ValueFirst Pace

XML API—User Guide

Version 1.2

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1. ValueFirst Pace

ValueFirst Messaging Server (hereinafter referred to as ValueFirst Pace) provides an open HTTP and XML standards-based API for integrating SMS capabilities into any application or an enterprise system.

ValueFirst Pace is a store and forward mechanism, using a middleware, deployed on Internet for sending and receiving SMS through the API endpoint(s) to the clients.

ValueFirst Pace provides different endpoints for bulk messaging (server to server) and for client-application-based systems.

1.1 ValueFirst Pace Client API Version 1.2

ValueFirst Pace Client API version 1.2 is specially designed for sending bulk messages through server-to-server communication. This API is designed to send up to 5000 messages in a single transaction. This API is available in XML-based HTTP / HTTPS post format only.

ValueFirst Pace Client API version 1.2 provides single authentication for multiple messages and multiple target numbers for a single message. The endpoint for this API is based on Message Queue architecture that provides high message throughput.

2. Guidelines for Sending Messages

The following guidelines should be followed when using XMLAPI for sending the messages.

2.1 Receiver Phone Number

1. The mobile number should start with the country code.
2. No leading '0' or '+' are allowed.
3. No special characters like "-", "(",")" and so on are allowed.

Correct Numbers: 447808928977, 919812345687, 923332327235, 2348033415540, 40723631776, 94772334276, 12468255000

Incorrect Numbers: +4478088928977, 09811344678, 234-8033415540

Note (applicable only in India)
1. For all numbers in India, the number of digits in the mobile number should be 12, including the country code 2. Mobile numbers (without the country code) starting with 94,96,97,98 and 99 series are considered as GSM numbers.

2.2 Sender ID

User is allowed to set an alphanumeric "Sender ID" in case the receiving mobile number is GSM. The "Sender ID" should be:

1. Maximum 11 alphanumeric characters.
2. Special characters like ", <, >, @, % and so on are not allowed.
3. If only numeric digits are used, the maximum allowed length is 15 digits.

—Typical examples of wrong Sender's ID are
db@sky (invalid character in Sender)
SomeInvalidSender (more than 11 characters)

—Typical examples of correct Sender's ID are
Ravi Bajaj (space in name is allowed)
Google123 (alphanumeric less than 11)
9198100123456 (numeric characters)

If the receiving mobile number is CDMA, CDMA restricts Sender ID to be a valid GSM number, with or without county code.

E.g. the valid Sender would be 919810234567
(Sender ID is used in the "FROM" tag. See below)

2.3 Message Text

The supported characters in the message text are

@	Δ	space	0	i	P	¿	p
£	_	!	1	A	Q	A	q
$	Φ	"(double Quote)	2	B	R	B	r
¥	Γ	#	3	C	S	C	s
è	Λ	¤	4	D	T	D	t
é	Ω	%	5	E	U	e	u
ù	Π	&	6	F	V	f	v
ì	Ψ	'(Single Quote)	7	G	W	g	w
ò	Σ	(	8	H	X	h	x
Ç	Θ	)	9	I	Y	i	y
	Ξ	*	:	J	Z	j	Z
Ø		+	;	K	Ä	k	ä
ø	Æ		<	L	Ö	l	ö
CR	Æ	-	=	M	Ñ	m	Ñ
Å	ß	,	>	N	Ü	n	Ü
å	É	/	?	O		o	§

Table 1 Characters that can be used in the message text.

Note: The characters in red may not be supported in all mobile phones. Messages containing characters other than the ones listed above will be rejected by the operator SMSC.

Note: The maximum character length is 160 for a single message. ValueFirst Pace will discard any message with more than 160 characters. To send a bigger message, the application should break the message in separate chunks with the same SMS block.

3. SMS-MT Service

ValueFirst Pace Client API version 1.2 encompasses advanced features specifically designed for sending bulk messages. Up to 5000 messages can be sent in a single transaction. The API also supports sending a single message to multiple destinations.

