MasterCard Clearing Presentment Simulator Guide

14 August 2014

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Summary of Changes

This document reflects changes associated with the 14 August 2014 version of this document.

Description of Change	Where to Look
Updated screen images and version references to reflect the current version of the simulator where applicable.	Throughout document
Removed information about the simulator hardware token.	Chapter 2

Table of Contents

Chapter 1   MasterCard Clearing Presentment Simulator

The MasterCard Clearing Presentment Simulator provides customers with a powerful and full-featured offline test tool. Customers can perform release or internal system testing at their own pace and convenience.

Introduction

The MasterCard Clearing Presentment Simulator is a suite of 32-bit, Microsoft® Windows software applications. These software applications create test files that verify the logic of back office processing systems for the Global Clearing Management System (GCMS).

Customers must install the simulator software components on a Pentium III 1GHz, Pentium 4.2.0 GHz (recommended) or a compatible PC with Microsoft® Windows® 7 operating system.

The MasterCard Clearing Presentment Simulator tests messages using the Integrated Products Message (IPM) clearing message format. Refer to the *IPM Clearing Formats* manual for additional message format information.

The simulator provides virtually all the testing capabilities that are available with online testing. With the simulator, customers can conduct extensive preparations for online testing in an offline environment. By performing simulator testing, customers can replicate the tests and procedures for scheduled online testing. This procedure will minimize the time required to perform online testing.

MasterCard updates the simulator in accordance with the GCMS release cycle. Typically, the most current version of the simulator will be available four weeks before any online customer testing facilities become available for the new release. The early availability of the simulator increases the amount of time that customers will have to complete release testing.

Related Information

The following documents and resources provide information related to the subjects discussed in this MasterCard Clearing Presentment Simulator Guide.

- *IPM Clearing Formats*

- *IPM Pre-edit and Utilities—Mainframe*

- *IPM Pre-edit and Utilities—Workstation Plus*

- An online help system available from the Help menu of each component

Descriptions of these documents are available in the List of Manuals in the Publications product on MasterCard Connect™.

Specific Terminology

The MasterCard Clearing Presentment Simulator components and the *MasterCard Clearing Presentment Simulator Guide* use the terms, **record, message**, and **transaction** interchangeably. A **record**, **message**, or **transaction** consists of a set of data elements used to exchange information between institutions (or their agents). The term "MasterCard Clearing Presentment Simulator (MCPS)" refers to the testing tool in its entirety.

Simulator Components

The MasterCard Clearing Presentment Simulator consists of the following components.

- **Configuration (CFG)—**Provides customization of the simulator with the customer's specific testing parameters. The MasterCard Clearing Presentment Simulator uses the values and parameters defined in the configuration for component processing operations.

- **Test Data Generator (TDG)—**Creates test data in the Integrated Product Messages (IPM) format required for customer inbound and outbound files. Issuers and acquirers can use the TDG to create records that contain the transaction data for testing specific system processing logic. Customers that have existing IPM format files can open those files in the TDG component for customization.

- **Clearing Emulation Engine (CEE)—**Processes IPM formatted test data using processing logic that simulates the MasterCard Central Site environment. The CEE calculates currency conversion values, fee assessments, and reconciliation totals. For acquirers, the CEE (acting as an issuer and processing transactions using GCMS functionality) receives acquirer transactions and responds to the acquirer with acknowledgement file data. For issuers, the CEE (acting as an acquirer and processing transactions using GCMS functionality) creates test IPM messages using the issuer's cardholder information and delivers the messages in a notification file. The CEE supports life cycle testing of retrieval requests and chargebacks.

- **MCPS Database Manager—**The Database Manager allows a user to detach from an existing database and attach to a different database. It is common for users to test with multiple databases or with multiple versions of the simulator. The tool allows for navigating a folder structure to find another database. The PC administrator can also use the Create DSN option to add the Data Source Name information automatically for all users.

1-2   14 August 2014 • MasterCard Clearing Presentment Simulator Guide

Chapter 2   Installation Instructions

This chapter describes the steps necessary for installation and setup of the MasterCard Clearing Presentment Simulator.

Requirements

The MasterCard Clearing Presentment Simulator is an integral part of testing for the Integrated Product Messages (IPM) format. Customers must use the MasterCard supplied and approved Clearing Presentment Simulator when testing directly with MasterCard or when required to submit test results to MasterCard. Testing with the MasterCard Clearing Presentment Simulator is also a prerequisite for any required IPM testing that uses the Member Test Facility.

However, this requirement does not preclude customers from using other simulators or test tools when doing internal testing or generating test results that are not required to be provided to MasterCard. Customers can use simulators or tools from any vendor to help with these general testing needs.

Contact Simulator Support for assistance with the MasterCard Clearing Presentment Simulator.

Hardware and Software Requirements

To install the MasterCard Clearing Presentment Simulator, the customer or processor must provide the hardware and software identified in the following table.

Item	Description
Computer/Processor	• Pentium® III 1 GHz CPU or compatible system—minimum • Pentium® 4.2.0 GHz—recommended
Operating System	Windows® 7
Memory	512 MB minimum 1.024 GB recommended
Hard Disk	Available hard disk space: • 1.0 GB minimum • 2.0 GB recommended
Display	Super VGA (1024 X 768) with 65,536 colors or higher-resolution display adapter
Monitor	17 inch or larger color display
Drive	CD-ROM drive or access to CD-ROM over a computer network
USB Port (Optional)	Active Universal Series Bus (USB) port or a USB hub
Peripheral/Miscellaneous	Microsoft mouse or compatible pointing device

The following table describes the MasterCard supplied hardware and software.

Item	Description	Note
Software token	Software that provides the license protection for the MasterCard Clearing Presentment Simulator. Software token is placed in the following folder: C:/programdata/MasterCard/licenses	The MasterCard Clearing Presentment Simulator will not operate without the software token (license).
SecurID® device	Physical device that provides a dynamic access code synchronized with the MasterCard Connect™ server.	You must use your PIN and the pass code from the SecurID device to access the MasterCard Connect™ server.
SQL Server® 2012 Express (Microsoft SQL Server Desktop Engine)	SQL Server compatible data engine for mobile and shared solutions.	Provided on CD-ROM or available for download from MasterCard Connect™.
Adobe® Acrobat® Reader	Document viewing application that supports a common documentation format.	Provided on CD-ROM or available for download from http://www.adobe.com/.
Microsoft Visual C++ 2012 SP1 Redistributable Package (x86)	Visual studio runtime components of C Runtime (CRT), Standard C++, ATL, MFC, Open MP and MSDIA libraries.	Available for download from http://www.microsoft.com/downloads/en/default.aspx
Windows Installer 4.5	The Microsoft® Windows® Installer (MSI) is the application installation and configuration service for Windows.	Available for download from http://www.microsoft.com/downloads/en/default.aspx
MasterCard Clearing Presentment Simulator Guide	Document with information about installing, configuring, and testing with the MasterCard Clearing Presentment Simulator.	Provided on CD-ROM or available for download from MasterCard Connect™.

The following table lists the software and documentation distributed via MasterCard Connect™.

Item	Description
MasterCard Clearing Presentment Simulator software	Windows® 7 compatible 32–bit applications
MasterCard Clearing Presentment Simulator Guide	Documentation provided in PDF format.
SQL Server® 2012 Express(Microsoft SQL Server Desktop Engine)	SQL Server compatible data engine for mobile and shared solutions.

Simulator Software Distribution

Customers can obtain the MasterCard Clearing Presentment Simulator application software by downloading the application using MasterCard Connect™ or by requesting that MasterCard distribute the simulator application on CD-ROM.

Simulator Distribution for New Users

New customers may download the MasterCard Clearing Presentment Simulator software from MasterCard Connect™ or request distribution of the application on a CD-ROM.

To request distribution of the MasterCard Clearing Presentment Simulator software on a CD-ROM, refer to **CD-ROM Distribution** for details.

Refer to **Download Simulator Software from MasterCard Connect** for details about downloading the MasterCard Clearing Presentment Simulator software from MasterCard Connect™.

New customers should refer to the **First Time Installation** section for MasterCard Clearing Presentment Simulator software installation instructions.

Download Simulator Software from MasterCard Connect

Use the following procedure to download the MasterCard Clearing Presentment Simulator application files from MasterCard Connect™.

NOTE

Customers that have licensed a previous version of the MasterCard Clearing Presentment Simulator can download the current upgrade version from MasterCard Connect™ at no additional charge.

Procedure

1. Start a MasterCard Connect™ session.

2. From the Applications tab, click **Clearing Presentment Simulator**.

3. Click **Clearing** at the top of the main Simulator Suite page.

4. Click **Downloads**.

5. Click **Download**.

6. Click **Save** in the download dialog box.

7. Select a directory and click **Save**. Once the download is complete, click **Close**.

8. Close your MasterCard Connect™ session after completing the download.

CD-ROM Distribution

As an alternate method for obtaining the MasterCard Clearing Presentment Simulator, customers can request distribution of the application on a CD-ROM.

However, customers located outside the U.S. region can incur greater import or customs duties. When the MasterCard Clearing Presentment Simulator application software is included on the distribution CD-ROM, the declared value of the shipment will be USD 9,500.00. If the MasterCard Clearing Presentment Simulator application software is not provided on the CD-ROM, the declared value of the shipment is less than USD 600.00.

To receive the MasterCard Clearing Presentment Simulator application software on the distribution CD-ROM, send an email message to license.sim@mastercard.com to request information on purchasing the MasterCard Clearing Presentment Simulator on CD-ROM.

NOTE

As an alternate method for obtaining the current MasterCard Clearing Presentment Simulator upgrade version, customers can request distribution of the application on a CD-ROM.

MasterCard will bill customers USD 395.00 plus shipping and handling, for the current MasterCard Clearing Presentment Simulator version application on CD-ROM. For customers located outside the U.S. region, the declared value of the upgrade CD-ROM shipment will be USD 395.00.

Simulator Distribution for Upgrade Versions

Customers that have licensed a previous version of the MasterCard Clearing Presentment Simulator can download the current upgrade version from MasterCard Connect™ or may request distribution of the software on a CD-ROM.

Refer to **Download Simulator Upgrade from MasterCard Connect** for upgrade version downloading instructions.

To request the distribution of the simulator software on a CD-ROM, refer to **CD-ROM Distribution** for details. MasterCard will bill customers USD 395.00 plus shipping and handling, for the current MasterCard Clearing Presentment Simulator version application on CD-ROM. For customers located outside the U.S. region, the declared value of the upgrade CD-ROM shipment will be USD 395.00.

Refer to the **Simulator Upgrade Installation** for MasterCard Clearing Presentment Simulator software installation instructions.

Download Simulator Upgrade from MasterCard Connect

Customers that have licensed a previous version of the MasterCard Clearing Presentment Simulator can download the current upgrade version from MasterCard Connect™ at no additional charge. Use the following procedure to download the simulator upgrade from MasterCard Connect.

Procedure

1. Start a MasterCard Connect™ session.

2. From the Applications tab, click **Clearing Presentment Simulator**.

3. Click **Clearing** at the top of the main Simulator Suite page.

4. Click **Downloads**.

5. Click **Download**.

6. Click **Save** in the download dialog box.

7. Select a directory and click **Save**. Once the download is complete, click **Close**.

8. Close your MasterCard Connect™ session after completing the download.

First Time Installation

New customers or customers that install the MasterCard Clearing Presentment Simulator on a new PC should follow the first time installation procedures.

License Token Installation

Your Information Services/Information Technology (IS/IT) department or representative should review all procedures before installing the required MasterCard Clearing Presentment Simulator hardware and software.

Software Token Installation

Place the software token in the following location: **C:/Program-data/MasterCard/licenses**.

NOTE

The software token must be present to operate the MasterCard Clearing Presentment Simulator.

NOTE

Contact *simulators@mastercard.com* using the LSID Utility tool provided with the Simulator to generate an email message requesting that a software token be generated for you.

Obtaining the Software Token

Use the following steps to obtain a simulator software token using the LSID Utility.

Procedure

1. Install the simulator.

2. Navigate to C:\Program Files (x86)\MasterCard\MCPS 14_Q4\Util.

3. Double-click **LSIDUtil.exe**.

4. Enter your information in the **Additional Info** fields.

5. Select one of the following:

   - New Install

   - Migration to VT

   - License Renewal

   - Transfer License

6. Select one of the following:

   - **Copy Mail Message**—Select this option if you don't have a default email program on that PC. This option copies the information selected above and can be pasted into a message that needs to be sent to simulators@mastercard.com.

   - **Email MasterCard**—Select this option if you have a default email program setup on the simulator PC. This option will generate an email with all of the information that MasterCard needs to generate your license file.

7. Send the email message to simulators@mastercard.com.

8. Click **Close** in the LSID Utility when finished.

What to do next

You will receive a software token (license file) via email once your request has been received by MasterCard.

Place the software token (license file) in the following location: **C:/Programdata/MasterCard/licenses**.

Software Installation

You must have administrative privileges to install the MasterCard Clearing Presentment Simulator and associated software.

Adobe Acrobat Reader Installation

The Adobe Acrobat Reader is provided to ensure that customers will be able to view and use the support documentation included with the MasterCard Clearing Presentment Simulator. Use the following procedure to install Adobe Acrobat Reader software from the MasterCard Clearing Presentment Simulator CD.

Procedure

1. Place the MasterCard Clearing Presentment Simulator CD in the CD-ROM drive.

2. Click **Start**, and select **Run**.

3. In the **Open** box, type **D:\Acrobat\Setup.exe**. (If necessary, modify the path.)

4. Click **OK**. Allow the Install Wizard to guide you through the installation process.

   NOTE

   If you did not receive a MasterCard Clearing Presentment Simulator CD, you may download the Adobe Acrobat Reader software from http://www.adobe.com/.

Microsoft Visual C++ 2012 SP1 Redistributable Package (x86) Installation

The MasterCard Clearing Presentment Simulator uses Microsoft® Visual Studio and therefore requires the installation of the Microsoft Visual C++ 2012 SP1 Redistributable Package (x86). Use the following procedure to install the Microsoft Visual C++ 2012 SP1 Redistributable Package (x86) software.

The Microsoft Visual C++ 2012 SP1 Redistributable Package (x86) software may be downloaded free of charge from http://www.microsoft.com/downloads/en/default.aspx.

Procedure

1. From the Microsoft Website, search for **vcredist_x86.exe**.

2. Click the **Microsoft Visual C++ 2012 SP1 Redistributable Package (x86)** link.

3. Click **Download**.

4. Save the **vcredist_x86.exe** file.

5. Double-click the downloaded file **vcredist_x86.exe**.

6. Click **Next**, then read and accept the license agreement.

7. Click **Install** to install the package.

8. Allow the Install Wizard to guide you through the installation process.

Microsoft SQL Server 2012 Express

The MasterCard Clearing Presentment Simulator uses Microsoft® SQL Server® 2012 Express Desktop Engine software to access specific databases. The installation of the SQL Server® 2012 Express engine is included in the MasterCard Clearing Presentment Simulator installation.

The MasterCard Clearing Presentment Simulator uses a scripted install configuration file that answers all the install options for SQL Server 2012 Express to make sure the install is setup correctly for the use of the simulator. Users that choose to setup SQL Server 2012 Express manually should refer to the Microsoft® technical documents for SQL Server® 2012 Express. MasterCard does not support the manual installation settings of SQL Server® 2012 Express for use with the MasterCard Clearing Presentment Simulator.

The MasterCard Clearing Presentment Simulator uses a scripted install configuration file that answers all the install options for SQL Server 2012 Express to make sure the install is setup correctly for the use of the simulator. Users that choose to setup SQL Server 2012 Express manually should refer to the Microsoft® technical documents for SQL Server® 2012 Express. MasterCard does not support the manual installation settings of SQL Server® 2012 Express for use with the MasterCard Clearing Presentment Simulator.

If the MasterCard provided scripted SQL Server® 2012 Express install already exists on the PC, skip this section and continue with the MasterCard Clearing Presentment Simulator Installation for first time installation.

The MasterCard scripted install of SQL Server® 2012 Express:

• Creates a defaulted SQL Instance named SQLEXPRESS for use with attaching the data

• Defines specific database rights that allow all local desktop users access to the database under their individual profile settings

NOTE

If MSDE 2000 is installed on your PC, you will need to stop the MS SQL Service while doing the installation of SQL Server® 2012 Express as certain SQL Server registry settings may need updating.

You can right-click and Stop the MS SQL Service using the **icon in the task bar, or you can use the Services applet in the Control panel on your PC to temporarily stop the MS SQL Service. You should not need to uninstall MSDE 2000 in order to install SQL Server® 2012 Express.**

Extracting the SQL Express 2012 Zip File to a Folder

Use the following procedure to extract the SQL Server® 2012 Express zip file to a folder.

Procedure

1. Download and save the **SQLEXPR_x86_Enu.zip** file from the MasterCard Connect™ Simulator Suite Web site, located under the main Clearing simulator section and then through the **Downloads** link.

2. Use Windows Explorer to browse to the location of the saved file.

3. Double-click the **SQLEXPR_x86_Enu.zip** file and then extract the file to a directory on the local computer.

   NOTE

   The simulator installation process will prompt you to provide the location of the downloaded and extracted SQL Server 2012 Express install executable.

MasterCard Clearing Presentment Simulator Installation

This section provides an overview of a **first time** installation for the current version of the MasterCard Clearing Presentment Simulator.

The initial installation process performs the following actions:

- Creates a new folder: C:\Program Files\MasterCard\MCPS xx_x[1]

- Creates an **MCPS xx.x** folder icon on the PC desktop

- Adds application icons to the **Start** menu

- Installs the SQL Server® 2012 Express Engine as per the install option selected

- Attaches the current version of the simulator database to SQL Server® 2012 Express

- Installs the SIMUTOV program

Installing the MasterCard Clearing Presentment Simulator

Use the following procedure to launch the MCPS installation process.

Procedure

1. Click the Windows Desktop **Start** button, and click **Run**.

2. Click **Browse** to locate the MasterCard Clearing Presentment Simulator executable file (mcps xx_x.exe[2]).

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1. "xx_x" equals the current version of the simulator.
2. "xx_x" equals the current version of the simulator.

- Select C: *³\mcps xx_x.exe if you downloaded the MasterCard Clearing Presentment Simulator application using MasterCard Connect™. (If necessary, modify the path.)

- Select D:\Simulator\mcps xx_x.exe if you received the MasterCard Clearing Presentment Simulator applications on CD-ROM. (If necessary, modify the path.)

3. Select **mcps xx.x.exe** and click **OK** to begin the MasterCard Clearing Presentment Simulator installation program. The system briefly displays the progress indicator.

4. Click **Next** to continue.

5. Read the Software License Agreement carefully, click **I accept the terms of the license agreement**, and then click **Next** to accept the terms of the agreement.

6. Of the three install options displayed, click one of the following two options and then click **Next**.

   - **First Time Install (Install MCPS Only)**—Select this option if you already have SQL Server 2012 Express installed on this PC and wish to only install the current version of MCPS

   - **First Time Install (Install Install SQL Express 2012 & MCPS)**—Select this option if you do not have SQL Server® 2012 Express installed on this PC and wish to install SQL Server® 2012 Express and the current version of MCPS.

   NOTE

   If MSDE 2000 is installed on your PC, you may need to stop the MS SQL Service while doing the installation of SQL Server® 2012 Express, as certain SQL Server registry settings may need updating. The scripted install will automatically stop and restart MSDE if it is present and running on the PC.

   You can right-click and Stop the MS SQL Service using the ⬚ icon in the task bar, or you can use the Services applet in the Control panel on your PC to temporarily stop the MS SQL Service. You should not need to uninstall MSDE 2000 in order to install SQL Server® 2012 Express.

7. Click **Next** to accept the default location destination, or click **Change** to select a different location and then click **Next** to continue.

   NOTE

   For easier installation of upgrades, MasterCard recommends that customers accept the default Location Destination.

8. Click **Install** to start the installation. The following products will be installed in the order they appear below:

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3. equals the directory selected by the customer when downloading the file from MasterCard Connect.

- MCPS xx.x[4]

- Rainbow Sentinel Driver

- SQL Server® 2012 Express (only if the **First Time Install [Install SQL Express 2012 & MCPS]** option is selected in step 6 above)

9. When prompted, select the location for the downloaded SQLExpress2012 install file, using the navigation window. Navigate to the location where the downloaded zip file was extracted. Once the location is selected, click **OK**. This will launch the installation of silent scripted install of SQLExpress2012.

   NOTE

   If the install option "First Time Install (Install SQL Express 2012 & MCPS)" was NOT selected, skip this step and continue with step 12.

10. You should not have to restart the PC after installing SQL Express 2012, however manually starting the SQL Express Service may need to be performed.

11. Verify that SQL Express Service is started.

    - To verify that SQL Express Service is started, see **Validating the Status of SQL Server 2012 Express Engine**; or

    - If SQLEXpress2012 Engine is not started, proceed with the steps in **Stopping the SQL Server 2012 Express Engine** and then click **OK**.

12. Click **Finish** when the setup is complete. The install process will attach the current version of the simulator database to SQL Server® 2012 Express.

Starting the MasterCard Clearing Presentment Simulator Components

Use the following procedure to start (open) the MasterCard Clearing Presentment Simulator components.

Procedure

1. From the Windows desktop, double-click the **MCPS xx.x**[5] folder icon to open the MCPS folder. This folder was created during the installation of the simulator.

2. Double-click a component icon.

Icon Name	MCPS Components
CFG	Configuration
CEE	Clearing Emulation Engine

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4. "xx_x" equals the current version of the simulator.
5. "xx.x" equals the current version of the simulator.

Icon Name	MCPS Components
TDG	Test Data Generator
MCPS Database Manager	MCPS Database Manager

Simulator Installation Support

As each installation of the MasterCard Clearing Presentment Simulator is unique, customers may encounter problems or error messages when attempting to use the MasterCard Clearing Presentment Simulator for the first time. Customers should immediately refer any problems to a MasterCard Clearing Presentment Simulator support specialist.

MasterCard Clearing Presentment Simulator support specialists provide technical support for all customer questions related to the MasterCard Clearing Presentment Simulator software installation process. For technical assistance, please contact MasterCard Clearing Presentment Simulator Support:

Region	E-mail Address
Europe (Region D)	Network_Interface_Testing@mastercard.com
All Others (Region 1, A, B, C, and E)	simulators@mastercard.com

Simulator Upgrade Installation

The MasterCard Clearing Presentment Simulator installation instructions described in this section assume that you are upgrading from a previous version of the simulator (MCPS v.04.2 or higher) to the current version.

If you are upgrading from a previous version (MCPS v.09.2.1 or lower) of the simulator, you must perform a **First Time Installation** of the simulator.

If you are upgrading to the current version of the MasterCard Clearing Presentment Simulator but performing the installation on a PC on which a previous version is not currently installed, see **First Time Installation**.

This section describes the upgrade installation steps for the MasterCard Clearing Presentment Simulator. The installation process performs the following actions:

- Creates a new folder: C:\Program Files\MasterCard\MCPS xx_x

- Creates a **MCPS xx.x** folder icon on the PC desktop

- Adds application icons to the **Start** menu

- Detaches the previous simulator version database from MSDE 2000 and attaches the current simulator version database to MSDE 2000

- Installs the SIMUTOV program

Installing the MasterCard Clearing Presentment Simulator Upgrade

Use the following procedure to launch the simulator upgrade installation process.

Procedure

1. If necessary, export user data added in the previous version of the simulator as per the instructions in **Exporting User MPE Entries and User Tables**. Please note that you should use the previous version **Configuration** component to perform this step.

2. Click the Window Desktop **Start** button, and select **Run**.

3. Click **Browse** to locate the MasterCard Clearing Presentment Simulator executable file (mcps xx_x.exe[6])

   - Select C: *[7]\mcps xx_x.exe, if you downloaded the *MasterCard Clearing Presentment Simulator* applications using MasterCard Connect™. (If necessary, modify the path.)

   - Select D:\Simulator\mcps xx_x.exe if you received the MasterCard Clearing Presentment Simulator applications on CD-ROM. (If necessary, modify the path.)

4. Select **mcps xx_x.exe**, and click **OK** to begin the MasterCard Clearing Presentment Simulator installation program. The system briefly displays a progress indicator.

5. Click **Next** to continue.

6. Read the Software License Agreement carefully, click "I accept the terms of the license agreement", and then click **Next** to accept the terms of the agreement.

7. Select **Upgrading from MCPS xx.x**. Select this option if you have a previous version of the simulator installed on this PC and want to upgrade to the current version of MCPS and click **Next**.

8. Click **Next** to accept the default location destination, or click **Change** to select a different location and then click **Next** to continue.

   NOTE

   For easier installation of upgrades, MasterCard recommends that customers accept the default Location Destination.

9. Click **Install** to start the installation.

10. Click **OK** if SQL Server® 2012 Express is started. To verify that SQL Server® 2012 Express is started, see **Validating the Status of SQL Server 2012 Express Engine**. Or if SQL Server® 2012 Express is not started, proceed

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6. "xx_x" equals the current version of the simulator.
7. * equals the directory selected by the customer when downloading the file from MasterCard Connect.

with the steps in **Stopping the SQL Server 2012 Express Engine** and then click **OK**.

11. Click **Finish** when setup is complete.

    NOTE

    The install process will detach the previous version of the simulator database from SQL Server 2012 Express and attach the current simulator database to SQL Server 2012 Express.

12. If you have exported user data as described in step 1, continue with **Importing User MPE Entries** and **Importing User Tables**.

Export—Import Process

The Configuration component contains an Export—Import function that automates the export and import of user-specific tables from a previous version of the simulator to the current version of the simulator. The Export function copies user MPE entries and user table information to a different directory other than the simulator directory for holding purposes.

The Export—Import function allows customers, that have entered specific information in a previous version of the MasterCard Clearing Presentment Simulator, to preserve and transfer this information to the current version of the simulator. You may do this by:

• Exporting user modified data (User MPE Entries and User Tables) using the previous version of the Configuration component

• Installing MasterCard Clearing Presentment Simulator v.xx.x upgrade

• Importing user modified data (User MPE Entries and User Tables) using the upgrade version of the Configuration component

After upgrading to the current version of the MasterCard Clearing Presentment Simulator, you can use the Import function to import those user MPE entries and user tables back to the simulator directory thereby replacing the corresponding information and preserving the information created by you in the previous version of the simulator.

Exporting User MPE Entries and User Tables

Before performing the Simulator Upgrade Installation, use the following procedure to export user MPE entries and user table information from the simulator.

Procedure

1. Launch the previous simulator's version of the **Configuration** component.

2. From the File menu, click **User MPE Entries/Export** (select User Tables/Export when performing the export of the User Tables).

3. Enter a unique name and click **Save**. A confirmation message displays to indicate a successful export. The name of the file and the accompanying log file are also indicated in the reference. The exported files, for user MPE entries and user tables, end with a **.dat** extension.

NOTE

Please make a note of the unique name for importing the saved data into the current version of the simulator.

4. Repeat the procedure for the **User Tables**.

5. Close the previous version of the Configuration component when finished.

Importing User MPE Entries

Use the following procedure if you have exported User MPE Entries from a previous version of the simulator and want to import the user modified information to the current version of the simulator.

It is important to note that customers should import the User MPE Entries before importing the User Tables into the simulator. This is due to the fact that some User Table information may reference corresponding information in the User MPE Entries.

At the time of the import process, if a match is not made between the User Table data and the corresponding User MPE data, then the User Table data will not be imported, resulting in data being lost.

Procedure

1. Launch the simulator's upgrade version of the **Configuration** component

2. From the File menu, click **User MPE Entries/Import**.

3. Click a radio button to indicate the action to be taken if identical entries exist in the database and in the user data being imported.

- **Do not Overwrite Entries in Database**—Adds all user entered data unless the matching data already exists in the database thereby leaving the MPE obtained data unaltered. For example, Member ID '991234' was not available in the previous database. The user added Member ID '991234' via the Configuration component. Now Member ID '991234' is on the newly installed database. Selecting "Do Not Overwrite Entries in Database" will retain the database information which was obtained from the MPE.

- **Overwrite Entries in Database**—Adds user entered or modified data, overwriting any matching entries contained in the database. Any corresponding MPE data contained in the database will be replaced by the matching user entered data. For example, Member ID '991234' was not available in the previous database. The user added Member ID '991234' via the Configuration component. Now Member ID '991234' is on the newly installed database. Selecting "Overwrite Entries in Database" will overwrite the current Member ID on the database with your user entered Member ID information.

4. Click **Browse** and select a User MPE Entries file (*.dat) to be imported. (For example, the file created from the User MPE Entries export procedure.)

5. Click **Open**.

6. Click **OK**.

   An import message displays indicating whether the import is successful or if there are errors with the import. Also indicated is the Import Log file name and location. The Import Log contains the import details.

Importing User Tables

Use the following procedure if you have exported User Tables from a previous version of the simulator and want to import user modified information to the current version of the simulator.

Procedure

1. Launch the upgrade version of the **Configuration** component.

2. From the File menu, select **User Tables**/**Import**.

3. Within the Open dialog box, select a User Table (*.dat) file (e.g. The file created from the User Table export), and click **Open**.

4. Click **OK**.

   An import message displays indicating whether the import is successful or if there are errors with the import. Also indicated, is the Import Log file name and location. The Import Log contains the import details.

SQL Server 2012 Express Management Database Engine

The MasterCard Clearing Presentment Simulator uses Microsoft® SQL Server® 2012 Express Management Database Engine software to access specific databases.

If you do not have SQL Server® 2012 Express installed on your PC you must first uninstall the MSDE engine and then proceed with the instructions under the First Time Installation section.

NOTE

The System Tray of the PC's desktop displays an SQL Server Service icon. Right-click the icon to check the version of MSDE installed on your PC and select "About".

If MSDE 2000 is installed on your PC, will need to stop the SQL Server while doing the installation of SQL Server 2012 Express as certain SQL Server registry settings may need updating. You can right-click and Stop the SQL Service using the icon in the task bar, or you can use the Services applet in the Control panel on your PC to temporarily stop the SQL Server. You should not need to uninstall MSDE 2000 in order to install SQL Server 2012 Express.

Uninstalling the SQL Server 2012 Express Database Engine

Use the following procedure to uninstall the existing SQL Server® 2012 Express Engine.

Procedure

1. Close any open simulator components.
2. If you also have MSDE 2000 installed, you must stop the MSDE Engine.
3. Double-click the SQL Server Service Manager icon located in the system tray
4. Click **Stop** to stop the server. Answer the confirmation message accordingly.
5. Close the SQL Server Service Manager dialog box.
6. Click **Start**, and then click **Settings/Control Panel**.
7. Click **Add/Remove Programs**.
8. Click **Microsoft SQL Server 2012**.
9. Click **Remove**.
10. When prompted, select the instance to remove, and then click **Next**.
11. Select the check box for SQL Server 2012 Express Database Engine Services, and then click **Next**.
12. When the operation shows as complete, click **Next**.
13. When the removal Summary window appears, click **Remove**.
14. Performing Windows Installer options will be displayed. (This may take several minutes.)

15. When the Windows Installer is complete, click **Next**.

16. Click **Close**.

Download SQL Server 2012 Express Engine from MasterCard Connect

Follow these steps to download the SQL Server® 2012 Express executable file from MasterCard Connect™.

Procedure

1. Start a MasterCard Connect session.

2. From the Applications tab, click **MasterCard Clearing Presentment Simulator**.

3. Click the **Clearing** link at the top of the page.

4. Click the MasterCard Clearing Presentment Simulator **Documentation** link.

5. Scroll to **Microsoft SQL Server Express 2012** and then click **Download** to launch the download dialog box.

6. Click **Save** in the download dialog box.

7. Select a directory and click **Save**. Once download is complete, click **Close**.

8. Close your MasterCard Connect browser session after completing the download.

Detaching Databases from SQL Server 2012 Express

Use the following procedure to detach databases from SQL Server 2012 Express.

Procedure

1. Close all components of the MCPS simulator.

2. Open the MCPS desktop folder.

3. Double-click the **MCPS Database Manager** shortcut icon.

4. Click **Detach**.

5. In the Command Prompt window, press any key to continue when indicated in the message.

6. Close the Attach window when finished.

Attaching Databases to SQL Server 2012 Express

Use the following procedure to attach databases to SQL Server 2012 Express.

Procedure

1. Close all components of the MCPS simulator.

2. Open the **MCPS** desktop folder.

3. Double-click the **MCPS Database Manager** shortcut icon.

4. In the Attach 2012 window, verify that the default directory path of **C:\ProgramData\ApplicationData\MasterCard\MCPS\DB\MCPS xx.x** is the directory path selected. Modify the path if necessary.

   NOTE

   The Attach window lists the Simulator database to be attached in this procedure. The database has two accompanying files (.mdf and .ldf) displaying "Database Attached" when the process is complete.

5. Click **Attach**.

6. In the Command Prompt window, press any key to continue when indicated in the message.

7. Close the Attach window when finished.

Stopping the SQL Server 2012 Express Engine

In the future, customers may need to update the MasterCard Clearing Presentment Simulator databases. If this situation occurs, simulator support personnel will require the customer to stop the SQL Server® 2012 Express Engine before loading the new databases. Once the databases are loaded, the SQL Engine will need to be restarted before continuing with simulator processing.

The following steps outline the procedures for stopping the SQL Server® 2012 Express Engine.

Procedure

1. Navigate to the system **Control Panel**.

2. Click the **System and Security** icon.

3. Click the **Administrative Tools** icon, and then double-click the **Services** icon.

4. In the Services list find the service named **SQL Server (SQLExpress)**.

5. Right-click **SQL Server (SQLExpress)** and select **Stop**.

Starting the SQL Server 2012 Express Engine

The following steps outline the procedures for starting the SQL Server 2012 Engine.

Procedure

1. Navigate to the system **Control Panel**.

2. Double-click the **Administrative Tools** icon, and then double-click the **Services** icon.

3. In the Services list locate the service named **SQL Server (SQLExpress)**.
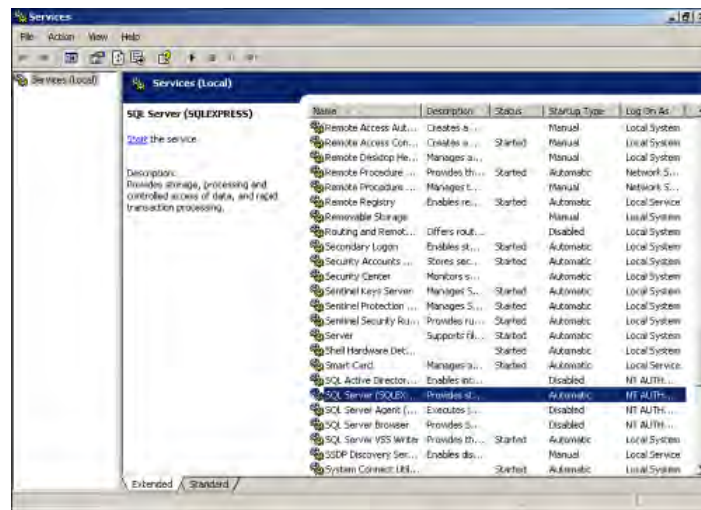
4. Double-click the **SQL Server (SQLExpress)** service to display the SQL Server Properties dialog box. Set the Startup type to **Automatic**, and then click **Start**.

5. Click **OK** to close the dialog box, and then close the Services window.

Validating the Status of SQL Server 2012 Express Engine

The following steps outline the procedures for validating the status of the SQL Server 2012 Express engine.

Procedure

1. Navigate to the system **Control Panel**.

2. Click the **System and Security** icon.

3. Click the **Administrative Tools** icon, and then double-click the **Services** icon.

4. In the Services list double-click the service named **SQL Server (SQLExpress)**.

5. Verify that the SQL Server (SQLExpress) Service is set to a Status of **Started**, and that the Startup Type is set to **Automatic**.

Chapter 3   Simulator Configuration

This chapter describes how customers configure, customize, and modify the MasterCard Clearing Presentment Simulator.

14 August 2014 • MasterCard Clearing Presentment Simulator Guide

Configuration Introduction

The Configuration component allows customers to create and modify multiple configurations, which provides customization of the simulator with the customer's specific testing parameters. The MasterCard Clearing Presentment Simulator uses the values and parameters defined in the configuration for component processing operations.

The system saves customizations created in the Configuration component to a configuration name. Customers can create and maintain multiple configurations having unique names that are available for selection through the Configuration window.

There are various options described under Configuration Requirements that customers must configure to customize the MasterCard Clearing Presentment Simulator before performing testing.

The Configuration component contains data tables that correspond to certain IPM Member Parameter Extract (MPE) data tables. These data tables contain various types of information to support customer processing. MasterCard initially pre-populates the corresponding simulator tables using a full MPE file as input eliminating the need to manually configure the customer's testing counterpart information. The MasterCard Clearing Presentment Simulator uses the MPE as a data import source allowing the customer to synchronize the data in the simulator with that of the MPE.

Configuration Requirements

Customers control the simulator configuration settings by using the Configuration component. Before testing, customers should define the following options in the Configuration component.

