Oracle Utilities SGG V2.0.0 and MDM V2.0.1 Integrations

Utility Reference Model

5.6.3.5b SGG-MDM.Manage Device Remote Disconnect (Echelon)

May 2013

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Oracle Utilities SGG V2.0.0 to MDM V2.0.1 Integration Utility Reference Model 5.6.3.5b

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Chapter 1

Overview

This chapter provides a brief description of the SGG-MDM.Manage Device Remote Disconnect (Echelon) business process and associated process diagrams. This includes:

- **Brief Description**

Brief Description

Business Process: 5.6.3.5b SGG-MDM.Manage Device Remote Disconnect (Echelon)

Process Type: Process

Parent Process: 5.6.3 SGG-MDM.Manage Devices

Sibling Processes: 5.6.3.1b SGG-MDM.Manage On-Demand Read (Echelon)

This process gets initiated when a 3rd Party application (E.g. Customer Care and Billing application), makes a request for a device Remote Disconnect or a MDM or SGG Authorized User manually requests for a device Remote Disconnect within SGG system. SGG initiates Remote Disconnect by communicating with respective Echelon Head-End System that in turn communicates with the Smart Meter device, for device disconnection, and sends response back to SGG. Head-End System also collects meter read from Smart Meter device, if required, as part of device Remote Disconnect process.

Chapter 2

Detailed Business Process Model Description

This chapter provides a detailed description of the SGG-MDM.Manage Device Remote Disconnect (Echelon) business process. This includes:

- **Business Process Diagrams**
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- **Manage Device Remote Disconnect (Echelon) Description**
- **Business Objects Lifecycle**
  - **D1-RemoteDisconnect**
  - **D4-DisconnectLoad**
  - **D4-DisconnectLoadNtf**
  - **D1-Completion Event**

Business Process Diagrams

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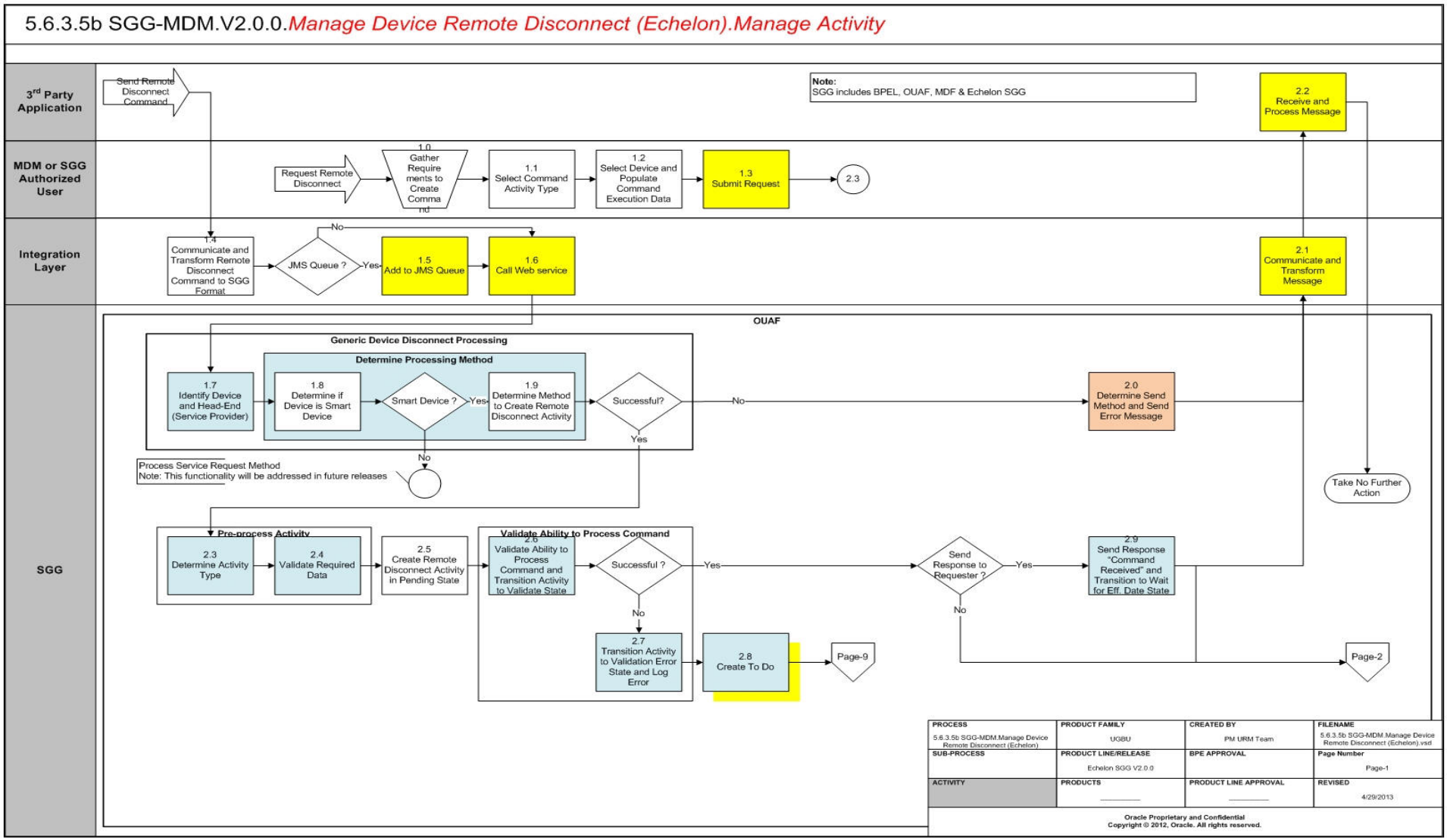
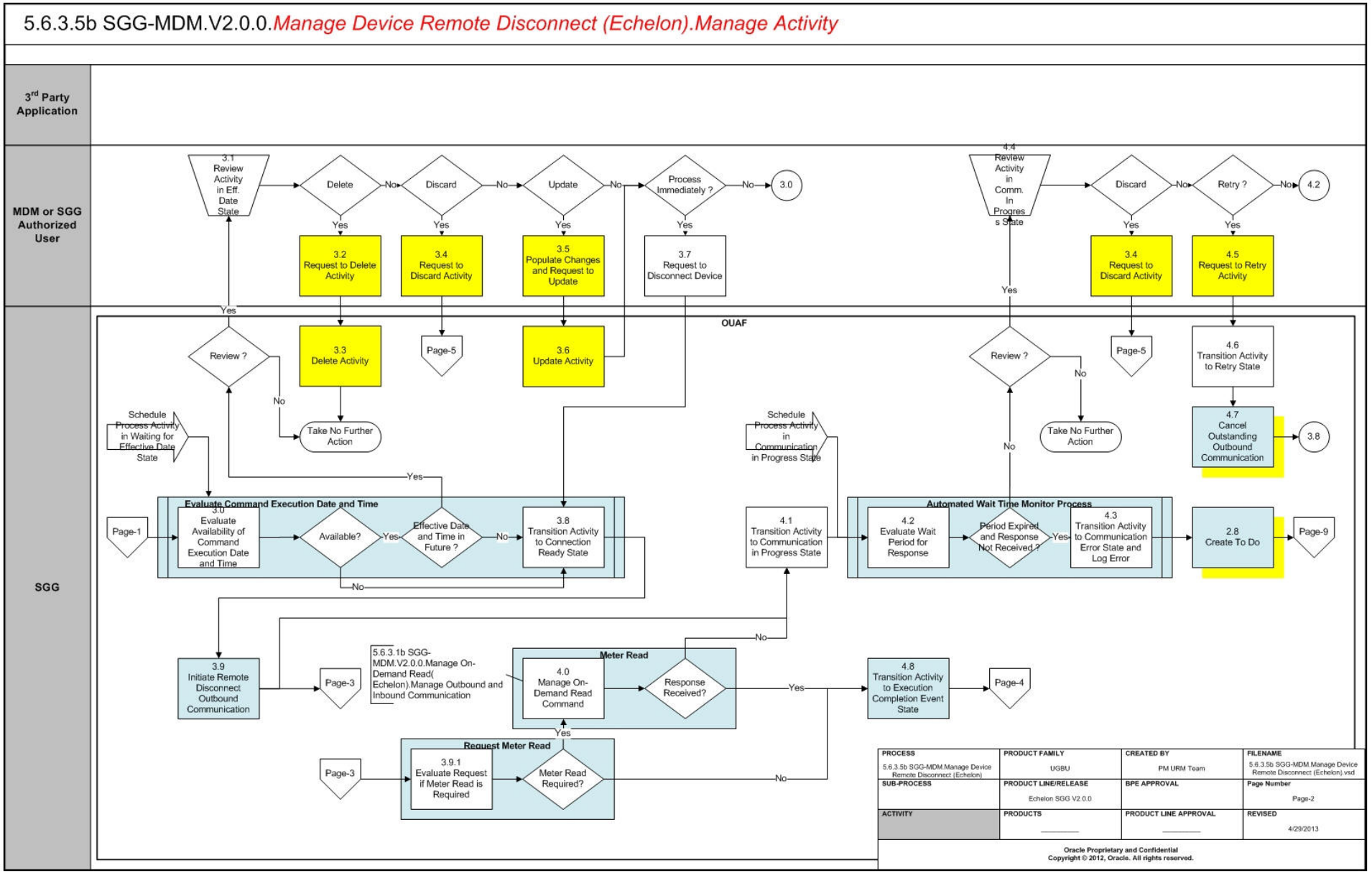
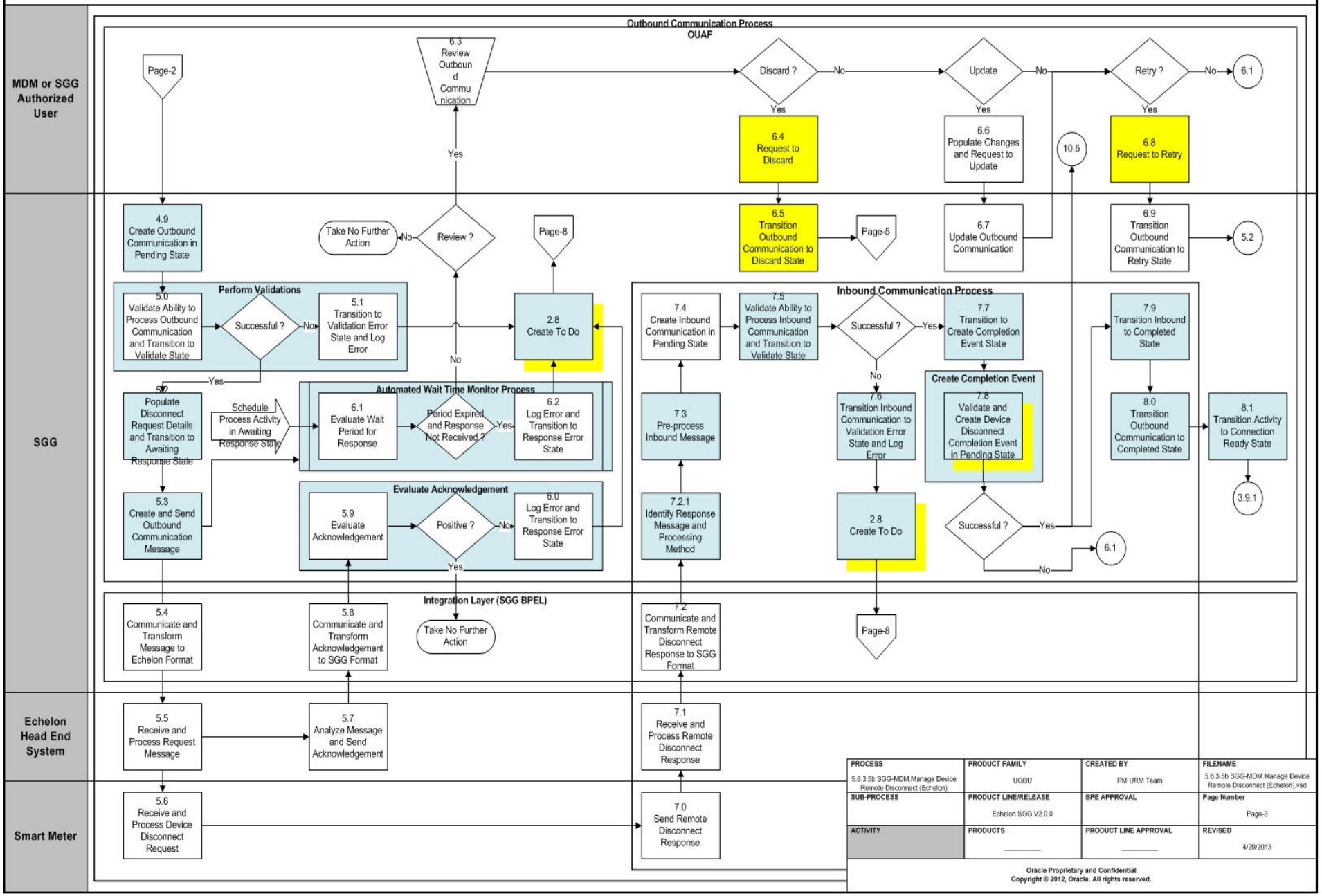


