



Sending To Multiple Recipients

SkyTel WCTP 1.2 Beta Release 1

Document #S268 Revision 1.00

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1 Introduction

Version 1.1 of the WCTP specification did not offer an efficient way to send a message to multiple recipients. If an enterprise wants to send a message to multiple recipients, the only way to accomplish this has been to send multiple Submit Request operations. Version 1.2 of WCTP will include an operation (**wctp-SendMsgMulti**) to send a message to multiple recipients. The following describes SkyTel's implementation of this operation. To use this operation, please refer to SkyTel's WCTP 1.2 Beta Release 1 DTD.

<http://www.skytel.com/protocols/dtds/wctp/wctp-v1r2sb1.dtd>

2 Send Multiple Recipient Message Operation

The Send Multiple Recipient Message operation of WCTP (**wctp-SendMsgMulti**) is used to initiate a new multiple-recipient message from a Wire-line Enterprise Host. *Figure -1* shows the major XML formatted elements of the Send Multiple Recipient Message operation. Each of these elements may specify a number of different attributes or parameters associated with the element.

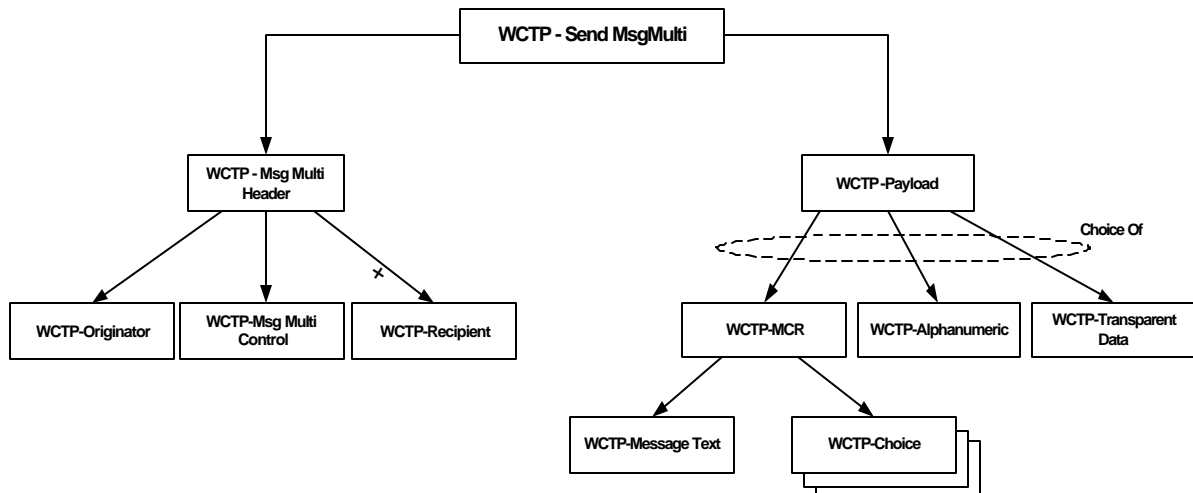


Figure -1 WCTP Send Multiple Recipient Message Operation

The Send Multiple Recipient Message operation has two major elements, the Msg Multi Header and the Payload.

2.1 Message Payload

The structure of the Payload element is identical to its namesake from the Submit Request operation.



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2.2 Msg Multi Header

The Msg Multi Header provides information about the message originator and message recipients, and establishes many message control parameters. The structure of the Msg Multi Header element is identical to the Submit Header from the Submit Request operation with two exceptions: it supports multiple recipients, and includes an **allRecipsRequired** attribute.

2.3 Multiple Recipients Details

In some cases, Wire-line Enterprise Hosts will submit a message where one or more of the recipients are invalid, but at least one is valid. In this case, the Wire-line Enterprise Host controls whether the message is sent to the valid recipients or not by setting the **allRecipsRequired** flag in the **wctp-MsgMultiControl** element. If the user sets **allRecipsRequired** to **true** and one or more of the recipients are invalid, then the message will not be sent to any of the recipients. If the user sets **allRecipsRequired** to **false** (the default value), then the message will be sent to all valid recipients, regardless of how many of the recipients are invalid.

2.4 Limit Details

With the SkyTel WCTP gateway, the maximum number of recipients allowable for a message is 50. The SkyTel WCTP gateway will accept and validate all recipients on a message, as long as the messages contain no more than this maximum number of recipients. The SkyTel WCTP gateway will reject all messages submitted with more than this maximum number of recipients.

3 Send Multiple Recipient Msg Response Operation

The Send Multiple Recipient Message Response operation (**wctp-SendMsgMultiResponse**) is sent by the SkyTel WCTP gateway in response to a Send Multiple Recipient Message operation. Each Send Multiple Message Response operation may contain a batch of **wctp-FailedRecipient** elements to tell the wire-line system that one or more of its recipients are invalid.

