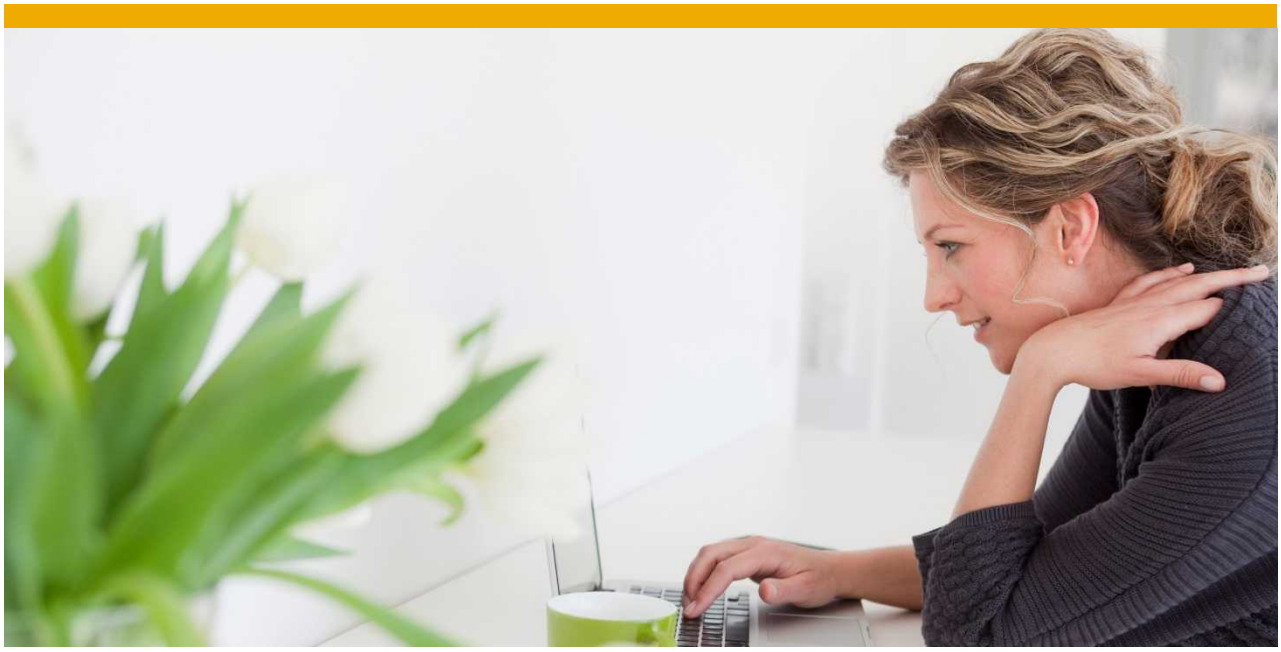

Sybase® Mobiliser Platform 5.1

Open Bank API Reference Guide

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1 INTRODUCTION

1.1 About this document

This document describes how to integrate with the Mobiliser mBanking Open Bank API services.

1.2 Intended Audience

This document addresses developers that want to integrate with the Mobiliser mBanking service offering

1.3 Prerequisites

A basic understanding of the used techniques, namely SOAP, XML and XML schemas is a requirement for the comprehension of this document.

2 TECHNICAL OVERVIEW

2.1 Interface

The interface is SOAP based which encapsulates XML messages into SOAP headers to provide the highest compatibility across programming languages.

The requests are sent from the Mobiliser mBanking server to the member banks. The member banks respond to the SOAP request with a SOAP response in a synchronous mode.

The WSDL that describes all service aspects is included in this project.

The message payloads have some resemblance to ISO8583 messages but provide all the flexibility and re-use of the modern SOAP protocol.

2.2 Security

The mBanking API provides multiple levels of security.

All communication is recommended to take place over VPN tunnels between Mobiliser and the banks.

On top of the transport encryption, HTTPS is used as an application layer encryption.

If supported by the partner bank a mutual SSL handshake is recommended in which client (Mobiliser) and server (partner bank) authenticate themselves with cryptographic certificate.

On an even more detailed level, field based encryption is supported using Triple DES encryption.

3 MBANKING SERVICES

3.1 Actors

3.1.1 Operator

This is the operator of the mobile banking platform offering mobile banking services to consumers of the connected Banks. It acts as an intermediary between a consumer and a member bank.

3.1.2 Bank

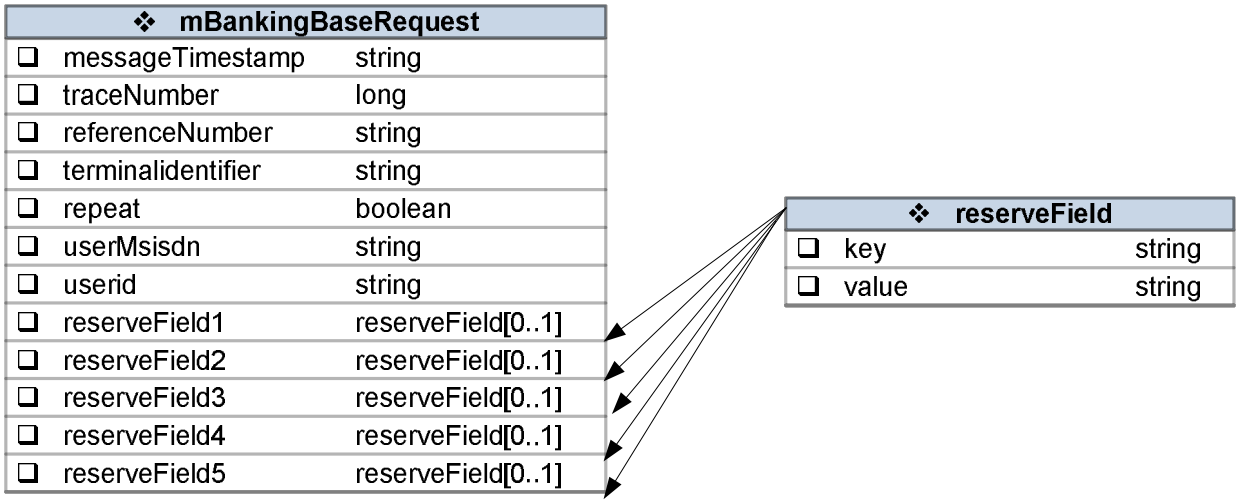
The Bank is the financial institution that fulfills the mobile banking transaction. It has a direct relationship with consumers.

3.1.3 Consumer

Consumer accesses the mobile banking services via mobile phone and requests for mobile banking transactions.

3.2 Common Attributes

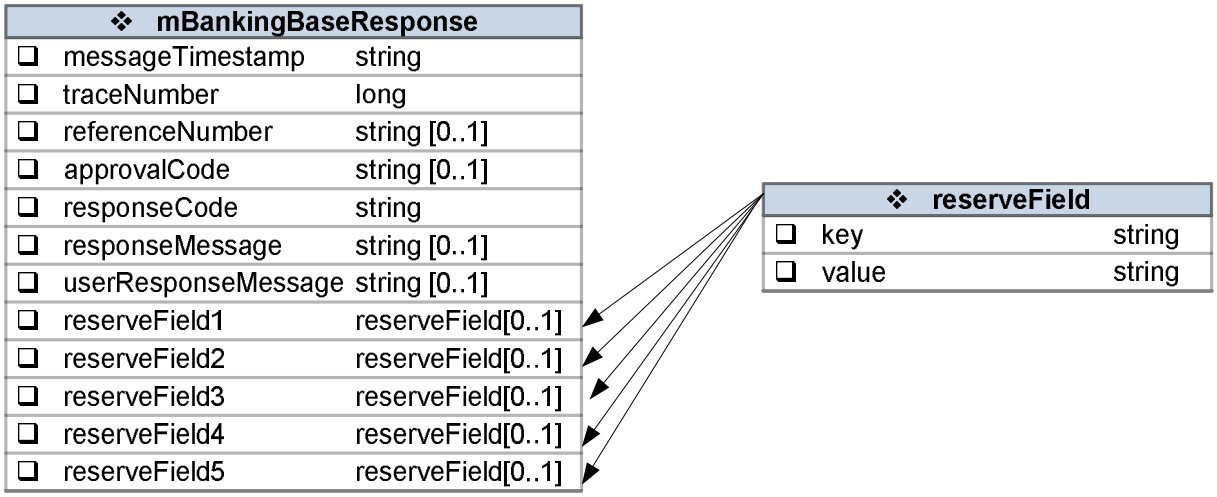
3.2.1 Request



Message Element	Type	Occurrence	Description
messageTimestamp	String (14)	1..1	The date and time the message was created ('YYYYMMDDHHMMSS')
traceNumber	Long (5..30)	1..1	Unique trace number for the transaction (YYMMDD99999999). Initiated by the transaction originator and echoed back by the server. Every different transaction in a single USSD session will have different trace number.
referenceNumber	String (5..30)	1..1	Unique number for each message. Mainly used for identifying (i.e. REQ123456789)
terminalIdentifier	String (5..30)	1..1	Identifies the terminal that is sending the message. For request coming from MOBILISER, value set to MOBILE01. For request coming from bank, append 01 at the end of the Institution Codes
repeat	Boolean	1..1	Indicates if the message is a message repeat. Set this flag to mark the request as a repeat call
userMsisdn	String (8..24)	1..1	The mobile phone number of the user in international format (e.g. +60174234234)
userId	String (4..30)	1..1	This is a unique customer ID or (PAN) provided by the bank
reserveField1	reserveField	0..1	Reserve Field 1
key	String (1..50)	0..1	Key

value	String (1..50)	0..1	Value
reserveField2	reserveField	0..1	Reserve Field 2
reserveField3	reserveField	0..1	Reserve Field 3
reserveField4	reserveField	0..1	Reserve Field 4
reserveField5	reserveField	0..1	Reserve Field 5

3.2.2 Response



Message Element	Type	Occurrence	Description
messageTimestamp	dateTime	0..1	The date and time the message was created ('YYYYMMDDHHMMSS')
traceNumber	Long (5..30)	1..1	Unique trace number for the transaction (YYMMDD99999999). Initiated by the transaction originator and echoed back by the server. Every different transaction in a single USSD session will have different trace number.
referenceNumber	String (5..60)	0..1	Unique number for each message. Mainly used for identifying (i.e. RES123456789)
approvalCode	String (6)	0..1	Approval code for successful transaction
responseCode	String (1..3)	1..1	Response code of the service call
responseMessage	String (0..80)	0..1	Internal response message that contains additional details in case of an error condition. For example, for enquiry on status of registration,

				return statuses could be “Not registered”, “pending” or “completed”.
userResponseMessage		String (0..160)	0..1	Response message that is displayed to the user
reserveField1		reserveField	0..1	Reserve Field 1
	key	String (1..50)	0..1	Key
	value	String (1..50)	0..1	Value
reserveField2		reserveField	0..1	Reserve Field 2
reserveField3		reserveField	0..1	Reserve Field 3
reserveField4		reserveField	0..1	Reserve Field 4
reserveField5		reserveField	0..1	Reserve Field 5

3.3 Services

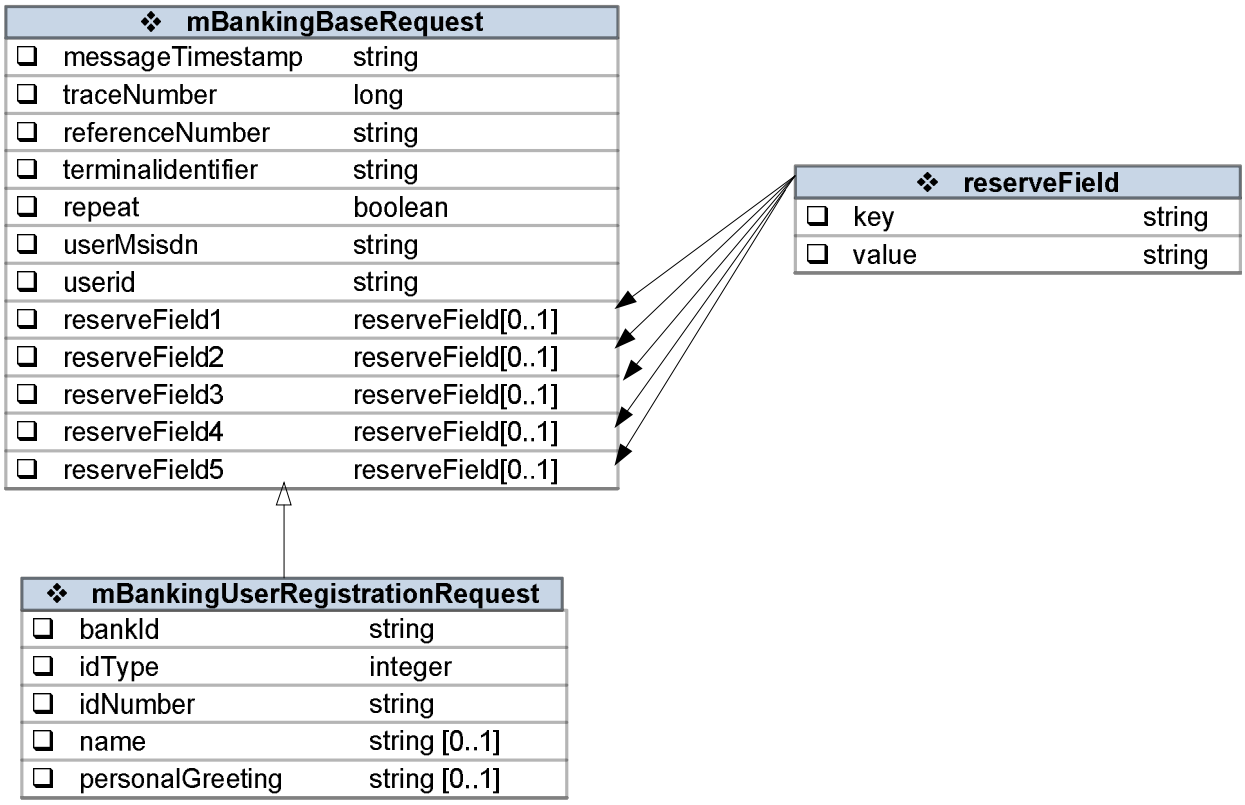
3.3.1 Consumer Profile Management

The Registration and the Termination services are the only services in the mBanking scope that are initiated by the bank.

3.3.1.1 Registration

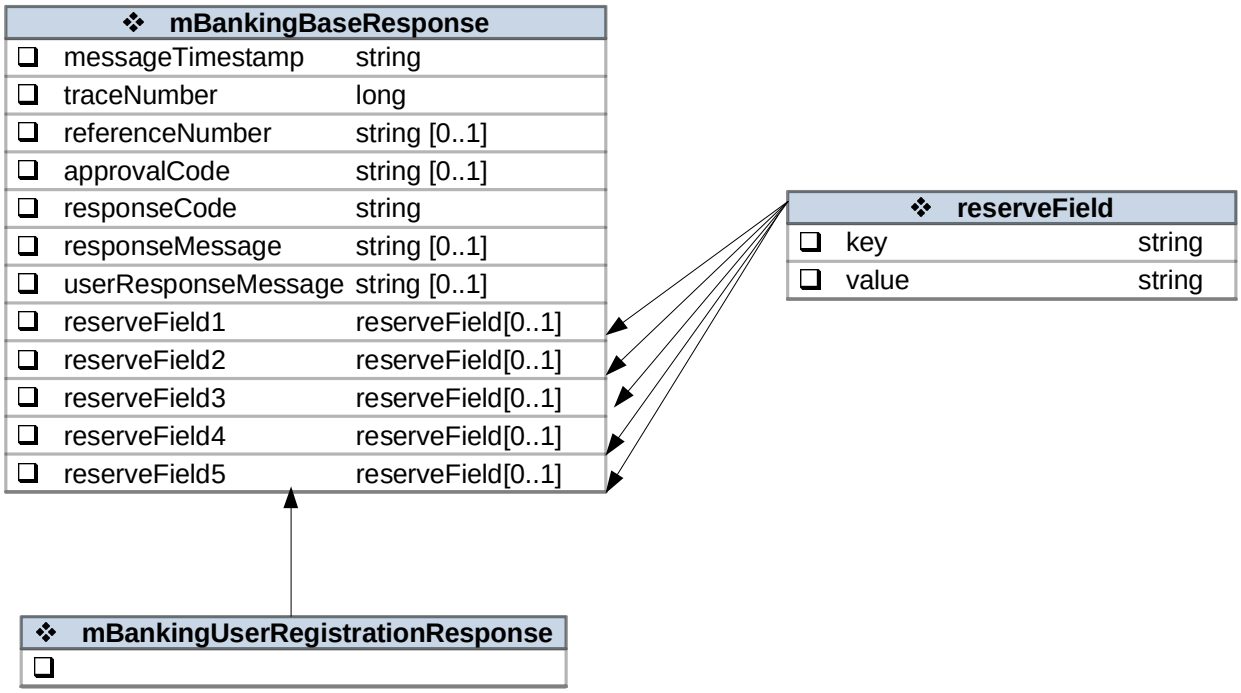
The bank sends the registration request to Mobiliser to register new users for mBanking.

