SOA SERVICE SPECIFICATION

ReverseTransaction_2_0

Service Id: 3020

Version 1.0

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CHANGE HISTORY

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RELATED DOCUMENTS

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DESIGN LEAD SIGN-OFF

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1 BUSINESS CONTEXT

The API ReverseTransaction_2_0 is used to rollback a previously successful purchase or payment transaction.

2 DEFINITIONS AND ABBREVIATIONS

Term	Definition
OSB	Oracle Service Bus
OWSM	Oracle Web Services Manager
MOBIQUITY	Mobile Financial Service Platform provided by Comviva
MSISDN	Mobile Station International Subscriber Directory Number
1..1	Mandatory element
0..1	Optional element

3 SERVICE OVERVIEW

ReverseTransaction operation is used to rollback a purchase or payment transaction. This service is used by consuming applications to cancel a transaction which was previously carried out successfully by sending the Mobiquity Transaction ID.

3.1 NAMESPACES

Namespace URI	Prefix
http://xmlns.tigo.com/MFS/ReverseTransactionRequest/V1	rt1
http://www.w3.org/2001/Schema	Xsd
http://xmlns.tigo.com/RequestHeader/V3	hdr
http://xmlns.tigo.com/MFS/ReverseTransactionResponse/V1	rt2
http://xmlns.tigo.com/ResponseHeader/V3	headerResponse
http://xmlns.tigo.com/Service/ReverseTransaction/V1	rts
http://xmlns.tigo.com/MFS/ReverseTransactionFault/V1	rtf
http://xmlns.tigo.com/ParameterType/V2	par
http://xmlns.tigo.com/CoreData/V1	cor

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3.2 REVERSETRANSACTION

This service provides a legitimate calling application the avenue to rollback the amounts it has transferred in a previously successful Purchase or Payment transaction that was performed through PurchaseInitiate_2_0 or Payments_3_0 APIs.

3.2.1   INPUT MESSAGE: REVERSETRANSACTION REQUEST

Element Name	Element Type	Occurrence	Description
ReverseTransactionRequest	rt1:ReverseTransactionRequest	1..1	Details containing the MSISDN or username and transactionId to reverse the transaction/voucher.

3.2.2   OUTPUT MESSAGE: REVERSETRANSACTION RESPONSE

Element Name	Element Type	Occurrence	Description
ReverseTransactionResponse	rt2:ReverseTransactionResponse	1..1	Response of the reverse transaction.

3.2.3   REFERENCED FAULTS

Element Name	Element Type	Occurrence	Description
ReverseTransactionFault	rtf:ReverseTransactionFault	NA	Back-end or service fault wrapped into SOAP fault

3.2.4   MESSAGE/DATA SECURITY

SSL/TLS Security and Consumer authentication will be used to ensure service security.

3.2.5   SERVICE SECURITY

The Consuming Applications must authenticate against the OSB layer using OWSM-Security by providing their username and password. The password is in plain text format. The username and password are issued by the Service Factory team to the consuming application.

The authentication credentials (OWSM - Security username and password) must be stored in a secure manner and encrypted whilst stored on the consuming application platform.

Username and password has to be sent as part of SOAP Header while invoking this service.

The SOATransactionID sent in the response from Middleware has to be saved for future tracking of the transactions