The SkyTel WCTP gateway will attempt to validate the list of recipients as soon as possible in order to generate meaningful response information in the **wctp-SendMsgMultiResponse**. When this is not possible, the SkyTel WCTP gateway will generate **wctp-StatusInfo** elements containing **wctp-Failure** elements as necessary to notify the sender of invalid recipients.

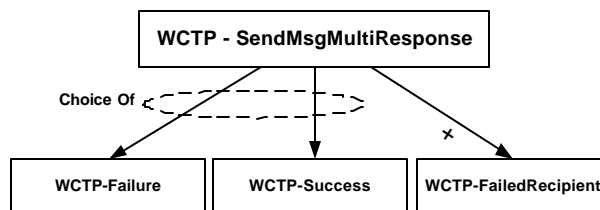


Figure -1 WCTP Send Multiple Recipient Message Operation



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4 Use Case 1: wctp-SendMsgMulti – Success

Conditions:

The maximum number of recipients allowed on one message is five, **allRecipsRequired** is set to **true**, there are three recipients, and all three recipients are valid.

Description:

The message is sent to the three recipients and **error code 200** (Acknowledged) is returned in the response. No **wctp-FailedRecipient** elements are returned.

Request:

```
<?xml version="1.0"?>
<!DOCTYPE wctp-Operation SYSTEM
    "http://www.skytel.com/protocols/dtds/wctp/wctp-
    v1r2sb1.dtd">
<wctp-Operation wctpVersion="WCTP-DTD-V1R2">
  <wctp-SendMsgMulti>
    <wctp-MsgMultiHeader
      submitTimestamp="1001684921"
    >
      <wctp-Originator
        senderID="john.tech@skypage.com"
        miscInfo="John The Technician"
      />
      <wctp-MsgMultiControl
        messageID="44"
        allRecipsRequired="true"
      />
      <wctp-Recipient
        recipientID="validRecip1"
      />
      <wctp-Recipient
        recipientID="validRecip2"
      />
      <wctp-Recipient
        recipientID="validRecip3"
      />
    </wctp-MsgMultiHeader>
    <wctp-Payload>
      <wctp-Alphanumeric>MESSAGE BODY</wctp-Alphanumeric>
    </wctp-Payload>
  </wctp-SendMsgMulti>
</wctp-Operation>
```



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Response:

```
<?xml version="1.0"?>
<!DOCTYPE wctp-Operation SYSTEM
    "http://www.skytel.com/protocols/dtds/wctp/wctp-
v1r2sb1.dtd ">
<wctp-Operation wctpVersion="WCTP-DTD-V1R2" wctpToken="20AG">
  <wctp-SendMsgMultiResponse
    maxNumRecips="5"
    numValidRecips="3"
    numInvalidRecips="0"
  >
    <wctp-Success
      successCode="200"
      successText="Message acknowledged"
    >
    </wctp-Success>
  </wctp-SendMsgMultiResponse>
</wctp-Operation>
```



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5 Use Case 2: wctp-SendMsgMulti – Failure

Conditions:

The maximum number of recipients allowed on one message is five, **allRecipsRequired** is set to **true**, there are three recipients, and one of the recipients is not recognized by the system.

Description:

The message is rejected with **error code 403** (Invalid Recipient ID) in the response (it is not sent to any of the recipients). The response includes one **wctp-FailedRecipient** element (for the invalid recipient), with an additional **error code 404** (Authorization code is invalid).

Request:

```
<?xml version="1.0"?>
<!DOCTYPE wctp-Operation SYSTEM
    "http://www.skytel.com/protocols/dtds/wctp/wctp-
    v1r2sb1.dtd ">
<wctp-Operation wctpVersion="WCTP-DTD-V1R2">
  <wctp-SendMsgMulti>
    <wctp-MsgMultiHeader
      submitTimestamp="1001684921"
    >
      <wctp-Originator
        senderID="john.tech@skypage.com"
        miscInfo="John The Technician"
      />
      <wctp-MsgMultiControl
        messageID="44"
        allRecipsRequired="true"
      />
      <wctp-Recipient
        recipientID="validRecip1"
      />
      <wctp-Recipient
        recipientID="validRecip2"
      />
      <wctp-Recipient
        recipientID="invalidRecip"
      />
    </wctp-MsgMultiHeader>
    <wctp-Payload>
      <wctp-Alphanumeric>MESSAGE BODY</wctp-Alphanumeric>
    </wctp-Payload>
  </wctp-SendMsgMulti>
</wctp-Operation>
```



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Response:

```
<?xml version="1.0"?>
<!DOCTYPE wctp-Operation SYSTEM
    "http://www.skytel.com/protocols/dtds/wctp/wctp-
v1r2sb1.dtd">
<wctp-Operation wctpVersion="WCTP-DTD-V1R2" wctpToken="20AG">
  <wctp-SendMsgMultiResponse
    maxNumRecips="5"
    numValidRecips="2"
    numInvalidRecips="1"
  >
    <wctp-Failure
      errorCode="403"
      errorText="Invalid Recipient ID"
    >
      Recipient invalidRecip not recognized. Your message was not
sent.
    </wctp-Failure>
    <wctp-FailedRecipient
      recipientID="invalidRecip"
      errorCode="404"
      errorText="Authorization code is invalid"
    />
  </wctp-SendMsgMultiResponse>
</wctp-Operation>
```



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6 Use Case 3: wctp-SendMsgMulti – Partial Success

Conditions:

The maximum number of recipients allowed on one message is five, **allRecipsRequired** is set to **false**, there are three recipients, and one of the recipients is not recognized by the system.