NOTE: User must strictly follow xml schema, all the XML tags are case-sensitive, failing which the API service will return with an error acknowledgement "The Specified message does not conform to DTD".

3.1 SMS-MT Example of Sending Text Messages

Here are examples for a valid SMS-MT request using ValueFirst Pace Client API version 1.2.

a.

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<!DOCTYPE MESSAGE SYSTEM "http://127.0.0.1/psms/dtd/messagev12.dtd" >
<MESSAGE VER="1.2">
   <USER USERNAME="mycompany" PASSWORD="somepassword"/>
   <SMS  UDH="0" CODING="1" TEXT="This is the first sms" PROPERTY="0"
ID="1">
        <ADDRESS FROM="9812345678" TO="919812345678" SEQ="1" TAG="" />
        <ADDRESS FROM="9812345678" TO="wrong_addr" SEQ="2" />
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="3" />
   </SMS>
   <SMS  UDH="0" CODING="1" TEXT=" This is the second and the last"
PROPERTY="1" ID="2">
        <ADDRESS FROM="9812345678" TO="919812345678" SEQ="1" />
        <ADDRESS FROM="9812345678" TO="919812345678" SEQ="2" />
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="3" />
        <ADDRESS FROM="9812345678" TO="919812345678" SEQ="4" />
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="5" />
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="6" />
   </SMS>
</MESSAGE>
```

b.

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<!DOCTYPE MESSAGE SYSTEM "http://127.0.0.1/psms/dtd/messagev12.dtd" >
<MESSAGE VER="1.2">
   <USER USERNAME="mycompany" PASSWORD="somepassword"/>
   <SMS  UDH="0" CODING="1" TEXT="Dear Passenger, your flight xxx from Delhi-
Mumbai dated 12/Feb/07 will depart at 2230 hrs." PROPERTY="0" ID="1">
        <ADDRESS FROM="9812345678" TO="919812345678" SEQ="1" TAG="" />
        <ADDRESS FROM="9812345678" TO="wrong_addr" SEQ="2" />
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="3" />
   </SMS>
</MESSAGE>
```


c. <?xml version="1.0" encoding="ISO-8859-1"?>

```
<!DOCTYPE MESSAGE SYSTEM "http://127.0.0.1/psms/dtd/messagev12.dtd" >
<MESSAGE VER="1.2">
   <USER USERNAME="mycompany" PASSWORD="somepassword"/>
   <SMS  UDH="0" CODING="1" TEXT="Your vehicle has been booked for Service at
xxxx Motors Ltd. Please be sure to bring it in the morning at xx AM." PROPERTY="0"
ID="1">
        <ADDRESS FROM="9812345678" TO="919812345678" SEQ="1" TAG="" />
        <ADDRESS FROM="9812345678" TO="919812345678" SEQ="2" />
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="3" />
   </SMS>
</MESSAGE>
```

The following table describes the different elements of a SMS-MT request.

Tag Name	Description
VER	VER is for internal checks. It should be set to "1.2"
UserName	User name of the sender of the message.
Password	User password provided by ValueFirst.
UDH	UDH is used for sending binary messages. For text message the value should be set to 0
Coding	Extended type of messages. For text message the value should be 1.
Property	Unique property of message. Default value is 0. For sending Flash SMS the value should be set to 1.
ID	Unique ID of SMS to be sent. The client sets this value. This value is used in future to check status of the message.
Text	Message text can be up to 160 characters
Address	Describe the Sender as well as Receiver address **From:** Sender, should conform to Sender Phone Number guidelines **Receiver:** Mobile number receiving the SMS; should conform to Receiver Phone Number guidelines **SEQ:** Unique Sequence ID; should be an integer and should be unique to each SMS. While checking message status you should send this ID.
FROM	Sender-Id of the company (See section 2.3 'Sender ID or Phone Number').
TAG	This is a user-generated field that is used to group records in the servers at ValueFirst. This allows users to access these records at server at future date. This field allows maximum of 20 characters. Normally it is left blank.

