



TECHNICAL SPECIFICATION

MC Connect SOAP

Document version 1.4

Basic information

Identification	
Name:	Technical specification MC Connect SOAP
Document version:	1.4
Create date:	2016-06-14
Last update date:	2021-02-16
Template version:	SAB_Uzivatelska_prirucka_20210101.docx
State:	production
Limitations:	none

Purpose of this document

This document covers complete specification of bi-directional proprietary SOAP-based protocol for transport of short messages (SMS) and delivery reports.

Features – content

1. Mobile originated message: Materna to Client (MO-AT) push
2. Application originated message: Client to Materna (AO-MT)
3. MT Billing
4. Delivery reports
5. isAlive

Copyright © 2008-2021 COMVERGA a.s. All rights reserved.

This document is protected by copyright. All rights, including those of translation, of reprinting and of copying using photo-mechanical or electronic means, are reserved. Protected trademarks, registered names etc., are not identified in the text. The absence of such a designation does not mean that a name is free of copyright within the context of the trade and brand name legislation. The names of persons and companies which are used as examples are purely fictitious.

Limitation of liability

The information contained in this document has been carefully checked, and as such may be considered to be reliable. However, we cannot undertake to guarantee that information specified in this document is without error. In particular, no commitment has been made as to whether the products which have been described are or are not suitable for particular purposes.

COMVERGA reserves the right to make changes to the products and product information. COMVERGA does not accept any further liability which results from the use of the products here described. The issuing of this document does not constitute any kind of license to use the products detailed, neither from COMVERGA nor from third parties.

COMVERGA a.s.
Vinohradská 2369/184, Prague
CZ-13052, Czech Republic

Technical support:
tel +420 234 493 130
E-mail support@comverga.com

History of changes

Date	Version	Author	Description
2016-06-14	1.0		Document created. MC Connect SOAP draft based on MC Connect HTTP v2.12
2019-10-22	1.1	MSp	Company logo update
2019-11-01	1.2	PMi	Possibility to check availability of interface
2020-08-20	1.3	JBr	smsSubmit: added optional input parameter <priority>.
2021-02-16	1.4	MSp	Company logo and name update

1. smsDeliver - Mobile originated message: Materna to Client (MO-AT)

For each one MO-AT message, MMR creates a HTTPS POST request. Short message is being „encoded“ into POST body as XML structure. The request is being „sent“ to client's application with login and password via HTTP basic authentication.

elements of <smsDeliver>

Parameter	Description	Example
messageID	Unique message ID assigned by MMR. You have to check for duplicates!	EurotelCZ.M2MPSMS_0001a365
source	Source number (MSISDN) of the message.	+420602123456
destination	Destination number (shortcode) of the message.	9003030
timestamp	Message timestamp (SCTS). 14-digit format (YYYYMMDDhhmmss).	20120229235012
data	<u>Type=SMS, SubType=Text</u> Message text , UTF8 string, URL-encoded <u>Type=SMS, SubType=Binary</u> Data payload , hexdump <u>Type=MMS</u> <i>Not defined</i>	UTF8 string „Přiliš%20žlutoučký%20kůň“ Hexdump: “00fc01AA” represents 4 octets 0x00, 0xfc, 0x01 and 0xaa
type	Type of the message SMS – text message MMS – multimedia message	SMS
subType	Format of Data - 'Text' or 'Binary'	Text
UDH	User Data Header , hexdump Contains binary sequence as hexdump.	The string „050003010201“ indicates 6 octets of UDH (0x05 0x00 0x03 0x01 0x02 0x01).
PID	Protocol ID (integer, 0 ... 255) Protocol identification according to GSM 03.40.	215

Example

Request

POST https://client.example.com/smsDeliver

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:mmr="http://sms2.maternacz.com/mmr">
  <soapenv:Header/>
  <soapenv:Body>
    <mmr:smsDeliver>
      <messageID>EurotelCZ.M2MPSMS_0001a365</messageID>
```

