For more information about the fields on this screen, see Plugins tab fields (on page 9).  
**Note:** You cannot change the group requests option. |
| 3    | Click **Save**. |

Mappings

**Introduction**

This Mappings tab of the Location Capabilities Pack screen displays the list of existing MSISDN mappings.

There are two ways a plug-in is chosen. It is either specified by the LSP client, or if one is not specified, the MSISDN of the mobile station will be used to select a plug-in.

The MSISDN or plug-in selection is determined using MSISDN ranges. This means that, if the MSISDN of interest falls within the range of a plug-in, the plug-in is used. The MSISDN ranges must be non-overlapping, that is, no part of the range overlaps with any other MSISDN ranges.

The table will allow a maximum of 100 entries.
Mappings tab

Here is an example Mappings tab.

![Location Capabilities Pack](image)

**Mappings fields**

This table describes the function of each field.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSISDN Start Range</td>
<td>Type a start value for the range of MSISDNs which will map to the plug-in.</td>
</tr>
<tr>
<td>- Notes:</td>
<td>• Ranges must not overlap with an existing range.</td>
</tr>
<tr>
<td></td>
<td>• After you save the record, the range cannot be modified.</td>
</tr>
<tr>
<td>MSISDN End Range</td>
<td>Type an end value for the range of MSISDNs which will map to the plug-in.</td>
</tr>
<tr>
<td>- Notes:</td>
<td>• Ranges must not overlap with an existing range.</td>
</tr>
<tr>
<td></td>
<td>• After you save the record, the range cannot be modified.</td>
</tr>
<tr>
<td>Plugin Type</td>
<td>Select the plug-in type from the drop-down menu.</td>
</tr>
</tbody>
</table>
**MSISDN Mapping screen**

Here is an example MSISDN Mapping screen.

**Adding an MSISDN mapping**

Follow these steps to add an MSISDN mapping for a selected plug-in.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | On the **Mappings** tab of the Locations Capabilities Pack screen, click **New**.  
**Result:** You see the New **MSISDN Mapping screen** (See example on page 12). |
| 2    | Configure this record by entering data in the fields on this screen.  
For more information about the fields in this screen, see **Mappings fields** (on page 11). |
| 3    | Click **Save**.  
**Result:** The record is added to the database. |

**Editing an MSISDN mapping**

Follow these steps to edit an MSISDN mapping.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | From the table on the **Mappings** tab of the Location Capabilities Pack screen, select the record.  
Click **Edit**.  
**Result:** You see the Edit **MSISDN Mapping screen** (See example on page 12). |
| 2    | The only field you can modify is the **Plugin Type**.  
For more information about the fields on this screen, see **Mappings fields** (on page 11). |
| 3    | Click **Save**. |

**Conversions**

**Introduction**

The **Conversions** tab displays the list of existing conversions that match the search criteria. If the search criteria fields are empty, the entire list of conversions is displayed. A circle showing the meaning of the coordinates is shown. The table will allow a maximum of 1 million entries.

**Conversion bulk loader**

The Conversion Bulk Loader enables you to load conversion data from text files. Files can contain data for updating by area ID or by cell ID, but not both.

The files can be imported using one of the following:
• Conversions tab of the Location Capabilities Pack screen
• Command line

For details on using the command line and the file format of the text files, refer to *LCP Technical Guide*.

**Conversions tab**

Here is an example Conversions tab.

![Location Capabilities Pack](image)

**Conversion fields**

This table describes the function of each field.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell ID</td>
<td>The ID of the Cell.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> This field cannot be changed after it is first saved.</td>
</tr>
<tr>
<td>Area ID</td>
<td>The ID of the Area.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> This field cannot be changed after it is first saved.</td>
</tr>
<tr>
<td>Longitude (Degrees)</td>
<td>The longitude coordinate. Restricted to between -179.99999 (W) to 180.00000 (E) degrees (5 decimal places throughout).</td>
</tr>
<tr>
<td>Latitude (Degrees)</td>
<td>The latitude coordinate. Restricted to between -90.00000 to 90.00000 degrees (5 decimal places throughout).</td>
</tr>
<tr>
<td>Radius (km)</td>
<td>The radius. Restricted to between 0.0000000 and 99999999.9999999 kilometers (7 decimal places throughout).</td>
</tr>
</tbody>
</table>
Conversion screen

Here is an example Conversion screen.