- **Member ID Lists**

  Defines a group list containing Member IDs that the MasterCard Clearing Presentment Simulator references for correct file processing. See **Member ID Lists** for details.

- **Process this Member ID?**

  Defines the Member IDs that are processed by the customer. This is set through either the Configuration window or the Member ID Detail option. The response in this field affects transaction processing in the CEE. See **Member ID Detail** for more information.

- **Reconciliation Lists**

  Sets the reconciliation categories that are applied for reconciliation summary reporting on all files processed that require acknowledgement of their successful submission or on all the notification data contained in the delivered file. See **Reconciliation Lists** for details.

- **Reconciliation Settlement List**

  Sets the reconciliation categories that are applied for calculation and creation of Settlement Position Detail/1644-688 messages. See **Settlement Reconciliation List** for details.

- **Cardholder Table**

  User-defined cardholder default values used by the TDG to pre-populate new files by cycling through the table's content. The contents of this table correspond to the Member ID information contained in the Member ID Detail for those Member IDs that the customer processes. See **Customizing the Cardholder Table** for details.

- **Default Values**

  Default Values and Default Values by MTI/Function Code options in the Configuration component allow users to specify a default value for a particular data element. Any changes to default values are stored in the configuration. The default values specified in the configuration are used to overlay those values specified by the MasterCard Clearing Presentment Simulator internal control file. See **Modifying the Default Value of a Data Element** in this section for details.

- **Merchant Table**

  User-defined merchant type default values that the TDG uses to pre-populate new files by cycling through the table's content. See **Customizing the Merchant Table** for details.

- **Life Cycle Algorithms**

  User-defined Life Cycle Algorithms used when performing Life Cycle testing to specify the conditions in which a "next step" life cycle message will be created and to identify what data that next step life cycle message should contain. See **Life Cycle Algorithms** for details.

The configuration sets properties that the simulator references when creating and processing clearing transactions. From the Configuration window, customers may create and select user-defined lists containing specified customer and testing information. The customer associates the selected lists to a Configuration Name(s). Customers may create multiple configuration names with any combination of the user-defined lists. A unique, user-defined configuration name identifies each configuration.

The following table provides details of the various fields and the information that customers can select within the Configuration window to help ensure correct operation of the MasterCard Clearing Presentment Simulator.

Field Name	Value
Configuration	Name of the active configuration. When multiple configurations exist, customers may select from the configuration names available in a drop-down list.
Description	A brief description of the configuration currently viewed within the Configuration window.
Perform Life Cycle Testing	Sets the option to perform Life Cycle Testing referencing a user-defined Life Cycle Algorithm. Refer to Life Cycle Algorithms in this section for additional information.
Start Processing Date	The user-defined processing date that the Test Data Generator (TDG) and the Clearing Emulation Engine (CEE) use when processing transactions. This date may be modified to match the dates on an IPM file that is processed by the CEE.
Member ID List Name	The name of the Member ID list defined for the configuration selected. The Member ID lists are defined in the Member ID Lists option. Refer to Member ID Lists in this section for additional information.
Process this Member ID?	Sets the "Process this Member ID?" option. Customers highlight a row in the Member ID grid and then select an option from the drop-down list for each Member ID.
Reconciliation Notification List	The name of the Reconciliation Notification list defined for the configuration selected. Refer to Reconciliation Lists for additional information.
Reconciliation Acknowledgement List	The name of the Reconciliation Acknowledgement list defined for the configuration selected. Refer to Reconciliation Lists for additional information.
Reconciliation Settlement List	The name of the Reconciliation Settlement list defined for the configuration selected. Refer to Settlement Reconciliation List for additional information.

Customizing a Configuration Name

Customers may create and modify multiple configuration names with different associated Life Cycle Algorithm and Member ID Lists selected, which allows the customer to customize their testing environment. Once created, the individual configuration names are available for selection in the Configuration window.

The Configuration Member ID Settings pane allows the customer to set the "Process this Member ID?," the "Reconciliation Notification/Acknowledgement," and the "Reconciliation Settlement" lists for the individual Member IDs displayed in the grid. The Member ID information displayed in the grid corresponds with the Member ID information contained in the Member ID Detail table. Any change to the Member ID information in either the Member ID Detail or the configuration window affects both. The Member ID information is the same for all configurations, as it is defined in the Member ID Detail or in the configuration display grid.

NOTE

Each time a simulator component opens, it loads the selected configuration into memory. MasterCard recommends pressing the Update button after changing any of the options in the configuration to ensure the use of the newly defined parameters.

Creating a Configuration Name

Use the following procedure to create a configuration name in the Configuration component.

Procedure

1. Click the Configuration component icon to display the Configuration window.

2. Click **Add**.

3. Enter the Configuration Name and Description (optional) and then click **Add**.

4. Click **OK**.

5. Click the **Perform Life Cycle Testing** option and click a **Life Cycle Algorithm name** in the corresponding drop-down list (optional).

6. Click a date in the Start Processing Date field if a specific date is needed.

7. Click a name in the Member ID List Name drop-down list.

8. Click on a **Member ID** in the display grid, highlighting the entire row for that Member ID (optional).

9. Click **Yes** or **No** in the Process this Member ID drop-down list (optional).

10. Click a name in the Reconciliation Notification drop-down list (optional).

11. Click a name in the Reconciliation Acknowledgement drop-down list (optional).

12. Click a name in the Reconciliation Settlement drop-down list (optional).

13. Repeat steps 8 through 12, as needed for each Member ID in the display grid (optional).

14. Click **Update** when finished.

15. Click **OK**.

Updating a Configuration Name

Use the following procedure to modify an existing Configuration name.

Procedure

1. Open the Configuration component.
2. Click a configuration name in the Configuration Name drop-down list.
3. Modify the appropriate fields and then click **Update**.
4. Click **OK**.

Deleting a Configuration Name

Use the following procedure to delete an existing Configuration Name.

Procedure

1. Open the Configuration component.
2. Click a configuration name in the Configuration Name drop-down list.
3. Click **Delete**. Answer appropriately to a warning notification asking for a confirmation before deleting the Configuration Name.
4. Click **OK**.

Setting a Configuration Name as Active

Use the following procedure to set a Configuration Name as active within the simulator.

Procedure

1. Open the Configuration component.
2. Click a **configuration name** in the Configuration Name drop-down list.
3. Click **Set as Active**.

Configuration Refresh Function

A refresh function, incorporated into each simulator component, refreshes each component with any changes made to the active configuration name.

When customers create, update, or set as active a configuration name within the Configuration component, any other open components refresh automatically with the configuration changes.

If the CEE component is open during the refresh, the status bar blinks to indicate the refresh action.

For the TDG component, the refresh action displays a message window. Customers may click **OK** to continue with the refresh or may cancel the refresh for that component only by closing the message window using the **Close** button in the upper right-hand of the window.

In the TDG, if creating a new file and a refresh begins, the refresh will prompt with a save message box (allowing the customer to save the file), then briefly closes and reopens the file.

Member ID Lists

Customers create and edit lists that contain specific Member IDs and corresponding information. Multiple Member IDs can be included within each Member ID list. These lists are then available for selection in the Configuration window when defining a configuration.

Adding a Member ID List Name

Use the following procedure to add a Member ID List Name in the simulator's Configuration component.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Member ID/Member ID Lists** to display the Member ID List window.

3. Click **Add List**.

4. Enter a list name and click **Add**.

5. Click **OK**.

6. Add Member ID(s) as needed. See **Adding a Member ID to a Member ID List** for details.

7. Click **Close** to return to the main Configuration window.

Renaming a Member ID List Name

Use the following procedure to rename a Member ID List within the simulator's Configuration component.

Procedure

1. Open the **Configuration** component.

2. From the Configuration menu, click **Member ID/Member ID Lists** to display the Member ID List dialog box.

3. Click a **Member ID List Name** in the drop-down list.

4. Click **Rename List**.

5. Enter a name, and then click **Rename**.

6. Click **OK**.

7. Click **Close**.

Deleting a Member ID List Name

Use the following procedure to delete a Member ID List Name.

Procedure

1. Open the **Configuration** component.

2. From the Configuration menu, click **Member ID/Member ID Lists** to display the Member ID List dialog box.

3. Click a **Member ID List Name** in the drop-down list.

4. Click **Delete List** and answer appropriately to a warning notification asking for a confirmation before deleting the list.

5. Click **Close** to return to the main Configuration window.

Adding a Member ID to a Member ID List

Use the following procedure to add a Member ID to a Member ID List.

Procedure

1. Open the **Configuration** component.

2. From the Configuration menu, click **Member ID/Member ID Lists**.

3. Click a **Member ID List** name in the drop-down list.

4. In the **All Member ID** pane, click the Member ID(s) to be added to the specified Member ID List Name.

5. Click **Add Member ID** to move the selected Member ID(s) to the **Member ID in List** pane.

   To add all Member IDs, click **Add All Member IDs**.

6. Click **Update List**.

7. Click **OK**.

8. Click **Close** to return to the Configuration window.

Updating a Member ID List

Use the following procedure to update a Member ID List Name.

Procedure

1. Open the **Configuration** component.

2. From the Configuration menu, click **Member ID/Member ID Lists** to display the Member ID List dialog box.

3. Click a **Member ID List Name** in the drop-down list.

4. Add or remove Member ID(s) as needed. See **Adding a Member ID to a Member ID List** or **Removing a Member ID from a Member ID List Name** for details.

5. Click **Update List**.

6. Click **Close** to return to the main Configuration window.

Removing a Member ID from a Member ID List Name

Use the following procedure to remove a Member ID from a Member ID List Name.

Procedure

1. Open the **Configuration** component.

2. From the Configuration menu, click **Member ID/Member ID Lists**.

3. Click a **Member ID List Name** in the drop-down list.

4. In the Member IDs in List pane, click the Member ID(s) to be removed from the Member ID List.

5. Click **Remove Member ID**.

6. Click **Update List** and then click **OK**.

7. Click **Close** to return to the Configuration window.

Member ID Detail

The Member ID Detail allows creation of specific customer information and use of it in the creation of test data.

Within Member ID records, customers can assign any combination of the following options:

- Process Member ID indicator

- Member ID Type (Issuer/Acquirer indicator)

- Settlement Currency Code

- Country Code

- MEC Indicator

- Reconciliation Lists—Notification, Acknowledgement, and Settlement

- ATM Indicator

Process This Member ID?

The "Process This Member ID?" field, contained in the Member ID Detail allows testing customers to specify which Member IDs are processed directly by the testing customer. The response in this field affects transaction processing in the CEE component.

CEE Processing

To receive Reconciliation data totals during CEE processing, set the "Process This Member ID?" field to **YES** for all appropriate Member IDs within the Member ID Detail. Set the "Process This Member ID?" field to **NO** if you do not want to receive Reconciliation data totals for Member IDs during CEE processing.

Data element (DE) 2 (Primary Account Number [PAN]), DE 31 (Acquirer Reference Data), and PDS 0165 (Settlement Indicator) are mandatory for first and second presentments, first chargeback, arbitration chargeback, and retrieval request transaction messages. DE 2 (PAN) identifies the issuer and DE 31 (Acquirer Reference Data), identifies the acquirer.

The CEE processing logic determines the Issuer and Acquirer Member IDs for individual message types by matching these data element values with the Issuer Account Range and Acquirer BIN tables. For first and second presentments, the CEE attempts to match DE 2 to an account range in the Issuer Account Range table to determine the Issuer Member ID for these messages. Once determined, the Issuer Member ID is then considered the **Destination** Member ID.

The CEE then proceeds to match DE 31, subfield 2, to an Acquirer BIN in the Acquirer BIN table to determine the Acquirer Member ID for these messages. Once determined, the Acquirer Member ID is considered the **Origination** Member ID.

The determination process used in first and second presentments is reversed for first chargebacks, arbitration chargebacks, and retrieval request transactions. The CEE attempts to match DE 2 to an account range in the Issuer Account Range table to determine the Issuer Member ID for these messages. Once determined, the Issuer Member ID is considered the **Origination** Member ID.

The CEE then proceeds to match DE 31, subfield 2, to an Acquirer BIN in the Acquirer BIN table to determine the Acquirer Member ID for these messages. Once determined, the Acquirer Member ID is considered the **Destination** Member ID.

For Fee Collection transactions, the CEE attempts to match DE 93 (Transaction Destination Institution ID Code), to a Member ID in the Member ID Detail table to determine the **Destination** Member ID. The CEE proceeds to match DE 94 (Transaction Originator Institution ID Code) to a Member ID in the Member ID Detail table to determine the **Origination** Member ID.

The following tables identify the processing conducted by the CEE component. This classification and processing is based on the settings of the "Process This Member ID?" field, for both the Destination and Origination Member IDs, compared to the values in the message.

IF...			THEN...
Destination Member ID "Process This Member ID?"	Origination Member ID "Process This Member ID?"	Value of PDS 0165	Simulator Processing Results—CEE
No	No	B, M, C	The CEE does not process this message.
No	Yes	B, M, C	The CEE processes the message for Acknowledgement Reconciliation totals in the Acknowledgement File.
Yes	No	B, M	The CEE creates a Notification message in the Notification File and processes the message for Notification Reconciliation totals.
Yes	No	C	The CEE does not process this message.
Yes	Yes	C	The CEE will process this message for Acknowledgement Reconciliation Totals in the Acknowledgement File.
Yes	Yes	B, M	The CEE creates a Notification message in the Notification File and processes the message for Notification Reconciliation totals. The CEE also processes the message for Acknowledgement Reconciliation Totals in the Acknowledgement File. The two logical files will be joined into one physical file.

Adding a New Member ID to the Member ID Detail

Customers may need to test with additional acquirer and issuer Member IDs that are not identified as system records (defined by the IPM MPE). Use the following procedure to add user-defined Member IDs.

Procedure

1. Open the **Configuration** component to display the Configuration window.

2. From the Configuration menu, click **Member ID/Member ID Detail** to open the Member ID Detail dialog box.

3. Click **Add**.

4. Enter an applicable **Member ID**.

5. Click **Yes** or **No** to determine if this Member ID is processed.

6. Click the **Member ID Type**.

7. Click a **Settlement Currency Code** in the drop-down list.

8. Click a **Country Code** in the drop-down list.

9. Click an **MEC Indicator** in the drop-down list.

10. Click an **ATM Indicator** in the drop-down list.

11. Click a **Notification**, **Acknowledgement**, and a Settlement Reconciliation List in the corresponding drop-down lists.

12. Click **Add**.

13. Click **OK**.

14. Click **Close** when finished.

Updating a Member ID in the Member ID Detail

Use the following procedure to update a Member ID in the Member ID Detail table.

Procedure

1. Open the **Configuration** component.

2. From the Configuration menu, click **Member ID/Member ID Detail** to open the Member ID Detail dialog box.

3. Click a **Member ID** in the display grid to select.

4. Click **Update**.

5. Modify the available fields and then click **Update**.

6. Click **OK**.

Deleting a Member ID from the Member ID Detail

Use the following procedure to delete user-defined Member IDs from the Member ID Detail table.

Procedure

1. Open the **Configuration** component to display the Configuration window.

2. From the Configuration menu, click **Member ID/Member ID Detail** to open the Member ID Detail dialog box.

3. Click a **Member ID** in the display grid to select.

4. Click **Delete**.

5. Answer appropriately to a confirmation message validating the delete action.

6. Click **OK**.

Customize the Cardholder Table

MasterCard provides customers with a default card table that customers may modify to specify account data that is used to pre-populate messages within a new test file or update an existing test file's cardholder information. Customers define the table to contain customer-specific information that is associated with the Member IDs defined in the Member ID Detail. By using this table, customers can with greater speed and accuracy, modify certain essential data elements within the messages.

The **Cardholder Table** contains the following categories:

• Primary Account number (PAN)

• Expiration Date

• Card Description

• Product Code

When creating new messages, the TDG references the Cardholder Table information before referencing the Default Values Table(s) for cardholder information. Values in the Cardholder Table override the default values.

Example:

Default Values Table	Cardholder Table	
DE 14 = 0505	PAN 547350XXXXXX0014	DE 14 = 0312
DE 14 = 0505	PAN 547350XXXXXX0139	No DE 14 value defined

IF…	THEN…
A message is created using PAN 547350XXXXXX0014	DE 14 is populated with the Cardholder Table defined value 0312.
A message is created using PAN 547350XXXXXX0139	DE 14 is not included in the message because it is not a mandatory data element and is not defined in the Cardholder Table.
A message is created using PAN 547350XXXXXX0139 And The "Include" option is selected for DE 14 in the Default Values table	DE 14 is populated with the Default Values Table defined value 0505.

Adding a Record to the Cardholder Table

Use the following procedure to add a record to the Cardholder Table.

Procedure

1. Open the **Configuration** component.
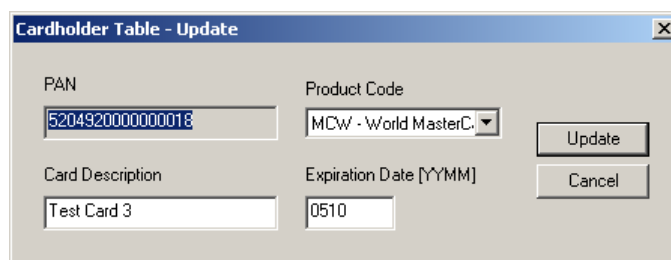
2. From the Setup menu, click **Cardholder Table** to display the Cardholder Table window.

3. Click **Add** to display the Cardholder Table - Add dialog box.

4. Enter data in the following fields:

    - PAN

    - Expiration Date

    - Card Description

    - Product Code

5. Click **Add**.

6. Click **OK**.

7. If adding multiple cardholder records, repeat steps 3 and 4.

8. Click **Close** when finished.

Modifying a Record in the Cardholder Table

Use the following procedure to modify a record in the Cardholder Table.

Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Cardholder Table** to display the Cardholder Table dialog box.

3. Click anywhere in the row to select the record to be modified.

4. Click **Update** to display the Cardholder Table - Update dialog box. The PAN field indicates the record being modified and corresponds with the Cardholder Table.

5. Enter the data to be changed in the available fields.

6. Click **Update**.

7. Click **OK**.

Deleting a Record in the Cardholder Table

Use the following procedure to delete a record in the Cardholder Table.

Procedure

1. Open the Configuration component

2. From the Setup menu, click **Cardholder Table** to display the Cardholder Table dialog box.

3. Click anywhere in the row to select the record to be deleted.

4. Click **Delete**. Answer appropriately to a warning notification asking for a confirmation before deleting the record.

5. Click **Close**.

inControl/*PayPass* Mapping
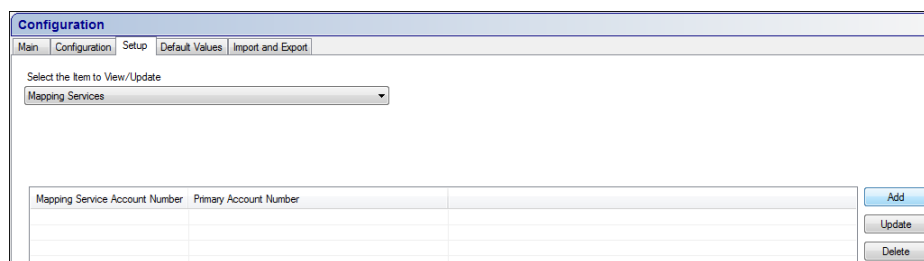
The inControl/*PayPass* Mapping option allows customer selection of a virtual account number that maps to an actual account number or a *PayPass* account number that maps to a cardholders Magnetic Stripe (Funding) Account number.

Adding inControl/*PayPass* Account Numbers

Use the following procedure to add an inControl/*PayPass* Account Number in the simulator.
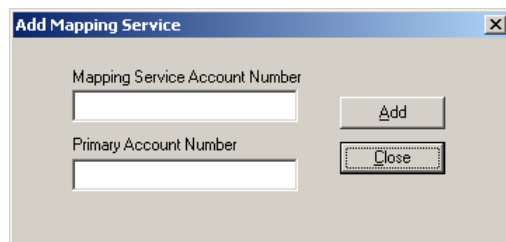
Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Mapping Service** to display the Mapping Service Table dialog box.

3. Click **Add** to display the Add Mapping Service dialog box.

4. Enter the appropriate Mapping Service Account Number and Primary Account Number.

5. Click **Add**.

6. Click **OK**.

7. If adding multiple Account Numbers, repeat steps 4 through 6.

8. Click **Close** when finished.

Updating inControl/*PayPass* Account Numbers

Use the following procedure to update an inControl/*PayPass* Account Number in the simulator.

Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Mapping Service** to display the Mapping Service Table dialog box.

3. Click a row in the grid to select the record to be modified.

4. Click **Update** to display the Update Mapping Service dialog box.
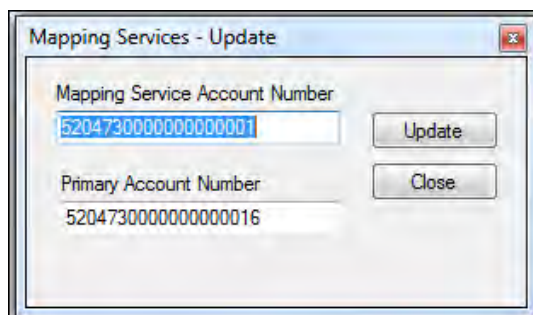
5. Type over the data to be changed in the available fields.

6. Click **Update**.

7. Click **OK**.

8. If updating multiple Account Numbers, repeat steps 2 through 6.

9. Click **Close** when finished.

Deleting inControl/*PayPass* Account Numbers

Use the following procedure to delete an inControl/*PayPass* Account Number from the simulator.

Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Mapping Service** to display the Mapping Service Table dialog box.

3. Click a row in the grid to select the record to be deleted.

4. Click **Delete**.

5. Answer appropriately to a warning notification asking for a confirmation before deleting the record.

6. If deleting multiple Account Numbers, repeat steps 2 and 3.

7. Click **Close**.

Reconciliation Lists

The Reconciliation Lists option allows customer selection of reconciliation reporting categories that the CEE provides during file processing. Customers create Reconciliation List names and select reconciliation categories for each unique Reconciliation List Name.

The customer can identify different reconciliation categories for acknowledgement and notification summaries through selection check boxes. The selection boxes contain Reconciliation Category names that identify a specific set of reconciliation categories. Once created, the Reconciliation List Names are available for selection in the Configuration window as either an Acknowledgement or Notification Reconciliation List name.

The Reconciliation Acknowledgement List sets the reconciliation categories that will be applied for all reconciliation summary reporting on all files processed for the specified Member ID that require acknowledgement of their successful submission.

The Reconciliation Notification List sets the reconciliation categories that will be applied for all reconciliation summary reporting on all files processed for the specified Member ID that require notification of their successful processing.

Adding Reconciliation Lists

Use the following procedure to add a Reconciliation List Name in the simulator's Configuration component.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Reconciliation Lists** to display the Reconciliation Lists dialog box.
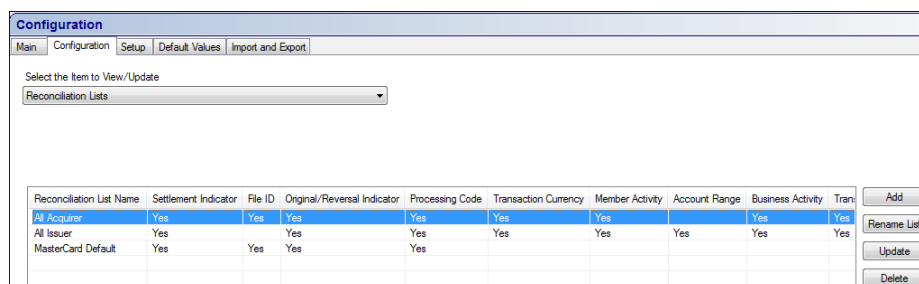
3. Click **Add** to display the Reconciliation Lists – Add dialog box.

4. Enter a **Reconciliation List Name**.

5. Click within a check box to select the corresponding category and click **Add**.

6. Click **OK**.

7. Click **Close** when finished.

Renaming Reconciliation Lists

Use the following procedure to rename a Reconciliation List in the simulator's Configuration component.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Reconciliation Lists**.

3. Click the appropriate list's name to highlight the entire list.

4. Click **Rename List**.

5. Enter the applicable name and then click **Rename**.

6. Click **OK**.

7. Click **Close** when finished.

Modifying Reconciliation Lists

Use the following procedure to modify a Reconciliation List Name in the simulator's Configuration component.

Procedure

1. Open the Configuration component.
2. From the Configuration menu, click **Reconciliation Lists**.
3. Click the appropriate list name to highlight the entire list.
4. Click **Update** to display the Reconciliation Lists-Update dialog box.
5. Click the check box, to select/deselect the corresponding category.
6. Click **Update**.
7. Click **OK**.
8. Click **Close** when finished.

Deleting Reconciliation Lists

Use the following procedure to delete a Reconciliation List Name from the simulator's Configuration component.

Procedure

1. Open the Configuration component.
2. From the Configuration menu, click **Reconciliation Lists**.
3. Click on the appropriate list name to highlight the entire list.
4. Click **Delete**. Answer appropriately to a warning notification asking for a confirmation before deleting the list.
5. Click **Close**.

Settlement Reconciliation Lists

The Settlement Reconciliation Lists option allows customer selection of settlement reconciliation reporting categories that the CEE provides during file processing. Customers create Reconciliation Settlement List names and select settlement reconciliation categories for each unique Reconciliation Settlement List Name.

Customers specify the reconciliation categories by selecting check boxes that correspond to the different Settlement Reconciliation Category names. Once created, the Reconciliation Settlement List Names are available for selection in the Configuration window.

The Reconciliation Settlement List sets the categories used to calculate and create Settlement Position Detail/1644-688 messages.

Customers may choose not to receive Settlement Position Detail/1644-688 messages by selecting "None Selected" in the "Reconciliation Settlement List" drop-down of the Configuration component.

Customers wanting to receive Settlement Position Detail/1644-688 messages can do so by selecting "MasterCard Default" in the "Reconciliation Settlement List" drop-down of the Configuration component. The "MasterCard Default" option provides Settlement Reconciliation totals by the "Settlement Activity Reconciled" and "File Reconciled" categories.

Customers wanting any of the other Settlement Reconciliation categories need to create a new Reconciliation Settlement List(s).

Adding Reconciliation Settlement Lists

Use the following procedure to add a Reconciliation Settlement List Name in the simulator's Configuration component.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Settlement Reconciliation Lists** to display the Settlement Reconciliation Lists dialog box.

3. Click **Add**.

4. Enter a **Settlement Reconciliation List Name** and click the appropriate **Settlement Reconciliation Categories**.
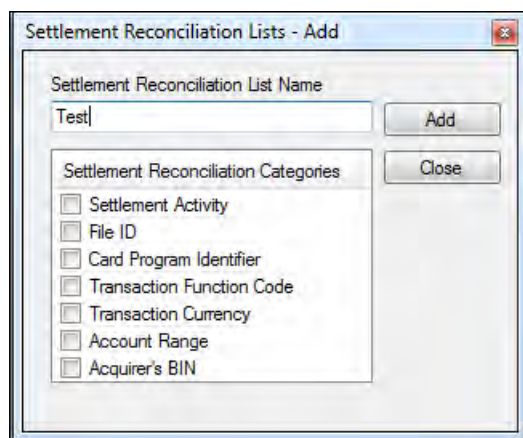
5. Click **Add**.

6. Click **OK**.

7. Click **Close** when finished.

Renaming Reconciliation Settlement Lists

Use the following procedure to rename a Reconciliation Settlement List in the simulator's Configuration component.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Settlement Reconciliation Lists**.

3. Click the appropriate list name to highlight the entire list.

4. Click **Rename List**.

5. Enter the applicable name and then click **Rename**.

6. Click **OK**.

7. Click **Close** when finished.

Modifying Reconciliation Settlement Lists

Use the following procedure to modify a Reconciliation Settlement List Name in the simulator's Configuration component.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Settlement Reconciliation Lists**.

3. Click the appropriate list name to highlight the entire list.

4. Click **Update** to display the Settlement Reconciliation Lists - Update dialog box.

5. Click a check box to select/deselect the corresponding category.

6. Click **Update**.

7. Click **OK**.

8. Click **Close** when finished.

Deleting Reconciliation Settlement Lists

Use the following procedure to delete a Reconciliation Settlement List Name from the simulator's Configuration component.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Settlement Reconciliation Lists**.

3. Click on the appropriate list name to highlight the entire list.

4. Click **Delete**. Answer appropriately to a notification confirming the delete.

Settlement Service Processing

The MasterCard Clearing Presentment Simulator provides the ability to perform multi-currency settlement testing. Customers that participate in regional settlement with the GCMS platform are able to settle transactions based on specific settlement selection criteria. This settlement selection criterion offers customers the ability to customize settlement of the transactions processed by MasterCard.

For additional information on multi-currency settlement, please refer to the *GCMS Reference Manual* and *Settlement Manual.*

There are three levels of settlement services:

- Level 1—Regional

- Level 3—Intracurrency

- Level 5—Bilateral

The hierarchy for settlement service selection is bilateral, intracurrency, regional, and then the regional default. The settlement service selection process evaluates customer participation in this order.

If, during the settlement service selection process, it is determined that the transaction qualifies for multiple settlement services within the same level, the simulator will use the parameters with the most specific matching criteria. If the same number of criteria matches, the simulator will use the settlement service with the highest priority.

The simulator is distributed with Level 3 (Intracurrency) and Level 5 (Bilateral) information. This information is obtained from the Member Profile Extract (MPE), initially, and will be updated during MPE importing unless otherwise specified.

Level 1 (Regional) information will not be pre-populated in the simulator as it is not provided in the MPE. However, customers may add their own Level 1 information using the procedures outlined in this section. Customers may also add different Level 3 and Level 5 information to test proposed changes.

Settlement Service Processing within the simulator references three options:

- Settlement Criteria Lists
- Settlement Services
- Member ID Settlement Services

Settlement Criteria Lists

To add a settlement service in the simulator, the settlement criteria must first be defined for the specified Settlement Criteria List ID. A list may contain one or more sequence records for each group of criteria defined.

There are seven definable parameters to consider:

- Acceptance Brand
- Transaction Function
- Transaction Currency
- Business Service Arrangement Type
- Licensed Product Identifier
- Processing Code
- Account Range

The bilateral and intracurrency settlement agreement information is distributed to customers via the Integrated Product Messages (IPM) Member Parameter Extract (MPE). The Settlement Criteria List IDs are assigned by the simulator and correspond to the values contained in the MPE. However, customers may define the Settlement Criteria List Name and criteria.

Adding a Settlement Criteria List

Use the following procedure to add settlement criteria list IDs in the simulator's Configuration component.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Settlement Criteria Lists** to display the Settlement Criteria Lists dialog box.


3. Click **Add List** to display the Settlement Criteria Lists – Add Lists dialog box.

4. Enter a **Settlement Criteria List Name**.

5. Click the appropriate **Member Activity** option and then click **Add**.

6. Click **OK** in a confirmation message indicating the list addition.

   After adding a Settlement Criteria List, customers add the settlement criteria for the new list ID. See **Adding a Settlement Criteria Sequence** for details.

Updating a Settlement Criteria List

Customers may update the Settlement Criteria List name. Use the following procedure to update a Settlement Criteria List Name.

Procedure

1. Open the Configuration component.

2. From the Settlement Criteria Lists dialog box, click a **Settlement Criteria List ID** or **Settlement Criteria List Name** in the corresponding drop-down list.

3. Click **Update List**.

4. Modify the Settlement Criteria List Name as needed.

   NOTE

   Customers may modify the Member Activity only for User-defined Settlement Criteria Lists.

5. Click **Update**.

   NOTE

   Customers may not modify system-defined Settlement List Member Activity.

Deleting a Settlement List

Customers may delete a user-defined Settlement Criteria List. Use the following procedure to delete a user-defined Settlement Criteria List.

Procedure

1. Open the Configuration component.

2. From the Settlement Criteria Lists dialog box, click a **Settlement Criteria List ID** or **Settlement Criteria List Name** in the corresponding drop-down list.

3. Click **Delete List**.

4. Answer appropriately to a confirmation message confirming the delete action.

   NOTE

   Customers may not delete System-defined Settlement Criteria Lists.

5. Click **OK**.

Adding a Settlement Criteria Sequence

Use the following procedure to add settlement criteria.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Settlement Criteria Lists** to display the Settlement Criteria Lists dialog box.

3. From the Settlement Criteria Lists dialog box, click a **Settlement Criteria List ID**.

4. Click **Add Sequence** to display the Settlement Criteria Lists – Add Sequence dialog box.

5. Define the criteria by selecting from the available drop-down lists.

6. Click **Add Sequence**.

7. Click **OK**.

8. Click **Close** when finished.

Within the Criteria fields, blank values in a column indicate that all values for the specified criteria apply. For example, in the figure below the blank Processing Code column indicates that all processing codes apply to the specified criteria.

Example

Updating a Settlement Criteria Sequence

Use the following procedure to update settlement criteria in the Configuration component's Settlement Criteria Lists dialog box.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Settlement Criteria Lists** to display the Settlement Criteria Lists dialog box.

3. From the Settlement Criteria Lists dialog box, click a **Settlement Criteria List ID**.

4. Click a **Criteria Sequence** to highlight.

5. Click **Update Sequence** to display the Settlement Criteria Lists – Update Sequence dialog box.

6. Modify the criteria by selecting from the available drop-down lists.

7. Click **Update Sequence**.

8. Click **OK**.

9. Use the arrows to navigate through the additional Criteria Sequences for the selected list repeating steps 4 through 6 as needed.

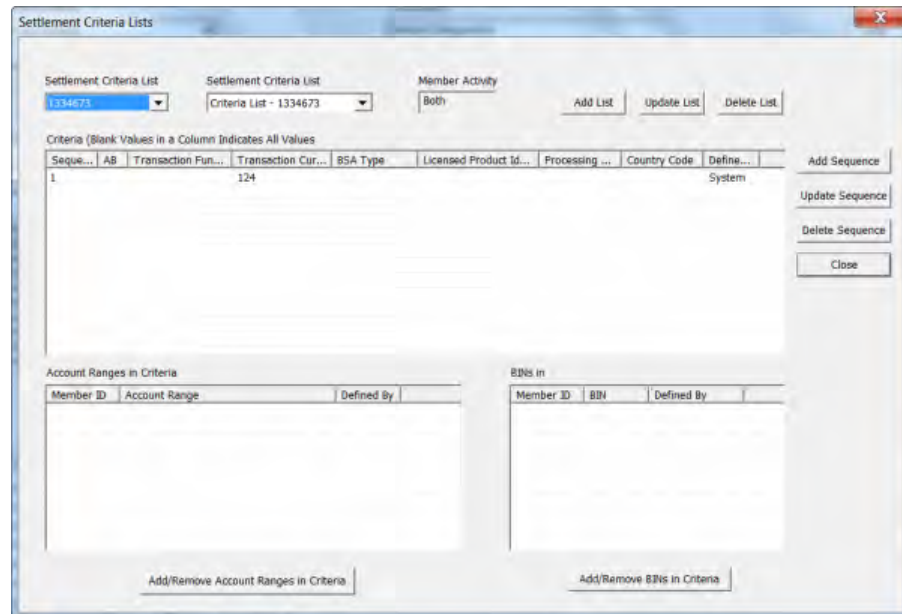10. Click **Close** when finished.

Deleting a Settlement Criteria Sequence

Use the following procedure to delete settlement criteria from the simulator's Configuration component.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Settlement Criteria Lists** to display the Settlement Criteria Lists dialog box.

3. From the Settlement Criteria Lists dialog box, click a **Settlement Criteria List ID**.

4. Click a **Criteria Sequence** to highlight.

5. Click **Delete Sequence**.

6. Answer appropriately to a message confirming the delete action.

7. Click **OK**.

Assigning Account Ranges to a Settlement Criteria List

Issuers may assign specific account ranges to a selected Settlement Criteria List(s). Use the following procedure to assign account ranges to a Settlement Criteria List.

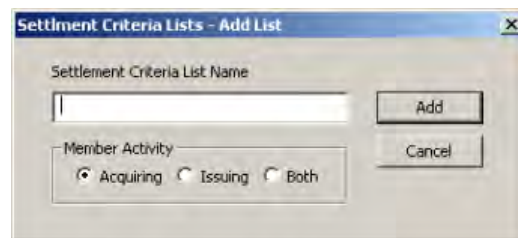### Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Settlement Criteria Lists** to display the Settlement Criteria Lists dialog box.

3. From the Settlement Criteria Lists dialog box, click a **Settlement Criteria List ID**.

4. In the lower pane of the Settlement Criteria Lists dialog box, click **Add/Remove Account Ranges in Criteria**.

5. Click a **Member ID** in the corresponding drop-down list. This selection filters the display of available account ranges for the specified Member ID.

6. Click an account range or multiple ranges in the Account Ranges field.

7. Click **Add** to add only those account ranges selected or **Add All** to add all account ranges available in the Account Range field.

8. Click **Close** when finished.

Removing Account Ranges from a Settlement Criteria List

Issuers may remove specific account ranges from a selected Settlement Criteria List(s). Use the following procedure to remove account ranges from a Settlement Criteria List within the simulator.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Settlement Criteria Lists** to display the Settlement Criteria Lists dialog box.