3.3.1.1.1.1 Request



Message Element	Type	Occurrence	Description
bankId	String (5…12)	1..1	The identifier for the bank, as assigned by MOBILISER during setup
idType	Integer	1..1	The identifier for the type of ID
idNumber	String (1..30)	1..1	ID number of the consumer
name	String (0..30)	0..1	Name of the consumer
personalGreeting	String (0..30)	0..1	Personal greeting message

3.3.1.1.2 Response

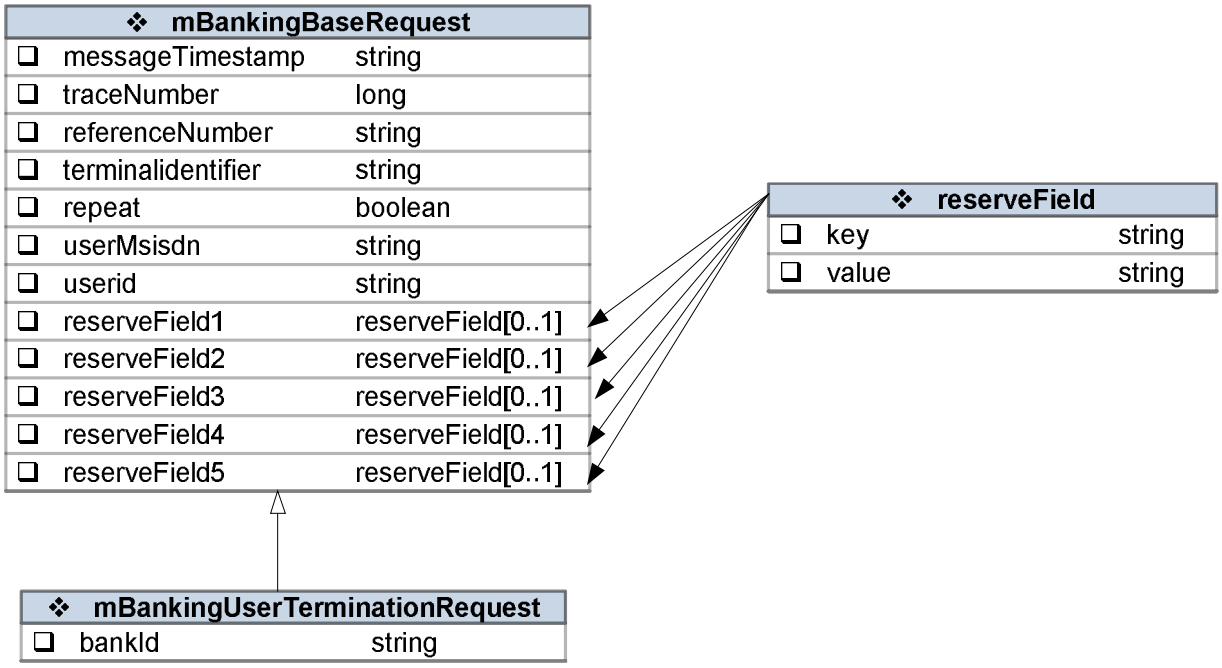


No specific parameters required (beyond standard response).

3.3.1.2 Termination

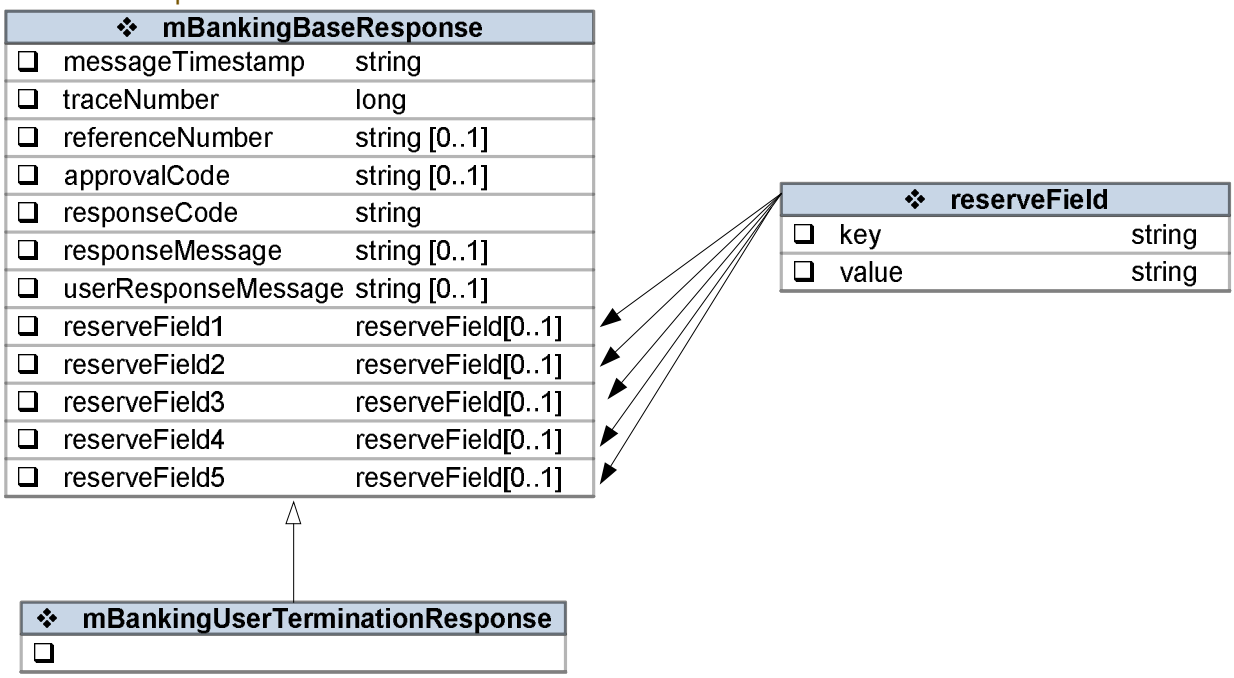
The termination request is used to terminate users from the mBanking service. The request is also used if the mobile phone number changes. The old number is terminated and a new number is registered.

3.3.1.2.1 Request



Message Element	Type	Occurrence	Description
bankId	String (5…12)	1..1	The identifier for the bank, as assigned by MOBILISER during setup

3.3.1.2.2 Response



No specific parameters required (beyond standard response).

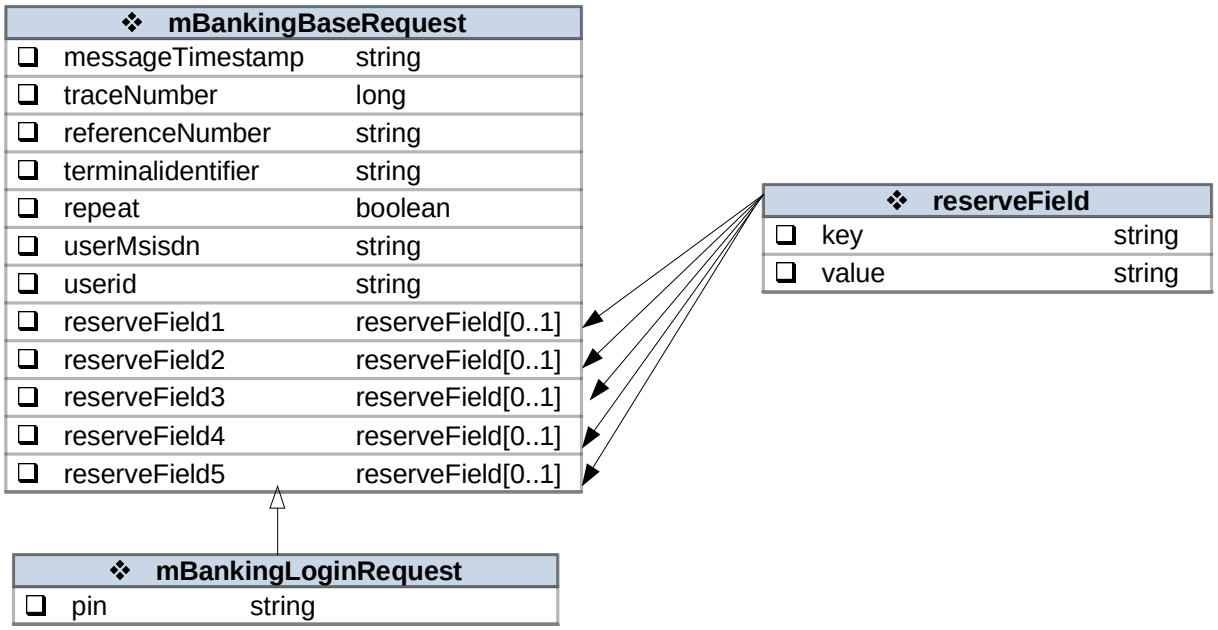
3.3.1.3 Login

The Login service is used to authenticate the consumer before allowing the consumer to access mobile banking services.

Consumer enters the PIN only once when accessing the mBanking services (the menu) and does not have to enter the PIN again for succeeding services (e.g. balance enquiry, transfers, etc) within the same session.

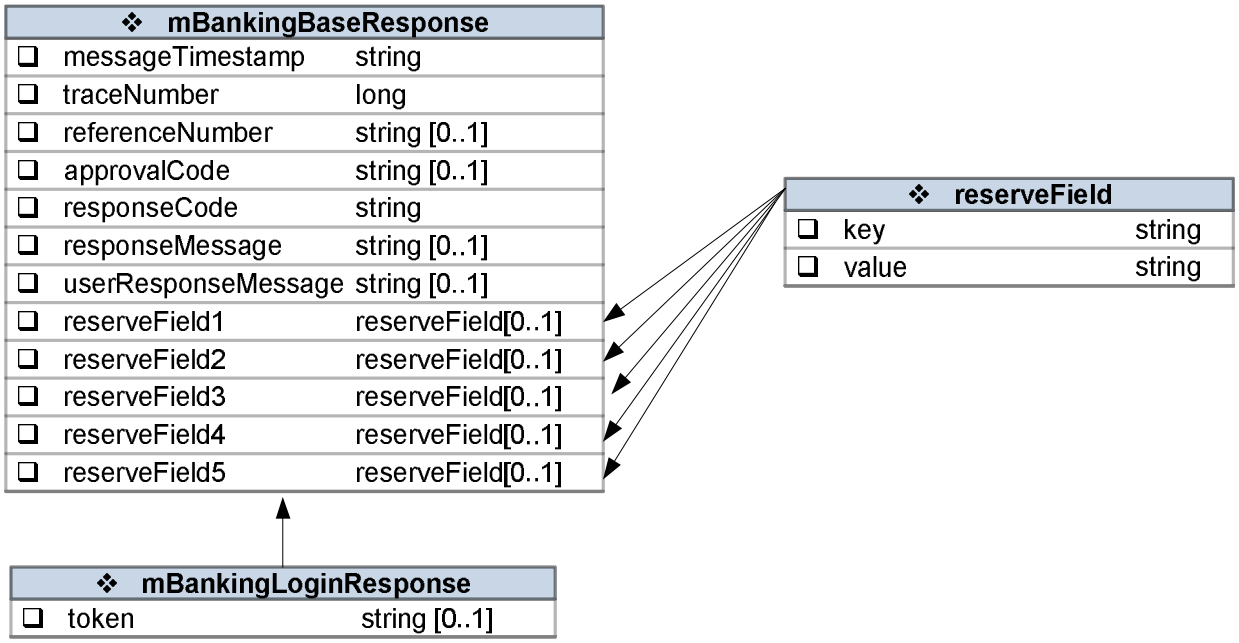
Upon successful verification of the PIN, MOBILISER will make a request for the consumer list of accounts.

3.3.1.3.1 Request



Message Element	Type	Occurrence	Description
pin	String (5…12)	1..1	The PIN entered by consumer

3.3.1.3.2 Response



Message Element	Type	Occurrence	Description

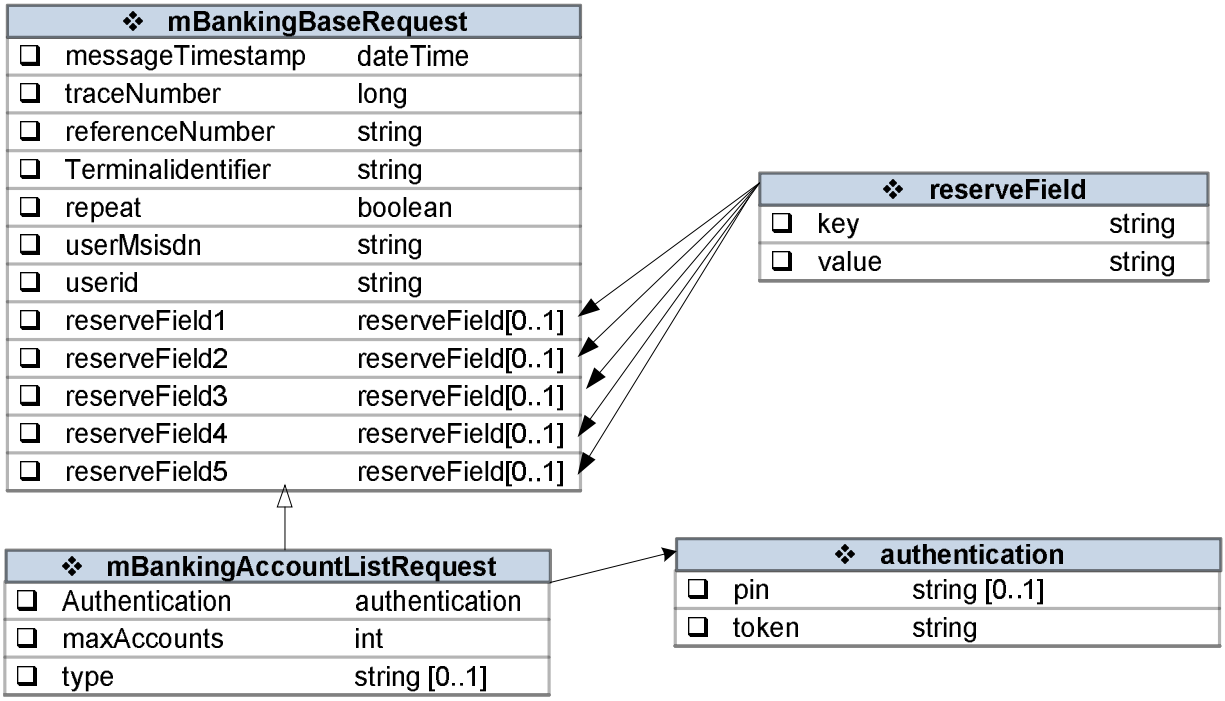
token	String (0..1000)	0..1	The Bank upon successful verification of the PIN can issue a token. The token might be used instead of the PIN in each succeeding message sent by MOBILISER within the same session. If the token and PIN is missing, MOBILISER must send error code to the Bank

3.3.2 Account Management

3.3.2.1 Account List

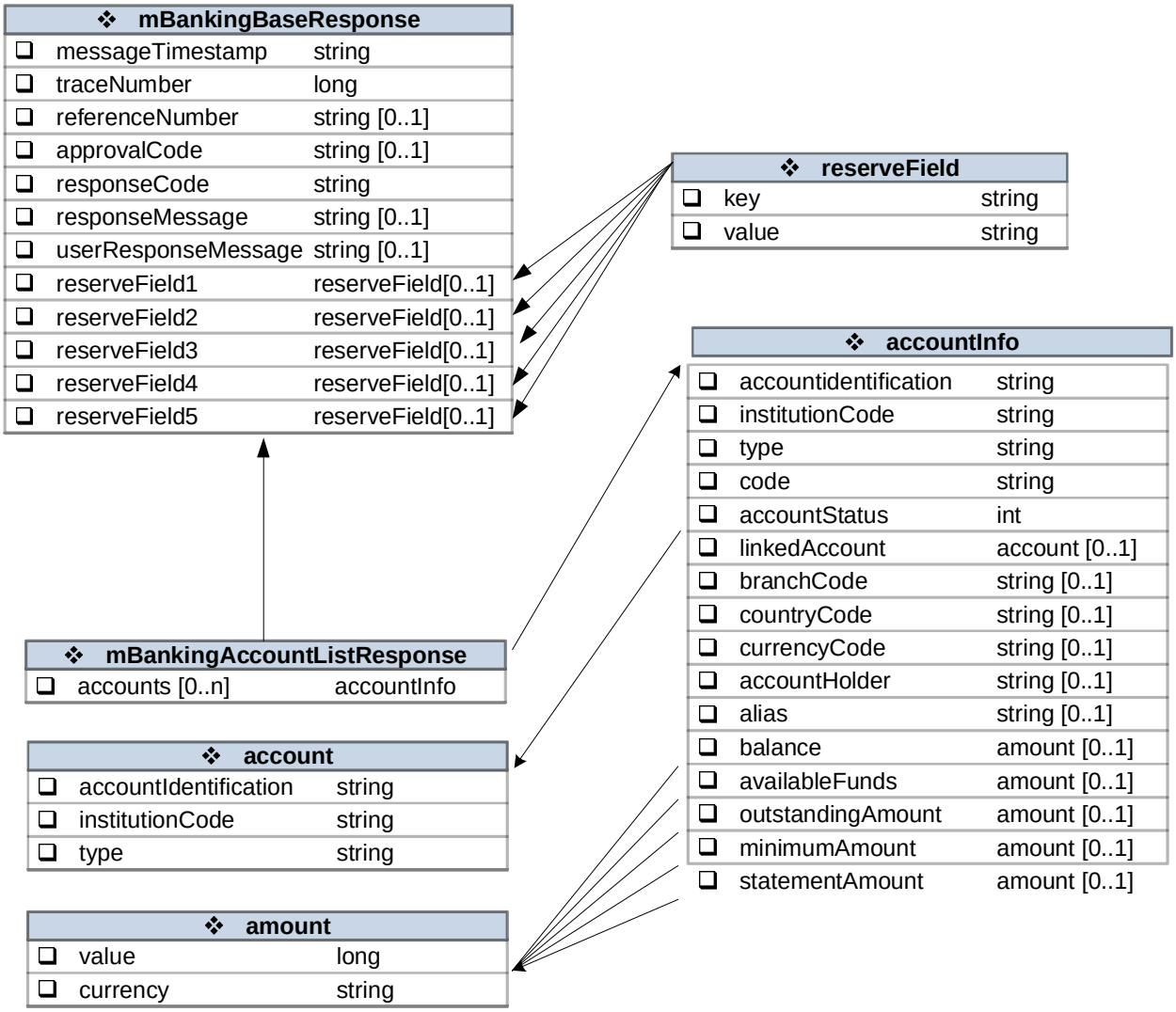
The Account List service is used to retrieve the accounts and credit card that are linked to a consumer.

