

International SMS Outbound Specification of Services

Version 5.3

whatever mobile GmbH

Contents

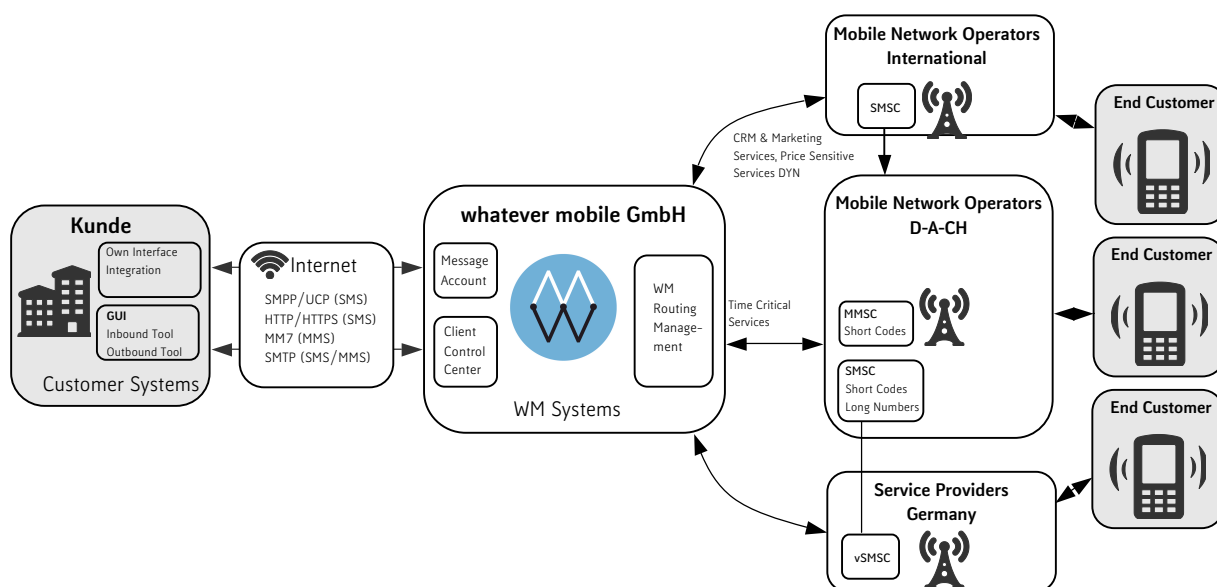
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1. Introduction

SMS Outbound from whatever mobile allows contracting parties to implement maximum-quality SMS services at the international level.

The main performance features of individual products from the range of "SMS Outbound" are specified below. Information on value added services is provided in the "Mobile Payment" specification.

2. Overview



3. SMS Outbound

The product "SMS Outbound" offers the contracting party the ability to send high-quality text messages at reasonable cost via the infrastructure of whatever mobile to national and international mobile networks.

For this, whatever mobile sets up a message account for the contracting party on the whatever mobile platform which the contracting party accesses in one of the ways listed in the section describing gateway types.

The message account is normally configured with a maximum throughput of 5 msg per second and allows simultaneous access to a connection with an IP address chosen by the contracting party. Should the contracting party have a proven requirement for higher bandwidth or need simultaneous access to several IP addresses through multiple parallel connections, whatever mobile can easily expand the message account.

Text messages sent by the contracting party to the message account are immediately transmitted to the mobile networks for delivery in accordance with the assigned Routing Service Class (see also WM MMA API Specification). It is irrelevant whether the contracting party transmits to whatever mobile simple text-only messages or, through appropriate encoding, special types of text message (concatenated, binary, unicode, flash, etc).

A concatenated text message is a message with a total number of characters greater than 160. Because these are in fact multiple text messages, whatever mobile charges the contracting party for the actual number of messages sent. Because the various mobile network operators interpret the character set differently, a text message with special characters and a total number of characters close to the maximum for a message may in rare cases be delivered as a concatenated message. In this

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case, the mobile network operator charges whatever mobile for multiple text messages. whatever mobile also always charges to the contracting party the costs for the actual number of text messages sent.

