

Switch Interface Gateway

Version-11.1

9NT1368-ORACLE FCUBSV.UM 11.1.0.0.0.0.0

[August] [2010]

Oracle Part Number E51575-01

**ORACLE**  
FINANCIAL SERVICES

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## Document Control

Author: Documentation Team	Group: UBPG	
Created on: October 01, 2008	Revision No: Final	
Updated by: Documentation Team	Reviewed by: Development/Testing teams	Approved by: Software Quality Assurance Team
Updated on: August 13, 2010	Reviewed on: August 13, 2010	Approved on: August 13, 2010

# Table of Contents

<b>1.</b>	<b>ABOUT THIS MANUAL.....</b>	<b>1-1</b>
1.1	INTRODUCTION.....	1-1
1.2	AUDIENCE.....	1-1
1.3	ABBREVIATIONS.....	1-1
1.4	ORGANIZATION.....	1-2
1.4.2	<i>Related Documents</i> .....	1-2
1.5	GLOSSARY OF ICONS.....	1-3
<b>2.</b>	<b>SWITCH INTERFACE GATEWAY.....</b>	<b>2-1</b>
2.1	INTRODUCTION.....	2-1
2.2	INTERFACE FUNCTIONALITIES.....	2-1
2.2.1	<i>ATM Transactions</i> .....	2-1
2.2.2	<i>Point Of Sale Transactions</i> .....	2-3
2.2.3	<i>IVR Transactions</i> .....	2-4
2.3	GATEWAY MAINTENANCE FOR SWITCH INTERFACE.....	2-4
2.3.1	<i>Maintaining Upload Source</i> .....	2-5
2.3.2	<i>Maintaining FLEXSWITCH External System</i> .....	2-6
2.3.3	<i>Specifying External System Functions</i> .....	2-7
2.3.4	<i>Specifying Source Preferences</i> .....	2-8
2.4	SWITCH INTERFACE MAINTENANCE.....	2-9
2.4.1	<i>Defining Currency for Currency Code Conversion</i> .....	2-9
2.4.2	<i>ATM/Debit Card Mapping for Card Account Number Conversion</i> .....	2-9
2.4.3	<i>Maintaining Process Code Mapping Details</i> .....	2-10
2.4.4	<i>Maintaining Network Details</i> .....	2-11
2.4.5	<i>Maintaining Merchant Details</i> .....	2-12
2.4.6	<i>Maintaining Terminal Details</i> .....	2-13
2.4.7	<i>Maintaining Utility Provider Details</i> .....	2-15
2.4.8	<i>Maintaining Product Types for Product Derivation</i> .....	2-16
2.4.9	<i>Showing Amount Block Transactions in Account Statements</i> .....	2-17
2.4.10	<i>Modifying a Product Preferences Screen</i> .....	2-18
2.4.11	<i>Maintaining Charges for Non-financial Transactions</i> .....	2-19
2.4.12	<i>ARC Maintenance</i> .....	2-21
2.5	BATCH PROCESSES.....	2-21
2.5.1	<i>Maintaining Batches for Batch Operations</i> .....	2-22
2.5.2	<i>Settlement Upload</i> .....	2-23
2.5.3	<i>Intra Day Batch</i> .....	2-24
2.5.4	<i>Viewing Transaction Monitor</i> .....	2-26
2.6	UPLOADING CARDS.....	2-27
2.7	UPLOADING TERMINAL ID.....	2-28
2.8	PROCESSING ATM CASH DEPOSITS.....	2-28
<b>3.</b>	<b>ANNEXURE A.....</b>	<b>3-1</b>
3.1	SWITCH SOFTWARE AND CARD TRANSACTIONS BUSINESS.....	3-1
3.2	ISO8583 PROTOCOL OVERVIEW.....	3-1
3.3	SWITCH TRANSACTION CATEGORIES.....	3-2
3.4	ACCOUNTING ENTRIES – ATM TRANSACTIONS.....	3-2
3.4.1	<i>Accounting Entries for Cash Withdrawal Transactions</i> .....	3-2
3.4.2	<i>Accounting Entries for Balance Enquiry</i> .....	3-4
3.4.3	<i>Accounting Entries for Deposit</i> .....	3-6
3.4.4	<i>Accounting Entries for Funds Transfer</i> .....	3-6

3.5	ACCOUNTING ENTRIES - POS PURCHASE .....	3-7
3.6	BALANCE HANDOFF FILE FORMATS .....	3-9
3.7	NETWORK SETTLEMENT MESSAGE FORMAT .....	3-10
3.8	MERCHANT SETTLEMENT FILE FORMAT .....	3-12
3.9	MAINTAINING SWTB_PARAM TABLE .....	3-13

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# 1. About this Manual

## 1.1 Introduction

This manual talks about the interface between Oracle FLEXCUBE and the Switch software system used in your bank. The maintenances required for the proper functioning of this interface, the interface workflow, validations, and processing for the interface have been documented in this manual.

## 1.2 Audience

This manual is intended for the following User/User Roles:

Role	Function
Back office data entry Clerks	Input functions for maintenance related to the interface
Back office Managers/Officers	Authorization functions

## 1.3 Abbreviations

Abbreviation	Description
System	Unless specified, it shall always refer to Oracle FLEXCUBE
CCY	Currency
SWITCH	Switch Software
BIN	Bank Identification Number
IMD	International Member Descriptor
OLTP	Online Transaction Processing
ATM	Automatic Teller Machine
POS	Point Of Sale
ISO	International Organization for Standardization
CMS	Card Management System
STAN	System Trace Audit Number
RRN	Retrieval Reference Number
Acquirer	Bank that deploys ATM/POS for acquiring transactions
Issuer	Bank that issues Cards to facilitate the Transactions
IC	Interest and Charges – Oracle FLEXCUBE module

Abbreviation	Description
EOC	End of Cycle
EOD	End of Day
SAF	Store and Forward
Msg	Message
MTI	Message Type Indicator
PAN	Primary Account Number
IVR	Interactive Voice Response

## 1.4 **Organization**

This manual is organized into the following chapters:

<b>Chapter 1</b>	<i>About this Manual</i> gives information on the intended audience. It also lists the various chapters covered in this User Manual.
<b>Chapter 2</b>	<i>Switch Interface Gateway</i> - helps in processing both Financial and Non-Financial Transactions.
<b>Chapter 3</b>	<i>Annexure A</i> – briefs the account of the Switch software domain and the components in a Cards Transactions Business network.

### 1.4.1.1 **Conventions Used in this Manual**

- Important information is preceded with the  symbol.
- 'Switch Interface' or 'Interface' in this document refers the Oracle FLEXCUBE Switch Interface that processes the transactions from Switch Software.
- 'Switch' and 'Switch Software' are generic terms used to refer to any OLTP product which sends transactions to Oracle FLEXCUBE Switch Interface using ISO8583 (1987/1993/2003) protocol.

### 1.4.2 **Related Documents**

You may refer the following manuals for more information

- User Manual of the Switch System installed in your Bank (This User manual is not included in Oracle FLEXCUBE Manuals)
- ISO documentation on ISO8583 protocol (This manual is not included in Oracle FLEXCUBE User Manuals)

## 1.5 Glossary of Icons

This User Manual may refer to all or some of the following icons:

Icons	Function
	New
	Copy
	Save
	Delete
	Unlock
	Print
	Close
	Re-open
	Reverse
	Template
	Roll-over
	Hold
	Authorize
	Liquidate
	Exit
	Sign-off
	Help
	Add row
	Delete row
	Option List
	Confirm

Icons	Function
	Enter Query
	Execute Query

*Refer the Procedures User Manual for further details about the icons.*

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## 2. Switch Interface Gateway

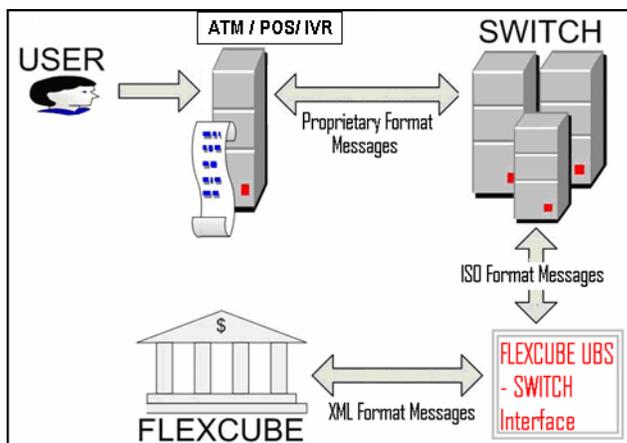
### 2.1 Introduction

Oracle FLEXCUBE Switch Interface helps in processing both Financial and Non-Financial Transactions. The interface helps in first validating each transaction request against the Oracle FLEXCUBE database and then posting the transactions into the system.

The interface with Switch software system supports Automatic Teller Machine (ATM) and Point Of Sale (POS) transactions originating from bank terminals or from Interchanges such as VISA or MasterCard. Switch Interface also supports Interactive Voice Response (IVR) transactions. The interface functionality includes the following:

- Interface with support for ISO 1987/1993/2003 protocols
- Authorization and posting of Switch/IVR transactions into Oracle FLEXCUBE

The following diagram illustrates the flow of messages via the Oracle FLEXCUBE – Switch system interface.



### 2.2 Interface Functionalities

Following are the functionalities of the Oracle FLEXCUBE – Switch system interface.

#### 2.2.1 ATM Transactions

The following functionalities are with respect to ATM transactions. This section describes all Transactions required for Switch interface and expected accounting entries.

##### 2.2.1.1 Cash Withdrawal

During a Cash Withdrawal transaction the product is determined and the preferences are checked for processing. Amount blocking or account posting is done depending upon the class of the message. Amount blocking will include all the charge components also (for Online and Issuer). The balance amount is recorded after amount posting is done.