3.2 SMS-MT Example of Response

The following example shows sample response of ValueFirst Pace Client API version 1.2.

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<MESSAGEACK>
  <GUID GUID="3de2ec71-1c37-4999-a758-e354dd6fdb1d" SUBMITDATE=" 2007-
2-12 16:39:12" ID="1">
     <ERROR SEQ="2" CODE="28680"/> <!-- Receiver Address not numeric -->
     <ERROR SEQ="3" CODE="57090"/> <!-- User Exceeded Credit Limit -->
  </GUID>
  <GUID GUID="f3de2ec71-1c37-4999-a758-s354dd6fdb1d" SUBMITDATE=" 2007-
2-12 16:39:12" ID="2">
  </GUID>
```


</MESSAGEACK>

The following table describes the different elements of SMS-MT Response.

Tag Name	Description
GUID	A globally unique message ID that is generated for each <SMS> tag. Note that, in future, to check the status of the message you should save this code.
SudmitDate	The date and time when the transaction was completed.
ID	Unique SMS ID sent by the customer. For each message, a unique GUID is generated. The Server sends the SMS ID so that the client application can map the GUID to the SMS ID provided by them.
Error	**Why error?** ValueFirst Pace Client API version 1.2 only sends Sequence information of messages that are rejected because of some error If there are no errors in a particular message, you will not receive any confirmation of each address SEQ. For instance, in the above example in message ID 1 (of client), the TO number "mycompany" was rejected as non-numeric. The second message does not have any error, and hence there was no error information for the second part. **SEQ**: The Sequence ID (provided by client) that has error. **Code**: Reason why the message was not accepted (Table 3). **Watch out for fatal errors** When a fatal error occurs (e.g., credit limit reached, service unavailable and authentication failure), the ValueFirst Pace Client API version 1.2 does not provide you with error details. **Suppose if your credit limited were reached at SEQ 12**, there would be no new error code after SEQ12. This is done to avoid repeated errors and unwanted bandwidth usage.

Binary Value	Decimal	Error Code
General		
11001111 00000000	52992	Username / Password incorrect
11011111 00000001	57089	Contract expired
11011111 00000010	57090	User Credit expired
11011111 00000011	57091	User disabled
11111111 00000000	65280	Service is temporarily unavailable
11111111 11111111	65535	The specified message does not conform to DTD
00010000 00000000	0	SMS submitted success NO Error (not returned in ValueFirst Pace Client API version 1.2)
Message Post		
01110000 00000001	28673	Destination number not numeric
01110000 00000010	28674	Destination number empty
01110000 00000011	28675	Sender address empty
01110000 00000100	28676	SMS over 160 character
01110000 00000101	28677	UDH is invalid
01110000 00000110	28678	Coding is invalid
01110000 00000111	28679	SMS text is empty
01110000 00001000	28680	Invalid sender ID
01110000 00001001	28681	Invalid message. Submit failed
01110000 00001010	28682	Invalid Receiver ID (will validate Indian mobile numbers only.)
01110000 00001011	28683	Invalid Property value.
01110000 00001100	28684	Invalid SMS Packet.
Status Request		
00110001 00000000	8448	Message delivered successfully
00110001 00000001	8449	Message failed
01110001 00000010	8450	Message ID is invalid

Table 3 All errors that may come across in ValueFirst Pace Client API version 1.2 are listed.

3.3 SMS-MT Example for sending Picture Messages

Here is a complete example for a valid SMS-MT request using ValueFirst Pace Client API version 1.1:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<!DOCTYPE MESSAGE SYSTEM "http://127.0.0.1/psms/dtd/messagev12.dtd" >
<MESSAGE VER="1.2">
   <USER USERNAME="mycompany" PASSWORD="mycompany"/>
 <SMS  UDH="1" CODING="3"
TEXT="48656C6C6F;00481C01ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30
ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3
ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30c
cf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30
ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3
ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30c
cf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3"
PROPERTY="" ID="1">
<ADDRESS FROM="9812345678" TO="919812345678" SEQ="1" TAG="some
client side random data" />
```



```
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="3" />
    </SMS>
<SMS  UDH="1" CODING="3"
TEXT=";00481C01ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30c
cf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30
ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3
ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30c
cf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30
ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3
ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3ccf30ccf0f30ccf0f3" PROPERTY="" ID="2">
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="3" />
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="6" />
    </SMS>
</MESSAGE>
```

