vcomT2Appl PosXML

vers 7.2.0

Interface description

Table of contents

1. Introduction

1.1 Document purpose

The document provides a short description of XML-based electronic payment interface for Telium2 payment terminals with particular emphasis on general principles and data exchange protocol. The document contains basic information that should be helpful for software developers mainly (and also for end users).

1.2 Terms

iCPT   - Ingenico Card Payment Terminal

PosXML   - XML module for POS systems

PosXML Client - client program

Client card   - a card used for client identification

Payment Card   - electronic payment card

2. Conception

2.1 General

The most important feature of PosXML is the possibility to perform electronic payments via *direct Internet connection* instead of dial-up*.* PosXML Client is a sample program which takes advantage of XML based communication protocol over HTTP.

2.2 HTTP sessions

iCPT supports only XML UTF-8 encoding.

PosXML Client initiates every operation (e.g. an electronic card payment) with a specific XML message and iCPT responds with corresponding response message (also XML). The Response message contains a result code of the operation (and may also contain other information). Typical steps of electronic card payment using PosXML are shown below.

1. Client initiates connection to iCPT

2. Client sends request:

```
http/1.0
content-length: 185
content-type: text/xml

<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version="7.2.0">
      <TransactionRequest>
            <Amount>10000</Amount>
            <CurrencyName>EUR</CurrencyName>
      </TransactionRequest>
</PosXML>
```

3. After successful transaction iCPT sends response:

```
http/1.0 200 ok
content-length: 1608
content-type: text/xml

<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version="7.2.0">
      <TransactionResponse>
            <ReturnCode>0</ReturnCode>
            <Reason></Reason>
            <TransactionData>
                  <Amount>10000</Amount>
                  <AdditionalAmount>0</AdditionalAmount>
                  <CurrencyName>EUR</CurrencyName>
                  <DateTime>24.03.2010 10:21:56</DateTime>
```

```
                <Stan>000006</Stan>
                <Type>T1</Type>
                <CardAction>2</CardAction>
                <AuthorizationNo>234961</AuthorizationNo>
                <HostAnswer>000</HostAnswer>
                <SecAmount>639</SecAmount>
                <SecAdditionalAmount>0</SecAdditionalAmount>
                <SecCurrencyName>EEK</SecCurrencyName>
                <SignatureRequired>0</SignatureRequired>
                <PINVerified>1</PINVerified>
        </TransactionData>
        <CardData>
                <PhysicalType>51</PhysicalType>
                <Pan>***********1699</Pan>
                <CardName>SWEDBANKI MC</CardName>
                <Expires>**/**</Expires>
                <ServiceCode>201</ServiceCode>
                <AL>MASTERCARD</AL>
                <AID>A0000000041010</AID>

    <CardID>A678499BC74FDE35F8252B0628219D7CF3FD83AB</CardID>
        </CardData>
        <TerminalData>
                <SerNo>9009808972</SerNo>
                <ID>VOC21201</ID>
                <Name>LIBA POS LUUK</Name>
                <Address>TALLINN, KAUBA 1</Address>
                <MerchantRegNo>11060344</MerchantRegNo>
                <PayDesk>005</PayDesk>
                <VerificationResult>0000000000</VerificationResult>

    <ApplicationCryptogram>CB5BAFF2DEF93CE5</ApplicationCryptogram>
                <TSI>E800</TSI>
                <CVMR>410302</CVMR>
                <IAD>0111651003020000DAC100000000000000FF</IAD>
                <UPN>6B45A638</UPN>
                <ATC>0136</ATC>
                <AIP>5800</AIP>
                <TT>0</TT>
                <PrinterStatus>2</PrinterStatus>
        </TerminalData>
    </TransactionResponse>
</PosXML>
```

4. If iCPT is configured to support XML session then iCPT closes connection, otherwise connection remains open until client closes it.

If PosXML receives an unknown message or detects a wrong message version, it responds with XML answer **Error**, described in 3.5.28.

3. Protocol

3.1 Data types

Type	Explanation
C (character)	Text with limited max length. For example, C-20 stands for string with max length of 20 characters. Multibyte characters (UTF-8) are allowed.
N (numeric)	ASCII numeric text. For example, N-6 stands for numeric string with max length of 6 ASCII numbers.

3.2 Structures

Type	Explanation
Element	The most basic type, represents one datatype.
Aggregate	Consists of one or more data fields that are logically associated to form an entity that can be referenced by specific name.
Message	The most complex data formation. Represents either request or response. Client issues a request and server send response within the same HTTP session.
Document	Root element (according to XML specificationi). Incorporates all the information specified by the protocol. Must contain protocol version number.

3.3 Message data fields (Elements)

Field name	Field type, max lenght	Explanation
AcquiringInstitutionID	C-11	iCPT specific parameter
Action	N-1	0 – clear all previously sent DisplayMessageRequest parameters 1 – use parameters LineX 2 – use parameters MessageXID
AdditionalAmount	N-12	Additional info for the payment (a tip or another adjustment) in cents. (Can be a negative number). The transaction total is Amount + AdditionalAmount.
AdditionalInfo	C-256	Arbitrary text
AddLines	C-2	Additional number of lines to be printed. The same amount of Line1..N fields must exist.
Address	C-40	Terminal address
AID	C-32	Application identifier. EMV data
AIP	C-4	Application interchange profile. EMV data
AL	C-32	Application label. EMV data
Amount	N-12	Amount of payment in cents
AmountBefore	N-1	iCPT specific parameter
AnswerType	N-3	0-2 - predefined Yes/No strings in terminal. If „Yes" or „No" present in request, then predefined strings are not used. 101-124 – numeric input required (length = AnswerType – 100). Answer is returned in Info tag.
ApplicationCryptogram	C-20	Terminal cryptogram (TC). EMV data
ATC	C-4	Application transaction counter. EMV data
AttendantID	C-8	Unique attendant ID (issued by accounting system)
AttendantIDUsed	N-1	iCPT specific parameter

AuthorizationNo	C-6	Authorization number
BackLight	N-1	1 – turn on iCPT display backlight
CardAcceptorBusinessCode	C-4	iCPT specific parameter
CardAcceptorID	C-15	iCPT specific parameter
CardAcceptorNameLocation	C-40	iCPT specific parameter
CardAction	C-1	How the payment was done
CardholderLanguage	C-2	Default language code for cardholder
CardholderPresent	N-1	Used in conjuction with „Manual" tag 0 – cardholder present, 1 – cardholder present, 2 – cardholder has sent mail or fax, 3 – cardholder on phone, 4 – cardholder permanent order.
CardID	C-40	Card unic hash (A678499BC74FDE35F8252B0628219D7CF3FD83AB)
CardName	C-40	Card name
CardNumber	C-8	Card number
CardPresent	N-1	Used in conjuction with „Manual" tag 0 – card not present, 1 – card present.
CardStatus	N-1	Card present status 1 – present in reader 0 – not present in reader 2 – unknown (some error)
CDASupported	N-1	iCPT specific parameter
CID	C-2	Cryptogram information data
Citizenship	C-3	Citizenship
Comment1	C-128	Comment nr 1
Comment2	C-128	Comment nr 2
Comment3	C-128	Comment nr 3
Comment4	C-128	Comment nr 4
Copy	C-1	Add to receipt „COPY"
Count	N-2	The number of empty rows, that iCPT has to print.
CountryCodeStr	C-3	iCPT specific parameter
CurrencyCodeStr	C-3	iCPT specific parameter
CurrencyExpChar	N-2	iCPT specific parameter
CurrencyName	C-3	Currency name
CurrencyNameStr	C-3	iCPT specific parameter
CustomerInputTimeout	N-3	iCPT specific parameter
CustomPrint	C-95	iCPT specific parameter
CustReceipt	C-4096	Customer receipt string
CVMR	C-6	Cardholder verification method results. EMV data
DateOfBirth	C-10	Date of birth
DateTime	N-19	Payment time. Format „DD.MM.YYYY HH:MM:SS"
DateTimeRev	N-19	Reversed transaction date and time. Format „DD.MM.YYYY HH:MM:SS"
DebugEnabled	N-1	iCPT specific parameter
DEProtoVer	N-1	iCPT specific parameter
Destination	N-1	Message destination
DiscountAmount	N-12	Discount amount
DiscountEnabled	N-1	Discount request enabled/disabled
DiscountID	N-12	Discount identificator