Manage Device Remote Disconnect (Echelon) Page 2

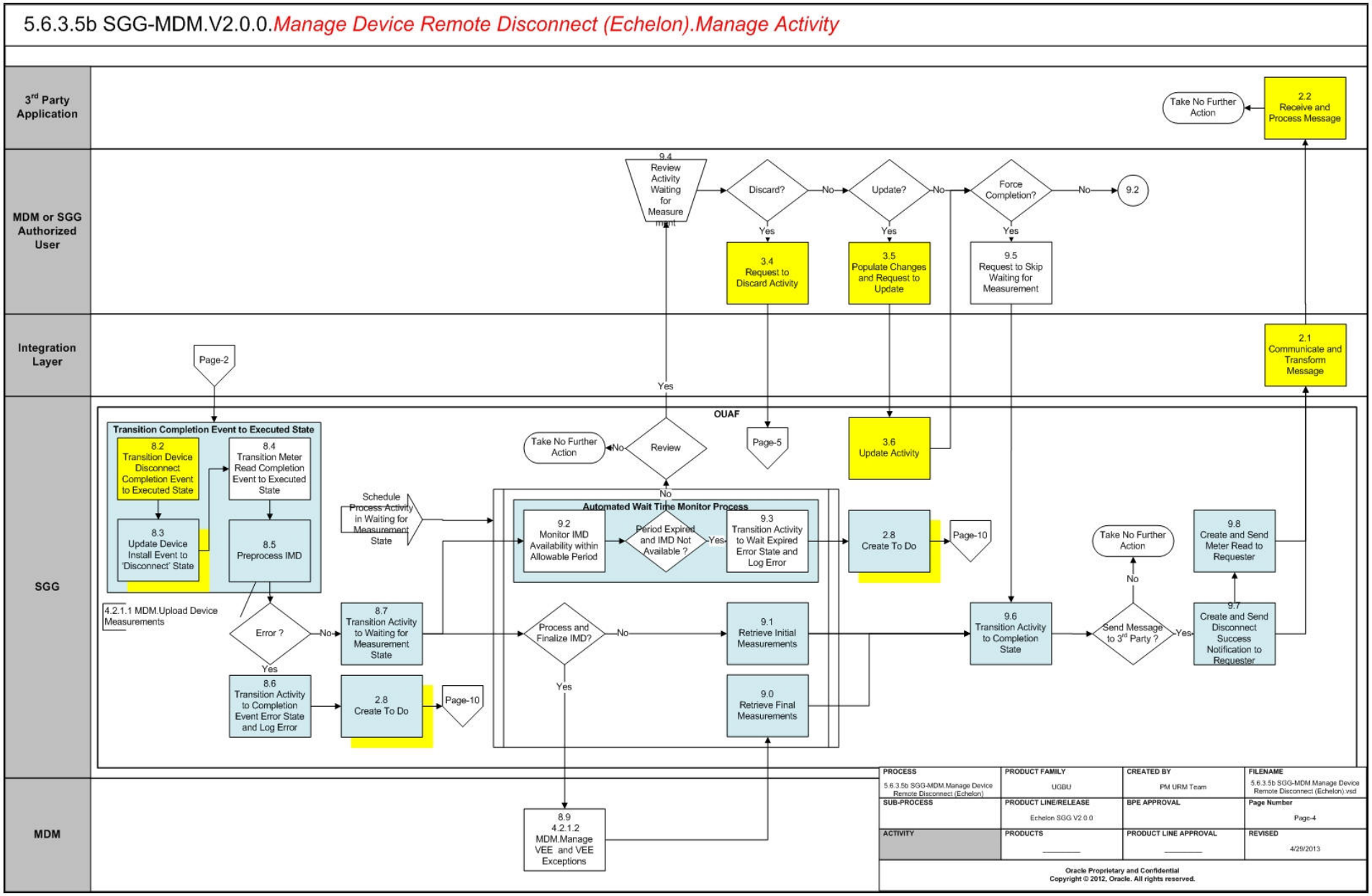


Manage Device Remote Disconnect (Echelon) Page 3

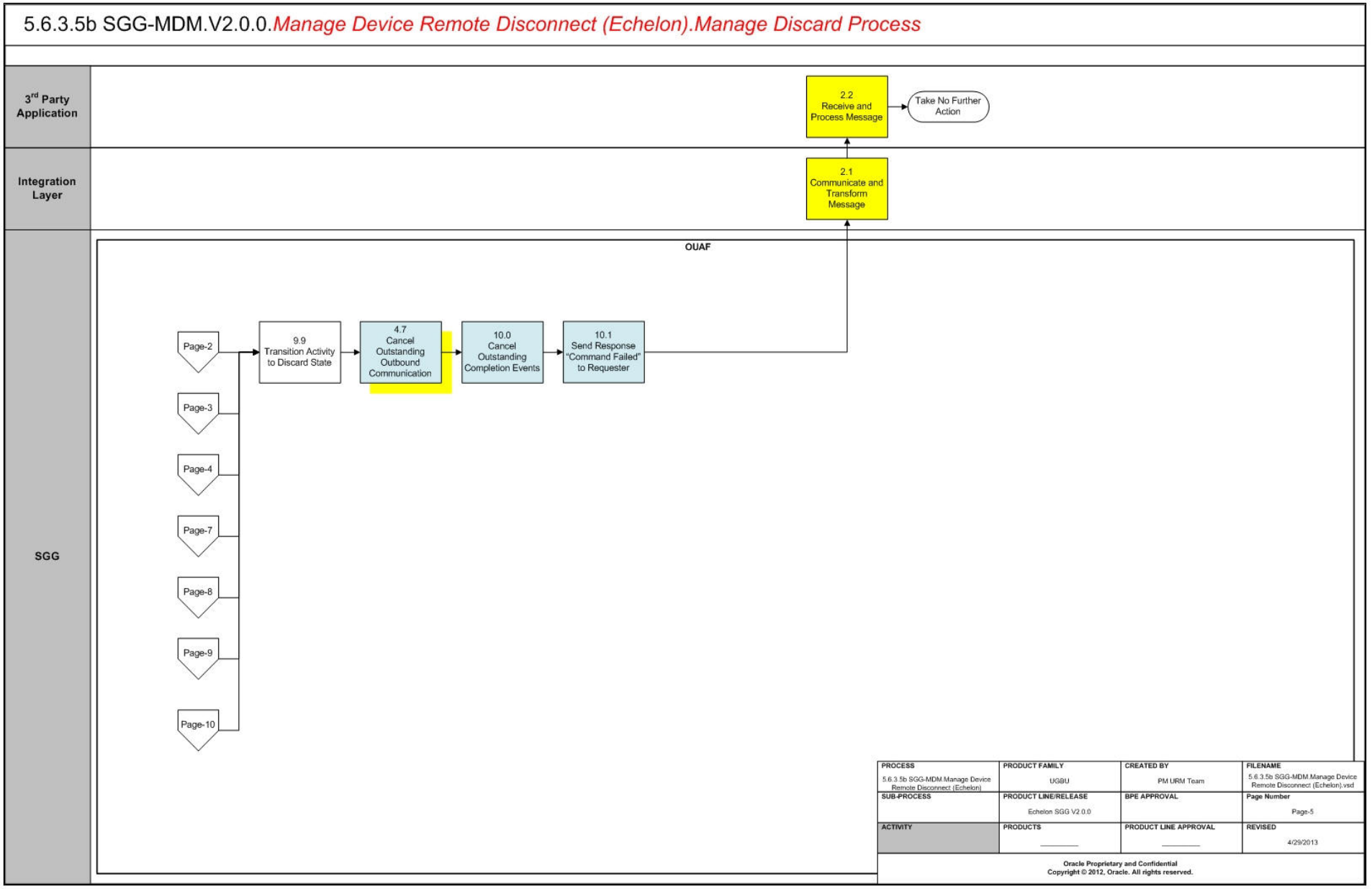
5.6.3.5b SGG-MDM.V2.0.0.*Manage Device Remote Disconnect (Echelon).Manage Outbound and Inbound Communication*



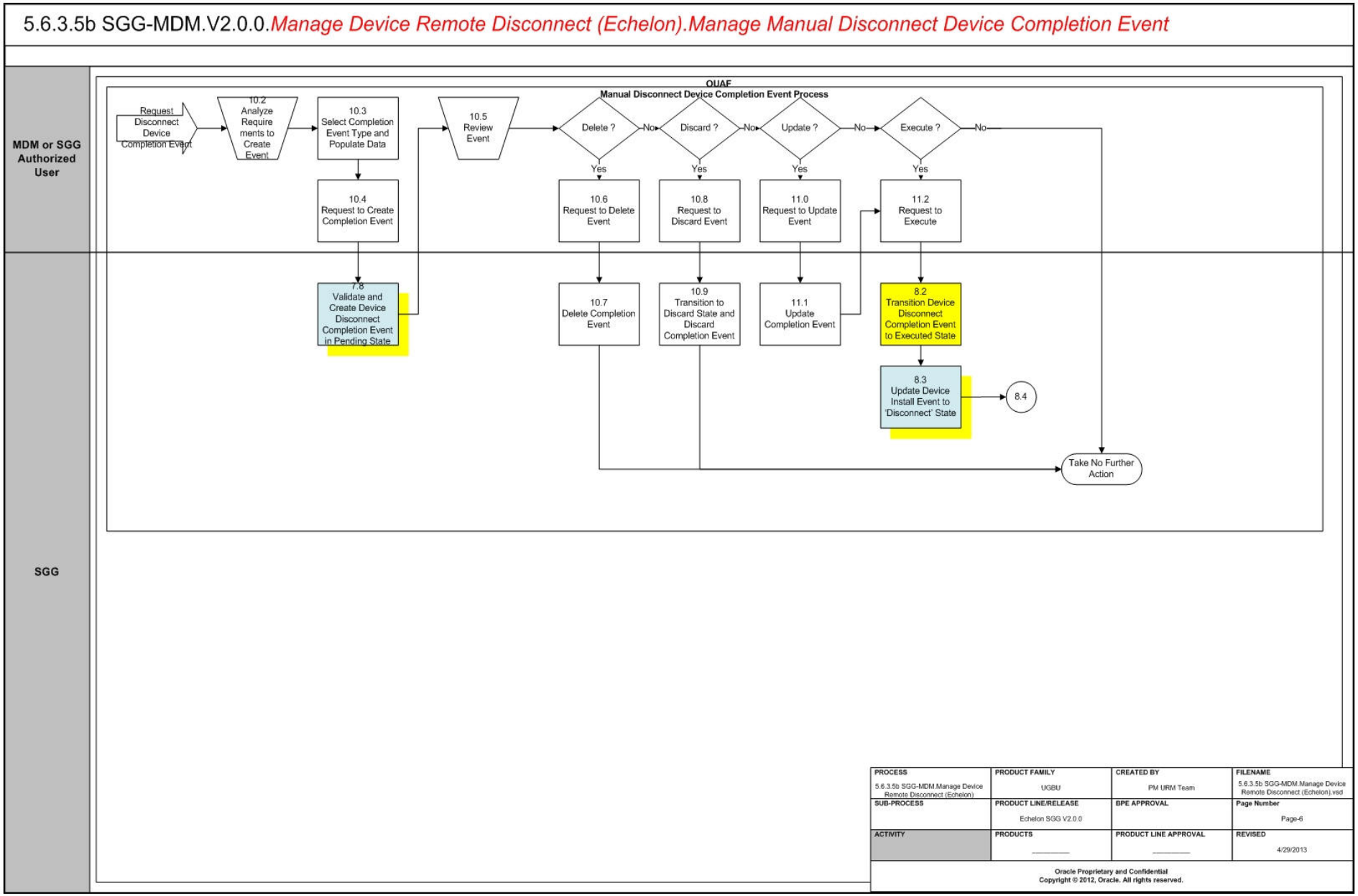
Manage Device Remote Disconnect (Echelon) Page 4