```
<source>+420602123456</source>
<destination>9003030</destination>
<timestamp>20120229235012</timestamp>
<data>This is a test message</data>
<type>SMS</type>
<subType>Text</subType>
</mmr:smsDeliver>
</soapenv:Body>
</soapenv:Envelope>
```

Response - *client confirms receiving of the message*

```
<mmr:smsDeliverResponse>
<accepted>true</accepted>
</mmr:smsDeliverResponse>
```

If the <accepted> element is true, message is considered as accepted, otherwise will be re-sent in a short interval (seconds).

Optional response element <directReply> may contain direct reply (MT message) is sent. This is equivalent to sending separate <smsSubmit> to MMR. See „Direct Replies“ below.

Duplicity check – **please read this paragraph carefully**

The possibility of duplicate delivery of a message is natural phenomenon of HTTP-based message transport¹. The only way to cope with this problem is application logic. Please consider having such a piece of logic in your SMS transport implementation. Thank you.

There is unique identification of each message you receive: MessageID. It's assigned by MMR (length 8 to 60 characters, character set [A-Za-z0-9_]). Client must store MessageID of each received message/report in some storage (say received_id_list) for future duplicity checks. When receiving messages, before pushing them to permanent storage or processing them, its MessageID must be checked against received_id_list.

If MessageID of received message **is found** in received_id_list, it's duplicate. Client application must

1. ignore the message (don't store to storage, don't push it to processing), but
2. send positive acknowledge (OK²), as when message is accepted,
3. send the same direct-reply as before (when using direct replies).

If MessageID of received message **is not found** in received_id_list, there is no problem. Client application must

1. push message to its permanent storage and/or processing code,
2. send positive/negative acknowledge (OK or Error) – depending of result of storage/processing.

Direct Replies

Warning: Direct reply **may not** be used for statefull applications. The HTTP Response, as a bearer of reply

1 Why? Imagine this: Client sends message to server, server receives it, sends positive response, but the response is lost. Server has the message received successfully. Client sees no response – times out. Client considers that message delivery failed and re-send the same message. Server receives the same message again.

2 with „warning – duplicate“ information

message, doesn't guarantee successful delivery³. Use with caution! Contact Materna support if you are not sure. Use indirect replies (see „application originated message“ below) if you are still not sure.

Elements of <directReply>

Element	M/O	Description	Example
data	M	message text/data	Hello%20world.
type	O	type, 'SMS' (default) or 'MMS'	SMS
subType	O	subtype, 'Text' (default) or 'Binary'	Text
dCS	O	data coding scheme ⁴	245
reportRequest	O	0 ... delivery report not requested (default) 1 ... delivery report requested	0
UDH	O	User data header	0605040B8423F0
mtBill	O	0 ... set zero MT-billing code (subscriber receives message for free) 1 ... set non-zero MT-billing code (subscriber is charged while receiving the message) (default) (applicable in selected countries/operators only)	1

(M)andatory, (O)ptional

Example