Messages sent to an invalid address are accounted for separately. An invalid address is for example the use of an incorrect number syntax. In some cases, mobile network operators reject the delivery of messages. This occurs for example with an incorrect message syntax or an incoming phone number for which the mobile network operator has no routing. A special charge is levied for such messages.

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3.1. Routing Service Classes

whatever mobile assumes total quality management responsibility and ensures high-quality delivery (according to the Routing Service Class chosen as well as the particular requirements of the client). The main performance characteristics for each of the Routing Service Classes are specified below:

	Time Critical Services	CRM & Marketing Services	Price Sensitive Services
Exploit-ability	E.g. time critical services such as one time passwords or alerts	E.g. CRM or marketing services	Any types of traffic requiring a highly favourable pricing
Delivery route	<p>Message is delivered as far as possible via the infrastructure of the (destination) network operator, i.e. for messages to Vodafone also via the relevant direct gateway.</p> <p>Product option: If a preferentially used SMSC gateway fails temporarily or delivery problems are detected by the continuous quality monitoring systems at whatever mobile, there is an automatic switchover after a few minutes to alternative direct connections maintained by national or international SMSCs or WM's own SS7 gateways. The switchover is limited exclusively to the duration of the detected failure. Additionally, a geo-redundant connection is available.</p> <p>Another product variant allows the delivery via direct or indirect connections to reliable international SMSCs as well as WM's own SS7 gateways. So-called Interworking or Roaming Agreements between the SMSCs used for delivery and the destination network ensure the timely delivery to the mobile networks.</p>	<p>Message is delivered as far as possible via foreign network operators or whatever mobile's own mobile network components (SS7 gateways) to the relevant destination networks.</p>	<p>Message is delivered as far as possible via foreign network operators or whatever mobile's own mobile network components (SS7 gateways) to the relevant destination networks.</p>
Benefits	<p>High delivery quality</p> <p>High throughput</p> <p>Variable sender identification</p>	<p>High delivery quality</p> <p>Favourable price</p> <p>Variable sender identification</p>	<p>High delivery quality</p> <p>Very favourable price</p> <p>Variable sender identification (where applicable)</p>
Please note		<p>Delivery time may be slightly longer (up to several seconds)</p> <p>The time stamp is set by the foreign SMSC. If the SMSC is in another time zone, the receiver will be shown the sending time for that time zone.</p> <p>Market prices: Routing and price changes are possible.</p> <p>If applicable, supported GSM features may be restricted.</p>	<p>Delivery time may be slightly longer (up to several seconds)</p> <p>The time stamp is set by the foreign SMSC. If the SMSC is in another time zone, the receiver will be shown the sending time for that time zone.</p> <p>Market prices: Routing and price changes are possible.</p> <p>If applicable, supported GSM features may be restricted.</p>

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For each message account, only the assigned Routing Service Class may be used. If the contracting party wishes to use other Routing Service Classes, they will need their own message account for each other Routing Service Class.

Please note that price changes may occur at short notice for the Routing Service Classes „CRM & Marketing Services“ and „Price Sensitive Services“ due to cancellation of the inter-working agreements listed. Delivery of your short messages will however be guaranteed in all cases through alternative routes utilised. whatever mobile makes every effort to inform the contracting party promptly about price changes.

For the majority of Routing Service Classes, whatever mobile has one or even several alternative delivery routes, known as backup routes. If one delivery option fails, the backup route immediately takes over the operation in progress.

3.2. Delivery to the Telekom Deutschland fixed network

Delivery to the Telekom Deutschland fixed network is easily achieved using the whatever mobile infrastructure. Text messages are delivered to SMS-capable devices, generally within a few seconds. If the device does not support text messaging, the message is read out by a voice service between 7:00 a.m. and 10:00 p.m. Telekom Deutschland sets the time restriction, intended to prevent night disturbance by incoming text messages. For delivery of a text message by voice, there can be delays in the Telekom Deutschland SMSC.

For delivery to the fixed network, free setting of senders is also restricted. Numeric senders are always supported. Incoming alphanumeric senders, however, are automatically overwritten with the whatever mobile short code number 86000.

