



# **Tanla Mobile Aggregator Interface Specification**

## **HTTP Access Programming Reference**

### **SMS GATEWAY**

Issue 2.6  
Sep 2006

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#### **Notice**

Every effort was made to ensure that the information in this document was complete and accurate at the time of printing. However, information is subject to change.

#### **Preventing Messaging Spam**

#### **Providing Consumer Security**

Be aware that there may be a risk of unauthorized intrusions associated with your system and/or its networked equipment. Also realize that, if such an intrusion should occur, it could result in a variety of losses to your company (including but not limited to, human/data privacy, intellectual property, material assets, financial resources, labor costs, and/or legal costs).

#### **Your Responsibility for Your Company's Messaging Security**

The final responsibility for securing both the client system and its networked equipment rests with you - a Tanla Mobile customer's system administrator, your telecommunications peers, and your managers. Base the fulfillment of your responsibility on acquired knowledge and resources from a variety of sources including but not limited to:

- Installation documents
- System administration documents
- Security documents
- Hardware/software-based security tools
- Shared information between you and your peers
- Telecommunications security experts

To prevent intrusions to your messaging system, you and your peers should carefully program and configure:

- your messaging systems and their interfaces
- your software applications, as well as their underlying hardware/software platforms and interfaces
- any other equipment networked to your applications.

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#### **Tanla Mobile Support**

Tanla Mobile provides a telephone number for you to use to report problems or to ask questions about your contact center. The support telephone number is +44-871-240-3500 in the United Kingdom. For additional support telephone numbers, see the Tanla Mobile Web site: <http://www.TanlaMobile.com>

#### **Acknowledgment**

This document was written by the Tanla Mobile Information Development group.

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## REVISION LIST

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#	Date	Name	Description	Version
1	15-Mar-2006	Amit Gupta	Major Release 2	2.0
2	16-Mar-2006	Amit Gupta	<i>-route</i> option added for MT -specified the default value for <i>deliv_ack</i> =0 and <i>billed</i> =0	2.1
3	16-Mar-2006	Amit Gupta	Changed max length of <i>user</i> & <i>password</i> to 16	2.2
4	14-July-2006	Amit Gupta	Added detailed error codes returned in the Delivery Receipts	2.3
5	13-Sep-2006	Amit Gupta	Mobizar re-branded to Tanla Mobile	2.4
6	14-Sep-2006	Amit Gupta	Changed the MT submit URL from <i>sendmsg_get.asp</i> to <i>sendmsg.asp</i> Changed number of characters for the username and password to 16 in the wap request	2.5
7	20-Sep-2006	Amit Gupta	Explanation for the 280 limit for WAP messages. Added Australian operator codes.	2.6

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## CHAPTER 1: HTTP ACCESS MODEL

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### INTRODUCTION

The Tanla Mobile Aggregator platform exposes a HTTP interface to its SMS Gateway. The SMS Gateway can be used for sending and receiving plain-text SMS, binary SMS, as well as WAP Push messages.

To send messages using the HTTP interface, a client has to do a POST to the Tanla Mobile platform. The platform returns delivery receipts (if requested) by doing a POST to a web URL specified by the client.

Similarly, the platform delivers incoming SMS messages to the client by doing a POST on a web URL specified by the client.

The platform supports HTTP/S 1.0 and HTTP/S 1.1.

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### TERMINOLOGY

*param\_name* denotes a parameter in a HTTP POST or GET request

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### GLOSSARY

MT	Message Termination; messages sent by the client
DR	Delivery Receipt; provided by Tanla Mobile to the client
MO	Message Origination; incoming messages for the client
POST	A HTTP post (RFC2616)
URL	Uniform Resource Locator
MSGID	Message ID
WAP	Wireless Application Protocol
HTTP	HyperText Transfer Protocol

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## CHAPTER 2: MESSAGE TERMINATION

### INTRODUCTION

The basic parameters required are *to* and *text*, which refer to the destination address and content of the message respectively.

