

Document name:	myMSP_API_v2_Appendix_smpp.pdf
Revision:	B

myMSP API v2 Appendix SMPP

System Interface - Specifications

- 1 Purpose of Document3**
 - 1.1 Author3
 - 1.2 Document Status3
 - 1.2.1 Document Changes3
 - 1.3 Document Perimeter3
- 2 SMPP Specifications4**
 - 2.1 Account details4
 - 2.2 Activate delivery4
 - 2.3 Supported SMPP functions4
 - 2.4 SMPP TON/NPI Parameters4
 - 2.5 Data coding4
 - 2.6 Enquire link5
 - 2.7 User Data Header (UDH)5
 - 2.7.1 Concatenated message5
 - 2.7.2 Destination and source port5
- 3 SMPP functions6**
 - 3.1 BIND_TRANSMITTER6
 - 3.2 BIND_RECEIVER6
 - 3.3 BIND_TRANSCEIVER6
 - 3.4 ENQUIRE_LINK6
 - 3.5 UNBIND6
 - 3.6 GENERIC_NACK6
 - 3.7 SUBMIT_SM7
 - 3.8 DELIVER_SM7
 - 3.8.1 Delivery report format8

1 Purpose of Document

The purpose of this document is to define the SMPP interface made available by myMSP to access the application functionality. Accessing myMSP can be done from the computer systems of external parties/customers.

1.1 Author

21st Century Mobile
Mikael Rosvall
mikael.rosvall@21st.se
+46 (0)8 21 21 55

1.2 Document Status

- Published 2009-12-21

1.2.1 Document Changes

- B [2019-03-11]
 - Updated graphic profile.

1.3 Document Perimeter

Neither economical questions nor questions regarding agreements/contracts will be dealt with in this document.

The information given in this document may change without notice and describes only the matters defined in the general part of this document. Please verify that your company has the most recent version. This information is intended for the use of customers and partners of 21st Century Mobile. The information or statements given in this document concerning the suitability, capacity or performance of the mentioned service cannot be considered binding but shall be defined in the agreement concluded between 21st Century Mobile and the customer, if applicable. 21st Century Mobile shall not be responsible in any event for errors in this document or for any damages, incidental or consequential (including monetary losses), that might arise from the use of this publication or the information in it. This material and the service described in this document are copyrighted in accordance with the applicable laws.

2 SMPP Specifications

This interface is realised through the Short Message Peer-to-Peer (SMPP) protocol. SMPP is the most commonly used protocol for sending SMS messages in use today.

2.1 Account details

host	smpp1.mymisp.21st.se
port	4300
system_id	<myMSP user name>
password	<myMSP password>
message mode	Store and Forward

2.2 Activate delivery

myMSP does not automatically send delivery reports or MO message to a client application that binds a receiver or a transceiver. If the client wants to be able to receive messages then this needs to be specified when setting up the account with 21st Century Mobile.

2.3 Supported SMPP functions

BIND_TRANSMITTER / _RESP
 BIND_RECEIVER / _RESP
 BIND_TRANSCIVER / _RESP
 ENQUIRE_LINK / _RESP
 UNBIND / _RESP
 SUBMIT_SM / _RE
 DELIVER_SM / _RESP
 GENERIC_NACK / _RESP

2.4 SMPP TON/NPI Parameters

The *Type Of Number* (TON) and *Number Plan Indicator* (NPI) values do not have to be specified since myMSP sets them automatically.

SMPP parameter	Type of address	Max length	Valid input	Output example
Source address	International	20	0-9, +, -,	+46709111111
Source address	Alphanumeric	11	a-z, A-Z, 0-9 (guaranteed)	myMSP
Destination address	Always international	20	0-9, +, -,	+46709111111

2.5 Data coding

The following character encoding regimes are supported.

0x00	GSM 03.38 (default GSM encoding)
0x01	ASCII (IA5)
0x03	Latin-1 (ISO-8859-1)

2.6 Enquire link

The client should send an ENQUIRE_LINK request every 60 seconds to keep the link alive.

2.7 User Data Header (UDH)

In order to use some of the more advanced features of SMPP a *User Data Header (UDH)* needs to be included in a message. The UDH should be placed before the message text in the *short_message* parameter of a *SUBMIT_SM* request. A UDH can also be included in a *mobile originated (MO)* message that is sent to the client from myMSP through a *DELIVER_SM* request. The *ems_class* of a message that includes an UDH should always be set to 64.

An UDH consists of the following fields:

- Length of User Data Header.
- Information Element Identifier (IEI). Used to identify what type of UDH is being submitted.
- Length of the header, excluding the first two fields.
- Content

2.7.1 Concatenated message

The IEI of a concatenated message is 0. The content must contain three octets: a reference number, the total number of parts, and the current message's number in the sequence.