3.3.2.1.1 Request



Message Element	Type	Occurrence	Description
authentication	Authentication	1..1	This contains the user authentication details (either PIN or token, see Login for details)
maxAccounts	Integer	1..1	The maximum number of accounts to be returned
type	String (2)	0..1	The type of the accounts to be returned

3.3.2.1.2 Response



Message Element		Type	Occurrence	Description
accounts		AccountInfo	0..n	The list of accounts and credit cards that are linked to the submitted consumer
	accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number). Bank will send to MOBILISER the list of accounts and credit cards (maximum of 10) that the consumer has chosen to transact using Mobile Banking

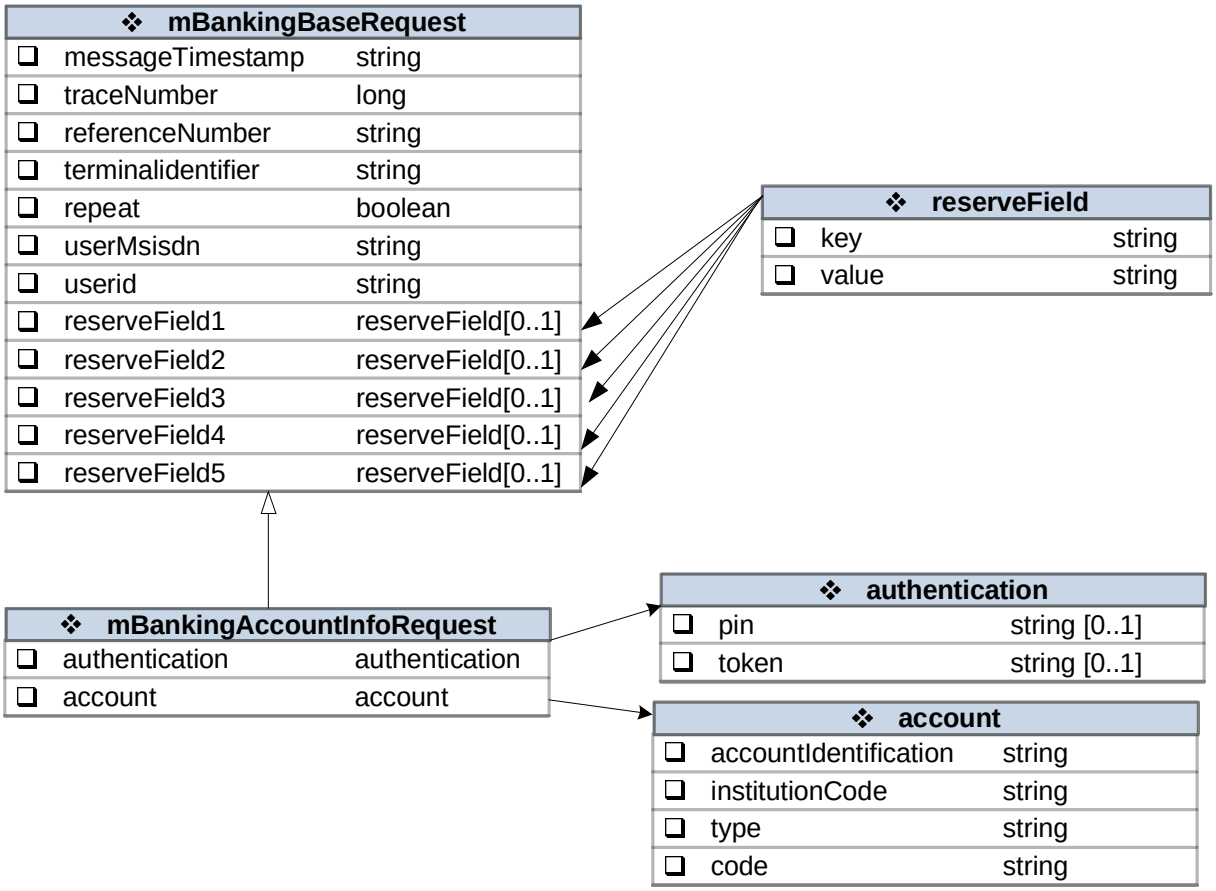
institutionCode		String (4)	1..1	Code of the financial institution where the account or credit card is maintained.
type		String (2)	1..1	The type of the account
code		String (10)	0..1	The account code
accountStatus		Integer	1..1	The account status (0=OK)
linkedAccount		Account	1..1	The linked account (i.e. current account for this debit card)
	accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number) or credit card number
	institutionCode	String (4)	0..1	Code of the financial institution where the account or credit card is maintained .
	type	String (2)	1..1	The type of the account
branchCode		String (0..30)	0..1	Branch code
countryCode		String (3)	1..1	The country of the bank (MY)
currencyCode		String (3)	0..1	Currency the account is maintained in (e.g. EUR)
accountHolder		String (0..30)	0..1	Name of the account holder
alias		String (0..30)	0..1	An alias used for the account (usually assigned by the consumer)
balance		Amount	0..1	The current balance of the account
	value	Long	1..1	The value of the amount in lowest currency unit (e.g. 100 = 1.00 EUR)
	currency	String (3)	1..1	The currency of the amount (e.g. EUR)
availableFunds		Amount	0..1	The currently available funds of the account

outstandingAmount	Amount	0..1	The outstanding amount for the credit card
minimumAmount	Amount	0..1	The minimum amount that the consumer needs to make payment for the credit card
statementAmount	Amount	0..1	The statement amount for the credit card

3.3.2.2 Account Info

The Account Info request is used to retrieve the current balance of a specific account and the credit card amounts (i.e. outstanding amount, minimum amount, statement amount) and the account holder information.

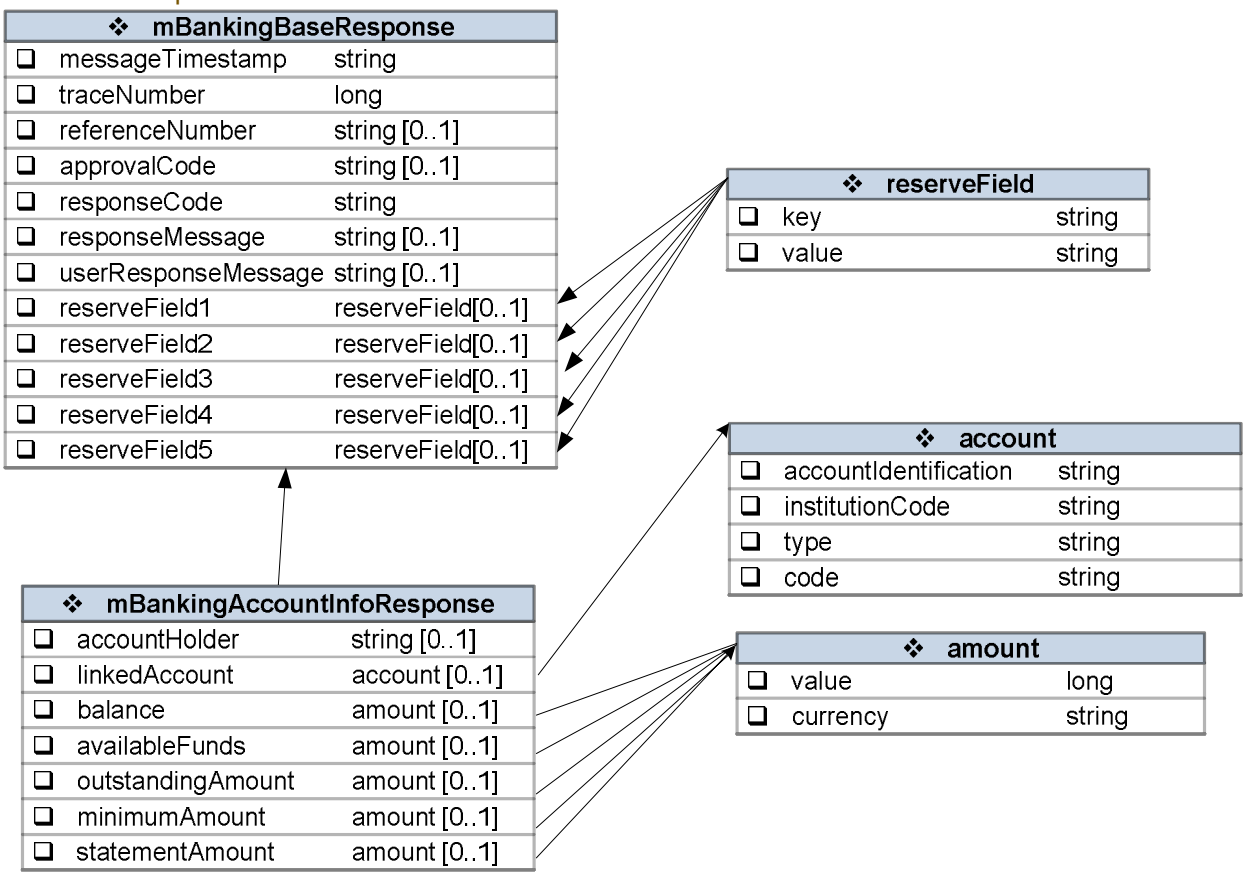
3.3.2.2.1 Request



Message Element		Type	Occurrence	Description
authentication		Authentication	1..1	This contains the user authentication details (either PIN or token, see Login for details)
	pin	String (5..12)	0..1	Either PIN or token is set

	token	String (0..1000)	0..1	Either PIN or token is set
account		Account	1..1	The account or credit card for which the balance is requested
	accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number) or credit card number
	institutionCode	String (4)	0..1	Code of the financial institution where the account or credit card is maintained .
	type	String (2)	1..1	The type of the account
	code	String (10)	0..1	The account code

3.3.2.2.2 Response



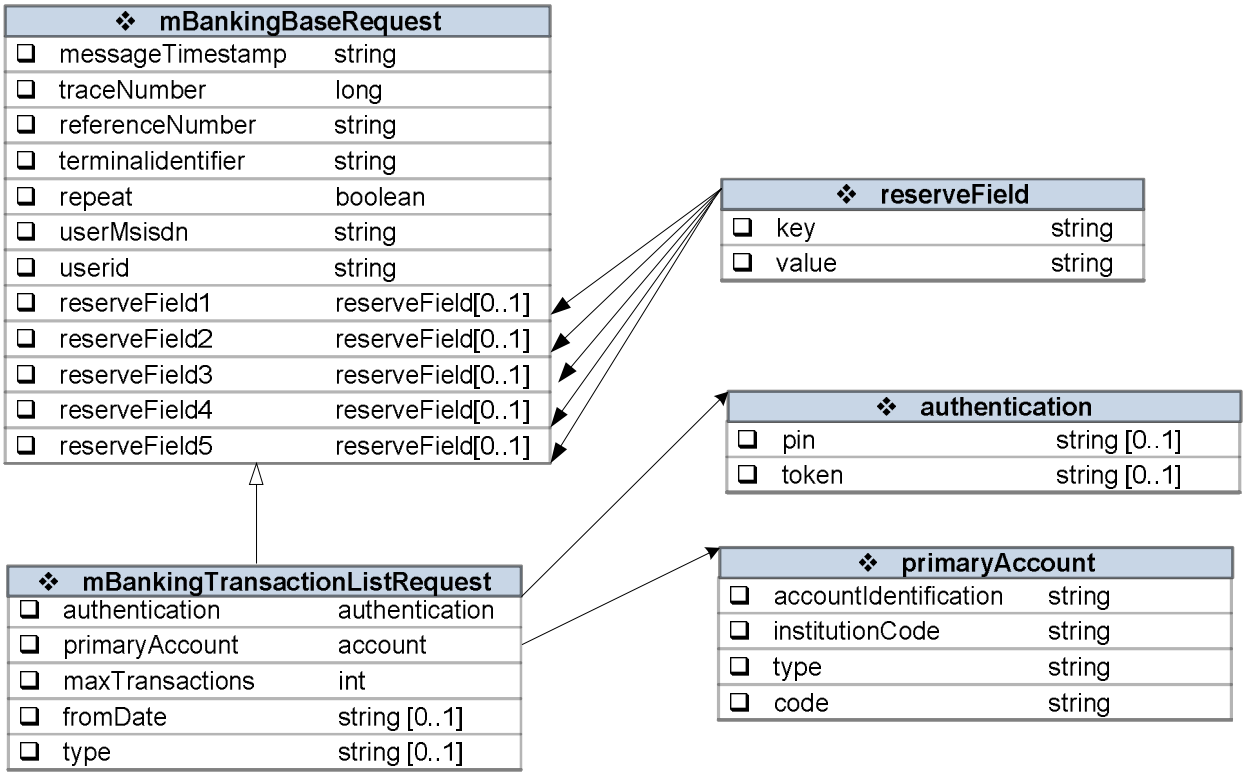
Message Element	Type	Occurrence	Description
accountHolder	String (1..30)	0..1	Name of the account

				holder
linkedAccount		Account	0..1	The linked account (i.e. current account for this debit card)
	accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number) or credit card number
	institutionCode	String (4)	0..1	Code of the financial institution where the account or credit card is maintained .
	type	String (2)	1..1	The type of the account
	code	String (10)	0..1	The account code
balance		Amount	0..1	The current balance of the account
	value	Long	1..1	The value of the amount in lowest currency unit (e.g. 100 = 1.00 EUR)
	currency	String (3)	1..1	The currency of the amount (e.g. EUR)
availableFunds		Amount	0..1	The currently available funds of the account
outstandingAmount		Amount	0..1	The outstanding amount for the credit card
minimumAmount		Amount	0..1	The minimum amount that the consumer needs to make payment for the credit card
statementAmount		Amount	0..1	The statement amount for the credit card

3.3.2.3 Transaction History

The Transaction History request is used to retrieve the transactions on a specific account including debit and credit cards.

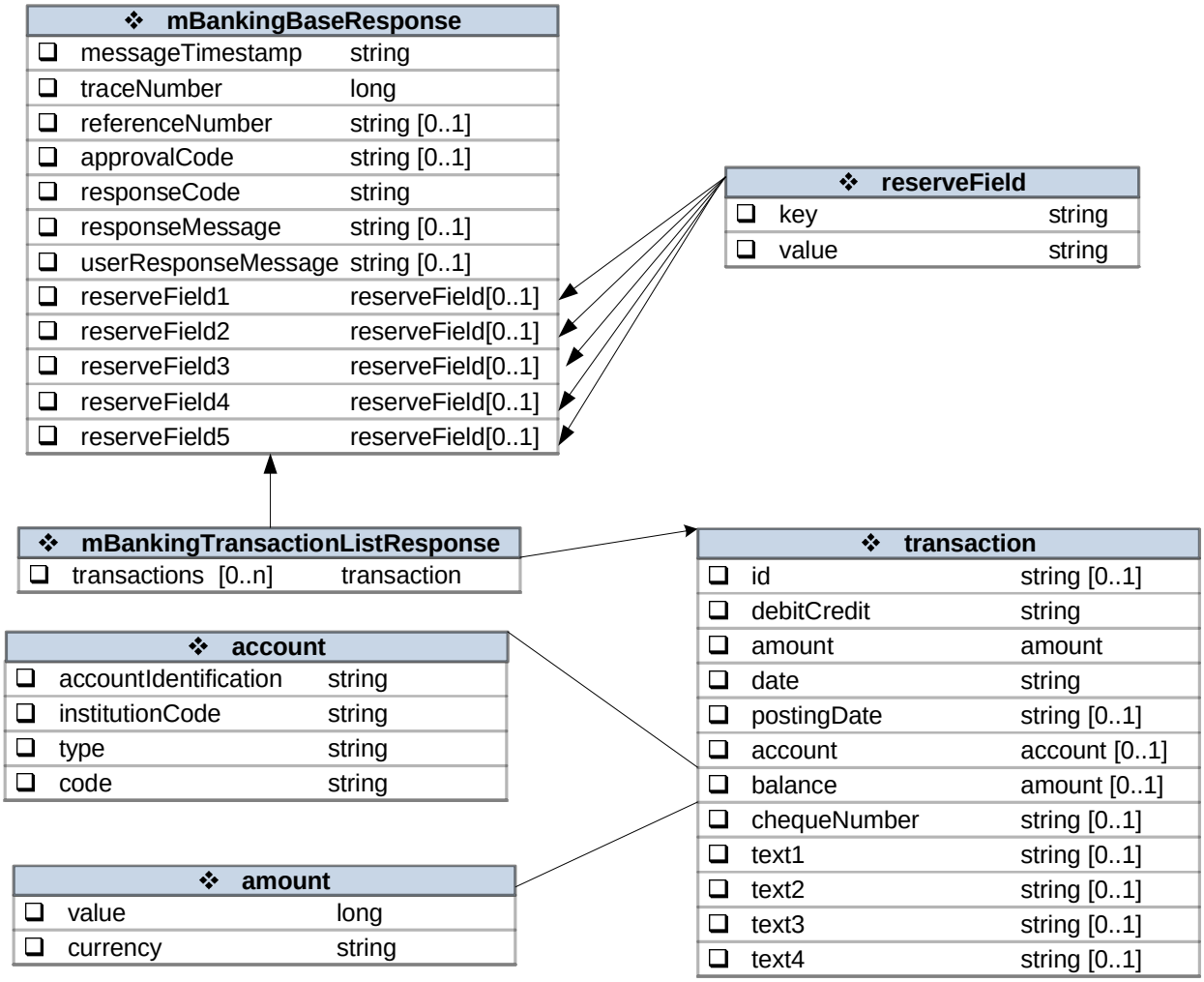
3.3.2.3.1 Request



Message Element		Type	Occurrence	Description
authentication		Authentication	1..1	This contains the user authentication details (either PIN or token, see Login for details)
	pin	String (5..12)	0..1	Either PIN or token is set
	token	String (0..1000)	0..1	Either PIN or token is set
primaryAccount		Account	1..1	The account or credit card for which the transaction history is requested
	accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number) or credit card number
	institutionCode	String (4)	0..1	Code of the financial institution where the account or credit card is maintained.
	type	String (2)	1..1	The type of the account
	code	String (10)	0..1	The account code

maxTransactions	Integer	1..1	The maximum number of transactions to be returned
fromDate	String (14)	0..1	If the date is current date, then the Bank is to return only current day's transactions. If this field is blank, bank is to return history transactions ('YYYYMMDDHHMMSS')
type	String (2)	0..1	The type of the account for the transactions to be returned.