```
<mmr:smsDeliverResponse>
<accepted>true</accepted>
<directReply>
<data>This is a reply message</data>
</directReply>
</mmr:smsDeliverResponse>
```

See „Application originated message“ for details.

Connection parameters (bi-directional push interface)

The per-client, per-service connection parameters:

Item	Example value	Assigned by
MO-AT		
URL (Client side)	https://client.example.com/smsDeliver	Client
http-basic username	Materna	Client
http-basic password	Kxxyt53jSDr.44	Client
AO-MT		

³ The retry-on-timeout mechanism on MMR side may trigger duplicate messages when http response is lost

⁴ DCS - if you use characters from ASCII (GSM7), don't use this parameter in AO message

Item	Example value	Assigned by
URL (MMR side)	http://sms2.maternacz.com/mmr/mcc-submit	Materna
http-basic username	ServiceXyz90030	Materna
http-basic password	jeCsf29976	Materna

2. smsSubmit - Application Originated message: Client to Materna (AO-MT)

Sending bulk SMS/Replying to Premium SMS

Client application sends messages via http request POST, authenticating itself with login and password via HTTP basic authentication.

For each one Application Originated message, client application creates a HTTP(S) POST request. Short message is being „encoded“ into XML elements. The request is being „sent“ to MMR with login and password via HTTP basic authentication or with client-certificate authentication.

Request

elements of <smsSubmit>

Element	M/O	Description	Example
source	O	Source number (shortcode) of the message.	9003030
destination	M	Destination number (MSISDN) of the message. See also: „OP:<OpID>“ in response-line.	+420602123456
data	M	<u>Type=SMS, SubType=Text</u> Message text , UTF8 string, URL-encoded <u>Type=SMS, SubType=Binary</u> Data payload , hexdump <u>Type=MMS</u> <i>Not defined</i>	UTF8 string „Přiliš%20žluťoučký%20kůň“ Hexdump: „00fc01AA“ represents 4 octets 0x00, 0xfc, 0x01 and 0xaa
type	O	Type of the message SMS – text message (default) MMS – multimedia message	SMS
subType	O	Format of Data - 'Text' (default) or 'Binary'	Text
refID	O	messageID value of related MO message (required for MT billing services)	EurotelCZ.M2MPSMS_0001a365
DCS	O	data coding scheme ⁵	245
reportRequest	O	false ... delivery report not requested (default) true ... delivery report requested	false
UDH	O	User Data Header , hexdump Contains binary sequence as hexdump. Useful for concatenated messages.	0605040B8423F0
mtBill	O	false ... set zero MT-billing code (subscriber	true

⁵ DCS - if you use characters from ASCII (GSM7), don't use this parameter in AO message

Element	M/O	Description	Example
		receives message for free) true ... set non-zero MT-billing code (subscriber is charged while receiving the message) (default) <i>(applicable in selected countries/operators only)</i>	
validityPeriod	O	The <i>ValidityPeriod</i> indicates the expiration time , after which the SMSC stops delivery attempts on message. Such a message will be discarded, when not (yet) delivered at VP time. The corresponding (EXPIRED) delivery report is returned back. The <i>ValidityPeriod</i> is specified as absolute 14-digit timestamp (YYYYMMDDhhmmss), local time. There are limitations: • minimum: VP must be at least 15 minutes in future. If not, MMR will adjust the VP to now+15min and the warning is returned. • maximum: VP must not exceed 7 days in future. If the specified VP exceeds now+7d, it's adjusted by MMR and the warning is returned.	20150228090807

(M)andatory, (O)ptional

Response

elements of <smsSubmitResponse>

Element	M/O	Description
accepted	M	True here shows that AO-MT message has passed authentication, all formatting checks, throttling, and is stored securely for store-and-forward processing.
acceptDetails	O	For accepted=true, this may contain MessageID, Operator ID or Recommended Delay.
rejectDetails	O	For accepted=false (rejected message), contains permanent/temporary and rejection details.

elements of <acceptDetails>

Element	M/O	Description
messageID	M	unique message identifier assigned by MMR (length 8 to 60 characters, character set [A-Za-z0-9_]).
recommendedDelay	O	recommended minimum delay before submitting next message (milliseconds); by obeying this recommended delay, you won't reach the 'THROTTLING-ACTIVE' (see below).
operatorId	O	numeric identification of destination operator (1-65535) as determined from Destination by MMR's routing table and NP database; presence of this element is configurable per client; the value is country- and installation-specific.

elements of <rejectDetails>

Element	M/O	Description
permanent	M	True: Message rejected permanently by MMR (protocol error/malformed message, provisioning mismatch, ect); do not try to re-send such a message. See <reasonString> for details. False: MMR would like to accept such a message. Unfortunately, there was a temporary indisposed conditions causing the message was not stored. Please re-send the same message again. Please wait at least 30 seconds before.
reasonString	M	Details for rejection or error.
throttlingActive	O	True: message not accepted – maximum throughput exceeded. Please re-send the same message again. You should wait spacific amount of miliseconds <recommendedDelay> before re-sending, otherwise the message will be rejected again.
recommendedDelay	O	recommended minimum delay before submitting the message again (miliseconds); by obeying this recommended delay, you won't reach the 'throttlingActive'.

Example – simple MT message