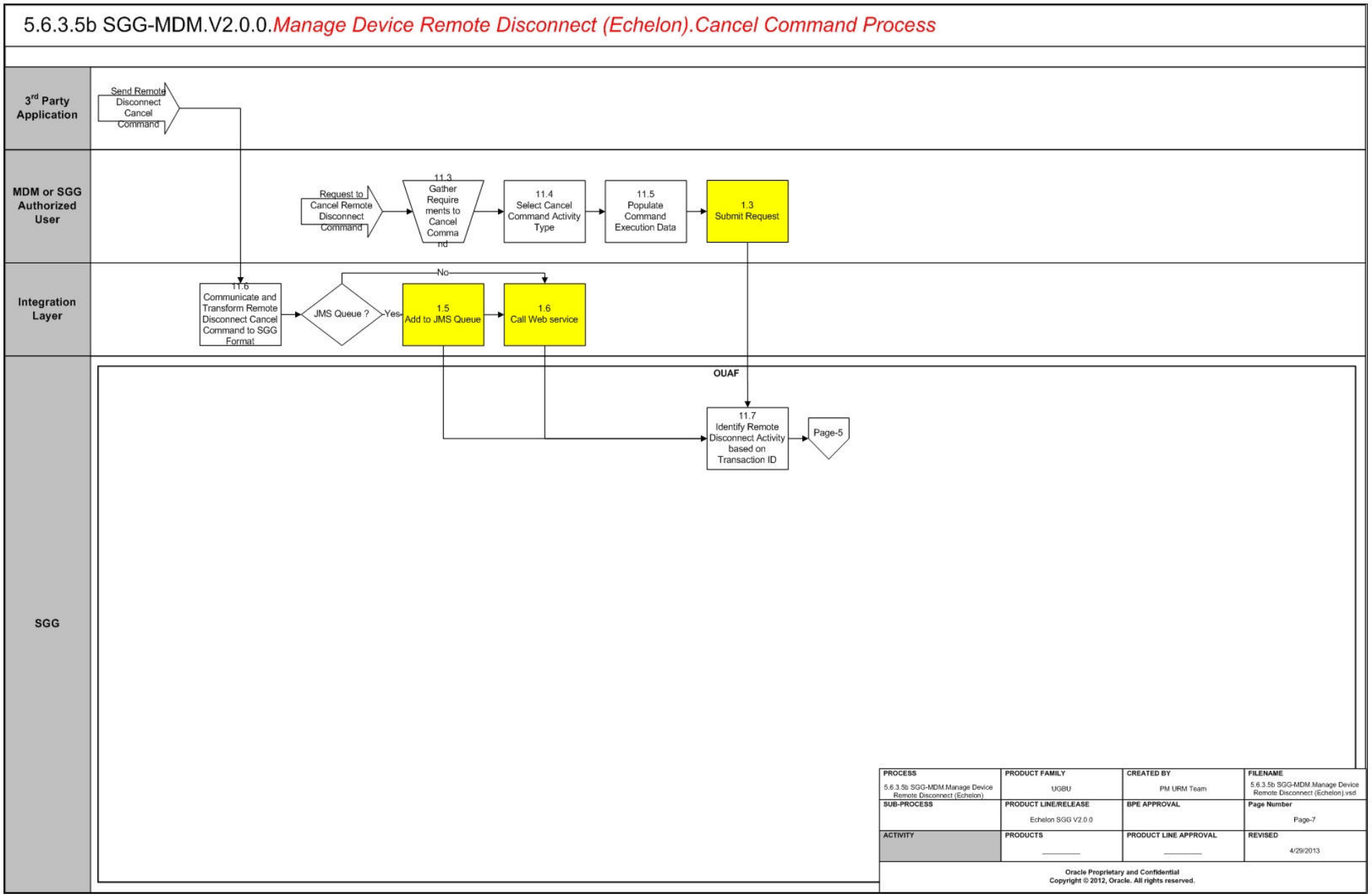
Manage Device Remote Disconnect (Echelon) Page 5



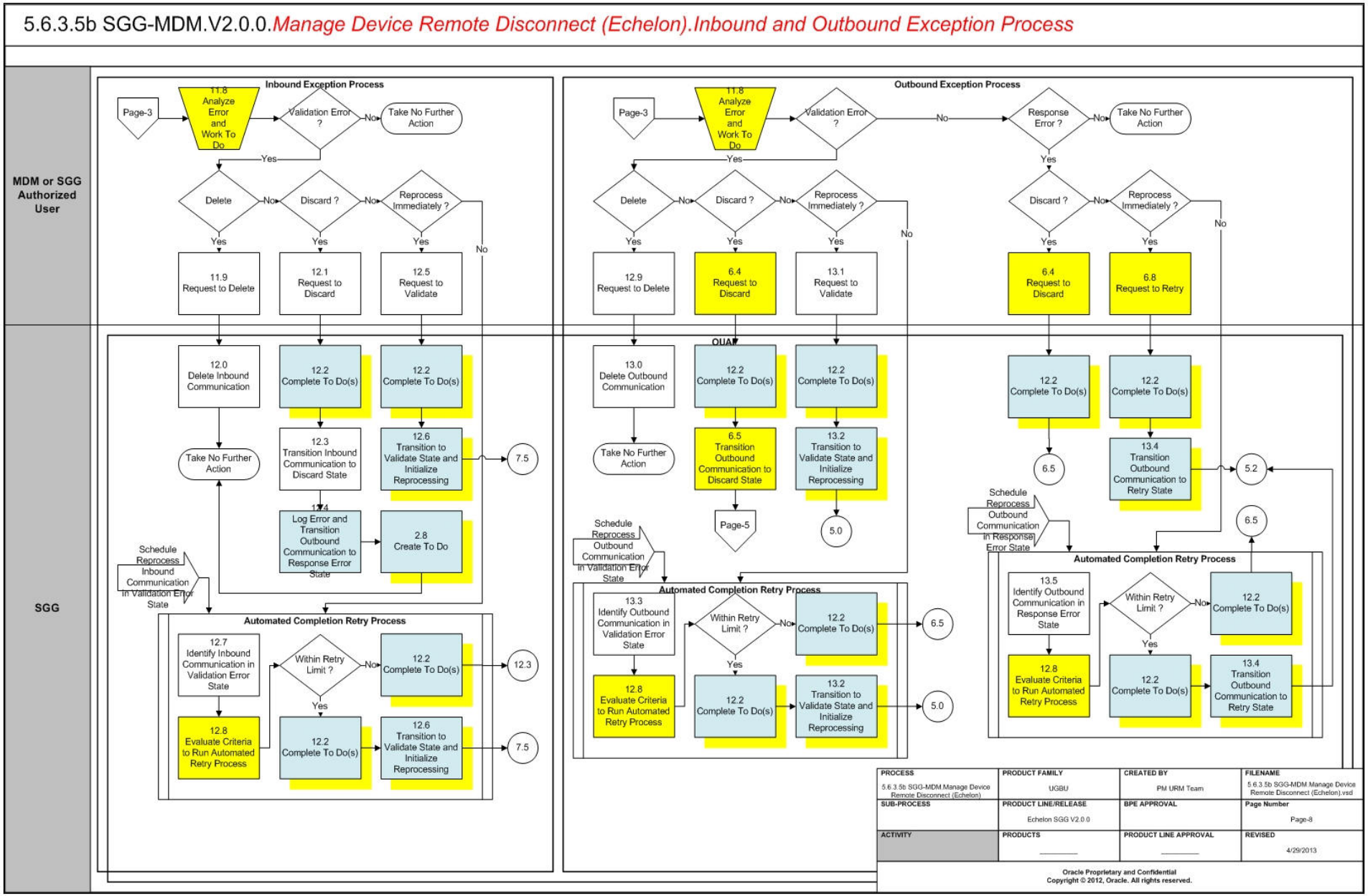
Manage Device Remote Disconnect (Echelon) Page 6