DiscountPercent	N-2	Discount percent
DisplayLanguage	C-2	Default language code for display
DUKPTInitialized	N-1	iCPT specific parameter
Duration1	N-5	Duration in 10 ms
Duration2	N-5	Duration in 10 ms
Duration3	N-5	Duration in 10 ms
DWLIPAddress	C-23	iCPT specific parameter
DWLIPPort	N-5	iCPT specific parameter
DWLMode	N-1	iCPT specific parameter
ECRPanID	C-33	PanID from ECRPANList
ECRPANList	C-4400	Up to 100 PAN (BIN) entries formatted as follows: 1 byte MatchLength + 9 bytes PANStart (BIN) data + 1 byte Type + 33 bytes PanID. All data in ASCII numbers. For example 3 Pan entries. First 8 bytes length, second 6 and third 9 – '867639223 BX bank discount 6676392 Csome client card 9676392232BY bank discount '.
ECRType	C-1	Type from ECRPANList
EMVDUKPTUsed	N-1	iCPT specific parameter
EMVOnlinePINOnly	N-1	iCPT specific parameter
EthernetUsed	N-1	iCPT specific parameter
Expires	C-5	Client card expiration date
FileData	C-64000	The last sent transactions from the transaction file. Every transaction has it's own row, with data divided with TABs. Sums are in cents. An example below shows two successful transactions. One transaction + cancelling and one failed transaction: **File** – the number of the transaction file, **Set** – the number of the transaction file set, **ID** – transaction identificator (TransactionID), **PAN** – card PAN, **Name** – Card name in iCPT, **Exp** – card expiration date (YYMM), **Datetime** – transaction date and time (YYMMDDHHMMSS), **STAN** – unique transaction number, **F38** – bank authorisation code, **F39** – bank transaction response code (ooo – successful transaction), **Amount** – sum in cents (minus – cancelling, sum in parentheses, why the transaction was terminated).
FileDateTime	C-19	Date of the file creation. Format „DD.MM.YYYY HH:MM:SS"
FileNumber	N-8	The number of the transaction file
FileSendStatus	N-1	Status of sending transaction files (1-success, 0-fail)
FileTotalAmount	N-12	Total of transactions
FileTransactionCount	N-3	Number of transactions
FinishAmount	N-12	Final transaction amount
FirstName	C-64	Forname
ForcedAction	C-1	1 - Do reversal request without customer card reading (only in unattended terminals) 0 – Do reversal request with customer card reading (default)
FormFeed	N-1	1 - eject receipt, 0 or element not present – don't eject Default - 0

Frequency1	N-5	Buzzer frequenzy in Hz (max 12700)
Frequency2	N-5	Buzzer frequenzy in Hz (max 12700)
Frequency3	N-5	Buzzer frequenzy in Hz (max 12700)
GatewayIPAddress	C-23	iCPT specific parameter
Gender	C-1	Gender
HostAnswer	C-3	Host answer code to authorisation (ISO field 39)
HostIPAddressA	C-23	iCPT specific parameter
HostIPAddressT	C-23	iCPT specific parameter
HostIPPortA	N-5	iCPT specific parameter
HostIPPortT	N-5	iCPT specific parameter
HostMode	N-1	iCPT specific parameter
HostPhoneNumber	C-23	iCPT specific parameter
HostPhonePrefix	C-4	iCPT specific parameter
HostSSLUsed	N-1	iCPT specific parameter
HostType	N-1	iCPT specific parameter
HostX25	N-1	iCPT specific parameter
IAD	C-128	Issuer application data. EMV data
ID	C-8	Terminal ID
IDCardEnabled	N-1	iCPT specific parameter
IDCode	C-11	ID code
ImageFileName	C-11	Print image file loaded to terminal
Input	C-16	Numeric string entered by customer
Interval1	N-5	Silence after beep in 10 ms
Interval2	N-5	Silence after beep in 10 ms
Interval3	N-5	Silence after beep in 10 ms
IPAddressMode	N-1	iCPT specific parameter
Language	C-2	Language code for display ('en', 'ru', 'et', etc). May be overwritten by chip card language
LastFourDigits	N-4	Last four digist from magnetic card cover
Line	C-2000	Symbols, that iCPT has to print. The field may contain a line feed symbol LF (0AH).
Line1	C-24	String to display on row 1
Line1..24	C-2000	Symbols, that iCPT has to print. The field may contain a line feed symbol LF (0AH).
Line2	C-24	String to display on row 2
Line3	C-24	String to display on row 3
Line4	C-24	String to display on row 4
LineFeedCount	N-2	Line feed count
LocalIPAddress	C-23	iCPT specific parameter
Logging	C-64	iCPT specific parameter
LogTCPIPAddress	C-23	iCPT specific parameter
LogTCPIPPort	N-5	iCPT specific parameter
MagNotUsed	N-1	iCPT specific parameter
Manual	N-1	Manual PAN transaction request
MerchantID	C-10	iCPT specific parameter
MerchantInputTimeout	N-3	iCPT specific parameter
MerchantLanguage	C-2	Default language code for merchant
MerchantRegNo	C-8	Merchant registration number

MerchReceipt	C-4096	Merchant receipt string
Message1ID	N-4	Terminal inner message ID to display on row 1
Message2ID	N-4	Terminal inner message ID to display on row 2
Message3ID	N-4	Terminal inner message ID to display on row 3
Message4ID	N-4	Terminal inner message ID to display on row 4
MiddleName	C-64	Other Fornames
MinCustomerAmount	N-12	iCPT specific parameter
Name	C-40	Terminal name
NextSTAN	N-6	Next transaction STAN to be used
No	C-12	Negative answer text
NotFinishedTransactionsCount	N-3	The number of pending transactions in the terminal
OrigAmount	N-12	Original transaction amount.
OrigDate	N-19	Original transaction time. Format „DD.MM.YYYY HH:MM:SS"
OrigCardAction	C-1	Original transaction card type.
Pan	C-20	Client card number
PANList	C-1000	Up to 100 PAN (BIN) entries formatted as follows: 1 byte length + 9 bytes PAN (BIN) data. All data in ASCII numbers. For example 3 Pan entries. First 8 bytes length, second 6 and third 9 – '867639223 6676392 9676392232'.
PANStarsMask	C-6	iCPT specific parameter
PartialAuthorization	N-1	Partial authorization enabled/disabled
PartialReversal	N-1	Partial reversal enabled/disabled
Password	N-1	1 – masked input Default - 0
PayDesk	C-3	Paydesk
PendingCount	N-3	Count of unsent transactions
PhysicalType	N-1	Terminal type
PingEnabled	N-1	iCPT specific parameter
PINInputTimeout	N-3	iCPT specific parameter
PinpadEmulation	N-1	iCPT specific parameter
PINVerified	N-1	PIN verified flag
PlaceOfBirth	C-64	Place of birth
PreAuthorisation	N-1	1 – preauthorisation, 0 – no presuthorisation (default). (iCPT ignores this field, if it's type is not RENT)
PreAuthPercent	N-2	iCPT specific parameter
PrinterFooter	C-128	iCPT specific parameter
PrinterHeader	C-128	iCPT specific parameter
PrinterLanguage	C-2	Default language code for printer
PrinterMode	N-1	iCPT specific parameter
PrinterStatus	C-1	Terminal printer status
PrinterTerminalOwnerAddress	C-32	iCPT specific parameter
PrinterTerminalOwnerName	C-32	iCPT specific parameter
PrintReceipt	N-1	0 – merchant receipt, 1 – merchant and customer receipts (default), 2 – none.
Reason	C-256	Detailed description of payment result
ReasonCode	C-3	Host answer code (reason for voice or fallback, request)
ReceiptData	C-2048	Transaction send receipt

ReceiptMessage	C-128	Text to print to receipt
RefundActionEnabled	N-1	iCPT specific parameter
RefundAmount	N-12	Refund amount.
Repeat	N-2	Repeat count for buzzer
RepeatInt	N-5	Delay between repeating in 10 ms
ReqID	C-24	XML command ID
ResidencePermitType	C-64	Residence permit type
Restart	N-1	iCPT specific parameter
ReturnCode	N-6	Result code of the operation
ReturnReceipts	N-2	24-64 - return receipt strings. Line length 24-64 characters. Default – none.
ReversalActive	N-1	1 – autoreversal active in iCPT 0 – no autoreversal in iCPT
ReverseAmount	N-12	Reverse transaction amount
SecAdditionalAmount	N-12	Additional amount in second currency
SecAmount	N-12	Amount in second currency
SecCurrencyName	C-3	Secondary urrency name
SecondaryCurrencyCodeStr	C-3	iCPT specific parameter
SecondaryCurrencyNameStr	C-3	iCPT specific parameter
SecondaryCurrencyRate	N-8	iCPT specific parameter
SelectAmount	N-12	Customer should select amount (partial transaction)
SendTime	C-4	The time of sending the transaction file
SerNo	C-64	Terminal serial number
SerPrintDataRate	N-5	iCPT specific parameter
ServiceCode	N-3	Service code for the client card
ShowLogo	C-15	iCPT specific parameter
ShowText1	C-32	iCPT specific parameter
ShowText2	C-32	iCPT specific parameter
ShowText3	C-32	iCPT specific parameter
SignatureRequired	N-1	Signature required on receipt
Stan	N-6	STAN of the payment
StanRev	N-6	Reversed transaction STAN
StartMNT	N-1	iCPT specific parameter
SubnetMask	C-23	iCPT specific parameter
SupportedLanguages	C-20	iCPT specific parameter
Surname	C-64	Surname
TerminalCurrentLanguage	C-2	iCPT specific parameter
TerminalID	C-8	iCPT specific parameter
TerminalIndex	C-10	iCPT specific parameter
TerminalLanguages	C-20	iCPT specific parameter
TerminalOwnerAddress	C-12	iCPT specific parameter
TerminalOwnerCountry	C-2	iCPT specific parameter
TerminalOwnerName	C-25	iCPT specific parameter
TerminalPrintLanguage	C-2	iCPT specific parameter
TerminalVersion	C-1	iCPT specific parameter
TernminalDiscountEnabled	N-1	iCPT specific parameter
Time	C-19	Terminal current date/time „31.01.2009 15:31:00"