Each message returns either a unique identifier in the form of a Message ID (MSGID) OR an error code. The returned content is part of the BODY part of the HTML document returned from the HTTP POST. The Message ID identifies a message uniquely in the Tanla Mobile system and can be used to track and monitor any given message if required. The MSGID is returned after each post.

### MESSAGE PARAMETERS

Name	Description	Restricted Values
<i>user</i> (Mandatory)	User Name	Maximum → 16 Characters
<i>password</i> (Mandatory)	Password	Maximum → 16 Characters
<i>op_id</i> (Mandatory)	The operator code to which the MSISDN belongs to, this is mandatory for billed messages.	<i>(For operator codes, refer Appendix B)</i>
<i>from</i> (Mandatory)	The source / sender address.	For Billed messages this must be the shortcode
<i>to</i> (Mandatory)	The destination address. May be referred to as the MSISDN – an International Number. Without any '00' prefix or leading + symbol.	
<i>message</i>	The content of the message.	Max length 280 for binary, 160 for text messages
<i>msg_type</i> (Mandatory)	Type of Message ( Binary or Text)	B → Binary Message T → Text Message

Name	Description	Restricted Values
<b><i>Dcs</i></b> (Mandatory)	DCS Character Coding	0- Text messages
<b><i>deliv_ack</i></b> (Optional)	This will return a delivery acknowledgement for any message, upon delivery of the message to the mobile handset.	0 → Off - Default Status, no delivery report sent back to client.  1 → Tanla Mobile Server send a deliver report back (delivery ack).
<b><i>billed</i></b> (Mandatory)	If you specify the billed parameter your Message will be charged, By default the Message will not be charged.	0 → Unbilled (Default)  1 → Billed
<b><i>route</i></b> (Optional)	To be used only if routing options are provided by Tanla Mobile; otherwise can be safely ignored. This is specific to Unbilled messages.	Use when routes are provided by Tanla Mobile.

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## EXAMPLE

`http://217.72.190.100/mobizar/sendmsg.asp?user=xxxxxx&password=xxxxxx&op_id=xxxxxx&from=xxxxxx&to=xxxxxxxxxxxx&message=xxxxxx&msg_type=x&dcs=xxx&deliv_ack=x&billed=x`

Response:  
MSGID : xxxxxx

OR

Response:  
ERROR: ErrorNumber  
(Note: For Error Codes Refer APPENDIX A of the Document)

This example does not use all parameters. Other parameters can be used if required.

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## MESSAGE PARAMETERS IN DETAIL

### 1. DESTINATION ADDRESS (TO)

SMS messages need to be sent in the standard international format, with country code followed by number. No leading zero to the number, and no

special characters such as "+" or spaces must be used. For example, a number in the UK being 07901551555 will become 447901551555.

## 2. SOURCE ADDRESS (FROM)

This source address (Sender ID) can be either a valid international format number between 1 and 16 characters long, or an 11 character alphanumeric string. Note that characters such as spaces, punctuation and other special characters, may not always be supported to all destinations, and could interfere with your delivery. We suggest that you refrain from using such characters on the Sender ID.

If this is set, then delivery acknowledgements may be unavailable. You may not use alphanumeric Sender IDs with 8-bit messaging; this may cause message delivery to fail.

Note: This service is not guaranteed across all telephone networks and may interfere with delivery to certain handsets.

## 3. MESSAGE TYPES (MSG\_TYPE)

We have pre-defined a number of SMS message-types in the API, so that you do not have to set the UDH manually. Message types are case sensitive.

Values set are: *msg\_type*=

### Values

B → Binary Message

T → Text Message

## 4. DELIVERY ACKNOWLEDGEMENT (DELIV\_ACK)

In order to determine whether an SMS has been received by a handset or not, we offer delivery acknowledgement. Delivery Acknowledgements could become subject to an additional charge, hence why it must be specifically requested. The ability to receive reliable delivery acknowledgements varies between end-networks. In the case of GSM phones that are off, a message that has exceeded the validity period will only be reported once a user has switched their phone back on.