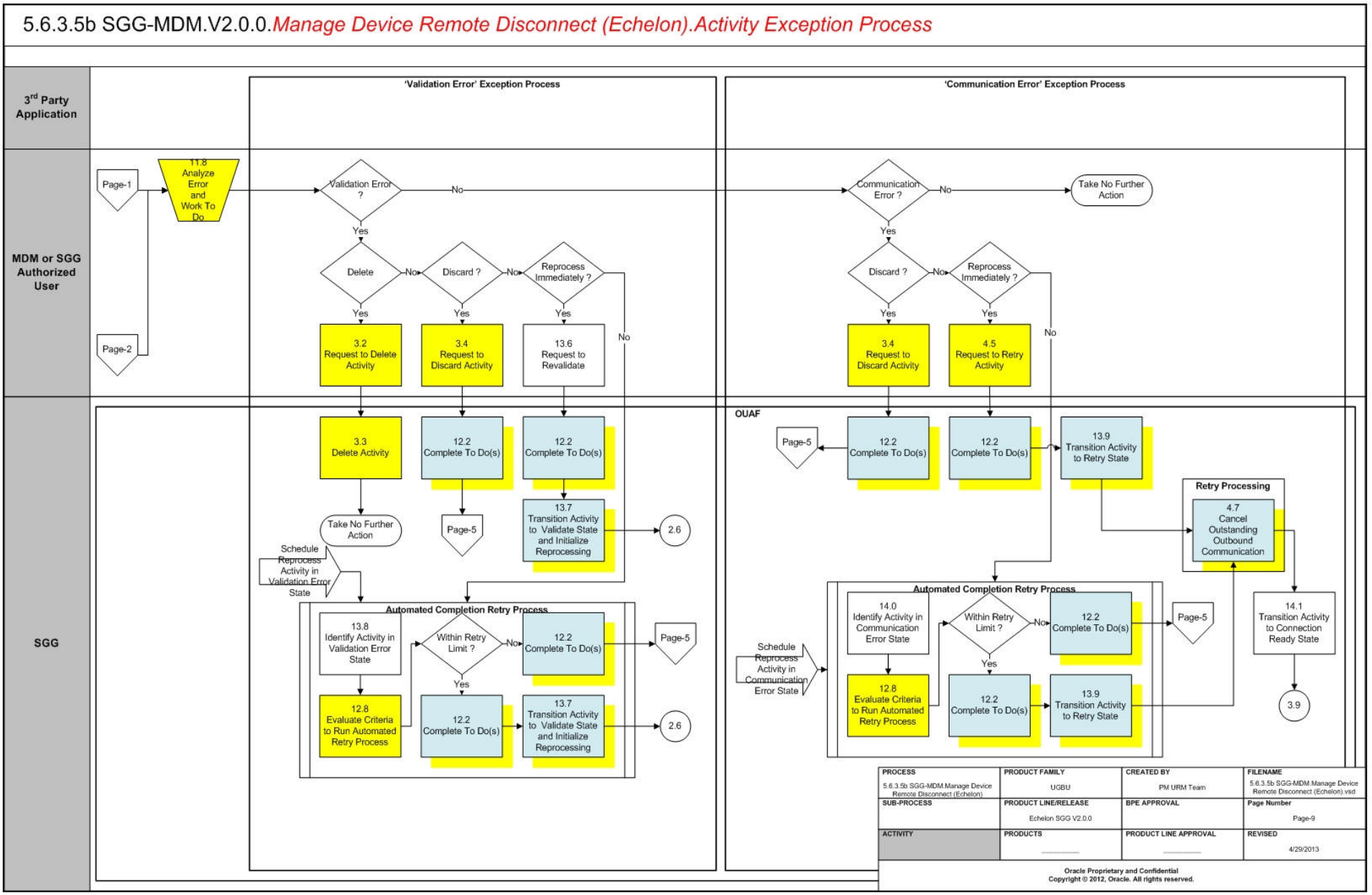
Manage Device Remote Disconnect (Echelon) Page 7



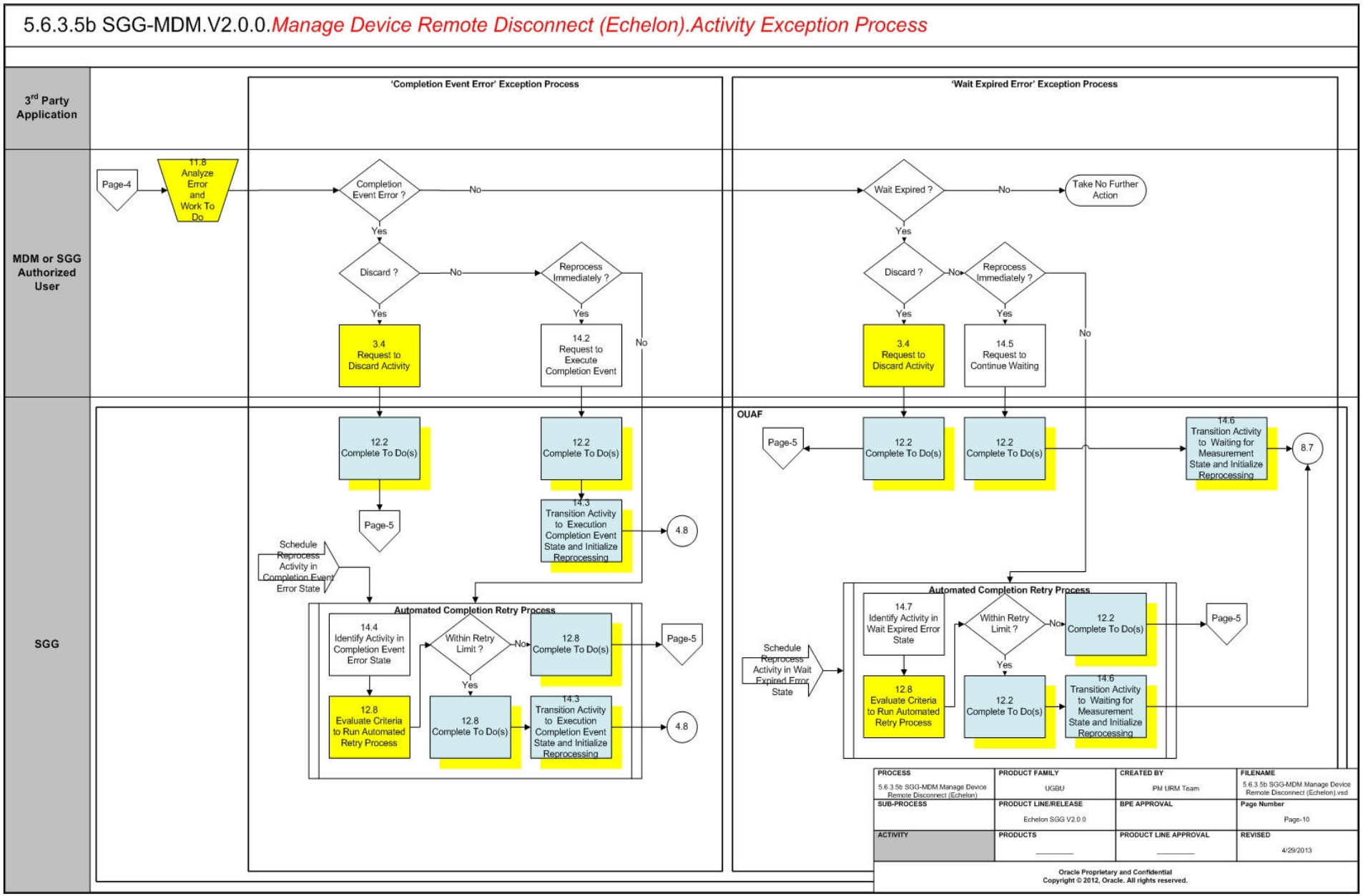
Manage Device Remote Disconnect (Echelon) Page 8



Manage Device Remote Disconnect (Echelon) Page 9



Manage Device Remote Disconnect (Echelon) Page 10



Manage Device Remote Disconnect (Echelon) Description

This section includes detailed descriptions of the steps involved in the SGG-MDM.Manage Device Remote Disconnect (Echelon) business process, including:

- **1.0 Gather Requirements to Create Command**
- **1.1 Select Command Activity Type**
- **1.2 Select Device and Populate Command Execution Data**
- **1.3 Submit Request**
- **1.4 Communicate and Transform Remote Disconnect Command to SGG Format**
- **1.5 Add to JMS Queue**
- **1.6 Call Web service**
- **1.7 Identify Device and Head-End (Service Provider)**
- **1.8 Determine if Device is Smart Device**
- **1.9 Determine Method to Create Remote Disconnect Activity**
- **2.0 Determine Send Method and Send Error Message**
- **2.1 Communicate and Transform Message**
- **2.2 Receive and Process Message**
- **2.3 Determine Activity Type**
- **2.4 Validate Required Data**
- **2.5 Create Remote Disconnect Activity in Pending State**
- **2.6 Validate Ability to Process Command and Transition Activity to Validate State**
- **2.7 Transition Activity to Validation Error State and Log Error**
- **2.8 Create To Do**
- **2.9 Send Response "Command Received" and Transition to Wait for Eff. Date State**
- **3.0 Evaluate Availability of Command Execution Date and Time**
- **3.1 Review Activity in Eff. Date State**
- **3.2 Request to Delete Activity**
- **3.3 Delete Activity**
- **3.4 Request to Discard Activity**
- **3.5 Populate Changes and Request to Update**
- **3.6 Update Activity**
- **3.7 Request to Disconnect Device**
- **3.8 Transition Activity to Connection Ready State**
- **3.9 Initiate Remote Disconnect Outbound Communication**
- **3.9.1 Evaluate Request if Meter Read is Required**
- **4.0 Manage On-Demand Read Command**
- **4.1 Transition Activity to Communication in Progress State**
- **4.2 Evaluate Wait Period for Response**

