



Promptxt SMS Gateway

www.promptxt.com

Specification for Third Party XML Users

Version 2.0US

1. Introduction

The SMS Gateway provided by Promptxt allows a third party to send SMS messages to its users or clients. Communication from the third party to the Promptxt gateway is achieved by means of XML documents sent as email attachments.

There are three types of message currently supported. They are referred to as BATCH_SEND, INSTANT_SEND and TEST documents. The XML format of these types is required to be highly compliant and is explained in the following sections.

2. BATCH_SEND XML Format

In some cases, a third party may wish to store messages in the promptxt database with the intention of having them sent at a later date. In this instance, a BATCH_SEND document is required. The format of a BATCH_SEND document is defined in Figure 2.1 below.

```
<DOCUMENT>
  <PIN>10000502</PIN>
  <MESSAGE_TYPE>BATCH_SEND</MESSAGE_TYPE>
  <VERSION>1.0</VERSION>
  <INVOICE_NUM>254</INVOICE_NUM>
  <COUNTRY_CODE>1</COUNTRY_CODE>

  <TEMPLATE>Dear [PARAM_1],
    Please remember that you have an appointment with [PARAM_2] on the
    [PARAM_3]
    Regards [PARAM_4]
  </TEMPLATE>

  <MESSAGES>
    <MESSAGE>
      <SEND_DATE>2002/06/28</SEND_DATE>
      <RECIPIENT_NUM>2154356264</RECIPIENT_NUM>
      <MESSAGE_PARAMS>
        <PARAM_1>Mark</PARAM_1>
        <PARAM_2>Mr Jones</PARAM_2>
        <PARAM_3>29th June 2002</PARAM_3>
        <PARAM_4>Miss Simmons</PARAM_4>
      </MESSAGE_PARAMS>
    </MESSAGE>
    <MESSAGE>
      <SEND_DATE>2002/03/25</SEND_DATE>
      <RECIPIENT_NUM>2154356265</RECIPIENT_NUM>
      <MESSAGE_PARAMS>
        <PARAM_1>John</PARAM_1>
        <PARAM_2>Mrs Smith</PARAM_2>
        <PARAM_3>26th March 2002</PARAM_3>
        <PARAM_4>Mr Jackson</PARAM_4>
      </MESSAGE_PARAMS>
    </MESSAGE>
  </MESSAGES>
  <CSUM>154ba6ldee786bfa154fc6bfea786efe</CSUM>
</DOCUMENT>
```

Figure 2.1 An example BATCH_SEND document

The pin number (<PIN>) is unique to the third party sending the document and is created during the initial registration process with Promptxt. The version number (<VERSION>) is used to identify the format of the document. The version currently supported by Promptxt is 1.0.

The invoice number (<INVOICE_NUM>) is required to be unique to each document sent from a third party. It is intended to prevent the same message being sent more than once. Any duplicate invoice numbers from a third party are automatically rejected.

The country code (<COUNTRY_CODE>) determines the country to which the messages are destined (e.g. 44 for UK, 1 for US). If the country code is null, the country code will automatically default to 44 for UK.

The template (<TEMPLATE>) defines the format of each text message sent to the users or clients of the third party. Figure 2.1 shows a standard appointment reminder that is to be sent to two clients. The number of parameters (<MESSAGE_PARAMS>) in a document template is unrestricted.

The send date (<SEND_DATE>) and recipient number (<RECIPIENT_NUM>) determine the date on which a message is sent from the Promptxt gateway and to which mobile number, respectively.

The checksum, encased within CSUM tags is explained in full later.

3. INSTANT_SEND XML Format

In some cases, a third party may wish to send a text message to a number of clients or users immediately. In this instance, an INSTANT_SEND document is required.

The format of an INSTANT_SEND document closely resembles that of a BATCH_SEND. In fact, there are only two differences. The first is that the message type is required to be denoted as INSTANT_SEND. The second difference is that the send date parameter is no longer needed and can therefore be omitted.

4. TEST XML Format

The final format supported by the Promptxt SMS Gateway is a TEST document. This format is required only for new users of the Promptxt system. As mentioned previously, a third party is given a unique pin number when they first register with PromptText. In addition to this, they are also given a secret gateway key, which is stored by both the software of the third party and the Promptxt system.

```
<DOCUMENT>
  <PIN>10000502</PIN>
  <MESSAGE_TYPE>TEST</MESSAGE_TYPE>
  <VERSION>1.0</VERSION>
  <INVOICE_NUM>254</INVOICE_NUM>
  <COUNTRY_CODE>1</COUNTRY_CODE>

  <MESSAGES>
    <MESSAGE>
      <RECIPIENT_NUM>2154356264</RECIPIENT_NUM>
    </MESSAGE>
  </MESSAGES>
  <CSUM>114ea62dee726baa124cc6b5aa766dee</CSUM>
</DOCUMENT>
```

Figure 4.1 An example TEST document

The gateway key is used for encoding the message checksum. In order to ensure both parties have recorded the key correctly, the third party user is required to send a TEST message to their own mobile phone.

If the new user does not receive the message, this indicates a checksum error. Recording the wrong gateway key in their software will have most likely caused this. This process must be repeated until the TEST message is successfully received.

5. Encoding the Checksum

The checksum (<CSUM>) is created using the MD5 method. It is intended to prevent unauthorised users sending SMS messages using the Promptxt gateway. The checksum is originally created by the third party software and sent with the XML file as shown in Figures 2.1 and 4.1.

On receipt of the XML document, Promptxt extracts the checksum and performs the same checksum operation on the document. If the two checksums are identical, the messages are processed. If not, the messages are rejected.

Before each checksum operation is performed, the gateway key is appended to the closing document tag. This prevents an unauthorised user creating a similar XML document and simply performing a checksum on the basic document.

In addition to appending the gateway key, all line breaks, line returns and spaces must be removed from the document. The removal of these characters is only necessary for determining the checksum value.

Figure 5.1 shows the actual string on which the MD5 checksum is required to perform for the example document shown in Figure 4.1. The MD5 checksum should return a 32-bit value.

```
<DOCUMENT><PIN>10000502</PIN><MESSAGE_TYPE>TEST</MESSAGE_TYPE><VERSION>1.0</VERSION><INVOICE_NUM>254</INVOICE_NUM><MESSAGES><MESSAGE><RECIPIENT_NUM>2154356264</RECIPIENT_NUM></MESSAGE><MESSAGE><RECIPIENT_NUM>2514356264</RECIPIENT_NUM></MESSAGE></MESSAGES></DOCUMENT>DFG321RTY
```

Figure 5.1 The MD5 checksum input string for the message shown in Figure 4.1 with a gateway key of DFG321RTY

Once the checksum has been created, the value is embedded in the XML document within CSUM tags. The message is now ready for transmission.

6. Responsibilities

All functionality relating to the preparation of the actual XML document content is required to be carried out by the software of the third party. The third party software should have some method of ensuring that no text message is over 160 characters in length and that characters that are likely to confuse the Promptxt SMS Gateway are removed.

It is the responsibility of the third party software to ensure that users of the software have some means of storing their Promptxt unique pin number and gateway key.

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