Timeout	N-3	Card waiting time in seconds
TIPAmount	N-12	Payment TIP in cents
TipPercent	N-2	iCPT specific parameter
Track1	C-64	Card track1
Track2	C-48	Card track2
TransactionCompletion	C-64	Payment completion state „COMPLETED" – transaction done „NOTIFICATION" – transaction failed „COMPLETED_REV" – transaction reversed „WAIT_COMPL_PRE" – transaction done, but not completed (waiting final amount) „WAIT_COMPL_PART" – transaction done, but waiting partial reversing
TransactionID	C-16	Unique transaction ID (issued by accounting system)
TransactionsCount	N-3	The number of transactions in the terminal
TransactionSTAN	N-6	Transaction STAN
TransactionTimeStr	N-4	iCPT specific parameter
TSI	C-4	Transaction status information. EMV data
TT	C-1	Transaction type. EMV data
Type	C-2	Payment type
UnattEmulation	N-1	iCPT specific parameter
UPN	C-8	Unpredictable number. EMV data
WaitCardTimeout	N-3	iCPT specific parameter
WaitTaken	N-3	Wait receipt taken in seconds
ValidFrom	C-10	The beginning date of validity
ValidTo	C-10	The ending date of validity
VerificationResult	C-14	Terminal verification result (TVR) . EMV data
VerifyPIN	N-1	1 – verify ID card PIN, 0 or not present – do not verify ID card PIN.
XMLDiscountEnabled	N-1	iCPT specific parameter
XMLIPPort	N-5	iCPT specific parameter
XMLMode	N-1	iCPT specific parameter
Yes	C-12	Afformitive answer text

```
File    Set     ID       PAN            Name      Exp Datetime     STAN    F38    F39  Amount
000004 000007 00000001 ************0014 ECMC CARD **** 050112183348 000020 322915 000  1000
000004 000007 00000002 ************0014 ECMC CARD **** 050112183417 000021 322916 000   900
000004 000008 00000003 ************6731 VISA CARD **** 050112183442 000022 266953 000   800
000004 000008 00000003 ************6731 VISA CARD **** 050112183833 000025 266953 000  -800
000004 000008 00000004 ************2986 VISA CARD **** 050112183529 000023        100  (700)
```

3.4 Aggregates

3.4.1 Card

Tag	Type	Usage	Explanation
CardID	Element	Optional	Card unic hash
CardName	Element	Optional	Card name if present
CurrencyName	Element	Optional	Currency name ('EUR')
DiscountAmount	Element	Optional	Discounting amount from table
DiscountID	Element	Optional	Discount ID from table
DiscountPercent	Element	Optional	Discounting percent from table
ECRPanID	Element	Optional	If card was in ECRPAN list, then ECRPanID from this list
ECRType	Element	Optional	If card was in ECRPAN list, then ECRType from this list
Expires	Element	Optional	Card expiration date
Pan	Element	Required	Card number
ServiceCode	Element	Required	Card service code
Track1	Element	Optional	Card track1
Track2	Element	Optional	Card track2

3.4.2 IDCard

Tag	Type	Usage	Explanation
CardNumber	Element	Required	Card number
Citizenship	Element	Optional	Citizenship
Comment1	Element	Optional	Comment nr 1
Comment2	Element	Optional	Comment nr 2
Comment3	Element	Optional	Comment nr 3
Comment4	Element	Optional	Comment nr 4
DateOfBirth	Element	Optional	Date of birth
FirstName	Element	Required	Forname
Gender	Element	Optional	Gender
IDCode	Element	Required	ID code
MiddleName	Element	Optional	Other fornames
PlaceOfBirth	Element	Optional	Place of birth
ResidencePermitType	Element	Optional	Resindence permit type
Surname	Element	Required	Surname
ValidFrom	Element	Required	Card validity start date
ValidTo	Element	Required	Card expiration date

3.4.3 TransactionData

Tag	Type	Usage	Explanation
AdditionalAmount	Element	Optional	Specification of the transaction
Amount	Element	Required	Amount of payment
AuthorizationNo	Element	Optional	Authorization number
CardAction	Element	Optional	Source of card data (chip or magnetic strip)
CurrencyName	Element	Optional	Currency name ('EUR')

DateTime	Element	Optional	Payment moment
DateTimeRev	Element	Optional	Reversal moment
HostAnswer	Element	Optional	Answer from host
PINVerified	Element	Optional	PIN verified or not
SecAdditionalAmount	Element	Optional	Specification of the transaction in second currency
SecAmount	Element	Optional	Amount of payment in second currency
SecCurrencyName	Element	Optional	Second currency name ('EEK')
SignatureRequired	Element	Optional	Signature in receipt
Stan	Element	Optional	Transaction STAN
StanRev	Element	Optional	Reversal STAN
TransactionCompletion	Element	Optional	Payment completion state
TransactionID	Element	Optional	Unique transaction ID (issued by accounting system)
Type	Element	Optional	Transaction type

3.4.4 CardData

Tag	Type	Usage	Explanation
AID	Element	Optional	Application ID
AL	Element	Optional	Application label
CardID	Element	Optional	Card unic hash
CardName	Element	Optional	Card name
Expires	Element	Optional	Card expiration date (**/** for compatibility with older PosXML versions)
Pan	Element	Required	Last 4 numbers of card PAN
PhysicalType	Element	Optional	Card type
ServiceCode	Element	Optional	Card service code

3.4.5 TerminalData

Tag	Type	Usage	Explanation
Address	Element	Required	Terminal address
AIP	Element	Optional	EMV data
ApplicationCryptogram	Element	Optional	Application cryptogram (AC) . EMV data
ATC	Element	Optional	EMV data
CID	Element	Optional	EMV data
CVMR	Element	Optional	EMV data
IAD	Element	Optional	EMV data
ID	Element	Required	Terminal ID
MerchantRegNo	Element	Required	Merchant registration number
Name	Element	Required	Terminal name
PayDesk	Element	Required	Paydesk number
PrinterStatus	Element	Optional	Printer paper status
SerNo	Element	Required	Terminal serial number
TSI	Element	Optional	EMV data
TT	Element	Optional	EMV data
UPN	Element	Optional	EMV data
VerificationResult	Element	Optional	Card verification data (TVR). EMV data

3.5 Requests and answers

3.5.1 CancelAllOperationsRequest – CancelAllOperationsResponse

CancelAllOperationsRequest

Tag	Type	Usage	Explanation
No parameters			

CancelAllOperationsResponse

Tag	Type	Usage	Explanation
ReturnCode	Element	Required	Result code of the operation

3.5.2 TransactionRequest - TransactionResponse

TransactionRequest

Tag	Type	Usage	Explanation
Amount	Element	Required	Amount of payment in cents
AttendantID	Element	Optional	Attendant unic ID. Default – empty.
CardholderPresent	Element	Optional	0 – cardholder present, 1 – cardholder present, 2 – cardholder has sent mail or fax, 3 – cardholder on phone, 4 – cardholder permanent order. Used in conjuction with „Manual" tag
CardPresent	Element	Optional	0 – card not present, 1 – card present. Used in conjuction with „Manual" tag
CashbackAuthorisation	Element	Optional	Transaction type 1 – cash, 0 – no
CurrencyName	Element	Required	Currency name ('EUR')
DiscountEnabled	Element	Optional	1 – Discount request to PosXML Client enabled, 0 – Discount request disabled. Default – 0.
GoodsAuthorisation	Element	Optional	Transaction type 1 – goods, 0 – no
Language	Element	Optional	Language code for display ('en', 'ru', 'et', etc). May be overwritten by chip card language
LastFourDigits	Element	Optional	Last four digits from card. Default – empty. If customer card is mag. stripe card and tag is not empty then terminal bypasses manual entering last four digits.
Manual	Element	Optional	Start manual PAN transaction.
PartialAuthorization	Element	Optional	Transaction type 1 – partial authorization, 0 – no
PreAuthorisation	Element	Optional	Transaction type 1 – preauthorisation, 0 – no
PrintReceipt	Element	Optional	0 – merchant receipt, 1 – merchant and customer receipts, 2 – none; Default – 1.
ReturnReceipts	Element	Optional	24-64 - return receipt strings. Line length 24-64 characters Default – none.

