**Discovery Report**

ORIENT COMMERCIAL BANK

Volume 12 - MasterCard Contactless

Way4 Implementation

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# Introduction

## Introduction

This document contains the flow of MasterCard Contactless transaction which the Way4 system will be configured for the Business Requirements of Orient Commercial Bank. It covers the different sections of the Way4 system and Configuration needed to be done in them.

The technical solution, setup and configuration needed to be done in Way4 to satisfy MasterCard Contactless issuing and acquiring requirements. These solutions are internal to Way4 and are based on expertise and knowledge of OpenWay staff. The solution will be updated and finalized during system build phase by OpenWay.

## Notations used

The formats of the file fields are as follows:

| Ref | Description |
| --- | --- |
| A | Alphabetic characters A through Z and a through z |
| N | Numeric digits 0 through 9. A numeric field containing only digits; the field is right-aligned and should to be appended with leading zeros to reach the specified length. |
| An | Alphabetic and Special Characters. A character field containing any printable characters; the field is left aligned, it is appended with trailing spaces to reach the specified length |
| Ns | Numeric and Special Characters |
| Ans | Alphabetic, Numeric and Special Characters |
| MM | Month, 01 through 12 |
| DD | Day, 01 through 31 |
| YY | Year, 00 through 99 |
| YYYY | Year, 0000 through 9999 |
| HH | Hour, 00 through 23 |
| MI | Minute, 00 through 59 |
| SS | Second, 00 through 59 |
| B | Binary representation of data. A binary field only used to store line delimiter characters |
| ..nn | Variable length data up to nn characters. There will be two or three character length (depending upon whether maximum data length is 99 or 999) at the beginning of the element to identify the number of positions following to the end of the data element |
| S | Single Value Field |
| MV | Multi-value Field/Multiline data |
| O | Optional |
| M | Mandatory |
| C | Conditional |
| MR | Copy from request |
| CR | Copy if present in request |
| ATM | Auto Teller Machine |
| CCDM | Cheque and Cash Deposit Machine |
| SML | SmartLink |
| Napas | Vietnam Nation Financial Switching Joint Stock Company |
| OCB | Orient Commercial Bank |

## Data Elements

The final component of a message consists of a number of 'data elements'. Data elements may be of fixed or variable length. No delimiters are used between data elements. Their order and presence is indexed by the associated bit map(s). Variable length data starts with length specified, indicating the length of that particular data element. Each data element is characterized by:

* **No** is a running number
* **Data Element Name** is name of field
* **Position** is starting position of the field.
* **Size** is the length of the field. For example: Position = 6 and length = 3 mean the field content starts at 6 spaces/ characters/ digits from the left and occupies 3 spaces/ characters/ digits.
* **M/C/O** is a value represents mandatory or conditional or optional. The following flags specify if the entry of data in the field is mandatory:
  + **M** - the data entry is mandatory,
  + **O**- the data entry is optional,
  + **C** - the data entry depends on other field values.
* **Description** is additional explanation of the field. It should clarify
  + whether the field is expecting a fixed value
  + the field is running number
  + the field existence depends on other field/ fields
  + termination symbol
  + delimiter; for example 0x0D, 0x0A (CRLF).

# MC PayPass Issuing

## REQC0001 – Issuing Product

### Business requirement

OCB requires support for the following issuing MC PayPass product. The product should have the following characteristics:

* MasterCard Dual interface(Contact and Contactless interfaces) Card
* Mastercard must be PayPass enabled
* OCB will support both existing EMV contact products and new EMV contactless products.
* OCB does not support mag-stripe contactless so CMS should decline all mag-stripe contactless transaction for MasterCard.
* Magnetic stripe should contains Track data for MasterCard.
* PIN should be constructed based on MasterCard PAN

### Technical requirement

WAY4 will support the setup and configuration of the MC PayPass product as required.

MC Card’s functionalities will be copied from an existing product in current Testing environment. A new service package to be defined for this product to have a separate set of parameters for Contactless.