The following table describes the different elements of a SMS-MT request:

Tag Name	Description
UDH	UDH is used for sending binary messages. For pictures message the value should be 1.
Coding	Extended type of messages. For text message the value should be 3.
Text	Message Text must be in Hex characters for pictures messages and it can contain message text along with picture. it must follow format '<Hex converted Message Text>;<Hex converted Nokia picture format>' . if there is no message text with image then it must be ';<Hex converted WBmp>'. It will costs you approx 1 to 5 credits according to the length of sms.

3.4 SMS-MT Example for sending Ringtones

Here is a complete example for a valid SMS-MT request using ValueFirst Pace Client API version 1.1:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<!DOCTYPE MESSAGE SYSTEM "http://127.0.0.1/psms/dtd/messagev12.dtd" >
<MESSAGE VER="1.2">
    <USER USERNAME="mycompany" PASSWORD="mycompany"/>
<SMS  UDH="2" CODING="3"
TEXT="024A3A594D8549951D84040018D904916136156166186 1A61C6288B000
" PROPERTY="" ID="1">
<ADDRESS FROM="919812345678" TO="919812345678" SEQ="1" TAG="some
client side random data" />
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="3" />
    </SMS>
<SMS  UDH="2" CODING="3"
TEXT="024A3A594D8549951D84040018D904916136156166186 1A61C6288B000
" PROPERTY="" ID="2">
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="3" />
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="6" />
```



```
    </SMS>
</MESSAGE>
```

The following table describes the different elements of a SMS-MT request:

Tag Name	Description
UDH	UDH is used for sending binary messages. For ringtone message the value should be 2.
Coding	Extended type of messages. For text message the value should be 3.
Text	It must contain hex converted PDU for ringtones.

3.5 MS-MT Example for sending vCard (Business Card)

Here is a complete example for a valid SMS-MT request using ValueFirst Pace Client API version 1.1:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<!DOCTYPE MESSAGE SYSTEM "http://127.0.0.1/psms/dtd/messagev12.dtd" >
<MESSAGE VER="1.2">
   <USER USERNAME="mycompany" PASSWORD="mycompany"/>
    <SMS  UDH="4" CODING="3" TEXT="
    424547494E3A56434152440D0A56455253494F4E3A322E310D0A4E3A536D6
    974683B4D696B650D0A54454C3B505245463A2B3535353531323334350D0A45
    4E443A56434152440D0A" PROPERTY="" ID="1">
        <ADDRESS FROM="919812345678" TO="919812345678" SEQ="1"
        TAG="some client side random data" />
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="3" />
    </SMS>
    <SMS  UDH="4" CODING="3" TEXT="
    424547494E3A56434152440D0A56455253494F4E3A322E310D0A4E3A536D6
    974683B4D696B650D0A54454C3B505245463A2B3535353531323334350D0A45
    4E443A56434152440D0A" PROPERTY="" ID="2">
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="3" />
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="6" />
   </SMS>
</MESSAGE>
```

The following table describes the different elements of a SMS-MT request:

Tag Name	Description
UDH	UDH is used for sending binary messages. For Business card message the value should be 4.
Coding	Extended type of messages. For text message the value should be 3.
Text	It must contain hex converted PDU for vCard. It will costs you approx 1 to 5 credits according to the length of sms.

