



EBILLSPAY VERSION 2 WEB SERVICE SPECIFICATION FOR BILLERS

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January 2017, NIBSS PLC.

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EbillsPay version 2 web service specification for Billers



Revisions

Version	Date	Description	Author
0.1	01/03/2017	Document Creation	Uchenna Nwanyanwu



Table of Contents

Revisions.....	3
1.0 Introduction	5
2.0 General Flow.....	5
3.0 SPECIFICATION DETAILS	6
Methods.....	6
3.1 validation (String request): String.....	6
URL.....	6
Header	6
XML Request.....	6
XML Response.....	7
3.2 notification (String request): String.....	7
URL.....	7
Header	7
XML Request.....	7
XML Response.....	8
4.0 STATUS CODES AND FIELD DESCRIPTION	9
Status Code.....	9
Field Description	9

1.0 Introduction

There is a growing need for Electronic Payments and with the recent circular from the Central Bank on Cash Policy banks are providing different infrastructures to meet the specific needs and requirements of their teeming Billers and Customers. It is desirable to have a solution that will make Bill payments seamless without the added overhead of paying at specific physical locations. NIBSS e-BillsPay is an account-number-based, online real-time Credit Transfer product that enables customers to make payments by leveraging the security provided by the banks. It enables banks to provide electronic bills payment services through Payment Channels such as Branch Tellers, Internet Banking, Mobile Banking and Kiosk, etc. while leveraging on the security measures provided by these channels with a view to making payments to signed-up Billers.

The requirements of the signed-up billers differ. Some billers require the paying customers to be validated and also notification of successful payments sent to them hence this specification. This document is a specification of the format of validation and notification request/response and mode of communication between Billers and NIBSS.

2.0 General Flow

This interface is implemented as a REST web service. The Biller is expected to expose a REST web service. The web service must expose the following methods:

1. **validation** – This method will be called by NIBSS with an xml string that contain customer, product and payment details to be validated.
2. **notification** – This method will be called by NIBSS to notify the Biller of a successful payment.

The data exchanged during the calls is xml-formatted. The image below depicts the communication between clients and NIBSS.

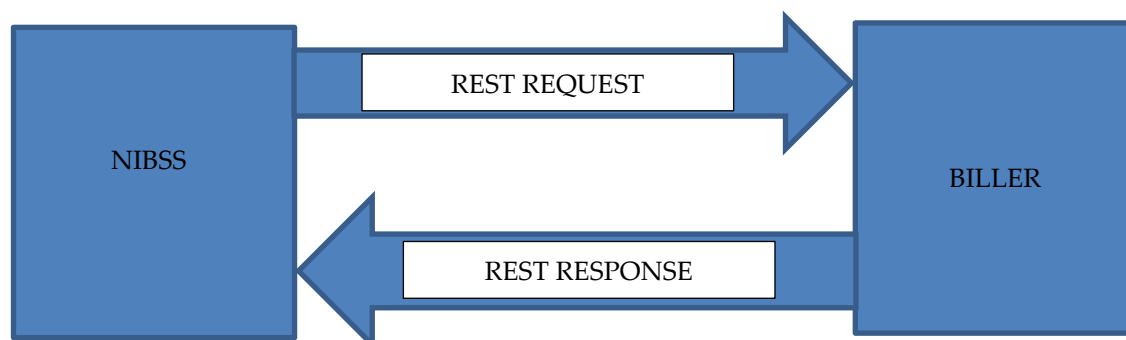


FIG 1



3.0 SPECIFICATION DETAILS

This is a REST web service and therefore supports only REST requests.

Methods

3.1 validation (String request): String

This method takes an xml string as an input and returns an xml string response.

URL

HTTP method – POST

Header

Content type – application/xml

Accept – application/xml

XML Request

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ValidationRequest>
  <SourceBankCode>077</SourceBankCode>
  <SourceBankName>My NIBSS Bank</SourceBankName>
  <InstitutionCode>000777</InstitutionCode>
  <ChannelCode>1</ChannelCode>
  <Step>1</Step>
  <StepCount>2</StepCount>
  <CustomerName>Seun Charles Uche</CustomerName>
  <CustomerAccountNumber>1234567890</CustomerAccountNumber>
  <BillerID>777</BillerID>
  <BillerName>Great Biller Incorporated</BillerName>
  <ProductID>100</ProductID>
  <ProductName>Fantastic Journal</ProductName>
  <Amount>10000</Amount>
  <Param>
    <Key>amount</Key>
    <Value>10000.00</Value>
  </Param>
  <Param>
    <Key>phoneNumber</Key>
    <Value>08033333333</Value>
  </Param>
  <Param>
    <Key>email</Key>
    <Value>seuncharlesuche@yahoo.com</Value>
  </Param>
</ValidationRequest>
```



XML Response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ValidationResponse>
  <BillerID>777</BillerID>
  <NextStep>0</NextStep>
  <ResponseCode>00</ResponseCode>
  <Param>
    <Key>amount</Key>
    <Value>10000</Value>
  </Param>
  <Param>
    <Key>Phone Number</Key>
    <Value>08033333333</Value>
  </Param>
  <Param>
    <Key>Email</Key>
    <Value>seuncharlesuche@yahoo.com</Value>
  </Param>
  <Param>
    <Key>Name</Key>
    <Value>Seun Charles Uche</Value>
  </Param>
  <Param>
    <Key>Status</Key>
    <Value>Valid</Value>
  </Param>
</ValidationResponse>
```

3.2 notification (String request): String

This method takes an xml string as an input and returns an xml string response.