3. In the Settlement Criteria Lists dialog box, click a **Settlement Criteria List ID** from the corresponding drop-down list. This selection filters the display of assigned account ranges for the specified Settlement Criteria List ID.

4. Click **Add/Remove Account Ranges in Criteria**.

5. Click an account range or multiple account ranges if applicable in the Account Ranges in Criteria field.

6. Click **Remove** to remove only those account ranges selected or **Remove All** to remove all account ranges available in the Account Range in Criteria field.

7. Click **Close** when finished.

Settlement Services

Settlement Services processing within the simulator uses PDS 0165—Settlement Indicator, subfield 1, to derive the settlement service that is appropriate for the message.

The simulator uses three levels of settlement services:

- Level 1—Regional
- Level 3—Intracurrency
- Level 5—Bilateral

Within a transaction, when the value in PDS 0165 is 'M' (MasterCard clearing and net settlement), Level 3 settlement services for the message originator and receiver are examined by the CEE. The CEE searches for a common settlement service between the two customers that contains settlement service criteria that match the message. If there is not a match found for Level 3 settlement services, the CEE will search Level 1 settlement services for the message originator and receiver. The Level 1 settlement services between the originator and the receiver will not be in common. A separate Level 1 settlement service will be chosen for each customer based on the matching criteria in the message.

When the value in PDS 0165 is 'B' (Bilateral settlement agreement), Level 5 settlement services for the message originator and receiver are examined by the CEE. The CEE searches for a common settlement service between the two customers that contains settlement service criteria that match the message.

The Settlement Services dialog box contains system-defined Settlement Service Levels and their associated Settlement Service IDs which are obtained from the MPE.

Customers may create user-defined Settlement Services assigning a Settlement Service Level to a Settlement Service ID.

Adding Settlement Services

Use the following procedures to add settlement services in the simulator's Configuration component.

Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Settlement Services**.

3. Click **Add** to display the Settlement Services (SS) – Add dialog box.
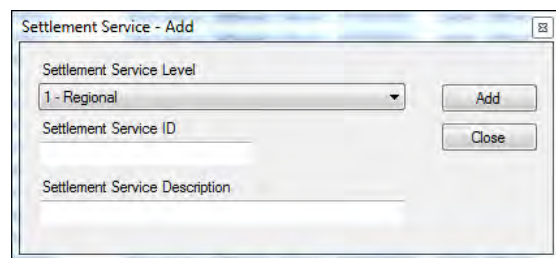
4. Click a **SS Level** in the corresponding drop-down list.

5. Enter a **SS ID** and **Description** and then click **Add**.

6. Click **OK** to a confirmation message.

7. Click **Close** when finished.

Updating Settlement Services

Use the following procedures to update a settlement service in the simulator's Configuration component.

Procedure

1. Open the Configuration component.
2. From the Setup menu, click **Settlement Services**.
3. Click a **SS Level** to highlight the row.
4. Click **Update** to display the Settlement Services (SS) – Update dialog box.
5. Modify the description and then click **Update**.
6. Click **OK** to a confirmation message.
7. Click **Close** when finished.

Deleting Settlement Services

Use the following procedures to delete a settlement services from the simulator's Configuration component.
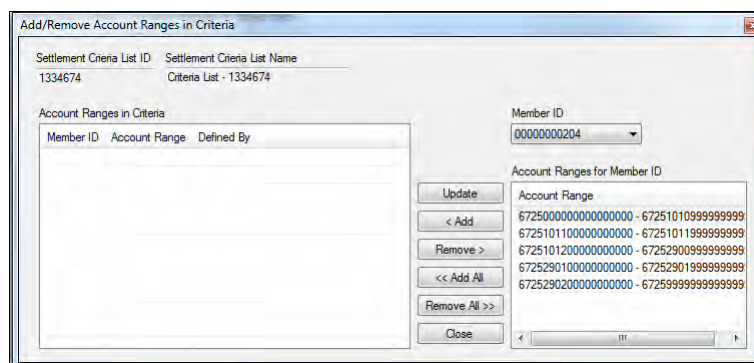
Procedure

1. Open the Configuration component.
2. From the Setup menu, click **Settlement Services**.
3. Click a **SS Level** to highlight the row and then click **Delete**.
4. Answer appropriately to a message confirming the delete action.
5. Click **OK**.
6. Click **Close** when finished.

Member Settlement Services

The Member Settlement Services dialog box links the Member ID, Settlement Service Level/ID, and the Settlement Service Criteria for settlement service processing within the simulator.

Adding a Member Settlement Service

Use the following procedure to add a Member Settlement Service in the simulator's Configuration component.

Procedure

1. Open the Configuration component.
2. From the Configuration menu, click **Member ID/Member ID Settlement Services** to display the Member Settlement Services dialog box.

3. Click **Add** to display the Member Settlement Services – Add dialog box.

4. Click a **Member ID** in the corresponding drop-down.

5. Click a **Settlement Service Level**.

6. Click or enter a **Settlement Service ID**.

7. Enter a **Priority**.

8. Click a **Settlement Currency**.

9. Click the appropriate **Settlement Criteria**.

10. Enter the **Transfer Agent Information**.

11. Click **Add**.

12. Click **OK**.

13. Click **Close** when finished.

> **NOTE**
>
> **The Transfer Agent Account column is intentionally blank due to the privacy of this information. Customers complete this column for their Member ID(s).**

Updating a Member Settlement Service

Use the following procedure to update a Member Settlement Service in the simulator's Configuration component.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Member ID/Member ID Settlement Services** to display the Member ID Settlement Services dialog box.

3. Click a row to highlight.

4. Click **Update**.

5. Modify the appropriate fields as needed.

6. Click **Update**.

7. Click **OK**.

Deleting a Member Settlement Service

Use the following procedure to delete a Member Settlement Service from the simulator.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Member ID/Member ID Settlement Services** to display the Member ID Settlement Services dialog box.

3. Click a row to highlight.

4. Click **Delete**.

5. Answer appropriately to a message confirming the delete action.

6. Click **OK**.

Product Graduation Parameters

The Product Graduation Parameters dialog box allows customers to view the simulator Product Graduation Parameters table that corresponds with the MPE Table IP0018T1—MasterCard Product Graduation Parameters. The Product Graduation Parameters table is populated by the MPE and contains valid account categories/licensed Product/IRD combinations. This data is informational only. Data in this dialog box cannot be added, modified, or deleted.

Viewing Product Graduation Information

Use the following procedure to view the Product Graduation Parameters table in the simulator's Configuration component.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Product Graduation Parameters** to display the Product Graduation Parameters dialog box.

3. Click **Close** when finished viewing the Product Graduation information.

NOTE

The drop-down lists at the top of the dialog box can be used to filter the table based on the Account Category Code and the Product Code for easier viewing.

Account Level Management Participation and Enhanced Value Parameters

The ALM Participation and Enhanced Value Parameters dialog box allows customers to view the simulator Account Level Management (ALM) Participation and Enhanced Value Parameters table that corresponds with the MPR Table IP0019T1—Enhanced Value Platform Parameters. The ALM Participation and Enhanced Value Parameters table is populated by the MPE and identifies information related to the Account Level Management, Business as Usual, and Enhanced Value Platform account categories. This data is information only. Data in this dialog box cannot be added, modified, or deleted.

Viewing Account Level Management Participation and Enhanced Value Platform Information

Use the following procedure to view the ALM Participation and Enhanced Value Parameters table in the simulator.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **ALM Participation and Enhanced Value Parameters** to display the ALM Participation and Enhanced Value Parameters dialog box.

3. Click **Close** when finished viewing the ALM Participation and Enhanced Value Platform information.

    NOTE

    The drop-down lists at the top of the dialog box can be used to filter the table based on the Acceptance Brand, BSA Type, BSA ID, and the IRD for easier viewing.

QPS and *PayPass* Chargeback Protection Amount

The QPS and *PayPass* Chargeback Protection Amount dialog box allows customers to view the simulator QPS and *PayPass* Chargeback Protection Amounts table that corresponds with the MPR Table IP0058T1—QPS and *PayPass* Chargeback Protection Amounts. The QPS and *PayPass* Chargeback Protection Amounts table is populated to chargeback Protection Amounts for QPS and *PayPass* transactions. This data is informational only and cannot be added, modified, or deleted.

Viewing QPS and *PayPass* Chargeback Protection Amounts

Use the following procedure to view the QPS and *PayPass* Chargeback Protection Amounts table in the simulator's Configuration component.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **QPS and *PayPass* Chargeback Protection Amounts** to display the QPS and *PayPass* Chargeback Protection Amount dialog box.
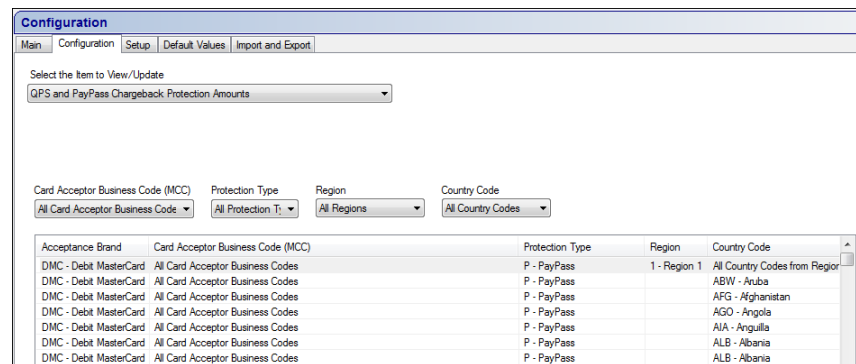
3. Click **Close** when finished viewing the Chargeback Protection Amount information.

NOTE

The drop-down lists at the top of the dialog box can be used to filter the table based on the Card Acceptor Business Code, Protection Type, Region, and Country Code for easier viewing.

Modify the Default Value of a Data Element

Customers can create messages containing default values from within the TDG component at any time. Additionally, the system uses the default values to populate the data elements of messages in test files before entering any user-defined values. An internal MasterCard Clearing Presentment Simulator control file provides the unalterable default data element values. However, the **Default Values – Global and Default Values - MTI/Function Code** options in the Configuration component allow users to specify a default value for a particular data element.

Any changes to default values are stored in the configuration. The default values specified in the configuration are used to overlay those values specified by the MasterCard Clearing Presentment Simulator internal control file.

Customers may find that it is beneficial to set their own default value for data elements such as the Transaction Amount, (DE 4) or any other data element value that may be used to create an expected default message in their own unique test environments.

NOTE

When entering a default value for a data element that requires a length indicator, customers must enter only the data value for the data element. It is not necessary to include the LLVAR or LLLVAR length indicator. The simulator automatically calculates the length indicator when creating the message.

Modifying the Global Default Value of a Data Element

The Default Values—Global option allows customers to make global changes for the default values of data elements. The customer enters a user-defined value for the selected data element that overlays the System-defined default value for use within the simulator. Use the following procedure to change the default values.

Procedure

1. From the Default Values menu, click **Default Values - Global** to display the Default Values dialog box.
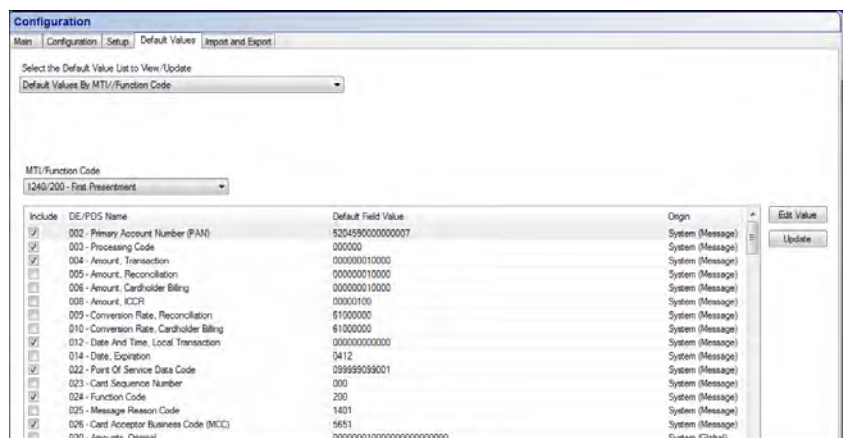
2. Click anywhere in a data element row to highlight the entire row.

3. Click **Edit Value** to display the Edit Value dialog box.
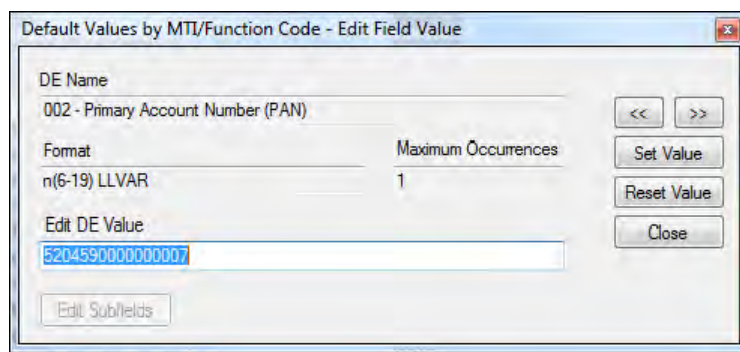
4. Enter a value and then click **Set Value**.

   NOTE

   To return to the system-defined default value, within the Default Values - Edit Field Value dialog box, click Reset Value and Close.

Defining the Include Conditional/Optional Field(s)

In the Default Values dialog box, customers may set the "default addition" of selected data elements and private data subelements in the creation process of new transactions of only those message types for which the data elements are valid, as defined for originator or system requirements. Use the following procedure to set the default conditional/optional fields.

Procedure

1. From the Default Values menu, click **Default Values - Global** to display the Default Values dialog box.

2. In the Include Conditional/Optional Field, click the corresponding check box to select/deselect a data element.

3. Modify the default value as needed.

4. Click **Close** when finished.

   Once this option is set, the selected DE/PDS and their values are included in any newly created messages for which the data elements are valid, until the selections are modified within the Default Values table. This option does not affect any existing messages within a test file.

   Customers may add conditional and optional fields to the individual message itself, if the fields are relative to only the individual message. To add the conditional and optional fields in the individual message, while in the Data Detail view, select the **Add Field** option from the Record menu.

Modifying the Global Default Value of a Data Element by MTI/FC

The Default Values—MTI/Function Code option allows customers to make global changes for the default values of data elements by message type. The customer enters a user-defined value for the selected data element that overlays the System-defined default value for use within the simulator.

Within the Default Values by MTI/Function Code dialog box, using the **View Field Types** option, customers may refine the display of data elements by selecting any combination of the following:

• Mandatory

• Conditional

• Optional

• Invalid

NOTE

The View Field Types option controls the display of the selected DE/PDS types from the Originator perspective within the Default Values by MTI/Function Code window and does not affect the data content in the messages of the opened file.

Use the following procedure to change the default values by message type or function code.

Procedure

1. Open the Configuration component.

2. From the Default Values menu, click **Default Values - MTI/Function Code** to display the Default Values by MTI/Function Code window.

3. Click a message type from the MTI/Function Code drop-down list.

4. Click anywhere in a data element row to highlight the entire row.

5. Click **Edit Value** to display the Edit Value dialog box.

6. Enter a value and then click **Set Value**.

7. Click **OK**.

   NOTE

   To return to the system-defined default value, click Reset Value and Close within the Default Values by MTI/Function Code - Edit Field Value dialog box.

8. If editing multiple data elements, click the arrows to scroll to another data element in the Default Values dialog box and repeat steps 5 and 6. The data element value displayed in the Default Values by MTI/Function Code - Edit Field Value dialog box corresponds to the list displayed in the Default Values by MTI/Function Code window.

9. Click **Close** when finished modifying the data element values to return to the Default Values dialog box.

10. Click **Close**.

Defining the Include Conditional/Optional Field(s) by MTI/FC

Within the Default Values by MTI/Function Code dialog box customers may set the "default addition" of selected data elements and private data subelements, for the specified message type, to the creation process in the simulator of new transactions. Use the following procedure to set the default conditional/optional fields by message type or function code.

Procedure

1. Open the Configuration component.

2. From the Default Values menu, click **Default Values by MTI/Function Code** to display the Default Values by MTI/Function Code window.

3. In the MTI/Function Code field, click a message type in the drop-down list.

4. In the Include field, click the corresponding check box(s) to select/deselect a data element(s).

5. Modify the default value as needed.

6. Click **Close** when finished.

> **NOTE**
>
> **All Mandatory fields are checked, and may not be deselected.**

Once this option is set, the selected DE/PDS and their values are included in any newly created messages of the specified message type, until the selections are modified within the Default Values by MTI/Function Code table. This option does not affect any existing messages within a test file.

Customers may add conditional and optional fields to the individual message itself, if the fields are relative to only the individual message. To add the conditional and optional fields in the individual message, while in the Data Detail view, click the **Add Field** option from the Record menu.

Example

A customer testing Financial Detail Addendum (Passenger Transport Detail—General Ticket Information) may include the conditional field, PDS0505 (Passenger Name) in the creation of any new Financial Detail Addendum messages by clicking the corresponding check box in the Default Values window. Here, the customer can specify the PDS to be included as well as the value to be used.

DE 55 Parsed View

Customers may view DE 55—Integrated Circuit Card (ICC) System-Related Data parsed when modifying the default value through either the Default Values – Global or Default Values – MTI/Function Code option. The parsed view allows customers to view each Tag in DE 55 and their associated Length and Value.

Viewing DE 55 Parsed in Default Values Global

Use the following procedure to view DE 55 parsed in the Default Values – Global dialog box within the Configuration component.

Procedure

1. Within the Configuration component, click **Default Values/Default Values –
   Global**.

2. In the Default Values dialog box, double-click **DE 55** to display the Default
   Values - Edit Field Values dialog box.

3. Click **Close** when finished viewing.

Viewing DE 55 Parsed in Default Values – MTI/Function Code

Use the following procedure to view DE 55 parsed in the Default Values –
MTI/Function Code dialog box.

Procedure

1. Within the Configuration component, click **Default Values/Default Values –
   MTI/Function Code**.

2. Click an **MTI/Function Code** from the drop-down list.

3. Double-click the **DE 55** row.

4. Click **Parse DE 55**. The Default Value By MTI/Function Code – Edit Field
   Value dialog box appears.
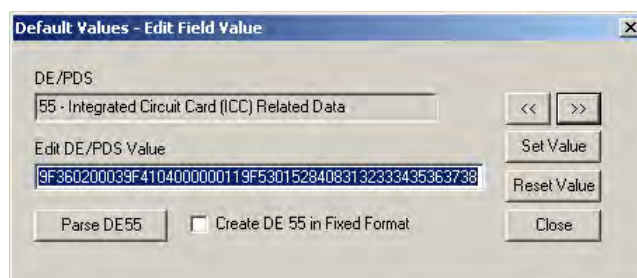
5. Click **Close** when finished viewing.
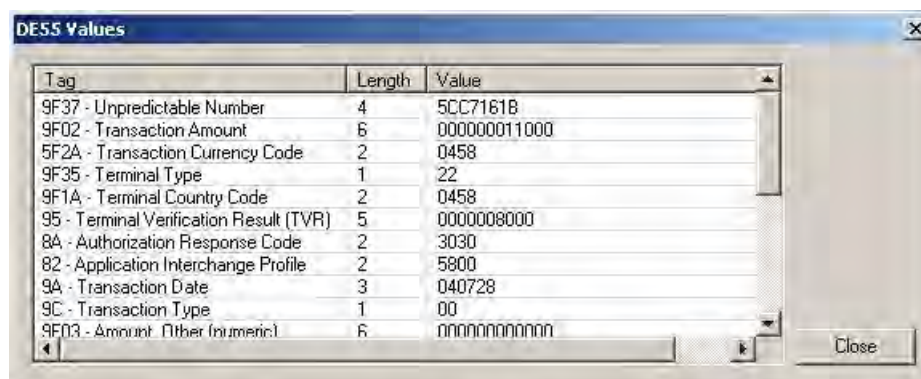
Data Elements Needing Customer-defined Values

The table below identifies data elements and private data subelements (PDSs) that need customer-defined default values for MasterCard Clearing Presentment Simulator testing. The suggested data elements are not meant to be all-inclusive but are to be used as a suggested base for data elements and private data subelements that need customer-defined default values.

The TDG component references the customer-defined default values when pre-populating test messages within a test file.

Customers define these data element default values using the steps outlined in Modifying the Global Default Value of a Data Element or Modifying the Global Default Value of a Data Element by MTI/Function Code.

Data Element/PDS	Data Element/PDS Definition	Subfield	Subfield Definition
DE 3	Processing Code		
DE 4	Amount, Transaction		
DE 25	Message Reason Code/MTI		
DE 31	Acquirer Reference Data	2	Acquirer's BIN
DE 33	Forwarding Institution ID Code		

Data Element/PDS	Data Element/PDS Definition	Subfield	Subfield Definition
DE 49	Currency Code, Transaction[1]		
DE 94	Transaction Originator Institution ID Code		
PDS 0148	Currency Exponents		
PDS 0165	Settlement Indicator		

Life Cycle Algorithms

Customers can configure the MasterCard Clearing Presentment Simulator to automatically create next step life cycle messages from files processed in the CEE. The Life Cycle Algorithm will allow the user to specify the conditions in which a "next step" life cycle message will be created and to identify what data that next step life cycle message should contain.

When set, the algorithm options determine, based on unique combinations of the Message Type, Function Code, Message Reason Code (MRC), occurrence position, and count, if a particular message(s) in the active file matches the arguments established in the algorithm. When finding a matched condition, the automated life cycle generation routine uses the matched message(s) as a base to create a new message(s) in a separate life cycle file. The unique information in the matched message(s) and the additional message information specified in the algorithm for the Message Type, Function Code, and Message Reason Code are used in creating each new life cycle message.

In the MasterCard Clearing Presentment Simulator configuration, the customer defines different Life Cycle Algorithms. Upon definition of the Life Cycle Algorithms, customers may select a specific algorithm Life Cycle List in the Configuration window, to be used in CEE processing.

The simulator uses two layers to define Life Cycle Algorithms:

- **Life Cycle Algorithm List**—List name that contains one or more Life Cycle record (algorithm).
- **Life Cycle Record**—Record that contains the Life Cycle algorithm based on the Incoming MTI/Function Code, MRC, Occurrence, Limit, and the Outgoing MTI/Function Code and MRCs.

Adding a Life Cycle Algorithm List

Use the following procedure to add a Life Cycle Algorithm List.

---

1. The value for DE 49 should equal the value set in PDS 0148.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Life Cycle Algorithms**.

3. Click **Add List**.

4. Enter a list name and then click **OK**.

Renaming a Life Cycle Algorithm List

Use the following procedure to rename a Life Cycle Algorithm List.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Life Cycle Algorithms**.

3. Click a Life Cycle Algorithm in the drop-down list.

4. Click **Rename List**.

5. Enter a new name and then click **Rename**.

6. Click **Close**.

Deleting a Life Cycle Algorithm List

Use the following procedure to delete a Life Cycle Algorithm List.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Life Cycle Algorithms**.

3. Click a Life Cycle List Name in the drop-down list.

4. Click **Delete List** and answer appropriately to a warning notification asking for a confirmation before deleting the Life Cycle List.

5. Click **Close**.

Adding Life Cycle Records to a Life Cycle Algorithm List
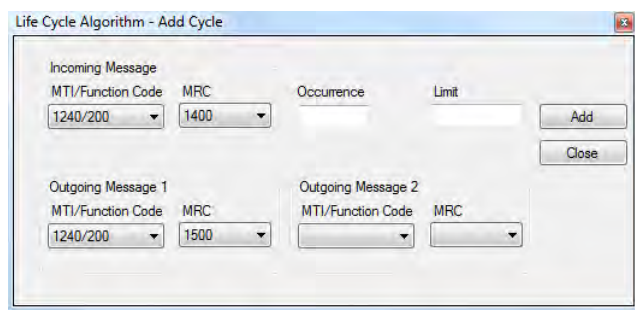
Use the following procedure to add a Life Cycle record to a Life Cycle Algorithm List.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Life Cycle Algorithms**.

3. Click a Life Cycle Algorithm List Name in the drop-down list.

4. Click **Add Cycle** to display the Life Cycle Algorithms - Add Cycle dialog box.

5. Click an **Incoming Message MTI/Function Code** in the corresponding drop-down list.

    The messages selected should be based on the messages present in the test file. If the message types in the algorithm are not found in the test file, a Life Cycle file will not be created by the CEE.

6. Enter an **Incoming Message MRC** in the corresponding field. See **Life Cycle Algorithm Wildcard Match for DE 25** for using a "wildcard" in this field.

7. Enter the **Occurrence and Limit** numbers in the corresponding fields.

    NOTE

    The "Occurrence" indicates the number of matching occurrences of the specified MTI/Function and MRC within the test file that are found before an outgoing message is created for the Life Cycle file. For example, if the Occurrence is set to three, every third matching occurrence of the MTI/Function and MRC results in the creation of an outgoing Life Cycle message. The "Limit" sets the limit of outgoing messages created. For example, if the Limit is set to 10 and the Occurrence is set to three, then for every third occurrence match the simulator creates an outgoing message up to the limit of 10 times.

8. Click an **Outgoing MTI/Function Code** in the corresponding drop-down list.

9. Click an **Outgoing MRC** in the corresponding drop-down list.

    NOTE

    The message types available in the "Outgoing MTI/Function Code" drop-down list depend on the incoming message type selected because only valid incoming/outgoing pairs can be selected. The "Outgoing MRC" list displays only valid reason codes for the selected Outgoing MTI/Function Code.

10. Click an **Outgoing MTI/Function Code** in the corresponding drop-down list.

11. Click an **Outgoing MRC** in the corresponding drop-down list.

    NOTE

    The second "Outgoing MTI/Function Code and MRC" accommodates the progressive handling fees for authorization related chargebacks.

12. Click **Add**.

13. Repeat steps 4 through 12 if entering multiple records.

14. Click **Close**.

Modifying Life Cycle Records

Use the following procedure to modify a Life Cycle record.

Procedure

1. Open the Configuration component,

2. From the Configuration menu, click **Life Cycle Algorithms**.

3. Click a Life Cycle List Name in the drop-down list.

4. Click a record to be modified.

5. Click **Update Cycle** to display the Life Cycle Algorithms – Update Cycle dialog box.

6. Click an **Incoming MTI/Function Code** in the corresponding drop-down list.

7. Enter an **Incoming MRC** in the corresponding field. See Life Cycle Algorithm Wildcard Match for DE 25 for using a "wildcard" in this field.

8. Enter the **Occurrence and Limit** numbers in the corresponding fields.

9. Click a **Message 1 Outgoing MTI/Function Code** in the corresponding drop-down list.

10. Click an **Outgoing MRC** in the corresponding drop-down list.

11. Click a **Message 2 Outgoing MTI/Function Code** in the corresponding drop-down list.

12. Click an **Outgoing MRC** in the corresponding drop-down list.

13. Click **Update**.

14. Repeat steps 3 through 12 if modifying multiple records.

Deleting Life Cycle Records

Use the following procedure to delete a Life Cycle record from a Life Cycle Algorithm List.

Procedure

1. Open the Configuration component.

2. From the Configuration menu, click **Life Cycle Algorithms**.

3. Click a Life Cycle List Name in the drop-down list.

4. Click the record to be deleted.

5. Click **Delete Cycle** and answer appropriately to a warning notification asking for a confirmation before deleting the Life Cycle record.

6. Click **Close**.

Life Cycle Algorithm Wildcard Match for DE 25

The customer can use the "wildcard" asterisk character (*****) to match any value in Reason Code (DE 25), or to match the absence of DE 25.

With the entry of this wildcard character, in the Reason Code In field of the Life Cycle Algorithms – Add Cycle and Life Cycle Algorithms – Update Cycle dialog boxes, the CEE will match every inbound message for the indicated Message Type Indicator/Function Code combination.

Simulator Procedures for Life Cycle Generation

When configured for Life Cycle testing, the CEE generates life cycle records only for messages processed for acknowledgement. Use the following procedures for Life Cycle generation.

Procedure

1. Open the Configuration component and create a Life Cycle Algorithm list and records.

2. Click a configuration name using the drop-down list.

3. Click **Perform Lifecycle Testing** and then click a Life Cycle Algorithm List name.

4. Set the "Process this Member ID?" to "**Yes**" for the Origination Member ID in the Member ID Detail table and then click **Update**.

   NOTE

   Set the "Process this Member ID?" to "No" for all other Member IDs in the Member ID Detail table.

5. Click **Set Active** to set the configuration as active.

6. Open a test file created through the TDG component or an existing IPM file in the CEE component.

7. Start a test session within the CEE. The CEE generates two output files (for example, TDG1_ACK_1234.ipm and TDG1_LIF_1234.ipm).

   NOTE

   The Life Cycle test file is created in the Originator format for the message types included.

8. Optionally, open the newly created Life Cycle file in the TDG and modify as needed.

9. Process the Life Cycle file through the CEE component.

   The CEE adds reconciliation totals and creates a notification file in a Destination format that can be processed by the customer's system.

Example Acquirer Life Cycle Phase 1

The following example simulates Phase 1 of an Acquirer Life Cycle process in the simulator.

Example—Phase 1
Object—Acquirer Life Cycle Simulation

Step	Action
1.	The acquirer creates a test file on its host system, testfile.ipm, with First Presentment/1240-200 messages.
2.	Set the "Process This Member ID?" to **Yes** for the Origination (Acquirer) Member ID in the Member ID Detail table. **Note: The "Process This Member ID?" is set only once during the life cycle process.**
3.	The customer configures a Life Cycle Algorithm List with Life Cycle records defined to create First Chargebacks/1442-450, First Chargebacks Partial/1442-453, or Retrieval Request/1644-603 messages from the selected incoming 1240-200 messages with any Message Reason Code using the wildcard "*****" value.
4.	In the Configuration window, click **Perform Lifecycle Testing** and click the appropriate Life Cycle Algorithm in the drop-down list. Update and set the Configuration.
5.	The customer processes testfile.ipm through the CEE component.
6.	CEE generates two output files, **testfile_ACK_NNNN.ipm** and **testfile_LIF_NNNN.ipm**. The **testfile_ACK_NNNN.ipm** is a customer inbound acknowledgement file with reconciliation messages. The **testfile_LIF_NNNN.ipm** file contains first chargebacks and retrieval requests from the first presentment. The **testfile_LIF_NNNN.ipm** is a customer outbound file that requires further processing through the CEE to create a customer inbound notification file that contains reconciliation messages.
7.	Optionally, the customer may modify **testfile_LIF_NNNN.ipm** within the TDG component to validate the record types, make additions, modifications, or deletions to the file.
8.	The customer processes **testfile_LIF_NNNN.ipm** through the CEE component. The CEE creates an output file called **testfile_LIF_NNNN_NOT_NNNN.ipm**.
9.	The customer processes **testfile_LIF_NNNN_NOT_NNNN.ipm** through the customer's host system.

Example Acquirer Life Cycle Phase 2

The following example simulates Phase 2 of an Acquirer Life Cycle process in the simulator.

Example—Phase 2 Object—Acquirer Life Cycle Simulation	
Step	**Action**
1.	The acquirer creates a test file on its host system, **testfile2.ipm**, with Second Presentment-Full/1240-205, Second Presentment-Partial/1242-282 from the First Chargebacks, and/or a Fee Collection (Retrieval Fee Billing)/1740-700 messages from the retrieval requests.
2.	The customer configures a Life Cycle Algorithm List with Life Cycle records defined to create Arbitration Chargebacks-Full/1442-451, Arbitration Chargebacks-Partial/1442-454 from Second Presentments, and/or Fee Collection Return/1740-780 messages from the 1740-700 messages with any MRC using the wildcard "*****" value.
3.	In the Configuration window, click Perform Lifecycle Testing and click the appropriate Life Cycle Algorithm in the drop-down list. Update and set the Configuration.
4.	The customer processes **testfile2.ipm** through the CEE component.
5.	CEE generates two output files, **testfile2_ACK_NNNN.ipm**, and **testfile2_LIF_NNNN.ipm**. The **testfile2_ACK_NNNN.ipm** is a customer inbound acknowledgement file with reconciliation messages. The **testfile2_LIF_NNNN.ipm** file contains arbitration chargebacks from the second presentment and fee collection returns from the fee collections. The **testfile2_LIF_NNNN.ipm** is a customer outbound file that requires further processing through the CEE to create a customer inbound notification file that contains reconciliation messages.
6.	Optionally, the customer may modify **testfile2_LIF_NNNN.ipm** within the TDG component to validate the record types, make additions, modifications, or deletions to the file.
7.	The customer processes **testfile2_LIF_NNNN.ipm** through the CEE component. The CEE creates an output file called **testfile2_LIF_NNNN_NOT_NNNN.ipm**.
8.	The customer processes **testfile2_LIF_NNNN_NOT_NNNN.ipm** through the customer's host system.

Example Acquirer Life Cycle Phase 3

The following example simulates Phase 3 of an Acquirer Life Cycle process in the simulator.

Example—Phase 3 Object—Acquirer Life Cycle Simulation	
Step	**Action**
1.	The acquirer creates a test file on its host system, **testfile3.ipm**, with Fee Collection/1740-700 messages.
2.	The customer configures a Life Cycle Algorithm List with Life Cycle records defined to create Fee Collection Return/1740-780 messages from the 1740-700 messages with any MRC using the wildcard "*****" value.
3.	In the Configuration window, click Perform Lifecycle Testing and click the appropriate Life Cycle Algorithm in the drop-down list. Update and set the Configuration.
4.	The customer processes testfile3.ipm through the CEE component.

Example—Phase 3
Object—Acquirer Life Cycle Simulation

Step	Action
5.	CEE generates two output files, **testfile3_ACK_NNNN.ipm**, and **testfile3_LIF_NNNN.ipm**. The **testfile3_ACK_NNNN.ipm** is a customer inbound acknowledgement file with reconciliation messages. The **testfile3_LIF_NNNN.ipm** file contains Fee Collection Returns from the Fee Collections. The **testfile3_LIF_NNNN.ipm** is a customer outbound file that requires further processing through the CEE to create a customer inbound notification file that contains reconciliation messages.
6.	Optionally, the customer may modify **testfile3_LIF_NNNN.ipm** within the TDG component to validate the record types, make additions, modifications, or deletions to the file.
7.	The customer processes **testfile3_LIF_NNNN.ipm** through the CEE component. The CEE creates an output file called **testfile3_LIF_NNNN_NOT_NNNN.ipm**.
8.	The customer processes **testfile3_LIF_NNNN_NOT_NNNN.ipm** through the customer's host system creating a customer test file "testfile4.ipm" containing Fee Collection Resubmission 1740/781.
9.	The customer configures a Life Cycle Algorithm List with Life Cycle records defined to create Fee Collection Arbitration Return/1740-782 messages from the 1740-781 messages with any MRC using the wildcard "*****" value.
10.	In the Configuration window, click Perform Lifecycle Testing and click the appropriate Life Cycle Algorithm in the drop-down list. Update and set the Configuration.
11.	The customer processes **testfile4.ipm** through the CEE component.
12.	CEE generates two output files, **testfile4_ACK_NNNN.ipm**, and **testfile4_LIF_NNNN.ipm**. The testfile4_ACK_NNNN.ipm is a customer inbound acknowledgement file with reconciliation messages. The **testfile4_LIF_NNNN.ipm** file contains Fee Collection Arbitration Returns from the Fee Collection Resubmission. The **testfile4_LIF_NNNN.ipm** is a customer outbound file that requires further processing through the CEE to create a customer inbound notification file that contains reconciliation messages.
13.	Optionally, the customer may modify **testfile4_LIF_NNNN.ipm** within the TDG component to validate the record types, make additions, modifications, or deletions to the file.
14.	The customer processes **testfile4_LIF_NNNN.ipm** through the CEE component. The CEE creates an output file called **testfile4_LIF_NNNN_NOT_NNNN.ipm**.
15.	The customer processes **testfile4_LIF_NNNN_NOT_NNNN.ipm** through the customer's host system.

Phase 3 may be repeated where the Fee Collection/1740-700 messages are initiated by an issuer (an acquirer can build the messages using the TDG component).

Example Issuer Life Cycle Phase 1

The following example simulates Phase 1 of an Issuer Life Cycle process in the simulator.