Below is a sample SOAP Header:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope">
   <soapenv:Header xmlns:wsse="http://docs.oasis-
   open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
      <wsse:Security>
         <wsse:UsernameToken>
            <wsse:Username></wsse:Username>
            <wsse:Password></wsse:Password>
         </wsse:UsernameToken>
      </wsse:Security>
   </soapenv:Header>
   <soapenv:Body>
      <!--request body-->
   </soapenv:Body>
</soapenv:Envelope>
```

3.2.6 SUCCESS STATUS CODES

Code	Description
reversertransaction-3020-0000-S	The request has been processed successfully.

3.2.7 ERROR CODES

This operation returns errors or failures in the standard SOAP format as per the xsd. The error codes and short descriptions are listed below.

Error No	Error Description	Country	Error Category
reversetransaction-3020-4501-V	Invalid Request. Please check the input and resubmit.	GHA	OSB Validation Error. Further details usually captured in additional information field.
reversetransaction-3020-4502-V	Invalid ISD code passed in the MSISDN	GHA	When an invalid ISD (Country) code is sent in the MSISDN.
reversetransaction-3020-4503-V	Web service implementation is not available for this country.	GHA	Error returned when the country in the request is other than GHA.
reversetransaction-3020-4506-V	Invalid consumerID passed in the request.	GHA	Error when consumerID passed in the request is other than the defined values or the consumerID is a mismatch to that of the Purchase or Payment transaction to be reversed.
reversetransaction-3020-4507-V	Invalid PaymentReferenceID/Authorization Code passed in the request.	GHA	Error when invalid PaymentReferenceID is passed in the request or the PaymentReferenceID is a mismatch to that of the Purchase or Payment transaction to be reversed.
reversetransaction-3020-2501-F	One or more back ends may be down. Please try again later.	GHA	When backends are down. Connection error message
reversetransaction-3020-2502-F	Service call has timed out. Please resubmit your request later.	GHA	OSB Timeout and backend timeout Error.
reversetransaction-3020-2505-F	Service Authentication Failed.	GHA	OWSM Authentication Failure. When webservice credentials are invalid.
reversetransaction-3020-2506-F	Consumer is not authorized to use the service.	GHA	When a valid consumer is trying to access this API for whom there is no authorization

reversetransaction-3020-3602-E	Internal service error has occurred.	GHA	OSB internal error
reversetransaction-3020-3999-E	Unknown/Uncaught error has occurred.	GHA	To be mapped in unknown section. The failure reason is not defined.
reversetransaction-3020-4511-V	Username cannot be passed in the request.	GHA	When Username is passed in the request in place of the MSISDN/Wallet number.
reversetransaction-3020-4512-V	Invalid apiType passed in the request	GHA	When Invalid apiType is passed in the request. Expected value is purchase or payment.
reversetransaction-3020-4513-V	Invalid TransactionID passed in the request	GHA	When an invalid Mobiquity (MFS) TransactionID is passed in the request
reversetransaction-3020-4514-V	Invalid Merchant specific AuthorizationCode passed in the request	GHA	When the authorizationCode in the reversal request does not match that of the Purchase or Payment transaction to be reversed.
reversetransaction-3020-4515-V	Invalid Merchant specific consumerID passed in the request	GHA	When the ConsumerID or MSISDN passed in the reversal request does not match that of the Purchase or Payment transaction to be reversed.
reversetransaction-3020-3001-E	<Backend description> or Request was not successful. Backend error has occurred.	GHA	Any unmapped backend error would be returned under this error code.

3.2.8 SAMPLE MESSAGES

Sample Request:
```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cor="http://soa.mic.co.af/coredata_1">
   <soapenv:Header xmlns:wsse="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
      <cor:debugFlag>true</cor:debugFlag>
      <wsse:Security>
         <wsse:UsernameToken>
            <wsse:Username>test_mw_osb</wsse:Username>
            <wsse:Password>tigo1234</wsse:Password>
         </wsse:UsernameToken>
      </wsse:Security>
   </soapenv:Header>
   <soapenv:Body>
      <v1:ReverseTransactionRequest
xmlns:v3="http://xmlns.tigo.com/RequestHeader/V3"
```

```
xmlns:v1="http://xmlns.tigo.com/MFS/ReverseTransactionRequest/V1"
xmlns:v2="http://xmlns.tigo.com/ParameterType/V2">
        <v3:RequestHeader>
           <v3:GeneralConsumerInformation>
              <v3:consumerID>TIGO</v3:consumerID>
              <!--Optional:-->
              <v3:transactionID>MP190913.1540.C00015</v3:transactionID>
              <v3:country>GHA</v3:country>
              <v3:correlationID>2332</v3:correlationID>
           </v3:GeneralConsumerInformation>
        </v3:RequestHeader>
        <v1:requestBody>
           <v1:userWallet>
              <!--You have a CHOICE of the next 2 items at this level-->
              <v1:msisdn>233276074111</v1:msisdn>
           </v1:userWallet>
           <v1:transactionId>MP190919.1033.C00034</v1:transactionId>
           <v1:transactionType>CANCEL TRANSACTION</v1:transactionType>
           <v1:paymentReference>7031</v1:paymentReference>
           <v1:apiType>purchase</v1:apiType>