Adding a conversion

Follow these steps to create a conversion.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>On the Conversions tab of the Locations Capabilities Pack screen, click New. Result: You see the New Conversion screen (See example on page 14).</td>
</tr>
<tr>
<td>2</td>
<td>Click either the Cell ID or Area ID and type the ID in the field beside the selection. Note: After you save this record, you cannot change this setting.</td>
</tr>
<tr>
<td>3</td>
<td>Fill in the coordinates. For more information about these fields, see Conversion fields (on page 13).</td>
</tr>
<tr>
<td>4</td>
<td>Click Save.</td>
</tr>
</tbody>
</table>

Editing a conversion

Follow these steps to edit a conversion.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From the table on the Conversions tab of the Location Capabilities Pack screen, select the record. Click Edit. Result: You see the Edit Conversion screen (See example on page 14).</td>
</tr>
<tr>
<td>2</td>
<td>Edit the fields to reflect the changes you need to make. For more information about the fields in this screen, see Conversion fields (on page 13).</td>
</tr>
<tr>
<td>3</td>
<td>Click Save.</td>
</tr>
</tbody>
</table>

Importing conversions

Follow these steps to import conversions.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>On the Conversions tab of the Location Capabilities Pack screen, click Import. Result: You see the Import screen (See example on page 15).</td>
</tr>
<tr>
<td>Step</td>
<td>Action</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
</tr>
</tbody>
</table>
| 2    | Specify the file type to import. Select one of the following:  
|      | - Cell  
|      | - Area  
|      | **Result:** The caption of the import button will reflect the file type selected. |
| 4    | Specify the import mode. Select one of the following:  
|      | - Replace - insert into empty database or replace all existing data  
|      | - Update - update the existing data  
| 5    | Select one of the following:  
|      | - Import Cell Data  
|      | - Import Area Data  
|      | **Result:** You see an Import screen reflecting your selection of options. |
| 6    | Browse to the file to import. Click the import button, for example, **Import Cell Data (Replace).**  
|      | **Result:** If successful, you see a dialog displaying the location of log files to check and delete after inspection. |
| 7    | Click **OK.**  
|      | **Result:** The database is updated. |

**Import screen**

Here is an example Import screen.

![Import Screen](image)

**Zones**

**Introduction**

Zones can be used to determine the location of a Subscriber for the purpose of differential billing and/or providing location-based services.

The Location Capabilities Pack uses ZONE profile tags configured in ACS to define a set of zones. These profile tags are defined on the **Profile Tag Details** tab on the ACS Configuration screen.

**Configuring zone profile tags**

You can define a set of zones which can be used to determine the location of a subscriber.

To define a zone, you must first define the zone profile group field using a ZONE profile tag. ZONE profile tags are configured in ACS. The LCP ZONE profile tags, Home and Work, are all configured at installation. All other zone profile tags are user defined and must conform to the configuration shown in this table.
<table>
<thead>
<tr>
<th>Profile Tag Name</th>
<th>Profile Tag Type</th>
<th>Profile Tag</th>
<th>Parent Profile Tag</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCP ZONES</td>
<td>Profile Block</td>
<td>4128769</td>
<td></td>
<td>Configured during installation.</td>
</tr>
<tr>
<td>Home</td>
<td>ZONE</td>
<td>4128770</td>
<td>4128769</td>
<td>Configured during installation.</td>
</tr>
<tr>
<td>Work</td>
<td>ZONE</td>
<td>4128771</td>
<td>4128769</td>
<td>Configured during installation.</td>
</tr>
<tr>
<td>ZoneName</td>
<td>ZONE</td>
<td>An integer value in the range: 4128772 to 4194305</td>
<td>4128769</td>
<td>User defined. <strong>Warning:</strong> The parent profile tag must be set to 4128769 (the profile tag value for LCP ZONES).</td>
</tr>
</tbody>
</table>

For further information on profile tags, see *NCC ACS User's Guide*.

**Using zone profile tags**

The LCP ZONE profile tags defined on the ACS Configuration screen are used by the LCP In The Zone feature node and Set My Zone feature node to access or update zone type values from within a control plan.

For more information on LCP feature nodes, see *NCC Feature Nodes Reference Guide*. For information on a specific node, click the Help button in the feature node's configuration window.
NCC Glossary of Terms

ACS
Advanced Control Services configuration platform.

ATI
Any Time Interrogation - this process is used on a GSM network to interrogate the HLR for location and or subscriber information.

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

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

GMLC
The Gateway Mobile Location Centre contains functionality required to support LCS (LoCation Services).

GPRS
General Packet Radio Service - employed to connect mobile cellular users to PDN (Public Data Network- for example the Internet).

GSM
Global System for Mobile communication.
It is a second generation cellular telecommunication system. Unlike first generation systems, GSM is digital and thus introduced greater enhancements such as security, capacity, quality and the ability to support integrated services.

HLR
The Home Location Register is a database within the HPLMN (Home Public Land Mobile Network). It provides routing information for MT calls and SMS. It is also responsible for the maintenance of user subscription information. This is distributed to the relevant VLR, or SGSN (Serving GPRS Support Node) through the attach process and mobility management procedures such as Location Area and Routing Area updates.

HPLMN
Home PLMN

HTML
HyperText Markup Language, a small application of SGML used on the World Wide Web.
It defines a very simple class of report-style documents, with section headings, paragraphs, lists, tables, and illustrations, with a few informational and presentational items, and some hypertext and multimedia.
**IMSI**

International Mobile Subscriber Identifier. A unique identifier allocated to each mobile subscriber in a GSM and UMTS network. It consists of a MCC (Mobile Country Code), a MNC (Mobile Network Code) and a MSIN (Mobile Station Identification Number).