- **4.3 Transition Activity to Communication Error State and Log Error**
- **4.4 Review Activity in Comm. In Progress State**
- **4.5 Request to Retry Activity**
- **4.6 Transition Activity to Retry State**
- **4.7 Cancel Outstanding Outbound Communication**
- **4.8 Transition Activity to Execution Completion Event State**
- **4.9 Create Outbound Communication in Pending State**
- **5.0 Validate Ability to Process Outbound Communication and Transition to Validate State**
- **5.1 Transition to Validation Error State and Log Error**
- **5.2 Populate Disconnect Request Details and Transition to Awaiting Response State**
- **5.3 Create and Send Outbound Communication Message**
- **5.4 Communicate and Transform Message to Echelon Format**
- **5.5 Receive and Process Request Message**
- **5.6 Receive and Process Device Disconnect Request**
- **5.7 Analyze Message and Send Acknowledgement**
- **5.8 Communicate and Transform Acknowledgement to SGG Format**
- **5.9 Evaluate Acknowledgement**
- **6.0 Log Error and Transition to Response Error State**
- **6.1 Evaluate Wait Period for Response**
- **6.2 Log Error and Transition to Response Error State**
- **6.3 Review Outbound Communication**
- **6.4 Request to Discard**
- **6.5 Transition Outbound Communication to Discard State**
- **6.6 Populate Changes and Request to Update**
- **6.7 Update Outbound Communication**
- **6.8 Request to Retry**
- **6.9 Transition Outbound Communication to Retry State**
- **7.0 Send Remote Disconnect Response**
- **7.1 Receive and Process Remote Disconnect Response**
- **7.2 Communicate and Transform Remote Disconnect Response to Echelon SGG Format**
- **7.2.1 Identify Response Message and Processing Method**
- **7.3 Pre-process Inbound Message**
- **7.4 Create Inbound Communication in Pending State**
- **7.5 Validate Ability to Process Inbound Communication and Transition to Validate State**
- **7.6 Transition Inbound Communication to Validation Error State and Log Error**

- **7.7 Transition to Create Completion Event State**
- **7.8 Validate and Create Device Disconnect Completion Event in Pending State**
- **7.9 Transition Inbound to Completed State**
- **8.0 Transition Outbound Communication to Completed State**
- **8.1 Transition Activity to Connection Ready State**
- **8.2 Transition Device Disconnect Completion Event to Executed State**
- **8.3 Update Device Install Event to 'Disconnect' State**
- **8.4 Transition Meter Read Completion Event to Executed State**
- **8.5 Preprocess IMD**
- **8.6 Transition Activity to Completion Event Error State and Log Error**
- **8.7 Transition Activity to Waiting for Measurement State**
- **8.9 4.2.1.2 MDM.Manage VEE and VEE Exceptions**
- **9.0 Retrieve Final Measurements**
- **9.1 Retrieve Initial Measurements**
- **9.2 Monitor IMD Availability within Allowable Period**
- **9.3 Transition Activity to Wait Expired Error State and Log Error**
- **9.4 Review Activity Waiting for Measurement**
- **9.5 Request to Skip Waiting for Measurement**
- **9.6 Transition Activity to Completion State**
- **9.7 Create and Send Disconnect Success Notification to Requester**
- **9.8 Create and Send Meter Read to Requester**
- **9.9 Transition Activity to Completion State**
- **10.0 Cancel Outstanding Completion Events**
- **10.1 Send Response "Command Failed" to Requester**
- **10.2 Analyze Requirements to Create Event**
- **10.3 Select Completion Event Type and Populate Data**
- **10.4 Request to Create Completion Event**
- **10.5 Review Event**
- **10.6 Request to Delete Event**
- **10.7 Delete Completion Event**
- **10.8 Request to Discard Event**
- **10.9 Transition to Discard State and Discard Completion Event**
- **11.0 Request to Update Event**
- **11.1 Update Completion Event**
- **11.2 Request to Execute**
- **11.3 Gather Requirements to Cancel Command**
- **11.4 Select Cancel Command Activity Type**
- **11.5 Populate Cancel Command Execution Data**

- **11.6 Communicate and Transform Remote Disconnect Cancel Command to SGG Format**
- **11.7 Identify Remote Disconnect Activity based on Transaction ID**
- **11.8 Analyze Error and Work To Do**
- **11.9 Request to Delete**
- **12.0 Delete Inbound Communication**
- **12.1 Request to Discard**
- **12.2 Complete To Do(s)**
- **12.3 Transition Inbound Communication to Discard State**
- **12.4 Log Error and Transition Outbound Communication to Response Error State**
- **12.5 Request to Validate**
- **12.6 Transition to Validate State and Initialize Reprocessing**
- **12.7 Identify Inbound Communication in Validation Error State**
- **12.8 Evaluate Criteria to Run Automated Retry Process**
- **12.9 Request to Delete**
- **13.0 Delete Outbound Communication**
- **13.1 Request to Validate**
- **13.2 Transition to Validate State and Initialize Reprocessing**
- **13.3 Identify Outbound Communication in Validation Error State**
- **13.4 Transition Outbound Communication to Retry State**
- **13.5 Identify Outbound Communication in Response Error State**
- **13.6 Request to Revalidate**
- **13.7 Transition Activity to Validate State and Initialize Reprocessing**
- **13.8 Identify Activity in Validation Error State**
- **13.9 Transition Activity to Retry State**
- **14.0 Identify Activity in Communication Error State**
- **14.1 Transition Activity to Connection Ready State**
- **14.2 Request to Execute Completion Event**
- **14.3 Transition Activity to Execution Completion Event State and Initialize Reprocessing**
- **14.4 Identify Activity in Completion Event Error State**
- **14.5 Request to Continue Waiting**
- **14.6 Transition Activity to Waiting for Measurement State and Initialize Reprocessing**
- **14.7 Identify Activity in Wait Expired Error State**

1.0 Gather Requirements to Create Command

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User analyzes requirements and gathers information required to create Remote Disconnect command.

1.1 Select Command Activity Type

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User selects Activity Type to create a Remote Disconnect command request.

Entities to Configure
Activity Type

1.2 Select Device and Populate Command Execution Data

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User selects the device and populates required data such as request effective date, request expiration date, etc. User also indicates if the command is optional, if future connect command is present, and can even indicate if measurement is to be retrieved as part of disconnect process.

1.3 Submit Request

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User submits request using Remote Disconnect manual request screen.

Business Object(s)
D1-RemoteDisconnect

1.4 Communicate and Transform Remote Disconnect Command to SGG Format

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: Integration Layer

Description: Integration layer facilitates the communication between the 3rd Party application and the SGG application. It receives the Remote Disconnect request, transforms, and converts the request into format compatible with SGG application.

1.5 Add to JMS Queue

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: Integration Layer

Description: Integration Layer adds the Remote Disconnect request to JMS queue.

1.6 Call Web service

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: Integration Layer

Description: Integration Layer calls web services to process further the Remote Disconnect request.

1.7 Identify Device and Head-End (Service Provider)

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Generic Device Disconnect Processing

Actor/Role: SGG

Description: SGG initiates pre-processing of the Remote Disconnect request that came from 3rd Party application. It attempts to read the request message and determines the Device for which the disconnect request is made, and the Head-End system that communicates with the device.

Entities to Configure
Device
Head -End System (Service Provider)

Business Objects	Available Algorithms
D1-GenericDisconnect	D1-DDR (Determine Device and Recipient)

1.8 Determine if Device is Smart Device

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Generic Device Connect Processing

Actor/Role: SGG

Description: The SGG determines whether the request received for Remote Disconnect is for a Smart Device or not.

Note: Currently application processes requests for Smart Devices only. Service Requests functionality will be included in later releases.

Entities to Configure
Device
Device Configuration

Business Objects	Available Algorithms
D1-GenericDisconnect	D1-CDDCSRTBO (Transform to Disconnect Command Request or Disconnect Service Request Transaction BO)

1.9 Determine Method to Create Remote Disconnect Activity

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Generic Device Disconnect Processing

Actor/Role: SGG

Description: SGG determines the method to create Activity if the device is found to be a Smart Device.

Entities to Configure
Device Configuration
Service Provider

Business Objects	Available Algorithms
D1-GenericDisconnect	D1-CDDCSRTBO (Transform to Disconnect Command Request or Disconnect Service Request Transaction BO)

2.0 Determine Send Method and Send Error Message

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG determines the method to send the error message to 3rd Party application and sends it.