<v1:AuthorizationCode>dGVzdF9td19vc2I6dGlnbzEyMzQ=</v1:AuthorizationCode>
        </v1:requestBody>
     </v1:ReverseTransactionRequest>
   </soapenv:Body>
</soapenv:Envelope>
```

Sample response:

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
   <soapenv:Header xmlns:wsse="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd"
xmlns:cor="http://soa.mic.co.af/coredata_1">
      <cor:SOATransactionID>029b2c3d-1ad9-4c14-a07e-
8063a65d9af1</cor:SOATransactionID>
   </soapenv:Header>
   <soapenv:Body xmlns:cor="http://soa.mic.co.af/coredata_1">
      <v1:ReverseTransactionResponse
xmlns:v1="http://xmlns.tigo.com/MFS/ReverseTransactionResponse/V1">
         <v3:ResponseHeader
xmlns:v3="http://xmlns.tigo.com/ResponseHeader/V3">
            <v3:GeneralResponse>
               <v3:correlationID>2332</v3:correlationID>
               <v3:status>OK</v3:status>
               <v3:code>reversetransaction-3020-0000-S</v3:code>
               <v3:description>The request has been processed
successfully.</v3:description>
            </v3:GeneralResponse>
         </v3:ResponseHeader>
         <v1:responseBody>
            <v1:transactionId>CI180323.1225.C00001</v1:transactionId>
         </v1:responseBody>
      </v1:ReverseTransactionResponse>
   </soapenv:Body>
</soapenv:Envelope>
```

Sample fault:

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
   <soapenv:Header xmlns:cor="http://soa.mic.co.af/coredata_1">
```