Example—Phase 1 Object—Issuer Life Cycle Simulation	
Step	**Action**
1.	The issuer creates a new test file or imports a Credit Simulator authorization file using the TDG component, *testfile.ipm*, with a First Presentment/1240-200 message for the issuing BINs. See "Authorization Message Conversion" and "Importing an Auth File" in Chapter 4 for details about importing an authorization file.
2.	Set the "Process This Member ID?" to **Yes** for the Destination (issuer) Member ID in the Member ID Detail table. **Note: The "Process This Member ID?" is set only once during the life cycle process.**
3.	The member processes testfile.ipm through the CEE component. CEE generates one customer inbound file, **testfile_NOT_NNNN.ipm** that contains first presentments and reconciliation messages.
4.	The customer processes **testfile_NOT_NNNN.ipm** through the customer's host system and creates a customer file "**testfile2.ipm**" containing First Chargebacks-Full/1442-450, First Chargebacks-Partial/1442-453, or Retrieval Requests/1644-603.
5.	The customer configures a Life Cycle Algorithm List with Life Cycle records defined to create Second Presentments-Full/1240-205, Second Presentments-Partial/1240-282 messages from the First Chargebacks, and/or Fee Collection (Retrieval Fee Billing)/1740-700 messages from Retrieval Requests with any MRC using the wildcard "*" value.
6.	In the Configuration window, click Perform Lifecycle Testing and click the appropriate Life Cycle Algorithm in the drop-down list. Update and set the Configuration.
7.	The customer processes testfile2.ipm through the CEE component.
8.	CEE generates two output files, **testfile2_ACK_NNNN.ipm** and **testfile2_LIF_NNNN.ipm.** The **testfile2_ACK_NNNN.ipm** is a customer inbound acknowledgement file with reconciliation messages. The **testfile2_LIF_NNNN.ipm** file contains second presentments from the first chargebacks and fee collections from the retrieval requests. The **testfile2_LIF_NNNN.ipm** is a customer outbound file that requires further processing through the CEE to create a customer inbound notification file that contains reconciliation messages.
9.	The customer may optionally modify **testfile2_LIF_NNNN.ipm** within the TDG component to validate the record types, make additions, modifications, or deletions to the file.
10.	The customer processes **testfile2_LIF_NNNN.ipm** through the CEE component. The CEE creates an output file called **testfile2_LIF_NNNN_NOT_NNNN.ipm**.
11.	The customer processes **testfile2_LIF_NNNN_NOT_NNNN.ipm** through the customer's host system.

Example Issuer Life Cycle Phase 2

The following example simulates Phase 2 of an Issuer Life Cycle process in the simulator.

Example—Phase 2
Object—Issuer Life Cycle Simulation

Step	Action
1.	The issuer creates a test file on their host system, **testfile3.ipm**, with Arbitration Chargeback-Full/1442-451, Arbitration Chargeback-Partial/1442-454 from the Second Presentments, and/or Fee Collection Returns/1740-780 messages from the Fee Collection messages.
2.	The customer configures a Life Cycle Algorithm List with Life Cycle records defined to create Fee Collection Resubmission/1740-781 messages for the Fee Collection Return/1740-780 messages with any MRC using the wildcard "*****" value.
3.	In the Configuration window, click **Perform Lifecycle Testing** and then click the appropriate Life Cycle Algorithm in the drop-down list. Update and set the Configuration.
4.	The customer processes testfile3.ipm through the CEE component.
5.	CEE generates two output files, **testfile3_ACK_NNNN.ipm,** and **testfile3_LIF_NNNN.ipm**.The **testfile3_ACK_NNNN.ipm** is a customer inbound acknowledgement file with reconciliation messages. The **testfile3_LIF_NNNN.ipm** file contains Fee Collection Resubmission from the Fee Collection Returns. The **testfile3_LIF_NNNN.ipm** is a customer outbound file that requires further processing through the CEE to create a customer inbound notification file that contains reconciliation messages.
6.	Optionally, the customer may modify **testfile3_LIF_NNNN.ipm** within the TDG component to validate the record types, make additions, modifications, or deletions to the file.
7.	The customer processes **testfile3_LIF_NNNN.ipm** through the CEE component. The CEE creates an output file called **testfile3_LIF_NNNN_NOT_NNNN.ipm**.
8.	The customer processes **testfile3_LIF_NNNN_NOT_NNNN.ipm** through the customer's host system.

Example Issuer Life Cycle Phase 3

The following example simulates Phase 3 of an Issuer Life Cycle process in the simulator.

Example—Phase 3
Object—Issuer Life Cycle Simulation

Step	Action
1.	The issuer creates a test file on its host system, **testfile4.ipm**, with Fee Collection/1740-700.
2.	The customer configures a Life Cycle Algorithm List with Life Cycle records defined to create Fee Collection Return 1740-780 messages for the 1740-700 message with any MRC using the wildcard "*****" value.
3.	In the Configuration window, click Perform Lifecycle Testing and then click the appropriate Life Cycle Algorithm in the drop-down list. Update and set the Configuration.
4.	The customer processes testfile4.ipm through the CEE component.

Example—Phase 3
Object—Issuer Life Cycle Simulation

Step	Action
5.	CEE generates two output files, **testfile4_ACK_NNNN.ipm**, and **testfile4_LIF_NNNN.ipm**. The **testfile4_ACK_NNNN.ipm** is a customer inbound acknowledgement file with reconciliation messages. The **testfile4_LIF_NNNN.ipm** is a customer outbound file that requires further processing through the CEE to create a customer inbound notification file that contains reconciliation messages.
6.	Optionally, the customer may modify **testfile4_LIF_NNNN.ipm** within the TDG component to validate the record types, make additions, modifications, or deletions to the file.
7.	The customer processes **testfile4_LIF_NNNN.ipm** through the CEE component. The CEE creates an output file called **testfile4_LIF_NNNN_NOT_NNNN.ipm**.
8.	The customer processes **testfile4_LIF_NNNN_NOT_NNNN.ipm** through the customer's host system creating a customer test file "**testfile5.ipm**" containing Fee Collection Resubmission 1740/781.
9.	The customer configures a Life Cycle Algorithm List with Life Cycle records defined to create Fee Collection Arbitration Return/1740-782 messages for the 1740-781 messages with any MRC using the wildcard "*****" value.
10.	In the Configuration window, click Perform Lifecycle Testing and then click the appropriate Life Cycle Algorithm in the drop-down list. Update and set the Configuration.
11.	The customer processes testfile4.ipm through the CEE component.
12.	CEE generates two output files, **testfile5_ACK_NNNN.ipm**, and **testfile5_LIF_NNNN.ipm**. The **testfile5_ACK_NNNN.ipm** is a customer inbound acknowledgement file with reconciliation messages. The **testfile5_LIF_NNNN.ipm** contains Fee Collection Arbitration Returns from the Fee Collection Resubmission. The **testfile5_LIF_NNNN.ipm** is a customer outbound file that requires further processing through the CEE to create a customer inbound notification file that contains reconciliation messages.
13.	Optionally, the customer may modify **testfile5_LIF_NNNN.ipm** within the TDG component to validate the record types, make additions, modifications, or deletions to the file.
14.	The customer processes **testfile5_LIF_NNNN.ipm** through the CEE component. The CEE creates an output file called **testfile5_LIF_NNNN_NOT_NNNN.ipm**.
15.	The customer processes **testfile5_LIF_NNNN_NOT_NNNN.ipm** through the customer's host system.

Phase 3 may be repeated when an acquirer initiates the Fee Collection/1740-700 messages. (The issuer can build the messages using the TDG component.)

Advanced Configuration

Once customers have correctly configured and tested the MasterCard Clearing Presentment Simulator with the provided configuration parameters and customization, they may use the following Advanced Configuration options to specify other parameters to achieve their testing goals.

- Customize the Merchant Table
- Define Currency Rates
- Define Business Service Arrangements
- Import an Member Parameter Extract File
- Import an Exchange Rate File
- Define an Acquirer BIN
- Define Acquirer BIN Participation
- Define an Issuer Account Range
- Define Issuer Account Range Participation
- Define Account Range Restrictions
- Define Account Range Cryptogram Data
- Define CAB Program Restrictions
- Define Currency Code Restrictions
- Define Fee Groups
- Define Fee Override
- Define Fee Structure
- Define Geographic Restrictions
- Define Message Reason Code Restrictions
- Define Processing Code Restrictions
- Define Product Code Restrictions
- Define Interchange Amount Restrictions
- Define Country Codes
- Modify MasterCard Assigned IDs
- Modify Fraud Notification Response Table

Customize the Merchant Table

Within the simulator, MasterCard provides customers with a default Merchant Table. Customers may modify the existing Merchant Table data or add new merchant data that can be used to auto populate merchant fields when creating messages in a new test file or to update merchant information in an existing test file. By using this table, customers can modify certain essential data elements in the messages with greater speed and accuracy.

The **Merchant Table** contains the following categories:

- Card Acceptor Business Code (MCC)
- Card Acceptor Name/Location (DE 43)
- Card Acceptor ID Code (DE 42)
- Card Acceptor Terminal ID (DE 41)
- Transaction Currency Code (DE 49)
- Point of Service Data Code (DE 22)
- Terminal Type (PDS 0023)
- Phone Number (PDS 0170 S2)
- Merchant Cleansing Service Exclusion

When creating new messages, the TDG references the Merchant Table information before referencing the Default Values Table(s) for merchant information. Values in the Merchant Table override the corresponding system-defined or user-defined default values.

Example:

Default Values Table	Merchant Table
DE 49 = 840	MCC = 3433
	DE 43 = Merchant 1…
	DE 49 = 036

IF…	THEN…
A new message is created using a MCC 3433 and DE 43 "Merchant 1…" combination.	The TDG populates DE 49 with the corresponding Merchant Table value 036.
A message is created using a merchant that is not in the Merchant Table.	DE 49 would be populated with the value 840 from the Default Values Table.

Adding a Record to the Merchant Table

Use the following procedure to add a record to the Merchant Table.

Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Merchant Table** to display the Merchant Table dialog box.

3. Click **Add** to display the Merchant Table Add dialog box.

4. Click a Transaction Category in the corresponding drop-down list. This selection displays only valid values in the MCC list for the Transaction Category selected.

5. Click a MCC in the corresponding drop-down list.

6. Enter information into the following categories:

   • Card Acceptor Name/Location (DE 43) **These fields are required.**

   • Card Acceptor ID Code

   • Card Acceptor Terminal ID

   • Transaction Currency Code

   • Terminal Type

   • Phone Number

   • Point of Service Data Code

7. Click **Add**.

8. Click **OK**.

9. Click **Close** when finished.

Modifying a Record in the Merchant Table

Use the following procedure to modify a record in the Merchant Table.

Procedure

1. Open the Configuration component.
2. From the Setup menu, click **Merchant Table** to display the Merchant Table window.
3. Click anywhere within a row to select the record to be modified.
4. Click **Update** to display the Merchant Table – Update dialog box.

5. Enter updated data in any of the available fields.
6. Click **Update**.
7. Click **OK** to return to the Merchant Table.
8. Click **Close** when finished.

Deleting a Record in the Merchant Table

Use the following procedure to delete a record in the Merchant Table.

Procedure

1. Open the Configuration component.
2. From the Setup menu, click **Merchant Table** to display the Merchant Table dialog box.
3. Click anywhere within the row to select the record to be deleted.

4. Click **Delete**. Answer appropriately to a warning notification asking for a confirmation before deleting the record.

5. Click **Close** when finished.

Updating the Merchant Table via IPM File Merchant Information

Customers may update the Merchant Table using the merchant information contained in an existing IPM test file. Customers open an existing IPM formatted file in the TDG component. Using the Merchant File Information option, any, or all of the merchant information contained in the file may be added to the Merchant Table.

The Merchant Table allows for unique combinations of MCC and DE 43 as shown below.

MCC	DE 43	DE 49
3010	Merchant 1…	840
3010	Merchant 2…	840

If a customer updates the Merchant Table using the "Add and Update All Merchants in Table", in the File Merchant Information dialog box, any of the IPM file's merchant information, not already contained in the table, will be added and any matching merchant combinations will be updated.

For example, the Merchant File Information of the IPM file contains the following:

MCC	DE 43	DE 49
3010	Merchant 2…	036
3010	Merchant 3…	840

If a customer selects "Add and Update All Merchants in Table," a new record would be added and an existing record updated in the Merchant Table as follows:

MCC	DE 43	DE 49
3010	Merchant 1…	840
3010	Merchant 2…	036
3010	Merchant 3…	840

Use the following procedure to update the Merchant Table via the Merchant Information.

Procedure

1. Open the TDG component.

2. In the TDG component, open an IPM file.

3. From the Record menu, click **Merchant/File Information** to display the File Merchant Information dialog box.
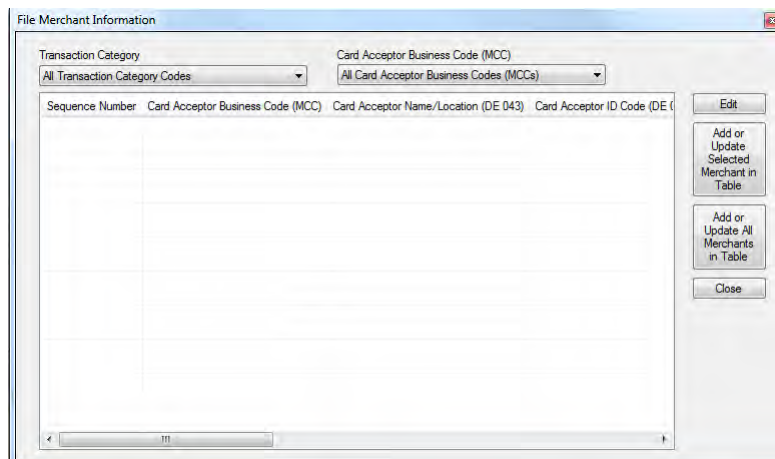
4. If needed, select filters from the Transaction Categories and Card Acceptor Business Code drop-down lists.

5. Choose one of the following options:

   • Click **Add or Update Selected Merchant in Table** to add/update a selected merchant.

   • Click **Add and Update All Merchants in Table** to add and update all the information in the File Merchant Information to the Merchant Table. A progress indicator display shows the number of records added and updated within the Merchant Table.

6. Click **OK**.

7. Click **Close**.

Define Currency Rates

The MCPS Currency Conversion table corresponds to the currency data contained in the GCMS Currency Rates table and does not need to be manually updated unless the customer needs to change a currency rate. With each new release of the simulator, the MCPS Currency Conversion table will be updated with the current GCMS Currency Rates table.

The Currency Conversion option allows the user to establish single-directional, currency conversion rates for use by the CEE in processing. MasterCard currently uses two types of currency conversion rates relative to the global base currency used in the system. The single-directional rates are referred to as the "buy rate" and the "sell rate" and are applied respectively for acquirers and issuers.

The simulator supports the processing of transactions with differing buy and sell rates through the Currency Conversion table, which allows the user to specify the "From Currency," the "To Currency'" and the "Conversion Rate" to be applied for each conversion.

Modifying Currency Records

Use the following procedure to modify Currency records.

Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Currency Conversion** to display the Currency Conversion dialog box.

3. Click the record to be modified and then click **Update**.

4. Enter the new conversion rate and then click **Update**.

5. Click **OK**.

Business Service Arrangements (BSA)

Business service functionality allows a group of customers to customize interchange processing rules, options, and fee structures for transactions that involve a given acceptance brand based on the following.

- Acquirer's BIN

- Issuer's Account Range

- Interchange program rules that the particular business service agreement and interchange program define, such as:

  – Specific Acceptance Brand(s)

  – Specific Product Codes

  – Card Acceptor Business Code (Merchant Category Code [MCC]) requirements

  – Processing code requirements

  – Fees

  – Message Reason Code

Adding a Business Service Arrangement

Use the following procedure to add a Business Service Arrangement in the simulator.

Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Business Service Arrangements** to display the Business Service Arrangements dialog box.
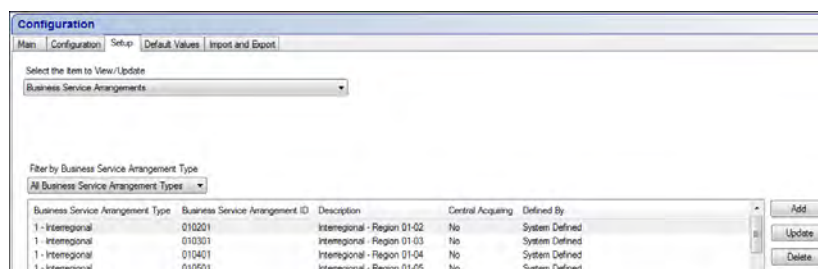
3. Click a **BSA Type** in the Filter by BSA Type drop-down list.

4. Click **Add** to display the Business Service Arrangements (BSA) – Add dialog box.
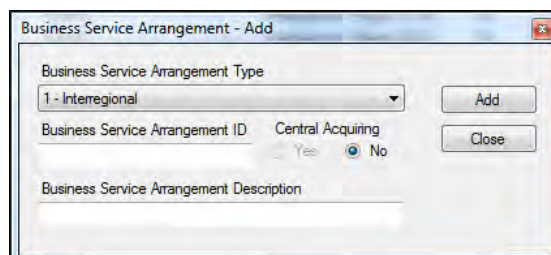
5. Click a BSA Type in the corresponding drop-down list.

6. Enter a **BSA ID** and **Description** in their respective fields.

7. Click **Add**.

8. Click **OK**.

9. If entering multiple BSA records, repeat steps 5 through 7 as necessary.

10. Click **Close** when finished.

   The newly entered BSA records are appended to the BSA table.

   NOTE

   If creating a new Business Service Arrangement, it will be necessary to setup the parameters that restrict and define the BSA.

Updating a Business Service Arrangement Description

Use the following procedure to update a Business Service Arrangement description.

Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Business Service Arrangements** to display the Business Service Arrangements dialog box.

3. Click a **BSA Type** in the Filter by BSA Type drop-down list.

4. Click a **BSA Type** in the display grid to highlight the entire row.

5. Click **Update**.

6. Enter a **BSA Description** and click **Update**.

7. Click **OK**.

Deleting a Business Service Arrangement

Use the following procedure to delete a Business Service Arrangement from within the simulator.

Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Business Service Arrangements** to display the Business Service Arrangements dialog box.

3. Click a **BSA Type** in the Filter by BSA Type drop-down list.

4. Click a **BSA Type** in the display grid to highlight the entire row.

5. Click **Delete**.

6. Answer appropriately to a confirmation message validating the delete.

7. Click **OK**.

   NOTE

   Customers are not able to delete system-defined (MPE) Business Service Arrangements.

Import an MPE File

Within the MasterCard Clearing Presentment Simulator are data tables that correspond to certain IPM Member Parameter Extract (MPE) data tables. Customers have the option to use the MPE as a data import source allowing synchronization of certain data in the simulator to that of the MPE. Customers may import either a full or a partial MPE file to the simulator.

NOTE

Customers that receive MPE files must copy those files to the simulator's PC before beginning the simulator's Import MPE option.

If the MPE file is in the U1014 format then perform a "Binary" transfer to the simulator's PC. If the MPE file in VBS format, then perform the transfer with "EBCDIC to ACSII" conversion and the CRLF (carriage return, line feed) option set to "On."

The import procedure stores the MPE table data in an interim table until the customer loads it to the corresponding simulator tables through the Load Tables option.

The following table indicates the MPE tables and the corresponding simulator table names that the simulator references during the MPE Import option.

MPE Table ID	Corresponding Simulator Table Name
IP0018T1—MasterCard Product Graduation	Product Graduation Parameters
IP0019T1—Enhanced Value Platform Parameters	ALM Participation and Enhanced Value Platform Parameters
IP0028T1—Country Codes	Country Codes
IP0037T1—Selection Criteria Data	Settlement Criteria Lists
IP0039T1—Selection Criteria Account Range	Settlement Criteria Lists
IP0040T1—Account Range Table	Issuer Account Range
IP0041T1—BIN Table	Acquirer BIN
IP0048T1—Settlement Service	Member ID Settlement Services
IP0050T1—Settlement Service Selection Criteria	Member ID Settlement Services
IP0052T1—Interchange Fee Group Table	Fee Group
IP0053T1—Interchange Fee Type Table	Fee Structure
IP0056T1—Member Business Service Agreements	Member Participation
IP0057T1—Interchange Override Fee Group Table	Fee Overrides
IP0058T1—QPS and *PayPass* Chargeback Protection Amount	QPS And *PayPass* Chargeback Protection Amount
IP0072T1—Expanded Member ID Master Table	Member ID Detail

MPE Table ID	Corresponding Simulator Table Name
IP0076T1—MasterCard Assigned IDs	MasterCard Assigned IDs
IP0090T1—Issuer Account Range Acceptance Brand and Business Service Arrangement Participation	Issuer Account Range Participation
IP0091T1—Acquiring BIN Acceptance Brand and Business Service Arrangement Participation	Acquirer BIN Participation
IP0093T1—Intracountry Business Service Override	Account Range Restrictions
IP0094T1—Geographic Restrictions	Geographic Restrictions
IP0095T1—Card Acceptor Business Program Restrictions	CAB Program Restrictions
IP0096T1—Acceptance Brand/Product Restrictions	Product Code Restrictions
IP0097T1—Message Reason Code Restrictions for Acceptance Brand/Business Service Arrangement	Message Reason Code Restrictions
IP0098T1—Processing Code Restrictions for Acceptance Brand/Business Service Arrangement	Processing Code Restrictions
IP0099T1—Transaction Currency Qualification	Currency Restrictions

Importing a Full MPE File

Use the following procedure to import a full MPE file to the simulator.

Procedure

1. Open the Configuration component.

2. From the File menu, click **Import MPE**/**Full MPE**.

3. Click **Browse** and navigate to the location of a downloaded full MPE file in the Import Replacement MPE dialog box.

4. Click **Import**.

5. Click **OK** in the confirmation message that indicates a successful import.

NOTE

For detailed information regarding the import, customers may reference the import log indicated in the confirmation message.

6. Click **OK** and the Load function will automatically start. The path to the log file of the completed MPE import will automatically be displayed in the location path.

NOTE

If the user cancels and restarts the Load process, the path will be cleared and the user will have to navigate to the appropriate log file to load it manually.

7. In the Load MPE Parameters dialog box, click one of the following in the Load MPE Parameters dialog box:

   • **Preserve All User Defined Entries** (default)

   Retains all user-defined values in the simulator regardless of any MPE table duplicates

   • **Overwrite User Defined Entries**

   Overwrites duplicate user-defined values in the simulator with the MPE values

   • **Delete All User Defined Entries**

   Deletes all user-defined values in all the tables that correspond with the MPE tables

8. Select an **As Of Date** from the drop-down list.

NOTE

Selecting the "As of Date" will determine which items to activate within the simulator, based on the date supplied.

For example, if a new IRD is being added to a specific Business Service as of a future date and the user would like to test with that new IRD and Business Service. Providing that the MPE being loaded has the data, the As of Date can be modified to a future date so that all data within the MPE (as of the date selected), will be loaded and available within the simulator.

It is often a best practice to select a date a several weeks or months ahead of the current date to pull in items that may be needed for future testing.

9. Click **OK** to continue.

10. Click **OK** to confirm the settings selected. The Load Status will be updated on the screen as the loading of the MPE continues. When completed a confirmation dialog box appears with the name and location of the log file for the load.

11. Click **OK**. Any errors can be viewed within the log.

12. Click **OK** in a Notice dialog box prompting the user to close and restart the simulator to refresh the data with the newly loaded MPE. The Load window and Confirmation dialog box will both close.

Importing an Update MPE File

Use the following procedure to import an Update MPE file into the simulator.

Procedure

1. Open the Configuration component.

2. From the File menu, click **Import MPE**/**Update MPE**.

3. Click an update MPE file in the Open dialog box.

4. Click **Open**. A progress indicator displays. This process takes several minutes.

5. Click **OK** in the confirmation message that indicates a successful import.

6. Continue with **Loading MPE Tables**.

Loading MPE Tables

Use the following procedure to load MPE tables in the simulator.

Procedure

1. Open the Configuration component.

2. From the File menu, click **Load Tables**.

3. Click one of the following in the Load MPE Parameters dialog box:

   • **Preserve All User Defined Entries** (default)

   Retains all user-defined values in the simulator regardless of any MPE table duplicates

   • **Overwrite User Defined Entries**

   Overwrites duplicate user-defined values in the simulator with the MPE values

   • **Delete All User Defined Entries**

   Deletes all user-defined values in all the tables that correspond with the MPE tables

4. Click an **As Of Date**.

5. Click **Browse** to select a directory for the log file other than the default (optional).

6. Click **OK**. A progress indicator displays.

7. Click **OK** in the confirmation message that indicates that the MPE load was successful.
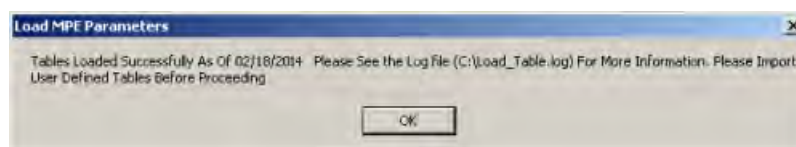
> **NOTE**
>
> **The Load_Table.log file contains detailed information regarding the load process**

8. Click **Cancel** to return to Configuration window.

9. **Close** and **restart** the Configuration component. The Configuration component must be restarted for the new MPE Parameters to become effective.

Importing an Exchange Rate File

Customers that choose to manually update the simulator with a new list of exchange rates can import a T057 file using the Load Exchange Rates option. Use the following procedure to load exchanges rates to the simulator.

Procedure

1. Open the Configuration component.

2. From the File menu, click **Load Exchange Rates**. The Load Exchange Rates dialog box appears.
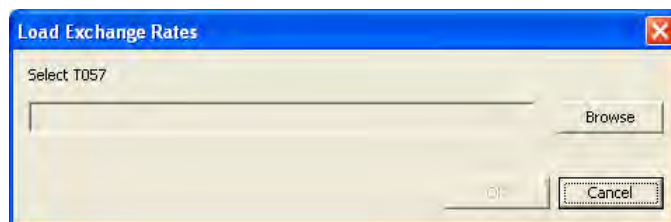
3. Click **Browse** and navigate to the directory where there is a previously saved T057 file.

4. Click the **Rate file** to import in the Select an Exchange Rate File dialog box, and then click **Open**.

5. Click **OK** to import the file.

6. Click **OK** in a confirmation dialog box that appears when the import is complete.

Acquirer BIN

The Acquirer BIN option allows the customer to add a bank identification number (BIN) to a Member ID, as well as assign an Acceptance Brand(s) and BIN Country Code(s) to the BIN.

See **Adding a New Member ID to the Member ID Detail** for information concerning adding Member IDs in the simulator.

Adding a BIN to a Member ID

Use the following procedure to add a BIN to a Member ID in the simulator.

Procedure

1. Open the Configuration component.

2. From the Setup tab, click **Acquirer**/**BIN** to display the Acquirer BIN dialog box.

3. In the Filter Member ID by category, click a **Member ID List Name**, **Member ID Country Code**, and **BIN** in the corresponding drop-down lists.

4. Click a **Member ID** in the corresponding drop-down list. The BIN specified in the Add BIN to Member ID category is added to the specified Member ID.

5. Enter a **BIN** in the BIN field to assign the BIN to the selected Member ID.

6. Click an **Acceptance Brand** in the corresponding drop-down list.

7. Click **Add** to assign the Acceptance Brand to the BIN. Repeat steps 5 through 6 as necessary. To remove an Acceptance Brand from the Assign to BIN field, click the applicable Acceptance Field and click Remove.

8. Click a **BIN Country Code** in the corresponding drop-down list.

9. Click **Add** to assign the BIN Country Code to the selected BIN. Repeat steps 8 and 9 as necessary. To remove a BIN Country Code, click the code in the Assign to BIN field and click Remove.

10. Click **Generate BIN Entries**.

11. Answer appropriately to a confirmation message that you are adding records.

Acquirer BIN Participation

The Acquirer BIN Participation feature in the simulator identifies all Acceptance Brands and business service arrangements associated with an acquiring BIN.

Displaying All Qualified Business Service Arrangements for a BIN

Use the following procedure to find and display all of the qualified Business Service Arrangements for a particular BIN in the simulator.

Procedure

1. Open the Configuration component.

2. From the Setup tab, click **Acquirer BIN Participation** to display the Acquirer BIN Participation dialog box.

3. Select **All BSA Types** in the **BSA Type** drop-down list.

4. Select **All BSA IDs** in the **BSA ID** drop-down list.

5. Click a **BIN ID** in the **Filter by BIN** drop-down list to display all of the qualified Business Service Arrangements for that **BIN ID**.

Adding BIN Participation to a BSA ID

Use the following procedure to add BIN participation to a BSA ID in the simulator.

Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Acquirer**/**BIN Participation** to display the BIN Participation dialog box.

3. Click a **BSA Type** in the corresponding drop-down list. This affects the availability of the BSA IDs displayed in the corresponding drop-down.

4. Click a **BSA ID** in the corresponding drop-down list.

5. Click a **BIN ID** in the Filter by BIN drop-down list to display any existing entries for the BIN in the BSA ID.

6. Click a BIN in the corresponding drop-down in the Add BIN Participation pane. The BIN is added to the specified BSA ID.

7. Click a **BSA Priority** in the drop-down list.

IF...	THEN...
BSA Type Code = 8	BSA Priority = 01
BSA Type Code = 4	BSA Priority = 02
BSA Type Code = 3	BSA Priority = 03
BSA Type Code = 2	BSA Priority = 04
BSA Type Code = 1	BSA Priority = 05

8. Click an **Acceptance Brand** in the drop-down list and then click **Add**. The selected Acceptance Brand displays in the Assign to BSA field. Repeat this step if selecting multiple Acceptance Brands. To remove an Acceptance Brand from the Assign to BSA field, click it in the Assign to BSA field and click Remove.

9. Click **Generate Table Entries**.

10. Answer appropriately to the confirmation message indicating the number of table entries being added.

11. Click **OK**. Table entries display in the table grid.

Deleting BIN Participation from a BSA ID

Use the following procedure to delete BIN participation from a BSA ID in the simulator.

Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Acquirer**/**BIN Participation** to display the BIN Participation dialog box.

3. Click a **BSA Type** in the corresponding drop-down list. This affects the availability of the BSA IDs displayed in the corresponding drop-down.

4. Click a **BSA ID** in the corresponding drop-down list.

5. Click a **BIN ID** in the Filter by BIN drop-down list.

6. Click on a **BSA** in the table grid to highlight the entire row.

7. Click **Delete**.

8. Answer appropriately to a confirmation message validating the delete action.

9. Click **OK**.

   NOTE

   Customers will not be able to delete system-defined (MPE) BINs.

Issuer Account Range

The Issuer Account Range option allows the customer to assign an account range to a Member ID in the simulator.

Customers may also specify the following for the Member ID/account range combination:

- Product code

- Acceptance Brand

- Default billing currency

- Acceptance Brand priority

- Account Range country code

- Secondary billing currencies

See **Adding a New Member ID to the Member ID Detail** for information concerning adding Member IDs in the simulator.

Adding an Issuer Account Range

Use the following procedure to add an Issuer Account Range in the simulator.

Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Issuer**/**Account Range** to display the Issuer Account Range dialog box.

3. Click **Add** to display the Issuer Account Range – Add dialog box.

4. Select a **Member ID List Name** from the drop-down list.

5. Select a **Member ID Country Code**.

6. Select a **Member ID**.

7. Select an **Account Range Low** from the drop-down list.

8. Enter an **Account Range High** value.

9. Select a **Product Code**.

10. Select an **Unmasked Product Code**.

11. Select a **Product Class**.

12. Select an **Acceptance Brand**.

13. Select a **Default Billing Currency Code**.

14. Select an **Acceptance Brand Priority**.

15. Select an **Account Range Country Code**.

16. Select a **Mapping Service Indicator**.

17. Select an **Account Level Participation Switch**.

18. Select an **Activation Date**.

19. Select **Y – Yes** or **N – No** from the Chip Conversion Switch drop-down list.

20. Select a date from the Floor Expiration Date drop-down.

21. (Optional) Click the appropriate Secondary Billing Currency Codes as needed. See Defining the Secondary Billing Currencies for details.

22. Click **Add**.

23. Click **OK**.

24. Repeat steps 4 through 23 as necessary.

25. Click **Close** when finished.

Updating an Issuer Account Range

Use the following procedure to update an Issuer Account Range in the simulator.

Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Issuer**/**Account Range** to display the Issuer Account Range dialog box.

3. Click a **Member ID List Name** in the corresponding drop-down list.

4. Click a **Member ID Country Code**, a **Member ID**, and **Account Range**

5. Click **Filter**.

6. Click any row in the display grid to select the entire row.

7. Click **Update** to display the Issuer Account Range – Update dialog box.

8. Modify the appropriate fields as needed.

9. Click **Update** when finished.

10. Click **OK**.

11. Click **Close**.

Deleting an Issuer Account Range

Use the following procedure to delete an Issuer Account Range from the simulator.

Procedure

1. Open the Configuration component.
2. From the Setup menu, click **Issuer**/**Account Range** to display the Issuer Account Range dialog box.
3. Click a **Member ID List Name** in the corresponding drop-down list.
4. Click a **Member ID Country Code**.
5. Click a **Member ID** in the drop-down list.
6. Click **Filter**.
7. Click any row in the display grid to select the entire row.
8. Click **Delete** and answer appropriately to a confirmation message.
9. Click **OK**.

   NOTE

   Customers will not be able to delete system-defined (MPE) Issuer Account Ranges.

Copying an Issuer Account Range

Use the following procedure to copy an Issuer Account Range in the simulator.

Procedure

1. Open the Configuration component.
2. From the Setup menu, click **Issuer/Account Range** to display the Issuer Account Range dialog box.
3. Click a **Member ID List Name** in the corresponding drop-down list.
4. Click a **Member ID Country Code**.
5. Click a **Member ID** in the corresponding drop-down list.
6. Click **Filter**.
7. Click any row in the display grid to select the entire row.
8. Click **Copy** to display the Issuer Account Range – Copy dialog box.
9. Modify the appropriate fields as needed.
10. Click **Add** when finished.
11. Click **OK**.
12. Click **Close**.

> **NOTE**
>
> **Customers will not be able to copy and add a new Account Range without first modifying one of the fields in the Issuer Account Range – Copy dialog box.**

Defining the Secondary Billing Currencies

The MasterCard Clearing Presentment Simulator supports testing of multiple billing currencies where an issuer may specify at the account range level a primary (default) billing currency and multiple secondary billing currencies for each account range. Issuers may enable the secondary billing currencies by designating the transaction currencies for which they want a secondary billing currency applied. When a transaction occurs in one of these designated transaction currencies, the cardholder is billed in the secondary billing currency defined for that transaction currency.

See *GCMS Reference Manual* for details concerning multiple cardholder billing currencies.

In the Issuer Account Range dialog box, customers may define secondary billing currencies for individual Member IDs and account ranges.

The CEE component processes transactions using all the appropriate Transaction/Billing Currency relationships defined in the Issuer Account Range dialog box. Transactions without a "Transaction Currency" defined in the Secondary Billing Currencies are processed using the "Default Billing Currency" for that Member ID.

Use the following procedure to define the Transaction and Secondary Billing Currencies.

Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Issuer**/**Account Range** to display the Issuer Account Range dialog box.

3. Click a **Member ID List Name** in the corresponding drop-down list.

4. Click a **Member ID Country Code**.

5. Click a **Member ID** in the drop-down list.

6. Click any row in the display grid to select the entire row.

7. Click **Update** to display the Issuer Account Range – Update dialog box.

8. Click a **Transaction Currency Code** in the drop-down list. The Billing Currency Code automatically changes to the first Currency Code in the list, but may be modified individually. Repeat this step as needed up to four times.

9. Click **Update**.

10. Click **OK**.

11. Click **Close**.

> **NOTE**
>
> **Customers will not be able to delete system-defined (MPE) Issuer Account Ranges.**

Issuer Account Range Participation

The Issuer Account Range Participation feature identifies all acceptance brands and business service arrangements associated with an issuer account range within the simulator.

Displaying all qualified Business Service Arrangements for an Account Range

Use the following procedure to display all qualified Business Service Arrangements for a particular Account Range within the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Issuer/Account Range Participation** to display the Account Range Participation dialog box.
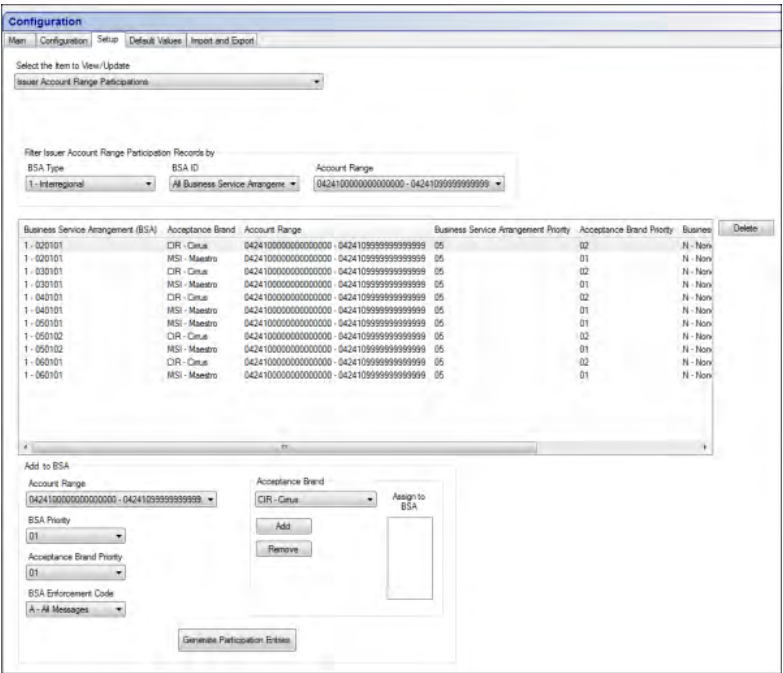
3. Select **All BSA Types** in the BSA Type drop-down list.