Timeout	Element	Optional	Card waiting time in seconds. If 0 – wait forever
TipAuthorisation	Element	Optional	Transaction type 1 – TIP, 0 – no
TransactionID	Element	Optional	Transaction unique ID. Default – empty.
UserSelectedAmount	Element	Required	Amount selected by client (partial transaction)

Optional intermediate requests from terminal

3.5.2.1 ClientCardRequest – ClientCardResponse - ClientCardPINResponse

ClientCardRequest

Tag	Type	Usage	Explanation
CardID	Element	Optional	Card unic hash
ECRPanID	Element	Optional	ECR PAN ID from ECRPAN list
ECRType	Element	Optional	ECR type from ECRPAN list
Expires	Element	Optional	Client card expiration date
Firstname	Element	Optional	ID Card Firstname
IDCode	Element	Optional	ID Card code
Pan	Element	Optional	Client card PAN (BIN)
ServiceCode	Element	Optional	Client card service code
Surname	Element	Optional	ID Card Surname
Track1	Element	Optional	Card track1
Track2	Element	Optional	Card track2
ValidFrom	Element	Optional	ID Card validity start date
ValidTo	Element	Optional	ID Card expiration date

ClientCardResponse

Tag	Type	Usage	Explanation
Action	Element	Required	Action to do. 1 – asc PIN code; 0 – continue transaction (with new amount). If PIN code required then terminal ends transaction with ClientCardPINResponse.
Amount	Element	Required if Action=0	New amount for transaction (if Action = 0)
AnswerType	Element	Required if Action=1	101-124 (PIN length = AnswerType – 100). PIN input is done in Line3.
CurrencyName	Element	Required	Currency name ('EUR')
Language	Element	Required if Action=1	Language code for display ('en', 'ru', 'et', etc)
Line1	Element	Required if Action=1	String to display on line 1
Line2	Element	Required if Action=1	String to display on line 2
Line3	Element	Required if Action=1	String to display on line 3
Timeout	Element	Optional	Answer waiting time in seconds

ClientCardPINResponse

Tag	Type	Usage	Explanation
Input	Element	Optional	Entered PIN in plain text
ReturnCode	Element	Required	0 – success

3.5.2.2 DiscountTransactionRequest – DiscountTransactionResponse

DiscountTransactionRequest

Tag	Type	Usage	Explanation
Amount	Element	Required	Current amount
CardID	Element	Optional	Card unic hash
CurrencyName	Element	Required	Currency name ('EUR')
DiscountID	Element	Optional	ID for discounting found in terminal
DiscountPercent	Element	Required	Percent for discounting found in terminal
IDCode	Element	Optional	ID card code
Pan	Element	Optional	Card PAN

DiscountTransactionResponse

Tag	Type	Usage	Explanation
Amount	Element	Required	Current amount
CurrencyName	Element	Required	Currency name ('EUR')
ReceiptMessage	Element	Optional	Text to print to receipt

3.5.2.3 VoiceTransactionRequest – VoiceTransactionResponse

VoiceTransactionRequest

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Arbitrary text
CardData	Aggregate	Optional	Data from card that was used for the payment
CustReceipt	Element	Optional	Customer receipt string
MerchReceipt	Element	Optional	Merchant receipt string
Reason	Element	Optional	Reason for voice transaction
ReturnCode	Element	Required	Answer code from host
TerminalData	Aggregate	Optional	Data from terminal that was used for the payment
TransactionData	Aggregate	Optional	Transaction details

VoiceTransactionResponse

Tag	Type	Usage	Explanation
AuthorizationNo	Element	Optional	
ReturnCode	Element	Required	

3.5.2.4 FallbackTransactionRequest – FallbackTransactionResponse

FallbackTransactionRequest

Tag	Type	Usage	Explanation
Reason	Element	Required	Reason for fallback
ReasonCode	Element	Optional	

FallbackTransactionResponse

Tag	Type	Usage	Explanation
LastFourDigits	Element	Optional	Last four digits from mag. card
ReturnCode	Element	Required	

TransactionResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Arbitrary text
CardData	Aggregate	Optional	Data from card that was used for the payment
CustReceipt	Element	Optional	Customer receipt string
MerchReceipt	Element	Optional	Merchant receipt string
Reason	Element	Optional	Error description
ReturnCode	Element	Required	Operation result code
TerminalData	Aggregate	Optional	Data from terminal that was used for the payment
TransactionData	Aggregate	Optional	Transaction details

3.5.3 TransactionMagStripeRequest - TransactionMagStripeResponse

TransactionMagStripeRequest

Tag	Type	Usage	Explanation
Amount	Element	Required	Amount of payment in cents
AttendantID	Element	Optional	Attendant unic ID. Default – empty.
CardholderPresent	Element	Optional	0 – cardholder present, 1 – cardholder present, 2 – cardholder has sent mail or fax, 3 – cardholder on phone, 4 – cardholder permanent order. If tag not present, terminal asks this from merchant.
CardPresent	Element	Optional	0 – card not present, 1 – card present. If tag not present, terminal asks this from merchant.
CashbackAuthorisation	Element	Optional	Transaction type 1 – cash, 0 – no
CurrencyName	Element	Required	Currency name ('EUR')
Expires	Element	Required	Card expiration date. Format - „YYMM".
Pan	Element	Optional	Card PAN
PartialAuthorization	Element	Optional	Transaction type 1 – partial authorization, 0 – no
PreAuthorisation	Element	Optional	Transaction type 1 – preauthorisation, 0 – no
PrintReceipt	Element	Optional	0 – merchant receipt, 1 – merchant and customer receipts (default), 2 – none, Default – 1.
ReturnReceipts	Element	Optional	24-64 - return receipt strings. Line length 24-64 characters Default – none.
ServiceCode	Element	Optional	Service code from track2. Default value „101".
TipAuthorisation	Element	Optional	Transaction type 1 – TIP, 0 – no
TransactionID	Element	Optional	Transaction unique ID. Default – empty.

Optional intermediate requests from terminal

3.5.3.1 DiscountTransactionRequest – DiscountTransactionResponse

DiscountTransactionRequest

Tag	Type	Usage	Explanation
Amount	Element	Required	Current amount
CardID	Element	Optional	Card unic hash
CurrencyName	Element	Required	Currency name ('EUR')
DiscountID	Element	Optional	ID for discounting found in terminal
DiscountPercent	Element	Required	Percent for discounting found in terminal
IDCode	Element	Optional	ID card code
Pan	Element	Optional	Card PAN

DiscountTransactionResponse

Tag	Type	Usage	Explanation
Amount	Element	Required	Current amount
CurrencyName	Element	Required	Currency name ('EUR')
ReceiptMessage	Element	Optional	Text to print to receipt

3.5.3.2 VoiceTransactionRequest – VoiceTransactionResponse

VoiceTransactionRequest

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Arbitrary text
CardData	Aggregate	Optional	Data from card that was used for the payment
CustReceipt	Element	Optional	Customer receipt string
MerchReceipt	Element	Optional	Merchant receipt string
Reason	Element	Optional	Reason for voice transaction
ReturnCode	Element	Required	Answer code from host

VoiceTransactionResponse

Tag	Type	Usage	Explanation
AuthorizationNo	Element	Optional	
ReturnCode	Element	Required	

TransactionMagStripeResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Arbitrary text
CardData	Aggregate	Optional	Data from card that was used for the payment
CustReceipt	Element	Optional	Customer receipt string
MerchReceipt	Element	Optional	Merchant receipt string
Reason	Element	Optional	Error description
ReturnCode	Element	Required	Operation result code
TerminalData	Aggregate	Optional	Data from terminal that was used for the payment
TransactionData	Aggregate	Optional	Transaction details

3.5.4 FinishTransactionRequest - TransactionResponse

FinishTransactionRequest

Tag	Type	Usage	Explanation
CurrencyName	Element	Optional	Currency name ('EUR')
FinishAmount Amount TIPAmount	Element	Optional	Transaction final amount. Amount tag can be one of described in Tag column.
PrintReceipt	Element	Optional	0 – merchant receipt, 1 – merchant and customer receipts, 2 – none; Default – 1.
ReturnReceipts	Element	Optional	24-64 - return receipt strings. Line length 24-64 characters Default – none.
TransactionID	Element	Optional	Transaction ID (has to be one of two elements - TransactionID or TransactionSTAN)
TransactionSTAN	Element	Optional	Transaction STAN (has to be one of two elements - TransactionID or TransactionSTAN)

TransactionResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Additional info
CardData	Aggregate	Required	Card data used for making the transaction
CustReceipt	Element	Optional	Customer receipt string
MerchReceipt	Element	Optional	Merchant receipt string
Reason	Element	requires	Error description
ReturnCode	Element	Required	Operation result code
TerminalData	Aggregate	Required	Terminal data used for making the transaction
TransactionData	Aggregate	Required	Transaction data

3.5.5 ReverseTransactionRequest – ReverseTransactionResponse

ReverseTransactionRequest

Tag	Type	Usage	Explanation
CurrencyName	Element	Required	Currency name ('EUR')
ForcedAction	Element	Optional	If 1 – do it without card reading
LastFourDigits	Element	Optional	Last four digits from mag. card
PartialReversal	Element	Optional	1 – partial reversal enabled, 0 – partial reversal disabled. Default – 0.
PrintReceipt	Element	Optional	0 – merchant receipt, 1 – merchant and customer receipts, 2 – none; Default – 1.
ReturnReceipts	Element	Optional	24-64 - return receipt strings. Line length 24-64 characters Default – none.
ReverseAmount Amount	Element	Optional	Transaction amount. Amount tag can be one of described in Tag column.
TransactionID	Element	Optional	Transaction ID (has to be one of two elements - TransactionID or TransactionSTAN)
TransactionSTAN	Element	Optional	Transaction STAN (has to be one of two elements - TransactionID or TransactionSTAN)

ReverseTransactionResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Additional info
CardData	Aggregate	Optional	Card data used for making the transaction
CustReceipt	Element	Optional	Customer receipt string
MerchReceipt	Element	Optional	Merchant receipt string
Reason	Element	Optional	Error description
ReturnCode	Element	Required	Operation result code
TerminalData	Aggregate	Optional	Terminal data used for making the transaction
TransactionData	Aggregate	Optional	Transaction data

3.5.6 RefundTransactionRequest – RefundTransactionResponse

RefundTransactionRequest

Tag	Type	Usage	Explanation
CurrencyName	Element	Required	Currency name ('EUR')
OrigAmount	Element	Optional	Original transaction amount.
OrigCardAction	Element	Optional	Original transaction card type.
OrigDate	Element	Optional	Original transaction date.
PrintReceipt	Element	Optional	0 – merchant receipt, 1 – merchant and customer receipts, 2 – none; Default – 1.
RefundAmount	Element	Optional	Refund amount.
ReturnReceipts	Element	Optional	24-64 - return receipt strings. Line length 24-64 characters Default – none.
TransactionID	Element	Optional	Transaction ID (has to be one of two elements)
TransactionSTAN	Element	Optional	Transaction STAN (has to be one of two elements)

RefundTransactionResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Additional info
CardData	Aggregate	Optional	Card data used for making the transaction
CustReceipt	Element	Optional	Customer receipt string
MerchReceipt	Element	Optional	Merchant receipt string
Reason	Element	Optional	Error description
ReturnCode	Element	Required	Operation result code
TerminalData	Aggregate	Optional	Terminal data used for making the transaction
TransactionData	Aggregate	Optional	Transaction data

3.5.7 ReadCardRequest - ReadCardResponse

ReadCardRequest

Tag	Type	Usage	Explanation
Amount	Element	Optional	If present and > 0 terminal waits payment card
CurrencyName	Element	Optional	Currency name ('EUR')
DiscountEnabled	Element	Optional	1 – Discount request to PosXML Client enabled, 0 – Discount request disabled. Default – 0.

Language	Element	Optional	Language code for display ('en', 'ru', 'et', etc).
Timeout	Element	Optional	Card waiting time in seconds, if 0 then wait forever

Optional intermediate requests from terminal

3.5.7.1 ClientCardRequest – ClientCardResponse - ClientCardPINResponse

ClientCardRequest

Tag	Type	Usage	Explanation
CardID	Element	Optional	Card unic hash
ECRPanID	Element	Optional	ECR PAN ID from ECRPAN list
ECRType	Element	Optional	ECR type from ECRPAN list
Expires	Element	Optional	Client card expiration date
Firstname	Element	Optional	ID Card Firstname
IDCode	Element	Optional	ID Card code
Pan	Element	Optional	Client card PAN (BIN)
ServiceCode	Element	Optional	Client card service code
Surname	Element	Optional	ID Card Surname
Track1	Element	Optional	Card track1
Track2	Element	Optional	Card track2
ValidFrom	Element	Optional	ID Card validity start date
ValidTo	Element	Optional	ID Card expiration date

ClientCardResponse

Tag	Type	Usage	Explanation
Action	Element	Required	Action to do. 1 – asc PIN code; 0 – continue transaction (with new amount). If PIN code required then terminal ends transaction with ClientCardPINResponse.
Amount	Element	Required if Action=0	New amount for transaction (if Action = 0)
AnswerType	Element	Required if Action=1	101-124 (PIN length = AnswerType – 100). PIN input is done in Line3.
CurrencyName	Element	Required	Currency name ('EUR')
Language	Element	Required if Action=1	Language code for display ('en', 'ru', 'et', etc)
Line1	Element	Required if Action=1	String to display on line 1
Line2	Element	Required if Action=1	String to display on line 2
Line3	Element	Required if Action=1	String to display on line 3
Timeout	Element	Optional	Answer waiting time in seconds

ClientCardPINResponse

Tag	Type	Usage	Explanation
Input	Element	Optional	Entered PIN in plain text
ReturnCode	Element	Required	0 – success

3.5.7.2 DiscountTransactionRequest – DiscountTransactionResponse

DiscountTransactionRequest

Tag	Type	Usage	Explanation
Amount	Element	Required	Current amount
CardID	Element	Optional	Card unic hash
CurrencyName	Element	Required	Currency name ('EUR')
DiscountID	Element	Optional	ID for discounting found in terminal
DiscountPercent	Element	Required	Percent for discounting found in terminal
IDCode	Element	Optional	ID card code
Pan	Element	Optional	Card PAN

DiscountTransactionResponse

Tag	Type	Usage	Explanation
Amount	Element	Required	Current amount
CurrencyName	Element	Required	Currency name ('EUR')
ReceiptMessage	Element	Optional	Text to print to receipt

ReadCardResponse

Tag	Type	Usage	Explanation
Card	Aggregate	Optional	Client card data
IDCard	Aggregate	Optional	ID card data
MerchReceipt	Element	Optional	Merchant receipt string
Reason	Element	Optional	Error description
ReturnCode	Element	Required	Return code for operation
SelectAmount	Element	Optional	Cardholder should select amount (partial transaction)

3.5.8 ReadIDCardRequest - IDCardResponse

ReadIDCardRequest

Tag	Type	Usage	Explanation
Language	Element	Optional	Language code for display ('en', 'ru', 'et', etc).
Timeout	Element	Optional	Card waiting time in seconds
VerifyPIN	Element	Optional	1 – verify ID card PIN, 0 or not present – do not verify ID card PIN.

IDCardResponse

Tag	Type	Usage	Explanation
IDCard	Aggregate	Optional	ID card data
ReturnCode	Element	Required	Operation result code

3.5.9 GetLastTransactionDataRequest – GetLastTransactionDataResponse

GetLastTransactionDataRequest

Tag	Type	Usage	Explanation
Copy	Element	Optional	Print „COPY" on receipt
PrintReceipt	Element	Optional	0 – merchant receipt, 1 – merchant and customer receipts, 2 – none; Default – 1.

ReturnReceipts	Element	Optional	24-64 - return receipt strings. Line length 24-64 characters. Default – none.
TransactionID	Element	Optional	Transaction ID (has to be one of two elements)
TransactionSTAN	Element	Optional	Transaction STAN (has to be one of two elements)

GetLastTransactionDataResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Arbitrary text
CardData	Aggregate	Optional	Data from card that was used for the payment
CustReceipt	Element	Optional	Customer receipt string
MerchReceipt	Element	Optional	Merchant receipt string
Reason	Element	Optional	Error description
ReturnCode	Element	Required	Operation result code
TerminalData	Aggregate	Optional	Data from terminal that was used for the payment
TransactionData	Aggregate	Optional	Transaction details

3.5.10 TransactionSendRequest – TransactionSendResponse

TransactionSendRequest

Tag	Type	Usage	Explanation
No parameters			

TransactionSendResponse

Tag	Type	Usage	Explanation
CurrencyName	Element	Optional	Currency name ('EUR')
FileData	Element	Optional	Last sent transactions from the transaction file.
FileDateTime	Element	Optional	Date and time of the transaction file
FileNumber	Element	Optional	Transaction file number
FileSendStatus	Element	Optional	Status of sending the transaction file
FileTotalAmount	Element	Optional	The total of transactions in the transaction file
FileTransactionCount	Element	Optional	The number of transactions in the transaction file
PendingCount	Element	Optional	Number of unsent transactions
ReceiptData	Element	Optional	Current (not sent jet) transactions receipt.
ReturnCode	Element	Required	Operation result code
SendTime	Element	Optional	Transaction sending time