```
        <cor:SOATransactionID>ab9fe63c-5093-41ec-b327-
0b41f6a3ebb4</cor:SOATransactionID>
 </soapenv:Header>
<soapenv:Body xmlns:ns1="http://xmlns.tigo.com/ ReverseTransactionFault/V1"
xmlns:cmn="http://xmlns.tigo.com/ResponseHeader/V3">
       <soapenv:Fault>
          <faultcode
xmlns:env="http://schemas.xmlsoap.org/soap/envelope">env:Server</faultcode>
          <faultstring>Invalid ISD code passed in the MSISDN.</faultstring>
          <detail>
             <ns1:ReverseTransactionFault >
                <cmn:correlationID>112312</cmn:correlationID>
                <cmn:status>ERROR</cmn:status>
                <cmn:code>reversetransaction-3020-4502-V</cmn:code>
                <cmn:description>Invalid ISD code passed in the
MSISDN.</cmn:description>
             </ns1:ReverseTransactionFault>
          </detail>
       </soapenv:Fault>
    </soapenv:Body>
</soapenv:Envelope>
```

3.3   XML SCHEMA DATA TYPE DEFINITION

3.3.1   INPUT MESSAGE: REVERSETRANSACTION REQUEST STRUCTURE

Element	Type	Occurrence	Description
RequestHeader	hdr:RequestHeader	1..1	This group of data contains information about the system that needs to consume the exposed service by the OSB.
RequestBody	rt1:requestBodyType	1..1	Identifies the request elements related to the functionality of the service

3.3.2   OUTPUT MESSAGE : REVERSETRANSACTION RESPONSE STRUCTURE

Element Name	Element Type	Occurrence	Description
ResponseHeader	headerResponse:ResponseHeader	1..1	This group of data contains information about the status of the service call along with transaction id
ResponseBody	rt2:responseBody Type	1..1	Identifies the response of the service to the calling application

3.3.3   REQUESTHEADER STRUCTURE

Element	Type	Occurrence	Description
GeneralConsumerInformation	cmn:GeneralConsumerInfoType	1..1	Request header details.

3.3.4   RESPONSEHEADER STRUCTURE

Element Name	Element Type	Occurrence	Description
GeneralResponse	cmn:GeneralResponseType	1..1	Response Header details.

3.3.5 GENERICCONSUMERINFOTYPE STRUCTURE

Element Name	Element Type	Occurrence	Description
consumerID	xsd:string	1..1	It is a unique identifier of the consumer of the service.
transactionID	xsd:string	0..1	Identifies the kind or type of transaction or operation that is taken in the consuming application.
country	cmn:CountryContentType	1..1	International country code (ISO 3166-1 alpha-3 format). Please refer to Appendix for the supported countries.
correlationID	xsd:string	1..1	Unique identifier of the transaction by the consuming application.

3.3.6 REQUESTBODYTYPE STRUCTURE

Element	Type	Occurrence	Description
userWallet	tns:userwalletType	1..1	The userWallet has a choice between the MSISDN and username. This is the wallet identifier to be validated for the payer of the purchase or payment transaction that is to be reversed.
transactionId	xsd:string	1..1	The Mobiquity (MFS) transactionId which has to be cancelled
transactionType	tns:TransactionType	1..1	This field signifies the type of transaction which has to be cancelled CANCEL VOUCHER – To cancel the vouchers created – not supported currently CANCEL TRANSACTION – To cancel the transaction.
paymentReference	xsd:string	1..1	Payment Reference ID of the purchase or payment transaction to be reversed.
apiType	xsd:string	1..1	The value is purchase/payment.
AuthorizationCode	xsd:string	1..1	Unique value for Merchant.
additionalParameters	par:ParameterType	0..1	Additional parameters for the service.

3.3.7 WALLETTYPE STRUCTURE

Element	Type	Occurrence	Description
Choice between 2 elements			
msisdn	cor:msisdnType {xsd:string(12)}	1..1	Customer MSISDN (MSISDN of the payer in the purchase or payment transaction to be reversed)
username	xsd:string	1..1	Subscriber's/Merchant's username. (Some MFS systems can accept Username instead of MSISDN) – not supported currently

3.3.8 GENERALRESPONSEHEADERTYPE STRUCTURE

Element Name	Element Type	Occurrence	Description
correlationID	xsd:string	0..1	Unique identifier of the transaction.
status	cmn:StatusContentType	0..1	State of the transaction Enumeration values ➢ OK ➢ ERROR
code	xsd:string	0..1	Code number agreed to identify the success or fail event in the transaction
codeType	xsd:string	0..1	Identifier of the type code agreed under the catalog (It could be on a database level or confluence documentation defined).
description	xsd:string	0..1	Technical and brief description of the error.
additionalInfo	Xsd:string	0..1	This element is used in case of backend error to return any additional information about the error. In this service, backend service name would be returned in this element.

3.3.9 RESPONSEBODYTYPE STRUCTURE

Element	Type	Occurrence	Description
transactionId	xsd:string	1..1	SessionID used to perform the transaction with the MFS Platform
additionalResults	par:ParameterType	0..1	AdditionalResults for this service returned are: Generated Consumed NewBalance SessionId

3.3.10 PARAMETERTYPE STRUCTURE

Element	Type	Occurrence	Description
ParameterName	xsd:string	1..1	Parameter name to be passed in the request
ParameterValue	xsd:string	1..1	Parameter value to be passed in the request

4 APPENDIX

4.1 COUNTRY CODES

Country code	Country name
SLV	El Salvador
GTM	Guatemala
HND	Honduras
BOL	Bolivia
COL	Colombia
PRY	Paraguay
TCD	Chad
COD	Democratic Republic of Congo
GHA	Ghana
MUS	Mauritius
RWA	Rwanda
SEN	Senegal
TZA	Tanzania

4.2 MSISDN FORMAT

Country name	MSISDN format	Sample
Democratic Republic of Congo	International format	243123456789
Senegal	International format	221123456789
Ghana	International format	233573579125
Tanzania	International format	255123456789