URL

HTTP method – POST

Header

Content type – application/xml

Accept – application/xml

XML Request

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<NotificationRequest>
  <SessionID>000013170228140604225526470055</SessionID>
  <SourceBankCode>077</SourceBankCode>
  <ChannelCode>1</ChannelCode>
  <CustomerName>Seun Charles Uche</CustomerName>
  <CustomerAccountNumber>1234567890</CustomerAccountNumber>
  <BillerID>777</BillerID>
```



EbillsPay version 2 web service specification for Billers

```
<BillerName>Great Biller Incorporated</BillerName>
<ProductID>100</ProductID>
<ProductName>Fantastic Journal</ProductName>
<Amount>9950.00</Amount>
<TotalAmount>10000.00</TotalAmount>
<Fee>50.00</Fee>
<TransactionFeeBearer>biller</TransactionFeeBearer>
<SplitType>fixed</SplitType>
<DestinationBankCode>099</DestinationBankCode>
<Narration>Seun Charles Uche Payment</Narration>
<PaymentReference>eBillsPay/1234567890098</PaymentReference>
<TransactionInitiatedDate>1488287164000</TransactionInitiatedDate>
<TransactionApprovalDate>1488287280000</TransactionApprovalDate>
<Param>
  <Key>Phone Number</Key>
  <Value>08033333333</Value>
</Param>
<Param>
  <Key>Amount</Key>
  <Value>10000</Value>
</Param>
<Param>
  <Key>Email</Key>
  <Value>seuncharlesuche@yahoo.com</Value>
</Param>
<Param>
  <Key>Name</Key>
  <Value>Seun Charles Uche</Value>
</Param>
</NotificationRequest>
```

XML Response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<NotificationResponse>
  <SessionID>000777170228085900784733413620</SessionID>
  <BillerID>777</BillerID>
  <ResponseCode>00</ResponseCode>
  <ResponseMessage>Payment Notification Successful</ResponseMessage>
  <Param>
    <Key>Amount</Key>
    <Value>10000.00</Value>
  </Param>
  <Param>
    <Key>Phone Number</Key>
    <Value>08033333333</Value>
  </Param>
  <Param>
    <Key>Name</Key>
    <Value>Seun Charles Uche</Value>
  </Param>
  <Param>
```



```

    <Key>Email</Key>
    <Value>seuncharlesuche@yahoo.com</Value>
  </Param>
</NotificationResponse>

```

4.0 FIELD DESCRIPTION

Status Code

Field Description

S/N	Code	Type	Description
1	SourceBankCode	String	Unique code that identifies the Bank where the payment was made
2	ResponseCode	String	Indicates status of the response.
3	SourceBankName	String	Bank Name
4	DestinationBankCode	String	Unique code that identifies the Bank of the Biller where the payment will go to
5	BillerID	int	Unique identifier of the biller
6	BillerName	String	Name of the biller
7	Key	String	Field name
8	Value	String	Field value
9	CustomerName	String	Name of the Customer making payment
10	CustomerAccountNumber	String	Account number of the Customer making payment
11	ProductID	int	Unique identifier of the product
12	ProductName	String	Name of the product
13	Amount	BigDecimal	This can be the amount the customer paid (for validation request) or the amount that goes to Biller's account after transaction fee is subtracted from the amount paid by customer (for notification request).
14	TransactionFeeBearer	String	Defines who pays the transaction fee. The values are: • Biller • Customer
15	Step	int	A number identifying the step assigned to the form. E.g. if the value is 1, it means it is the first form the customer sees, 2 means the second form etc.
16	SplitType	int	Defines the type of transaction fee. The allowable values are:



			• Fixed • Percentage
17	TransactionInitiatedDate	long	Date and time when the transaction was initiated in milliseconds.
18	TransactionApprovalDate	long	Date and time when the transaction was approved in milliseconds.
19	PaymentReference	String	A unique reference that identifies a transaction. Please don't rely on this, use the SessionId element to uniquely identify a transaction.
20	Narration	String	A narration for the transaction
21	StepCount	String	The number of steps (forms) available for the current product.
22	ChannelCode	int	Identifies the channel where the transaction was initiated. This can be internet banking, ATM etc.
23	InstitutionCode	Boolean	Indicates if the field is mandatory
24	NextStep	int	The number of the next form that will be displayed when the current form is submitted.
25	SessionID	String	Uniquely identifies a transaction
26	ResponseCode	String	Indicates the status of the transaction.
27	ResponseMessage	String	Response message
28	TotalAmount	BigDecimal	Sum of the transaction fee and amount of the transaction that goes to the biller's Bank account
29	Fee	BigDecimal	Transaction fee of the transaction
30	ResponseMessage	String	This is a descriptive message of the response.

5.0 Response Description

Codes	Descriptions
00	Approved or completed successfully
01	Status unknown, please wait for settlement report
03	Invalid Sender
05	Do not honor
06	Dormant Account
07	Invalid Account
08	Account Name Mismatch
09	Request processing in progress
12	Invalid transaction



EbillsPay version 2 web service specification for Billers

13	Invalid Amount
14	Invalid Batch Number
15	Invalid Session or Record ID
16	Unknown Bank Code
17	Invalid Channel
18	Wrong Method Call
21	No action taken
25	Unable to locate record
26	Duplicate record
30	Format error
34	Suspected fraud
35	Contact sending bank
51	No sufficient funds
57	Transaction not permitted to sender
58	Transaction not permitted on channel
61	Transfer limit Exceeded
63	Security violation
65	Exceeds withdrawal frequency
68	Response received too late
69	Unsuccessful Account/Amount block
70	Unsuccessful Account/Amount unblock
71	Empty Mandate Reference Number
91	Beneficiary Bank not available
92	Routing error
94	Duplicate transaction
96	System malfunction
97	Timeout waiting for response from destination