```

<mmr:smsSubmit>
<source>9003030</source>
<destination>+420602123456</destination>
<type>SMS</type>
<subType>Text</subType>
<data>MATERNA testing message:Žlutoučký kůň tiše řehťá @.-,</data>
</mmr:smsSubmit>

```

Explanation: this SOAP request represents text message „**Chyba! Neznámý název vlastnosti dokumentu.** testing message:Žlutoučký kůň tiše řehťá @.-,“ from shortcode 9003030 to MSISDN +420602123456.

Example – response (accepted)

<accepted>true</accepted> <acceptDetails> <messageID>HbxPSMS_00000a84</messageID> <recommendedDelay>470</recommendedDelay> <operatorID>208</operatorID> </acceptDetails>	This response confirms that the above message was accepted with identification HbxPSMS_00000a84 and recommended minimum delay before submitting next message is 470 miliseconds. The message's destination number (+420602123456) is national operator number 208.
---	--

Example – response (accepted)

<accepted>true</accepted> <acceptDetails> <messageID>HbxPSMS_00000a84</messageID> </acceptDetails>	This response confirms that the above message was accepted with identification HbxPSMS_00000a84 .
---	---

Example – response (rejected permanently)

<accepted>false</accepted>	Message rejected permanently, hence client may not
----------------------------	--

<pre> <rejectDetails> <permanent>true</permanent> <reasonString>REJECT: MMR service (HbxPSMS): connection from 178.1.2.3 restricted</reasonString> </rejectDetails> </pre>	<i>repeat the same request again. The same request will be rejected again, unless the IP address (178.1.2.3) is whitelisted in MMR service configuration.</i>
--	---

Example – response (rejected temporarily)

<pre> <accepted>false</accepted> <rejectDetails> <permanent>false</permanent> <reasonString>/dev/sdg9: no space left on device</reasonString> <recommendedDelay>30000</recommendedDelay> </rejectDetails> </pre>	<i>Message rejected temporarily due to some unhappy conditions on MMR. Client should resend the same message after 30 seconds again.</i>
--	--

Example – response (rejected by throttling)

<pre> <accepted>false</accepted> <rejectDetails> <permanent>false</permanent> <throttlingActive>true</throttlingActive> <reasonString>Service HbxPSMS is limited to 300 AO messages per 10 seconds. Please wait 7500ms and resend</reasonString> <recommendedDelay>7500</recommendedDelay> </rejectDetails> </pre>	<i>Message rejected temporarily because there were too many messages sent on the same service (HbxPSMS) in last few seconds. MMR service configuration may set the throughput as „N messages/sec“. The actual window for measuring it is 10 consecutive seconds, so the limitation is „10*N messages/10 seconds“.</i>
---	---

Connection parameters (bi-directional push interface)

The per-client, per-service connection parameters:

Item	Example value	Assigned by
MO-AT		
URL (MMR side)	https://content-provider.eu/sms/receive/	Client
http-basic username	Materna	Client
http-basic password	Kxxyt53jSDr.44	Client
AO-MT		
URL (MMR side)	https://sms6.maternacz.com/mmr4/pull	Materna
http-basic username	ServiceXyz90030	Materna
http-basic password	jeCsf29976	Materna

UDH

- UDH must contain binary-as-hexdump. The string „050003010201“ indicates 6 octets of UDH (0x05 0x00 0x03 0x01 0x02 0x01).

Concatenated messages

To send concatenated (long) SMS messages you can use parameter UDH:
UDH must be in this format: 050003DDXXYY, where:

- 050003 is fixed part
- DD: 01-FF, CSMS reference number, must be same for all the SMS parts in the CSMS
- XX: 01-FF, total number of parts concatenated message.
- YY: 01-FF, this part's number in the sequence

For sending long (concatenated) messages, you can set parameter UDH and split long message by 153 characters.
Example: message with 200 characters will be splitted to the two parts, one with 153 characters, second with 47 characters.

Example – concatenated (long) MT message

Part 1 of 2

Request (client → Materna)

`https://mmr.maternacz.com/mmr/send?Source=%2B420234567890&Destination=%2B494617123456&Type=SMS&SubType=Text&UDH=050003010201&Data=This+is+a+test+message+first+part+with+153+characters.....`

Response (Materna → client)

MC system responds with HTTP code "200", Content-Type: text/plain" and body in form:
`OK;ExampleService90030xx_00de5012;4978ms`

Part 2 of 2

Request (client → Materna)