Note: Sending mechanism could be different and depends on application landscape. Currently it is determined based on customer requirements.

2.1 Communicate and Transform Message

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: Integration Layer

Description: Integration Layer of SGG receives the outbound message from SGG, transforms, and converts it into format compatible with 3rd Party Application.

2.2 Receive and Process Message

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: 3rd Party application

Description: 3rd Party Application receives message from SGG and processes it.

2.3 Determine Activity Type

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Pre-process Activity

Actor/Role: SGG

Description: SGG identifies the Activity Type to be assigned to the Activity to be created. Further, it sets the type of measurement to be retrieved (based on the availability of a MDM product) as part of the remote disconnect process, if retrieve measurement is part of the command request.

Note: Typically system has different Activity types configured to reflect different business scenarios, and currently the system will select the Activity type related to disconnect command action.

Entities to Configure
Activity Type
To Do Type
To Do Role

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	D1-DETACTTYP (Determine Activity Type) D1-DMRRD (Defaults the Measurement Requested field Remote Disconnect)

2.4 Validate Required Data

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Pre-process Activity

Actor/Role: SGG

Description: SGG validates the availability and correctness of required information. Usually, system checks for Requester information, Device information, Effective Date/Time and Expiration Date/Time, etc.

Entities to Configure
Device
Edge Application Details

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	D1-GINPVAL (Common Input Validation) D1-VALMDEST (Validate Measurement Destination) D1-VALMREQO (Validate Measurement Requested) D1-MDRFMVAL (Measurement Fields for Retrieve Final Measurement Validation)

2.5 Create Remote Disconnect Activity in Pending State

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG creates Remote Disconnect Activity in 'Pending' state.

Business Objects
D1-RemoteDisconnect
D1-RemoteDisconnectType

2.6 Validate Ability to Process Command and Transition Activity to Validate State

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Validate Ability to Process Command

Actor/Role: SGG

Description: SGG validates ability to process Remote Disconnect request. Typically, system validates current Device connection status, Measuring Components, Ability of Head-End to support On-Demand Read, Ability of Head-End to perform Disconnect, and also checks if already any Connect command or Disconnect command is issued, etc.

Entities to Configure
Device
Measuring Components
Processing Method for On-Demand Read
Processing Method for Disconnect

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	D1-VALACTTDI (Validate Activity Type and Transition to Error State if Invalid) D1-VALDVCNDC (Validate Device Not Already Disconnected) D1-VALDEVMCS (Validate that Device has appropriate Measuring Component) D1-VHCPODRD (Validate Head-End's Ability to Perform On-Demand Read Disconnect) D1-VALHECPRD (Validate Head-End's Ability to Perform Disconnect) D1-ACTDISCON (Check for Existing Active Disconnect Command Request) D1-CHKCONNCR (Check for Concurrent Connect Command Request) F1-AT-RQJ (Transition to Default Next Status)

2.7 Transition Activity to Validation Error State and Log Error

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Validate Ability to Process Command

Actor/Role: SGG

Description: If any error occurs during validations, SGG transitions the Activity to 'Validation Error' state and logs an error.

Business Object
D1-RemoteDisconnect
D1-RemoteDisconnectType

2.8 Create To Do

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: Once an error is logged, SGG creates a 'To Do' entry for the Authorized User.

Entities to Configure
To Do Type
To Do Role

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	D1-CTDEBOE (Create To Do Entry for BO in Error)

2.9 Send Response “Command Received” and Transition to Wait for Eff. Date State

See **Manage Device Remote Disconnect (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG sends command received acknowledgement to the 3rd party requester.

Entities to Configure
Processing Role

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	D1-RRER (Send Received Response to External Requester)

3.0 Evaluate Availability of Command Execution Date and Time

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: If command's Effective Date and Time are available, SGG uses it to determine execution date and time. If the Effective Date and Time are not available, SGG processes the Outbound Communication immediately. If Effective Date and Time are in the future, System waits in 'Wait for Effective Date' state, else, it initiates the Outbound Communication.

Customizable Processes
D1-CRWT (Command Request Wait - Monitor)

Entities to Configure
Effective Date and Time

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	D1-WAITEFFDT (Wait for Effective Date) F1-AT-RQJ (Transition to Default Next Status (Java))

3.1 Review Activity in Eff. Date State

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User reviews and analyzes the Activity.

Business Object
D1-RemoteDisconnect
D1-RemoteDisconnectType

3.2 Request to Delete Activity

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: If MDM or SGG Authorized User determines that the Activity is not required, Authorized User requests to delete Activity record.

Business Object
D1-RemoteDisconnect
D1-RemoteDisconnectType

3.3 Delete Activity

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG deletes the Activity.

> **Note:** Once an Activity record is deleted it is permanently removed from the system and cannot be recovered. This option is not recommended for common business practice.

Business Object
D1-RemoteDisconnect
D1-RemoteDisconnectType

3.4 Request to Discard Activity

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User if determines that the Activity is not required, Authorized User requests to discard it.

Business Object
D1-RemoteDisconnect
D1-RemoteDisconnectType

3.5 Populate Changes and Request to Update

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User modifies Activity data and requests to perform appropriate updates.

Business Object
D1-RemoteDisconnect
D1-RemoteDisconnectType

3.6 Update Activity

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG updates the Activity with data populated by Authorized User.

Business Object
D1-RemoteDisconnect
D1-RemoteDisconnectType

3.7 Request to Disconnect Device

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: If command's effective date and time is in the future and MDM or SGG Authorized User identifies the need to execute command immediately, Authorized User requests to initiate the command processing.

Business Object
D1-RemoteDisconnect
D1-RemoteDisconnectType

3.8 Transition Activity to Connection Ready State

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG transitions the Activity to 'Connection Ready' state to initiate outbound communication when command effective date and time has reached. The other possible option of transition and initiation is when the Authorized User manually makes a request.

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	D1-WAITEFFDT (Wait for Effective Date)

3.9 Initiate Remote Disconnect Outbound Communication

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG determines the processing method for Remote Disconnect Outbound Communication and initiates the Outbound Communication process.

Entities to Configure
Outbound Communication Processing Method
Outbound Communication Type

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	D1-CRDOC (Create Remote Disconnect Outbound Communication)

3.9.1 Evaluate Request if Meter Read is Required

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG evaluates and checks if there exists any request to retrieve measurement.

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	D1-CRDOC (Create Remote Disconnect Outbound Communication)

4.0 Manage On-Demand Read Command

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG determines the processing method for Meter Read Outbound Communication and initiates Meter Read. Please refer to process 5.6.3.1b SGG-MDM.V2.0.0.Manage On-Demand Read (Echelon).Manage Outbound and Inbound Communication for further details.

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	D1-CRDOC (Create Remote Disconnect Outbound Communication)

4.1 Transition Activity to Communication in Progress State

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG transitions Activity to 'Communication in Progress' state to monitor response for the outbound communication.

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	F1-AT-RQJ (Transition to Default Next Status)

4.2 Evaluate Wait Period for Response

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG periodically checks if the Activity expiration wait time configured for monitoring the response has expired or not.

Customizable Processes
D1-CRWT (Command Request Wait - Monitor)

Entities to Configure
Activity Type

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	D1-WTTMOUTEX (Wait Time Out - Transition to Exception)

4.3 Transition Activity to Communication Error State and Log Error

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: If the Activity wait time for outbound communication response has expired, SGG transitions the Activity to 'Communication Error' state and logs an error.

Business Object
D1-RemoteDisconnect D1-RemoteDisconnectType

4.4 Review Activity in Comm. In Progress State

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User reviews and analyzes the Activity.

Business Object
D1-RemoteDisconnect
D1-RemoteDisconnectType

4.5 Request to Retry Activity

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User requests to recreate the Outbound Communication process.

Business Object
D1-RemoteDisconnect
D1-RemoteDisconnectType

4.6 Transition Activity to Retry State

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG transitions Activity to 'Retry' state.

Business Object
D1-RemoteDisconnect
D1-RemoteDisconnectType

4.7 Cancel Outstanding Outbound Communication

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG cancels any existing outstanding Outbound Communications.

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	D1-COOC (Cancel Outstanding Outbound Communication)

4.8 Transition Activity to Execution Completion Event State

See **Manage Device Remote Disconnect (Echelon) Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG transitions Activity to 'Execution Completion Event' state. In this state, SGG transitions the Completion Events to 'Executed' state.

Business Objects	Available Algorithms
D1-RemoteDisconnect **D4-DisconnectLoad**	D1-UCCDFTPA (Update Connect Disconnect Completion Flag and Transition Parent Activity) D1-EXCMPEVTS (Execute Completion Events)

4.9 Create Outbound Communication in Pending State

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

Description: SGG creates Remote Disconnect Outbound Communication in 'Pending' state.

