



# SMPP v3.4 Protocol Implementation guide for GSM / UMTS

Version 1.0

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## Table of Contents

1.1 Overview .....	4
1.2 Scope.....	4
1.3 Glossary.....	5
1.4 References .....	5
2.1 Introduction.....	6
2.2 Sending regular text.....	6
2.2.1 Operation and fields to use.....	7
2.2.1.1 Operations .....	7
2.2.1.2 Fields .....	7
2.2.2 Data coding and size.....	8
2.2.2.1 Data coding.....	8
2.2.2.2 Data size .....	9
2.2.3 Mapping.....	9
2.2.3.1 Standard mapping.....	9
2.2.3.2 Extended mapping.....	10
2.2.3.3 Using financial symbols in a short message .....	11
2.2.4 Long messages and Concatenation .....	11
2.2.4.1 User data headers .....	12
2.2.4.2 SMPP parameters.....	13
2.3 Sending binary data, ring tones and operator logos .....	13
2.3.1 Operation and fields to use.....	13
2.3.1.1 Operations .....	13
2.3.1.2 Fields .....	14
2.3.2 Data coding .....	14
2.3.3 User data header.....	15
2.4 Enhanced messaging service.....	16
2.4.1 User data headers .....	16
2.4.2 Concatenation .....	17
2.5 Using priority.....	18
2.6 Requesting notifications.....	20
2.7 Addressing.....	21
2.7.1 Addressing a mobile.....	21
2.7.2 Addressing an ESME .....	21
2.8 Route messages on a mobile / direct displaying .....	22
2.9 Setting indications for voice mail, e-mail and FAX.....	22
2.9.1 Return Call Message.....	23
2.9.2 Data Coding Scheme .....	24
2.9.3 User Data Header, Special SMS Message Indication.....	24
2.10 Up-to-date messaging via message replacement .....	25
2.10.1 Message replacement on the SMSC .....	25
2.10.2 Message replacement at the mobile itself .....	26

# 1 Introduction

## 1.1 Overview

The Short Message Peer To Peer (SMPP) protocol is an open, industry standard protocol designed to provide a flexible data communication interface for transfer of short message data between a Message Centre and a SMS application system. A Bearer Message Centre can be a Short Message Service Centre (SMSC), a GSM Unstructured Supplementary Services Data (USSD) Server, a Broadcast Message Service Centre or another type of Message Centre.

This document provides guidelines for getting an application based on the SMPP protocol version 3.4 specification working in a SMSC/GSM/UMTS network environment.

## 1.2 Scope

This document provides practical information for developers building ESME applications that communicate with a SMSC working in a GSM environment, using SMPP protocol version 3.4. SMPP features common to all network types or not specifically SMSC related will not be discussed.

The information about the subjects discussed in this document is retrieved from related official specification documents, like the SMPP protocol version 3.4 specification, the GSM 23.038/23.040 and UCS2 specifications.

In order to keep the document a practical reference manual, the document will not contain specific in-depth information that is available in those specifications, but will include them as reference.

For maximising the reading efficiency, it is advisable to download the referenced specifications prior to reading this document.

### 1.3 Glossary

EMS	Enhanced Messaging Service
ESME	External Short Message Entity
GSM	Global System for Mobile Communications
MS	Mobile Station
SM	Short message
SMPP	Short Message Peer To Peer
SMSC	Short Message Service Centre
UCS	Universal Character Set
UDH	User Data Header
UMTS	Universal Mobile Telecommunications System

### 1.4 References

At the time of writing the latest versions of below stated documents were used, but for most cases other versions of these documents are also applicable as reference for this implementation guide.

Ref.	Document Title	Document Number	Version Number
[SMPP34]	SMPP protocol specifications v3.4	SMPP Forum <a href="http://www.smpp.org">http://www.smpp.org</a>	Issue 1.2
[GSM23038]	Alphabets and language-specific information	3GPP TS 23.038 <a href="http://www.3gpp.org">http://www.3gpp.org</a>	v4.2.0 (release 4)
[GSM23040]	Technical realization of the Short Message Service (SMS)	3GPP TS 23.040 <a href="http://www.3gpp.org">http://www.3gpp.org</a>	v5.0.0 (release 5)
[UCS2]	UCS-2. ISO/IEC 10646 encoding form: Universal Character Set coded in 2 octets	<a href="http://www.unicode.org">http://www.unicode.org</a>	

**Table 1-1: References**

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