*Refer the Annexure chapter for the corresponding accounting entries.*

### **2.2.1.2 Balance Enquiry**

This facility produces a quote of the Account Balance for a given account. The following balances are provided:

- Ledger balance
- Available balance
- Unclear balance

You can select the 'Include OD limit' option when showing balance.

*Refer the Annexure chapter for the corresponding accounting entries.*

### **2.2.1.3 Mini Statement Enquiry**

The interface facilitates the enquiry for Mini Statements. You can specify number of rows/the period for which the statement is to be generated.

The statement can have the following columns:

- Originating Branch Code
- Transaction Literal
- Transaction Amount Sign
- Transaction Amount
- Flag Dr/Cr
- Value Date
- Transmission Date
- Transaction Reference Number

*The accounting entries are the same as those for Balance Enquiry*

### **2.2.1.4 Deposit**

The system can automatically select the product based on the check or cash deposit. In case of cash deposits the system checks whether immediate accounting or posting is required or whether it is to be only logged.

*Refer the Annexure chapter for the corresponding accounting entries.*

### **2.2.1.5 Funds Transfer**

This facility is used when a customer initiates a Fund Transfer between his accounts or to another customer's account. The Switch system will send both Account numbers in ISO messages.

*Refer the Annexure chapter for the corresponding accounting entries.*

### **2.2.1.6 Utility Payments**

This facility helps in making payments into a Utility Provider's account.

*Accounting entries are same as that of Fund Transfer.*

### **2.2.1.7 Ad-Hoc Statement Generation Request**

Here the customer requests a Statement through the ATM. This request is reaches the Switch interface at the bank where is passed to the Oracle FLEXCUBE system. Oracle FLEXCUBE system will generate Book Dated statements by default. The period for which the statement is required can be specified.

*Accounting entries are same as that of Balance Enquiry.*

### **2.2.1.8 Cheque Book Issue**

The customer requests a Cheque Book via the ATM, thereby informing the bank. This request is sent to the Oracle FLEXCUBE system via the interface. The number for cheque leaves can be specified. The cheque numbers are automatically generated.

*Accounting entries are same as those for Balance Enquiry.*

 ATM transaction data will be handed-off to Mantas for the branch as per the Mantas maintenance. Transactions whose value date is same as the branch EOD date is extracted for Mantas hand off. Transactions whose status is other than 'Success or Reversed' will not be handed off to Mantas.

## **2.2.2 Point Of Sale Transactions**

The following are the facilities provided for Point Of Sale (POS) Transactions.

### **2.2.2.1 POS Purchase**

The customer initiates a normal purchase at Merchants POS Terminal. This purchase request reaches Oracle FLEXCUBE via the Switch interface. Based on the purchase a product is identified and the preferences are considered. Depending upon the message class, either amount blocking or account posting is done. Amount blocking will include all the charge components. The account balance is recorded after the amounts are posted.

*Refer the Annexure chapter for the corresponding accounting entries.*

### **2.2.2.2 Cash Advance**

For cash advances the Oracle FLEXCUBE product is derived at and the preferences are checked for processing. Depending upon the message class, either amount blocking or account posting is done. Amount blocking will include all the charge components. The account balance is recorded after the amounts are posted.

*Accounting entries are same as that of POS purchase.*

### **2.2.2.3 Refund**

Accounting entries are similar to those of Cash Deposit.

#### **2.2.2.4 Adjustments**

The Adjustments facility corresponds to Partial Reversals in ATM, the difference being that Cr Adjustments are also possible.

*Accounting entries are same as that of POS purchase.*

#### **2.2.2.5 Pre-auth-Completion**

Pre-auth completion involves removing amount block.

*Accounting entries are similar to those of POS purchase.*

 Point of Sale (POS) transaction data will be handed-off to Mantas for the branch as per the Mantas maintenance. Transactions whose value date is same as the branch EOD date is extracted for mantas hand off. Transactions whose status is other than 'Success or Reversed' will not be handed off to Mantas.

#### **2.2.3 IVR Transactions**

The following transactions are supported by IVR:

- Balance Enquiry
- Mini Statement Enquiry
- Ad-Hoc Statement Generation Request
- Cheque Book Issue
- Funds Transfer
- Utility Payments

 IVR transaction data will be handed-off to Mantas for the branch as per the Mantas maintenance. Transactions whose value date is same as the branch EOD date is extracted for Mantas hand off. Transactions whose status is other than 'Success or Reversed' will not be handed off to Mantas.

### **2.3 Gateway Maintenance for Switch Interface**

The following are the interface gateway maintenances done for setting up the Switch Interface Gateway.

### 2.3.1 Maintaining Upload Source

The Upload Source is maintained in the 'Upload Source Maintenance' screen. You can invoke the 'Upload Source Maintenance' screen by typing 'CODSORCE' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

The screenshot shows a window titled "Upload Source Maintenance". Inside the window, there is a form with the following elements:

- A text input field labeled "Source Code \*".
- A text input field labeled "Description" with a help icon to its right.
- A checkbox labeled "Base Data From Flexcube".

At the bottom of the window, there is a "Fields" section with a grid of labels:

Input By DOC1	Date Time	Modification Number	<input type="checkbox"/> Authorized
Authorized By	Date Time		<input checked="" type="checkbox"/> Open

A "Cancel" button is located to the right of the "Fields" section.

In the above screen the Source Code – FLEXSWITCH – and the brief description of the source are maintained.

## 2.3.2 Maintaining FLEXSWITCH External System

The FLEXSWITCH external system is maintained in the 'External System - Detailed' screen. Here you can maintain the Correlation pattern, Message pattern, and Queue names for the external system i.e. FLEXSWITCH.

You can invoke the 'External System - Detailed' screen by typing 'GWDEXSYS' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

In Queue*	Response Queue
<input type="checkbox"/>	
<input type="checkbox"/>	

You must specify the following in the above screen.

### External System and Description

Specify the External System as 'FLEXSWITCH'. You may optionally give a brief description of the External System too.

### Correlation Pattern - Request

Select and set 'Correlation ID' against this field.

### Message Exchange Pattern – Request Message

Select 'Input only' from the adjoining drop-down list.

### Message Exchange Pattern – Response Message

Select 'Full screen' from the adjoining drop-down list.

### Default Response Queue

Specify the default response queue as 'SW\_MDB\_QUEUE\_RESPONSE'.

### Dead Letter Queue

Specify the dead letter queue as 'MDB\_QEUEU\_DLQ'.

### XSD Validation Required

Select this checkbox if the request xml and response xml has to be validated against the XSD.

### Register Response Queue Message Id

Select this checkbox to register the response queue message Id.

### External System Queues

Give the External IN-QUEUE and RESPONSE-QUEUE for Switch.

## 2.3.3 Specifying External System Functions

You can specify the external system's functions in the 'External System Functions – Detailed' screen. Here you can maintain Function ID, Action, Service name and Operation code for the Switch Interface Gateway External system.

You can invoke the 'External System Functions – Detailed' screen by typing 'GWDEXFUN' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

External System Functions - Detailed

External System \* [icon] Description

Function \* [icon]

Action \* [icon]

Service Name [icon]

Operation Code [icon]

Fields

Input By DOC1 Date Time Modification Number Authorized

Authorized By Date Time Open Cancel

### External System

Select the External system – FLEXSWITCH – from the list of options available.

### Function

Select the Function id from list.

Once you have entered the above details the following fields are filled automatically:

- Action
- Service Name
- Operation Code

### 2.3.4 Specifying Source Preferences

You can set the preferences for the External system in the 'Upload Source Preferences Maintenance' screen.

You can invoke the 'Upload Source Preferences Maintenance' screen by typing 'CODUPLDM' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

The screenshot shows the 'Upload Source Preferences Maintenance' window. It features a header bar with the title and a close button. The main area contains several fields and sections. At the top, there are two required text fields: 'Source Code \*' and 'Module Code \*', each with a list icon. Below these are two sections: 'Error Handling' and 'Post Upload'. In the 'Error Handling' section, there is an 'On Override \*' dropdown menu set to 'Ignore' and an 'On Exception \*' dropdown menu set to 'Reject'. In the 'Post Upload' section, there is a 'Status \*' dropdown menu set to 'Authorized' and a 'Purge Days(Calender)' text input field. Below these are three unchecked checkboxes: 'Allow Deferred Processing', 'Allow EOD with Deferred', and 'Allow Delete'. At the bottom of the window, there is a 'Fields' tab and a footer area with labels for 'Input By DOC1', 'Date Time', 'Modification Number', 'Authorized By', and 'Date Time'. There are also two checkboxes, 'Authorized' (unchecked) and 'Open' (checked), and a 'Cancel' button.

#### Source Code

Select Source Code - FLEXSWITCH - from the list.

#### Module Code

Select Module Code from the list of options.

#### On Override

Select 'Ignore' to ignore error handling overrides.

#### On Exception

Select 'Reject' to reject error handling exceptions.

#### Post Upload Status

Select 'Authorized' for the uploads to be automatically authorized on completion of the upload process.

Leave the following checkboxes cleared:

- Allow Deferred Processing
- Allow EOD with Deferred
- Allow Delete

## 2.4 Switch Interface Maintenance

You must perform the following maintenances for the Oracle FLEXCUBE – Switch system interface.

### 2.4.1 Defining Currency for Currency Code Conversion

ISO numeric currency codes are converted into Oracle FLEXCUBE's alpha numeric currency code. The definition for the conversion is maintained against the 'ISO Numeric Currency Code' field in the Currency Definition screen as shown below.

You can invoke the 'Currency Definition' screen by typing 'CYDCDEFN' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

### 2.4.2 ATM/Debit Card Mapping for Card Account Number Conversion

The interface facilitates conversion of ATM Card Number and Card Account Number to Oracle FLEXCUBE's alphanumeric account number. For this facility you must map the card account numbers to Oracle FLEXCUBE account numbers. This mapping can be done in the 'Debit Card Oracle FLEXCUBE Account Mapping' screen. Upload will be provided for this date tends to be in bulk and banks will prefer to maintain it using handoffs.