3.3. Delivery to international networks

Delivery to international networks is easily achieved using the whatever mobile infrastructure. The conditions for international termination are published on the internet at www.sms-broker.com. For delivery to networks outside Germany or Austria, the scope of service is similar to that described above. Note that exceptions to this rule include national restrictions on setting the sender and on transmission of delivery notifications. Information on this subject is obtainable from the sales staff at whatever mobile.

3.4. Delivery notifications via the Telekom Deutschland fixed network

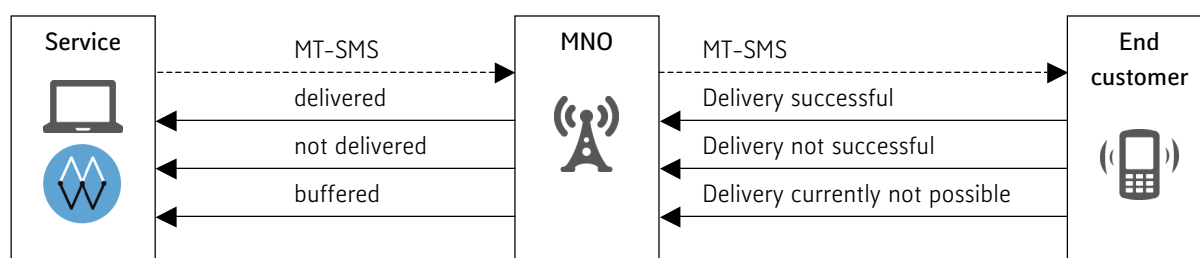
If the contracting party requests a delivery notification for transmitted text messages, they will receive it at the rates listed in the Contract Form. At the same time, confirmations such as "Buffered" or "Acknowledged" will be delivered by whatever mobile.

3.5. Delivery Notifications in German mobile networks

The SMSCs of all German mobile network operators (MNO) make available the current delivery status of submitted text messages. For delivery notifications in German mobile networks, a distinction is drawn between two final and two temporary status codes:

Final status codes	Description
delivered	The network operator has successfully delivered the text message.
not delivered	The network operator has not successfully delivered the text message.

Temporary status codes	Description
buffered	The network operator has received the text message but not yet delivered it to the mobile device. The most frequent reason is a switched-off mobile device. "Buffered" is a temporary status and after the network operator has delivered the message, gives way to "delivered" or "not delivered".
no status	The network operator has not assigned a status to the text message.



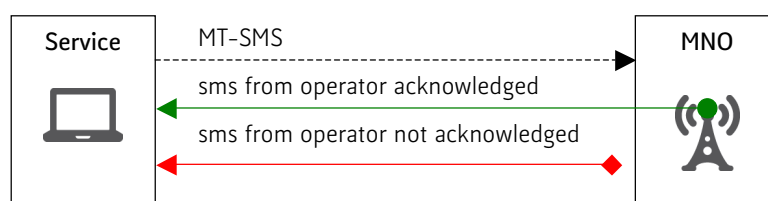
Final and temporary status codes

As a rule, a reason for the status in the form of a "reason code" is supplied for the status codes "not delivered" and "buffered", depending on the protocol used (e.g. SMPP or UCP). The actual supply of the reason code is protocol-specific and may be found in the relevant interface specifications. Here are some examples of SMPP codes:

- expired The message has exceeded its storage period.
- invalid The message is not valid.
- rejected The network operator rejected the message.
- absent subscriber The device is switched off.

Optionally, whatever mobile can also return the message to the network operator in the form of a status code:

Status code	Description
sms from operator acknowledged	The message was acknowledged by the network operator (ACK).
sms from operator not acknowledged	The message was not acknowledged by the network operator (NACK).



3.6. Delivery notifications in Austrian networks

In view of the heterogeneous SMSC infrastructure of mobile network operators in Austria, the whatever mobile infrastructure sends a "delivered" status when receipt of the message is acknowledged by the network operator.

3.7. WAP Push messages to Telekom Deutschland mobile devices

In Germany, there are approx. 4.5 million mobile devices with Telekom branding (as at February 2011) which accept WAP Push messages solely from a special Telekom SMSC. All incoming WAP Push messages from other SMSCs (including Telekom's own) are automatically deleted by these devices immediately after receipt without any indication to the end user. whatever mobile has a gateway to this special Telekom WAP Push SMSC. whatever mobile automatically forwards to the special Telekom WAP Push SMSC any text messages which represent a WAP Push message and are transmitted by the Routing Service Classes of "Time Critical Services" with a Telekom destination.