**If this parameter is not used, or left blank, then this parameter is automatically assumed to be 0 (the default value).**

Values set are: *deliv\_ack*=

#### **Value Status**

0 → Off - Default Status, no delivery status reported.

1 → Tanla Mobile Server send a delivery report back

Delivery acknowledgements are not guaranteed by all of our upstream providers. Please test to a specific network first, before assuming that you will receive delivery acknowledgments for messages that are delivered. If we have successfully passed the message onto the relevant telco, then we will issue an SMSC acknowledgment.

### **5. BILLING TYPES (billed)**

We have pre-defined billing types in the API, so that you have to set the billed parameter manually.

Values set are: *billed* =

**If this parameter is not used, or left blank, then this parameter is automatically assumed to be 0 (Unbilled-the default value).**

#### **Values**

0 → Unbilled Message (Not Charged)

1 → Billed Message (Charged)

*Note: When you set the billed parameter to "1" your SOURCE ADDRESS (FROM) should be same as that of your Short Code provided to you at the time of registration.*

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## CHAPTER 3: MESSAGE TERMINATION – WAP PUSH

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The Tanla Mobile platform uses WAP Pus Service Indication (SI) to send WAP Push messages to handsets. The procedure for sending WAP Push messages is similar to that for sending normal SMS messaged with slight variations.

Each message returns either a unique identifier in the form of a Message ID (MSGID) OR an error code. The returned content is part of the BODY part of the HTML document returned from the HTTP POST. The Message ID identifies a message uniquely in the Tanla Mobile system and can be used to track and monitor any given message if required. The MSGID is returned after each post.

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### MESSAGE PARAMETERS

Name	Description	Restricted Values
<b>user</b> (Mandatory)	User Name	Maximum → 16 Characters
<b>password</b> (Mandatory)	Password	Maximum → 16 Characters
<b>op_id</b> (Mandatory)	The operator code to which the MSISDN belongs to, this is mandatory for billed messages.	<i>(For operator code, refer Appendix B)</i>
<b>from</b> (Mandatory)	The source / sender address.	For Billed messages this must be the shortcode
<b>to</b> (Mandatory)	The destination address. May be referred to as the MSISDN – an International Number. Without any '00' prefix or leading + symbol.	
<b>deliv_ack</b> (Mandatory)	This will return a delivery acknowledgement for any message, upon delivery of the message to the mobile handset.	0 → Off - Default Status, no delivery report sent back to client. 1 → Tanla Mobile Server send a deliver report back (delivery ack).
<b>billed</b> (Mandatory)	If you specify the billed parameter your Message will be charged, By default the Message will not be charged.	0 → Unbilled (Default) 1 → Billed
<b>title</b> (Mandatory)	This field is specific to <b>WAP</b> messages. This is the title of the WAP message	Title string
<b>url</b> (Mandatory)	This is the <b>WAP</b> url that has to be displayed in the message	URL string

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## EXAMPLE

http://217.72.190.100/mobizar/sendwap.asp?user=xxxxx&password=xxxx&op\_id=xxxx&from=xxxxxx&to=xxxxxxxxxxxx&title=xxxxxx&url=xxxxxxxx&deliv\_ack=x&billid=x

Response:  
MSGID : xxxxxx

OR

Response:  
ERROR: ErrorNumber  
(Note: For Error Codes Refer APPENDIX A of the Document)

This example does not use all parameters. Other parameters can be used if required.

---

## MESSAGE PARAMETERS IN DETAIL

### 1. DESTINATION ADDRESS (TO)

SMS messages need to be sent in the standard international format, with country code followed by number. No leading zero to the number, and no special characters such as "+" or spaces must be used. For example, a number in the UK being 07901551555 will become 447901551555.

### 2. SOURCE ADDRESS (FROM)

This source address (Sender ID) can be either a valid international format number between 1 and 16 characters long, or an 11 character alphanumeric string. Note that characters such as spaces, punctuation and other special characters, may not always be supported to all destinations, and could interfere with your delivery. We suggest that you refrain from using such characters on the Sender ID.