3.6 SMS-MT Example for sending WAP PUSH

Here is a complete example for a valid SMS-MT request using ValueFirst Pace Client API version 1.1:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<!DOCTYPE MESSAGE SYSTEM "http://127.0.0.1/psms/dtd/messagev12.dtd" >
<MESSAGE VER="1.2">
   <USER USERNAME="mycompany" PASSWORD="mycompany"/>
    <SMS  UDH="5" CODING="3"
    TEXT="5468697320697320736D706C652056616C756546697273742057
    150204D6573736167652053657276696363652E;7777772E7666697273742E63
    6F6D" PROPERTY="" ID="1">
        <ADDRESS FROM="919812345678" TO="919812345678" SEQ="1"
        TAG="some client side random data" />
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="3" />
    </SMS>
</MESSAGE>
```

The following table describes the different elements of a SMS-MT request:

Tag Name	Description
UDH	UDH is used for sending binary messages. For WAP PUSH message the value should be 5.
Coding	Extended type of messages. For text message the value should be 3.
Text	Message Text must be in Hex characters for WAP PUSH and it can contain message text along with URL. it must follow format <Hex converted text>;<Hex converted URL without 'http://'> if there is no message text with WAP push URL then it must be ;<Hex converted URL> Each WAP push message takes 3 credits. Example: <?xml version="1.0" encoding="ISO-8859-1"?> <!DOCTYPE MESSAGE SYSTEM "http://127.0.0.1/psms/dtd/messagev12.dtd" > <MESSAGE VER="1.2"> <USER USERNAME="test" PASSWORD="test"/> <SMS UDH="5" CODING="3" TEXT="56616c75656669727374;7777772e7666697273742e636f" PROPERTY="" ID="1"> <ADDRESS FROM="VALUEFIRST" TO="9198XXXXXXXXXX" SEQ="3" TAG="some client side random data" /> </SMS> </MESSAGE> Shall sent a wap push with text "ValueFirst" and URL www.vfirst.com to specified mobile number.

3.7 SMS-MT Example of Sending Unicode Text Messages

Here are examples for a valid SMS-MT request using ValueFirst Pace Client API version 1.2.

```
a. <?xml version="1.0" encoding="ISO-8859-1"?>
<!DOCTYPE MESSAGE SYSTEM "http://127.0.0.1/psms/dtd/messagev12.dtd" >
<MESSAGE VER="1.2">
   <USER USERNAME="mycompany" PASSWORD="somepassword"/>
        <SMS  UDH="0" CODING="2" TEXT=" 093809020938094D091509430924 "
        PROPERTY="0" ID="1">
        <ADDRESS FROM="9812345678" TO="919812345678" SEQ="1" TAG="" />
        <ADDRESS FROM="9812345678" TO="wrong_addr" SEQ="2" />
        <ADDRESS FROM="VALUEFIRST"    TO="919812345678" SEQ="3" />
   </SMS>
</MESSAGE>
```

The following table describes the different elements of a SMS-MT request:

Tag Name	Description
UDH	For Text message the value should be 0.
Coding	Extended type of messages. For Unicode text message the value should be 2.
Text	Message Text must be in Hex of Unicode characters.

4. SMS-SR Service

Status request API supports multiple message status per transaction.

4.1 SMS-SR Example of Status Request

A simple example of SMS-SR status request is shown below:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<!DOCTYPE STATUSREQUEST SYSTEM
"http://127.0.0.1/psms/dtd/requeststatusv12.dtd" >
<STATUSREQUEST VER="1.2">
      <USER USERNAME="mycompany" PASSWORD="somepassword"/>
      <GUID GUID="3de2ec71-1c37-4999-a758-e354dd6fdb1d">
            <STATUS SEQ="1" />
            <STATUS SEQ="2" />
      </GUID>
      <GUID GUID="3de2ec71-1c37-4999-a758-s354dd6fdb1d" />
</STATUSREQUEST>
```

The elements of the above XML code are explained in the following table:

Tag Name	Description
VER	VER maintains current API version. It should be set to "1.2"
GUID	A globally unique Message ID that is generated for each <SMS> tag. This GUID is generated when ValueFirst Pace receives a new session.
Seq	The address (Mobile No.) SEQ ID whose status needs to be extracted. If

	no Status tag is sent the API shall return status of all Sequences in the specified Transaction
UserName	User name of the sender of the message
Password	User password