3.5.11 TransactionSendStatusRequest – TransactionSendStatusResponse

TransactionSendStatusRequest

Tag	Type	Usage	Explanation
No parameters			

TransactionSendStatusResponse

Tag	Type	Usage	Explanation
CurrencyName	Element	Optional	Currency name ('EUR')
FileData	Element	Optional	Last sent transactions from the transaction file.
FileDateTime	Element	Optional	Date and time of the transaction file
FileNumber	Element	Optional	Transaction file number

FileSendStatus	Element	Optional	Status of sending the transaction file
FileTotalAmount	Element	Optional	The total of transactions in the transaction file
FileTransactionCount	Element	Optional	The number of transactions in the transaction file
PendingCount	Element	Optional	Number of unsent transactions
ReceiptData	Element	Optional	Current (not sent jet) transactions receipt.
ReturnCode	Element	Required	Operation result code
SendTime	Element	Optional	Transaction sending time

3.5.12 TransactionCurrStatusRequest – TransactionCurrStatusResponse

TransactionCurrStatusRequest

Tag	Type	Usage	Explanation
No parameters			

TransactionCurrStatusResponse

Tag	Type	Usage	Explanation
CurrencyName	Element	Optional	Currency name ('EUR')
FileData	Element	Optional	Current (not sent jet) transactions in terminal file.
FileDateTime	Element	Optional	Date and time of the transaction file
FileNumber	Element	Optional	Transaction file number
FileSendStatus	Element	Optional	Status of sending the transaction file
FileTotalAmount	Element	Optional	The total of transactions in the transaction file
FileTransactionCount	Element	Optional	The number of transactions in the transaction file
PendingCount	Element	Optional	Number of unsent transactions
ReceiptData	Element	Optional	Current (not sent jet) transactions receipt.
ReturnCode	Element	Required	Operation result code
SendTime	Element	Optional	Transaction sending time

3.5.13 PrintImageFileRequest – PrintImageFileResponse

PrintImageFileRequest

Tag	Type	Usage	Explanation
ImageFileName	Element	Required	Preloaded image file name in terminal.

PrintImageFileResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Error explanation
PrinterStatus	Element	Optional	Printer paper status
ReturnCode	Element	Required	Result code of the operation

3.5.14 PrintLineRequest – PrintLineResponse

PrintLineRequest

Tag	Type	Usage	Explanation
AddLines	Element	Optional	Number of additional rows for printing. The number of Line1..24 fields has to be equal to that.
FormFeed	Element	Optional	1 - eject receipt, 0 or element not present – don't eject Default - 0
Language	Element	Optional	Print language ('en', 'ru', 'et', etc)

Line	Element	Required	Symbols to be printed by iCPT. Maximum number of symbols in one message is 2000 bytes. The message may contain a line feed symbol LF (0AH).
Line1..24	Element	Optional	Symbols iCPT has to print. Maximum number of symbols in one message is 2000 bytes. The message may contain a line feed symbol LF (0AH).
LineFeedCount	Element	Optional	Linefeeds at the end of printing
WaitTaken	Element	Optional	Max wait taken time in seconds (external printer only).

PrintLineResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Error explanation
PrinterStatus	Element	Optional	Printer paper status
ReturnCode	Element	Required	Result code of the operation

3.5.15 PrintCustomerReceiptRequest – PrintCustomerReceiptResponse

PrintCustomerReceiptRequest

Tag	Type	Usage	Explanation
Copy	Element	Optional	Print „COPY" on receipt
PrintReceipt	Element	Optional	0 – merchant receipt, 1 – merchant and customer receipts, 2 – none; Default – 1.
ReturnReceipts	Element	Optional	24-64 - return receipt strings. Line length 24-64 characters Default – none.
TransactionID	Element	Optional	Transaction ID (has to be one of two elements)
TransactionSTAN	Element	Optional	Transaction STAN (has to be one of two elements)

PrintCustomerReceiptResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Error explanation
CustReceipt	Element	Optional	Customer receipt string
PrinterStatus	Element	Optional	Printer paper status
ReturnCode	Element	Required	Result code of the operation

3.5.16 PrintMerchantReceiptRequest – PrintMerchantReceiptResponse

PrintMerchantReceiptRequest

Tag	Type	Usage	Explanation
Copy	Element	Optional	Print „COPY" on receipt
PrintReceipt	Element	Optional	0 – merchant receipt, 1 – merchant and customer receipts, 2 – none; Default – 1.
ReturnReceipts	Element	Optional	24-64 - return receipt strings. Line length 24-64 characters. Default – none.
TransactionID	Element	Optional	Transaction ID (has to be one of two elements)
TransactionSTAN	Element	Optional	Transaction STAN (has to be one of two elements)

PrintMerchantReceiptResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Error explanation

MerchReceipt	Element	Optional	Merchant receipt string
PrinterStatus	Element	Optional	Printer paper status
ReturnCode	Element	Required	Operation result code

3.5.17 PrintLineFeedRequest - PrintLineFeedResponse

PrintLineFeedRequest

Tag	Type	Usage	Explanation
Count	Element	Optional	Number of rows

PrintLineFeedResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Error explanation
PrinterStatus	Element	Optional	Printer paper status
ReturnCode	Element	Required	Operation result code

3.5.18 PrintFormFeedRequest - PrintFormFeedResponse

PrintFormFeedRequest

Tag	Type	Usage	Explanation
WaitTaken	Element	Optional	Max wait taken time in seconds

PrintFormFeedResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Error explanation
PrinterStatus	Element	Optional	Printer paper status
ReturnCode	Element	Required	Operation result code

3.5.19 ChangeLanguageRequest – ChangeLanguageResponse

ChangeLanguageRequest

Tag	Type	Usage	Explanation
CardholderLanguage	Element	Optional	Language code for cardgholder ('en', 'ru', 'et', 'lv', 'lt', 'fr')
DisplayLanguage	Element	Optional	Language code for display ('en', 'et', 'lv', 'lt')
MerchantLanguage	Element	Optional	Language code for merchant ('en', 'et', 'lv', 'lt')
PrinterLanguage	Element	Optional	Language code for printer ('en', 'et', 'lv', 'lt')

ChangeLanguageResponse

Tag	Type	Usage	Explanation
ReturnCode	Element	Required	Operation result code

3.5.20 DisplayMessageRequest – DisplayMessageResponse

DisplayMessageRequest

Tag	Type	Usage	Explanation
Action	Element	Optional	0 – clear all previously sent DisplayMessageRequest parameters 1 – use parameters LineX 2 – use parameters MessageXID
BackLight	Element	Optional	0 – turns backlight off, 1 - turns backlight on

Destination	Element	Optional	Message destination 1 – terminal, 2 – pinpad, 3 - both
Language	Element	Optional	Language code for display ('en', 'ru', 'et', etc)
Line1	Element	Optional	String to display line 1
Line2	Element	Optional	String to display line 2
Line3	Element	Optional	String to display line 3
Line4	Element	Optional	String to display line 4
Message1ID	Element	Optional	String ID in terminal application to display line 1
Message2ID	Element	Optional	String ID in terminal application to display line 2
Message3ID	Element	Optional	String ID in terminal application to display line 3
Message4ID	Element	Optional	String ID in terminal application to display line 4

DisplayMessageResponse

Tag	Type	Usage	Explanation
ReturnCode	Element	Required	Operation result code

3.5.21 ShowInfoRequest – ShowInfoResponse

ShowInfoRequest

Tag	Type	Usage	Explanation
AnswerType	Element	Optional	0-2 - predefined Yes/No strings in terminal. If „Yes" or „No" present in request, then predefined strings are not used. 101-124 – numeric input required (length = AnswerType – 100). Only Line1 and Line2 are displayed and input is done in Line3. Default 0
Destination	Element	Optional	Message destination 1 – terminal, 2 – pinpad, 3 - both
Language	Element	Optional	Language code for display ('en', 'ru', 'et', etc)
Line1	Element	Optional	String to display line 1
Line2	Element	Optional	String to display line 2
Line3	Element	Optional	String to display line 3
No	Element	Optional	String to display refusal answer
Password	Element	Optional	Masked input (*)
Timeout	Element	Optional	Answer waiting time in seconds
Yes	Element	Optional	String to display affirmative answer

ShowInfoResponse

Tag	Type	Usage	Explanation
Input	Element	Optional	Numeric input if required
ReturnCode	Element	Required	Operation result code