3.3.2.3.2 Response



Message Element	Type	Occurrence	Description
transactions	Transaction	0..n	The list of transactions

	id	String (0..30)	0..1	(Unique) Transaction identifier
	debitCredit	String (1)	1..1	An indicator if the transaction was a debit ('D') or credit ('C')
	amount	Amount	1..1	The amount of the transaction
date		String (14)	1..1	The date and time of the transaction ('YYYYMMDDHHMMSS')
postingDate		String (14)	0..1	The date and time for the posting ('YYYYMMDDHHMMSS')
account		Account	0..1	The account or credit card on which this transaction was processed
	accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number) or credit card number
	institutionCode	String (4)	0..1	Code of the financial institution where the account or credit card is maintained .
	type	String (2)	1..1	The type of the account
	code	String (10)	0..1	The account code

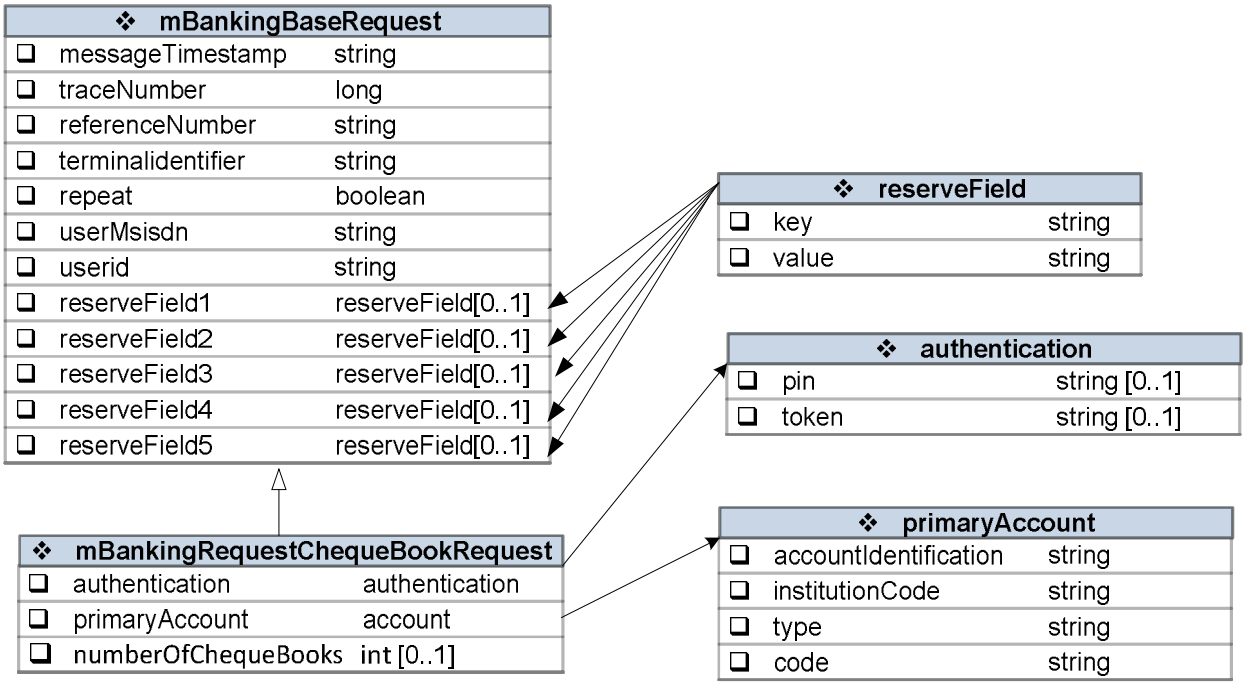
balance	Amount	0..1	The account balance after the transaction
chequeNumber	String (0..30)	0..1	The cheque number if available
text1	String (0..80)	0..1	An optional reference text
text2	String (0..80)	0..1	An optional reference text
text3	String (0..80)	0..1	An optional reference text
text4	String (0..80)	0..1	An optional reference text

3.3.3 Cheque Management

3.3.3.1 Request Cheque Book

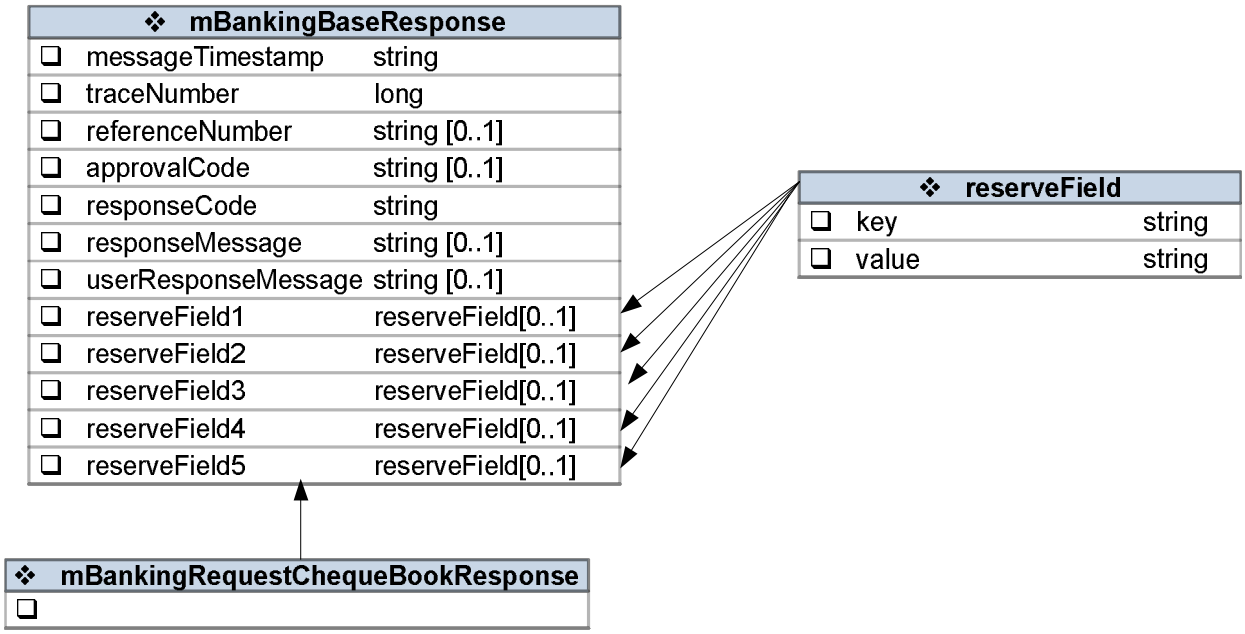
The Request Cheque Book request is to send consumer's request for new cheque books to the bank.

3.3.3.1.1 Request



Message Element		Type	Occurrence	Description
authentication		Authentication	1..1	This contains the user authentication details (either PIN or token, see Login for details)
	pin	String (5..12)	0..1	Either PIN or token is set
	token	String (0..1000)	0..1	Either PIN or token is set
primaryAccount		Account	1..1	The account or credit card for which the transaction history is requested
	accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number) or credit card number
	institutionCode	String (4)	0..1	Code of the financial institution where the account or credit card is maintained .
	type	String (2)	1..1	The type of the account
	code	String (10)	0..1	The account code
numberOfChequeBooks		Integer	0..1	The number of cheque books requested by consumer

3.3.3.1.2 Response

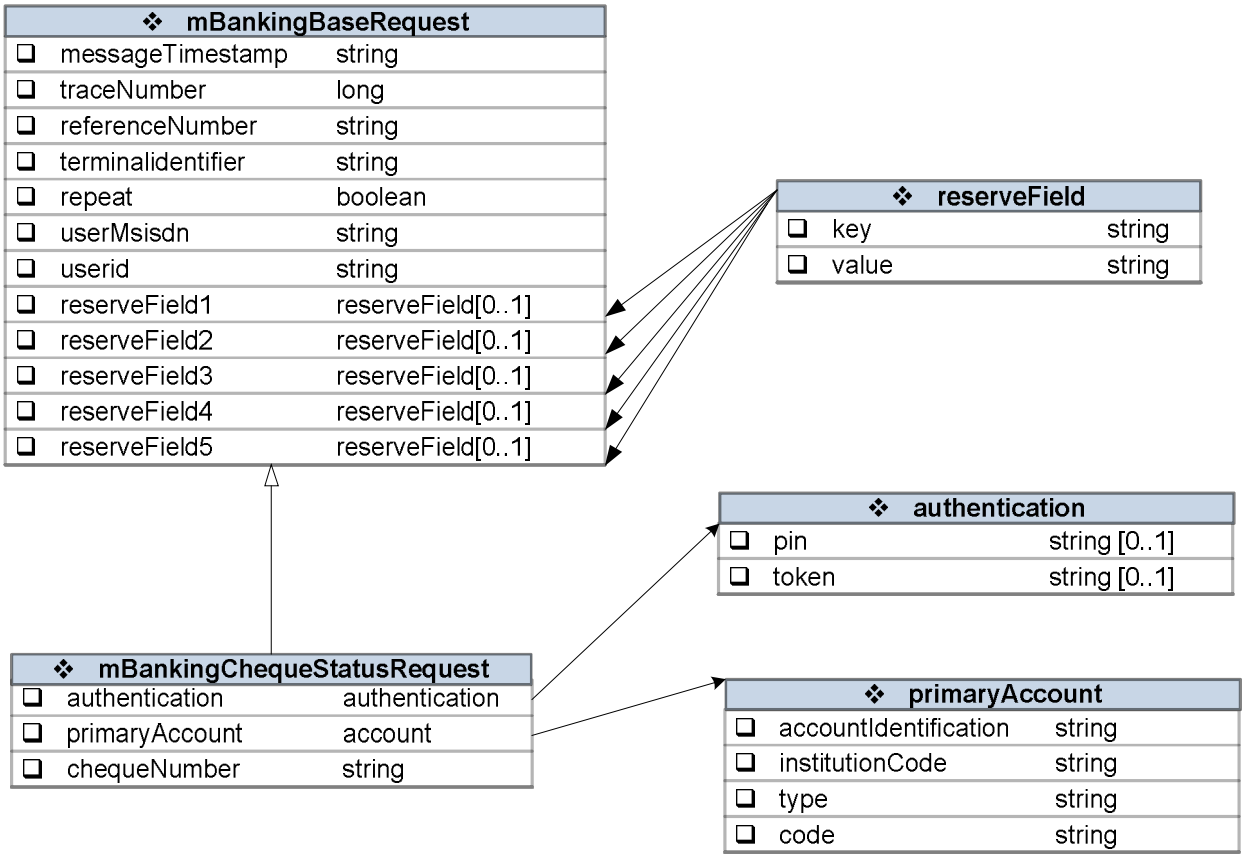


No specific parameters required.

3.3.3.2 Cheque Status

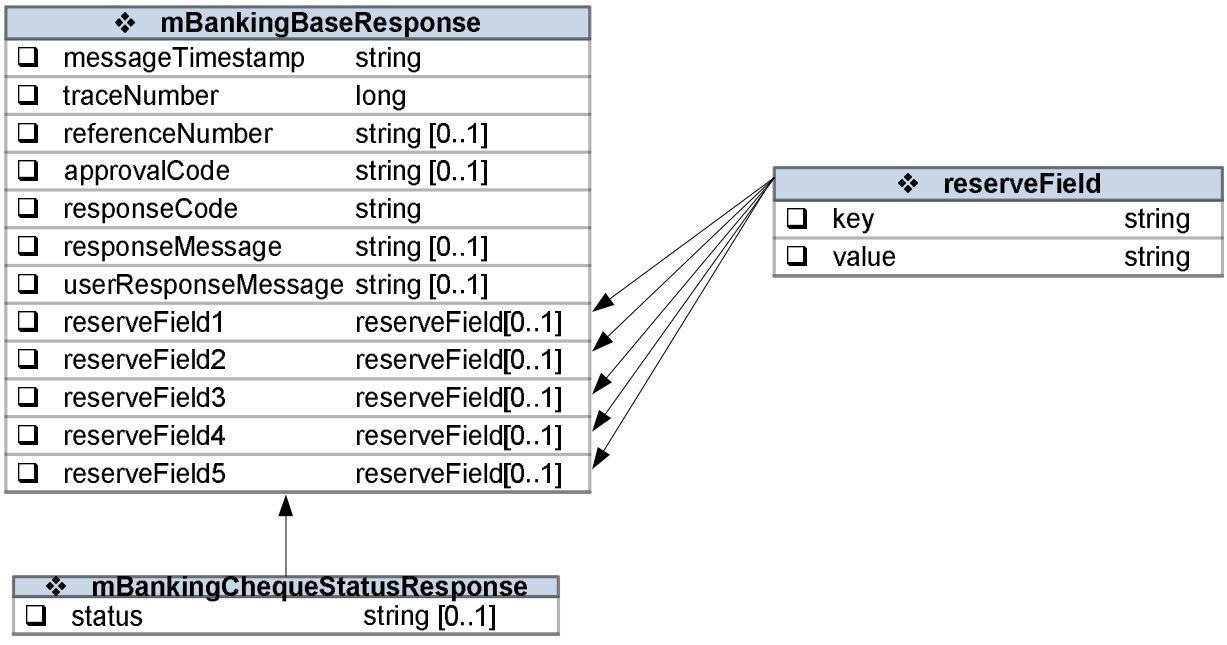
This request is used to enquire on the status of a cheque. The status information will be passed on to the consumer without modifications.

3.3.3.2.1 Request



Message Element		Type	Occurrence	Description
authentication		Authentication	1..1	This contains the user authentication details (either PIN or token, see Login for details)
	pin	String (5..12)	0..1	Either PIN or token is set
	token	String (0..1000)	0..1	Either PIN or token is set
primaryAccount		Account	1..1	The account or credit card for which the transaction history is requested
	accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number) or credit card number
	institutionCode	String (4)	0..1	Code of the financial institution where the account or credit card is maintained.
	type	String (2)	1..1	The type of the account
	code	String (10)	0..1	The account code
chequeNumber		String (1..30)	1..1	The (alpha-numeric) number of the cheque

3.3.3.2.2 Response

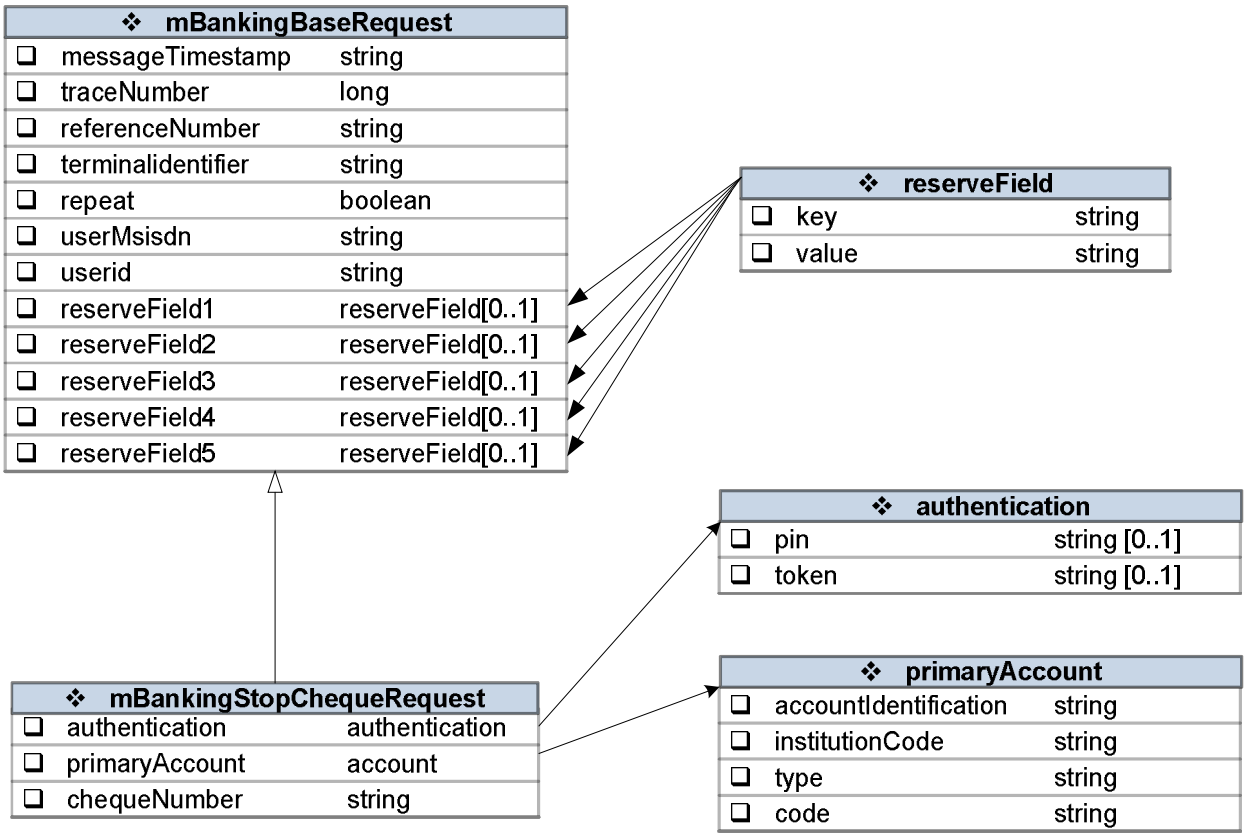


Message Element	Type	Occurrence	Description
status	String (0..10)	0..1	The status of the cheque

3.3.3.3 Cheque Stop

This request can be used to stop a particular cheque based on the cheque number.