`https://mmr.maternacz.com/mmr/send?Source=%2B420234567890&Destination=%2B494617123456&Type=SMS&SubType=Text&UDH=050003010202&Data=This+is+a+test+message+second+part`

Response (Materna → client)

MC system responds with HTTP code "200", Content-Type: text/plain" and body in form:
`OK;ExampleService90030xx_00de5013;9971ms`

- MC_MessageID for both messages will be different
- Each part of concatenated message will be billed as single message

3. MT Billing

There are two main branches of billing style on the field of Premium Short Message Services.

- MO billing: mobile subscriber is charged while sending MO. Mobile subscriber receives MT for free. This scheme is considered as default for Premium SMS.
- MT billing: mobile subscriber sends MO with no extra fee⁶. Mobile subscriber is charged while receiving MT.

⁶ the MO message is billed as ordinary on-net message according to subscriber's tariff

The MT billing consists of two different use cases.

1. One-shot service: Mobile subscriber sends MO; low amount (one, typ. up to 5) MT messages follows.
2. Subscription service: Mobile subscriber orders the service, and confirms the subscription. Limited amount of MT (charged) messages is sent to subscriber within unlimited time frame.

Note for Czech Republic: Whole process of ordering service billed via MT messages and delivering MT billed messages must fulfill requirements listed in APSMS codex (normative for all local mobile operators and content providers). See <http://www.platmobilem.cz/>, **Kodex Premium SMS** ⁷ [english].

SMS flow description – one-shot service

Client sends MT billed messages via MMR. Messages should be sent as ordinary MT messages (see „*Application originated message: Client to Materna*“), with some exceptions:

- The source number (Source) should be used consistently according to the price.
 - For billed premium MT messages, use 8-digit shortcode as Source in form 90xyyzzz; zzz is end-price incl. VAT in CZK (90030005 → 5,00 CZK, 90230095 → 95,00 CZK)
 - For non-billed (non-premium) MT messages, use 5-digit shortcode as Source.
- You should always request a delivery report (ReportRequest=1) to know delivery status of message. Successful submit of billed MT message does not guarantee that end-user is really billed. The message may be encountered as billed only after positive delivery report (with StatusCode=0; see below).

SMS flow description – subscription service, Czech Republic

The service providing entity (client) will need a “table of subscribed numbers”. Materna recommends following layout of the table:

Msisdn	Reference
<i>MSISDN of subscribed end-user. Copy of Source from “START” command.</i>	<i>Unique ID of subscription. Copy of MessageID</i>

Example of “table of subscribed numbers”

Msisdn	Reference
+420601234567	GsmCZ.M2M_0001baaa
+420601234599	GsmCZ.M2M_000203dc
...	...

- on new subscription (mtbill_code=START), client inserts the record into table of subscribed numbers
 - in case of duplicity of MSISDN, the “reference” must be updated
- on subscription end (mtbill_code=STOP), client removed the record by MSISDN

Process

⁷ version 4.2 valid as of 9/2009; check for newer version(s)

1. Enduser sends SMS to a five digit shortcode⁸ serviced by MMR⁹. SMS text begins with a keyword assigned to client. Provider (MC) must allow enduser to set maximum count of MT billed messages (for one service) per day, which he (she) is willing to receive. (This message is not considered as a Premium rate MO SMS. More info in enclosed APSMS codex.)
 - MMR generates the „challenge“ - MT SMS with description of client's service and direction how to confirm the service order (reply „YES <servicename>“ to start subscription). Text of this message is strictly declared by Codex. This message is free of charge for enduser.
 - MMR creates a <smsDeliver> request to client application with **info** about client's request. This kind of request will be generated for all MO messages sent to five digit prefix with client's keywords in SMS text.

additional elements of <smsDeliver> - the INFO command:

Parameter	Description	Example
<i>See elements of <smsDeliver> in „Mobile originated message: Materna to Client“ for common parameters</i>		
mtBillCommand	the fixed string „info“: informs client about end-user's (not yet confirmed) request	info

Example