3.5.22 GetTerminalStatusRequest – GetTerminalStatusResponse

GetTerminalStatusRequest

Tag	Type	Usage	Explanation
No parameters			

GetTerminalStatusResponse

Tag	Type	Usage	Explanation
CardStatus	Element	Required	Card present status 1 – present in reader 0 – not present in reader 2 – unknown (some error)
DisplayLanguage	Element	Optional	Default language code for display
NextSTAN	Element	Required	Next transaction unic number for host
NotFinishedTransactionsCount	Element	Required	The number of not finished (preauthorised) transactions in the terminal
PrinterLanguage	Element	Optional	Default language code for printer
PrinterStatus	Element	Optional	Printer paper status
ReturnCode	Element	Required	Operation result code
ReversalActive	Element	Required	Autoreversal state
Time	Element	Required	Terminal current date/time „31.01.2009 15:31:00"
TransactionsCount	Element	Required	The number of transactions in the terminal

3.5.23 SetParametersRequest – SetParametersResponse

SetParametersRequest

Tag	Type	Usage	Explanation
CustomerInputTimeout	Element	Optional	
CustomPrint	Element	Optional	
Logging	Element	Optional	
MerchantInputTimeout	Element	Optional	
MinCustomerAmount	Element	Optional	
PINInputTimeout	Element	Optional	
PrinterFooter	Element	Optional	
PrinterHeader	Element	Optional	
Restart	Element	Optional	If present restarts terminal
ShowLogo	Element	Optional	
ShowText1	Element	Optional	
ShowText2	Element	Optional	
ShowText3	Element	Optional	
StartMNT	Element	Optional	
WaitCardTimeout	Element	Optional	

SetParametersResponse

Tag	Type	Usage	Explanation
ReturnCode	Element	Required	Operation result code

3.5.24 GetParametersRequest – GetParametersResponse

GetParametersRequest

Tag	Type	Usage	Explanation
No parameters			

GetParametersResponse

Tag	Type	Usage	Explanation
AcquiringInstitutionID	Element	Optional	
AmountBefore	Element	Optional	
AttendantIDUsed	Element	Optional	
CardAcceptorBusinessCode	Element	Optional	
CardAcceptorID	Element	Optional	
CardAcceptorNameLocation	Element	Optional	
CDASupported	Element	Optional	
CountryCodeStr	Element	Optional	
CurrencyCodeStr	Element	Optional	
CurrencyExpChar	Element	Optional	
CurrencyNameStr	Element	Optional	
CustomerInputTimeout	Element	Optional	
CustomPrint	Element	Optional	
DebugEnabled	Element	Optional	
DEProtoVer	Element	Optional	
DUKPTInitialized	Element	Optional	
DWLIPAddress	Element	Optional	
DWLIPPort	Element	Optional	
DWLMode	Element	Optional	
EMVDUKPTUsed	Element	Optional	
EMVOnlinePINOnly	Element	Optional	
EthernetUsed	Element	Optional	
GatewayIPAddress	Element	Optional	
HostIPAddressA	Element	Optional	
HostIPAddressT	Element	Optional	
HostIPPortA	Element	Optional	
HostIPPortT	Element	Optional	
HostMode	Element	Optional	
HostPhoneNumber	Element	Optional	
HostPhonePrefix	Element	Optional	
HostSSLUsed	Element	Optional	
HostType	Element	Optional	

HostX25	Element	Optional	
IDCardEnabled	Element	Optional	
IPAddressMode	Element	Optional	
LocalIPAddress	Element	Optional	
MagNotUsed	Element	Optional	
MerchantID	Element	Optional	
MerchantInputTimeout	Element	Optional	
MerchantRegNo	Element	Optional	
MinCustomerAmount	Element	Optional	
PANStarsMask	Element	Optional	
PayDesk	Element	Optional	
PingEnabled	Element	Optional	
PINInputTimeout	Element	Optional	
PinpadEmulation	Element	Optional	
PreAuthPercent	Element	Optional	
PrinterFooter	Element	Optional	
PrinterHeader	Element	Optional	
PrinterMode	Element	Optional	
PrinterTerminalOwnerAddress	Element	Optional	
PrinterTerminalOwnerName	Element	Optional	
RefundActionEnabled	Element	Optional	
SeconCurrencyNameStr	Element	Optional	
SecondaryCurrencyRate	Element	Optional	
SecondCurrencyCodeStr	Element	Optional	
SerPrintDataRate	Element	Optional	
ShowLogo	Element	Optional	
ShowText1	Element	Optional	
ShowText2	Element	Optional	
ShowText3	Element	Optional	
SubnetMask	Element	Optional	
SupportedLanguages	Element	Optional	
TerminalCurrentLanguage	Element	Optional	
TerminalDiscountEnabled	Element	Optional	
TerminalID	Element	Optional	
TerminalIndex	Element	Optional	
TerminalLanguages	Element	Optional	
TerminalOwnerAddress	Element	Optional	
TerminalOwnerCountry	Element	Optional	
TerminalOwnerName	Element	Optional	

TerminalPrintLanguage	Element	Optional	
TerminalVersion	Element	Optional	
TipPercent	Element	Optional	
TransactionTimeStr	Element	Optional	
UnattEmulation	Element	Optional	
WaitCardTimeout	Element	Optional	
XMLDiscountEnabled	Element	Optional	
XMLIPPort	Element	Optional	
XMLMode	Element	Optional	

3.5.25 SetClientPANRequest – SetClientPANResponse

SetClientPANRequest

Tag	Type	Usage	Explanation
PANList	Element	Required	Up to 100 PAN (BIN) entries formatted as follows: 1 byte length + 9 bytes PAN (BIN) data. All data in ASCII numbers. For example 3 Pan entries. First 8 bytes length, second 6 and third 9 – '867639223 6676392 9676392232'.

SetClientPANResponse

Tag	Type	Usage	Explanation
ReturnCode	Element	Required	Operation result code

3.5.26 SetECRPANRequest – SetECRPANResponse

SetECRPANRequest

Tag	Type	Usage	Explanation
ECRPANList	Element	Required	Up to 100 PAN (BIN) entries formatted as follows: 1 byte MatchLength + 9 bytes PANStart (BIN) data + 1 byte Type + 33 bytes PanID. All data in ASCII numbers. For example 3 Pan entries. First 8 bytes length, second 6 and third 9 – '867639223 BX bank discount 6676392 CSome client card 9676392232BY bank discount '.

SetECRPANResponse

Tag	Type	Usage	Explanation
ReturnCode	Element	Required	Operation result code

3.5.27 DoBeepRequest – DoBeepResponse

DoBeepRequest

Tag	Type	Usage	Explanation
Duration1	Element	Optional	* 10ms
Duration2	Element	Optional	* 10ms
Duration3	Element	Optional	* 10ms
Frquency1	Element	Optional	Hz

Frquency2	Element	Optional	Hz
Frquency3	Element	Optional	Hz
Interval1	Element	Optional	* 10ms
Interval2	Element	Optional	* 10ms
Interval3	Element	Optional	* 10ms
Repeat	Element	Optional	times
RepeatInt	Element	Optional	* 10ms

DoBeepResponse

Tag	Type	Usage	Explanation
ReturnCode	Element	Required	Operation result code

3.5.28 Error

Tag	Type	Usage	Explanation
ReturnCode	Element	Required	Operation result code

3.6 ReturnCodes

Response messages may contain the following ReturnCode values:

ReturnCode	Category	Explanation
0	Info	Operation succeeded
1	Info	Card inserted
32769	Error	XML message error
32770	Error	Wrong XML message version
32771	Error	Incorrect parameter in the XML message
32772	Error	Communication problem
32773	Error	XML syntax error
32774	Error	Technical error
32775	Error	Sequence error
32776	Error	Timeout. Could not perform operation within specified time period
32778	Error	Transaction failed
32779	Error	Operation can not be performed, try again
32780	Error	Disconnected from the client
32781	Error	Specified transaction missing
32782	Error	Operation cancelled manually
32783	Error	This command is not supported by iCPT (for example because of terminal configuration)
32784	Error	ID card PIN error
32785	Error	Smartcard reader error
32786	Error	Amount error
32787	Error	Currency error

Appendix 1. Message examples

1. ReadCardRequest - ReadCardResponse

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version=„7.2.0“>
        <ReadCardRequest>
        </ReadCardRequest>
</PosXML>