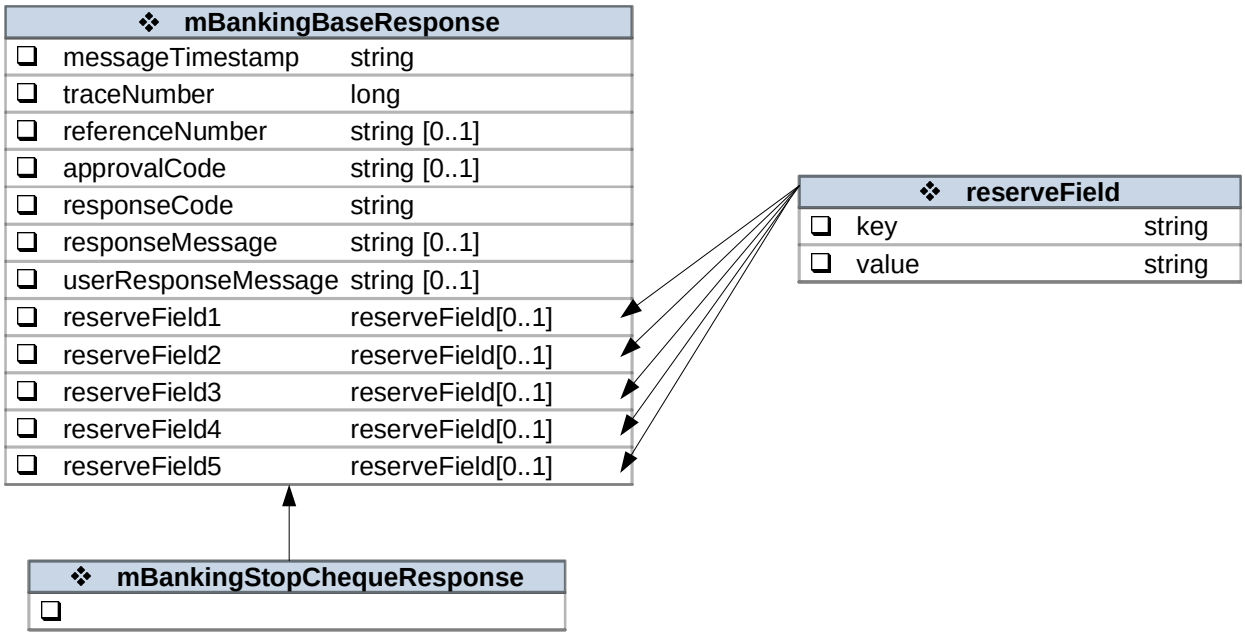
3.3.3.3.1 Request



Message Element		Type	Occurrence	Description
authentication		Authentication	1..1	This contains the user authentication details (either PIN or token, see Login for details)
	pin	String (5..12)	0..1	Either PIN or token is set
	token	String (0..1000)	0..1	Either PIN or token is set
primaryAccount		Account	1..1	The account or credit card for which the transaction history is requested
	accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number) or credit card number

institutionCode	String (4)	0..1	Code of the financial institution where the account or credit card is maintained .
type	String (2)	1..1	The type of the account
code	String (10)	0..1	The account code
chequeNumber	String (1..30)	1..1	The (alpha-numeric) number of the cheque

3.3.3.3.2 Response



No specific parameters required.

3.3.4 Transfers and Bill Payment

The consumer can make several kinds of transfers:

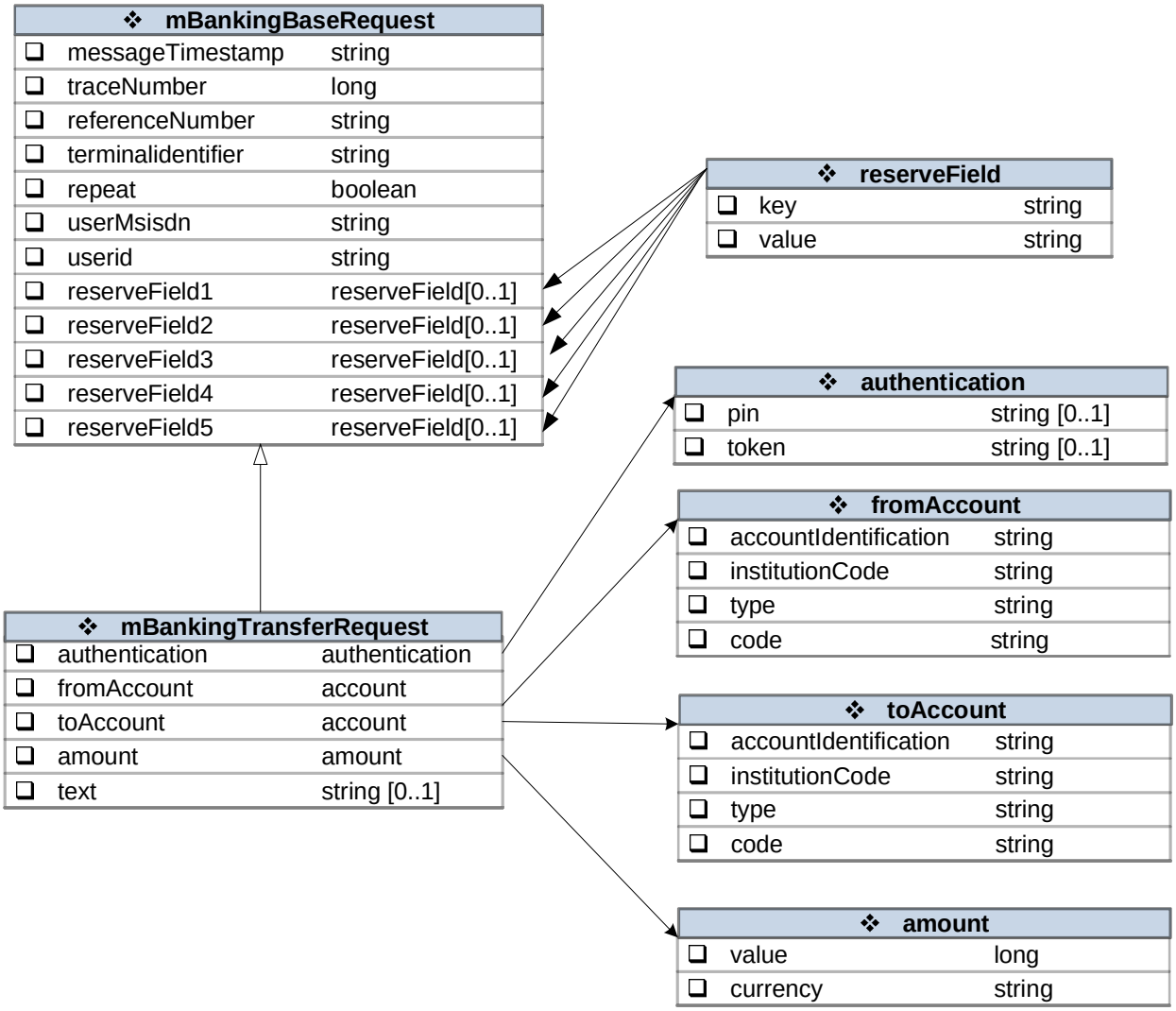
- Own account transfer: transfer from one account to another account both owned by the same consumer
- Intra bank transfer: transfer from a consumer account to a registered 3rd party account in the same bank
- Inter-bank transfer: transfer from a consumer account to a registered 3rd party account in a different bank

The consumer can also make bill payment to registered billers.

3.3.4.1 Own Account Transfer

The same API call is used for the own account transfer and credit card payment as both account and credit card are owned by the same consumer.

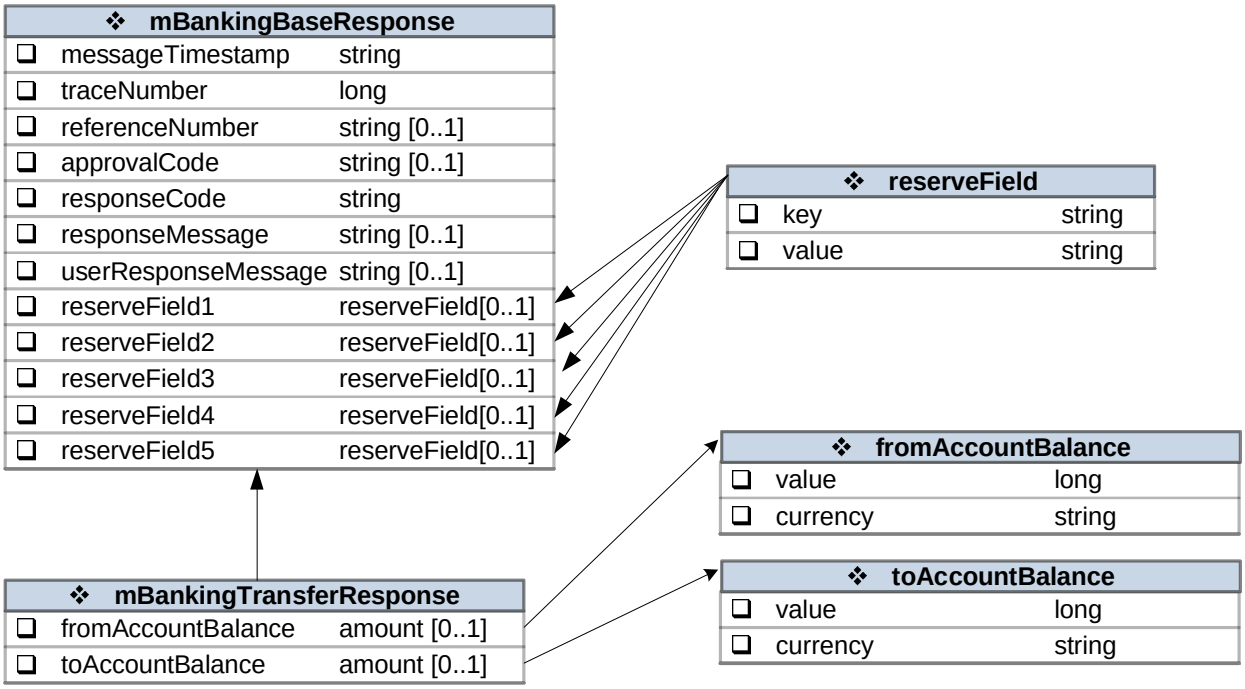
3.3.4.1.1 Request



Message Element		Type	Occurrence	Description
authentication		Authentication	1..1	This contains the user authentication details (either PIN or token, see Login for details)
	pin	String (5..12)	0..1	Either PIN or token is set
	token	String (0..1000)	0..1	Either PIN or token is set
fromAccount		Account	1..1	The account that is to be debited
	accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number) or credit card number

	institutionCode	String (4)	0..1	Code of the financial institution where the account or credit card is maintained.
	type	String (2)	1..1	The type of the account
	code	String (10)	0..1	The account code
toAccount	Account	1..1	The account that is to be credited or the credit card for which payment is being made	
	accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number) or credit card number
	institutionCode	String (4)	0..1	Code of the financial institution where the account or credit card is maintained .
	type	String (2)	1..1	The type of the account
	code	String (10)	0..1	The account code
amount	Amount	1..1	The amount that is to be transferred or the payment amount	
	value	Long	1..1	The value of the amount in lowest currency unit (e.g. 100 = 1.00 EUR)
	currency	String (3)	1..1	The currency of the amount (e.g. EUR)
text	String (0..80)	0..1	An optional reference text that can be entered by the consumer (if supported in the UI)	

3.3.4.1.2 Response

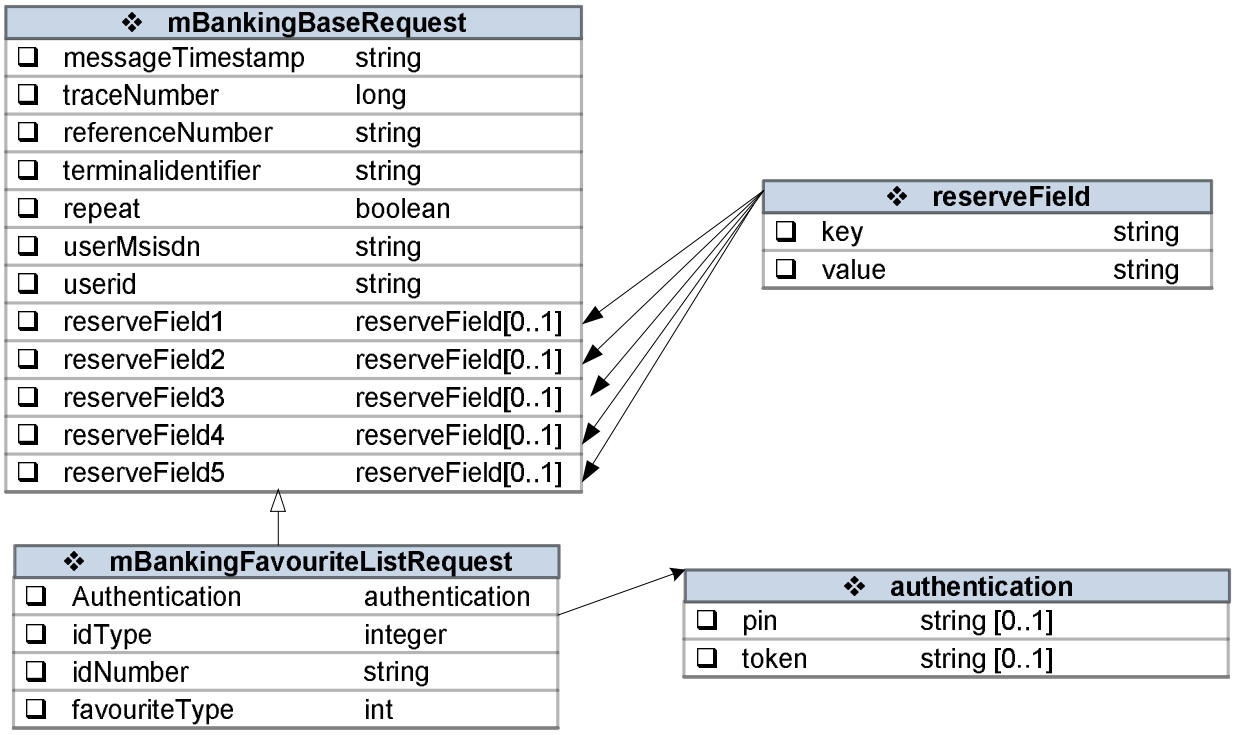


Message Element	Type	Occurrence	Description
fromAccountBalance	Amount	0..1	The account balance of the payer account
value	Long	1..1	The value of the amount in lowest currency unit (e.g. 100 = 1.00 EUR)
currency	String (3)	1..1	The currency of the amount (e.g. EUR)
toAccountBalance	Amount	0..1	The account balance of the payee account
value	Long	1..1	The value of the amount in lowest currency unit (e.g. 100 = 1.00 EUR)
currency	String (3)	1..1	The currency of the amount (e.g. EUR)

3.3.4.2 Transfer to Registered 3rd Party Account List

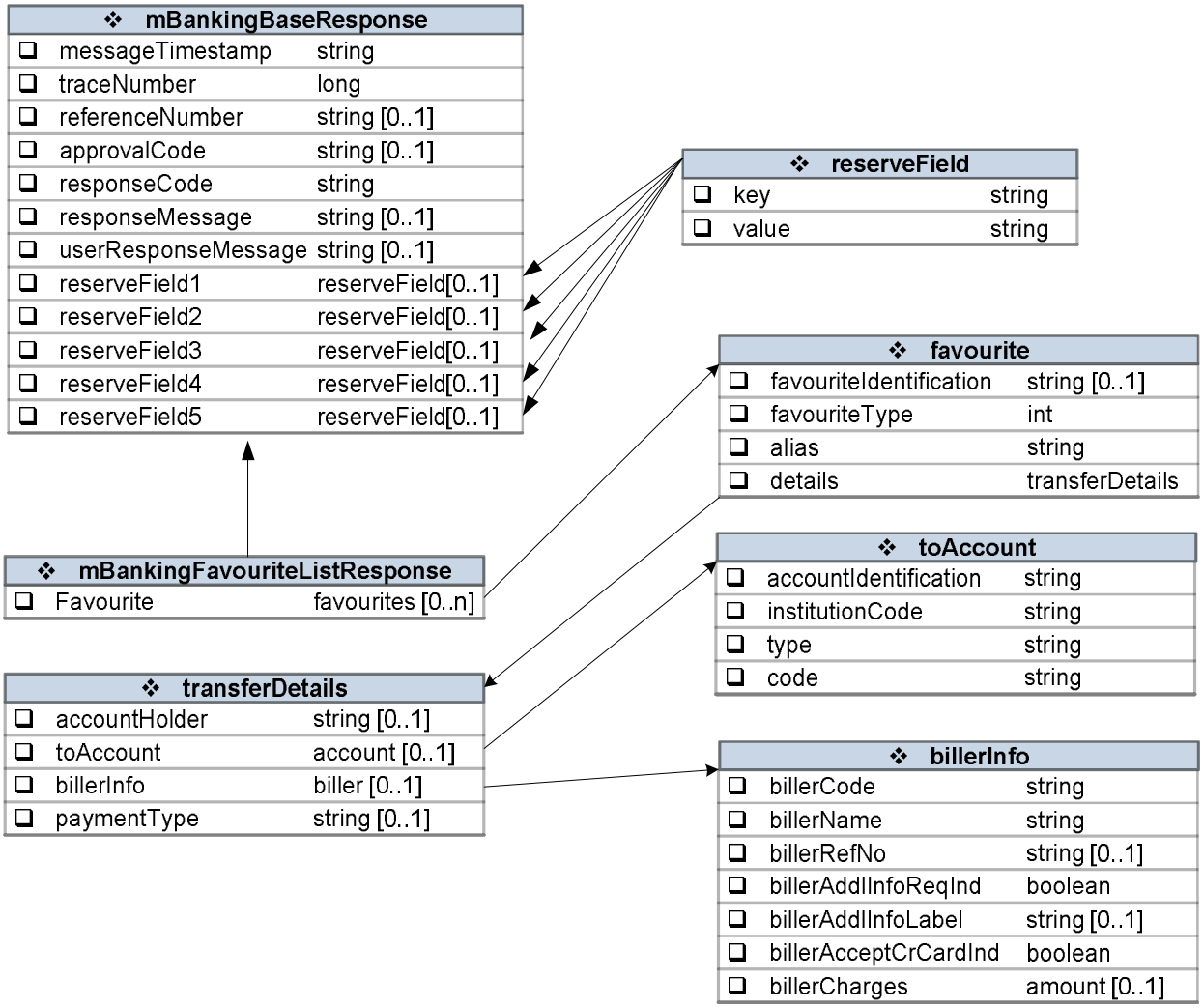
The list of registered 3rd party beneficiaries is maintained at the bank. MOBILISER mobile banking will retrieve the list from the bank. Depending on the specified type of registered 3rd party, this can be used for account transfers and also bill payments.