If this is set, then delivery acknowledgements may be unavailable. You may not use alphanumeric Sender IDs with 8-bit messaging; this may cause message delivery to fail.

Note: This service is not guaranteed across all telephone networks and may interfere with delivery to certain handsets.

### 3. DELIVERY ACKNOWLEDGEMENT (DELIV\_ACK)

In order to determine whether an SMS has been received by a handset or not, we offer delivery acknowledgement. Delivery Acknowledgements could become subject to an additional charge, hence why it must be specifically requested. The ability to receive reliable delivery acknowledgements varies between end-networks. In the case of GSM phones that are off, a message that has exceeded the validity period will only be reported once a user has switched their phone back on.

Values set are: *deliv\_ack*=

#### Value Status

0 → Off - Default Status, no delivery status reported.

1 → Tanla Mobile Server send a delivery report back

Delivery acknowledgements are not guaranteed by all of our upstream providers. Please test to a specific network first, before assuming that you will receive delivery acknowledgments for messages that are delivered. If we have successfully passed the message onto the relevant telco, then we will issue an SMSC acknowledgment.

### 4. BILLING TYPES (billed)

We have pre-defined billing types in the API, so that you have to set the billed parameter manually.

Values set are: *billed* =

#### Values

0 → Unbilled Message (Not Charged)

1 → Billed Message (Charged)

*Note: When you set the billed parameter to "1" your SOURCE ADDRESS (FROM) should be same as that of your Short Code provided to you at the time of registration.*

### 5. TITLE & URL

The combined length of the *title* and *url*, when converted to hexadecimal format, should not exceed 280.

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## CHAPTER 4: MESSAGE ORGINATION

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### INTRODUCTION

The Tanla Mobile SMS Server can push SMS messages received on a two-way or short code account by making an HTTP POST request to a URL provided by the client, using the parameters specified below.

On successful delivery of a message to the client, the web server is expected to return a HTTP 200 response code.

The Tanla Mobile platform will continue to try to post the message, using an exponential delay, until a response code of 200 is received from the client.

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### MESSAGE PARAMETERS

Field Name	Explanation
<i>operatorid</i>	Operator id to which the originator belongs.
<i>date</i>	Date message was received Format: yyyy-mm-dd hh:mm:ss
<i>from</i>	Originator of the message
<i>to</i>	Destination number. i.e. ,Short code
<i>message</i>	The message text with keyword (if applicable)

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## CHAPTER 5: DELIVERY REPORT

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### INTRODUCTION

The Tanla Mobile platform delivers delivery reports by making an HTTP POST request to a URL provided by the client. Delivery reports for a message will be returned only if the option was turned on for the message during the MT process.

On successful delivery of a message to the client, the web server is expected to return a HTTP 200 response code.

The Tanla Mobile platform will continue to try to post the message, using an exponential delay(till the validity of the message expires) for 24 hours , until a response code of 200 is received from the client.

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### DELIVERY REPORT PARAMETERS

Field Name	Explanation
<i>Status</i>	Status of the message one of: DELIVERED FAILED
<i>to</i>	Number the sms was delivered to(eg: 441234123444)
<i>msgid</i>	Reference id returned when the message was submitted
<i>submittime</i>	Date and time message was submitted to Tanla Mobile Format: yyyy-mm-dd hh:mm:ss
<i>deliverytime</i>	Date and time message was delivered/failed Format: yyyy-mm-dd hh:mm:ss
<i>error</i>	The error code returned (if any) by the operator. Please refer to Appendix A for the detailed list.

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## APPENDIX A: ERROR CODES

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### INTRODUCTION

Every message which has been submitted to Tanla Mobile gateway will receive an acknowledgement. However, not all submitted messages will be delivered successfully to the mobile subscribers. The Tanla Mobile gateway will return an error code, which clearly states the error encountered by the gateway while processing the message.