4.2 SMS-SR Example of Response

When the server receives SMS-SR query, the server will respond with following XML code:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<STATUSACK>
   <GUID GUID="3de2ec71-1c37-4999-a758-e354dd6fdb1d">
      <STATUS SEQ="1" ERR="50" DONEDATE="2004:10:13 12:10:12"/> <!--
Message delivered successfully-->
      <STATUS SEQ="2" ERR="8448" DONEDATE="0"/> <!--Invalid Message ID-->
   </GUID>
   <GUID GUID="3de2ec71-1c37-4999-a758-s354dd6fdb1d">
      <STATUS SEQ="1" ERR="8448" DONEDATE="2004:10:13 12:10:12"/> <!--
Message delivered successfully-->
      <STATUS SEQ="2" ERR="8448" DONEDATE="2004:10:13 12:10:12"/> <!--
Message delivered successfully-->
      <STATUS SEQ="5" ERR="8448" DONEDATE="2004:10:13 12:10:12"/> <!--
Message delivered successfully-->
      <STATUS SEQ="6" ERR="8448" DONEDATE="2004:10:13 12:10:12"/> <!--
Message delivered successfully-->
   </GUID>
</STATUSACK>
```

The elements of the above XML code are explained in the following table:

Tag Name	Description
GUID	A globally unique Message ID that is generated for each <SMS> tag. This GUID is generated when ValueFirst Pace receives a new session.
Seq	The address (Mobile No.) SEQ ID (Client side value) whose status was queried
DONEDATE	The time when the new status was received. The new status could be either successful or failure, the field is in Standard ANSI format, i.e. YYYY-MM-DD HH:MM:SS
ERR	Error/Message Status Code, If no standard error occurred, the ERR shall be either one of the following value. 8448: Message was successfully delivered on DONEDATE 8449: Message reportedly failed on DONEDATE Blank: When no error code is returned, the message status is in "waiting" state

5. SMS-CR Service

5.1 SMS-CR Example of Credit Request

Credit request API is used to check credit status. A simple example of SMS-CR is shown below:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<!DOCTYPE REQUESTCREDIT SYSTEM "http://127.0.0.1/psms/dtd/
requestcredit.dtd" >
<REQUESTCREDIT USERNAME="mycompany" PASSWORD="somepassword">
</REQUESTCREDIT>
```

The elements of the above XML code are explained in the following table:

Tag Name	Description
UserName	User name of the sender of the message
Password	User password as provided by ValueFirst