The IMSI is returned by the HLR query (SRI-SM) when doing FDA. This tells the MSC exactly who the subscriber is that the message is to be sent to.

**IN**

Intelligent Network

**INAP**

Intelligent Network Application Part - a protocol offering real time communication between IN elements.

**IS-41**

Interim Standard 41 is a signaling protocol used in cellular telecommunications systems. It deals with the signalling between the MSC and other network elements for the purpose of handovers and roaming etc.

**ISDN**

Integrated Services Digital Network - set of protocols for connecting ISDN stations.

**ITU**

International Telecommunication Union

**LCP**

Location Capabilities Pack - set of software components used by other applications to look up the location of mobile devices.

**MAP**

Mobile Application Part - a protocol which enables real time communication between nodes in a mobile cellular network. A typical usage of the protocol would be for the transfer of location information from the VLR to the HLR.

**MC**

Message Centre. Also known as SMSC.

**MCC**

Mobile Country Code. In the location information context, this is padded to three digits with leading zeros. Refer to ITU E.212 ("Land Mobile Numbering Plan") documentation for a list of codes.

**MNC**

Mobile Network Code. The part of an international address following the mobile country code (MCC), or at the start of a national format address. This specifies the mobile network code, that is, the operator owning the address. In the location information context, this is padded to two digits with a leading zero. Refer to ITU E.212 ("Land Mobile Numbering Plan") documentation for a list of codes.
MSC
Mobile Switching Centre. Also known as a switch.

MSIN
Mobile Station Identification Number.

MSISDN
Mobile Station ISDN number. Uniquely defines the mobile station as an ISDN terminal. It consists of three parts; the country code (CC), the national destination code (NDC) and the subscriber number (SN).

MSRN
Mobile Station Roaming Number

MT
Mobile Terminated

Oracle
Oracle Corporation

PLMN
Public Land Mobile Network

POSREQ
IS-41 Position Request - process used in the IS-41 network to interrogate the HLR for location and subscriber information.

SGML

SGSN
Serving GPRS Support Node

SME
Short Message Entity - an entity which may send or receive Short Messages. It may be located in a fixed network, a mobile, or an SMSC.

SMS
Depending on context, can be:
- Short Message Service
- Service Management System platform
- NCC Service Management System application
SN
Service Number

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

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

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

A
About This Document • v
Accessing LCP • 5
ACS • 17
Adding a conversion • 14
Adding a plug-in definition • 9
Adding an MSISDN mapping • 12
ATI • 17
Audience • v

C
Callback and collect call locations • 2
CC • 17
Components • 2
Configuring zone profile tags • 16
Conversion bulk loader • 13
Conversion fields • 13, 14
Conversion screen • 14
Conversions • 6, 12
Conversions tab • 13
Copyright • ii

D
Definitions • 2
Deleting a record • 7
Document Conventions • vi

E
Editing a conversion • 14
Editing a plug-in definition • 10
Editing an MSISDN mapping • 12
Emergency services • 1

F
FDA • 17
Feature nodes • 3

G
Getting Started • 5
GMLC • 17
GPRS • 17
GSM • 17

H
HLR • 17
HPLMN • 17
HTML • 17

I
Import screen • 15
Importing conversions • 15
IMSI • 18

IN • 18
INAP • 18
Introduction • 1, 8, 10, 12, 15
IS-41 • 18
ISDN • 18
ITU • 18

L
LCP • 18
LCP Administration Screens and Tasks • 5
Location Capabilities Pack screen • 6
Location Module • 3
Location-based billing • 1

M
MAP • 18
Mappings • 6, 10
Mappings fields • 11, 12
Mappings tab • 11
MC • 18
MCC • 18
MNC • 18
MSC • 19
MSIN • 19
MSISDN • 19
MSISDN Mapping screen • 12
MSRN • 19
MT • 19

N
Navigating between fields and buttons • 6

O
Oracle • 19
Other possible scenarios • 2
Overview • 1, 5
Overview diagram • 4

P
PLMN • 19
Plugin Definition screen • 9, 10
Plugins • 6, 8
Plug-ins • 3
Plugins tab • 8
Plugins tab fields • 9, 10
POSREQ • 19
Prerequisites • v
Provisioning and management • 3

R
Related documents • v

S
Scope • v
Search example • 7
Searching for records • 7
Selecting tabs • 6
SGML • 19
SGSN • 19
SME • 19
SMS • 19
SN • 20
SRI • 20
System Overview • 1

T
Tabs • 6
Tracking • 1
Typographical Conventions • vi

U
Usage scenarios • 1
Using zone profile tags • 16
USSD • 20

V
VLR • 20

W
What is Location Capabilities Pack? • 1, 6

Z
Zones • 15