mobiyo

Integration Document — SMSC — Asynchronous http Routing

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INTRODUCTION

The information contained in this document describes the interface between the Mobiyo's SMS platform and other computer systems and applications. The interface is based on Web Services, of which there are several types : REST, XML-RPC, SOAP, etc. Mobiyo offers an API based on widespred system : REST to connect to its SMS Center (SMSC)

1. Who is this document aimed at ?

This document is intended for anyone involved in the design and implemntation of applications on computer systems that need to interact with the SMSC.

Knowledge and prerequisites ;

- HTPP protocol (http://en.wikipedia.org/wiki/Hypertext_Transfer_Protocol)
- An understanding of web servicess (http://www.w3schools.com/webservices),
- Knowing how th handle a file or a XML steam (http://www.w3schools.com/xml)
- How to master programming language allowing the use of web services
- Hosting a web server

2. Technical support

This document is sufficient to allow a developer to use Mobiyo's customisable services in the development of an application or APIs, to interface with the SMSC. It is advisable to read this guide in its entirety before undertaking any development.

However, if the developer of the application encounters a problem that cannot be solved by this document, then IT support is available.

When any contact with the support team is made, then certain information will be requested, including the timestamps of the various tests carried out. In order to process the request quickly, it is necessary to have the maximum of information about the test environment and any furher information that will be useful in the diagnosis of the problem.

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PRESENTATION

3. What is « SMS+ » ?

SMS+ is a method of payment to monetize a product and develop interactive exchanges with its customers. Simple, universal and quick, the SMS is aimed at all mobile users. The purchase takes place with the round-trips (1 round trip = 1 session) in accordance with the legal limitations of the target country. Easy to access thanks to a short number of 5 digits, the SMS multiplies the possible service offerings to be proposed to all mobile subscribers. You can choose the price and the billing method for your service, upon the action or the subscription.

4. What is "HTTP Routing"

The routing operator Mobiyo aggregates several operators worldwide around its SMS processing centre (SMSC) and facilitates the use of its resources through its web services. In this way, SMS are sent to merchants in a uniform manner through a HTTP request. The purpose of this method is to allow merchants to interact with SMS from their own platform, to be autonomous, and to offer a personalized, added value service to its customers.

5. What is "asynchronous HTTP Routing" ?

'Asynchronous' routing is a method of communication between the Allopass SMSC (Mobiyo) and the platform managed by the merchant using the principle of multi-transactional exchange.

An SMS (MO) sent by the user is routed to the merchant through an internet URL which will acknowledge the notification. The dealer will call a URL of the Mobiyo platform for a second time to send the SMS (MT) to the user, and the transaction is done in two stages.

This model of communication is necessary for services that require a delayed response, and provides a safety net in case of damage to one of the platforms.

Sample application: Subscription, Chat, Alerts, etc.

This system is opposed to the synchronous method, which is used for the services of the following type:

Payment, reloading of an account, astrology, current events...

6. What do I need ?

A server to host the processing scripts accessible from a public URL. What will be requested of the merchant:

- A public URL that points to the processing scripts that Mobiyo will use for the notification of the messages.
- Allow the Mobiyo IP (transmitted afterwards) to call the aforementioned URLs
- Provide Mobiyo with the public IP of the server that hosts the scripts and that will appeal to Mobiyo's SMSC in order to authorize them acces
- A Mobiyo 'technical account' with their identifiers. Provided during the integration.

7. General operation

The merchant declares a routing service on the Mobiyo SMS interconnection for external management; in other words, since their own platform is hosted outside the SMSC.