3.3.4.2.1 Request



Message Element		Type	Occurrence	Description
authentication		Authentication	1..1	This contains the user authentication details (either PIN or token, see Login for details)
	pin	String (5..12)	0..1	Either PIN or token is set
	token	String (0..1000)	0..1	Either PIN or token is set
idType		Integer	1..1	The identifier for the type of ID
idNumber		String (1..30)	1..1	ID number of the consumer
favouriteType		Integer	1..1	The type of favourites that are requested

3.3.4.2.2 Response



Message Element	Type	Occurrence	Description
favourites	Favourite	0..n	The list of favourites is stored in the user's profile with a given type. The maximum number of favourites would be 10 for each type.
favouriteIdentification	String 0..30	1..1	A unique identification for the favourite that is assigned by the bank. This identification will be used at a later stage to make the transfer to
favouriteType	Integer	1..1	The type of favourite

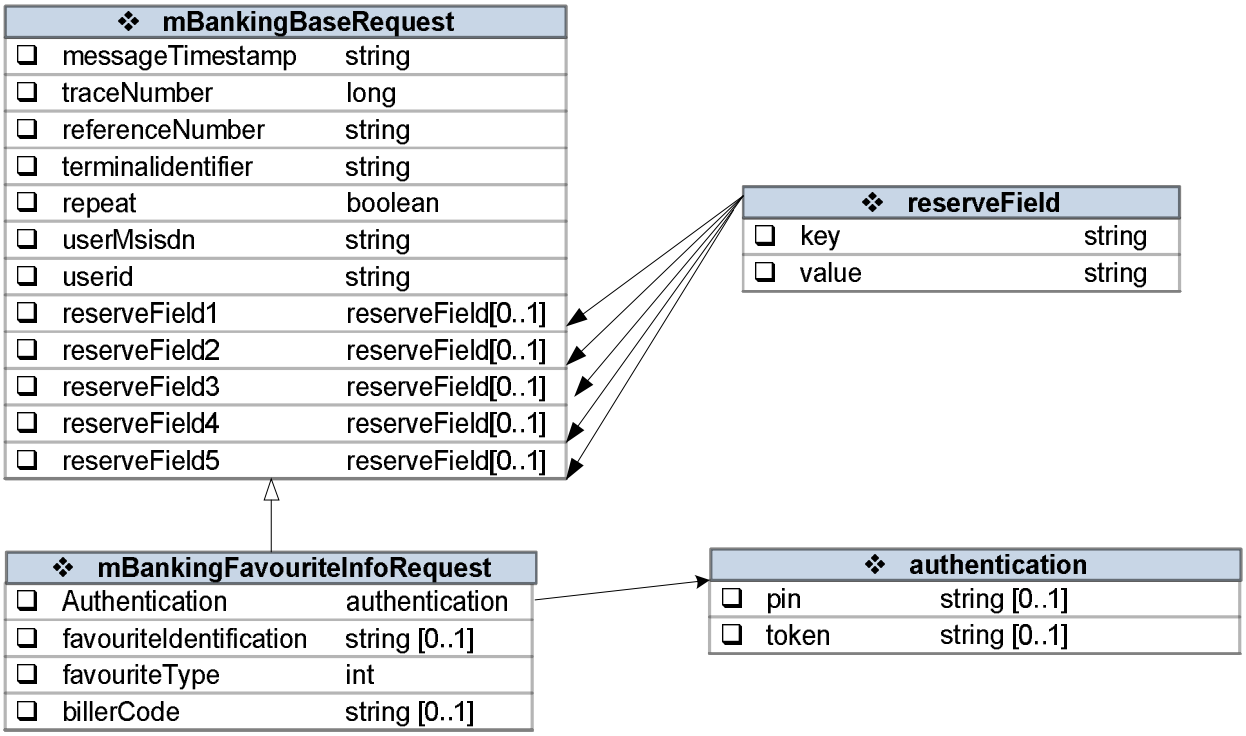
alias		String 1..30	1..1	The nickname for this favourite that the user has registered and is familiar with
details		details	0..n	Either toAccount or toBiller must be provided
	accountHolder	String (0..30)	0..1	Name of the account holder
	toAccount	Account	0..1	Additional information describing the favourite (registered 3rd party account)
	accountIdentification	String (1..30)	1..1	Account number to transfer to
	InstitutionCode	String (4)	1..1	Code of the financial institution where the account or credit card is maintained .
	type	String (2)	1..1	The type of the account, as returned by the Account List response
	code	String (10)	0..1	The account code
	billerInfo	String	0..1	Additional information describing the registered bill payment
	billerCode	String (1..30)	1..1	Biller Code
	billerName	String (1..30)	1..1	Biller Name
	billerRefNo	String (1..30)	1..1	Biller Reference Number
	billerAddlInfoReqInd	Boolean	1..1	Indicator if biller requires additional information
	billerAddlInfoLabel	String (0..30)	0..1	Field label if biller requires additional information
	billerAcceptCrCardInd	Boolean	1..1	Indicator if biller accepts credit card (defaults to 'false')
	billerCharges	Amount	0..1	Biller charges

paymentType	String (5)	0..1	Payment type

3.3.4.3 Retrieve Registered 3rd Party Account Info

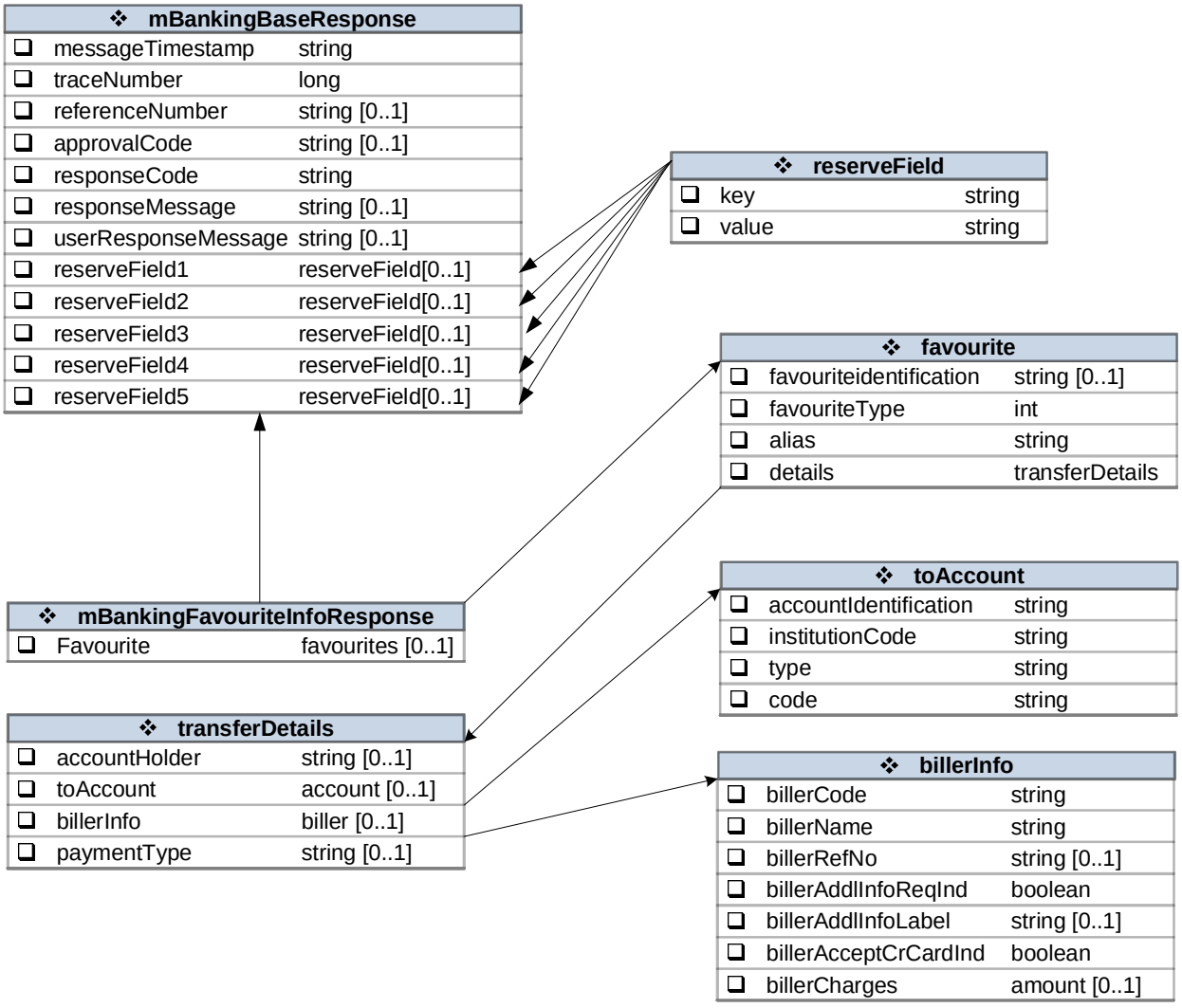
The 3rd Party Account Info request is used to retrieve detail information on the 3rd party account.

3.3.4.3.1 Request



Message Element		Type	Occurrence	Description
authentication		Authentication	1..1	This contains the user authentication details (either PIN or token, see Login for details)
	pin	String (5..12)	0..1	Either PIN or token is set
	token	String (0..1000)	0..1	Either PIN or token is set
favouriteIdentification		String (0..30)	1..1	A unique identification for the favourite that is assigned by the bank. This identification will be used at a later stage to make the transfer to
favouriteType		Integer	1..1	The type of favourites that are requested
billerCode		String (1..30)	0..1	Biller Code

3.3.4.3.2 Response



Message Element	Type	Occurrence	Description
favourites	Favourite	0..1	The list of favourites is stored in the user's profile with a given type. The maximum number of favourites would be 10 for each type.
favouriteIdentification	String 0..30	1..1	A unique identification for the favourite that is assigned by the bank. This identification will be used at a later stage to make the transfer to

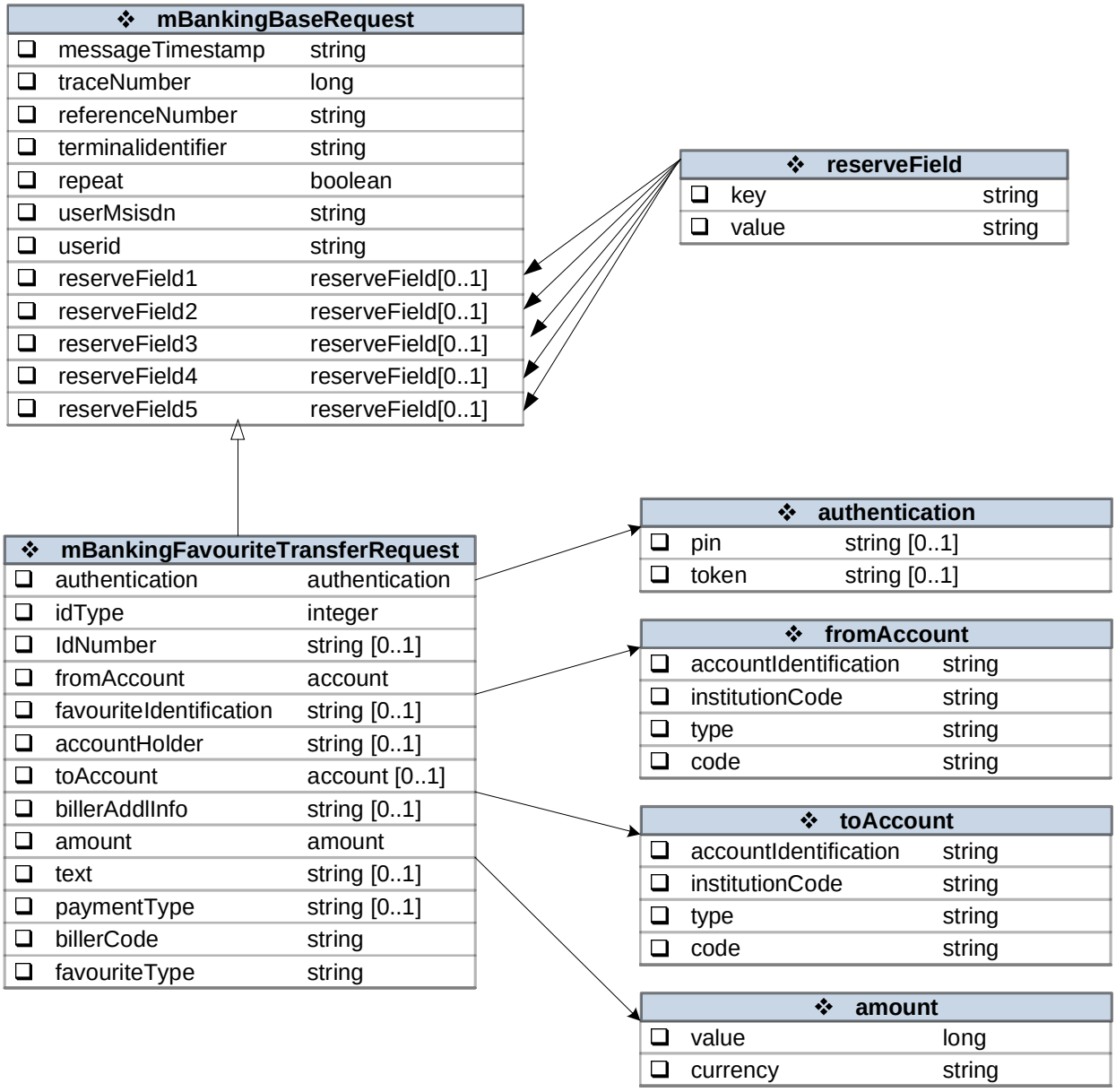
favouriteType			Integer	1..1	The type of favourite
alias			String 1..30	1..1	The nickname for this favourite that the user has registered and is familiar with
details			details	0..n	Either toAccount or toBiller must be provided
	accountHolder		String (0..30)	0..1	Name of the account holder
	toAccount		Account	0..1	Additional information describing the favourite (registered 3rd party account)
		accountIdentification	String (1..30)	1..1	Account number to transfer to
		InstitutionCode	String (4)	1..1	Code of the financial institution where the account or credit card is maintained.
		type	String (2)	1..1	The type of the account, as returned by the Account List response
		code	String (10)	0..1	The account code
	billerInfo		String	0..1	Additional information describing the registered bill payment
		billerCode	String (1..30)	1..1	Biller Code
		billerName	String (1..30)	1..1	Biller Name
		billerRefNo	String (1..30)	1..1	Biller Reference Number
		billerAddlInfoReqInd	Boolean	1..1	Indicator if biller requires additional information
		billerAddlInfoLabel	String (0..30)	0..1	Field label if biller requires additional information
		billerAcceptCrCardInd	Boolean	1..1	Indicator if biller accepts credit card (defaults to

			'false')
billerCharges	Amount	0..1	Biller charges
paymentType	String (5)	0..1	Payment type

3.3.4.4 Transfer to Favorite or Unregistered 3rd Party

This service call makes the actual transfer. The destination can be specified by the “favouriteidentification” that is returned by the bank from the previous call. The same API call is used for the intra bank transfer, interbank transfer and bill payment as these services refer to the favourite list.
The same API call can also be used for transfer to unregistered 3rd party (intra bank, interbank). The “toAccount” message elements would be populated instead of “favourtiteidentification”.