You can invoke the 'ATM/Debit Card FCC Account Mapping' screen by typing 'SWDATMCD' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

The screenshot shows a software window titled "ATM/Debit Card FCC Account Mapping". Inside the window, there are four input fields with asterisks indicating they are mandatory: "ATM/Debit Card Number \*", "Card Account Number", "Branch \*", and "Account Number \*". The "Branch" and "Account Number" fields have small icons next to them, likely representing dropdown menus. At the bottom of the window, there is a dark blue bar containing several fields: "Input By DOC1", "Date Time", "Modification Number", "Authorized By", "Date Time", "Authorized" (with an unchecked checkbox), and "Open" (with a checked checkbox). A "Cancel" button is located on the right side of this bar.

You must maintain the following mandatory fields in the above screen.

#### **Card Number and Card Account Number**

Specify the card number and the card account number here. This must be a unique combination. The Card Account Number is mandatory only when the transaction account is the Card Account and not the account maintained in Oracle FLEXCUBE.

#### **Branch**

Specify the card issuer branch from the list of options available alongside.

#### **Account Number**

From the list of options available alongside, specify the Oracle FLEXCUBE account number for which the card has been issued.

### **2.4.3 Maintaining Process Code Mapping Details**

All transaction requests from the switch system are conveyed in ISO transaction codes. These are resolved into corresponding specific transactions in Oracle FLEXCUBE. For this you must maintain the ISO transaction code and its corresponding Oracle FLEXCUBE transaction literal in the 'Process Code Mapping Details' maintenance screen.

Create and maintain process code types for all Oracle FLEXCUBE literals in the 'Process Code Mapping Details' screen. You can invoke the 'Process Code Mapping Details' screen by typing 'SWDFCLTL' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button..

Specify the following details here.

#### **Oracle FLEXCUBE Literal**

Select the Oracle FLEXCUBE literal from the drop-down list available alongside. This is a mandatory field. You can enter additional information in the editor that is displayed on clicking the adjoining icon.

#### **Process Code Type**

Specify the first two characters from the ISO process code here. It is a two-digit unique number. This is a mandatory field.

#### **Channel**

Based on the FLEXCUBE literal selected, the system defaults the applicable channels of the corresponding FLEXCUBE literal. However, you can modify the selection of the channel and this is validated by the system

#### **External Transaction Code**

Specify the external transaction code here. This is an optional field.

#### **Description**

Optionally you can specify a brief description of your maintenance here.

### **2.4.4 Maintaining Network Details**

For every network interacting with the SWITCH system, you need to maintain the Network, Issuers and Acquirer details. This maintenance is done in the 'Network Details' screen as shown below.

You can invoke the 'Network Details' screen by typing 'SWDNWDET' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

### **Network ID**

Specify the Network Id of the card issuing agency here. This is a mandatory field.

### **Account Number and Account Branch**

Specify the Account Number from the list of options available alongside each field. This account number – a Nostro account – belongs to the specify Network Id. This is used to post entries when the corresponding network is involved in the transaction. It is a mandatory field. Depending on the Account Number selected, the corresponding Account Branch is displayed.

### **Issuer and Acquirer Details**

Acquirer is the Bank that owns the ATM and POS terminals and offer access to card holders from their own and also other banks. Issuer is the Bank that issues the Card to account holders and authorizes/posts transactions.

You must maintain the Issuer and Acquirer Banks for the network here. Specify the BIN (Bank Identification Number ) alias IMD ( International Member Descriptor ) to identify the Acquirer and Issuer. You may also specify a description for each.

## **2.4.5 Maintaining Merchant Details**

You may have various POS machines at different locations, each having their own Merchant Details. For facilitating POS transaction you must maintain the Merchant Details in the screen as shown below.

You can invoke the 'Merchant Details' screen by typing 'SWDMRCID' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

The screenshot shows a window titled "Merchant Details". It contains three input fields: "Merchant Id \*", "Account Branch \*", and "Account No \*". Each field has a small icon to its right. The bottom of the window is a dark blue footer with several fields: "Input By DOC1", "Authorized By", "Date Time", "Date Time", "Modification Number", "Authorized" (checkbox), "Open" (checkbox), and a "Cancel" button.

### **Merchant Id**

Specify the Merchant ID of the POS machine here. This is mandatory.

### **Account Branch**

Specify the related branch of the Merchant's account here. This is mandatory.

### **Account Number**

Specify the Merchant's account number here. This is mandatory. This will be the Oracle FLEXCUBE account to which postings will be done.

## **2.4.6 Maintaining Terminal Details**

You must maintain Terminal Details such as the Originating branch, Cash GL and Terminal ID for each ATM or POS Terminal. This is done in the 'Terminal Details' screen as shown below.

You can invoke the 'Terminal Details' screen by typing 'SWDTRMID' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

The screenshot shows the 'Terminal Details' window with the following fields and options:

- Terminal ID \* (text input)
- Channel:  POS,  ATM,  IVR
- Originating Branch \* (dropdown menu)
- Cash General Ledger Number (text input)
- Merchant ID (text input)
- Terminal Address (text input)
- Intelligent Deposit

Footer fields and buttons:

- Input By DOC1
- Date Time
- Modification Number
- Authorized By
- Date Time
- Authorized
- Open
- Cancel

### Terminal ID

Specify the unique terminal ID of the ATM machine/POS machine to uniquely identify then. This is mandatory.

### Channel

Specify a channel that should be used. You can select one of the following options:

- ATM
- POS
- IVR



Note the following:

- If you select the channel as IVR, then you need to leave 'Intelligent Deposit' option unchecked.
- If you select the channel as IVR, then the options 'Cash General Ledger number' and 'Merchant ID' should be blank.

### Originating Branch

Specify the Originating Branch from the list of options given alongside. It is either the issuer branch of the POS or the ATM branch, as the case may be.

### Cash GL Account

This field is enabled and is mandatory for ATM type terminals only. Specify the Cash GL Account from the adjoining list of options.

### Merchant ID

This field is enabled and is mandatory for POS type terminals only. Specify the Merchant ID here.

## Terminal Address

Specify the address of the terminal here.

## Intelligent Deposits

This checkbox is valid only for ATM terminals. Select this checkbox to indicate the ATM provides Intelligent Deposits facility. In the Intelligent Deposits facility, accounting entries are done as soon as the customer makes the Deposit.

## 2.4.7 Maintaining Utility Provider Details

Maintain the details of a utility provider in the 'Utility Provider Details' screen. You can invoke the 'Utility Provider Details' screen by typing 'SWDUPDET' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

The screenshot shows a window titled "Utility Provider Details" with a blue header and a white body. The body contains four input fields: "Utility Provider Id \*" (with a red asterisk), "Description", "Account Branch \*" (with a red asterisk and a dropdown arrow), and "Account Number \*" (with a red asterisk and a dropdown arrow). A small yellow speech bubble icon is next to the "Description" field. The bottom of the window has a dark blue footer with several fields: "Input By DOC1", "Authorized By", "Date Time", "Modification Number", "Authorized" (with an unchecked checkbox), and "Open" (with a checked checkbox). A "Cancel" button is located on the right side of the footer.

### Utility Provider Id

Specify the Utility Provider Id here.

### Account Branch

Specify the related branch of the Merchant's account here. This is mandatory.

### Account Number

Specify the Merchant's account number here. This is mandatory. This will be the Oracle FLEXCUBE account to which postings will be done.

### Description

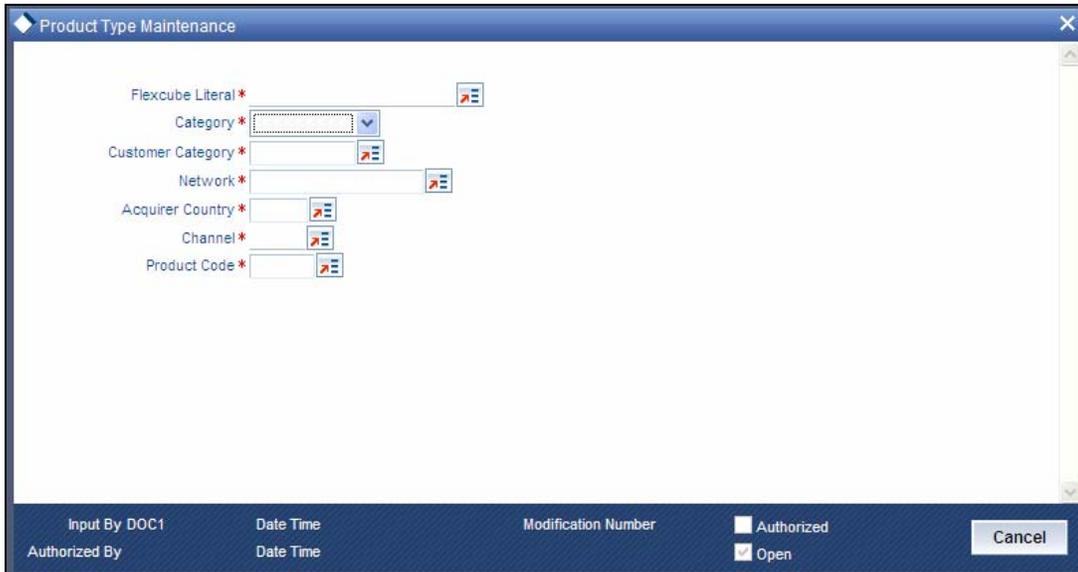
Optionally you can give a brief description of the utility provider here.

## 2.4.8 Maintaining Product Types for Product Derivation

Every transaction request from the switch system is assigned under a particular product type. This maintenance is done in the 'Product Type Maintenance' screen. Here, you can map products to Oracle FLEXCUBE literals.

