

**EBILLSPAY VERSION 2 WEB SERVICE SPECIFICATION FOR BILLERS**

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# Revisions

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| 0.1 | 01/03/2017 | Document Creation | Uchenna Nwanyanwu |

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# 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.

# 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.

NIBSS

REST REQUEST

BILLER

REST RESPONSE

FIG 1

# 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>

<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>

# 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. |

# 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 |
| 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 |