Description:

The message is sent to the two valid recipients and **error code 221** (Message Sent With Recipient Failure) is returned in the response. The response includes one **wctp-FailedRecipient** element (for the invalid recipient), with an additional **error code 404** (Authorization code is invalid).

Request:

```
<?xml version="1.0"?>
<!DOCTYPE wctp-Operation SYSTEM
    "http://www.skytel.com/protocols/dtds/wctp/wctp-
    v1r2sb1.dtd">
<wctp-Operation wctpVersion="WCTP-DTD-V1R2">
  <wctp-SendMsgMulti>
    <wctp-MsgMultiHeader
      submitTimestamp="1001684921"
    >
      <wctp-Originator
        senderID="john.tech@skypage.com"
        miscInfo="John The Technician"
      />
      <wctp-MsgMultiControl
        messageID="44"
        allRecipsRequired="true"
      />
      <wctp-Recipient
        recipientID="validRecip1"
        authorizationCode="5493"
      />
      <wctp-Recipient
        recipientID="validRecip2"
        authorizationCode="9002"
      />
      <wctp-Recipient
        recipientID="invalidRecip"
        authorizationCode="2001"
      />
    </wctp-MsgMultiHeader>
    <wctp-Payload>
      <wctp-Alphanumeric>MESSAGE BODY</wctp-Alphanumeric>
    </wctp-Payload>
```



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```
</wctp-SendMsgMulti>  
</wctp-Operation>
```



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Response:

```
<?xml version="1.0"?>
<!DOCTYPE wctp-Operation SYSTEM
    "http://www.skytel.com/protocols/dtds/wctp/wctp-
v1r2sb1.dtd">
<wctp-Operation wctpVersion="WCTP-DTD-V1R2" wctpToken="20AG">
  <wctp-SendMsgMultiResponse
    maxNumRecips="5"
    numValidRecips="2"
    numInvalidRecips="1"
  >
    <wctp-Success
      successCode="221"
      successText="Message Sent With Recipient Failure"
    >
    </wctp-Success>
    <wctp-FailedRecipient
      recipientID="invalidRecip"
      errorCode="404"
      errorText="Authorization code is invalid"
    />
  </wctp-SendMsgMultiResponse>
</wctp-Operation>
```



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7 Use Case 4: wctp-SendMsgMulti – Too Many Recipients

Conditions:

The maximum number of recipients allowed on one message is three, **allRecipsRequired** is set to **false**, there are four recipients, and one of the recipients would not be recognized by the system.

Description:

The message is rejected with **error code 433** (Too Many Recipients) in the response (it is not sent to any of the recipients). The response includes no **wctp-FailedRecipient** elements since the recipients were not checked for validity.

Request:

```
<?xml version="1.0"?>
<!DOCTYPE wctp-Operation SYSTEM
    "http://www.skytel.com/protocols/dtds/wctp/wctp-
    v1r2sb1.dtd">
<wctp-Operation wctpVersion="WCTP-DTD-V1R2">
  <wctp-SendMsgMulti>
    <wctp-MsgMultiHeader
      submitTimestamp="1001684921"
    >
      <wctp-Originator
        senderID="john.tech@skypage.com"
        miscInfo="John The Technician"
      />
      <wctp-MsgMultiControl
        messageID="44"
        allRecipsRequired="true"
      />
      <wctp-Recipient
        recipientID="validRecip1"
      />
      <wctp-Recipient
        recipientID="validRecip2"
      />
      .
      .
      .
      <wctp-Recipient
        recipientID="validRecip50"
      />
      <wctp-Recipient
        recipientID="invalidRecip"
      />
    </wctp-MsgMultiHeader>
```



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```
<wctp-Payload>  
  <wctp-Alphanumeric>MESSAGE BODY</wctp-Alphanumeric>  
</wctp-Payload>  
</wctp-SendMsgMulti>  
</wctp-Operation>
```



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Response:

```
<?xml version="1.0"?>
<!DOCTYPE wctp-Operation SYSTEM
    "http://www.skytel.com/protocols/dtds/wctp/wctp-
v1r2sb1.dtd">
<wctp-Operation wctpVersion="WCTP-DTD-V1R2" wctpToken="20AG">
  <wctp-SendMsgMultiResponse
    maxNumRecips="3"
  >
    <wctp-Failure
      errorCode="433"
      errorText="Maximum recipients exceeded"
    >
    </wctp-Failure>
  </wctp-SendMsgMultiResponse>
</wctp-Operation>
```