For every transaction request the Oracle FLEXCUBE product is derived based on the Category, Oracle FLEXCUBE literal and the Customer Category.

You can invoke the 'Product Type Maintenance' screen by typing 'SWDPRMAP' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.



You can specify the following details here.

### Oracle FLEXCUBE Literal

Select a three digit literal from the list of options available alongside.

### Category

Select the category of the transaction – On-Us, Off-Us or Remote-On-Us – from the list of options available alongside.

### Customer Category

Select a customer category from the list of options available alongside.

### Channel

Specify the channel that should be used for transaction. The adjoining option list displays all the channels maintained in the system.

 ATM, POS and IVR requests may come from the same port or from different ports based on the configuration done in the property file. If they are configured to arrive from different ports, then the channel is identified based on the port number. If they are configured to arrive from the same port then the channel is identified as 'ALL'. It is also possible that some of the channels alone share a port.

## Product Code

From the list of options available alongside, select the Oracle FLEXCUBE product code to be mapped to the specified literal.

## Network

Select the network from the list of options available alongside.

## Acquirer Country

Select the country of the acquirer from the list of options available alongside.

## 2.4.9 Showing Amount Block Transactions in Account Statements

You can have any field from the transaction log included in the Customer Account statement generation. Additionally you can also choose to include transactions that resulted in amount blocks.

You can invoke the 'Amount Block Input' screen by typing 'CADAMBLK' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

The screenshot shows the 'Amount Block Input' dialog box. The fields are arranged as follows:

- Account Number \* (Mandatory)
- Amount \* (Mandatory)
- Effective Date
- Remarks
- Hold Code
- Hold Description
- Sequence Number \* (Mandatory, value: AB382)
- Expiry Date
- Amount Block Type (Dropdown menu, value: Flexcube)
- Reference No

At the bottom, there is a 'Fields' section with the following options:

- Input By DOC1
- Date Time
- Modification Number
- Authorized
- Authorized By
- Date Time
- Open

A 'Cancel' button is located in the bottom right corner.

## Account Number

Specify the Oracle FLEXCUBE account number for blocking the amount. This field is mandatory.

## Amount Block Number

Amount block number is unique and is created after the amount block creation.

## Amount

Specify the Amount blocked. This field is mandatory.

### Expiry Date

Specify the expiry date of the Amount Block.

### Effective Date

Specify the date from which the Amount block is effective.

### Amount Block

This list shows Switch, Oracle FLEXCUBE, and Pre-Auth. If the amount block is done via Switch, then it must be selected here.

### Remark

Optionally you may add your remarks here.

## 2.4.10 Modifying a Product Preferences Screen

During the implementation of the Switch interface system you can use the following facility to modify the 'Preferences' screen for a product.

You can invoke the 'Retail Teller Product Preferences' screen by typing 'DEDRTPRM' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

The screenshot displays the 'Retail Teller Product Maintenance' window. It features a grid of input fields for product information. On the left side, fields include Product Code, Product Description, Report Module (set to RT), Product Type, Description, Slogan, Product Group, Product Group Description, Start Date, End Date, and Remarks. On the right side, fields include Exchange Rate Variance (in %), Override Limit (set to 3), Stop Limit (set to 100), Rate Code, and Rate Type Preferred. At the bottom, there are tabs for 'Preferences', 'MIS', and 'UDF'. Below the tabs, there are fields for Maker, Checker, Date Time, Mod No, Record Status, and Authorization Status, along with a 'Cancel' button.

You may select the following checkboxes if you wish to have them in a product's 'Preferences' screen.

- Partial Reversals allowed
- Reversal Includes charges - Reversal should reverse charges
- Switch product

## 2.4.11 Maintaining Charges for Non-financial Transactions

You can have the following non financial transactions charged:

- Balance Enquiry
- Cheque Book request
- Mini statement request
- Ad-hoc statement request

You can facilitate the above service by first using the 'Retail Teller Product Maintenance' to maintain a Retail Teller product as shown below.

You can invoke the 'Retail Teller Product Maintenance' screen by typing 'DEDRTPRM' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

The screenshot displays the 'Retail Teller Product Maintenance' window. The window title is 'Retail Teller Product Maintenance'. The main area contains several input fields and labels:

- Product Code \*
- Product Description \*
- Report Module: RT
- Retail Teller (text)
- Product Type \*
- Description
- Slogan
- Product Group \*
- Product Group Description
- Start Date \*
- End Date \*
- Remarks
- Exchange Rate Variance(in %)
- Override Limit \*
- Stop Limit \*
- Rate Code \*
- Rate Type Preferred \*

At the bottom of the window, there are tabs for 'Preferences', 'MIS', and 'UDF'. Below the tabs, there are fields for 'Maker', 'Checker', 'Date Time:', 'Mod No', 'Record Status', and 'Authorization Status'. A 'Cancel' button is located in the bottom right corner.

You must next do the ARC Maintenance for the above product in the 'ARC Maintenance' screen as shown below. In the ARC Maintenance you can maintain the charges for the various non-financial transactions under the CHARGE 1-5 tabs. The transaction amounts will be zero and so the accounting entries will have only the charges.

The screenshot displays the 'ARC Maintenance' window with the following sections:

- General Information:** Branch, Branch Name, Account Class/Product (Account Class/Product Type), Description, Transaction Type, Description, Float Days Basis (Calendar/Working), Currency.
- Offset Details:** Branch, Account.
- Transaction Details:** Branch, Account.
- Transaction Code:** Offset Transaction Code, Main Transaction Code. Includes checkboxes for 'Liquidation Product for Demand Draft' and 'Netting Charges'.
- Management Information System:** Main Leg for the transaction (Transaction Leg), Debit Account (Transaction Account), Charge From Account (Transaction Account), End Point, Description, Bank Float Days, Customer Float Days. Includes checkboxes for 'Generate Transaction Advice' and 'Generate MT101'.
- Exchange Rate Revaluation:** Profit Revaluation GL, Loss Revaluation GL.
- CHARGE TABS:** CHARGE1, CHARGE2, CHARGE3, CHARGE4, CHARGE5.
- Charge Configuration (CHARGE1 selected):** Basis, Charge Account, Transaction Code, Charge Type, Currency, Rate Code, Slab Type (None), Netting, Their Charge, Rate, Minimum Charge, Maximum Charge, Rate Type, Amount, Description, MIS Head, Interest Basis, Delete button.
- Footer:** Fields, Regulation, Input By DOC1, Date Time, Modification Number, Authorized, Open, Cancel.

## 2.4.12 ARC Maintenance

You can maintain the charges for the product type in the ARC Maintenance screen.

You can invoke the 'ARC Maintenance' screen by typing 'IFDATMMN' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

The screenshot shows the 'ARC Maintenance' window with the following sections:

- Offset Details:** Branch, Account, Main Leg for the transaction (Transaction Leg), Management Information System, Debit Account (Transaction Account), Charge From Account (Transaction Account), End Point, Description, Bank Float Days, Customer Float Days, Generate Transaction Advice, Generate MT101.
- Transaction Details:** Branch, Account.
- Transaction Code:** Offset Transaction Code\*, Main Transaction Code\*, Liquidation Product for Demand Draft, Netting Charges.
- Exchange Rate Revaluation:** Profit Revaluation GL, Loss Revaluation GL.
- Charge Tabs:** CHARGE1, CHARGE2, CHARGE3, CHARGE4, CHARGE5.
- Charge Fields:** Basis, Charge Account, Transaction Code, Charge Type, Currency, Rate Code, Slab Type (None), Netting, Their Charge, Rate, Minimum Charge, Maximum Charge, Rate Type, Amount, Description, MIS Head, Interest Basis, Delete.
- Footer:** Input By DOC1, Date Time, Modification Number, Authorized, Open, Cancel.

The ARC maintenance is done for the product Cash Withdrawal (CHWL). You can maintain charges (under charge tabs CHARGE1 -5) for both financial and non-financial transactions.

CHARGE1 must be the Transaction Fee. The Description under 'CHARGE1' tab should be given as TXN\_FEE. CHARGE2 must be the Transaction Processing Fee. The Description under the 'CHARGE2' tab should be given as TXN\_PROCESS\_FEE.

*For more details on ARC Maintenance, refer the relevant Oracle FLEXCUBE user manual.*

## 2.5 Batch Processes

The following batch processes are part of the Oracle FLEXCUBE – Switch Interface.

*For more information on Batch Processes refer the corresponding Oracle FLEXCUBE user manual.*

## 2.5.1 Maintaining Batches for Batch Operations

You can maintain the following batches for Batch Operations in the 'Batch EOD Function Inputs' screen:

- SWSWRECN – Switch Reconciliation Batch
- SWDPRCRT – Process Transaction Batch
- SWNETSET – Network Settlement Batch
- SWMERSET – Merchant Settlement Batch
- SWDPURGE – Adhoc Purge Batch
- SWDRETB – Retry and Suspense Processing Batch.