5.2 SMS-CR Example of Credit Request Response

When the server receives SMS-CR query, the server will respond with following XML code:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<SMS-Credit User="test">
<Credit Limit="100000000" Used="1522932.00"/>
</SMS-Credit>
```

The elements of the above XML code are explained in the following table:

Tag Name	Description
Credit Limit	Total credits assigned.
Used	Credits used.

6. Encoding Procedure

ValueFirst server accepts all content in XML. Therefore
1. Special characters in the message text need to be XML encoded.
2. The call itself should be URL encoded.

The encoding in XML requires two steps.

Step 1

The following table displays the codes that need to be replaced in the message text. As a rule of thumb all string data should be XML encoded as shown below:

Code	**Replace with**
#39 (single quote)	&apos
#32 (space)	&#032
#34 (double quote)	&quot
>	&gt
<	&lt
#13 (Line feed)	&#013
#10(form feed)	&#010
#9(Tab)	&#009

Note: There are few characters like '[',']', ‘’,” (MS word double quotes) and so on that are not recognized as standard GSM character set and hence should be dropped from message text. Refer Table 1 for information on characters supported by ValueFirst Server.

Step 2

ValueFirst Server accepts all data as a form post. Therefore all XML content needs to be URL encoded before hitting ValueFirst Server.

Rules for encoding XML content to URL format (for all characters):
1. If the ASCII value of the character is greater than 128 or smaller than 32, or if the character is ‘*’, ‘#’, ‘%’, ‘<’, ‘>’ or ‘+’, replace it with its corresponding hexadecimal (hereinafter Hex) value (2 digits with leading zero), preceded by a ‘%’ character. E.g. “space” is encoded into %20.

- * is encoded into %2A
- # is encoded into %23
- % is encoded into %25
- < is encoded into %3C
- > is encoded into %3E
- + is encoded into %2B
- enter key (#13#10) is encoded into %0D%0A

Encoding example

Before encoding

http://api.myvaluefirst.com/psms/servlet/psms.Eservice2?data=<?xml version="1.0" encoding="ISO-8859-1"?><!DOCTYPE MESSAGE SYSTEM "http://127.0.0.1/psms/dtd/message.dtd" ><MESSAGE><USER USERNAME="test" PASSWORD="XXXXXX"/><SMS UDH="0" CODING="1" TEXT="The flight # <101> "DEL" to "BLR" is delayed and it's revised time will be informed later. Have a nice day!" PROPERTY="0" ID="1"><ADDRESS FROM="ValueFirst" TO="91XXXXXXXXXX" SEQ="1" TAG="some clientside random data" /></SMS></MESSAGE>&action=send

After encoding

http://api.myvaluefirst.com/psms/servlet/psms.Eservice2?data=%3C?xml%20version=%221.0%22%20encoding=%22ISO-8859-1%22?%3E%3C!DOCTYPE%20MESSAGE%20SYSTEM%20%22http://127.0.0.1/psms/dtd/message.dtd%22%20%3E%3CMESSAGE%3E%3CUSER%20USERNAME=%22test%22%20PASSWORD=%22valueone%22/%3E%3CSMS%20%20UDH=%220%22%20CODING=%221%22%20TEXT=%22The%20flight%20No.%20SG101:%20DEL%20to%20BLR%20is%20delayed%20and%20it's%20revised%20time%20will%20be%20informed%20later.%20Have%20a%20nice%20day!%22%20PROPERTY=%220%22%20ID=%221%22%3E%3CADDRESS%20FROM=%22ValueFirst%22%20TO=%22919891153528%22%20SEQ=%221%22%20TAG=%22some%20clientside%20random%20data%22%20/%3E%3C/SMS%3E%3C/MESSAGE%3E&action=send