3.8. Setting the text message sender

In general, the contracting party has the ability to freely set the sender of the message sent by him under the WM MMA API specification. However, without the express consent of whatever mobile, no short codes and value-added numbers (premium-rate numbers) may be used as sender where the use is not covered by a contract between the contracting party or whatever mobile with the relevant mobile network operator. Text messages sent to E-Plus customers with a short code not entered in the E-Plus SMSC as a whatever mobile short code are not transmitted and are billed at a rate of EUR 0.095 per message.

The contracting party must also ensure that, where an MSISDN is chosen as the message sender for the messages passed by them to whatever mobile, they are the commercial owner of the MSISDN or that they hold the express consent of the commercial owner for the use of the MSISDN number as sender. In addition, sender IDs which infringe § 2.2 of the general terms and conditions (for example brand names such as "Vodafone") and senders containing a 0900 or similar number are not allowed. They will not be transmitted by whatever mobile to the destination networks, but will however be charged.

On request, the contracting party will without delay confirm, or supply documentation on, compliance with the above points. In the event of infringement of this provision, the contracting party will keep whatever mobile exempt from all valid claims from third parties.

Where text messages are transmitted to the Deutsche Telekom fixed network, only numeric senders can be used. If the contracting party transmits an alphanumeric sender ID, it will be replaced by a (short code) number from the Telekom Deutschland SMSC.

3.9. SMS Outbound - with direct reply capability in Germany

With the direct reply option, whatever mobile offers a cost-efficient product extension for sending and receiving messages using a pool of long telephone numbers. With this option, a return channel is opened for sent text messages. It has a guaranteed duration of 14 days, but the arrival of a reply extends the channel by 48 hours. After the end of the guaranteed duration, the maximum channel life is 14 days. Active channel management enables such incoming messages to be assigned to the message account using the mobile handset number. These are held accordingly in the account used for sending

3.10. Delivery of Cost Centres

The contracting party has the optional possibility to use cost centres when delivering messages to the platform of whatever mobile. The cost centres are displayed in the Account Statement of the CCC. This feature enables the contracting party to group messages by cost centres. Characters and digits may be chosen freely, however, the maximum length may not exceed 64 characters. This functionality is only available when using the HTTP protocol.

3.11. Multi-message broadcast

If the Mobile Broadcast Tool is used (see section on gateway types), the contracting party can make a multi-message broadcast. A multi-message broadcast allows different message texts to be sent to different recipients as part of a single send process. This feature requires implementation of the http link to the Mobile Broadcast Tool. This is available to the contracting party after setting up the Mobile Broadcast Tool. Further information can be found in the operating instructions for the Mobile Broadcast Tool.

3.12. Setup, operating and transaction charges

Setup, operating and transaction-dependent charges are specified in the Contract Form. In the event of any increase in the price for sending text messages on the part of the mobile network operators or as a result of a change in routing by whatever mobile, the latter will inform the contracting party accordingly without delay. Any such price change is valid from the time of the increase, regardless of when the contracting party is informed.

4. Client Control Center

As a service, the contracting party receives access to the Client Control Center (CCC), based on the Java Virtual Machine (JVM). The CCC offers the contracting party the ability to generate reports and statistics at any time, and to configure the use of whatever mobile infrastructure. The contracting party receives comprehensive instructions from whatever mobile on optimising use of the CCC.

The CCC's scope of performance depends on the solution selected. Selection of additional products from the whatever mobile range of products can increase the CCC's scope accordingly. When booking, the following functionalities are available to you:

4.1. Change password

Each time the contracting party uses CCC access after correct authentication using their login and password, the use is registered as such. Passwords and logins assigned to the contracting party are therefore to be stored with utmost caution. For security reasons, whatever mobile recommends changing the access password regularly with the admin option "Change password".

4.2. Message search

Message search allows the contracting party to identify precisely at any time what message was received or sent by which MSISDN. It also allows the contracting party to view the log times.

4.3. Operator statistics

Here, the contracting party receives a detailed breakdown of how many messages have been carried from which source networks and to which destination networks through their whatever mobile message account.