OpenWay will support OCB to do certification with MasterCard.

New card can perform contactless transactions via OCB POS which support contactless technology and MasterCard merchant.

### Limitations

N/A

### Impact Areas

N/A

## REQC0002 – Issuing Contract Hierarchy

### Business requirement

* Apply existing Contract hierarchy which is implemented at OCB

### Technical requirement

Apply WAY4 standard

### Limitations

N/A

### Impact Areas

N/A

## REQC0003 – Card Production

### Business requirement

WAY4 need to support the generation of a personalization file. The file will be sent to OCB personalization vendor for EMV PayPass data preparation and electrical personalization. Note that EMV DES and RSA key management will be done by EMV personalization vendor outside of WAY4. A separate embossing file will be required for the MC Paypass cards only which is different from the existing file used for EMV Card personalization.

OCB will use the same flow to issue MC EMV Card to apply for MC Paypass card. The card should generate the dynamic CVV3 capability for the contactless transactions

### Technical requirement

Card Personalization through WAY4 will be done as follows:

* WAY4 will produce a personalization file for MC Paypass Cards based on WAY4 standard embossing file format
* The Personalization bureau will use the file produced from WAY4 to product the cards and deliver them to clients
* If any exceptions of EMV Electric Personalization are generated during production, they will be reported manually to OCB operators.
* Sample of Contact Less personal file export 
* OpenWay will give OCB the latest personalization file export which supports MC Paypass.
* Card Production will be used the same interface and flow with existing MC EMV Card

### Limitations

N/A

### Impact Areas

* Product Hierarchy
* WAY4 Modules:
  + WAY4 Core
  + WAY4 Issuing
  + WAY4 PIN Management and Card Production
* Interfaces:
  + WAY4 Personalization Interface

## REQC0004 – Card Activation

### Business Requirement

* The same requirement with MC EMV Card

### Technical Details

* N/A

### Impact Areas

* N/A

### Limitation

* N/A

## REQC0005 – Card Renewal/Replacement

### Business Requirement

* Same requirement with existing MC EMV Card

### Technical Details

* N/A

### Limitation

* N/A

## REQC0006 – Fees

### Business Requirement

* Same requirement with existing MC EMV Card

### Technical Details

* N/A

### Limitation

* N/A

## REQC0007 – Usage Limiters

### Business Requirement

* Same requirement with existing MC EMV Card

### Technical Details

* N/A

### Limitation

* N/A

# MC PayPass POS Acquiring

## REQC0008 – POS Acquiring Product

### Business requirement

* OCB requires WAY4 to support below contactless transactions in POS acquiring product:
  + Purchase
  + Cash
  + Void
  + Online Reversal
  + Online Partial Reversal
  + Card Verify
  + Purchase with TIP
  + Pre-Authorization
  + Auth Completion
* Transaction conditions:
  + Under XXX VND, contactless online transaction without CVM. This limit should be configured at contactless reader as required by MasterCard.
  + Contactless Floor limit should be configured at contactless reader as required by MasterterCard
  + Above XXX VND, only contact transactions to be allowed and contactless transactions should be declined.
* OCB does not support mag-stripe contactless transaction.

### Technical requirement

OpenWay will support to enhance the configuration of existing POS Acquiring Product to accept MC PayPass transactions as required.

There is nothing change in other parts of POS Acquiring Product.

New POS Type will be used in system

OpenWay will deliver specification of contactless transaction to POS vendor to update their applications in POS.

OpenWay will support OCB to certification with MasterCard.

POS vendor will perform MTIP/ADVT/CDET certification with support of OCB and OpenWay.

### Limitations

N/A

### Impact Areas

POS vendor need to setup DE22=070 for contactless transaction.

## REQC0009 – POS Acquiring Contract Hierarchy

### Business requirement

* Apply existing Contract hierarchy which is implemented at OCB

### Technical requirement

Apply WAY4 standard

### Limitations

N/A

### Impact Areas

N/A