Example:

Part 1: 0x5, 0x0, 0x3, 0x1, 0x2 0x1

Part 1: 0x5, 0x0, 0x3, 0x1, 0x2 0x2

2.7.2 Destination and source port

The IEI of a message which specifies a destination and a source port is either 4 (for 8 bit addresses) or 5 (for 16 bit addresses). The content must contain two (8 bit) or four octets (16 bit): a destination port and a source port.

Example:

8-bit [destination=50, source=0]: 0x4, 0x4, 0x2, 0x32, 0x0

16-bit [destination=50000, source=0]: 0x6, 0x5, 0x4, 0xc3, 0x50, 0x0, 0x0

3 SMPP functions

The following section specifies which parameters should be set for each SMPP request sent to myMSP, and which parameters myMSP sets when sending requests to the client. Parameters that are not listed below will be ignored if they are set.

3.1 BIND_TRANSMITTER

Parameter	Value
system_id	<myMSP user name>
password	<myMSP password>

3.2 BIND_RECEIVER

Parameter	Value
system_id	<myMSP user name>
password	<myMSP password>

3.3 BIND_TRANSCEIVER

Parameter	Value
system_id	<myMSP user name>
password	<myMSP password>

3.4 ENQUIRE_LINK

According to the SMPP 3.4 specification.

3.5 UNBIND

According to the SMPP 3.4 specification.

3.6 GENERIC_NACK

According to the SMPP 3.4 specification.

3.7 SUBMIT_SM

Parameter	Value
destination_addr	The mobile number that the message should be sent to.
data_coding	Indicates which character encoding regiment was used to encode the message text (see 2.5). This value should be set to 240 when sending flash SMS.
esm_class	The ESM class of the message. Should be set to 64 if the message has a UDH.
schedule_delivery_time	When the message should be delivered. Set to NULL for immediate delivery. Should be set as an absolute time.
short_message	The message body. Contains the message text and/or a UDH (see 2.7). The data coding value is used do encode the text.
source_addr	The originator (numeric or alphanumeric) that should be set for the message.
validity_period	The validity period of the message. Set to NULL to request the default validity period.

3.8 DELIVER_SM

Delivery reports and MO messages are sent from myMSP to the client as a DELIVER_SM requests.

Delivery report	
Parameter	Value
destination_addr	The mobile number that the message was sent to.
dest_addr_ton	The destination TON that was set for the message.
dest_addr_npi	The destination NPI that was set for the message.
source_addr	The originator (numeric or alphanumeric) of the sent message.
source_addr_ton	The source TON that was set for the message.
source_addr_npi	The source NPI that was set for the message.
esm_class	Always set to 4.
short_message	The message body. Contains the information content of the delivery report (see 3.8.1).

Mobile originated message	
Parameter	Value
destination_addr	The mobile number of the handset that sent the message.
source_addr	The number that the message was sent to.
esm_class	Always set to 2.
short_message	The message body. Contains the message text.

3.8.1 Delivery report format

The information content of the delivery report is contained in the short_message parameter. The following parameters are always present:

id	The ID that was assigned to the message when it was submitted to myMSP.																		
dlvrd	Always set to "1".																		
submit date	The date and time when the message was first submitted to myMSP. Format: yyMMddHHmm.																		
done date	The date and time when the message was delivered to the recipient. Format: yyMMddHHmm.																		
stat	<p>The delivery status of the message. myMSP can format the delivery status in two ways: default and short. Short delivery statuses are always 8 characters long, while default statuses vary in length. Please specify which version is preferable when setting up the account with 21st Century Mobile.</p> <p>stat can have the following values:</p> <table border="0"> <thead> <tr> <th>Default</th> <th>Short</th> </tr> </thead> <tbody> <tr> <td>DELIVERED</td> <td>DELIVRD</td> </tr> <tr> <td>RETRIEVED</td> <td>DELIVRD</td> </tr> <tr> <td>EXPIRED</td> <td>EXPIRED</td> </tr> <tr> <td>REJECTED</td> <td>REJECTD</td> </tr> <tr> <td>DELETED</td> <td>DELETED</td> </tr> <tr> <td>UNDELIVERED</td> <td>UNDELIV</td> </tr> <tr> <td>FAILED</td> <td>UNDELIV</td> </tr> <tr> <td>ERROR</td> <td>UNDELIV</td> </tr> </tbody> </table>	Default	Short	DELIVERED	DELIVRD	RETRIEVED	DELIVRD	EXPIRED	EXPIRED	REJECTED	REJECTD	DELETED	DELETED	UNDELIVERED	UNDELIV	FAILED	UNDELIV	ERROR	UNDELIV
Default	Short																		
DELIVERED	DELIVRD																		
RETRIEVED	DELIVRD																		
EXPIRED	EXPIRED																		
REJECTED	REJECTD																		
DELETED	DELETED																		
UNDELIVERED	UNDELIV																		
FAILED	UNDELIV																		
ERROR	UNDELIV																		
err	Operator error code.																		
text	Always empty.																		

Example:

"id:123456789 dlvrd:1 submit date:0901011201 done date: 0901011205 stat:DELIVERED err:0 Text:"