4. Select **All BSA IDs** in the BSA ID drop-down list.

5. Click an **Account Range** in the Filter by Account Range drop-down list to display all of the qualified Business Service Arrangements for that Account Range.

Adding Issuer Account Range Participation

Use the following procedure to add Issuer Account Range participation in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Issuer/Account Range Participation** to display the Account Range Participation dialog box.

3. Select a **BSA Type** from the corresponding drop-down list.

4. Select a **BSA ID** from the corresponding drop-down list.

5. Select an **Account Range** from the Filter By Account Range drop-down list.

6. Select an **Account Range** from the corresponding drop-down list in the Add Account Range Participation pane.

7. Select a **BSA Priority**.

IF...	THEN...
BSA Type Code = 8	BSA Priority = 1
BSA Type Code = 4	BSA Priority = 2
BSA Type Code = 3	BSA Priority = 3
BSA Type Code = 2	BSA Priority = 4
BSA Type Code = 1	BSA Priority = 5

8. Select an **AB Priority**. The AB Priority indicates the priority order of the Acceptance Brands for the account ranges that have two or more Acceptance Brands.

9. Select an **Acceptance Brand** from the drop-down list and then click **Add**. The selected Acceptance Brand displays in the Assign to BSA field. Repeat this step if selecting multiple Acceptance Brands. To remove an Acceptance Brand from the Assign to BSA field, click it in the Assign to BSA field and click Remove.

10. Select one of the following options from the **BSA Enforcement Code** drop-down list:

   • **A - All messages**

   • **F – First Presentment**

   • **N - None**

11. Click **Generate Table Entries**.

12. Answer appropriately to the confirmation message indicating the number of table entries being added.

13. Click **OK**. Table entries display in the table grid.

Deleting Issuer Account Range Participation

Use the following procedure to delete issuer account range participation in the simulator.

Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Issuer/Account Range Participation** to display the Issuer Account Range Participation dialog box.

3. Click a **BSA Type** in the corresponding drop-down list. This affects the availability of the BSA IDs displayed in the corresponding drop-down.

4. Click a **BSA ID** in the corresponding drop-down list.

5. Click an **Account Range** in the Filter by Account Range drop-down list.

6. Click on a **BSA** in the table grid to highlight the entire row.

7. Click **Delete**.

8. Answer appropriately to a confirmation message validating the delete action.

9. Click **OK**.

   NOTE

   Customers will not be able to delete system-defined (MPE) Issuer Account Ranges.

Account Range Restrictions

The MasterCard Clearing Presentment Simulator supports the Intracountry Business Service Override with a data table that corresponds to the Intracountry Business Service Override table contained in the IPM Member Parameter Extract (MPE).

NOTE

Customers have the option to use the MPE as a data import source allowing synchronization of certain data in the simulator to that of the MPE.

This table contains issuer account ranges and related business service arrangements in which the merchant country code must equal the country code of the acquiring BIN and issuing account range in order to qualify for the country's intracountry business service arrangement.

Within the MasterCard Clearing Presentment Simulator, customers use the Account Range Restrictions dialog box in the Configuration component to generate table entries using the **BSA Type**, **BSA ID**, and an **Account Range** to control the BSA to which the Account Range Restrictions apply.

The Account Range Restrictions identifies the Account Ranges used to determine restrictions for messages processed between Intra-European customers.

Display All Qualified Business Service Arrangements for an Account Range Restriction

Use the following procedure to display all of the qualified Business Service Arrangements for a particular Account Range Restriction.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Issuer**/**Account Range Restrictions** to display the Account Range Restrictions dialog box.
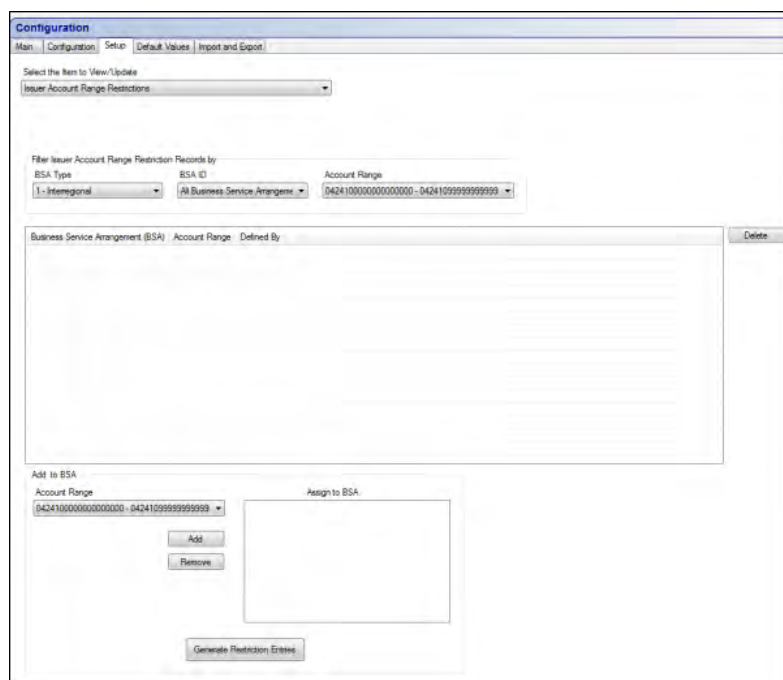
3. Select **ALL BSA Types** in the **BSA Type** drop-down list.

4. Select **ALL BSA IDs** in the **BSA ID** drop-down list.

5. Click an **Account Range** in the **Filter by Account Range** drop-down list to display all of the qualified Business Service Arrangements for that Account Range Restriction.

Adding Account Range Restrictions

Use the following procedure to add account range restrictions in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Issuer/Account Range Restrictions** to display the Account Range Restrictions dialog box.

3. Click a **BSA Type**, **BSA ID,** and an **Account Range** in their corresponding drop-down lists. These selections control the BSA to which the Account Range Restrictions apply when generating table entries. The **Add Account Range Restrictions to BSA** corresponds to the selections made in these filters.

4. Click an **Account Range** in the drop-down list.

5. Click **Add** to assign the Account Range to the BSA. The selected Account Range displays in the Assign to BSA field. Repeat this step if selecting multiple Account Ranges.

> **NOTE**
>
> **To remove an Account Range from the Assign to BSA field, click it in the Assign to BSA field and then click Remove.**

6. Click **Generate Table Entries**.

7. Answer appropriately to the confirmation message indicating the number of table entries being added.

8. Click **OK**. Table entries display in the table grid.

Deleting an Account Range Restriction

Use the following procedure to delete an Account Range Restriction in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Issuer/Account Range Restrictions** to display the Account Range Restrictions dialog box.

3. Click a **BSA Type**, **BSA ID**, and an **Account Range** in their corresponding drop-down lists.

4. Click on a **BSA** in the table grid to highlight the entire row.

5. Click **Delete**.

6. Answer appropriately to a confirmation message validating the delete action.

7. Click **OK**. The table entry is deleted.

8. Click **Close**.

Account Range Cryptogram Data

The Issuer Account Range Cryptogram Data identifies Account Ranges (low and high), Master Derivations Keys, and Chip Application Names to be used in the validation of the DE 55 Cryptogram.

Adding Account Range Cryptogram Data

Use the following procedure to add account range cryptogram data in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup tab, click **Issuer/Account Range Cryptogram Data** to display the Account Range Cryptogram Data dialog box.
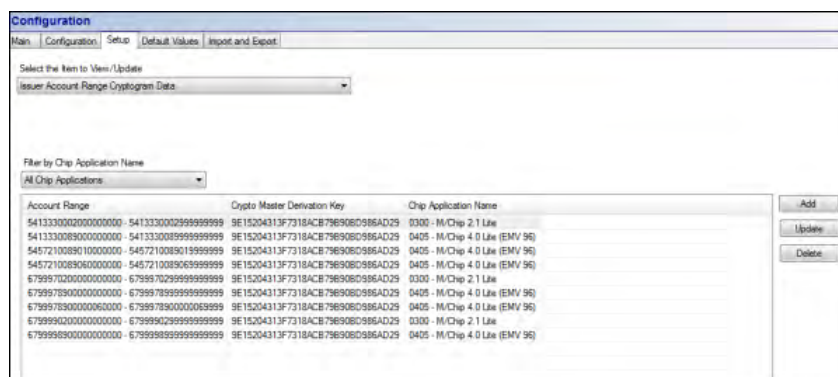
3. Click a **Filter by Chip Application Name** in the drop-down list.

4. Click **Add** to display the **Account Range Cryptogram Data – Add** dialog box.

5. Click an **Account Range** in the drop-down list.

6. Click a **Chip Application Name** in the drop-down list.

7. Enter the **Crypto Master Derivation Key**.

   NOTE

   The Crypto Master Derivation Key is a customer defined value that is unknown to MasterCard.

8. Click **Add**.

9. Click **OK**.

10. Click **Close**. The new Account Range Cryptogram data displays in the table grid.

Updating Account Range Cryptogram Data

Use the following procedure to update account range cryptogram data in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup tab, click **Issuer/Account Range Cryptogram Data** to display the Account Range Cryptogram Data dialog box.

3. Click a **Filter by Chip Application Name** in the drop-down list.

4. Click a row in the table grid.

5. Click **Update** to open the Account Range Cryptogram Data - Update dialog box.

6. Click a new **Chip Application Name** in the drop-down list and/or enter a new **Crypto Master Derivation** key.

7. Click **Update**.

8. Click **OK**.

9. Click **Cancel**. Updated Account Range Cryptogram data displays in the table grid.
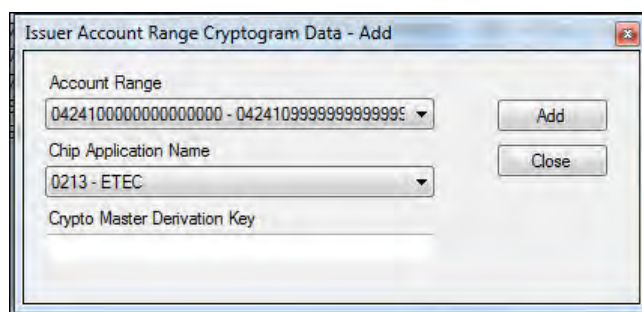
Deleting Account Range Cryptogram Data

Use the following procedure to delete account range cryptogram data from the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Issuer/Account Range Cryptogram Data** to display the Account Range Cryptogram Data dialog box.

3. Click a **Filter by Chip Application Name** in the drop-down list.

4. Highlight an entry in the table grid.

5. Click **Delete** and answer appropriately to the confirmation message.

6. Click **Close**.

CAB Program Restrictions

The CAB Program Restriction feature identifies the valid Card Acceptor Business (CAB) Programs for the combination of Acceptance Brand, Business Service Arrangement, and Interchange Rate Designator in the simulator.

Display All Qualified Business Service Arrangements for a CAB Program Restriction

Use the following procedure to display all of the qualified Business Service Arrangements for a particular Cab Program Restriction in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **CAB Program Restrictions** to display the Card Acceptor Business (CAB) Program Restrictions dialog box.

3. Select **All BSA Types** in the BSA Type drop-down list.

4. Select **All BSA IDs** in the BSA ID drop-down list.

5. Select a **CAB Program** in the Filter by CAB Program drop-down list to display all of the qualified Business Service Arrangements for that CAB Program Restriction.

Adding CAB Program Restrictions

Use the following procedure to add CAB Program Restrictions in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup tab, click **CAB Program Restrictions** to display the Card Acceptor Business (CAB) Program Restrictions dialog box.

3. Click a **BSA Type**, **BSA ID**, and a **Filter by CAB Program** in their corresponding drop-down lists. These selections control the BSA to which the CAB Program Restrictions apply when generating table entries. The **Add CAB Program Restrictions to BSA** corresponds to the selections made in these filters.

4. Click an **Acceptance Brand** in the drop-down list.

5. Click **Add** to assign the Acceptance Brand to the BSA. The selected Acceptance Brand displays in the Assign to BSA field. Repeat this step if

selecting multiple Acceptance Brands. To remove an Acceptance Brand from the Assign to BSA field, click it in the Assign to BSA field and click Remove.

6. Click an **IRD** and click **Add** to assign the IRD to the BSA. The selected IRD displays in the corresponding Assign to BSA field. Repeat this step if selecting multiple IRDs. To remove an IRD from the Assign to BSA field, click it in the Assign to BSA field and click Remove.

7. Click a **CAB Program** and click **Add** to assign the CAB Program to the BSA. The selected CAB Program displays in the corresponding Assign to BSA field. Repeat this step if selecting multiple CAB Programs. To remove a CAB Program from the Assign to BSA field, click it in the Assign to BSA field and click Remove.

8. Click **Generate Table Entries**.

9. Answer appropriately to the confirmation message indicating the number of table entries being added.

10. Click **OK**. Table entries display in the table grid.

Deleting CAB Program Restrictions

Use the following procedure to delete CAB Program Restrictions from the simulator.

Procedure

1. Open the Configuration component.

2. From the Setup tab, click **CAB Program Restrictions** to display the CAB Program Restrictions dialog box.

3. Click a **BSA Type** in the corresponding drop-down list. This affects the availability of the BSA IDs displayed in the corresponding drop-down list.

4. Click a **BSA ID** in the corresponding drop-down list.

5. Click a **Filter by CAB Program** in the drop-down list.

6. Click on a **BSA** in the table grid to highlight the entire row.

7. Click **Delete**.

8. Answer appropriately to a confirmation message validating the delete action.

9. Click **OK**. The table entry will be deleted.

10. Click **Close**.

> **NOTE**
>
> **Customers will not be able to delete system-defined (MPE) Cab Program Restrictions.**

Currency Code Restrictions

The MasterCard Clearing Presentment Simulator supports the Transaction Currency Qualification with a data table that corresponds to the Transaction Currency Qualification table contained in the IPM Member Parameter Extract (MPE).

For business service arrangements existing in this table, the transaction currency of the message must equal the transaction currency of the business service arrangement for the transaction to qualify for that specific arrangement. This table applies to intra-European transactions only.

Within the Configuration component, customers use the Currency Code Restrictions dialog box to generate table entries using the **BSA Type** and **BSA ID** to control the BSA to which the Currency Code Restrictions apply.

A certain currency code(s) may be specified as the only valid currency code(s) for the indicated Intra-European business service arrangement type and ID. The Currency Code Restrictions dialog box specifies the currency code(s), which is valid for messages processed between Intra-European customers. If the business service arrangement type and ID are not listed in the Currency Code Restrictions table, then all currency codes will be valid.

Display All Qualified Business Service Arrangements for a Currency Code Restriction

Use the following procedure to display all of the qualified Business Service Arrangements for a particular Currency Code Restriction in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Currency Code Restrictions** to display the Currency Code Restrictions dialog box.
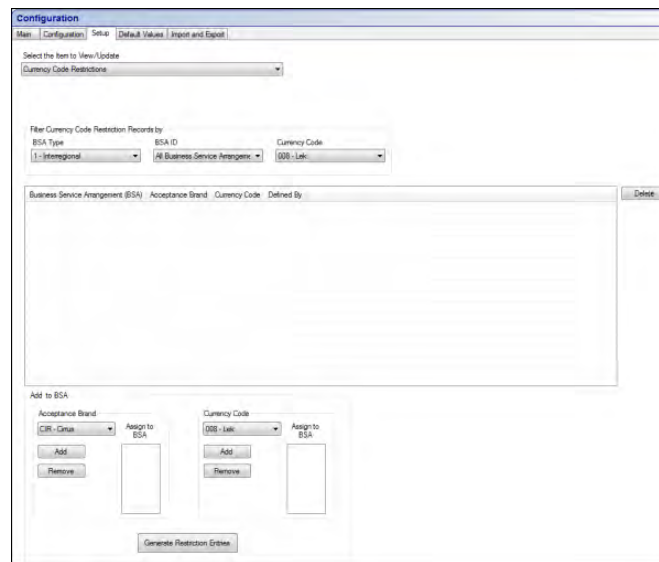
3. Select **ALL BSA Types** in the **BSA Type** drop-down list.

4. Select **ALL BSA IDs** in the **BSA ID** drop-down list.

5. Click a **Currency Code** in the **Filter by Currency Code** drop-down list to display all of the qualified Business Service Arrangements for that **Currency Code Restriction**.

Adding Currency Code Restrictions

Use the following procedure to add Currency Code Restrictions in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Currency Code Restrictions** to display the Currency Code Restrictions dialog box.

3. Click a **BSA Type** and **BSA ID** in their corresponding drop-down lists. These selections control the BSA to which the Currency Code Restrictions apply when generating table entries. Adding **Currency Code Restrictions** to the BSA corresponds to the selections made in these filters.

4. Click a **Currency Code** in the drop-down list.

5. Click an **Acceptance Brand** in the drop-down list. Click **Add** to assign the Acceptance Brand to the BSA. The selected Acceptance Brand displays in the Assign to BSA field. Repeat this step if selecting multiple Acceptance Brands. To remove an Acceptance Brand from the Assign to BSA field, click it in the Assign to BSA field and click Remove.

6. Click **Generate Table Entries**.

7. Answer appropriately to the confirmation message indicating the number of table entries being added.

8. Click **OK**. Table entries display in the table grid.

Deleting Currency Code Restrictions

Use the following procedure to delete Currency Code Restrictions.

Procedure

1. Open the **Configuration** component.
2. From the Setup menu, click **Currency Code Restrictions** to display the Currency Code Restrictions dialog box.
3. Click a **BSA Type** and **BSA ID** in their corresponding drop-down lists.
4. Click on a **BSA** in the table grid to highlight the entire row.
5. Click **Delete**.
6. Answer appropriately to a confirmation message validating the delete action.
7. Click **OK**. The table entry is deleted.
8. Click **Close**.

Fee Group

The Fee Group feature in the simulator identifies interchange fee groups and contains the data necessary to establish fees for each of the groups.

Display All Qualified Business Service Arrangements for a Fee Group

Use the following procedure to display all of the qualified Business Service Arrangements for a particular Fee Group in the simulator.

Procedure

1. Open the **Configuration** component.
2. From the Setup menu, click **Fee/Fee Group** to display the Fee Group dialog box.

3. Select **ALL BSA Types** in the **BSA Type** drop-down list.

4. Select **ALL BSA IDs** in the **BSA ID** drop-down list.

5. Click an **IRD** in the **Filter by IRD** drop-down list to display all of the qualified Business Service Arrangements for that **IRD**.

Adding Fee Groups

Use the following procedure to add Fee Groups in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Fee/Fee Group** to display the Fee Group dialog box.

3. Click a **BSA Type**, **BSA ID** and a **Filter by IRD** in their corresponding drop-down lists. These selections control the BSA to which the Fee Group applies when generating table entries. The **Add Fee Group to BSA** corresponds to the selections made in these filters.

4. Click a **Reversal Indicator**.

5. Click a **Fee Code Pointer** and a **Fee Override Pointer**.

6. Click an **Acceptance Brand** in the corresponding drop-down list.

7. Click **Add** to assign the Acceptance Brand to the BSA. The selected Acceptance Brand displays in the Assign to BSA field. Repeat this step if selecting multiple Acceptance Brands. To remove an Acceptance Brand

from the Assign to BSA field, click it in the Assign to BSA field and then click Remove.

8. Click an **IRD** and click **Add** to assign the IRD to the BSA. The selected IRD displays in the corresponding Assign to BSA field. Repeat this step if selecting multiple IRDs. To remove an IRD from the Assign to BSA field, click it in the Assign to BSA field and then click Remove.

9. Click a **MTI/Function Code** and click **Add** to assign the MTI/Function Code to the BSA. The selected MTI/Function Code displays in the corresponding Assign to BSA field. Repeat this step if selecting multiple MTI/Function Codes. To remove a MTI/Function Code from the Assign to BSA field, click it in the Assign to BSA field and then click Remove.

10. Click a **Processing Code** subfield value in each of the corresponding drop-down lists and click **Add** to assign the Processing Code to the BSA. The selected Processing Code displays in the corresponding Assign to BSA field. Repeat this step if selecting multiple Processing Codes. To remove a Processing Code from the Assign to BSA field, click it in the Assign to BSA field and then click Remove.

11. Click a **Product Type** and click **Add** to assign the Product Type to the BSA. The selected Product Type displays in the corresponding Assign to BSA field. Repeat this step if selecting multiple Product Types. To remove a Product Type from the Assign to BSA field, click it in the Assign to BSA field and then click Remove.

12. Click **Generate Table Entries**.

13. Answer appropriately to the confirmation message indicating the number of table entries being added.

14. Click **OK**. Table entries display in the table grid.

Updating Fee Pointers

Use the following procedure to update Fee Pointers in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Fee/Fee Group** to display the Fee Group dialog box.

3. Click a **BSA Type**, **BSA ID** and a **Filter by IRD** in their corresponding drop-down lists. These selections control the BSA to which the Fee Group applies when generating table entries.

4. Click **Update Fee Pointers**.

5. Select a **Fee Code Pointer** and **Fee Override Pointer** from the appropriate drop-down lists and then click **OK**.

6. Click **OK** in the confirmation message.

Deleting Fee Groups

Use the following procedure to delete Fee Groups from the simulator.

Procedure

1. Open the Configuration component.

2. From the Setup menu, click **Fee/Fee Group** to display the Fee Group dialog box.

3. Click a **BSA Type** in the corresponding drop-down list. This affects the availability of the BSA IDs displayed in the corresponding drop-down.

4. Click a **BSA ID** in the corresponding drop-down list.

5. Click an **IRD** in the Filter by IRD drop-down list.

6. Click on a **BSA** in the table grid to highlight the entire row.

7. Click **Delete**.

8. Answer appropriately to a confirmation message validating the delete action.

9. Click **OK**. The selected Fee Group will be deleted.

10. Click **Close**.

> **NOTE**
>
> **Customers will not be able to delete system-defined (MPE) Fee Groups.**

Fee Override

The Fee Override table in the simulator corresponds to the MPE's IP0057T1 – Interchange Override Fee Group Table. From the Fee Override table, you may view, add, modify, and delete Fee Override entries in the simulator.

Customers have the option to use the MPE as a data import source allowing synchronization of certain data in the simulator to that of the MPE. See **Importing a Full MPE File** for details.

Adding a Fee Override

Use the following procedure to add a Fee Override in the simulator.

Procedure

1. Open the **Configuration** component.
2. From the Setup menu, click **Fee/Fee Override** to display the Fee Override dialog box.
3. Click **Add** to display the Fee Overrides – Add dialog box.
4. Enter a **Fee Override Pointer**.
5. Select an **Override Sequence** from the corresponding drop-down lists.
6. Select a **Fee Code Pointer** from the drop-down list and then click **Add**.
7. Click **Close**.

Updating a Fee Override

Use the following procedure to update a Fee Override in the simulator.

Procedure

1. Open the **Configuration** component.
2. From the Setup menu, click **Fee/Fee Override** to display the Fee Override dialog box.
3. Click a **Fee Override Pointer** row in the table grid to select.
4. Click **Update**.
5. Enter or modify the appropriate fields and then click **Update**.
6. Click **OK**.
7. Click **Close**.

Deleting a Fee Override

Use the following procedure to delete a Fee Override from the simulator.

Procedure

1. Open the **Configuration** component.
2. From the Setup menu, click **Fee/Fee Override** to display the Fee Override dialog box.
3. Click a **Fee Override Pointer** row in the table grid to select.
4. Click **Delete**.
5. Click **OK**.
6. Click **Close**.

Fee Structure

The Fee Structure identifies interchange rates, unit fees, and limits for various interchange programs.

Adding a Fee Structure

Use the following procedure to add a Fee Structure in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Fee/Fee Structure** to display the Fee Structure dialog box.

3. Click **Add** to display the Fee Structure – Add dialog box.

4. Enter a **Fee Code Pointer**.

5. Select a **Rate Type** from the corresponding drop-down list.

6. Select a **Payment Party** from the corresponding drop-down list.

7. Enter an **Interchange Rate**.

8. Select an **Interchange Rate Direction** from the drop-down list.

9. Enter a **Unit Fee**.

10. Select a **Unit Fee Direction** from the corresponding drop-down list.

11. Enter a **Minimum Fee**.

12. Select a **Min-Max Fee Direction** from the corresponding drop-down list.

13. Enter a **Maximum Fee**.

14. Select a **Fee Currency Code** from the corresponding drop-down list.

15. Click **Add**.

16. Click **OK**.

17. Click **Close** to return to the Configuration window.

Updating a Fee Structure

Use the following procedure to update a Fee Structure in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Fee/Fee Structure** to display the Fee Structure dialog box.

3. Click a **Fee Code Pointer** in the drop-down list.

4. Click anywhere in a row to highlight the entire row.

5. Click **Update**.

6. Modify the appropriate fields and click **Update**.

7. Click **OK**.

8. Click **Close** to return to the Configuration window.

Deleting a Fee Structure

Use the following procedure to delete a Fee Structure in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Fee/Fee Structure** to display the Fee Structure dialog box.

3. Click a **Fee Code Pointer** in the drop-down list.

4. Click anywhere in a row to highlight the entire row.

5. Click **Delete**.

6. Answer appropriately to a confirmation message verifying delete action.

7. Click **OK**.

8. Click **Close** to return to the Configuration window.

   NOTE

   Customers will not be able to delete system-defined (MPE) Fee Structures.

Geographic Restrictions

The Geographic Restrictions feature in the simulator identifies the valid Country/Region for the combination of Acceptance Brand and Business Service Arrangement.

Display All Qualified Business Service Arrangements for a Geographic Restriction

Use the following procedure to display all of the qualified Business Service Arrangements for a particular Geographic Restriction in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Geographic Restrictions** to display the Geographic Restrictions dialog box.

3. Select **ALL BSA Types** in the BSA Type drop-down list.

4. Select **ALL BSA IDs** in the BSA ID drop-down list.

5. Click a **Country/Region** in the Filter by Country/Region drop-down list to display all of the qualified Business Service Arrangements for that Country/Region.

Adding Geographic Restrictions

Use the following procedure to add Geographic Restrictions in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Geographic Restrictions** to display the Geographic Restrictions dialog box.

3. Click a **BSA Type**, **BSA ID**, and a **Filter by Country/Region** in their corresponding drop-down lists. These selections control the BSA to which the Geographic Restrictions apply when generating table entries. The **Add Geographic Restrictions to BSA** corresponds to the selections made in these filters.

4. Click an **Acceptance Brand** in the drop-down list.

5. Click **Add** to assign the Acceptance Brand to the BSA. The selected Acceptance Brand displays in the Assign to BSA field. Repeat this step if selecting multiple Acceptance Brands. To remove an Acceptance Brand from the Assign to BSA field, click it in the Assign to BSA field and click Remove.

6. Click a **Country/Region** and click **Add** to assign the Country/Region to the BSA. The selected Country/Region displays in the corresponding Assign to BSA field. Repeat this step if selecting multiple Countries/Regions. To remove a Country/Region from the Assign to BSA field, click it in the Assign to BSA field, and then click Remove.

7. Click **Generate Table Entries**.

8. Answer appropriately to the confirmation message indicating the number of table entries being added.

9. Click **OK**. Table entries display in the table grid.

Deleting Geographic Restrictions

Use the following procedure to delete Geographic Restrictions in the simulator.

Procedure

1. From the Setup menu, click **Geographic Restrictions** to display the Geographic Restrictions dialog box.

2. Click a **BSA Type** in the corresponding drop-down list. This affects the availability of the BSA IDs displayed in the corresponding drop-down list.

3. Click a **BSA ID** in the corresponding drop-down list.

4. Click a **Filter by Country/Region** in the drop-down list.

5. Select a **BSA** in the table grid to highlight the entire row.

6. Click **Delete**.

7. Answer appropriately to a confirmation message validating the delete action.

8. Click **OK**. The table entry will be deleted.

9. Click **Close**.

NOTE

Customers will not be able to delete system-defined (MPE) Geographic Restrictions.

Message Reason Code Restrictions

The Message Reason Code Restrictions feature in the simulator identifies the valid Message Reason Codes for the combination of Acceptance Brand, Business Service Arrangement, and transaction function/reversal indicator.

Display All Qualified Business Service Arrangements for a Message Reason Code Restriction

Use the following procedure to display all of the qualified Business Service Arrangements for a particular Message Reason Code Restriction within the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Message Reason Code Restrictions** to display the Message Reason Code (MRC) Restrictions dialog box.

3. Select **ALL BSA Types** in the BSA Type drop-down list.

4. Select **ALL BSA IDs** in the BSA ID drop-down list.

5. Click a **MTI/Function Code** in the MTI/Function Code drop-down list to display all of the qualified Business Service Arrangements for that MTI/Function Code and MRC.

Adding Message Reason Code Restrictions

Use the following procedure to add Message Reason Code Restrictions in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Message Reason Code Restrictions** to display the Message Reason Code Restrictions dialog box.

3. Click a **BSA Type**, **BSA ID,** and a **MTI/Function Code** in their corresponding drop-down lists. These selections control the BSA to which the Message Reason Code Restrictions apply when generating table entries. The **Add Message Reason Code Restrictions to BSA** corresponds to the selections made in these filters.

4. Click a **Reversal Indicator**.

5. Click an **Acceptance Brand** in the drop-down list.

6. Click **Add** to assign the Acceptance Brand to the BSA. The selected Acceptance Brand displays in the Assign to BSA field. Repeat this step if selecting multiple Acceptance Brands. To remove an Acceptance Brand from the Assign to BSA field, click it in the Assign to BSA field and then click Remove.

7. Click a **Message Reason Code** and click **Add** to assign the Message Reason Code to the BSA. The selected Message Reason Code displays in the corresponding Assign to BSA field. Repeat this step if selecting multiple Message Reason Codes. To remove a Message Reason Code from the Assign to BSA field, click it in the Assign to BSA field and then click Remove.

8. Click **Generate Table Entries**.

9. Answer appropriately to the confirmation message indicating the number of table entries being added.

10. Click **OK**. Table entries display in the table grid.

Deleting Message Reason Code Restrictions

Use the following procedure to delete Message Reason Code Restrictions from within the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Message Reason Code Restrictions** to display the Message Reason Code Restrictions dialog box.

3. Click a **BSA Type**, **BSA ID**, and a **MTI/Function Code** in their corresponding drop-down lists.

4. Click a **BSA** in the table grid to highlight the entire row.

5. Click **Delete**.

6. Answer appropriately to a confirmation message validating the delete action.

7. Click **OK**. The table entry is deleted.

8. Click **Close**.

Processing Code Restrictions

The Processing Code Restrictions feature in the simulator identifies the valid Processing Code/Reversal Indicator values for an acceptance brand, business service arrangement and transaction function combination. It also indicates the transaction function/processing code combinations that require interchange rate designator validation for a given acceptance brand/business service arrangement combination.

Display All Qualified Business Service Arrangements for a Processing Code Restriction

Use the following procedure to display all of the qualified Business Service Arrangements for a particular Processing Code Restriction in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Processing Code Restrictions** to display the Processing Code Restrictions dialog box.

3. Select **ALL BSA Types** in the BSA Type drop-down list.

4. Select **ALL BSA IDs** in the BSA ID drop-down list.

5. Click a **Processing Code** in the Filter By Processing Code drop-down list to display all of the qualified Business Service Arrangements for that Processing Code.

Adding Processing Code Restrictions

Use the following procedure to add Processing Code Restrictions in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Processing Code Restrictions** to display the Processing Code Restrictions dialog box.

3. Click a **BSA Type**, **BSA ID,** and a **Filter by Processing Code** in their corresponding drop-down lists. These selections control the BSA to which the Processing Code Restrictions apply when generating table entries. The **Add Processing Code Restrictions to BSA** corresponds to the selections made in these filters.

4. Click a **Reversal Indicator**.

5. Click **Yes** or **No** in the IRD Validation Required drop-down.

6. Click the **blank space** or **6** in the Extended Decimal Precision drop-down list.

7. Click an **Acceptance Brand** in the drop-down list.

8. Click **Add** to assign the Acceptance Brand to the BSA. The selected Acceptance Brand displays in the Assign to BSA field. Repeat this step if selecting multiple Acceptance Brands. To remove an Acceptance Brand from the Assign to BSA field, click it in the Assign to BSA field and click Remove.

9. Click a **MTI/Function Code** and then click **Add** to assign the MTI/Function Code to the BSA. The selected MTI/Function Code displays in the corresponding Assign to BSA field. Repeat this step if selecting multiple MTI/Function Codes. To remove a MTI/Function Code from the Assign to BSA field, click it in the Assign to BSA field and click Remove.

10. Click a **Processing Code** subfield value in each of the corresponding drop-down lists and then click **Add** to assign the Processing Code to the BSA. The selected Processing Code displays in the corresponding Assign to BSA field. Repeat this step if selecting multiple Processing Codes. To remove a Processing Code from the Assign to BSA field, click it in the Assign to BSA field and then click Remove.

11. Click **Generate Table Entries**.

12. Answer appropriately to the confirmation message indicating the number of table entries being added.

13. Click **OK**. Table entries display in the table grid.

14. Click **Close**.

Updating Processing Code Restrictions

Use the following procedure to update Processing Code Restrictions in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup tab, click **Processing Code Restrictions** to display the Processing Code Restrictions dialog box.

3. Click a **BSA Type**, **BSA ID,** and a **Filter by Processing Code** in their corresponding drop-down lists.

4. Click on a **BSA** in the table grid to highlight the entire row.

NOTE

You cannot update System Masked entries. Only System entries and User-defined entries can be updated.

5. Click **Update**. The Processing Code Restrictions – Update dialog box appears.

6. Select one of the options in the Extended Decimal Indicator drop-down list and then click **OK**.

7. Click **OK**. Click **Close**.

Deleting Processing Code Restrictions

Use the following procedure to delete Processing Code Restrictions from within the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Processing Code Restrictions** to display the Processing Code Restrictions dialog box.

3. Click a **BSA Type**, **BSA ID**, and a **Filter by Processing Code** in their corresponding drop-down lists.

4. Click on a **BSA** in the table grid to highlight the entire row.

5. Click **Delete**.

6. Answer appropriately to a confirmation message validating the delete action.

7. Click **OK**. The Table Entry will be deleted.

8. Click **Close**.

NOTE

Customers will not be able to delete system-defined (MPE) Processing Code Restrictions.

Product Code Restrictions

The Product Code Restrictions feature in the simulator identifies the valid Product Codes for the combination of acceptance brand, business service arrangement, and interchange rate designator.

Display All Qualified Business Service Arrangements for a Product Code Restriction

Use the following procedure to display all of the qualified Business Service Arrangements for a particular Product Code Restriction in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Product Code Restrictions** to display the Product Code Restrictions dialog box.

3. Select **ALL BSA Types** in the BSA Type drop-down list.

4. Select **ALL BSA IDs** in the BSA ID drop-down list.

5. Click a **Product Code** in the Filter By Product Code drop-down list to display all of the qualified Business Service Arrangements for that Product Code.

Adding Product Code Restrictions

Use the following procedure to add Product Code Restrictions in the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Product Code Restrictions** to display the Product Code Restrictions dialog box.

3. Click a **BSA Type**, **BSA ID**, and a **Filter by Product Code** in their corresponding drop-down lists. These selections control the BSA to which the Product Code Restriction applies when generating table entries. The **Add Product Code Restrictions to BSA** corresponds to the selections made in these filters.

4. Click an **Acceptance Brand** in the drop-down list.

5. Click **Add** to assign the Acceptance Brand to the BSA. The selected Acceptance Brand displays in the Assign to BSA field. Repeat this step if selecting multiple Acceptance Brands. To remove an Acceptance Brand from the Assign to BSA field, click it in the Assign to BSA field and then click Remove.

6. Click an **IRD** and then click **Add** to assign the IRD to the BSA. The selected IRD displays in the corresponding Assign to BSA field. Repeat this step if selecting multiple IRDs. To remove an IRD from the Assign to BSA field, click it in the Assign to BSA field and then click Remove.

7. Click a **Product Code** and then click **Add** to assign the Product Code to the BSA. The selected Product Code displays in the corresponding Assign to BSA field. Repeat this step if selecting multiple Product Codes. To remove a Product Code from the Assign to BSA field, click it in the Assign to BSA field and then click Remove.

8. Click **Generate Table Entries**.

9. Answer appropriately to the confirmation message indicating the number of table entries being added.

10. Click **OK**. Table entries display in the table grid.

11. Click **Close** when finished.

Deleting Product Code Restrictions

Use the following procedure to delete Product Code Restrictions from within the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Product Code Restrictions** to display the Processing Code Restrictions dialog box.

3. Click a **BSA Type**, **BSA ID**, and a **Filter by Product Code** in their corresponding drop-down lists.

4. Click on a **BSA** in the table grid to highlight the entire row.

5. Click **Delete**.

6. Answer appropriately to a confirmation message validating the delete action.

7. Click **OK**. The table entry will be deleted.

8. Click **Close**.

   NOTE

   Customers will not be able to delete system-defined (MPE) Product Code Restrictions.