<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version=„7.2.0“>
        <ReadCardResponse>
                <ReturnCode>0</ReturnCode>
                <Card>
                        <Pan>9233660000103227</Pan>
                        <Expires>07/05</Expires>
                        <ServiceCode>700</ServiceCode>
                </Card>
        </ReadCardResponse>
</PosXML>
```

2. ReadIDCardRequest - IDCardResponse

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version=„7.2.0“>
        <ReadIDCardRequest>
        </ReadIDCardRequest>
</PosXML>


<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version=„7.2.0“>
        <IDCardResponse>
                <ReturnCode>0</ReturnCode>
                <IDCard>
                        <Surname>Smith</Surname>
                        <FirstName>John</FirstName>
                        <MiddleName></MiddleName>
                        <Gender>M</Gender>
                        <IDCode>30901010245</IDCode>
                        <CardNumber>A01234567</CardNumber>
                        <ValidFrom>01.01.2009</ValidFrom>
                        <ValidTo>01.01.2019</ValidTo>
                        <Citizenship>EST</Citizenship>
                        <PlaceOfBirth>Tallinn</PlaceOfBirth>
                        <DateOfBirth>01.01.2009</DateOfBirth>
                        <ResidencePermitType></ResidencePermitType>
                </IDCard>
        </IDCardResponse>
</PosXML>
```

3. TransactionRequest - TransactionResponse

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version=„7.2.0“>
        <TransactionRequest>
                <Amount>50000</Amount>
                <CurrencyName>EUR</ CurrencyName>
                <TransactionID>ABC123</TransactionID>
                <PrintReceipt>48</PrintReceipt>
        </TransactionRequest>
</PosXML>


(online transaction with chip card)
```

```
<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version=„7.2.0“>
        <TransactionResponse>
                <ReturnCode>0</ReturnCode>
                <Reason></Reason>
                <TransactionData>
                        <TransactionID>ABC123</TransactionID>
                        <Amount>50000</Amount>
                        <AdditionalAmount>0</AdditionalAmount>
                        <DateTime>07.01.2009 13:40:13</DateTime>
                        <Stan>000072</Stan>
                        <Type>T1</Type>
                        <CardAction>2</CardAction>
                        <AuthorizationNo>054247</AuthorizationNo>
                        <SecAmount>3196</SecAmount>
                        <SecAdditionalAmount>0</SecAdditionalAmount>
                        <CurrencyName>EUR</CurrencyName>
                        <SecCurrencyName>EEK</SecCurrencyName>
                        <SignatureRequired>0</SignatureRequired>
                        <PINVerified>1</PINVerified>
                </TransactionData>
                <CardData>
                        <PhysicalType>41</PhysicalType>
                        <Pan>************1570</Pan>
                        <CardName>HANSA VISA KREDIIT</CardName>
                        <Expires>**/**</Expires>
                        <ServiceCode>201</ServiceCode>
                        <AL>Visa Credit</AL>
                        <AID>A0000000031010</AID>
                </CardData>
                <TerminalData>
                        <SerNo>9026808847</SerNo>
                        <ID>VOC21201</ID>
                        <Name>KAUBAMAJA!</Name>
                        <Address>TALLINN, KAUBA 1</Address>
                        <MerchantRegNo>11060344</MerchantRegNo>
                        <PayDesk>005</PayDesk>
                        <VerificationResult>0080000800</VerificationResult>
                        <ApplicationCryptogram>FA92BA6EF529E091</ApplicationCryptogram>
                        <CID>40</CID>
                        <TSI>F800</TSI>
                        <CVMR>010302</CVMR>
                        <IAD>06010A03642000</IAD>
                        <UPN>BD60438A</UPN>
                        <ATC>0062</ATC>
                        <AIP>5C00</AIP>
                        <TT>0</TT>
                        <PrinterStatus>2</PrinterStatus>
                </TerminalData>
                <AdditionalInfo></AdditionalInfo>
                <MerchReceipt>
                        CARD PAYMENT RECEIPT
                        KAUBAMAJA! TALLINN, KAUBA 1
                        Terminal:VOC21201    Reg:11060344    Paydesk:005
                        Receipt:000072        Time:07.01.2009-13:40:13
                        Author. no: 054247    T1
                        TRANSACTION DONE
                        Amount:                         500.00 EUR
                                                      (31.96 EEK)
                        Payment card: HANSA VISA KREDIIT
```

```
                        PAN:************1570
                        AL: Visa Credit
                        AID:A0000000031010
                        CID:40  TC:FA92BA6EF529E091
                        TVR:0080000800 TSI:F800 CVMR:010302
                        IAD:06010A03642000
                        UPN:BD60438A TT:0 AIP:5C00 ATC:0062
                        PIN CHECKED
                </MerchReceipt>
                <CustReceipt>
                        CARD PAYMENT RECEIPT
                        KAUBAMAJA! TALLINN, KAUBA 1
                        Terminal:VOC21201    Reg:11060344    Paydesk:005
                        Receipt:000072          Time:07.01.2009-13:40:13
                        Author. no: 054247     T1
                        TRANSACTION DONE
                        Amount:                          500.00 EUR
                                                         (31.96 EEK)
                        Payment card: HANSA VISA KREDIIT
                        PAN:************1570
                        AL: Visa Credit
                        AID:A0000000031010
                        PIN CHECKED
                        Retain receipt for statement verification
                </CustReceipt>
        </TransactionResponse>
</PosXML>
```

4. TransactionRequest – TransactionResponse

```
<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version=„7.2.0">
        <TransactionRequest>
                <Amount>10000</Amount>
                <CurrencyName>EUR</ CurrencyName>
                <TransactionID>ABC124</TransactionID>
                <PrintReceipt>48</PrintReceipt>
        </TransactionRequest>
</PosXML>


(online declined transaction with chip card)
<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version=„7.2.0">
        <TransactionResponse>
                <ReturnCode>32778</ReturnCode>
                <Reason>
                        Card declined transaction.  System error! (909).. Return card!.
                </Reason>
                <TransactionData>
                        <TransactionID>ABC124</TransactionID>
                        <Amount>10000</Amount>
                        <AdditionalAmount>0</AdditionalAmount>
                        <DateTime>07.01.2009 13:51:02</DateTime>
                        <Stan>000073</Stan>
                        <Type>T1</Type>
                        <CardAction>2</CardAction>
                        <AuthorizationNo>        </AuthorizationNo>
                        <SecAmount>639</SecAmount>
                        <SecAdditionalAmount>0</SecAdditionalAmount>
                        <CurrencyName>EUR</CurrencyName>
                        <SecCurrencyName>EEK</SecCurrencyName>
                        <SignatureRequired>0</SignatureRequired>
```

```
                <PINVerified>1</PINVerified>
        </TransactionData>
        <CardData>
                <PhysicalType>41</PhysicalType>
                <Pan>************1570</Pan>
                <CardName>HANSA VISA KREDIIT</CardName>
                <Expires>**/**</Expires>
                <ServiceCode>201</ServiceCode>
                <AL>Visa Credit</AL>
                <AID>A0000000031010</AID>
        </CardData>
        <TerminalData>
                <SerNo>9026808847</SerNo>
                <ID>VOC21201</ID>
                <Name>KAUBAMAJA!</Name>
                <Address>TALLINN, KAUBA 1</Address>
                <MerchantRegNo>11060344</MerchantRegNo>
                <PayDesk>005</PayDesk>
                <VerificationResult>0080000800</VerificationResult>
                <ApplicationCryptogram>1CE06FC829F004E9</ApplicationCryptogram>
                <CID>00</CID>
                <TSI>E800</TSI>
                <CVMR>010302</CVMR>
                <IAD>06010A03240400</IAD>
                <UPN>C49A93CE</UPN>
                <ATC>0063</ATC>
                <AIP>5C00</AIP>
                <TT>0</TT>
                <PrinterStatus>2</PrinterStatus>
        </TerminalData>
        <AdditionalInfo></AdditionalInfo>
        <MerchReceipt>
                ERRORMESSAGE
                Terminal:VOC21201    Reg:11060344    Paydesk:005
                Receipt:000073        Time:07.01.2009-13:51:02
                Transaction failed
                Card declined transaction
                 System error! (909).
                Return card!

                Payment card: HANSA VISA KREDIIT
                PAN:************1570
                AL: Visa Credit
                AID:A0000000031010
                CID:00  TC:1CE06FC829F004E9
                TVR:0080000800 TSI:E800 CVMR:010302
                IAD:06010A03240400
                UPN:C49A93CE TT:0 AIP:5C00 ATC:0063
        </MerchReceipt>
        <CustReceipt></CustReceipt>
    </TransactionResponse>
</PosXML>
```

Appendix 2. Control codes for printing

Each line may contain formatting code blocks. A code block has effect only on current line. Block begins with "{*" and ends with "*}". Inside block may be several formatting codes separated with comma.

Printing result depends on printer type terminal uses).

- Alignement (default – left)

CNT – center

RGT – right

- Format (default – normal)

BLD – bold

REV – dark background

ITA – italic

UND – underlined

- Letter size (default 48 symbols, normal size)

11C – 32 symbols per line

15C – 42 symbols per line

20C – 48 symbols per line

DHT – double letter height

DWD – double letter width

DWH – double letter height and width

QWH – quardo letter height and width

For example "{*11C,CNT,REV,DWH*}Hello"
Will be printed as a centered text on dark background with double letter height stal.

`Hello`