```
<mmr:smsDeliver>
<messageID>GsmCZ.PSMS_0001a365</messageID>
<source>+420602123456</source>
<destination>90235</destination>
<timestamp>20060329235012</timestamp>
<data>Eur10</data>
<type>SMS</type>
<subType>Text</subType>
<mtBillCommand>info</mtBillCommand>
</mmr:smsDeliver>
```

2. Enduser sends „confirmation“ - second SMS with the text „ANO¹⁰ <servicename>“, example: „ANO Eur10“, to the same 5-digit shortcode serviced by MMR. By sending this message enduser confirms order of subscription service. From now, client application may send MT billed messages to enduser's MSISDN.

On start of subscription, MMR sends the „START“ command to the client. MMR creates <smsDeliver> request to client application. Parameter „mtBillCommand“ will be set to **START**. By this request MC confirms that client is allowed to send MT billed messages to enduser's MSISDN.

additional elements of <smsDeliver> – the START command:

Parameter	Description	Example
<i>See elements of <smsDeliver> in „Mobile originated message: Materna to Client“ for common parameters</i>		

⁸ Czech Republic

⁹ MT billing subscription service may also be started by http request from client's application (end-user don't have to send 1st MO SMS); see „MTBSS API“ below.

¹⁰ Yes

Parameter	Description	Example
mtBillCommand	the fixed string “START” : informs client about start of subscription of corresponding MSISDN (Source)	START
refID	Reference of the started subscription. Used as RefID for MT billed messages.	GsmCZ.EMI_000dd595

Example

```

<mmr:smsDeliver>
<messageID>TBA_00010aaa</messageID>
<source>+420602123456</source>
<destination>90235</destination>
<timestamp>20060329235012</timestamp>
<data>Ano Eur10</data>
<type>SMS</type>
<subType>Text</subType>
<mtBillCommand>START</mtBillCommand>
<refID>GsmCZ.EMI_000dd595</refID>
</mmr:smsDeliver>

```

Client must store the msisdn (source) and reference (refID) in the "table of subscribed numbers". On duplicate MSISDN, the reference must be updated.

- Client sends MT billed messages via one or multiple <smsSubmit> request(s) until the Subscription is stopped. Messages should be sent as ordinary MT messages (see „Application originated message: Client to Materna“), with some exceptions:
 - The source number <source> should be used consistently according to the price. For billed premium MT messages, use 8-digit shortcode as Source.
 - 8-digit shortcode in form 90xyyzzz; zzz is end-price incl. VAT in CZK (90030005 → 5,00 CZK)
 - The refID must contain the reference string from "table of subscribed numbers".
 - See „Delivery of billed AO-MT messages“ (below) also.
- Subscription service may be stopped by following means:
 - Enduser sends message with text “STOP”, “STOP ALL”, “STOP <keyword>”.
 - Enduser’s LifeTime limit of Service ran out.
 - Three consecutive MT billed messages were not delivered (negative delivery report)

On stop of subscription, MMR sends the „STOP“ command to the client. MMR creates a <smsDeliver> to client application. Parameter <mtBillCode> will be set to **STOP**. Client application must remove the entry (by MSISDN) from table of subscribed numbers. After this event no MT billed SMS will be delivered to enduser’s MSISDN.

additional elements of <smsDeliver> – the STOP command:

Parameter	Description	Example
See elements of <smsDeliver> in „Mobile originated message: Materna to Client“ for common parameters		
mtBillCode	the fixed string “STOP” : informs client about end of subscription of corresponding MSISDN (Source)	STOP

Example