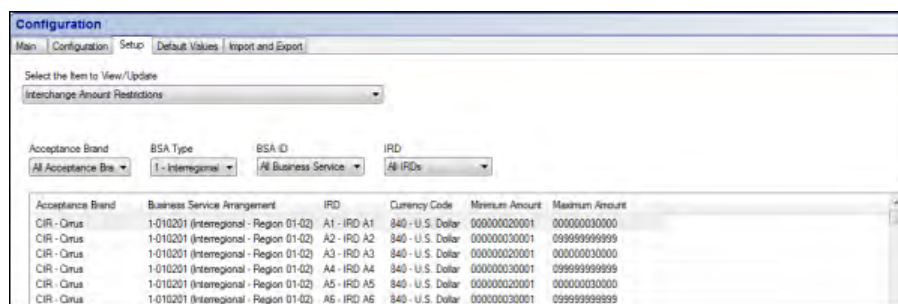## Interchange Amount Restrictions

The Interchange Amount Restrictions dialog box allows customers to view the simulator Interchange Amount Restrictions table that corresponds with the MPE Table IP0030T1—Interchange Amount Restriction. The Interchange Amount Restrictions table is populated by the MPE and contains the amount ranges for large ticket interchange programs that are restricted based on the transaction amount. This data is information only. Data in this dialog box cannot be added, modified, or deleted.

Viewing Interchange Amount Restrictions Information

Use the following procedure to view the Interchange Amount Restrictions table within the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Interchange Amount Restrictions** to display the Interchange Amount Restrictions dialog box.

3. Click **Close** when finished viewing the Interchange Amount Restrictions information.

Country Codes

The Country Codes option allows customers to view the simulator Country Codes table that corresponds with the MPE Table IP0028T1—Country Codes. The Country Codes table is populated by the MPE and contains valid numeric and alphanumeric country codes to be used by the simulator. It also contains state/province codes for countries that require the presence of state/province codes.

The Country Codes option allows customers to view (listed as displayed in table) the following codes in the Country Codes table:

• Country Codes and Names – Alpha and Numeric

• Region

• Country Code and Names – Alpha and Numeric

• Additional Currency Codes

Although the Country Codes table is populated by the MPE, customers may modify the National Currency Code and Additional National Currency Codes for the Country Code records in the simulator table.

The simulator compares the value in DE 49 (Currency Code, Transaction) of a 1240/200 First Presentment to the values in the National Currency Code – Numeric and Additional National Currency Codes contained in the Country Codes table. When the value in DE 49 of the 1240/200 First Presentment message matches either the National Currency Code – Numeric or the Additional National Currency Codes in the table, the simulator populates PDS 0177 (Cross Border), subfield 2 (Currency Indicator) with a value of **Y**. If no match is found, the simulator populates PDS 0177, subfield 2 with a value of **N**.

Viewing the Country Codes Table

Use the following procedure to view the Country Codes table within the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Country Codes**. The Country Codes dialog box appears.
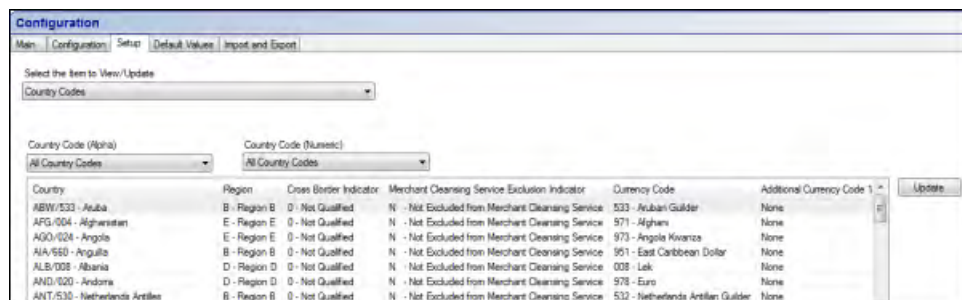

3. Click a **Country Code** in the corresponding drop-down list (Country Code – Alpha or Country Code – Num) to view the desired country code information.

4. Click **Cancel** when finished viewing the Country Codes information.

Modifying Currency Codes in the Country Codes Table

Use the following procedure to modify the National Currency Codes and Additional Currency Codes in the Country Codes table within the simulator.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Country Codes**.

3. Click a **Country Code** in the corresponding drop-down list (Country Code – Alpha or Country Code – Num) to view the desired country code information.

4. Click the record to be modified and then click **Update**. The Country Code – Update dialog box appears.
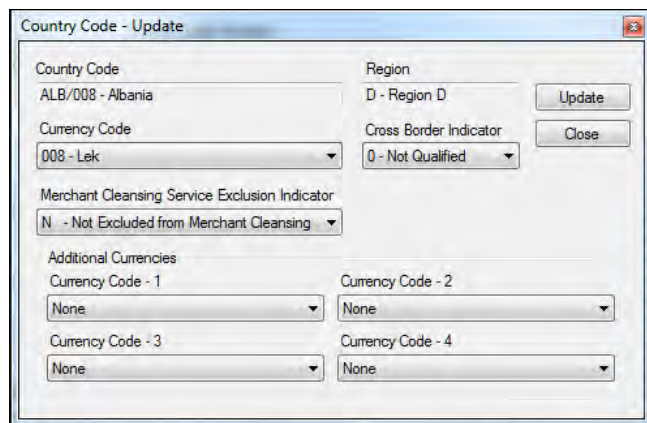
5. Select a value from any of the available drop-down lists, and then click **Update**.

6. Click **OK**.

MasterCard Assigned IDs

The MasterCard Assigned IDs option allows customers to view the simulator MasterCard Assigned IDs table that corresponds with the MPE Table IP0076T1—MasterCard Assigned IDs. The table is populated by the MPE and contains valid assigned ID's as well as activation dates for CVC 2 Participation to be used by the simulator to populate PDS 0044 when processing 1240/* files in the CEE.

The MasterCard Assigned ID option allows customers to view (listed as displayed in table) the following data listed in the MPE table IP0076T1:

• MasterCard Assigned ID

• CVC 2 Validation Program Participation Switch

• Start Date (YYY/MM/DD) format

• End Date (YYY/MM/DD) format

Although the table is populated by the MPE, customers may modify the CVC 2 Validation Program Participation switch as well as the Start and End date of records in the simulator table.

When the CEE component processes a 1240/* message that contains PDS 0176-MasterCard Assigned ID value that matches an entry in Table IP0076T1, and the CVC 2 Validation Program Participation switch is set to "Y" and a valid Start Date is configured, then the CEE will add PDS 0044 to the outgoing message with the value of "C" in subfield 1. This indicates that the MasterCard Assigned ID from PDS 0176 is a CVC 2 Participant to the issuer.

Viewing the MasterCard Assigned IDs Table

Use the following procedure to view the simulator's MasterCard Assigned IDs table.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **MasterCard Assigned IDs** to display the MasterCard Assigned IDs dialog box.
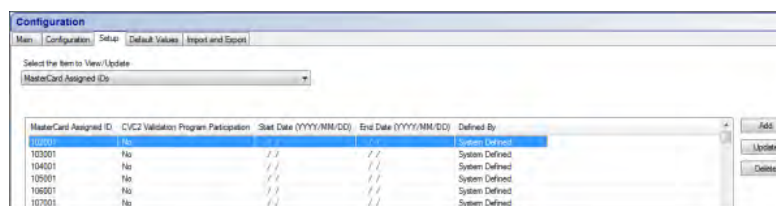
3. Double-click an entry in the table to view details of that entry.

4. Click **Cancel** when finished viewing the information.

5. Click **Close**.

Modifying Data in the MasterCard Assigned IDs Table

Use the following procedure to modify the CVC 2 Participation switch, and Start and End dates in the simulator's MasterCard Assigned IDs table.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **MasterCard Assigned IDs**.

3. Double-click an entry in the list to view details of an entry in the table.

4. Click the record to be modified, and then click **Update**. The MasterCard Assigned IDs – Update dialog box appears.
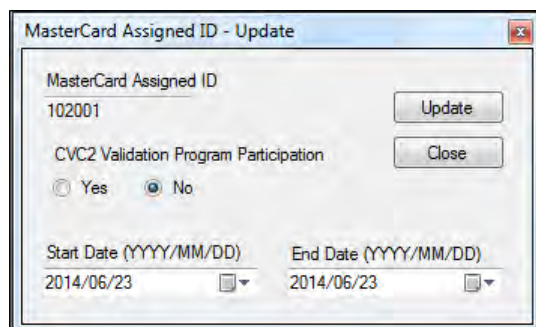
5. Click **Yes** or **No** for the CVC2 Validation Program Participation, or select a Start and End date from the available drop-down lists, and then click **Update**.

6. Click **OK**.

Adding an entry in the MasterCard Assigned IDs Table

Use the following procedure to create a new entry in the simulator's MasterCard Assigned IDs table.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **MasterCard Assigned IDs**.

3. Click **Add**. The MasterCard Assigned ID - Add dialog box appears.

4. Type in the MasterCard Assigned ID (no duplicates allowed). Select **Yes** or **No** for the CVC 2 Validation Program Participation, and then select a **Start** and **End** date from the available drop-down lists.

5. Click **Add** to add the new entry to the table.

Fraud Notification Response Table

The Fraud Notification Response table allows a user to simulate when an account number has received two chargeback notifications for the following Message Reason codes: 4837, 4847, 4857, 4862, 4870, and 4871.

For 1442/450 and 1442/451 messages if the account number matches an account number found in the Fraud Notification Response table with a valid date in the table, and:

IF the 1442/450 or 451 message contains…	THEN the CEE will…
4837 No Cardholder Authorization	Add PDS 0200 with the date from the Fraud Notification Response table
4847 Requested/Required Authorization Not Obtained and fraudulent Transaction	Add PDS 0200 with the date from the Fraud Notification Response table
4857 Card-Activated Telephone Transactions (fraud only)	Add PDS 0200 with the date from the Fraud Notification Response table
4862 Counterfeit Transaction Magnetic Stripe POS Fraud	Add PDS 0200 with the date from the Fraud Notification Response table
4870 Chip Liability Shift	Add PDS 0200 with the date from the Fraud Notification Response table
4871 Chip/PIN Liability Shift	Add PDS 0200 with the date from the Fraud Notification Response table

This will simulate that this transaction is the second chargeback for the account and will then notify the acquirer by adding PDS 0200 to the chargeback.

Viewing the Fraud Notification Response Table

Use the following procedure to view the simulator's Fraud Notification Response table.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Fraud Notification Response Table** to display the Fraud Notification Response table dialog box.

3. Double-click an entry in the table to view details.

4. Click **Cancel** when finished viewing the information.

5. Click **Close**.

Modifying Data in the Fraud Notification Response Table

Use the following procedure to modify an entry in the simulator's Fraud Notification Response table.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Fraud Notification Response Table**.

3. Double-click an entry in the list to view details of an entry in the table.

4. Or click the record to be modified, and then click **Update**. The Fraud Notification Response - Update dialog box appears.

5. Only the Expiration Date, Fraud Notification Date, and Fraud Notification Service Counter fields may be modified, as the PAN is a protected field once entered. Modify the appropriate fields and then click **Update**.

6. Click **OK** and then click **Close**.

Adding Data in the Fraud Notification Response Table

Use the following procedure to add a new entry to the simulator's Fraud Notification Response table.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Fraud Notification Response Table**.

3. Click **Add** to add an entry in the list.

4. Add the account range used for this test. Then add a date to the date field, which will act as the notification date to be added to PDS 0200.

5. Click **OK** when finished.

Deleting Data in the Fraud Notification Response Table

Use the following procedure to delete an entry in the simulator's Fraud Notification Response table.

Procedure

1. Open the **Configuration** component.

2. From the Setup menu, click **Fraud Notification Response Table**.

3. Click **Delete** to remove an entry in the list.

4. Click the entry to be removed. The Confirmation dialog box will appear.

5. Click **Yes** to confirm deletion.

6. Click **OK**.

Chapter 4   Creating a Test File

This chapter details how customers use the Test Data Generator component to create test files.

TDG Introduction

The Test Data Generator (TDG) component allows customers to create and customize test data for inbound and outbound files for customer testing. The TDG can open any Integrated Product Messages (IPM) formatted file for customization and use within the simulator.

Customers may perform a one-time setup for cardholder and merchant information that, when selected, pre-populates test messages with data.

This chapter details how the TDG component:

- Creates and modifies test files
- Modifies test messages

TDG File and Save Options

From the File menu, customers may select the **Preferences** option, which allows customers to specify the file encoding format for a saved file, as well as Save Options.

Settings selected in the Preferences dialog box affect only the TDG component.
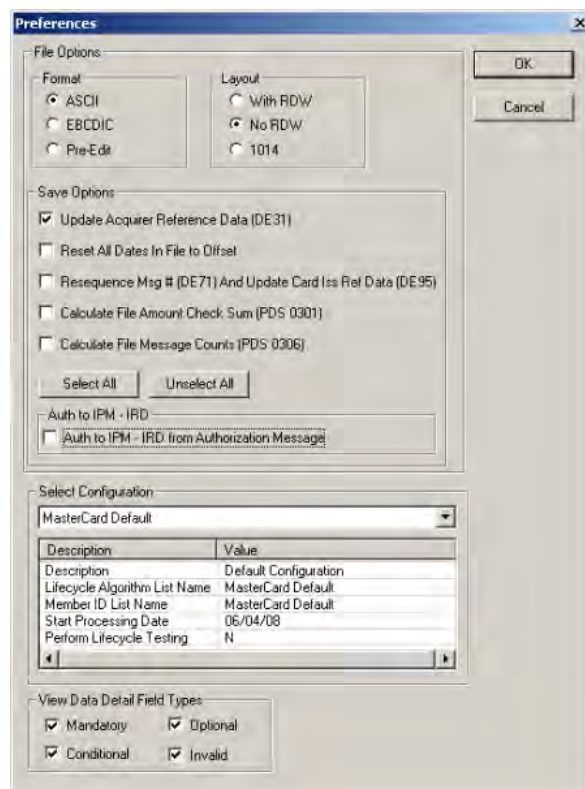
WARNING!

If modifying an existing test file in the TDG, the selected File Options overwrite the original format of the file while saving the file.

NOTE

For example, in the TDG component, the File Format Option is set to ASCII and an existing test file, encoded in EBCDIC, is opened and saved. The saved file is encoded in ASCII changing the original format of the file.

The File Format Option field allows the customer to set a default character format that determines the character format of the saved test file. The File Options selections set within the Preferences dialog box affect only the TDG output files. File Option fields are set in the TDG and CEE components independently of each other.

The Save Options listed below are present in the Preferences dialog box and affect only the TDG component.

By clicking the corresponding option, customers may toggle on or off any of the Save Options, thereby controlling their function within the test file. Once set, the Save Options become the default save actions until the options are modified and will be performed each time the file is saved.

Update Acquirer Reference Data (DE 31)—updates the Acquirer Reference Data (DE 31), subfield 3 (Julian Processing Date), subfield 4 (Acquirer Sequence Number), and subfield 5 (Check Digit). Subfields 1 and 2 remain unchanged.

When creating a new file, customers should select this option for proper sequencing of the message numbers and the creation of a valid check digit.

Reset All Dates in File to Offset—resets all dates contained in the test file to the offset date relative to the "file base date" defined in PDS 0105, subfield 2 (Processing Date).

The simulator determines the "file base date" for a new test file versus an existing test file as follows.

When creating a new file, the "file base date" refers to the Start Processing Date set in the Configuration, which is reflected in PDS 0105, subfield 2 of the new test file's header record. The header record is created during the file save of the new test file.

For an existing test file, the "file base date" is determined by the value in PDS 0105, subfield 2 of the test file's header record regardless of the Start Processing Date set in the Configuration. To change the "file base date" in an existing file, the customer first changes the value in PDS 0105, subfield 2, to reflect the new "file base date." Next, the customer selects the **Reset All Dates in File to Offset** option in the Preferences dialog box.

Resequence Message Numbers (DE 71) and Update Card Iss Ref Data (DE 95)—re-sequences the message numbers in the test file and populates DE 95 with a unique value in every message. The TDG assigns the unique numbers to DE 95 at the time the file is saved. If the "Update Card Iss Ref Data (DE 95)" is selected, a confirmation message displays at the time the test file is saved. Customers may select "Yes" to save the file with the unique values in DE 95, or select "No" to maintain the existing values in DE 95. If the "Update Card Iss Ref Data (DE 95)" is not selected, the simulator populates DE 95 with a constant value as defined in the Default Values by MTI/Function Code dialog box.

When creating a new file, customers should select the **Resequence Message Number (DE 71)** option for proper sequencing of the message numbers.

For an existing file, customers should deselect this option if the automatic calculation of DE 71 is not desired.

Calculate File Amount Check Sum (PDS 0301)—calculates the sum of all amounts from each occurrence of DE 4 (Amount, Transaction) in a logical file.

When creating a new file, customers should select this option for proper calculation of the Amount Check Sum (PDS 0301).

For an existing file, customers should deselect this option if the automatic calculation of PDS 0301 is not desired.

Calculate File Message Counts (PDS 0306)—calculates the total number of messages in the test file.

When creating a new file, customers should select this option for proper calculation of the File Message Counts (PDS 0306).

For an existing file, customers should deselect this option if the automatic calculation of PDS 0306 is not desired.

Auth to IPM – IRD—identifies a data element (DE) in the Authorization Request/Response (0100/0110) messages and the location within this data element that contains a customer entered interchange rate designator (IRD).

The indicated two positions within the data element in the Authorization Request/Response (0100/0110) message will be used to populate PDS 0158 (Business Activity), subfield 4 (Interchange Rate Designator) in the First Presentment/1240/200 message created by the Auth-to-IPM process.

Selecting this option will display the following dialog box.
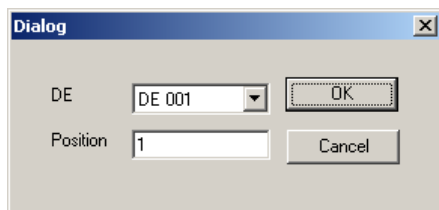
Customers will select the data element contained in the Authorization Request/Response (0100/0110) message (for the customer entered IRD) from the DE drop-down list and in the Position selection box, enter the starting position of the IRD for this DE in the Authorization Request/Response (0100/0110) message.

Select Configuration

From the CEE Preferences option, you may select a configuration for CEE processing from existing configuration names. This allows you the ability to quickly set a configuration from within the CEE without needing to access the Configuration component.

Although the Select Configuration option references the Configuration Name, customers may not access or edit the configuration from the CEE component.

View Data Details Field Types

The **View Data Details Field Types** field allows the customer to refine the Data Details View within the TDG component by filtering the display of the following DE/PDS types.

• Mandatory

• Conditional

• Optional

• Invalid

NOTE

The Origination or Destination format of the message type being viewed in the TDG determines the view perspective of the DE/PDS types. The TDG views all files from the Origination perspective. Therefore, if viewing an output file from the CEE component, which is in the Destination format, values created by the CEE, will be filtered by the View Data Details Field Types as "Invalid," when in fact the CEE entered values are not invalid for the Destination format perspective.

By clicking the corresponding check box in the View Data Detail Field Types, customers may control the display of the selected DE/PDS Types while in the Data Details view.

NOTE

The View Field Types option only controls the visual display of the record content and does not affect the data content within the messages of the opened file.
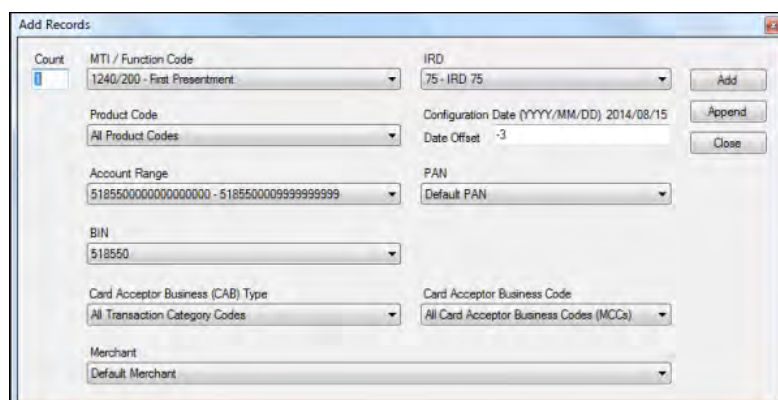
Creating a New Test File

The Test Data Generator (TDG) component allows customers to create test files quickly by adding standard (default) messages into a window. Once customers have created a test file, they can modify both the content of the file and the content of the messages within it. Information defined in the Cardholder and Merchant tables automatically populates the cardholder and merchant data fields contained within the messages.

Customers may access these tables through the Configuration component. See **Customize the Cardholder Table** and **Customize the Merchant Table** for more information.

Use the following procedure to create a test file.

Procedure

1. Double click the **TDG** icon to open the Test Data Generator application window.

2. From the **File** menu, click **New** to open a new file window.

3. From the Record menu, click **Add Record** to display the Add Records dialog box.

4. To add a message to the open file, in the **Count** field, enter the quantity of the message type you want and click a message type in the **MTI/Function Code** drop-down list.

   NOTE

   Before adding any addendum messages through the Add Records dialog box, highlight the corresponding 1240/200 message in the file. If a 1240/200 message is not highlighted, an error display indicates that the addendum was not added because the addendum was unable to link to a Financial Transaction.

   Addendum messages may also be added to First Presentment messages using the Add Remove Addendum option. See Adding and Removing Addendum Messages for details.

5. Select the following information from their respective drop-down lists:

- Product Code

- Account Range

- BIN

- Transaction Category

- Merchant

- IRD

- PAN

- Card Acceptor Business Code

6. In the **Date Offset** field, enter the Date Offset.

7. Click **Add** to populate the new file with the selected information.

8. Continue to select message types and information, clicking either **Add** or **Append**, until you are finished creating the test file.

9. Click **Close** when finished.

10. Verify the File and Save Options in the Preferences dialog box. See **TDG File and Save Options** for details.

11. From the **File** menu, click **Save** to open the **Save As** dialog box.

12. Type a new name for this test file in the **File name** field.

13. Click **Save**. The simulator automatically adds the .ipm suffix for test files.

The simulator has populated your new test file with the selected messages. The simulator will automatically populate the individual data elements of the messages with default values based on the MasterCard Clearing Presentment Simulator internal control file and any customer-defined tables containing default values.

NOTE

The Simulator automatically creates a file header and a trailer message when saving a new test file for the first time.

Although you can use the test file without modification, it is likely that you are creating the file to perform a specific test or set of test cases. You will probably need to edit the data element values of the various messages to ensure that the system meets the various test criteria. You can edit the data element values using the TDG component. Refer to the **Modifying a Message** section for additional information.
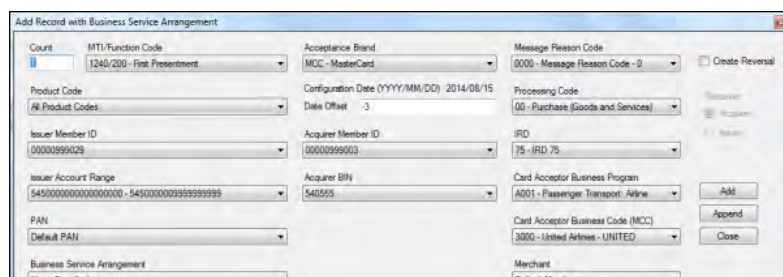
NOTE

As an alternate method for populating a script file, you may use the copy and paste feature to populate a test file with a customized message(s). Refer to the Cutting, Copying, and Pasting Messages section for additional information.

Adding a BSA Record to a Test File

The **Add BSA Record** option allows customers to add records with Business Service Arrangement information to a test file quickly and easily. Use the following procedure to add a record(s) with a Business Service Arrangement to a test file.

Procedure

1. From the Record menu, click **Add BSA Record** to display the Add Record with Business Service Arrangement dialog box.

2. To add a message to the open file, in the **Count** field, enter the quantity of the message type you want and select a message type from the **MTI/Function Code** drop-down list.

3. Select the following information from their respective drop-down lists:

   • Product Code

   • Issuer Member ID

   • Issuer Account Range

   • PAN

   • Business Service Arrangement

   • Acceptance Brand

   • Acquirer Member ID

   • Acquirer BIN

   • Message Reason Code

   • Processing Code

   • IRD

   • CAB Program

   • MCC

   • Merchant

4. Enter a date in the **Date Offset**.

5. Click **Add** or **Append** to populate the file with the selected information.

6. If creating a reversal, click the **Create Reversal** option.

7. Click **Close** when finished.

   NOTE

   If adding a Retrieval Fee Billing/1740-700 message type, customers may select either Acquirer or Issuer in the Receiver field.

Adding a Record(s) from Template to a Test File

The **Add Records from Template** option allows customers to add records with valid pre-populated data elements (DE) and private data sub-elements (PDS) to a test file quickly and easily.

The data elements and private data sub-elements listed below will be pre-populated depending upon the options selected in the Transaction Type, PAN Entry Mode, and Cardholder Verification fields of the Add Records from Template dialog box:

- DE 3—Processing Code, Subfield 1 (Cardholder Transaction Type)
- DE 22—Point of Service Data Code
- DE 26—Card Acceptor Business Code (MCC)
- DE 38—Approval Code
- DE 42—Card Acceptor ID Code
- DE 55—Integrated Circuit Card (ICC) System-Related Data
- PDS 0023—Terminal Type
- PDS 0043—Program Registration ID

Use the following procedure to add a record from template to a test file.

Procedure

1. From the Record menu, click **Add Records from Template** to display the Add Records from Template dialog box.

2. To add a message to the open file, in the **Count** field, enter the quantity of 1240/200 First Presentment messages you want to add.

NOTE

Only 1240/200 First Presentment messages can be created with this function.

3. Select the following information from their respective drop-down lists:

    - Acceptance Brand

    - IRD

    - Acquirer Member ID

    - Issuer Member ID

    - Acquirer BIN

    - Issuer Account Range

    - Transaction Type

    - PAN Entry Mode

    - Cardholder Verification

4. Enter a value in the **Date Offset**.

5. Click **Add** or **Append** to populate the file with the selected information.

6. Click **Close** when finished.

Field Length Validation

The simulator allows entry of invalid length values within the data element "Edit Field Value" dialog box, but automatically validates the field lengths at the time the field is updated. If an invalid field length exists, a notification message displays indicating that the length of the value is too long and asks if you want the TDG to correct the value.

Customers may select one of the following options in the notification message:

- **Yes**—TDG truncates the entered value

- **No**—Field is updated with the indicated invalid length field unchanged

- **Cancel**—Cancels the update function

WARNING!

The file becomes corrupted if No is selected and the file contains an incorrect field length for a fixed length field such as DE 3 (Processing Code). The simulator will not be able to reopen the file once corrupted.

Zero Byte Length PDS(s) Error Message

If a message in a test file contains one or more PDS set with zero byte length, the TDG will delete the PDS from the message. Also note that after deleting the zero-length PDS, if the carrier DE (48, 62, 124, or 125) does not contain any PDS, then the carrier DE will also be deleted from the message.

A notification message will be displayed as shown below:
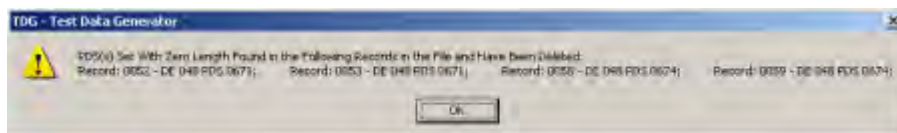
The message will contain the record number and the DE/PDS(s) that contained a zero byte length. Once the user selects OK, they can edit the specific transaction message noted in the error to add the offending DE/PDS(s) manually and edit the value accordingly.

This option allows the user to open files that normally would be unparseable in the TDG.

Modifying a Message

In addition to modifying the test file as a whole, the customer can customize each message individually. Within the TDG component, the Data Detail view allows customers to modify a message when they need to change the values for specific data elements. The modified data element value, within an individual message, overrides the system-defined or customer-defined default values for that specific data element for that message only.

NOTE

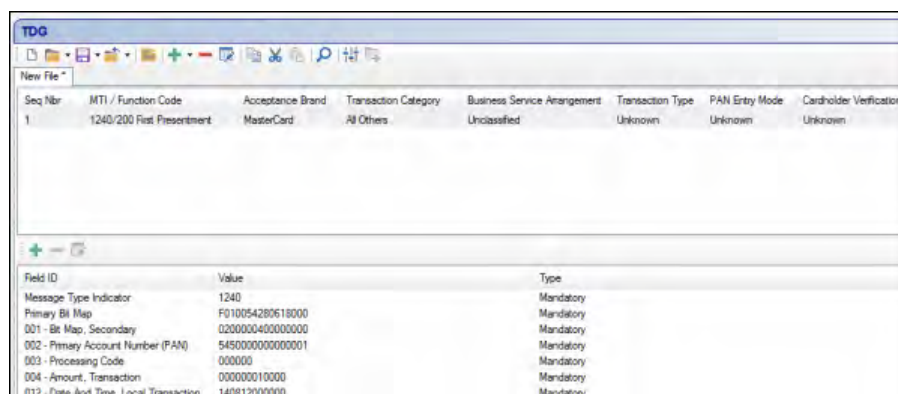**For example, a customer may want to change the Transaction Amount in a specific message.**

The changes that you make to an individual message are not global changes, but apply only to that message contained in the active test file. See **Modifying the Global Default Value of a Data Element** or **Modifying the Global Default Value of a Data Element by MTI/FC** for details concerning global modification of data element default values.

Selecting a Message to Modify

After opening a test file within the TDG component, use the following procedure to select a message to modify.

Procedure

1. Click a message within the TDG component to select it.

2. From the View menu, click **Data Details** to display the message in the Data Details view.

NOTE

The Data Details view displays the data element number, description, values, and indicates whether the data element is mandatory or conditional.

## Changing a Data Element Value in a Message

You can manually modify data element values for individual messages within the Data Details view rather than accepting the default values. After selecting a message to modify, use the following procedure to change a data element value within the message.

Procedure

1. Open a test file in the TDG component.

2. Select a message to modify.

3. Click the data element you want to modify and double-click the **Field Value** field to display the **Edit Field Value** dialog box.
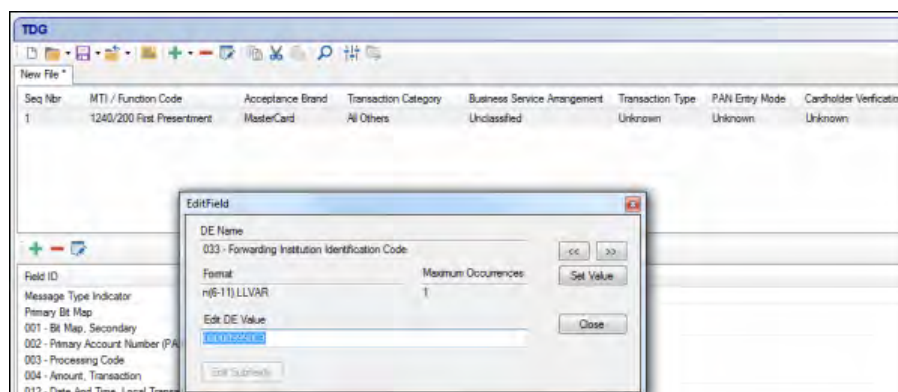
4. Type the new value for the data element in the **Edit DE/PDS Value** field and click **Set**. Or if modifying a data element that contains subfields, click **Edit Subfields**.

5. In the **Edit Subfield** dialog box, click a value to display in the edit box located at the bottom of the window.
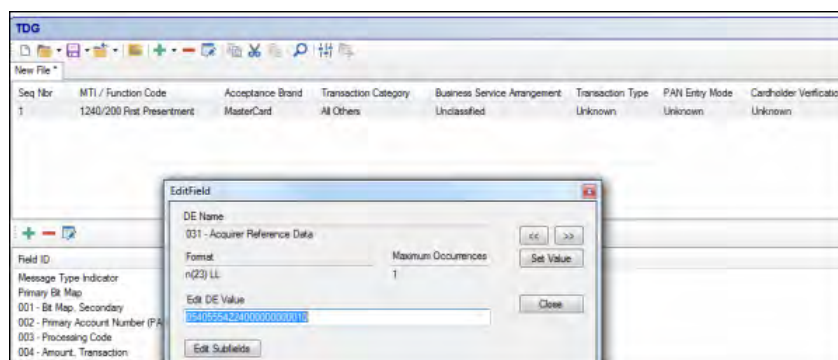
6. Type the new value for the selected value in the edit box, and then click **Update**.

7. Click **OK**.

8. Click **Set** within the Edit Field Value dialog box.

9. If modifying multiple data elements, click the arrows to scroll through the data elements within the message.

10. Repeat Steps 3 through 5 for each data element you want to modify.

11. Click **Close** when finished to return to the Data Details view in the main TDG application window.

NOTE

If a subfield allows for multiple occurrences, the Add and Delete Occurrence buttons become available for selection.

For example, PDS 0148 (Currency Exponents) may contain one to fifteen occurrences of currency exponent information. By using **Add Occurrence**, the customer may duplicate the last set of occurrence information listed each time the button is selected. Each subfield occurrence displays separately, allowing easy modification of the occurrence values as needed.

The **Delete Occurrence** deletes the selected occurrence while indicating the occurrence number and line position for verification. The number of occurrences is indicated in the upper left-hand corner of the window. Once reaching the maximum number of allowed occurrences, the Add Occurrence button becomes grayed out and unavailable.
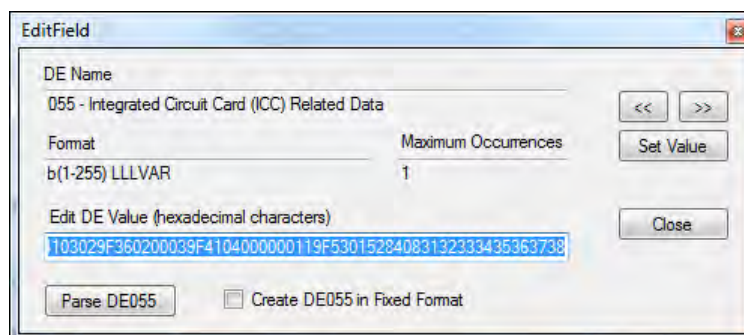
DE 55 Parsed View

From the Data Details view, you have the option to parse DE 55—Integrated Circuit Card (ICC) System-Related Data in the current message. The parsed view allows customers to view each Tag in DE 55 and their associated Length and Value. Use the following procedure to view DE 55 parsed in a message.

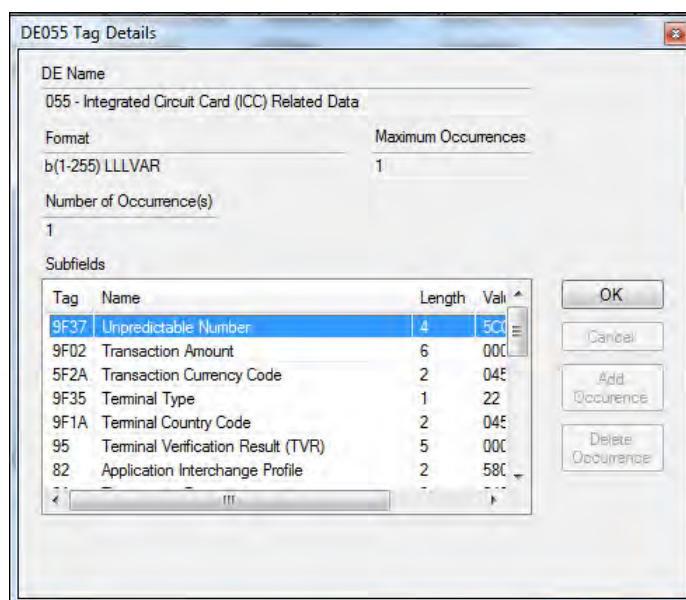**Procedure**

1. Open the TDG component.

2. Select a message in the TDG window.

3. From the View menu, select **Data Details** to display the message in the Data Details view.

4. Double-click the **Field Value** field of DE 55 to display the **Edit Field Value** dialog box.

5. Click **Parse DE55**. The DE 55 Values dialog box appears.

6. Click **OK** when finished viewing DE 55 values.

Creating Fixed Length DE 55

Within the TDG component, customers can select the fixed format option for DE 55 in the Edit Field Value dialog box. When selected, the fixed format option left justifies and pads DE 55 with low value (hexadecimal 00) up to 255 bytes.

Customers have two options for the formatting of DE 55 (Integrated Circuit Card [ICC] System Related Data):

• Send DE 55 in variable length format, sending only meaningful data

Or

• Send DE 55 in fixed format, in which case DE 55 is left justified and padded with low value (hexadecimal **00**) up to 255 bytes

Use the following procedure to create DE 55 in a fixed format.