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Sample service: Clairvoyant chat

1. The user sends an SMS: The service is identified by the first word before a space — called the key word — contained in the SMS, which in this case is: MEDIUM.

```
Send "MEDIUM" to 61071 - SMS Sent at 10am
```

2. Consultant team respond to the user (MT) but the response is not immediate and needs humain processing time. Once the (MT) message is sent, the merchant wil be notified of the reception status of the message on the user terminal.

```
Hello, I'm Claire, give me your name and your date of birth to begin the consultation (price) - SMS Sent at 10:10am
```

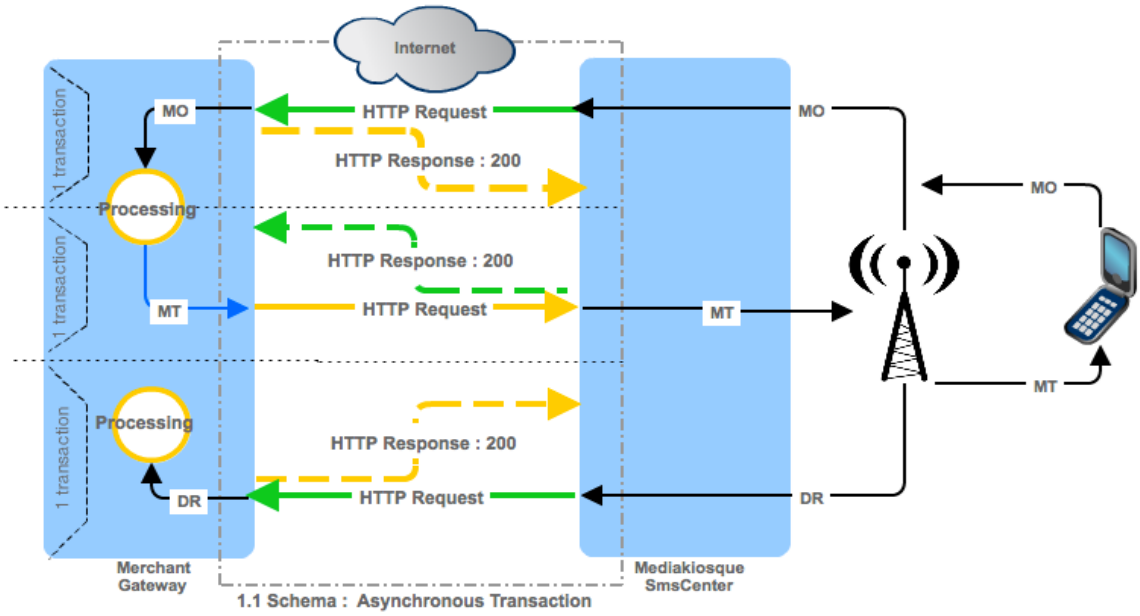
8. The session

According to operators and the billing model for the service, the act of purchase is articulated within a session and is defined by the order for content and its delivery. The lifetime of a session is limited between 2 and 48 h, outside of which any billing attempt of the buyer will be rejected. The session ends upon the delivery of the paid content.

With the “asynchronous" routing the merchant must be careful not to exced the time of the session in which case the paid content SMS will be rejected and the purchase invalidated.

9. Notification process

The merchant is notified of a SMS (MO) via a URL that he acknowledges with a HTTP 200 response. The merchant will use an offline Mobiyo web service to deliver SMS (MT) content. The merchant will be notified later of the reception status (DR) of the SMS (MT) sent.



1.1 Schema : Asynchronous Transaction

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Receipt of a new SMS (MO)

Upon receipt of a new SMS, the Mobiyo platform notifies the merchant's url configured for the target service.

10. Mobiyo notifies the merchant

The Mobiyo SMSC contacts the merchant's URL and transfers xml data to them through a variable HTTP and information related to the order placed for the targeted service via the POST or GET method in XML format.