```
<mmr:smsDeliver>
  <messageID>GsmCZ.M2M_0001baaa</messageID>
  <source>+420602123456</source>
  <destination>90235</destination>
  <timestamp>20060329235012</timestamp>
  <data>LiteTimeLimit ran out</data>
  <type>SMS</type>
  <subType>Text</subType>
  <mtBillCommand>STOP</mtBillCommand>
  <refID>GsmCZ.EMI_000dd595</refID>
</mmr:smsDeliver>
```

Now, the subscription for +420602123456 (Reference GsmCZ.EMI_000dd595) ends.

Delivery of billed AO-MT messages

Note: Successfull submit of billed MT message does not guarantee that end-user is really billed. The message may be encountered as billed only after positive delivery report (with statusCode=0; see below).

Each billed (premium) MT SMS from client will be internally authorized by MMR (subscription service).

If MT billed SMS pass the authorization:

MC system creates a <smsDeliver>. Element "mtBillCommand" will be set to **ACK**.

If MT billed SMS does not pass the authorization:

MC system creates a <smsDeliver>. Element "mtBillCommand" will set to **NACK**.

MTBSS (MT billing subscription service) API description

Client-to-server specification:

Initialization (order) of subscription service via HTTP request:

1. Client's application gets MSISDN of end-user (via web interface etc.)
2. Client's application sends uHTTP request to Materna application with username+password:
 - `http://servicename:password@materna-server/mmr-mtbss-api/mtbss-api?arguments`
3. Materna application sends HTTP response of type text/plain
 - a. MTBSS:OK;refId=<reference_string>
 - message accepted
 - b. MTBSS:ERROR;<error description>
 - message rejected
4. Client's application should handle HTTP-level timeout and/or application error (MTBSS:ERROR) and re-try after configurable amount of time (minimum 120s)

Argument	Value type	Example
Login	per-client	FoobarSubscription25CZK
Password	per-client	big3cret
sourceNumber	dynamic (from web-input)	+420722011456
destinationNumer	per-service	90030
messageText	per-service	FOOBAR

Example

`http://FoobarSubscription25CZK:big3cret@materna-server/mmr-mtbss-api/service-start?messageText=FOOBAR&destinationNumer=90030&sourceNumber=%2B420722011456`

`http://BadooSubscription90030CZK30:big3cret@materna-server/mmr-mtbss-api/service-start?messageText=BADOO&destinationNumer=90030&sourceNumber=%2B420722011456`

4. Delivery reports

Sending delivery reports from Materna message router to the client's application

The delivery reports are related to AO-MT messages. Delivery report informs asynchronously whether (when) MT message was (was not) delivered to the mobile station. Please check with your Materna contact person whether you have delivery reports active on your connection.

One MT message may trigger several delivery reports. There may be some intermediate reports; there is exactly one final report.

Note: Client's application should request the delivery report with ReportRequest=true parameter while sending AO-MT message (smsSubmit).

MC system creates a HTTP POST request to client application, authenticating itself with login and password via HTTP basic authentication. The POST request contains following elements:

Parameters description:

Parameter	Presence	Description
messageID	M	identification of AO message related to this delivery report
source	O	source number, ie. '+420602123456' (copy of Destination from AO message)
destination	O	destination number, ie. '9003030' (copy of Source from AO message)
statusCode	M	Result of delivery
statusText	O	Human-readable description of message status
timestamp	M	Timestamp of message status

presence: (M)andatory, (O)ptional

Result of delivery (statusCode) - overview

StatusCode	Description
-128 ... -1	intermediate status (additional delivery report will follow)
0	final status; message was delivered at <i>timestamp</i>
1 ... 9	final status; message was not delivered
10...127	final status; delivery status is not known

Result of delivery (statusCode) - details

StatusCode	final	description (message was ...)
-3	n	accepted by PLMN operator (used for MT-billing)
-2	n	accepted by PLMN operator's subsystem on transport-level
-1	n	<i>reserved for internal use</i>
0	y	delivered to mobile station
1	y	not delivered
2	y	rejected by PLMN operator (used for MT-billing)
3	y	expired on SMSC
4	y	rejected by MMR/MTBA (used for MT-billing)
10	y	accepted by PLMN operator on transport-level (not real relivry report)
11	y	expired – no report from PLMN operator within three ¹¹ days

Example