You can invoke the 'Batch EOD Function Inputs' screen by typing 'BADEODFN' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

Batch EOD Function Inputs

Batch End Of Day Functions

Branch \*

Function Identification \*

Description

End Of Cycle Group \*  Transaction Input  End Of Transaction Input  End Of Financial Input  End of Day  Beginning Of Day

Report Orientation  Not Applicable  Portrait  Landscape

Function Inputs

Parameter *	Data Type *	Value	Date Format
<input type="checkbox"/>	VARCHAR2		

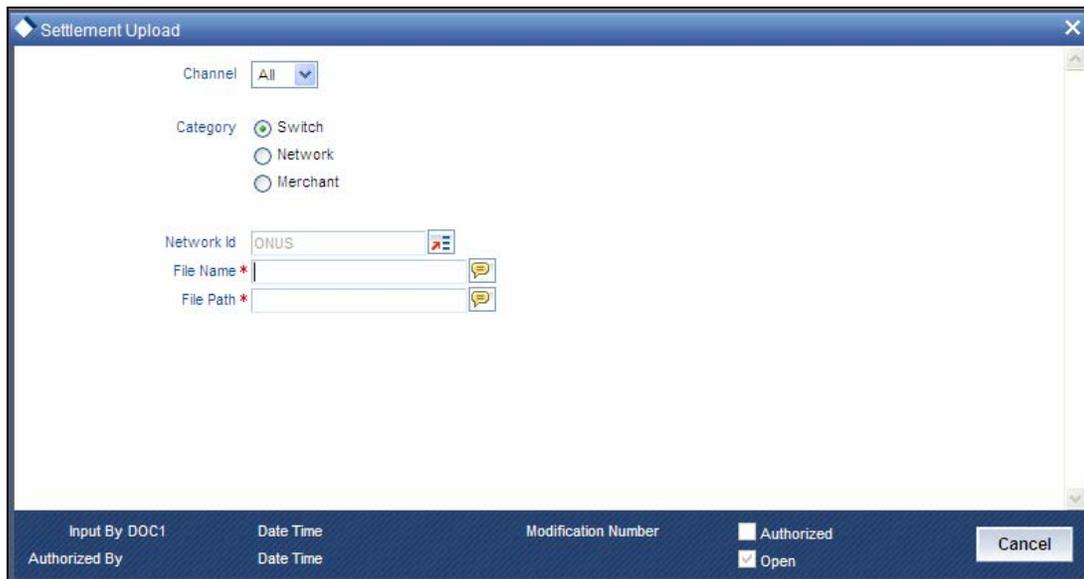
Input By DOC1 Date Time Modification Number Authorized Open

Authorized By Date Time

Cancel

## 2.5.2 Settlement Upload

You can perform settlement uploads for the Switch, Network and Merchant categories from the 'Settlement Upload' screen. You can invoke the 'Settlement Upload' screen by typing 'SWDUPLST' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.



The screenshot shows a window titled "Settlement Upload" with a blue header and a white main area. The window contains the following fields and controls:

- Channel:** A drop-down menu currently set to "All".
- Category:** Three radio buttons labeled "Switch" (selected), "Network", and "Merchant".
- Network Id:** A text input field containing "ONUS" with a small icon to its right.
- File Name \*:** A text input field with a small icon to its right.
- File Path \*:** A text input field with a small icon to its right.

At the bottom of the window, there is a dark blue footer area containing the following text and controls:

- Input By:** DOC1
- Authorized By:** (empty field)
- Date Time:** (empty field)
- Date Time:** (empty field)
- Modification Number:** (empty field)
- Authorized:**
- Open:**
- Cancel:** A button with the text "Cancel".

You need to specify the following details.

### Channel

Select the channel to be used while uploading settlement files into Oracle FLEXCUBE, from the adjoining drop-down list. The following values are available:

- ALL
- ATM
- POS
- IVR

Based on the channel specified, the system will pick up the appropriate Retail Teller product and ARC maintenance for settlement and reconciliation processing.

### Category

The categories for which you can perform settlement upload are:

- Switch
- Network
- Merchant

In the above screen you can specify the Reconciliation File/Network file/Merchant upload file's name and path.

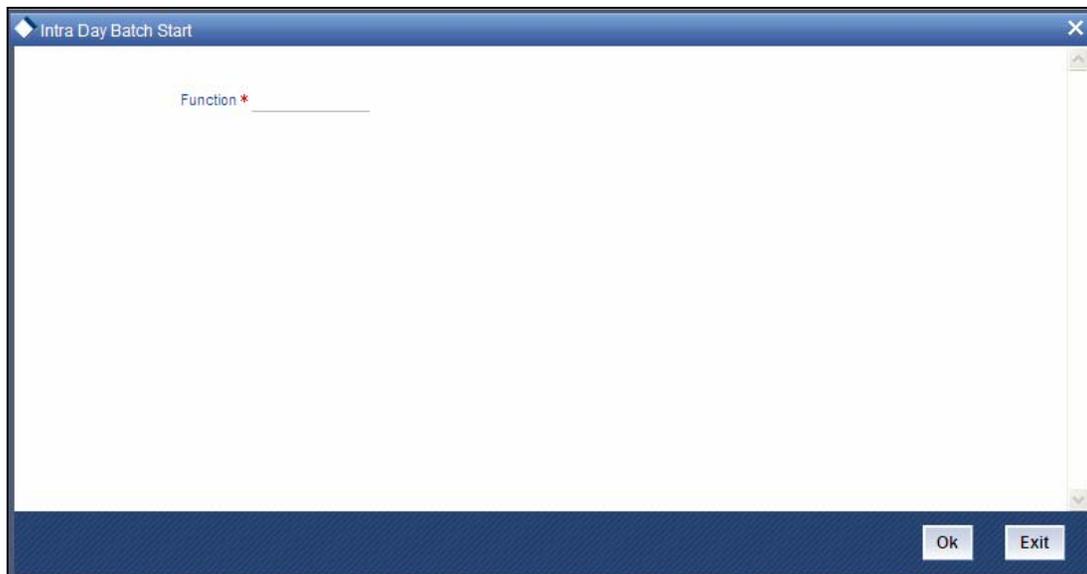
### 2.5.3 Intra Day Batch

You can run the following Functions in the 'Intra Day Batch Start' screen:

- SWSWRECN – This is the batch for the reconciliation file.
- SWNETSET – This is the batch for the network file.
- SWDPRCRT – This batch removes the amount block.
- SWMERSET – This is the batch for Merchant settlement.
- SWDPURGE – This is the batch for Adhoc purge of transaction data to history table.
- SWDRETB – This is the batch for retry and suspense processing.

Once the batches are successfully run, their corresponding accounting entries will be posted.

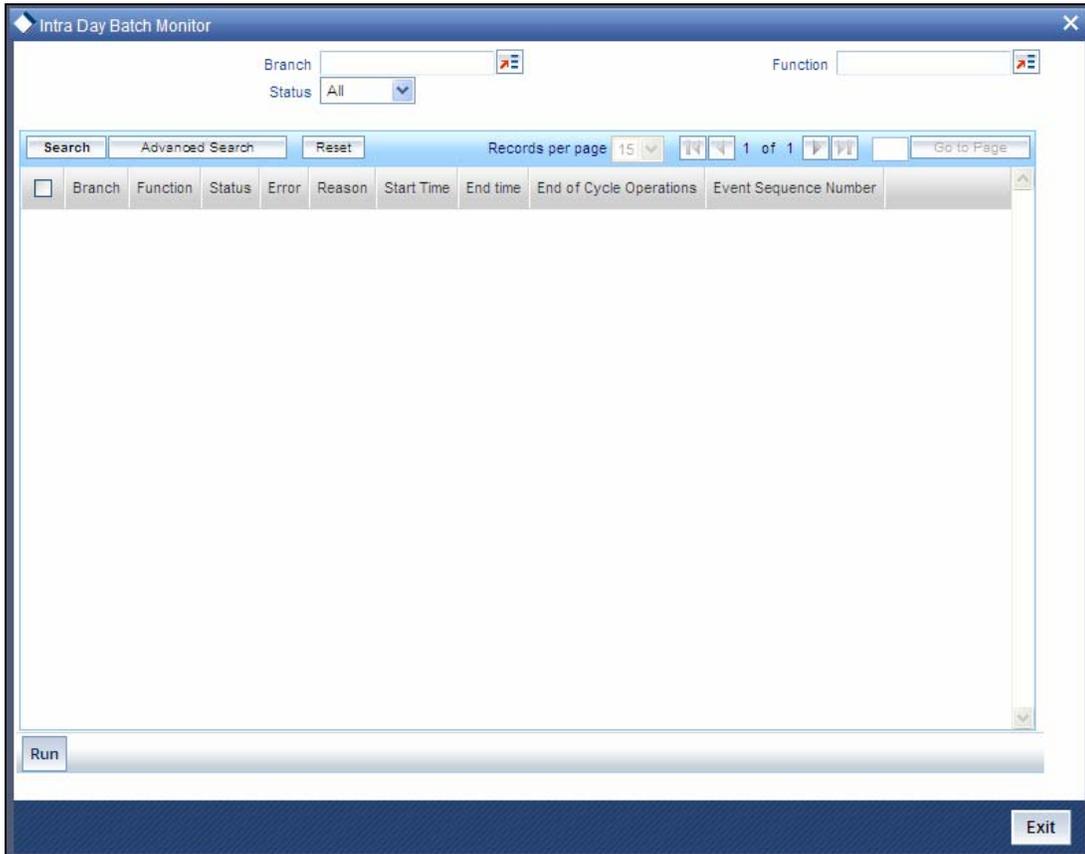
You can invoke the 'Intra Day Batch Start' screen by typing 'BABIDBAT' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.



Click 'Ok' button to initiate the Intra Day Batch process.

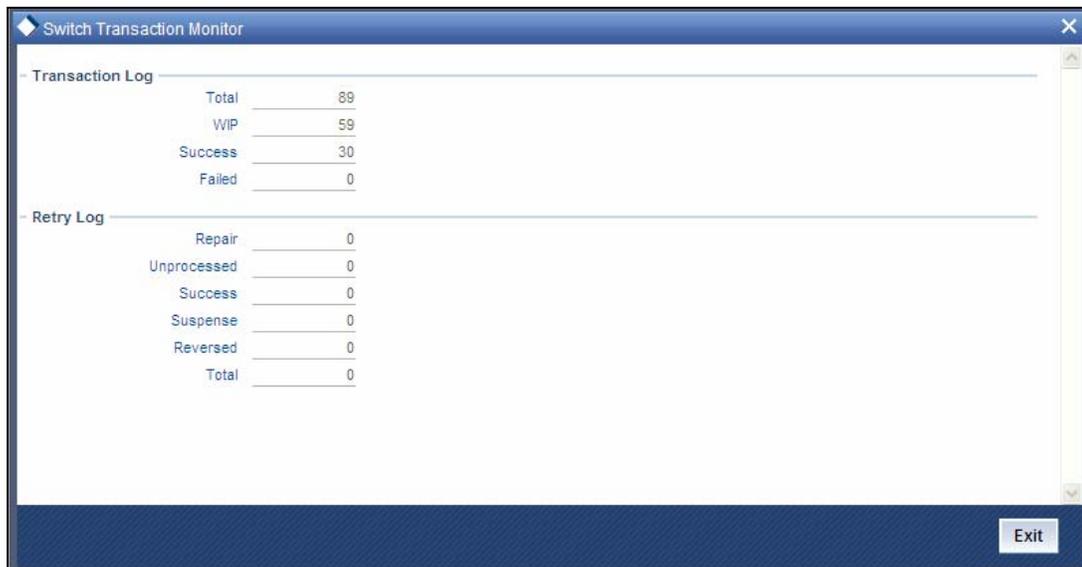
You can monitor the status of successfully run SWSWRECN and SWNETSET functions in the 'Intra Day Batch Start Monitor' screen.