Procedure

1. Open the TDG component.

2. Open a test file in the TDG.

3. Select a message and then click the Data Details ▦ button.

4. Double-click **DE 55** in the Field ID - Description.

5. Click **Create DE 55 in Fixed Format**.
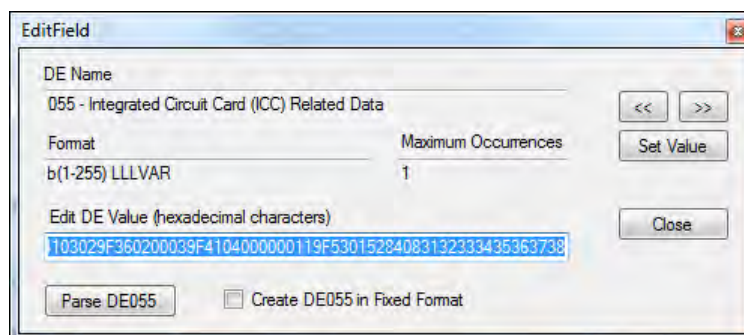
6. Click **Set**.

7. Click **Close**.

Adding a Data Element to a Message

From the Data Details view, you have the option to add data elements to the current message. Use the following procedure to add a data element to a message.

Procedure

1. Open a test file in the TDG component.

2. Select a message in the TDG window and from the View menu, click **Data Details**.

3. From the Record menu, click **Add/Edit Field** to display the Add/Edit Fields dialog box. The box lists all of the available data elements.

4. Click the corresponding option to toggle on or off the display of the following DE/PDS types in the Add/Edit Fields dialog box:

- Mandatory

- Conditional

- Optional

- Invalid

The DE/PDS types displayed are specific to the active message type in the test file and are from the perspective of the message originator.

5. Click the corresponding option to select/deselect data element(s) and then click **Update**.

6. Click **Close**.

7. The system will add the data element(s) using default values. Customers may need to update the value of the data element(s) following its addition to the message.

Deleting a Data Element from a Message

From the Data Detail view, you can delete data elements from a selected message. Customers should not delete mandatory data elements unless the intention of the test is to create deliberate errors in messages. Use the following procedure to delete a data element from a message.
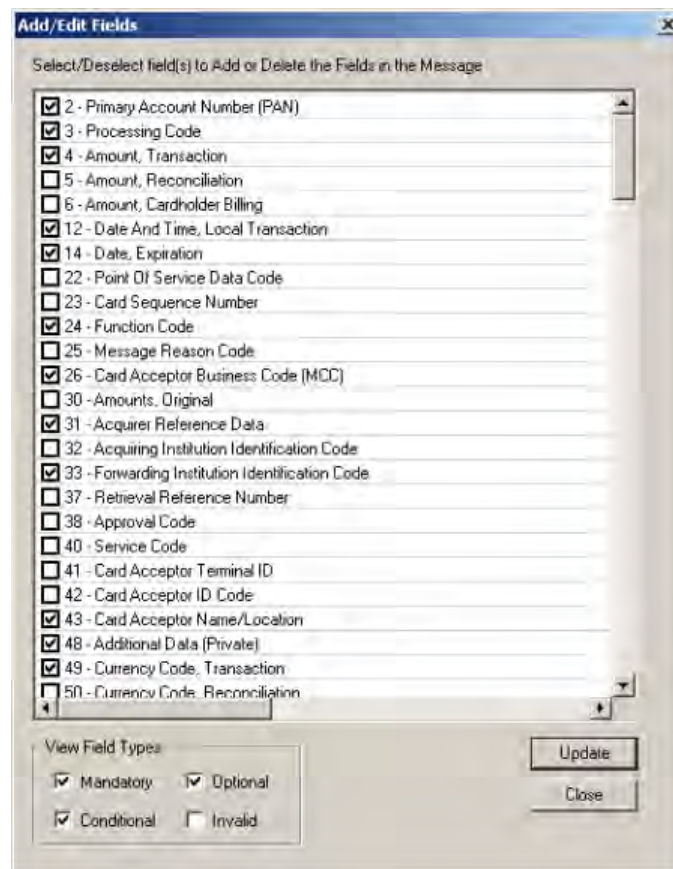
Procedure

1. .Open a test file in the TDG component.

2. Select a message in the TDG window and then from the View menu, click **Data Detail**.

3. Click the data element you want to delete.

4. From the Record menu, click **Delete Field**. The system deletes the data element immediately without requiring confirmation.

Modifying Cardholder File Information Detail in a Message

Customers may modify the cardholder file information within a message quickly and easily using the Cardholder/File Information option within the TDG component. When selected, the Cardholder/File Information displays all cardholder information for the active test file. Use the following procedure to modify the cardholder information using the Cardholder/File Information option.

Procedure

1. Open a test file in the TDG component.

2. From the Records menu, click **Cardholder/File Information** to display the File Cardholder Information dialog box.

3. Click a row to highlight.

4. Click **Edit** to display the Cardholder File Detail - Edit dialog box.

5. Modify the appropriate fields and then click **Update**.

6. If editing multiple records, click the arrows to scroll to another cardholder record and repeat steps 3 through 5. The PAN displayed in the Cardholder File Detail - Edit dialog box corresponds to the list displayed in the File Cardholder information.

7. Click **Close** to return to the File Cardholder Information dialog box.

8. Click **Close** when finished.

Modifying Merchant Detail in a Message

Customers may modify the merchant detail within a message quickly and easily using the Merchant/File Information option in the TDG component. When selected, the Merchant/File Information option displays all merchant information for the active test file. Use the following procedure to modify the merchant information using the Merchant/File Information option.

Procedure

1. Open a test file in the TDG component.

2. From the Record menu, click **Merchant/File Information** to display the File Merchant Information dialog box.

3. Click a **Transaction** and **Card Acceptor Business Code** category from the corresponding drop-down lists to filter the display of merchant information.

4. Click a row to highlight.

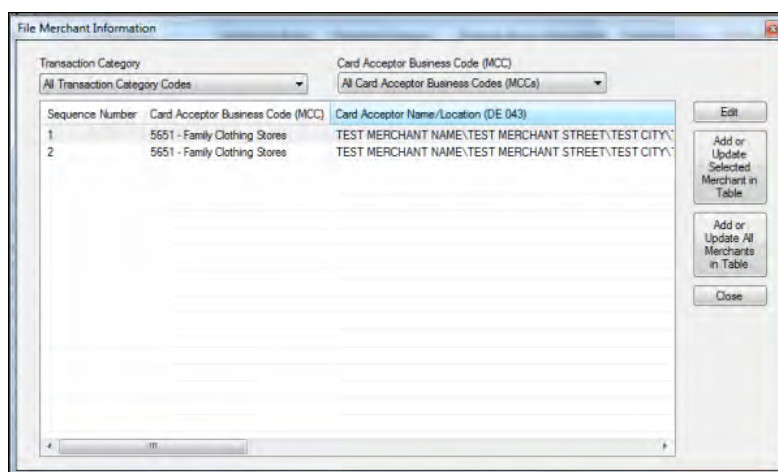5. Click **Edit** to display the Merchant File Detail – Edit dialog box.

6. Modify the appropriate fields and then click **Update**.

7. If editing multiple records, click the arrows to scroll to another merchant record and repeat steps 3 through 5.

8. Click **Close** to return to the File Merchant Information dialog box.

9. Click **Close** when finished.

Modifying *PayPass* and Primary Account Numbers in a Message

Customers may modify *PayPass* and Primary Account Numbers within a message quickly and easily using the *PayPass*/File Information option in the TDG component. When selected, the *PayPass*/File Information displays all *PayPass* and Primary Account information for the active test file. Use the following procedure to modify the *PayPass* and Primary Account Numbers using the *PayPass*/File Information option.

Procedure

1. Open a test file in the TDG component.

2. From the Record menu, click **PayPass/File Information** to display the File *PayPass* Information dialog box.

3. Click a row to highlight.

4. Click **Edit** to display the *PayPass* File Detail – Edit dialog box.

5. Modify the appropriate fields and then click **Update**.

6. Click **OK**.

7. Click **Close** to return to the File *PayPass* Information dialog box.

8. Click **Close** when finished.

Using Cardholder Table Data to Update Messages
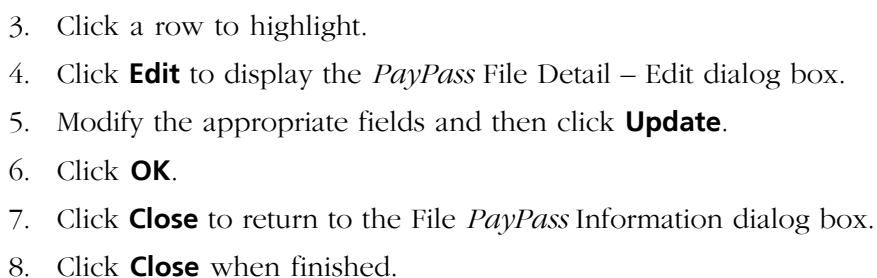
Using the Cardholder Table, customers can update specific cardholder information within the test file quickly and easily. The process allows you to edit or add cardholder data within the table and then update the active test file for those messages that contain the selected primary account number (PAN). Use the following procedure to update the active test file with cardholder data contained within the Cardholder Table.

Procedure

1. Open an IPM file in the TDG component.

2. From the Record menu, click **Cardholder/Table** to display the Cardholder Table dialog box.

3. Click a row.

4. Click **Update**. An information message confirms update of all records for the PAN selected.

5. Click **OK** to return to Cardholder Table dialog box.

Updating the Cardholder Table via IPM File Cardholder Information

Customers may update the Cardholder Table using the cardholder information contained in an existing IPM test file. Customers open an existing IPM formatted file in the TDG component. Using the Cardholder/File Information option, any, or all of the cardholder information contained in the file may be added to the Cardholder Table.

NOTE

A customer using the Authorization Message Conversion function in the TDG component converts a MasterCard Credit Authorization Simulator authorization file to an IPM formatted file. The customer then may use the cardholder detail contained in that converted IPM file to update the MasterCard Clearing Presentment Simulator's Cardholder Table.

Use the following procedure to update the Cardholder Table via the File Cardholder Information.

Procedure

1. Open an IPM file in the TDG component.

2. From the Record menu, click **Cardholder/File Information** to display the File Cardholder Information dialog box.
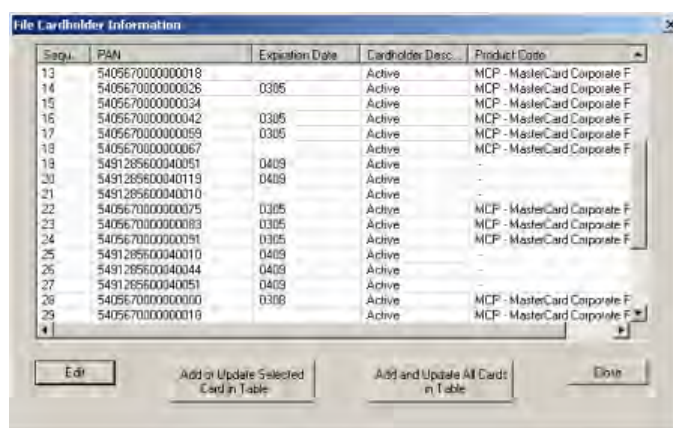
3. Click one of the following options:

   - To add/update a selected card only, select a card and click **Add or Update Selected Card in Table**

   - To add and update all the information in the File Cardholder Information to the Cardholder Table, click **Add and Update All Cards in Table**. An information window shows the number of cards added and updated within the Cardholder Table.

4. Click **OK**.

5. Click **Close**.

Using *PayPass* Table Data to Update Messages

Using the *PayPass* Table, customers can update specific *PayPass* information within the test file quickly and easily. The process allows the customer to update *PayPass* information within the table and then update the active test file for those messages that contain the selected *PayPass* information. Use the following procedure to update the active test file with *PayPass* information contained within the *PayPass* Table.

Procedure

1. From the Record menu, click **PayPass/Table** to display the *PayPass* Table dialog box.

2. Click a row.

3. Click **Update**.

4. Click **OK** to return to *PayPass* Table dialog box.

Updating the *PayPass* Table via IPM File *PayPass* Information

Customers may update the *PayPass* Table using the *PayPass* information contained in an existing IPM test file. Customers open an existing IPM formatted file in the TDG component. Using the *PayPass*/File Information option some or all of the *PayPass* information contained in the file may be added to the *PayPass* Table. Use the following procedure to update the *PayPass* Table via the File *PayPass* Information table.

Procedure

1. Open an IPM file in the TDG component.

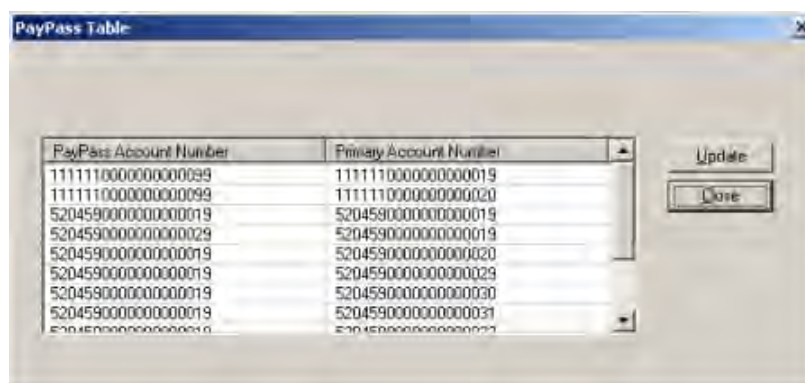2. From the Record menu, click **PayPass/File Information** to display the File *PayPass* Information dialog box.

3. Click one of the following options:

- To add/update selected *PayPass* information, select a line in the grid and click **Add or Update Selected *PayPass* in Table**.

- To add and update all the *PayPass* information in the file, click **Add and Update All *PayPass* in Table**.

An information window shows the number of cards added and/or updated within the *PayPass* Table.

4. Click **OK**.

5. Click **Close**.

Using Merchant Table Data to Update Messages

Using the Merchant Table, customers can update specific merchant information within the test file quickly and easily. The process allows the customer to update merchant data within the active test file in the TDG component for those messages that contain the selected merchant.

Procedure

1. From the Record menu, click **Merchant/Table** to display the Merchant Table dialog box.

2. Click a row to highlight.

3. Click **Update**. An information window confirms update of all records for the merchant selected.

4. Click **OK** to update or **Cancel** to cancel request and return to the Merchant Table dialog box.

Authorization Message Conversion

The TDG component has the ability to import authorization files from the MasterCard Authorization Simulator (MAS). This allows customers to create an IPM file quickly or to perform complete end-to-end testing.

For example, issuers can generate test authorization transactions and submit them to the customer host system for approval. The authorization files log all transactions from the MasterCard Authorization Simulator. The issuer can use these transactions in the file as input to an import routine in the TDG component of the MasterCard Clearing Presentment Simulator to create IPM clearing messages within an IPM test file.

The TDG converts the authorization messages in the file, based on the value in Response Code (DE 39), to the appropriate clearing message type as indicated in the following table.

IF DE 39 equals...	THEN TDG creates this IPM message...
00 (Approved) 08 (Honor with ID)10 (Partial Approval)87 (Purchase Amount Only, No Cash Back Allowed)	1240-200 (First Presentment)
04 (Capture Card)	1740-700 (Fee Collection - Member Generated)
41 (Lost Card)	1740-700 (Fee Collection - Member Generated)
43 (Stolen Card)	1740-700 (Fee Collection - Member Generated)
all other values	no IPM message created, transaction ignored

Once created, the IPM test file is processed through the CEE component creating a notification file.

Importing an Authorization File

Use the following steps to import an authorization file into the TDG.

Procedure

1. Double-click the **TDG** icon to open the Test Data Generator component window.

2. From the File menu, click **Import Auth File** to display an Open dialog box.

3. Click a file, and then click **Open**.

4. When the file opening is complete, click **Close** in the Open File indicator window(s).

5. Modify the IPM file as needed.

    The TDG creates separate IPM files for each Acquiring Institution ID Code (DE 32) of an Authorization Request/0100 message, based on the content of the authorization file. Each authorization-generated IPM file contains:

    • IPM header and trailer messages

    • First Presentment/1240 messages from all authorizations

    • Associated financial addendum based on transaction types, card acceptor type, or card product

    • Corresponding IPM data elements and private data subelements from the data elements contained in the Authorization/0100/0110 messages

    • Fee Collection/1740-700 messages from captured cards, lost or stolen response codes

Convert Notification File to an Input File Format

Customers may convert a notification file into a file that is ready for processing. A notification file can be created by GCMS central site or by the CEE. The converting function changes or removes those DEs and PDSs that are populated by central site/CEE. The file will be placed into a format that is ready for processing. Customers may make additional changes to the file to meet their testing needs. Use the following procedure to convert a notification file to an input file.

Procedure

1. Open the TDG component.

2. In the TDG, click **File**/**Convert Notification to Input File** to launch the Convert Notification to Input File dialog box.

3. Click **Open**.

4. Click a **Notification file** and then click **Open**.

5. Click **Save** in the Convert Notification to Input File dialog box.

6. Enter a file name and select the destination in the Save As dialog box.

7. Click **Save**.

8. Click **OK**. The file opens in the TDG.

Modifying a Test File

You can customize a new test file or an existing test file using the various functions detailed within this chapter.

Add/Delete Data Elements and Private Data Subelements in All Messages

Customers may add or delete a data element or private data subelement for all selected messages in an IPM file using the **Modify Records** option. Customers may access the Modify Records dialog box when viewing a file in either the Business Summary or Business Detail view in the TDG component.

NOTE

Customers may add all mandatory fields for a specific message type in an IPM file with one update by selecting "Add All Mandatory DE/PDSs" in the Modify Records dialog box. This capability makes it easy to update IPM files with fields that have become mandatory for a new release of GCMS.

Adding a Data Element to All Messages for a Selected Message Type

Use the following procedure to add a specific data element to all messages matching the specified message type in an IPM test file.

Procedure

1. Open a test file in the TDG component.

2. From the View menu, click either the **Business Summary** or **Business Detail** view.

3. From the Record menu, click **Modify Records**.

4. Click a **Message Type** and a **DE/PDS** in their respective drop-down lists.
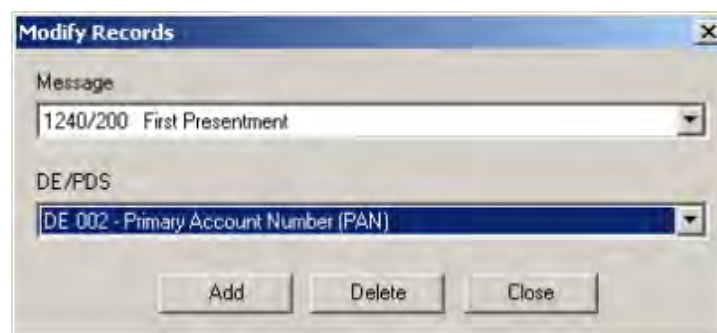
5. Click **Add**.

6. Answer appropriately to a confirmation message validating the action.

7. Click **OK** in a message that indicates the number of messages updated.

8. Click **Close**.

Deleting a Data Element from All Messages for a Selected Message Type

Use the following procedure to delete a specific data element from all messages matching the specified message type in an IPM test file.

Procedure

1. Open a file in the TDG component.

2. From the View menu, click either the **Business Summary** or **Business Detail** view.

3. From the Record menu, click **Modify Records**.

4. Click a **Message Type** and a **DE/PDS** in their respective drop-down lists.

5. Click **Delete**.

6. Answer appropriately to a confirmation message validating the action.

7. Click **OK** in a message that indicates the number of messages updated.

8. Click **Close**.

Adding and Removing Addendum Messages

Financial detail addendum messages provide information that is critical to qualification for certain interchange programs. Financial detail addendum messages must immediately follow the associated first presentment messages. For simulator processing, addendum messages may be associated to a specific First Presentment using the Add Remove Addendum option in the TDG. Use the following procedure to add or remove addendum messages in a test file.

Procedure

1. Open a test file in the TDG component.

2. Click a first presentment message.

3. From the Options menu, click **Add Remove Addendum**.

4. Click a check box or multiple check boxes as needed for the corresponding addendums.
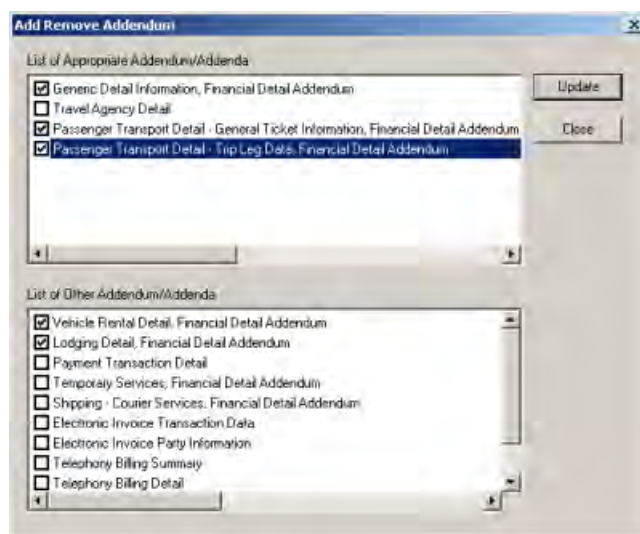
NOTE

Clicking a check box selects/deselects the corresponding addendum message to be added or removed in the test file for the selected first present message.

5. Click **Update**.

6. Click **Close** when finished.

Using the Find and Replace Options

When working with test files in the TDG component, you can search for and replace certain values. From the **Edit** menu, you can select the **Find** or **Replace** option. The Find and Replace functions apply only to the Business Class Detail view within the TDG.

TIP

For example, you can open an existing test file and replace the Expiration Date for specific transactions or for all the transactions within the test file that contain the data specified.

The **Find** option within the TDG component performs a search in the active test script for all transactions after the current transaction.

The **Replace** option also searches the active test file to find each occurrence of the specified data and then allows you to replace the existing data with the new data that you define.

Within the Find dialog box, you can define the **Find in Field** (data element) and the specific data contained within that field. You also can define the message type(s) in the **Find in Message(s)** field to refine the Find feature by searching specific message types. You may select one or multiple message types in **Find in Message(s)** by using the standard Microsoft Windows convention of using a left mouse click in conjunction with the Control (CTRL) or Shift (SHIFT) keys.

Find and Replace Wildcard

When working with test files in the TDG component, you can search for and replace certain values. From the **Edit** menu, you can select the **Find** or **Replace** option. The Find and Replace functions apply only to the Business Detail view within the TDG. A customer may use the asterisk character (*****) as a wildcard to match any value for the specified "Find What" field, or to match the complete absence of the field in question.

With the entry of this wildcard character in the "Find What" field of the Find and Replace dialog boxes, the TDG will match any value in a message provided a value does exist. If the system does not find the value, it responds with a "Cannot Find" message.

In the Replace dialog box, you define the **Find in Field**, the **Find in Message(s)**, the **Find What** text, and the **Replace With** text. The **Find What** and the **Replace With** fields allow you to type data into the text boxes.

You may select one or multiple message type(s) in **Find in Message(s)** using the standard Microsoft Windows convention of using a left mouse click in conjunction with the Control (CTRL) or Shift (SHIFT) keys.
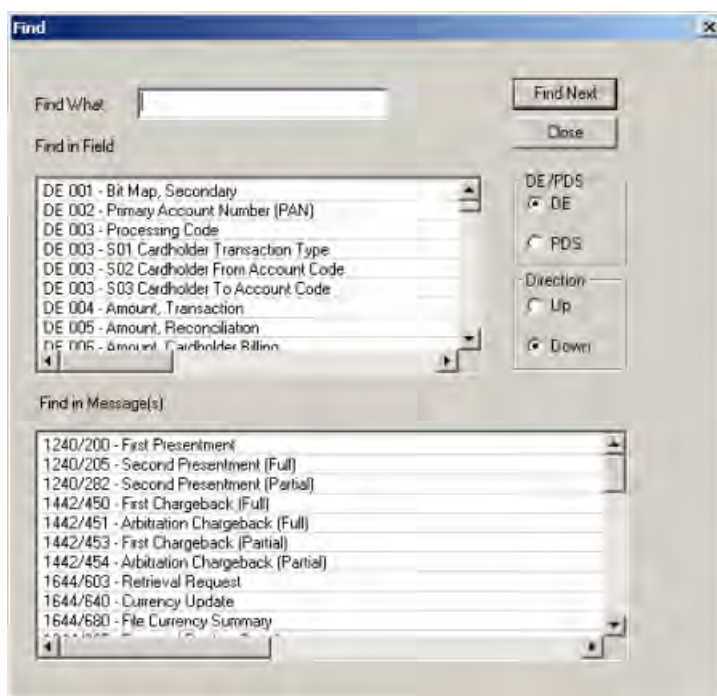
In the **Find What** field, you can use an asterisk as a wildcard to indicate, "find any value."

If you choose **Replace All**, the system will replace all occurrences of the search within the entire test file. Alternatively, by choosing **Replace**, you may selectively replace the occurrences that you choose.

4-28   14 August 2014 • MasterCard Clearing Presentment Simulator Guide

Finding a Specific Data Element Value

The **Find** function applies only to the Business Detail view within the TDG component. Use the following procedure to find a specific data element value in a test file.

Procedure

1. Open a test file in the TDG component.

2. From the Edit menu, click **Find** to open the Find dialog box.

3. In the **Find What** field, type the value you seek.

4. In **Find in Field,** click the field in which to search.

5. In the **Find in Message(s)** field, click a message or messages in which to search.

6. Click a direction to search, either **Up** or **Down**. The search includes the current record.

7. Click **Find Next**. If the system finds the data element value, it highlights the first record in which it occurs within the main TDG application window (Business Detail view). If the system does not find the data element value, it responds with a "Cannot Find" message.

8. Click **Close** when finished with the search.

Replacing a Data Element Value with a Specific Value

You can replace a data element value anywhere in a test file by using the Replace feature in the TDG component. The search process contained in the Replace option searches the entire test file. The Replace option applies only to the Business Detail view within the TDG. Use the following procedure to replace a specific data element value within a test file.

Procedure

1. Open a test file in the TDG component.

2. From the Edit menu, click **Replace** to open the Replace dialog box.

3. In the **Find What** field, type the value you seek.

4. In the **Replace With** field, type the value that you want to replace the existing value.

5. In **Find in Field**, click the data element that you want searched.

6. In the **Find in Message(s)** field, click a message(s) in which to search.

7. Click **Find Next** to begin the search.

8. Select one of the following options:

   • Click **Replace All** to replace all occurrences of the value in the entire test file.

   • Click **Replace** to replace the occurrence of the value displayed in the TDG main application window (Business Class Detail view).

9. Click **Find Next** to continue searching. You can choose to ignore a specific occurrence and go to the next occurrence by clicking **Find Next**.

10. Click **Close** when finished with the replacement.

Cutting, Copying, and Pasting Messages

The standard Windows commands of cut, copy, and paste are available from the **Edit** menu within the TDG. Customers may copy a message or multiple messages from one transaction file and paste them into another file or within the same file. Use the following procedure to edit a test file in the TDG component using Cut, Copy, and Paste.

Procedure

1. Open a test file in the TDG component.

2. Click a message(s) in the test file.

3. From the **Edit** menu, click **Cut** or **Copy**.

4. Move your insertion point to the new location by clicking a message.

5. From the **Edit** menu, click **Paste**. The system inserts the pasted message above the selected message insertion point.

Changing the Order of Messages

Customers may use the drag and drop function in the TDG component to change the order of the messages within a test file.

To move a message to a different location within a test file in the TDG, select the message, click, and hold the left mouse button while dragging the message to its new location. Drop the message by releasing the left mouse button. The system places the message below the insertion point.

Deleting Messages

To delete a message from a test file within the TDG component, select the message and press delete on the toolbar, or select **Record/Delete Record**. The system immediately deletes the message without a confirmation warning.

Viewing a Test File

The TDG component provides three primary modes for viewing a test file; Business Detail (default view), Business Summary, and Data Details.

Business Detail View

The Business Class Details view displays all transactions within the test file. While in the Business Class Details view, customers may navigate quickly to the Data Details view by double-clicking a message.

NOTE

The status bar in the Business Details and Data Details views indicates the file format and layout, the view and the file sequence number of the active record as well as the total number of records in the file.

Business Summary View

The Business Summary displays a summary view of all transactions within the test file, grouping the different message types and providing the individual group record totals.
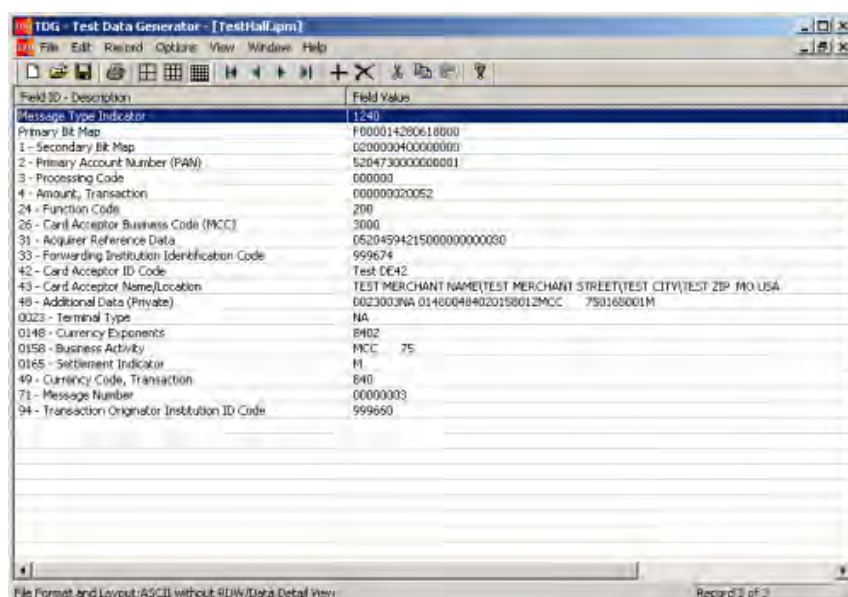
Data Detail View

The Data Detail provides a detailed view of the selected (or highlighted) transaction within the test file parsed out by data element. This allows the customer to view the exact information contained within the individual message.

Printing a Test File

You may want to print your test file for examination or reference. Print options within the TDG component allow you to print **Business Summary**, **Business Detail**, and **Data Detail** view format information from the Print menu while in the corresponding view mode.

Print View Information

Use the following procedure to print the active "view" of your test file in the TDG component.

Procedure

1. Open a test file in the TDG component.

2. From the **File** menu, click **Print** to open the Print dialog box.

3. Click the appropriate print options.

4. Click **OK** to print the active view of the test file.

Print All or Message Range Option

You may also print the current message, all of the messages in a file or a selected range of messages through a Print menu option available only while in the **Data Detail** view. Use the following procedure to print from the Data Detail view in the TDG component.

Procedure

1. Open a test file in the TDG component.

2. From the View menu, click **Data Details**.

3. From the File menu, click **Print**.

4. Click a print option.
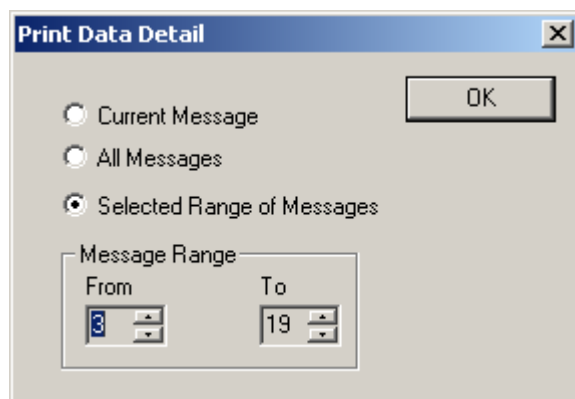
NOTE

If choosing the Selected Range of Messages option, adjust the Message Range accordingly by using the arrows provided in the From and To fields.

5. Click **OK** in the Print Data Detail dialog box.

6. Click **OK** in the Print dialog box.

Print Preview

Use the following procedure to view a screen image of the test file in the TDG component before printing.

Procedure

1. Open a test file in the TDG component.

2. From the File menu, click **Print Preview** to display an image of your file on the screen.

3. Click **Zoom In** to see the report in more detail, or **Next Page** to scroll to the next page of the report.

4. Click **Close** to end the print preview.

Chapter 5   Using the Simulator

This chapter explains how customers use the Clearing Emulation Engine component to conduct test sessions.

Introduction to the CEE

Customers use the Clearing Emulation Engine (CEE) component of the MasterCard Clearing Presentment Simulator to emulate transaction processing through the Global Clearing Management System (GCMS). The CEE processes IPM format files created within the specifications of a file submitted to GCMS for processing.

The CEE determines which processed messages are expected as notification and which are expected as acknowledgement as determined by the configuration setup at the time of processing. As part of message processing, the CEE performs calculation of currency conversion values, fee assessments, and reconciliation totals with the same processing rules applied by GCMS. The CEE creates output files containing any notification messages and the calculated reconciliation totals for acknowledgement and notification based upon the configuration settings.

The CEE component will process test files generated with the TDG component of the simulator as well as files generated by the customer host system.

The CEE component can be configured to automatically generate next step records for complete transaction life cycle testing. When configured to perform life cycle testing, the CEE will generate life cycle messages based upon user defined rules and will create those messages in a separate life cycle output file.

The CEE component also may be used to emulate Early Reconciliation by processing each test file in a separate CEE testing cycle, resulting in one Acknowledgement file for each outbound file.

The CEE captures the results of a testing session in a log file that can be viewed at any time during an active test session and can be saved for later reference. The log indicates all the processing actions taken by the CEE including the following:

- Addition of a file to the processing queue

- Determination of the message intent for notification or acknowledgement

- Fee calculation as determined by the business service arrangement indicated in the message

- Determination of the appropriate reconciliation category to which a transaction will be attributed for reporting in the Financial Position Detail messages

The CEE's main window displays the following categories for each opened file:

- **File Name and Path**

Name of the opened file including the directory location of the file.

- **No. of Records in File**

Total number of records contained in the file.

- **No. of Records Processed**

Total number of records in the individual file that have been processed through the CEE component during current test session.

- **No. of Errors in File**

Total number of records in error for the individual file found during the initial edit check.

The lower pane of the CEE window displays the following combined information for all the files contained in a testing session. The displayed information updates with the adding and removing of test files.

- **Total Records in All Files**

Total number of records contained in the file(s) opened.

- **Records Processed From All Files**

Total number of records in opened file(s) that have been processed through the CEE component during current test session.

- **Total Number of Errors**

Total number of records in error for active file(s) found during the initial edit check.

Set CEE Preferences

The CEE Preferences dialog box allows you to set the following preferences that the CEE references when processing test files in the simulator.

The CEE Preferences option allow you to:

- Set CEE File Format and Layout Options
- Validate DE 55 Cryptogram
- Perform Data Integrity Edits
- Create a Crypto Log
- Create 1644/640 and/or 1644/680 messages
- Select Configuration
- Set Customer File Folder directory location
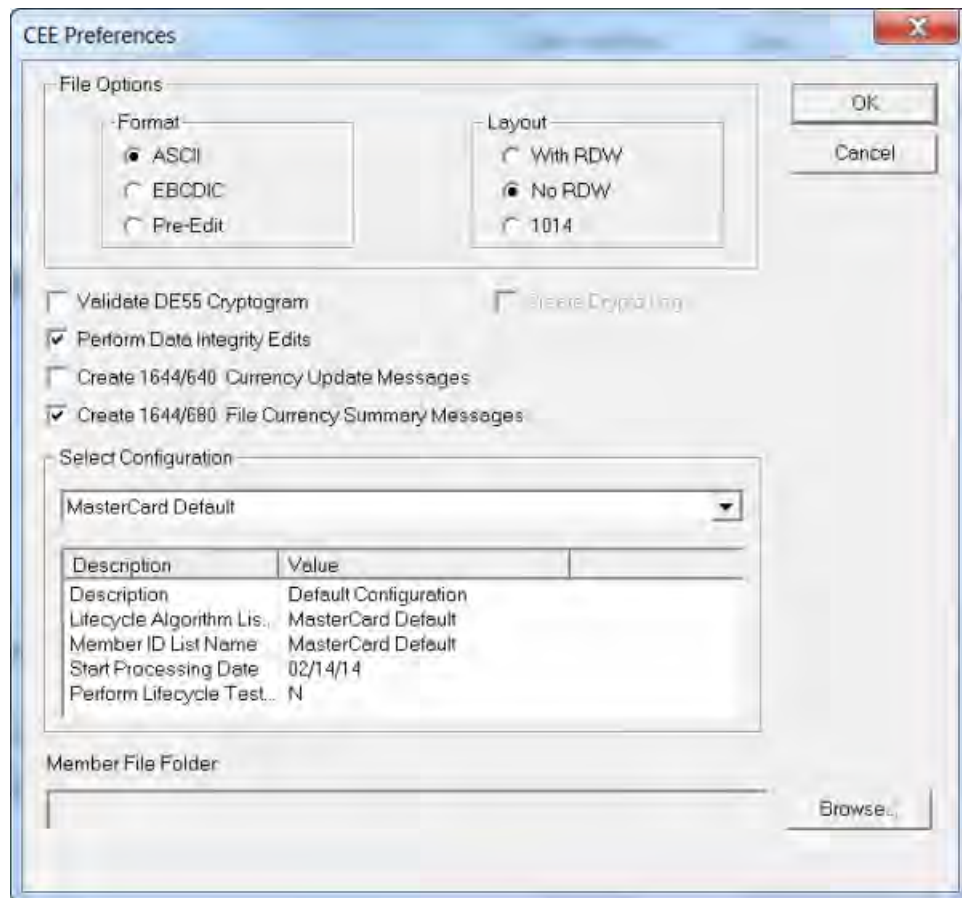
CEE File Options

The File Options field allows you to set a default character format that determines the character format and file layout of the CEE output file. For example, the record formatting requirements of the customer's mainframe environment and IPM pre-edit and Utilities Workstation Plus for XP environment require selection of either the Pre-Edit or 1014 File Encoding options for MasterCard Clearing Presentment Simulator test file compatibility.