3.3.4.4.1 Request

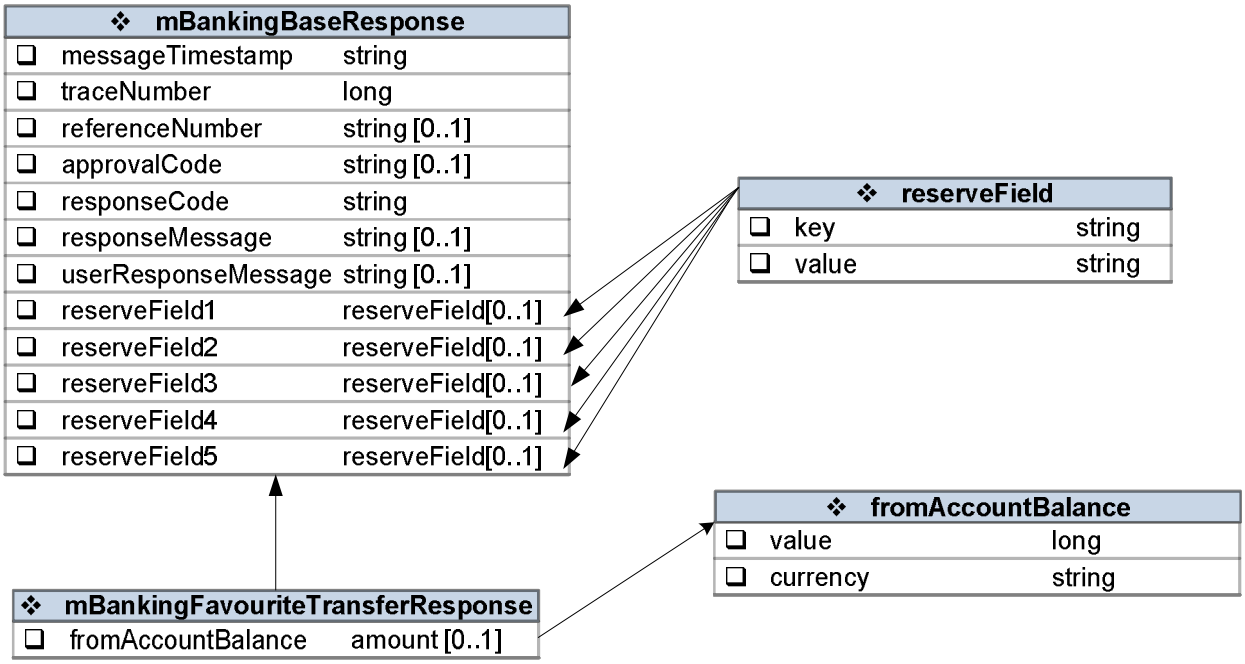


Message Element		Type	Occurrence	Description
authentication		Authentication	1..1	This contains the user authentication details (either PIN or token, see Login for details)
	pin	String (5..12)	0..1	Either PIN or token is set
	token	String (0..1000)	0..1	Either PIN or token is set
idType		Integer	1..1	The identifier for the type of ID
idNumber		String (1..30)	1..1	ID number of the consumer
fromAccount		Account	1..1	The account or credit card that is to be debited
	accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number) or credit card number
	institutionCode	String (4)	1..1	Code of the financial institution where the account or credit card is maintained.
	type	String (2)	1..1	The type of the account, as returned by the Account List response
	code	String (10)	0..1	The account code
favouriteIdentification		String (0..30)	1..1	A unique identification for the favourite that is assigned by the bank. This identification was provided by the bank in a previous call.

accountHolder		String (0..30)	0..1	Name of the account holder
toAccount		Account	0..1	For open transfer, the account to transfer to.
	accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number) or credit card number
	institutionCode	String (4)	1..1	Code of the financial institution where the account or credit card is maintained .
	type	String (2)	1..1	The type of the account, as returned by the Account List response
	code	String (10)	0..1	The account code
billerAddlInfo		String (0..30)	0..1	Additional biller info entered by consumer
amount		Amount	1..1	The amount that is to be transferred
	value	Long	1..1	The value of the amount in lowest currency unit (e.g. 100 = 1.00 EUR)
	currency	String (3)	1..1	The currency of the amount (e.g. EUR)
text		String (0..80)	0..1	An optional reference text that can be entered by the user (if supported in the UI)
paymentType		String 5	0..1	Payment type
billerCode		String (1..30)	0..1	Biller Code

favouriteType	Integer	0..1	The type of favourite

3.3.4.4.2 Response



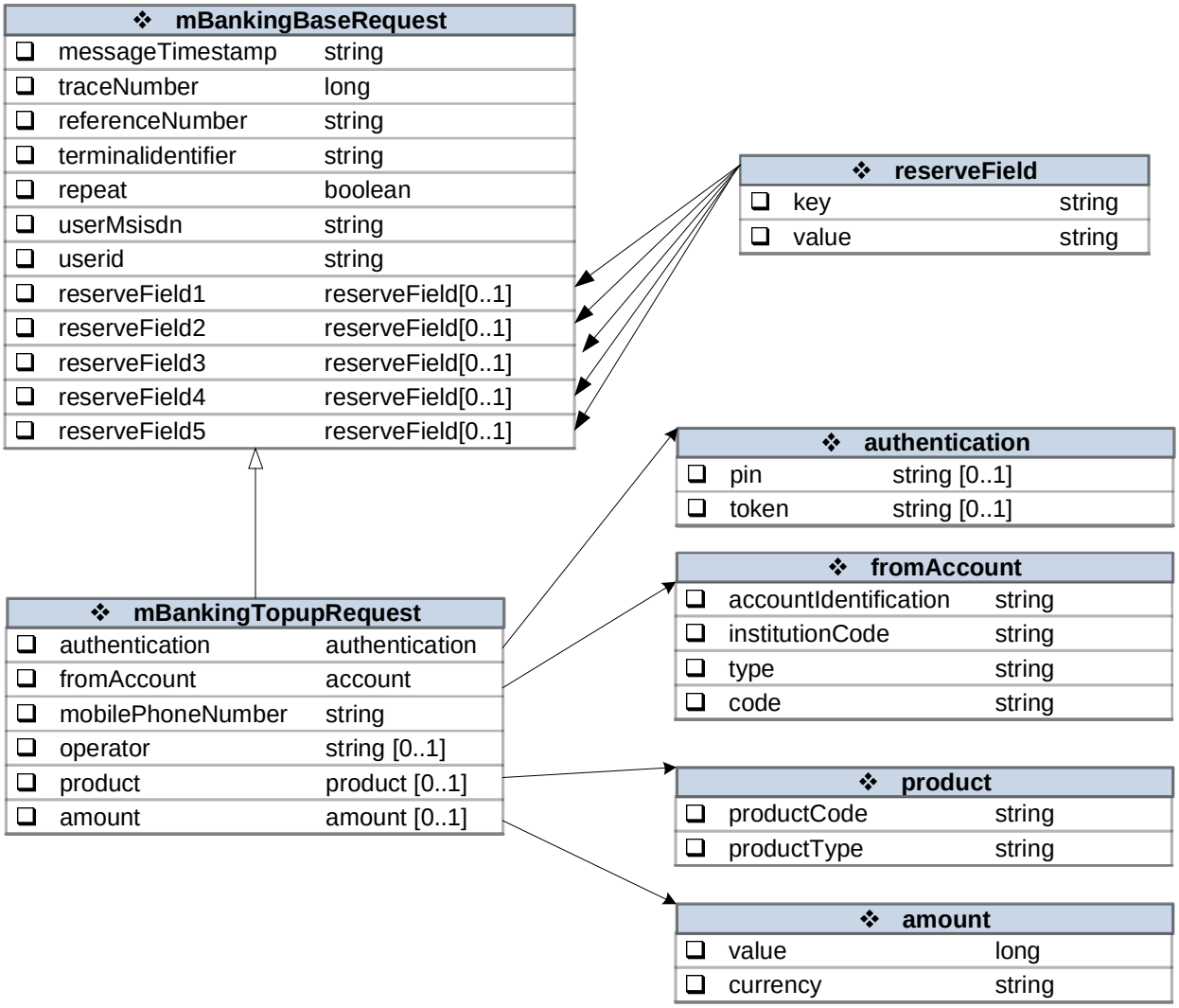
Message Element		Type	Occurrence	Description
fromAccountBalance		Amount	0..1	The account balance of the payer account
	value	Long	1..1	The value of the amount in lowest currency unit (e.g. 100 = 1.00 EUR)
	currency	String (3)	1..1	The currency of the amount (e.g. EUR)

3.3.5 Mobile Reload

The Mobile Reload service is used to transfer funds from the specified account to the airtime account of the given mobile phone number.

3.3.5.1 Topup

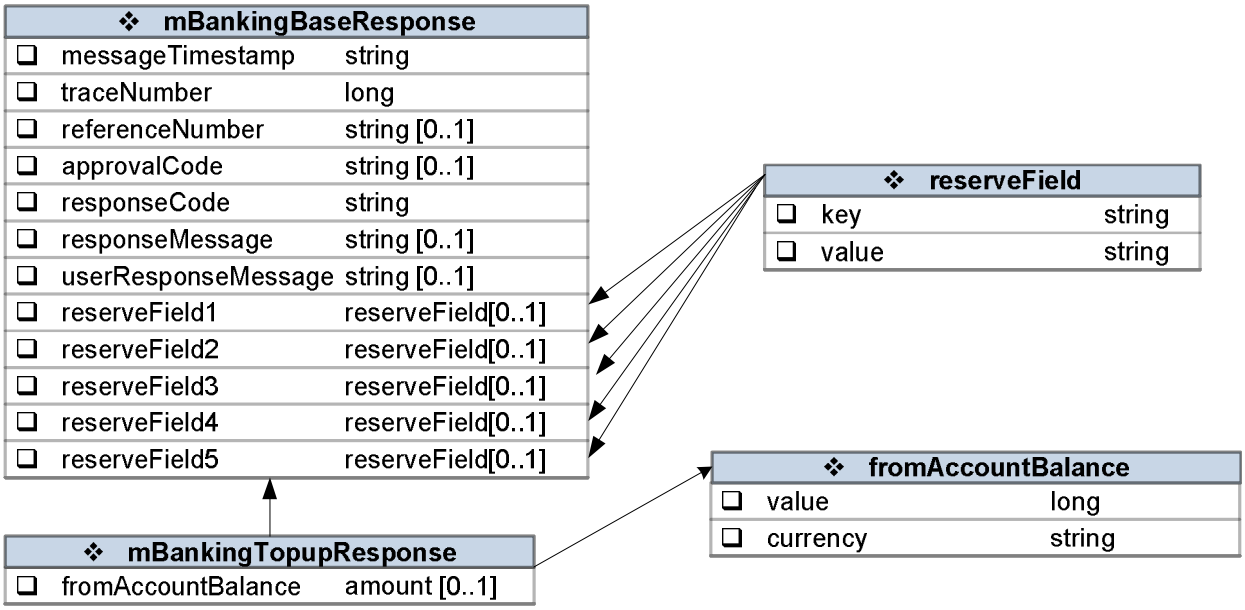
3.3.5.1.1 Request



Message Element		Type	Occurrence	Description
authentication		Authentication	1..1	This contains the user authentication details (either PIN or token, see Login for details)
	pin	String (5..12)	0..1	Either PIN or token is set
	token	String (0..1000)	0..1	Either PIN or token is set
fromAccount		Account	1..1	The account or credit card that is to be debited

	accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number) or credit card number
	institutionCode	String (4)	1..1	Code of the financial institution where the account or credit card is maintained .
	type	String (2)	1..1	The type of the account, as returned by the Account List response
	code	String (10)	0..1	The account code
mobilePhoneNumber		String (10..11)	1..1	The mobile phone number to top up
operator		String (0..30)	0..1	The mobile phone operator
product		Product	0..1	The product that is to be topped up
	productCode	String (1..30)	1..1	The bank specific product code
	productType	String (1..30)	1..1	The bank specific product type
amount		Amount	1..1	The amount that is to be transferred
	value	Long	1..1	The value of the amount in lowest currency unit (e.g. 100 = 1.00 EUR)
	currency	String (3)	1..1	The currency of the amount (e.g. EUR)

3.3.5.1.2 Response



Message Element		Type	Occurrence	Description
fromAccountBalance		Amount	0..1	The account balance of the payer account
	value	Long	1..1	The value of the amount in lowest currency unit (e.g. 100 = 1.00 EUR)
	currency	String (3)	1..1	The currency of the amount (e.g. EUR)

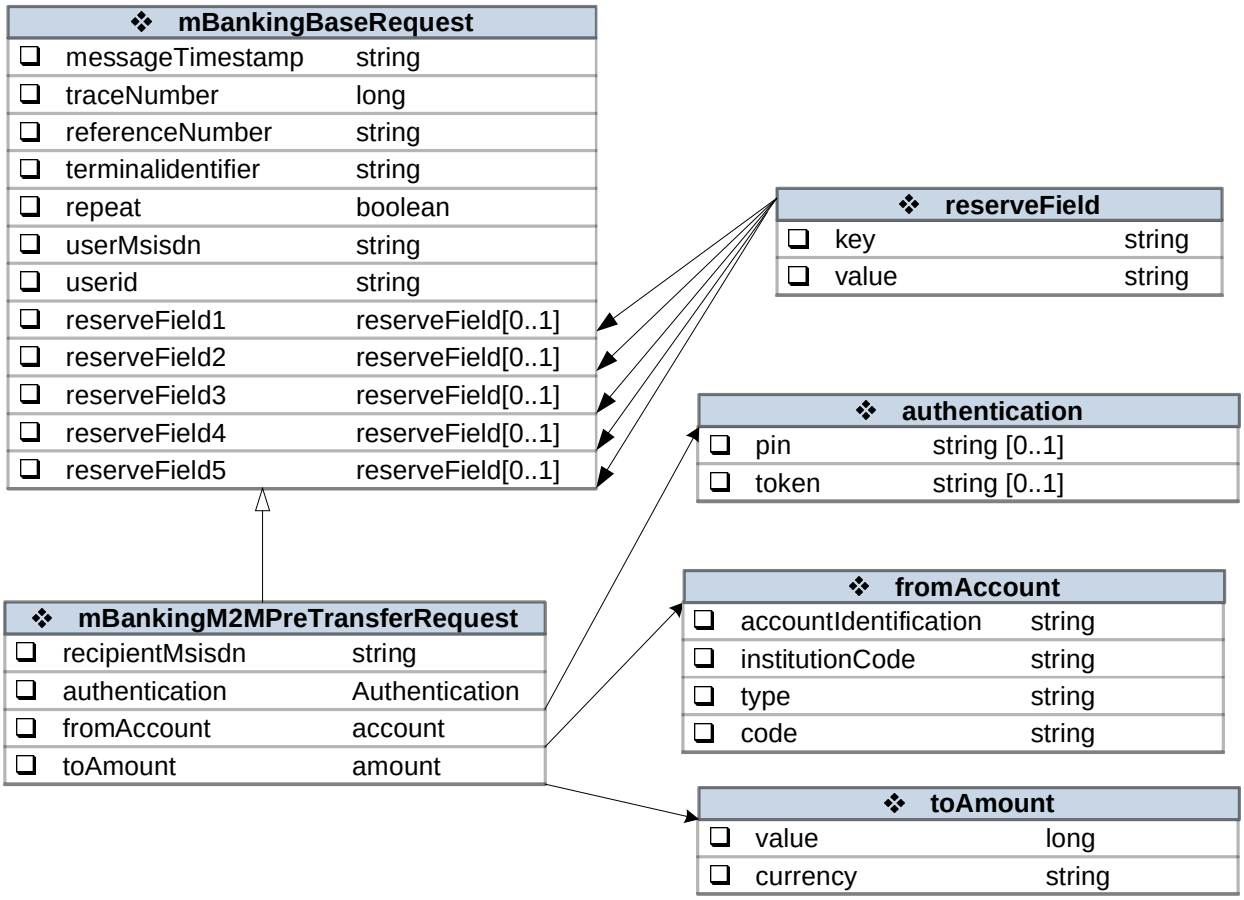
3.3.6 Mobile-to-Mobile Transfer

The Mobile-Mobile Transfer service is used to transfer funds from the specified account for the account holder to another user via Mobile number.

3.3.6.1 Mobile to Mobile Pre Funds Transfer

Before actual transfer request is made, recipient will be notified via SMS of an intended request for transfer to his/her mobile number.