You can invoke the 'Intra Day Batch Start Monitor' screen by typing 'BASIDMTR' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.



## 2.5.4 Viewing Transaction Monitor

You can view a summary of transaction status in the 'Switch Transaction Monitor' screen. You can invoke this screen by typing 'SWDTXQRY' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.



The screenshot shows a window titled 'Switch Transaction Monitor' with a blue header and a white body. It contains two sections: 'Transaction Log' and 'Retry Log'. Each section has a table of data. The 'Transaction Log' table shows: Total (89), WIP (59), Success (30), and Failed (0). The 'Retry Log' table shows: Repair (0), Unprocessed (0), Success (0), Suspense (0), Reversed (0), and Total (0). There is an 'Exit' button in the bottom right corner.

Transaction Log	
Total	89
WIP	59
Success	30
Failed	0

Retry Log	
Repair	0
Unprocessed	0
Success	0
Suspense	0
Reversed	0
Total	0

Here you can view the following details.

### Transaction Log

You can view the number of transactions in the following statuses.

- WIP
- Success
- Repair
- Failed
- Total

### Retry Log

You can view the retry log of transactions in the following statuses.

- Unprocessed
- Success
- Suspense
- Reversed
- Total

## 2.6 Uploading Cards

You can upload card account mapping maintenance through the 'Debit Card FCC Account Upload' screen. You can invoke this screen by typing 'SWDCDUPL' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

The screenshot shows a software window titled "Debit Card FCC Account Upload". The window contains three input fields: "File Name \*", "File Path \*", and "Intraday Sequence Number". The "File Name" and "File Path" fields have a yellow speech bubble icon to their right. The "Intraday Sequence Number" field is empty. At the bottom of the window, there is a status bar with the following fields: "Input By DOC1", "Date Time", "Modification Number", "Authorized By", "Date Time", "Authorized" (checkbox), and "Open" (checkbox). A "Cancel" button is located in the bottom right corner.

You can specify the following details.

### **File Name**

Specify the name of the file that should be uploaded.

### **File Path**

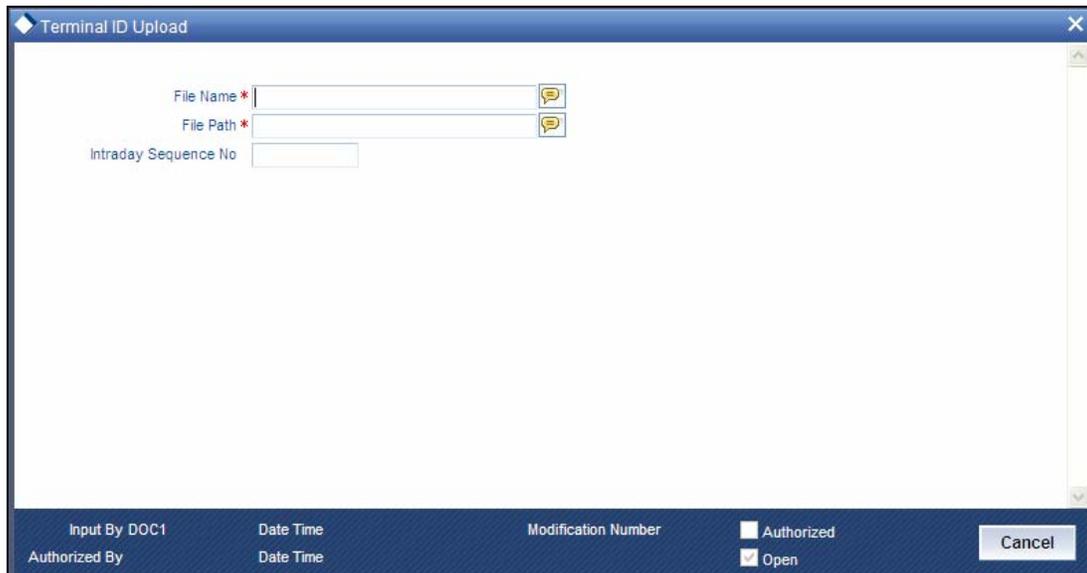
Specify the path from where the file should be picked up for uploading.

### **Intraday Sequence Number**

The system generates a sequence number for the upload transaction and displays it here.

## 2.7 Uploading Terminal ID

You can upload terminal ID maintenance through the 'Terminal ID Upload' screen. You can invoke this screen by typing 'SWDTIDUP' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.



The screenshot shows a window titled "Terminal ID Upload". Inside the window, there are three input fields: "File Name \*" with a help icon, "File Path \*" with a help icon, and "Intraday Sequence No". At the bottom of the window, there is a status bar with the following fields: "Input By DOC1", "Date Time", "Modification Number", "Authorized" (checkbox), "Open" (checkbox), and a "Cancel" button.

You can specify the following details.

### **File Name**

Specify the name of the file that should be uploaded.

### **File Path**

Specify the path from where the file should be picked up for uploading.

### **Intraday Sequence No**

The system generates a sequence number for the upload transaction and displays it here.

## 2.8 Processing ATM Cash Deposits

Cash deposits can happen at ATMs which don't have the Intelligent Deposits facility. For such ATMs the 'Intelligent Deposits' option also is not selected in Terminal Details maintenance. In the case of such ATMs the cash deposit details are stored as a 'Tanked Deposit Transaction' until you can validate the transaction amount.

For Tanked Deposit Transactions, accounting entries are not passed until the transaction amount is validated and authorised. You can validate the transaction amounts of Tanked Deposit Transactions in the 'ATM Cash Deposit Details' screen.

You can invoke the 'ATM Cash Deposit Details' screen by typing 'SWDCSHDP' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

The screenshot shows a software window titled "ATM Cash Deposit Details". The window is divided into two main sections: "Details" and "Charges".

**Details Section:**

- Transaction Account: \_\_\_\_\_
- Transaction Currency: \_\_\_\_\_
- Transaction Amount: \_\_\_\_\_
- Local Currency Amount: \_\_\_\_\_
- Transaction Date: \_\_\_\_\_
- Transaction Reference Number: \_\_\_\_\_
- Amount: \_\_\_\_\_

**Charges Section:**

Charge Currency: _____	Charge Currency 1: _____	Charge Currency 2: _____
Charge Amount: _____	Charge Amount1: _____	Charge Amount2: _____
Charge Description: _____	Charge Description1: _____	Charge Description2: _____
Charge Currency 3: _____	Charge Currency 4: _____	
Charge Amount3: _____	Charge Amount4: _____	
Charge Description3: _____	Charge Description4: _____	

**Bottom Bar:**

- Input By: \_\_\_\_\_
- Authorized By: \_\_\_\_\_
- Date Time: \_\_\_\_\_
- Date Time: \_\_\_\_\_
- Modification Number: \_\_\_\_\_
- Authorized:
- Open:
- Exit button

You must validate the tanked deposit by specifying the actual transaction amount in the 'Actual Amount' field. Once done, click 'Exit' button to exit and save your validation.

The following details are displayed in the above screen. The details give information regarding the cash deposit.

### **Transaction Account**

This displays the Oracle FLEXCUBE account which has been linked to the Card Account Number.

### **Transaction Currency**

This field displays the Oracle FLEXCUBE currency which has been linked to the numeric currency in the ISO message.

### **Transaction Amount**

This is the deposit amount sent through the ISO message.

### **Local Currency Amount**

If a local currency has been maintained then the transaction amount is converted to the local currency and displayed here.

### **Transaction Date**

This is the Deposit transaction date as sent in the ISO message.

### **Transaction Reference Number**

This is the Transaction Reference Number which is generated for the deposit transaction.

**Charge Currency and Charge Currency 1-4**

Charges may be levied as Transaction Fee, Transaction Processing Fee and as other charges maintained in Oracle FLEXCUBE. The currency that has been defined for the corresponding charge is displayed here.

**Charge Amount and Charge Amount 1-4**

The charge amount for the corresponding charge is displayed here.