> It is important that the merchant's script has a short response time: the script must fulfil the notification then carry out the necessary processes.
>
> Mobiyo will carry out a new notification of the same SMS (MO) in instances of non-response or badly formatted responses, up to five times before failing.
>
> It is recommended that the merchant incorporates a lock to prevent the processing of the same message. This means that the merchant should check closely **that the same transaction identifier is not processed twice**

10.1. URL

Example of the url that the merchant must deploy on their service to receive notifications : *https://mywebsite.com/sms.php*

10.2. Parameters of the query

Parameters	Format	Description	Example
moid	digit	Unique identifier for the transaction (bigint)	1000000000001
mcc	digit	International code for the country of the operator of the user responsible for sending the SMS	208 for France
mnc	digit	International code for the network of the operator of the user responsible for sending the SM	01 for Orange France 10 for SFR France
number	text	Telephone number identifying the mobile of the caller; depending on the country it can be an alias.	Alias or local number
content	text	Message sent by the user (on request, the message can be encapsulated in a CDATA section)	MYBRAND 123456
shortcode	digit	Number of the destination to which the user has sent his message	81051
login/password	Text	Identifier that the merchant wants Mobiyo to use to authenticate -- non--mandatory, highly recommended.	

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Example of a request received by the merchant

```
xmldata =
<sms>
 <login>smsc_Mobiyo</login>
 <password>XghY767</password>
 <mo>
  <moid>10000006677001</moid>
  <number>321782726120</number>
  <mcc>208</mcc>
  <mnc>01</mnc>
  <shortcode>61015</shortcode>
  <content>MEDIUM</content>
 </mo>
</sms>
```

11. Response that the merchant's script must return to Mobiyo

It is necessary to check if the **moid** has already been processed. If the merchant's site slows down, the notification sent by Mobiyo could fail (beyond 5 seconds, Mobiyo considers the notification to have failed due to the response time being too long). In this case, the Mobiyo SMSC will again attempt to send the same message to the merchant, who might nevertheless, have processed it at the time of the previous notification; it remains up to the merchant to pay for the new notification and to process it in error.

11.1. Description of the response expected by Mobiyo

The HTTP code of the Header must be equal to 200. It is ncessary to acknowledge the notification beofre triggering any response or processing procedure. If the SMS (MT) response is sent before the acknowledgement of the current notification, the request will be rejected by the SMSC.

Parameters	Format	Description	Example
status	boolean	Response status	0 or 1
error	text	In the case of an error, it contains the description of the error	Already processed service not found

11.2. Status

Value	Description	Context
0	OK	The new message has been taken into account.
1	Failure	An error occurred during initialisation of the transaction.

The status 0 or 1 is an acknowledgement of the transaction. The transaction is considered to be a failure in the instance of non-–response, a HTTP return different by 200, or an unexpected response format.

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Sending an SMS (MT) response

After processing the SMS (MO) message notified by Mobiyo, the merchant responds offline to the order, using the web services offered by Mobiyo.

12. 4The merchant notifies Mobiyo

The merchant contacts a Mobiyo SMSC web service to send the SMS response content to return to the end user. The information is sent using the POST or GET method through the webservice sendmt

> The SMSC acknowledges the message with an HTTP 200 response containing a transaction reference (trx_id) in the body of the header. It is advisable to keep this reference as it will be asked for if you need to request support.

12.1. URL

The URL of the service that the merchant must call from his script, to send an SMS

https://ws.smsc.mediakiosque.com/sendmt/

12.2. Expected parameters in the query

Parameters	Format	Description	Example
login	Text	Technical login credentials	
password	Tex	Password for the login credentials	
msisdn	Digit	Number or alias of the user	
moid	digit	Unique identifier for the transaction (bigint)	1000000000001
mcc	digit	International code for the country of the operator of the user responsible for sending the SMS	208 for France
mnc	digit	International code for the network of the operator of the user responsible for sending the SM	01 for Orange France 10 for SFR France
content	text	Contains the text of the message to send to the user	Hello I'm Claire, give me your name and your date of birth to begin the consultation (price)
shortcode	digit	Number of the destination to which the user has sent his message	81051
billing	Boolean	Indicates the application of a surcharge to the message. According to the billing method	0 message without surcharge 1 message with surcharge

The parameters must be avoided in accordance with the specifications of the http protocol (RFC 3986) 7 if the GET method is used. (see appendix Encoded Url)

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13. Response that the Mobiyo script returns to the merchant

It is advisable to keep a note of the ID of the transaction (trx_id) returned by the web service, as it will be used during the notification of acknowledgement of receipt.