Note: If you are using the Web browser for calling API during testing, the browser will automatically encode the special characters.

7. Accessing Server Services

To access ValueFirst Pace, you need to register for a regular business account.
For getting an account, contact ValueFirst at sales@vfirst.com.

When you are registered, you will be provided a username and password. This authentication information will be required for availing any of the services of ValueFirst Pace.

The URL for accessing ValueFirst Pace Client API version 1.2 is
http://api.myvaluefirst.com/psms/servlet/psms.Eservice2

This URL accepts data through two parameters, namely "data" and "action". The data parameter specifies XML content that needs to be posted. The action parameter is different for each XML (Table 2).

XML	Data parameter	Action parameter
Sending message	SMS-MT Version 1.2 XML (URL and HTML encoded)	send
Checking status	SMS-SR Version 1.2 XML (URL and HTML encoded)	status
Checking Credit status	SMS-CR Version 1.2 XML (URL and HTML encoded)	credit

Table 2 Difference between 'data' and 'action' parameter.

The complete example for a valid SMS-MT and SMS-SR is given in Figure 1.

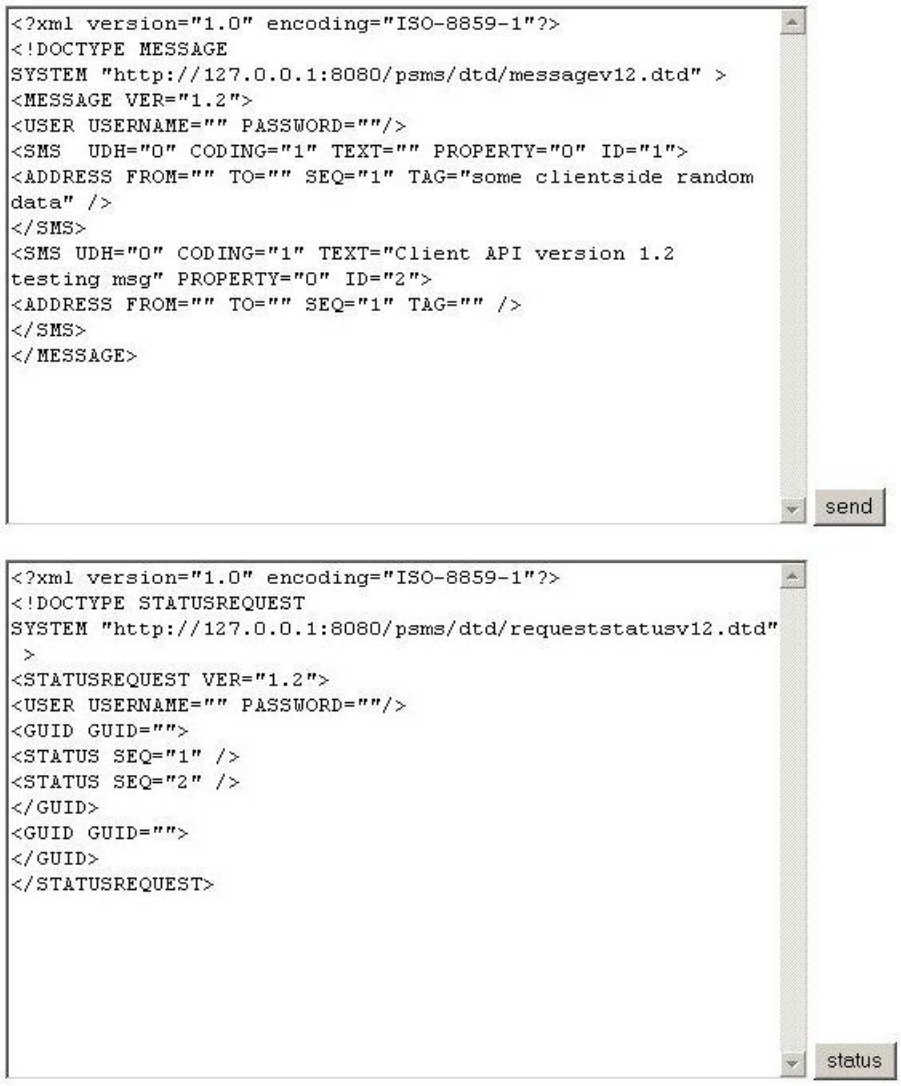

Figure 1 Designed for demo testing of the XML and action parameters (the URL for accessing this screen is http://api.myvaluefirst.com/psms/).

8. Mobile Originated (MO) Messages (Ver.1.1)

To download the inbound SMS messages from the ValueFirst Gateway which have been sent by the users on the long code (e.g. 919898123456) or short code (e.g. 56070), the service end point is:
http://myvaluefirst.com/psms/servlet/psms.MOService1_1

For testing, the MO-SMS service, user can browse to the URL
http://myvaluefirst.com/psms/getXML1_1.jsp

Note: To download all the new incoming messages, in condition tag remove fromnumber, fromdate and todate fields.

When ValueFirst Pace receives a request for downloading messages, it sends back messages in the following format:

```
<?xml version=1.0 encoding=ISO-8859-1?>
<!DOCTYPE Messaging SYSTEM client1_0.dtd>
<Messaging>
<TO NUMBER=9898123456>
<SMS>
<From>9811912182</From>
< MSG >Sample Message Text1</MSG >
</SMS>
<SMS>
<From>9811912192</From>
< MSG >Sample Message Text2</MSG >
</SMS>
</To>
</Messaging>
```

All the messages downloaded in a single transaction are given the same sequence number and are transferred as a single batch.

For a soft copy of this document and sample codes, please login to our website:
http://www.vfirst.com/sms-gateway-services.php