**Charge Description and Charge Description 1-4**

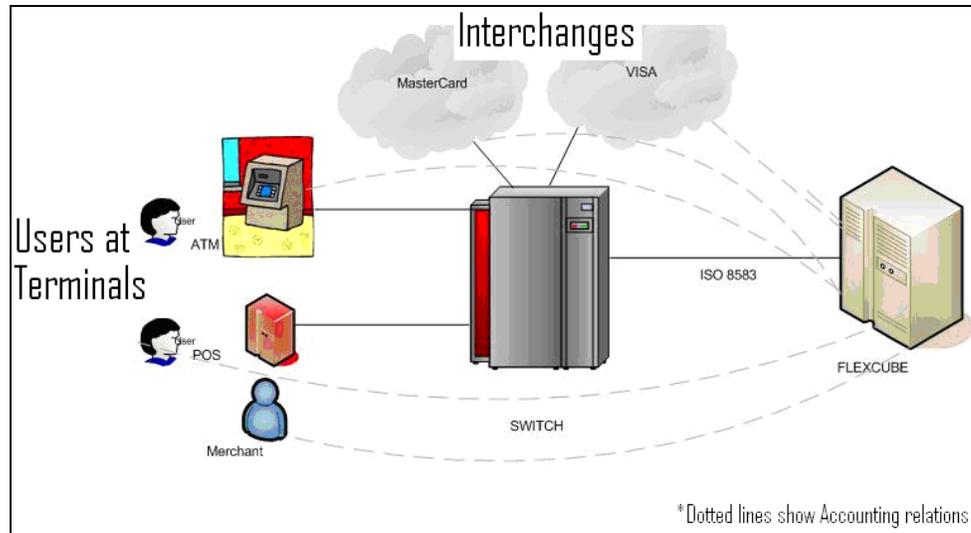
The description for the charge is displayed here.

## 3. Annexure A

### 3.1 Switch Software and Card Transactions Business

The following is a brief account of the Switch software domain and the components in a Cards Transactions Business network.

The following diagram illustrates the components in the switch network.



ATMs and POS Terminals are connected with the Switch Software system using proprietary message protocol depending on the upon the terminal device type. Switch software is also connected with 'Interchanges' like VISA and MasterCard.

A switch software system provides the following functionalities:

- Maintaining all ATM / POS / Interchange information
- Maintaining Card Number to Account Number Linkages
- Receiving Card Transactions from ATM / POS terminals and checking PIN and Card status
- Forwarding the Transactions to Host Banking Systems like Oracle FLEXCUBE after converting proprietary protocol into ISO8583 protocol
- Performing 'stand-in' authorization incase of Link to Host systems are down
- Refreshing Account balances from Banking Systems ( to use Stand-in )

### 3.2 ISO8583 Protocol Overview

ISO8583 protocol is called the 'Financial Transaction Standard for Card originated messages and Interchange message specifications'. This protocol provides for the exchange of information between an 'Acquirer' and an 'Issuer' for card transactions. The terms 'Acquirer' and 'Issuer' are explained below.



DR CUSTOMER A/C FC\_CHARGES (converted to a/c ccy)  
CR P&L GL FC\_CHARGES

**Remote – ON US**

DR CUSTOMER A/C BILL-AMT ( converted to a/c ccy)  
CR NETWORK SUSPENSE GL SETL\_AMT

DR CUSTOMER A/C TXN\_FEE (converted to a/c ccy)  
CR NETWORK SUSPENSE GL TXN\_FEE

DR CUSTOMER A/C TXN\_PROCESS\_FEE (converted to a/c ccy)  
CR NETWORK SUSPENSE GL TXN\_PROCESS\_FEE

DR CUSTOMER A/C FC\_CHARGES (converted to a/c ccy)  
CR P&L GL FC\_CHARGES

During Network Settlement

DR NETWORK SUSPENSE GL SETL\_AMT  
CR NETWORK NOSTRO A/C SETL\_AMT (converted to a/c ccy)

DR NETWORK SUSPENSE GL TXN\_FEE  
CR NETWORK NOSTRO A/C TXN\_FEE (converted to a/c ccy)

DR NETWORK SUSPENSE GL TXN\_PROCESS\_FEE  
CR NETWORK NOSTRO A/C TXN\_PROCESS\_FEE (converted to a/c ccy)

**OFF- US**

DR NETWORK SUSPENSE GL SETL-AMT (converted to a/c ccy)  
CR CASH GL TXN-AMT

DR NETWORK SUSPENSE GL TXN\_FEE (converted to setl ccy)  
CR P&L GL TXN\_FEE

DR NETWORK SUSPENSE GL TXN\_PROCESS\_FEE (converted to a/c ccy)  
CR P&L GL TXN\_PROCESS\_FEE

During Network Settlement

DR NETWORK NOSTRO A/C SETL\_AMT ( converted to a/c ccy)  
CR NETWORK SUSPENSE GL SETL\_AMT

DR NETWORK NOSTRO A/C TXN\_FEE  
CR NETWORK SUSPENSE GL TXN\_FEE (converted to a/c ccy)

DR NETWORK NOSTRO A/C TXN\_PROCESS\_FEE ( converted to a/c ccy)  
CR NETWORK SUSPENSE GL TXN\_PROCESS\_FEE

### **3.4.2 Accounting Entries for Balance Enquiry**

#### **ON US**

DR CUSTOMER A/C TXN\_FEE (converted to a/c ccy)  
CR P&L GL TXN\_FEE

DR CUSTOMER A/C TXN\_PROCESS\_FEE (converted to a/c ccy)  
CR P&L GL TXN\_PROCESS\_FEE

DR CUSTOMER A/C FC\_CHARGES (converted to a/c ccy)  
CR P&L GL FC\_CHARGES

#### **R-ONUS**

DR CUSTOMER A/C TXN\_FEE (converted to a/c ccy)  
CR NETWORK SUSPENSE GL TXN\_FEE

DR CUSTOMER A/C TXN\_PROCESS\_FEE (converted to a/c ccy)  
CR NETWORK SUSPENSE GL TXN\_PROCESS\_FEE

DR CUSTOMER A/C FC\_CHARGES (converted to a/c ccy)  
CR P&L GL FC\_CHARGES

During Network Settlement

DR NETWORK SUSPENSE GL TXN\_FEE  
CR NETWORK NOSTRO A/C TXN\_FEE (converted to a/c ccy)

DR NETWORK SUSPENSE GL TXN\_PROCESS\_FEE  
CR NETWORK NOSTRO A/C TXN\_PROCESS\_FEE (converted to a/c ccy)

#### **OFF-US**

DR NETWORK SUSPENSE GL TXN\_FEE (converted to setl ccy)  
CR P&L GL TXN\_FEE

DR NETWORK SUSPENSE GL TXN\_PROCESS\_FEE (converted to a/c ccy)  
CR P&L GL TXN\_PROCESS\_FEE

During Network Settlement

DR NETWORK NOSTRO A/C TXN\_FEE  
CR NETWORK SUSPENSE GL TXN\_FEE (converted to a/c ccy)

DR NETWORK NOSTRO A/C TXN\_PROCESS\_FEE ( converted to a/c ccy)  
CR NETWORK SUSPENSE GL TXN\_PROCESS\_FEE

### 3.4.3 Accounting Entries for Deposit

#### ON US

DR	CASH GL	TXN-AMT
CR	CUSTOMER A/C	BILL-AMT (converted to a/c ccy)
DR	CUSTOMER A/C	TXN_FEE (converted to a/c ccy)
CR	P&L GL	TXN_FEE
DR	CUSTOMER A/C	TXN_PROCESS_FEE (converted to a/c ccy)
CR	P&L GL	TXN_PROCESS_FEE
DR	CUSTOMER A/C	FC_CHARGES (converted to a/c ccy)
CR	P&L GL	FC_CHARGES

### 3.4.4 Accounting Entries for Funds Transfer

#### ON US

DR	FROM A/C	BILL-AMT (converted to a/c ccy)
CR	TO A/C	TXN-AMT (converted to a/c ccy)
DR	FROM A/C	TXN_FEE (converted to a/c ccy)
CR	P&L GL	TXN_FEE
DR	FROM A/C	TXN_PROCESS_FEE (converted to a/c ccy)
CR	P&L GL	TXN_PROCESS_FEE
DR	CUSTOMER A/C	FC_CHARGES (converted to a/c ccy)
CR	P&L GL	FC_CHARGES

### 3.5 Accounting Entries - POS Purchase

#### ON US

DR CUSTOMER A/C BILL-AMT (converted to a/c ccy)

CR MERCHANT SUSPENSE GL TXN-AMT

DR CUSTOMER A/C TXN\_FEE (converted to a/c ccy)

CR P&L GL TXN\_FEE

DR CUSTOMER A/C TXN\_PROCESS\_FEE (in a/c ccy)

CR P&L GL TXN\_PROCESS\_FEE

DR CUSTOMER A/C FC\_CHARGES (converted to a/c ccy)

CR P&L GL FC\_CHARGES

#### During Merchant Settlement

DR MERCHANT SUSPENSE GL TXN\_AMT- COMMISSION (a/c ccy)

CR MERCHANT A/C TXN\_AMT- COMMISSION (a/c ccy)

DR MERCHANT SUSPENSE GL COMMISSION

CR P&L GL COMMISSION

#### Remote – ON US

DR CUSTOMER A/C BILL-AMT (converted to a/c ccy)

CR NETWORK SUSPENSE GL SETL-AMT

DR CUSTOMER A/C TXN\_FEE (converted to a/c ccy)

CR NETWORK SUSPENSE GL TXN\_FEE

DR	CUSTOMER A/C	TXN_PROCESS_FEE (a/c ccy)
CR	NETWORK SUSPENSE GL	TXN_PROCESS_FEE

DR	CUSTOMER A/C	FC_CHARGES (a/c ccy)
CR	P&L GL	FC_CHARGES

During Network Settlement

DR	NETWORK SUSPENSE GL	SETL_AMT
CR	NETWORK NOSTRO A/C	SETL_AMT (converted to a/c ccy)

DR	NETWORK SUSPENSE GL	TXN_FEE
CR	NETWORK NOSTRO A/C	TXN_FEE (converted to a/c ccy)

DR	NETWORK SUSPENSE GL	TXN_PROCESS_FEE
CR	NETWORK NOSTRO A/C	TXN_PROCESS_FEE (a/c ccy)

**OFF-US**

DR	NETWORK SUSPENSE GL	SETL-AMT (converted to a/c ccy)
CR	MERCHANT SUSPENSE	GL TXN-AMT (converted to a/c ccy)

DR	NETWORK SUSPENSE GL	TXN_FEE (converted to setl ccy)
CR	P&L GL	TXN_FEE

DR	NETWORK SUSPENSE GL	TXN_PROCESS_FEE (a/c ccy)
CR	P&L GL	TXN_PROCESS_FEE

During Network Settlement

DR	NETWORK NOSTRO A/C	SETL_AMT
CR	NETWORK SUSPENSE GL	SETL_AMT

DR NETWORK SUSPENSE GL TXN\_FEE  
 CR NETWORK NOSTRO A/C TXN\_FEE (converted to a/c ccy)

DR NETWORK NOSTRO A/C TXN\_PROCESS\_FEE (a/c ccy)  
 CR NETWORK SUSPENSE GL TXN\_PROCESS\_FEE

During Merchant Settlement

DR MERCHANT SUSPENSE GL TXN\_AMT – COMMISSION  
 CR MERCHANT A/C TXN\_AMT – COMMISSION

DR MERCHANT SUSPENSE GL COMMISSION  
 CR P&L GL COMMISSION

### 3.6 Balance Handoff File Formats

Oracle FLEXCUBE generates ASCII files (‘|’ separated) with the balances of all the accounts that are linked with Cards. The following table gives the general Balance Handoff File Format of Oracle FLEXCUBE. You may have a different format installed as per your requirements.