13.1. Description of the response expected by Mobiyo

The HTTP code of the Header is equal to 200

Parameters	Format	Description	Example
status	text	Response status	OK or ERROR
code	Digit	In the case of an error, it contains the description of the error	Already processed service not found
message	text	In the case of an error, it contains the description of the error	Already processed service not found

13.2. Status

Value	Description	Context
OK	Valid query	The message has been properly received by Mobiyo
ERROR	Failed query	An error occurred during initialisation of the transaction. The message tag describes the cause if the error. It is possible to replay the request once corrected

Example of calling the URL with the GET method (url encoder)

```
<?xml version="1.0" encoding="utf-8"  ?>
<root>
 <results>
 <result>
  <status>OK</status>
  <code>00</code>
  <trx_id>100000000001</trx_id>
 <result>
 <results>
</root >
```

If the message is rejected by the Mobiyo SMSC

```
<?xml version="1.0" encoding="utf-8"  ?>
<root>
 <errors>
 <error>
  <status>ERROR</status>
  <code>04</code>
  <message>service not found</message>
```


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<error> <errors></root >

Aknowledgment of receipt (DR)

Mobiyo notifies the merchant to inform them of the status of the reception of the SMS (MT) by the user's terminal in the form of an acknowledgement of receipt through the URL configured to this end. This step is dependent upon the technical limits of the operators.

14. Mobiyo notifies the merchant

The Mobiyo SMSC contacts the merchant's URL and transfers xml data to them through a variable HTTP and related data that constitute the acknowledgement of receipt via the POST or GET method in XML format. .

It is advisable to manage the association of the SMS (MT) that is sent and the acknowledgement of receipt, with the identifier of the transaction trx_id returned by Mobiyo at the time of the request to dend the SMS (MT) to the user

14.1. URL

Example of the url that the merchant must deploy on their service to receive notifications. https://mywebsite.com/confirm.php

14.2. Parameters of the request received by the merchant

Parameters	Format	Description	Example
status	text	Notification stage	Delivered Not Delivered
trx_id	digital	Identifier of the message (MT) sent by the merchant	205789828
login /password	text	*ID authentication for Mobiyo -- not obligatory but highly recommended.*	

Example of a request received by the merchant

```
xmldata =
<sms>
 <login>smsc_Mobiyo</login>
 <password>XghY767</password>
 <dr>
 <status>Delivered</status>
 <trx_id>205789828</trx_id>
 </dr>
</sms>
```


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14.3. status, status of the sent message (MT).

Parameters	Format	Description	Example
Delivered	Accepted	Message accepted -- final status	Delivered
Not delivered	Rejected	Message refused -- final status	Not delivered
Pending[3]	None	The message has not yet been approved -- in transit statu	**Pending**[3]
Ack[2]	None	The status of the message is unknown -- in transit status	**Ack**[2]

15. Response that the merchant's script must return to Mobiyo

Remember to check if the transaction (trx_id) has already been addressed. In the instance of no response or a badly formatted response, Mobiyo will conduct a new test for the first notification.

Parameters	Format	Description	Example
status	boolean	Response status	
error	text	In the case of an error, it contains the description of the error.	Already Processed Id not found

15.1. Description of the response expected by Mobiyo

HTTP Header code must be equal to 200.

15.2. Status

Value	Description	Context
0	OK	The notification has been taken into account.
1	Failure	An error occurred during initialisation of the transaction.

The status 0 or 1 is an acknowledgement of the transaction. The transaction is considered to have failed in the case of non--response ("time--out" or HTTP code that is different to 200) or a response format that is unexpected.