```
<mmr:drDeliver>
  <messageID>ClientABC_0123abcd</messageID>
  <source>+421999888741</source>
  <destination>5589</destination>
  <statusCode>0</statusCode>
  <statusText>message delivered</statusText>
  <timestamp>20161231235959</timestamp>
</mmr:drDeliver>
```

Examples – successfull deliveries

```
statusCode      0
statusText      Message delivered
timestamp       20090730140447
messageID       ClientACCF_001a9377
source          +420736302320
destination     +420737000111
```

¹¹ The timeout (3 days) may vary per installation, per service

Message from 736302320 (virtualSC number) to (+420)737000111 has been delivered at 14:04:47.

statusCode 0
statusText Zprava byla dorucena – ISUC_005 – Message delivered
timestamp 20090730140346
messageID ClientXPPS_001a9372

Message ClientXPPS_001a9372 has been delivered at 14:03:46¹².

statusCode 0
statusText SUCCESSFUL_DELIVERY
timestamp 20091005120225
messageID XdcSubscription90030CZK30_000169ba
source 90030030
destination +420775773773

Message from 90030030¹³ to (+420)775773773 has been delivered at 12:02:25.

Examples – failed deliveries

statusCode 1
statusText Message delivery failed with error code 000
timestamp 20090730130003
messageID ClientXPPS_001a8f28
source +420736302320
destination +420732000000

Message id ClientXPPS_0a18f28 has not been delivered; see StatusText for operator-specific cause.

StatusCode 1
StatusText Zprava nebyla dorucena - ISUC_006 - Message delivery failed
Timestamp 20090730125101
MessageID ClientXPPS_001a92f0
Source 1991023

Message id ClientXPPS_0a18f28 has not been delivered; see StatusText for operator-specific cause.

statusCode 1
statusText No Connector found for Source [] and Destination [+42076583700]
timestamp 20090730124939
messageID ClientXPPS_001a92a0
source
destination +42072583700

Message id ClientXPPS_0a18f28 has not been delivered; dropped by MMR because of missing A-number (empty Source).

statusCode 2
statusText rejected on transport-level (Connector.SMPP rejected): (Code 64) MSISDN has not enough credit.

¹² the source and destination number elements are optional

¹³ MT billing, price level 30,00 CZK

timestamp 20091001112233
messageID AqSubscription90030CZK30_0001696d

Message id AqSubscription90030CZK30_0001696d (MT billing) has not been delivered; rejected by operator – pre-paid subscriber has not enough credit.

5. isAlive – possibility to check availability of API interface

There is no other special input parameters for calling. Standard Request is called as:

```
<xs:element name="isAlive">  
  <xsd:complexType>  
    <xsd:sequence/>  
  </xsd:complexType>  
</xs:element>
```

Response for this Request has one output parameter (boolean : true/false). This method call internal methods of API, there is complex check that API and Backend is Up and Running.

```
<xs:element name="isAliveResponse">  
  <xsd:complexType>  
    <xsd:sequence>  
      <xsd:element name="alive" type="xs:boolean"/>  
    </xsd:sequence>  
  </xsd:complexType>  
</xs:element>
```