4.4. Statement of account

The customer account shows all debit (e.g. termination or processing charges) and credit entries, generally in real time. This provides the contracting party with a permanent overview of their current account status. The period for viewing can be selected as required.

4.5. Keyword statistics

If the whatever mobile short code/long numbers are jointly used, the contracting party has access to keyword statistics. The success of different keywords can be viewed individually or collectively. The keyword statistics have a wide variety of time segmentation levels, allowing an overview of how heavily the contracting party's services were used at what time of day. The keyword statistics also allow evaluation of new customers or the average number of text messages per end customer (= MSISDN). In this context, please note the difference between an SMS text message and a message. A message can comprise several individual SMS text messages, where for instance a concatenated SMS text message was sent.

4.6. Keyword administration

Keyword administration allows the contracting party to reserve, book and – depending on the application – change keywords online for short code and long numbers which have already been set up for them. After successful transmission, all that is required is authorisation by whatever mobile for simple, rapid and flexible administration of keywords by the business partner. This gives the contracting party a constant overview of the current status of their order. Please note that the contracting party's use of or application for keywords is permitted in all cases only after authorisation by whatever mobile. whatever mobile processes requests between 9:00 a.m. and 5:00 p.m. Monday-Friday. Upon telephone request, a change to these times is always possible.

5. Glossary

Term	Meaning	Explanation
Added-value number (premium-rate number)		A number to which SMS or MMS messages can be sent. Sending an SMS or MMS message to an added-value number costs the end customer more than sending an SMS text message to a mobile handset
Billing	Billing or invoicing	Successful entry of transactions in the invoicing systems (e.g. of mobile network operators or whatever mobile)
CCC	Client Control Center	Administration and statistics tool of whatever mobile
Contracting party		Purchases whatever mobile services.
dedicated	Exclusive	e.g. exclusive use of a short code, i.e. all incoming SMS/MMS messages are forwarded to the contracting party's message account
IP address	Internet address	e.g. 111.110.12.58
Keyword		Serves to identify and assign an end-customer text message to a contracting party's message account or application
Message		A message can comprise several SMS text messages
MNO	Mobile Network Operator	Holds a licence to operate a mobile telephone network including all necessary network components
MO-SMS	Mobile Originated SMS text message	An SMS text message sent by the end-customer (mobile device)
Mobile device		e.g. mobile handset or PDA
MSISDN	Mobile Subscriber Integrated Services Digital Network number	Also known as "mobile number"
MT-SMS	Mobile Terminated SMS text message	An SMS text message sent to the end-customer (mobile device)
MVNO	Mobile Virtual Network Operator	Uses an MNO's infrastructure to operate its "own" mobile telephone network. Maintains its own active network components (e.g. Virgin Mobile in the UK)
Routing		Denotes the sending of SMS/MMS messages via special gateways (e.g. via foreign mobile network operators)
Routing Service Class	Type of delivery	Determines the internal routing in whatever mobile's message gateway
Service Provider		Uses an MNO's infrastructure to operate their "own" mobile telephone network. Does NOT maintain own active network components (e.g. Talkline)

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Services provider		Bears responsibility for the content and function of a (mobile) service
shared	Shared use	Shared use of existing short codes and long numbers via keywords
SMS	Short Message Service	Short text message, 160 characters maximum
SMS long number		Long number, e.g. 0176-888 00 88, to which SMS text messages may be sent
SMS short code		Short code, e.g. 12345, to which SMS text messages may be sent
SMSC	Short Message Service Centre	Each network operator maintains their own SMSC for the sending and receipt of SMS text messages. In the SMSC, short codes for instance are set up. The SMSC is the interface of whatever mobile with the relevant mobile telephone network.
Termination		Sending of SMS text messages to a mobile device (mobile handset)
vSMSC	Virtual Short Message Centre	Numerous service providers maintain their own vSMSC. In the vSMSC, short codes for instance are set up. The vSMSC are the whatever mobile interface to the relevant service provider networks
WAP Push		Specially encoded SMS text messages which request/cause the mobile device (mobile handset) to set up an Internet connection to an Internet server, for the purpose for instance of downloading content