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### ERROR CODES

Error codes are returned at 2 different stages:

#### 1. During Message Submission

Returned at the time of submission of the message as part of the acknowledgement, this error code is in the body of the HTML page returned. There will be no message charge if these errors are generated when submitting a message.

Error Code	Description
1000	Authentication Failed
1001	Account Deactivated
1002	Credit Limit Exceeded
1003	Operator Id Missing/ Operator not in the list
1004	Unknown Operator Id
1005	From (source / sender ) Address Missing
1006	To (Destination ) Address Missing
1007	DCS field Missing
1008	Delivery Acknowledgement field Missing
1009	Invalid Delivery Acknowledgement Type
1010	Billed Parameter field Missing
1011	Invalid Billed Parameter Type
1012	Invalid From (source / sender ) Address
1013	Invalid Message Type or field missing
1014	Invalid Route ID
1015	Not configured to send Billed Messages
1016	Not configured to send Unbilled Messages
1017	MSISDN barred on the service ("STOP")
1018	WAP Message Too big(>280)
1019	Title Missing (WAP)
1020	WAP Billed Message Not Permitted
1021	To Field Format Error
1022	Message Length Exceeded

## 2. In the Delivery Receipt

Returned as part of the delivery receipt, this error code is the value of the parameter “*error*” in the HTTP POST to the URL provided by the client.

Status	error	Category	Type	Description
FAILED	010	Absent Subscriber	Permanent	Subscriber is absent in the operator network and cannot be located.
FAILED	011	Unknown Subscriber	Permanent	Subscriber is invalid or unidentified at the operator
FAILED	012	Absent Subscriber	Temporary	Message can't be delivered temporarily because the user's handset is switched off can't be reached on the network
FAILED	020	Phone Error	Temporary	Message failed to deliver to the handset because of reasons like SIM card full, SME busy, memory exceeded etc.
FAILED	021	Phone Error	Permanent	Handset is incompatible or does not support this type of message
UNKNOWN	060	Unknown: Final Status not Known	Unknown	There is no delivery status from operator yet.
FAILED	061	Unknown- Failed Reason not known	Temporary	The message failed/expired at operator to deliver to the handset and the detailed reason for failure is not known.
BUFFRED	030	No Credit	Intermediate	The message was rejected by operator because of insufficient subscriber credit and will be retried by Tanla Mobile.
FAILED	031	No Credit	Temporary	The message failed to deliver to the handset because of no credit and expired at operator
EXPIRED	032	No Credit	Temporary	Message failed to deliver to the handset and expired at Tanla Mobile
FAILED	040	Operator Network Failure	Temporary	Message failed to deliver to the handset because of operator network failure, This could be related to SS7 or SMSC
FAILED	070	Content Lock Error	Permanent	Message was rejected by operator because of content lock set for this subscriber
FAILED	050	Subscriber can't be Billed	Temporary	The message failed because the subscriber has reached the predefined credit limit for the period and cannot be billed
FAILED	051	Subscriber Barred	Permanent	Subscriber is barred to receive SMS by the MT network
REJECTD	062	Unknown - Rejected by operator	Permanent	The message was rejected by the Operator and reason is not known

### Note:

- **Intermediate** – This indicated a final delivery receipt should be expected and this is not the final status for this message.
- **Permanent** – This indicated that the message “Failed” and the failure reason is permanent, i.e. message to this subscriber in the future also would not be delivered.
- **Temporary** – This indicates that this message “Failed” but the failure reason is temporary i.e. message to this subscriber in the future might be delivered.
- **Unknown** – This indicates that the final delivery status is not known from the operator.

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## APPENDIX B: OPERATOR CODES

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### INTRODUCTION

The Tanla Mobile platform identifies the operators by their codes as given below.

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### OPERATOR CODES

#### UNITED KINGDOM

Operator Code	Operator
23410	O2
23420	Orange
23430	VodaFone
23440	T-Mobile
23450	3
23460	Virgin

#### AUSTRALIA

Operator Code	Operator
50501	Telstra
50502	Optus
50503	VodaFone