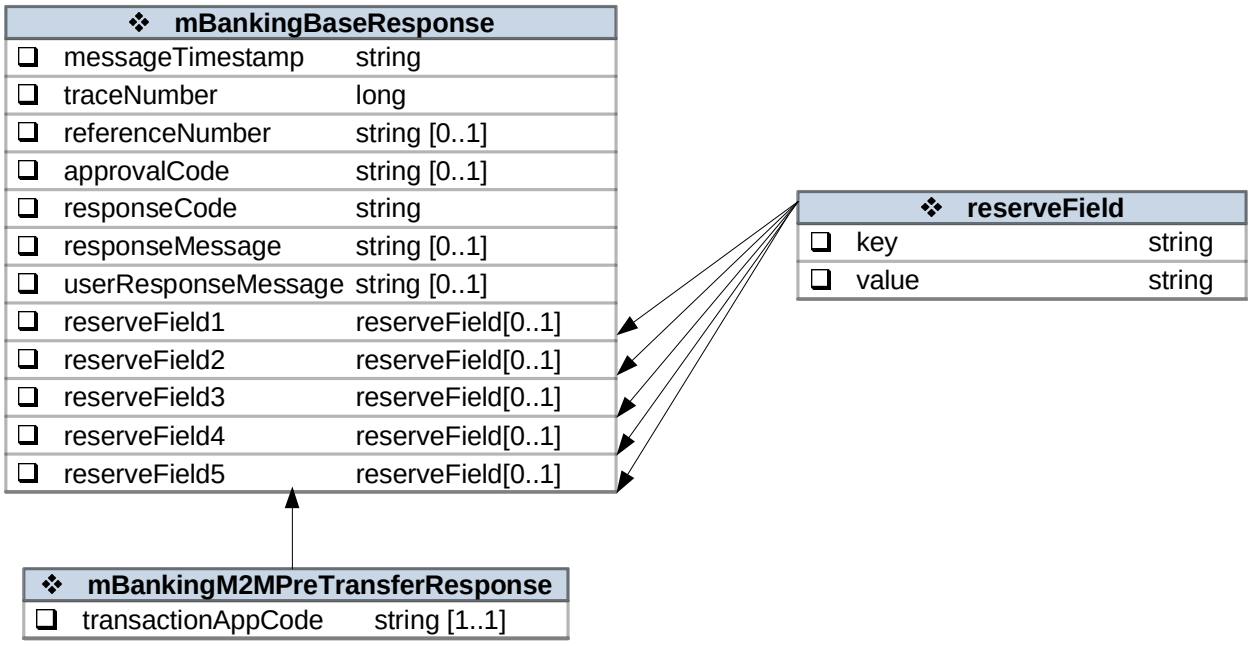
3.3.6.1.1 Request



Message Element	Type	Occurrence	Description
authentication	Authentication	1..1	This contains the user authentication details (either PIN or token, see Login for details)
pin	String (5..12)	0..1	Either PIN or token is set
token	String (0..1000)	0..1	Either PIN or token is set
fromAccount	Account	1..1	The account or credit card that is to be debited
accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number) or credit card number

	institutionCode	String (4)	1..1	Code of the financial institution where the account or credit card is maintained .
	type	String (2)	1..1	The type of the account, as returned by the Account List response
	code	String (10)	0..1	The account code
recipientMsisdn		String (8..24)	1..1	The mobile phone number of the recipient in international format (e.g. +60174234234)
amount		Amount	1..1	The amount that is to be transferred
	value	Long	1..1	The value of the amount in lowest currency unit (e.g. 100 = 1.00 EUR)
	currency	String (3)	1..1	The currency of the amount (e.g. EUR)

3.3.6.1.2 Response

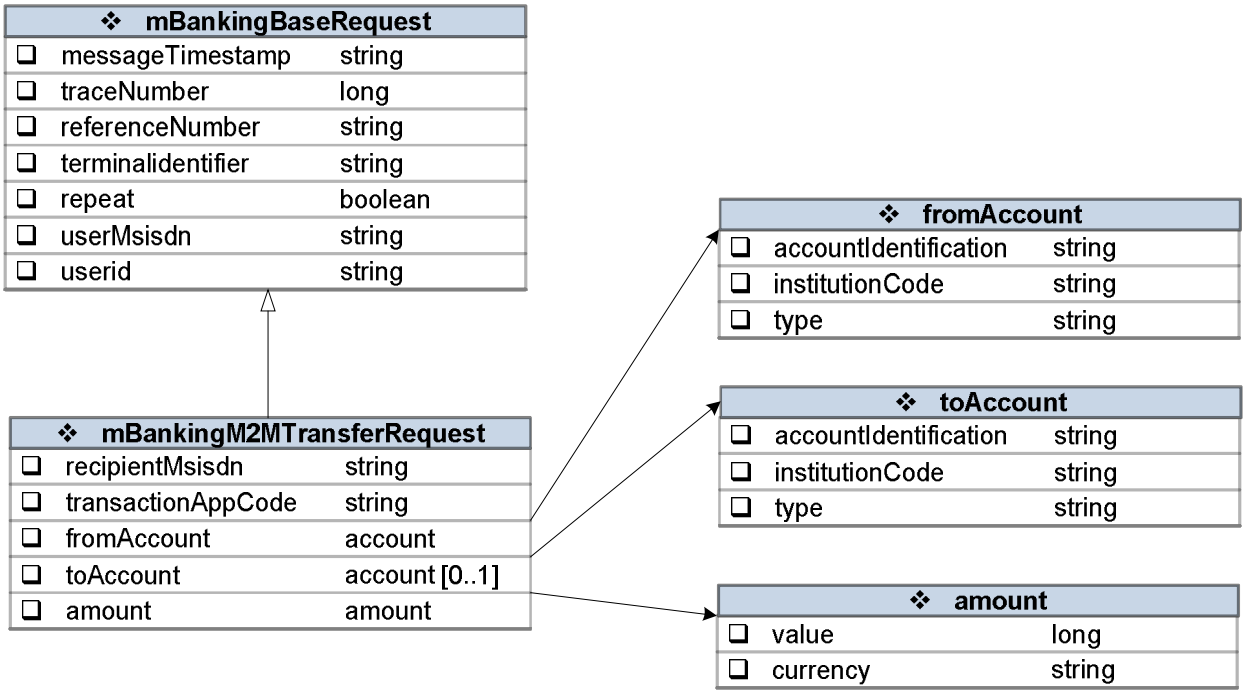


Message Element	Type	Occurrence	Description
transactionAp3.3.6.1.3pCode	String (5..20)	1..1	The transaction approval code returned by bank used for validation during the actual transfer request.

3.3.6.2 Mobile to Mobile Actual Funds Transfer

After the recipient acknowledges the funds transfer request, actual funds transfer call to bank will be initiated by MOBILISER.

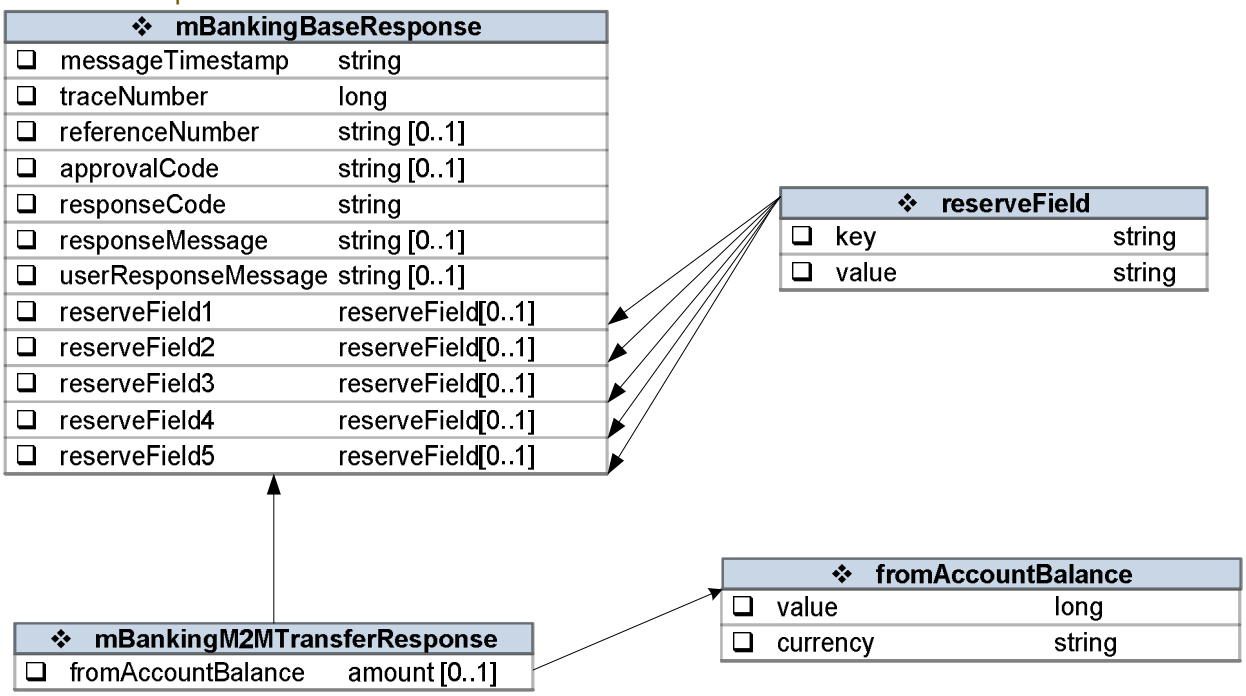
3.3.6.2.1 Request



Message Element	Type	Occurrence	Description
recipientMsisdn	String (8..24)	1..1	The mobile phone number of the recipient in international format (e.g. +60174234234)
transactionAppCode	String (5..20)	1..1	The transaction approval code returned by bank used for validation during the actual transfer request.
fromAccount	Account	1..1	The account or credit card that is to be debited
accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number) or credit card number
institutionCode	String (4)	1..1	Code of the financial institution where the account or credit card is maintained .

	type	String (2)	1..1	The type of the account, as returned by the Account List response
toAccount	Account	0..1	For open transfer, the account to transfer to.	
	accountIdentification	String (1..30)	1..1	The unique identification of the account (usually the account number) or credit card number
	institutionCode	String (4)	1..1	Code of the financial institution where the account or credit card is maintained .
	type	String (2)	1..1	The type of the account, as returned by the Account List response
amount	Amount	1..1	The amount that is to be transferred (including the extra charges)	
	value	Long	1..1	The value of the amount in lowest currency unit (e.g. 100 = 1.00 EUR)
	currency	String (3)	1..1	The currency of the amount (e.g. EUR)

3.3.6.2.2 Response

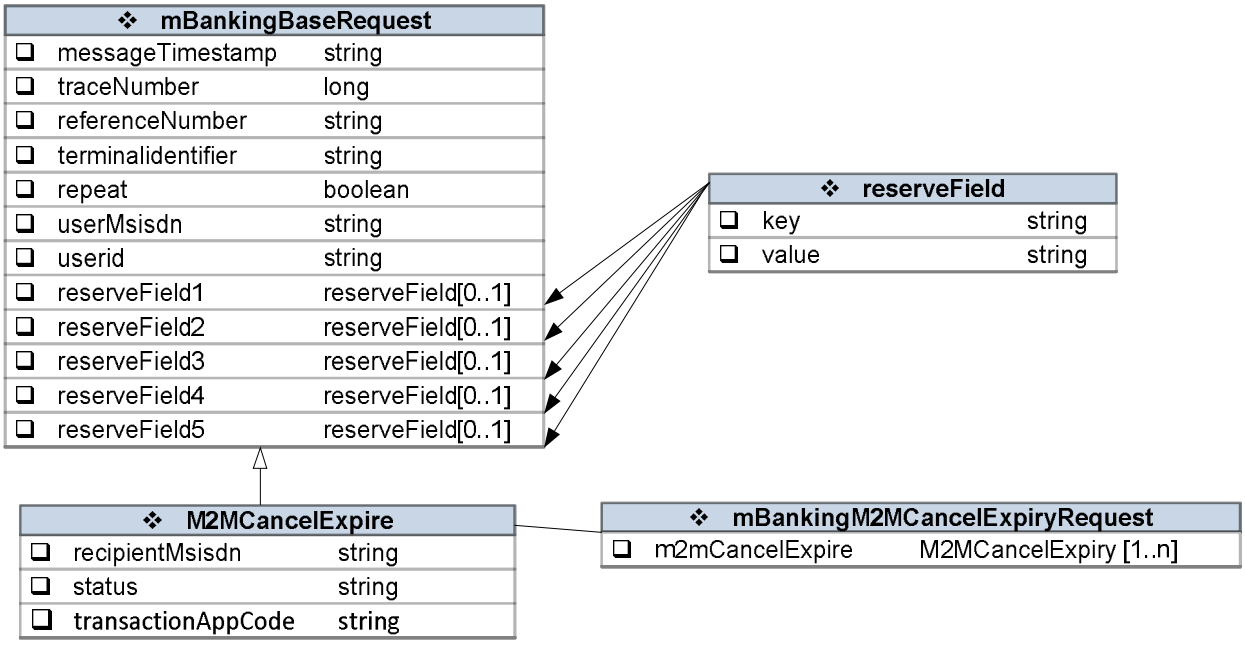


Message Element		Type	Occurrence	Description
fromAccountBalance		Amount	0..1	The account balance of the payer account
	value	Long	1..1	The value of the amount in lowest currency unit (e.g. 100 = 1.00 EUR)
	currency	String (3)	1..1	The currency of the amount (e.g. EUR)

3.3.6.3 Mobile to Mobile Cancellation/Expire Transaction

This API call will be used to cancel/expire existing Mobile-mobile transfer .

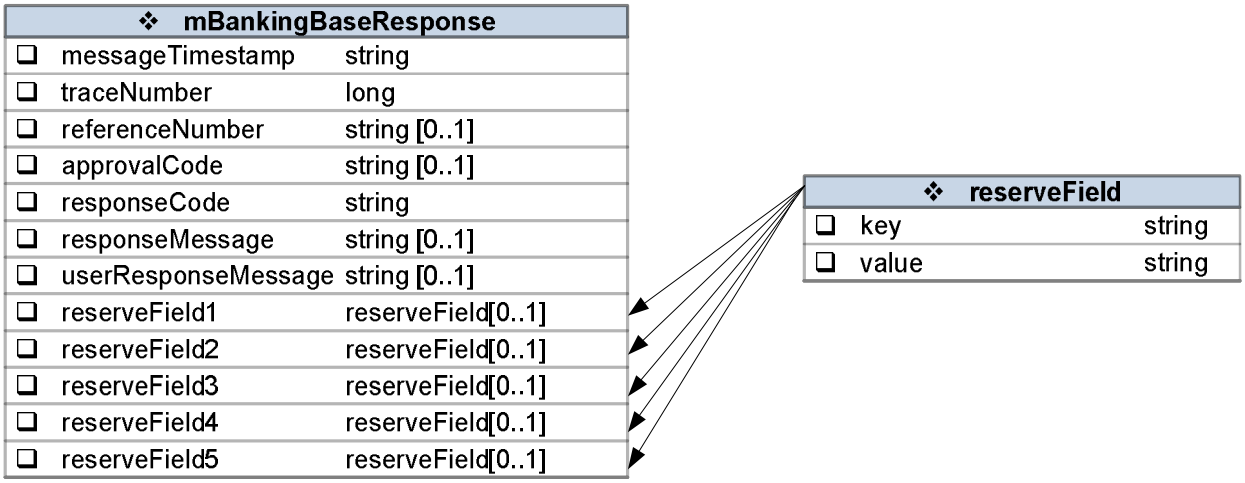
3.3.6.3.1 Request



Message Element	Type	Occurrence	Description
mBankingM2MCancelExpiryRequest	M2MCancelExpire	1..10000	The list of pending M2M transactions
recipientMsisdn	String (8..24)	1..1	The mobile phone number of the recipient in international format (e.g. +60174234234)
status	String	1..1	This contains the status requested to the bank. (Expire, Cancel)

transactionAppCode	String (5..20)	1..1	The transaction approval code returned by bank used for validation during the actual transfer request.

3.3.6.3.2 Response



No specific parameters required.

4 LOOKUPS

4.1 Response Codes

Code	Description
0	Approved or completed successfully
100	Do not honor
102	Suspected fraud
110	MSISDN already registered
115	Requested function not supported
116	Not sufficient funds
117	Incorrect PIN
119	Transaction not permitted to cardholder
120	Transaction not permitted to terminal
125	PIN re-tries exceeded
126	Invalid PIN block
127	PIN length error
129	Suspected counterfeit card
180	Unknown user id
181	mBanking session has expired
200	Request in progress
210	Invalid amount
211	Exceeds withdrawal amount limit
212	Exceeds withdrawal frequency limit
220	Invalid account
221	No credit account
222	No investment account
223	No current account
224	No savings account

250	Completed partially
300	User account is suspended
301	Suspected malfunction
302	Technical Problem
310	Credit Card Frequency Exceeded
320	Bills Payment Frequency Exceeded
330	Funds Transfer Intrabank Own Account Frequency Exceeded
331	Funds Transfer Intrabank Other Account Frequency Exceeded
332	Funds Transfer Interbank Frequency Exceeded
340	Mobile Reload Frequency Exceeded
341	Mobile Transfer Intrabank Frequency Exceeded
342	Mobile Transfer Interbank Frequency Exceeded
350	Stop Cheque Frequency Exceeded
351	Request Cheque Frequency Exceeded
901	Invalid response
902	Invalid transaction
904	Format error
907	Card issuer or switch inoperative
911	Invalid Request
913	Duplicate transmission
915	Response Received Too Late

4.2 Favourite Types

Type	Description
0	All
1	Same bank transfer
2	Other bank transfer
3	Bill payment

4	International transfer

4.3 Account Types

Type	Description
BL	Biller Account
CA	Current Account
SA	Savings Account
DB	Debit Card
FD	Fixed Deposit Account
LA	Loan Account
IV	Investment Account
IA	Insurance Account
UT	Unit Trust
VI	Visa™ Credit Card
MA	Master™ Credit Card
AM	American Express™ Credit Card
DC	Diners Club™ Credit Card
IS	Individual Savings account
NW	Negotiable Order of Withdrawal Account
NB	Numbered Bank Account
JB	Joint Bank Account
MM	Money Market Account

4.4 ID Types

Type	Description
0	Generic, see Issuer of identit
1	Citizenship Card
2	Identity Card
3	Foreigner Card

4	Personal Tax Id Number
5	Business Tax Id Number
6	Idependent patrimony
7	Passport
8	Correspondent
9	Foreignes Tax Id Number
10	Military Card

5 INTERFACE

5.1 WSDL and XSD Documents

5.1.1 Operator Services

To obtain the associated operator services WSDL and XSD files, download the Open_Bank_resource_files.zip at http:// infocenter.sybase.com/help/index.jsp?topic=/com.sybase.infocenter.dc01872.0510/doc/html/title.html.

5.1.2 Bank Services

To obtain the associated bank services WSDL and XSD files, download the Open_Bank_resource_files.zip at http:// infocenter.sybase.com/help/index.jsp?topic=/com.sybase.infocenter.dc01872.0510/doc/html/title.html.

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