#### Header

Field sequence #	Field Name
1	No. of Accounts
2	Check Digits
3	Time Stamp

#### Body

Field sequence #	Field Name	Size (Characters)	Description
1	Branch code	3	Oracle FLEXCUBE branch code
2	Customer Account number	28	Account number
3	Account Currency	3	Account currency code - alpha

Field sequence #	Field Name	Size (Characters)	Description
6	Available balance. This represents the amount available for withdrawal/spending. Switch should stand-in based on this field.	22	Available balance from Oracle FLEXCUBE. Limit to be included should be definable.

#### Footer

Field sequence #	Field Name
1	No. of Accounts
2	Check Digits
3	Time Stamp

### 3.7 Network Settlement Message Format

The following table gives the format of the file accepted by Oracle FLEXCUBE for network settlements. Fields are separated by '|' pipe symbol and the amounts are with decimal included. The following table gives the general format in Oracle FLEXCUBE. You may have a different format installed as per your requirements.

Field sequence number	Field name	Size	Mandatory (M) / Optional (O)	Remarks
1	Message type	n4	O	If it is optional, original or reversal is identified based on Transaction code
2	Card number	n19	M	
3	Branch code	n3	O	
4	Bank account number	ans 28	M	
5	Transaction Code	ans 10	M	05 - Sale, 06 - Refund, 07- Cash Wdl, 25 - Sale reversal, 26 - Refund reversal, 27 - Cash wdl reversal. Refer Transaction service derivation logic in earlier sections.
6	processing code	ans 6	O	This is used for information purpose
7	Transaction	n 22	M	Refer Amount derivation logic

Field sequence number	Field name	Size	Mandatory (M) / Optional (O)	Remarks
	Amount			
8	Transaction ccy	n 3	M	Refer Amount derivation logic
9	Settlement Amount	n 22	O	Refer Amount derivation logic
10	Settlement Currency	n 3	O	Refer Amount derivation logic
11	Billing Amount	n 22	O	Refer Amount derivation logic
12	Billing currency	n3	O	Refer Amount derivation logic
13	Transaction Date (Format YYYYMMDD)	s 8	M	Used for Transaction matching
14	Transaction Time	s 6	M	
15	STAN	an 12	M	Used for Transaction matching
16	Original STAN	An12	O	Used in reversals
17	Acquirer ID	asn 6	M	Used for Transaction matching
18	Terminal ID	ans 16	M	Used for Transaction matching
19	Card Acceptor ID	ans 20	O	
20	Merchant Id	ans 20	O	
21	Merchant Name	ans 40	M	Information purpose
22	Merchant City	ans 40	M	Information purpose
23	Merchant Country	asn 10	O	
24	Merchant Category code	n 4	M	
25	Retrieval reference number of	an 12	M	

Field sequence number	Field name	Size	Mandatory (M) / Optional (O)	Remarks
	transaction			
26	Authorization Code	ans 6	M	Used for Transaction matching
27	Authorization Reference	ans 20	O	Some other reference for matching
28	Response code	n4	O	if sent, only 00 is considered for processing
29	Domestic flag	S 1	O	D – Domestic I – International R – regional (Europe)
30	Settlement Account	Ans28	O	
31	Pre-Auth and Charge back Data	Ans 45	O	Applicable only in case of Reconciliation

### 3.8 **Merchant Settlement File Format**

The following table gives the format of the file accepted by Oracle FLEXCUBE for Merchant Settlements. Fields are separated by '|' pipe symbols. The following table gives the general format in Oracle FLEXCUBE. You may have a different format installed as per your requirements.

Field sequence #	Field name	Length	Mandatory / Optional	Description
1	Merchant ID	an 15	M	To be used to derive merchant a/c
2	Transaction code	2	M	To be used to derive the product
3	Processing code	6	O	ISO type processing code
6	Event date	8	O	Batch processing date
7	Amount	22	M	Total amount settled to merchant
	Currency	3	M	
8	Tax Amount	22	O	reserved for future use
9	DrCr Flag	1	O	incase switch sends, use it

Field sequence #	Field name	Length	Mandatory / Optional	Description
10	Commission Amount	22	O	To be detected
11	Commission Flag	1	O	commission flag incase sent
12	Commission currency code	3	O	commission currency code
13	Merchant current a/c	28	O	incase merchant ID is not having any maintenance at Oracle FLEXCUBE
14	Branch code	3	O	Merchant branch code
15	Bank code	10	O	Merchant bank code
16	User Info	30	O	Reserved for CSE

### 3.9 Maintaining SWTB PARAM Table

The SWTB\_PARAM is the single record table for SWIG initial parameters. The maintenances in this table are done during implementation of the Switch Interface Gateway system. This is for your information only.

FOLLOW_ON	Y
AMOUNT_BLOCK	Y
SETL_BEFORE_FILE	Y
LOG_TABLE_KEY	MSG_TYPE~RRN
CHG_ON_BALENQ	N
CHG_ON_ADSTMT	N
CHG_ON_MISTMT	N
CHG_ON_CHQBK	N
NO_TXN_MISTMT	10
ISO_VERSION	0
NO_CHK_LEAVES	25
ACC_STMT_PERIOD	1
UTIL_PROV_ACC_SEND	Y

FOLLOW_ON	Y
BLOCK_EXP_DAYS	30
MAX_RETRY_COUNT	5
FCC_ACC_FROM_SWITCH	N
ONLY_PAN_FROM_SWITCH	N

- If FOLLOW\_ON= 'Y' then
  - for 200 MSG\_TYPE Amount Block is done
  - for 220 MSG\_TYPE Parent message will be checked
- If FOLLOW\_ON= 'N' then for 200 and 220 MSG\_TYPE it will check if AMOUNT\_BLOCK= 'Y' then all 200 and 220 MSG will perform amount block.
- If SETL\_BEFORE\_FILE= 'Y' then all remote on-us and off-us transaction will perform Retail Teller transaction and accounting entries.
- If SETL\_BEFORE\_FILE= 'N' then all remote on-us and off-us transaction will do the Amount block and Retail Teller transaction will completed at the time of settlement file.
- LOG\_TABLE\_KEY is for making the primary key for ATM transaction.
- If CHG\_ON\_BALENQ = 'Y' then for balance enquiry transaction, if charge is defined then it will be deducted from the customer account.
- If CHG\_ON\_ADSTMT= 'Y' then for adhoc statement transaction, if charge is defined then it will be deducted from customer account.
- If CHG\_ON\_MISTMT = 'Y' then for mini statement transaction, if charge is defined then it will be deducted from customer account.
- If CHG\_ON\_CHQBK='Y' then for cheque book request transaction, if charge is defined then it will be deducted from customer account.
- NO\_TXN\_MISTMT defines the number of latest transactions that should appear in a mini statement. (E.g. If NO\_TXN\_MISTMT=10 then in the mini statement the latest 10 transactions will be displayed).
- ISO\_VERSION has only three type of value 0, 1 and 2.This gives the ISO 8583 message version.
  - 1987 = 0
  - 1993 = 1
  - 2003 = 2
- NO\_CHK\_LEAVES defines the number of pages that should be in one cheque book.
- ACC\_STMT\_PERIOD defines the duration of account statement period.(e.g. If ACC\_STMT\_PERIOD=1 then duration is 1 month).
- If UTIL\_PROV\_ACC\_SEND='Y' means for utility payment we have to send the account number in 102 field. If UTIL\_PROV\_ACC\_SEND='N' then Oracle FLEXCUBE will send the provider id not an account number.
- BLOCK\_EXP\_DAYS defines the number of days for amount block. (E.g. If BLOCK\_EXP\_DAYS =30 then after 30 days the amount block on the account expires). Block expiry days will also be used to calculate the purge date for switch transaction.
- MAX\_RETRY\_COUNT defines the number of times for Retail Teller transactions to try for a single transaction if it fails.

- If FCC\_ACC\_FROM\_SWITCH='Y' then transaction account is same as Oracle FLEXCUBE account. If FCC\_ACC\_FROM\_SWITCH='N' then transaction account is card account not Oracle FLEXCUBE account.
- If ONLY\_PAN\_FROM\_SWITCH='Y' then transaction account is not mandatory in ISO request (i.e. No need to give card account or Oracle FLEXCUBE account in request).
- If ONLY\_PAN\_FROM\_SWITCH='N' then in request transaction account is mandatory.



Switch Interface Gateway  
[August] [2010]  
Version 11.1

Oracle Corporation  
World Headquarters  
500 Oracle Parkway  
Redwood Shores, CA 94065  
U.S.A.

Worldwide Inquiries:  
Phone: +1.650.506.7000  
Fax: +1.650.506.7200  
[www.oracle.com/ financial\\_services/](http://www.oracle.com/financial_services/)

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