The File Option selections set within the CEE Preferences dialog box affect only the CEE output files. File Option fields are set in the TDG and CEE components independently of each other.

The File Options set in the CEE component determine the file format of the reconciliation files regardless of the encoding of the input file. For example, if the File Options of the CEE are set to EBCDIC and the file being processed is encoded in ASCII, the resulting Acknowledgement/Notification file(s) is created in EBCDIC.

Validate DE 55 Cryptogram

When selected in the CEE Preferences dialog box, the Validate DE 55 Cryptogram option in the CEE component validates the DE 55 Cryptogram for each message during CEE processing.

The Validate DE 55 Cryptogram check box acts as a toggle on or off switch when selected/deselected.

Crypto Log

Customers may turn on or off a Crypto Log option in the CEE component that records information about the simulator's validation of DE 55 cryptographic calculations.

This text log is located in the main simulator directory, MCPS x_x[1] . When both the Validate DE 55 and the Create Crypto Log check boxes are selected, the CEE creates a Crypto Log during processing. The Create Crypto Log check box acts as a toggle on or off switch when selected/deselected. The default name for the log is destrace.txt.

Typically customers will not need the Crypto log. Although at times Simulator support staff may request the Crypto log information during a support call.

---

1.   x_x equals the current simulator version number.

Perform Data Integrity Edits

When enabled, the Perform Data Integrity Edits option validates files added to the CEE component by checking against a series of data integrity edits that simulate the same edits performed in Data Warehouse. This option is informational and will not result in the rejection of transactions during simulator processing.

This option allows the user to check their clearing files (within the simulator) for edits normally performed in Data Warehouse. This allows the user the option of correcting the files before sending them to MasterCard.

For questions regarding the Data Integrity Program and Data Integrity Edits, please contact the Data Integrity team at, PS Data Integrity@mastercard.com.

Enabling Data Integrity Edits

Use the following procedure to enable Data Integrity edits within the CEE component of the MasterCard Clearing Presentment Simulator.

Procedure

1. In the MCPS folder, double-click the **CEE** icon to open the CEE component.
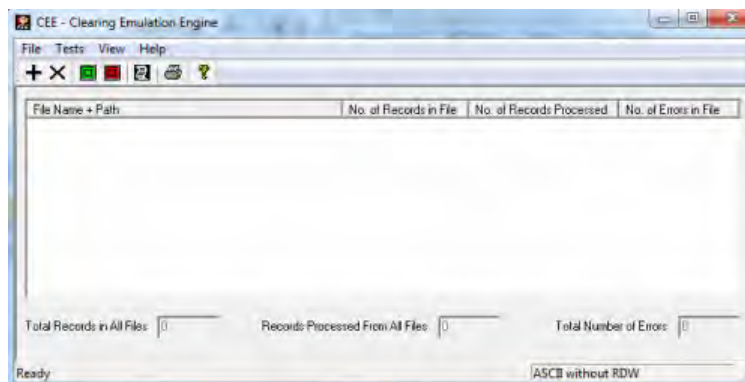
2. From the File menu, click **CEE Preferences**.

3. Click **Perform Data Integrity Edits**. The Data Integrity Edits will be captured in the CEE log.
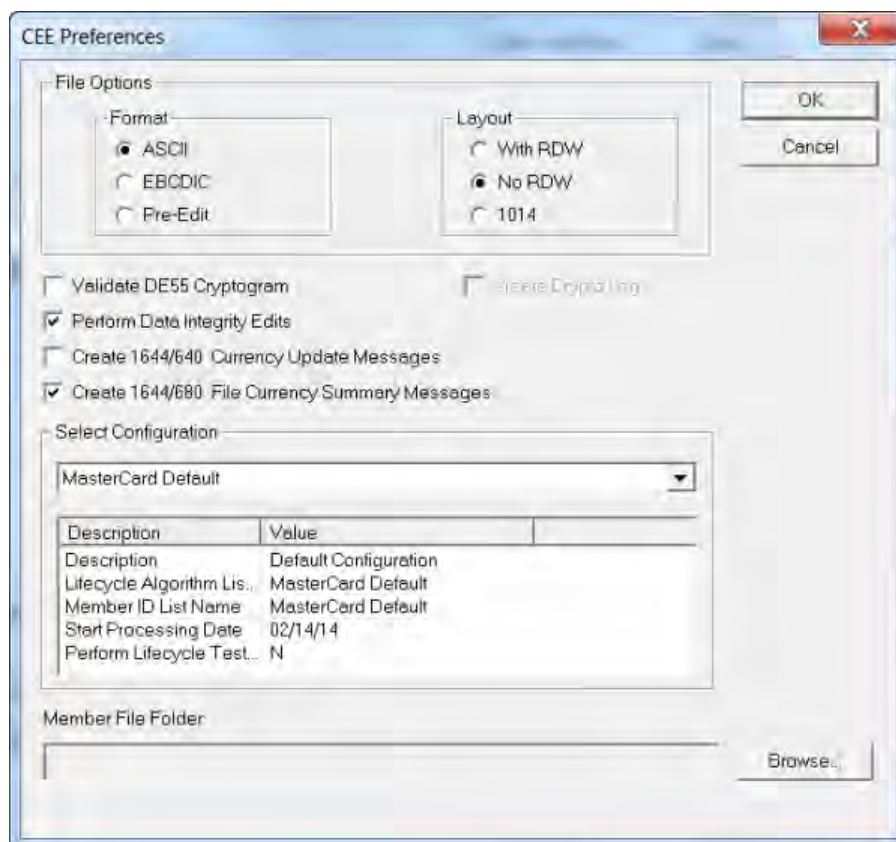
Reviewing a File for Data Integrity Errors

Once the **Perform Data Integrity Edits** option is enabled in the CEE Preferences, the edits are automatically performed on each test file as it is opened within the CEE component.

The Data Integrity edit results are shown at the top of the CEE log and are color coded to reflect the edits:

- A section header and trailer are added in **Green** at the beginning and end of the Data Integrity edits in the CEE log.

- Data Integrity errors are indicated in **Blue** and are nested together when multiple errors are present in a record.

Example:

<Date> - <Time> <Record#><Heading/Edit Number>

OCT 03 2012 06:55:18 ===========================

OCT 03 2012 06:55:18 Data Integrity Edit Results Start

OCT 03 2012 06:55:18 ===========================

OCT 03 2012 06:55:18 Record 2 (1240/200) contains following Data Integrity Warning(s):

```
OCT 03 2012  06:55:18      CLEARING EDIT:1 MCC_a

OCT 03 2012  06:55:18      CLEARING EDIT:3 INV_DE 43_d

OCT 03 2012  06:55:18      CLEARING EDIT:3 INV_DE 43_f

OCT 03 2012  06:55:18      CLEARING EDIT:4 CNTRY_GEO

OCT 03 2012  06:55:18      CLEARING EDIT:5 INV_STREET

OCT 03 2012  06:55:18      CLEARING EDIT:7 TERM_POS_a

OCT 03 2012  06:55:18      CLEARING EDIT:7 TERM_POS_b

OCT 03 2012  06:55:18      CHIP CLEARING EDIT:1
DE23_MISSING_DE55_PRESENT

OCT 03 2012  06:55:18      CHIP CLEARING EDIT:2
MISSING_MANDATORY_TAG

OCT 03 2012  06:55:18      CHIP CLEARING EDIT:4
MANDATORY_TAG_BAD_VALUE

OCT 03 2012  06:55:18      CHIP CLEARING EDIT:3
MANDATORY_TAG_BAD_LENGTH
```

```
OCT 03 2012  06:55:18      CHIP CLEARING EDIT:5
OPTIONAL_TAG_BAD_LENGTH
```

```
OCT 03 2012  06:55:18      CHIP CLEARING EDIT:6
INVALID_DE55_TAG
```

OCT 03 2012 06:55:18 Record 3 (1240/200) contains following Data Integrity Warning(s):

```
OCT 03 2012  06:55:18      CLEARING EDIT:1 MCC_a
```

```
OCT 03 2012  06:55:18      CLEARING EDIT:3 INV_DE 43_d
```

```
OCT 03 2012  06:55:18      CLEARING EDIT:3 INV_DE 43_f
```

```
OCT 03 2012  06:55:18      CLEARING EDIT:4 CNTRY_GEO
```

```
OCT 03 2012  06:55:18      CLEARING EDIT:5 INV_STREET
```

```
OCT 03 2012  06:55:18      CLEARING EDIT:7 TERM_POS_a
```

```
OCT 03 2012  06:55:18      CLEARING EDIT:7 TERM_POS_b
```

Please Contact ps_data_integrity@mastercard.com for questions or support on Data Integrity edits.

OCT 03 2012 06:55:18 ============================

OCT 03 2012 06:55:18 Data Integrity Edit Results End

OCT 03 2012 06:55:18 ============================

Data Integrity log entries will be concluded with a trailer as shown above.

For an explanation of Data Integrity Clearing edits, please see the *Data Integrity Monitoring Program* manual or send an e-mail message to the Data Integrity team at PS_Data_Integrity@mastercard.com.

List of Data Integrity Clearing Edits Performed in MCPS

Following is a list of data integrity edits performed in the MasterCard Clearing Presentment Simulator.

DI Clearing Edit Number	Performed in MCPS	Comments
1	Yes	
2	Yes	This edit is performed on a per file basis, MCPS has no history to pull from, so the first entry that meets the criteria is used to compare to all other entries that meet the same criteria for the edit.
3_a	Yes	

DI Clearing Edit Number	Performed in MCPS	Comments
3_b	Yes	
3_c	No	No longer applicable
3_d	Yes	
3_e	Yes	
3_f	Yes	
4	Yes	The first edit for each item is performed in MCPS (DE 43 [Card Acceptor Name/Location], subfield 4 [Space] is all zeros, all nines or unknown).MCPS is not able to compare postal codes to countries because there is not a global address database in MCPS or in the Member Parameter Extract, therefore the second edit for each item cannot be performed.
5	Yes	
6	No	This edit is not performed in MCPS. MCPS is not able to compare postal codes to cities because there is not a global address database in MCPS or in the Member Parameter Extract.
7	Yes	
8	Yes	This edit is performed only when a file is imported into the TDG component using the Auth to IPM option. The simulator doesn't have an Auth history and can only compare Auth file values upon import of an ATH file.
9	Yes	This edit is performed only when a file is imported into the TDG component using the Auth to IPM option. The simulator doesn't have an Auth history and can only compare Auth file values upon import of an ATH file.
10	Auth to IPM only	This edit is performed only when a file is imported into the TDG component using the Auth to IPM option. The simulator doesn't have an Auth history and can only compare Auth file values upon import of an ATH file.This edit is part of the DE 22 (Point-of-Service [POS] Entry Mode) Auth to IPM mapping from the *IPM Clearing Formats* manual.

Currency Update and File Currency Summary Messages

Customers may specify the creation of 1644/640 Currency Update and/or 1644/680 File Currency Summary messages during CEE processing through selection options in the CEE Preferences dialog box.

The CEE will include/exclude the messages during processing, based on the user preferences selected in the CEE Preferences dialog box. The corresponding check box acts as a toggle on or off switch when selected.

Select Configuration

From the CEE Preferences option, you may select a configuration for CEE processing from existing configuration names. This allows you the ability to quickly set a configuration from within the CEE without needing to access the Configuration component.

Although the Select Configuration option references the Configuration Name, customers may not access or edit the configuration from the CEE component.

Customer File Folder Directory Location

Customers may change the default output file directory location for the CEE component by selecting a directory, other than the default, through the CEE Preferences dialog box. Once selected, the Customer File Folder directory becomes the default directory location until modified. If this is left blank, the CEE uses the default location and places the output file in the same location as the input file.

Processing a File in the CEE

Use the following procedure to open and process a file in the Clearing Emulation Engine (CEE) component.

Procedure

1. In the MCPS folder, double-click the **CEE** icon to open the CEE component.

2. From the File menu, click **Add File**. The system displays an **Open** dialog box that defaults to files located in the MCPS folder but files may be opened from any location.

3. Click a file(s) and then click **Open**.

NOTE

The CEE component performs an initial edit when opening a file that checks the file for record count and the messages for mandatory data elements, valid data element values, and correct data element lengths. The initial edit also checks to see if any transactions within the test file contain one or more private data subelements (PDSs) with a zero byte length.

The CEE component also performs Data Integrity Edits and DE 55 Cryptogram validation for each message in the file if these options are selected in the CEE Preferences.

4. From the Tests menu, click **Start**. A message box indicates the output file name of the test, the directory path of the file, and the file encoding.
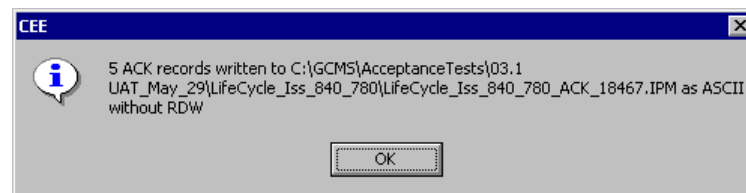
5. Click **OK**.

Zero Byte Length PDS(s) in CEE

If a transaction message in a test file contains one or more PDS that is set with a zero length, then an error message will display in the CEE component.
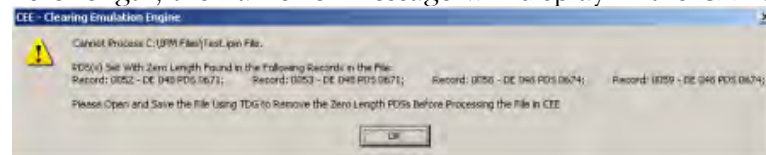
If this is the case the user will not be able to add or process the file in the CEE unless the file has been corrected.

The following example log indicates a zero length PDS error:

Example:

FEB 18 2014 16:21:48 User Cleared Log File - MasterCard Clearing Presentment Simulator Version xx.x

FEB 18 2014 16:21:58 Cannot Process C:\IPM Files\Test.ipm File.

FEB 18 2014 16:21:58 PDS(s) Set With Zero Length Found in the Following Records in the File:

FEB 18 2014 16:21:58 Record: 0052 - DE 048 PDS 0671; Record: 0053 - DE 048 PDS 0671; Record: 0058 - DE 048 PDS 0674; Record: 0059 - DE 048 PDS 0674;

FEB 18 2014 16:21:58 Please Open and Save the File Using TDG to Remove the Zero Length PDSs Before Processing the File in CEE

Output File Name Format

When generating file output names, the CEE uses the input file name followed by a three letter descriptor, describing the type of file, (for example, ACK, NOT, LIF, NAK, COL), followed by randomly assigned numbers, ending with an .ipm extension.

Example:		
Input file name:	TDG1.ipm	
Output file names:	TDG1_ACK_1 234.ipm	Acknowledgement Only File
	TDG1_NOT_1 234.ipm	Notification Only File
	TDG1_LIF_123 4.ipm	Automatic Life Cycle File
	TDG1_NAK_1 234.ipm	Acknowledgement & Notification File
	TDG1_COL_1 234.ipm	Collection Only File

Processing Multiple Test Files

The CEE component allows customers to process multiple test files during a single testing session that results in the creation of a single Acknowledgement file with totals for multiple customer outbound files.

Customers can add or remove test files at any time using the **Add File** or **Remove File** options from the **File** menu. Customers may select multiple files from the Open dialog box by using the standard Microsoft® Windows convention of a left mouse click in conjunction with the Control (CTRL) or Shift (SHIFT) keys.

Based on the initial edit check performed in the CEE upon opening a file, customers may determine, at that point, what files to continue using through the test session process.

If the initial edit check indicates multiple errors in the file, customers may remove the file(s) from the test session. Customers would open the file (in error) in the TDG component for further evaluation and correction of errors before reprocessing through the CEE.

NOTE

Intracurrency testing must be performed in a separate CEE testing cycle than non-intracurrency testing due to conflicting configuration settings.

CEE Log for File Processing Information

The CEE component records daily activity in a CEE log. The log records information about file processing activity within the CEE.

The log is located in the main simulator directory, MCPS xx_x[2]. The CEE log name format is CEE_YYYYMMDD.log where YYYYMMDD is the current year, month, and day of the information. The simulator appends the data to the CEE log if there are multiple simulator sessions during a day, resulting in only one file created for any one day. Customers may change the log name to open a new log or clear the log if they do not want the information appended for a specific test.

The log indicates all test files opened during the active test session with a total record and error count for each file. A record number identifies the message containing an error(s) found within the individual test file(s). The log also displays the data element(s) in error as well as an error description.

Example:	FEB 18 2014 19:40:00 CEE Application Started - MasterCard Clearing Presentment Simulator Version 12.Q1
	FEB 18 2014 19:42:20 Added file: C:\MCPS sample files\CEELogTest.ipm (ASCII without RDW)
	FEB 18 2014 19:42:20 5 Records Parsed, 2 Errors
	FEB 18 2014 19:42:20 Error in Record 3, 1644/696
	FEB 18 2014 19:42:20 DE 033 Must Be Numeric
	FEB 18 2014 19:42:20 PDS 0552 Length Must Be 17
	FEB 18 2014 19:43:00 CEE Application Ended

The messages in error may be corrected first before starting the CEE processing or the file can be processed with the errors. The log will show that the test started and provides the following for each message that passes:

• Member IDs and BIN ranges of the acquirer and issuer

• Business service arrangement, Fee calculations

• Processing fee assigned (which will appear in PDS 0146)

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2. "xx_x" equals the current simulator version.

Example: FEB 18 2014 17:33:15 CEE Application Started - MasterCard Clearing Presentment Simulator Version 12.Q1

FEB 18 2014 17:39:56 Added file: C:\PC Simulator\MCPS\New Sim Files\FeeCalculations.ipm (ASCII without RDW)

FEB 18 2014 17:39:56 4 Records Parsed, 0 Errors

FEB 18 2014 17:40:01 Started Test

FEB 18 2014 17:40:01 Processing File: C:\PC Simulator\MCPS\New Sim Files\FeeCalculations.ipm

FEB 18 2014 17:40:01 Record 1 (1644/697) has no fee impact - not processed for fees

FEB 18 2014 17:40:01 Record 2 (1240/200) contains no error - processed for fees

FEB 18 2014 17:40:01 Using Origination Member-ID 9674/BIN 550674

FEB 18 2014 17:40:01 Using Destination Member-ID 9660/Account Range 5522490000000000 - 5522499999999999

FEB 18 2014 17:40:01 Using Acceptance Brand = MCC, BSA Type = 2, BSA ID = 010001

FEB 18 2014 17:40:01 Origination: ACQ Fee Code Pointer: <255> Rate Type = 1, Fee Currency = 840, Fee Rate = 2.650000 DR Unit Fee = .10000 DR.

FEB 18 2014 17:40:01 Destination: ISS Fee Code Pointer: <255> Rate Type = 1, Fee Currency = 840, Fee Rate = 2.640000 CR Unit Fee = .10000 CR.

FEB 18 2014 17:40:01 Calculating fees using amount 999.57 [DE4} & 840 [DE49]

FEB 18 2014 17:40:01 Fee Calculated in Fee Currency(840) for Sender = 26.590000 Debit

FEB 18 2014 17:40:01 Fee Calculated in Settlement Currency(840) for Sender = 26.590000 Debit

FEB 18 2014 17:40:01 Fee Calculated in Fee Currency(840) for Receiver = 26.490000 Credit

FEB 18 2014 17:40:01 Fee Calculated in Settlement Currency(840) for Receiver = 26.490000 Credit

Next, the CEE log indicates if the message(s) contains errors or no errors.

FEB 18 2014 17:40:01 Record 2 (1240/200) contains no error - not processed for message exception

FEB 18 2014 17:40:01 Record 3 (1240/200) contains no error - not processed for message exception

Next, the CEE log shows if the message is processed for acknowledgement, notification, or both.

FEB 18 2014 17:40:01 Record 2 (1240/200) processed for notification/acknowledgement

FEB 18 2014 17:40:01 Record 2 (1240/200) is Processed for Notification (NOT) File

Finally, the CEE log indicates that the acknowledgement and/or notification reconciliation list was found for the Member ID(s) in the file. Also indicated are the acknowledgement and/or notification output file name and location, if Life Cycle records were generated, and the name and location of the Life Cycle output file. Also indicated is the output file's encoding format.

Example: FEB 18 2014 17:40:01 Found Notification Reconciliation List: MasterCard Default for Member ID: 9660

FEB 18 2014 17:40:01 Opened file C:\PC Simulator\MCPS\New Sim Files\FeeCalculations.ipm _NOT_13720.IPM for NOTIFY output

FEB 18 2014 17:40:01 6 NOTIFY records written to C:\PC Simulator\MCPS\New Sim Files\FeeCalculations.ipm_NOT_13720.IPM as ASCII without RDW

FEB 18 2014 17:40:01 Generating LifeCycle File

FEB 18 2014 17:40:01 No LifeCycle records generated

FEB 18 2014 17:40:01 Test Ended

FEB 18 2014 18:19:16 CEE Application Ended

Viewing the Log within the CEE Component

Customers may view the CEE log in the CEE component during an active test session to analyze possible error conditions.

From the View menu, click **Log** to open the active log file.
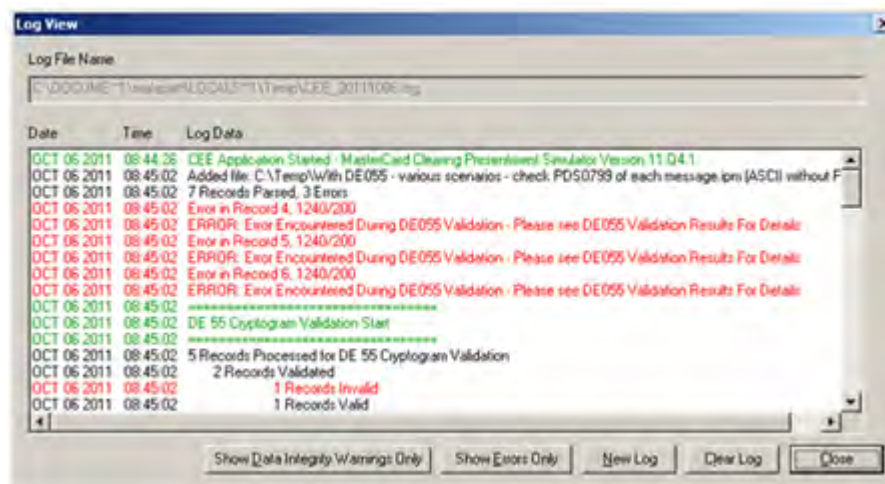
Customers may start a new log file for a specific test by clicking **New Log** and entering a new log file name. Customers may also clear the active log by clicking **Clear Log** if the previous information is not needed.

NOTE

Previous log files may not be opened within the CEE component but may instead be viewed in a word processor such as Microsoft® WordPad or Notepad.

Show Errors Only

Customers may filter the log view in the CEE component using **Show Errors Only** to quickly view any errors contained in the CEE log.

When **Show Errors Only** is selected, the CEE displays an additional window with a filtered view of the CEE log that contains only the errors found during CEE processing

Show Data Integrity Warnings Only

Customers may filter the log view in the CEE component using **Show Data Integrity Warnings Only** to quickly view any Data Integrity warnings/errors contained in the CEE log.

When **Show Data Integrity Warnings Only** is selected, the CEE displays an additional window with a filtered view of the CEE log that contains only the Data Integrity warnings/errors found during CEE processing.
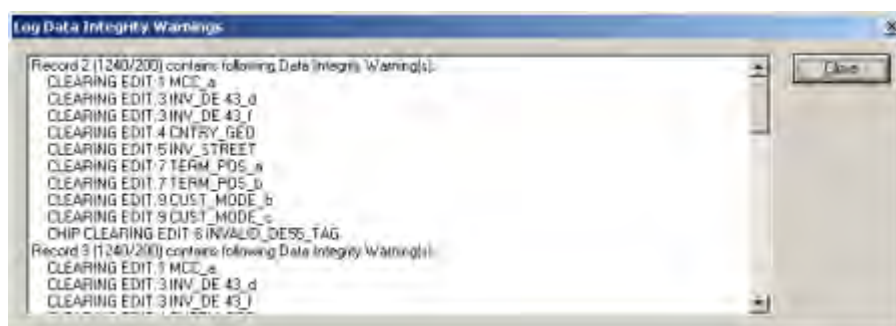
Data Integrity Edits are warning errors only within the simulator. The CEE will not reject any files due to Data Integrity edits.

View Menu

The View menu provides customers with the ability to toggle on or off the Status Bar in the CEE component application window. The Status Bar, when active, is located on the bottom of the main application window.

Chapter 6   File Format Conversion

This chapter describes file format conversion procedures to convert simulator test file formats for compatibility compliance with a customer's mainframe.

Converting Simulator File Formats

The record formatting requirements of the customer's mainframe environment require conversion of the MasterCard Clearing Presentment Simulator test files for compatibility. The conversion of the simulator files to the Variable Blocked Spanned (VBS) format (mainframe) allows the environment to recognize the test data for processing.

File Conversion for Mainframe Compatibility

A MasterCard Clearing Presentment Simulator test file may be converted to allow the mainframe environment to recognize the test data for processing.

For mainframe conversion, the Test Data Generator (TDG) component properly blocks the data contained in the simulator test files when instructed to save in the 1014 format. The customer then creates an empty file on its mainframe with an unblocked record format (RECFM) and a block size (BLKSIZE) of 1014. Upon creation of the empty file, the customer may initiate the file transfer process (performing a Binary transfer) designating the destination file as the empty file just created. Once the file transfer completes, the customer executes a job on the mainframe using an Assembly language program (SIMUTOV) to convert the data to a VBS format.

The SIMUTOV program is a stand-alone Assembly language program, which is provided by MasterCard in the simulator installation package. The source code and sample Job Control Language (JCL) text file for the SIMUTOV program are placed in a folder in the path, C:\Program Files\MasterCard\MCPS xx_x\Util, during simulator installation.

Setup of SIMUTOV Program

Use the following procedure to setup the SIMUTOV program as part of the simulator file conversion process for mainframe compatibility.

Procedure

1. Initiate a file transfer process of the SIMUTOV source code (simutov.txt) from the PC to the mainframe with ASCII to EBCDIC translation.

2. Customize the JCL (Sample JCL.txt) to meet the customer's mainframe environment standards.

3. Run the job stream to assemble and link the SIMUTOV program. Assembling and linking of the SIMUTOV program is a one-time process.

Simulator File Format for Mainframe Conversion

Use the following procedure to save the simulator test files to the EBCDIC format with 1014 layout.

Procedure

1. Open an IPM test file in the TDG component.

2. From the File menu, click **Preferences** to display the TDG Preferences dialog.

3. In the File Options, click **EBCDIC** and **1014**. Click **OK**.
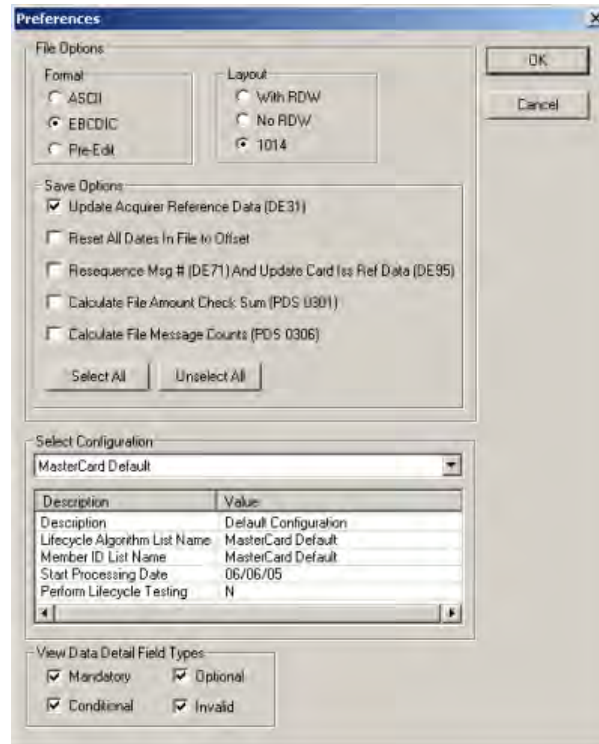
4. From the File menu, click **Save** to save the file in EBCDIC and 1014.

   NOTE

   Customers may also specify the format of files created during CEE processing through selections made in the CEE Preferences dialog of the CEE component.

File Format Conversion for the Mainframe

To prepare MasterCard Clearing Presentment Simulator files for processing in a mainframe environment, a multi-step procedure takes the files through applications on both the Simulator PC and the customer's mainframe. The procedure below creates files that are compatible with the mainframe's expected VBS file structure.

Use the following procedure to convert the simulator test files to a mainframe VBS format.

Procedure

1. Create an empty file on the mainframe with the RECFM = U and BLKSIZE= 1014.

2. Initiate a file transfer process of the converted file designating the newly created "empty" file as the destination file.

   NOTE

   Be sure to indicate "Binary" in the file transfer process or some bytes will be altered during the file transfer process.

3. Open the sample JCL that is located in C:\Program Files\MasterCard\MCPS xx_x\Util. Enter the mainframe file name from step 2 on the 'INFILE' line in the SIMUTOV program. Submit a mainframe job that executes the SIMUTOV program.

4. Process the output file (OUTFILE line) from the SIMUTOV program through either the IPM Pre-edit Mainframe or the mainframe processing cycle.

Example

Sample JCL

```
000001 //USERID JOB (XXXX,XX,XXXX),'NAME',CLASS=A,MSGCLASS=X
000002 /*JOBPARM SYSAFF=ANY
000003 //JOBLIB DD DSN=DTF.IT.TEST.PGMLIB,DISP=SHR
000004 // DD DSN=DTF.IT.PROD.PGMLIB,DISP=SHR
000005 // DD DSN=ITF.IT.PROD.PGMLIB,DISP=SHR
000006 // DD DSN=YTF.AD.PROD.PGMLIB,DISP=SHR
000007 // DD DSN=MCI.AD.PROD.PGMLIB,DISP=SHR
000008 //UCC11 EXEC UCC11,RUNTYP='F'
000009 //****************************************************************
000010 //* UTOVBS – DEBLOCK UMODE DATA FILES TO VBS
000011 //****************************************************************
000012 //STEP010 EXEC PGM=SIMUTOV
000013 //SYSPRINT DD SYSOUT=*, DCB=(RECFM=FB, BLKSIZE=120, LRECL=120)
000014 //SYSUDUMP DD SYSOUT=D
000015 //ABNLDUMP DD SYSOUT=D
000016 //* INFILE IS BLOCKED INPUT FILE
000017 //INFILE DD DSN=TEST.IP.SIM.U1014.FILE,
000018 // DISP=SHR
000019 //*OUTFILE IS VBS OUTPUT FILE
000020 //OUTFILE DD DSN=TEST.IP.VBS.TEST.PARM,
000021 // DISP=(,CATLG,DELETE),
000022 // SPACE=(CYL,(1,1),RLSE),
000023 // DCB=(RECFM=VBS,LRECL=32760,BLKSIZE=27998)
000024 //
```

Appendix A   Simulator File Customization for IPM Pre-edit

This appendix describes data element values that need customization within the MasterCard Clearing Presentment Simulator to ensure correct data integrity editing when used in conjunction with the IPM Pre-edit software.

Simulator Test File Customization

The MasterCard Clearing Presentment Simulator and the IPM Pre-edit software are complementary software products designed to work together to provide the customer with expanded testing functionality. The MasterCard Clearing Presentment Simulator provides data integrity edits on individual data elements and Business Service Processing functionality. The IPM Pre-edit software provides data integrity edits that emulate edits performed in the production GCMS environment, which includes cross-editing functionality. Therefore, for those customers choosing to process MasterCard Clearing Presentment Simulator test files through the IPM Pre-edit software, customization of certain data element and PDS values is required to ensure correct data integrity editing.

Customers perform customization of the values through use of the default value tables, the Merchant table or within the individual message itself. See "Customizing the Merchant Table" and "Modifying the Default Value of a Data Element" in Chapter 3, and "Modifying a Message" in Chapter 4 for details about customization of values.

In the following tables, MasterCard identifies, by message type, specific data elements, and PDSs that require customer-defined values. Refer to the *IPM Clearing Formats* manual for details concerning data element and PDS formatting.

Headers and Trailers

Customers should customize the private data subelements (PDSs) listed in the following table for all headers and trailers regardless of the message type.

Data Element/PDS	Data Element/PDS Definition	Subfield	Subfield Definition
PDS 0105	File ID	1	File Type
		2	File Reference Date
		3	Processor ID
			Note: This must contain all 11 digits, which includes the 7 leading zeros.
		4	File Sequence Number

First Presentments

Customers should customize in the MasterCard Clearing Presentment Simulator the following data elements and PDSs for all First Presentment/1240 messages.

Data Element/PDS	Data Element/PDS Definition	Subfield	Subfield Definition
DE 3	Processing Code		
DE 4	Amount, Transaction		
DE 25	Message Reason Code/MTI		
DE 31	Acquirer Reference Data	2	Acquirer's BIN
DE 33	Forwarding Institution ID Code		
DE 38	Approval Code		
DE 42	Card Acceptor ID Code		
DE 43	Card Acceptor Name/Location		
DE 63	Transaction Life Cycle ID		
DE 94	Transaction Originator Institution ID Code		
PDS 0148	Currency Exponents		
PDS 0158	Business Activity	1-4	1 - Card Program Indicator 2 - Business Service Level Code 3 - Business Service ID Code 4 - Interchange Rate Designator

NOTE

The message originator must provide spaces or valid values in subfields 1, 2, and 3 whenever subfield 4 is provided.

			Note: This cannot be set in the default value tables but must be set in the individual record itself.
PDS 0165	Settlement Indicator		

Second Presentment

Customers should customize in the MasterCard Clearing Presentment Simulator the following data elements and PDSs for all Second Presentment/1240 messages.

A-2   14 August 2014 • MasterCard Clearing Presentment Simulator Guide

Data Element/PDS	Data Element/PDS Definition	Subfield	Subfield Definition
DE 3	Processing Code		
DE 4	Amount, Transaction		
DE 25	Message Reason Code/MTI		
DE 30	Amounts, Original		
DE 31	Acquirer Reference Data	2	Acquirer's BIN
DE 33	Forwarding Institution ID Code		
DE 42	Card Acceptor ID Code		
DE 43	Card Acceptor Name/Location		
DE 94	Transaction Originator Institution ID Code		
PDS 0148	Currency Exponents		
PDS 0149	Currency Codes, Amounts, Original		
PDS 0158	Business Activity	1-4	1 - Card Program Indicator
			2 - Business Service Level Code
			3 - Business Service ID Code
			4 - Interchange Rate Designator

NOTE

The message originator must provide spaces or valid values in subfields 1, 2, and 3 whenever subfield 4 is provided.

0165	Settlement Indicator		

First Chargeback and Arbitration Chargeback

Customers should customize the following data elements and PDSs for all First Chargeback and Arbitration Chargeback/1442 messages in the MasterCard Clearing Presentment Simulator.

Data Element/PDS	Data Element/PDS Definition	Subfield	Subfield Definition
DE 3	Processing Code		
DE 4	Amount, Transaction		

Data Element/PDS	Data Element/PDS Definition	Subfield	Subfield Definition
DE 25	Message Reason Code/MTI		
DE 30	Amounts, Original		
DE 31	Acquirer Reference Data	2	Acquirer's BIN
DE 33	Forwarding Institution ID Code		
DE 42	Card Acceptor ID Code		
DE 43	Card Acceptor Name/Location		
DE 94	Transaction Originator Institution ID Code		
PDS 0148	Currency Exponents		
PDS 0149	Currency Codes, Amounts, Original		
PDS 0165	Settlement Indicator		

Retrieval Request

Customers should customize the following data elements and PDSs for all Retrieval Request/1644 messages in the MasterCard Clearing Presentment Simulator.

Data Element/PDS	Data Element/PDS Definition	Subfield	Subfield Definition
DE 2	Primary Account Number		
DE 25	Message Reason Code/MTI		
DE 30	Amounts, Original		
DE 31	Acquirer Reference Data	2	Acquirer's BIN
DE 33	Forwarding Institution ID Code		
DE 94	Transaction Originator Institution ID Code		
PDS 0148	Currency Exponents		
PDS 0149	Currency Codes, Amounts, Original		
PDS 0165	Settlement Indicator		