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Example response expected by Mobiyo

```
<?xml version="1.0" encoding="utf-8"  ?>
<return>
 <status>0</status>
 <error></error>
</return>
```

If the new message is not processed by the merchant platform

```
<?xml version="1.0" encoding="utf-8"  ?>
<return>
 <status>1</status>
 <error><![CDATA[Id Not found]]></error>
</return>
```


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Appendix

16. Lexicon

MT (Mobile Terminated): SMS sent by the merchant to an end user.

AR or DR (acknowledgement of receipt) 2 Status of the message sent to the user. Dependent upon the technical options of the operators.

HTTP: Communication protocol using the Internet network.

POST/GET: Method of transferring data through the HTTP protocol.

URL: Location address of a resource (script, etc.) through a network (internet, etc.).

MCC/MNC: Mobile Country and Network Code is an international nomenclature to identify an operator int he country of a user. Example : 2081 Oange France

17. Content and legislation

The resources used through SMSC are subject to the laws in force in the countries covered, among which, is the obligation to display legal information in the content of the SMS (MT) and equally in the support media used for promoting the service.

The price and the name of the Publisher of the service form part of this obligatory information and must be identifiable to the user of the service.

Mobiyo reserves the right to tattoo the message sent to the user, which reduces the number of characters available for the content of the MT.

Mobiyo reserves the right to restrict the service without prior notice in the event of non-compliance with the contract established between the parties, or the rules of professional conduct and in one of the following cases:

- Total or partial absence / error / theft of sender ID
- Total or partial absence / error / inaccuracy of the tariff for the means of access to the service
- Total or partial absence / error / inaccuracy of the commercial name of the service
- Unauthorised modification of the "identification of the sender" field of an SMS-MT
- Unauthorised alteration of the nature of the service.
- Sending of SMS-MT to users who do not correspond to the service category that has been declared

18. Length of the message 4 and encoding

The supported encoding is UTF8. This encoding is not to be confused with the encoding of the communication protocol. This here is the encoding of the message to be sent to the user.

Each operator uses specific encoding for communication with their partners. The same message shall not be interpreted in the same way from one operator to another. In general, the table of symbols used is GSM, encoded in 7--bit, yet the SMS memory size is 140B which allows up to 160 characters, however some characters can count for two, which reduces the size of the final message. For example the euro symbol according to the encodings can be interpreted as 1 or 2 bits. Extending the length of the SMS is possible in accordance with the technical limitations of operators. For further information, please contact your account executive.

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19. Url encoding

The base characters of a URL are between A and Z, a and z, 0 to 9, and :. _ / ~ %--+ & #?=()@. It is possible to use other characters that are not supported, but they must be converted. A "url encoding" conversion function is provided by the majority of programming languages. example < will give%3C, space will give%20

20. MCC / MNC

The MCC and MNC — Mobile Country Code and Mobile Network Code respectively — are international nomenclature, which allows the identification of an operator in a country, used to determine the operator of the user. Example

MCC	Country	MNC	Carrier	MCC	Country	MNC	Carrier
208	France	01	Orange	214	Spain	01	Vodafone
		10	SFR			03	Amena
		15	FreeMobile			05	Yoigo
		20	BouyguesTelecom			07	Movistar
206	Belgium	01	Proximus			08	Euskaltel
		10	Mobistar				
		20	Base				

This service, as with all Mobiyo services, are subject to technical restrictions and the requirements of the partner operators. In the event of non--compliance with the rules of professional conduct in force, Mobiyo reserves the right to restrict access to the services. Mobiyo channels the flows to redistribute them to the partner operators. Despite Mobiyo's large capacity to absorb commercial flows, the deadline for receipt of messages by the end--user is a function of the storage and accessibility of the operator's platform and that of the user's mobile terminal on the GSM network, which has the effect of deferring the receipt of the message from the date of dispatch.

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Pour toute question, contactez le support ou votre chargé de compte

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