Entities to Configure
Outbound Communication Processing Method
Outbound Communication Type

Business Objects	Available Algorithms
D4-DisconnectLoadNtf	D1-CRDOC (Create Remote Disconnect Outbound Communication) D1-GDRFFPA (Default required fields from Parent Activity) D4-DRFFPA (Default required priority field from Parent Activity)

5.0 Validate Ability to Process Outbound Communication and Transition to Validate State

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

Description: SGG validates ability to process Outbound Communication. Typically, system checks for communication type.

Entities to Configure
Communication Type

Business Objects	Available Algorithms
D4-DisconnectLoad	D1-VALCOMTP (Validate Communication Type) F1-AT-RQJ (Transition to Default Next Status)

5.1 Transition to Validation Error State and Log Error

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

Description: If any error occurs during validations, SGG transitions the Outbound Communication to 'Validation Error' state and logs an error.

Business Object
D4-DisconnectLoad

5.2 Populate Disconnect Request Details and Transition to Awaiting Response State

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

Description: SGG transitions Outbound Communication to 'Awaiting Response' state and populates Remote Disconnect Outbound Communication message details.

Entities to Configure
Inbound Communication Processing Method

Business Objects	Available Algorithms
D4-DisconnectLoad	D4-PDCLSD (Populate Disconnect Load Send Detail)

5.3 Create and Send Outbound Communication Message

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

Description: SGG creates Outbound Communication and sends it to Echelon Head-End System.

Business Objects	Available Algorithms
D4-DisconnectLoad	D4-COUTMSGD (Create Outbound Message For Disconnect Load)

5.4 Communicate and Transform Message to Echelon Format

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Group: Integration Layer (SGG BPEL)

Actor/Role: SGG

Description: Integration Layer of SGG facilitates the communication between the SGG and Echelon Head-End System. It receives the Outbound Communication request, transforms, and converts the request into format compatible with Head-End System.

5.5 Receive and Process Request Message

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: Echelon Head-End System

Description: Echelon Head-End System receives the Remote Disconnect request and processes it.

Note: This is external and outside the Oracle SGG environment.

5.6 Receive and Process Device Disconnect Request

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: Smart Meter

Description: Smart Meter Device receives request from Head-End System for Remote Disconnect and processes it.

Note: This is external and outside the Oracle SGG environment.

5.7 Analyze Message and Send Acknowledgement

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: Echelon Head-End System

Description: Echelon Head-End System on receipt of Remote Disconnect request from SGG, analyzes, and sends a real-time acknowledgement back to SGG.

5.8 Communicate and Transform Acknowledgement to SGG Format

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Group: Integration Layer (SGG BPEL)

Actor/Role: SGG

Description: Integration Layer of SGG facilitates the communication between the Echelon Head-End System and SGG. It receives the synchronous acknowledge, transforms, and converts the acknowledgement into format compatible with SGG.

5.9 Evaluate Acknowledgement

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

Description: SGG evaluates acknowledge and checks the success of sending Outbound Communication.

Business Objects	Available Algorithms
D4-DisconnectLoad	D4-EVALRESP (Evaluate Response)

6.0 Log Error and Transition to Response Error State

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

Description: SGG logs error and transitions Outbound Communication to Response Error state.

Business Object
D4-DisconnectLoad

6.1 Evaluate Wait Period for Response

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

Description: SGG periodically checks if the Outbound Communication expiration wait time configured for monitoring the response has expired or not.

Customizable Processes
D1-COMM (Batch Control for Communications)

Entities to Configure
Outbound Communication Type

Business Objects	Available Algorithms
D4-DisconnectLoad	D4-TIMEOUT (Time Out - Outbound Communication)

6.2 Log Error and Transition to Response Error State

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

Description: If the wait time for outbound communication response has expired, SGG transitions the Outbound Communication to 'Response Error' state and logs an error.SGG logs error and transitions Outbound Communication to Response Error state.

Business Object
D4-DisconnectLoad

6.3 Review Outbound Communication

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User reviews and analyzes the Outbound Communication.

Business Object
D4-DisconnectLoad

6.4 Request to Discard

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User if determines that the Outbound Communication is not required, Authorized User requests to discard it.

Business Object
D4-DisconnectLoad

6.5 Transition Outbound Communication to Discard State

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

Description: SGG transitions Outbound Communication to 'Discard' state.

Note: When an Outbound Communication is 'Discarded' it still remains in the system database and is not removed, hence, this is the preferred business practice to perform.

Business Object
D4-DisconnectLoad

6.6 Populate Changes and Request to Update

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User modifies Outbound Communication data and requests to perform appropriate updates.

Business Object
D4-DisconnectLoad

6.7 Update Outbound Communication

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

Description: SGG updates the Outbound Communication with data populated by Authorized User.

Business Object
D4-DisconnectLoad

6.8 Request to Retry

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User requests to recreate the Outbound Communication.

Business Object
D4-DisconnectLoad

6.9 Transition Outbound Communication to Retry State

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

Description: SGG transitions Outbound Communication to 'Retry' state.

Business Object
D4-DisconnectLoad

7.0 Send Remote Disconnect Response

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Group: Inbound Communication Process

Actor/Role: Smart Meter

Description: Smart Meter Device sends response on Device Disconnect status to Head-End System.

Note: This is external and outside the Oracle SGG environment.

7.1 Receive and Process Remote Disconnect Response

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Group: Inbound Communication Process

Actor/Role: Echelon Head-End System

Description: Head-End System receives the response from Smart Meter and processes a response for SGG.

Note: This is external and outside the Oracle SGG environment.

7.2 Communicate and Transform Remote Disconnect Response to Echelon SGG Format

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Group: Inbound Communication Process

Group: Integration Layer (SGG BPEL)

Actor/Role: SGG

Description: Integration Layer of SGG facilitates the communication between the Echelon Head-End System and SGG. It receives the response, transforms, and converts the response into format compatible with SGG.

7.2.1 Identify Response Message and Processing Method

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Group: Inbound Communication Process

Actor/Role: SGG

Description: SGG identifies the inbound command completion event message and determines appropriate processing method.

Note: The SGG uses device event seeder to perform this action.

Business Objects	Available Algorithms
D1-DeviceEventSeeder	D1-DVEVTINFO (Device Event Info) D1-SETERRFLG (Set Error Flag) D1-SPRID (Service Provider Identification) D1-DEVICEID (Device Identification) D1-SHEVTDTTM (Shift Event Date/Times to Standard) D1-DETBOID (Device Event Type and Business Object Identification) D1-SETBO (Set BO)

7.3 Pre-process Inbound Message

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Group: Inbound Communication Process

Actor/Role: SGG

Description: SGG retrieves details from inbound communication and performs pre-processing.

Business Objects	Available Algorithms
D4-DisconnectLoadNtf	D1-COMMINFO (Communication Information) D4-SETDFBOEL (Set default BO elements)

7.4 Create Inbound Communication in Pending State

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Group: Inbound Communication Process

Actor/Role: SGG

Description: SGG creates Inbound Communication in 'Pending' state.

Business Object
D4-DisconnectLoadNtf

7.5 Validate Ability to Process Inbound Communication and Transition to Validate State

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Group: Inbound Communication Process

Actor/Role: SGG

Description: SGG validates ability to process Inbound Communication. Typically, it checks for Communication Type, determines the outbound communication that initiated it and links to it and also evaluates the status of Remote Disconnect event success status.

Entities to Configure
Inbound Communication Type

Business Objects	Available Algorithms
D4-DisconnectLoadNtf	D1-VALCOMTP (Validate Communication Type) D4-FPCOMMBO (Find Initiating Outbound Communication) D4-EVNSTAT (Evaluate Notification Status) F1-AT-RQJ (Transition to Default Next Status)

7.6 Transition Inbound Communication to Validation Error State and Log Error

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Group: Inbound Communication Process

Actor/Role: SGG

Description: If any error occurs during validations, SGG transitions the Inbound Communication to 'Validation Error' state and logs an error.

Business Object
D4-DisconnectLoadNtf

7.7 Transition to Create Completion Event State

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Group: Inbound Communication Process

Actor/Role: SGG

Description: SGG transitions Inbound Communication to 'Create Completion Event' state.

Business Objects	Available Algorithms
D4-DisconnectLoadNtf	F1-AT-RQJ (Transition to Default Next Status (Java))

7.8 Validate and Create Device Disconnect Completion Event in Pending State

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Group: Inbound Communication Process

Actor/Role: SGG

Description: SGG creates Disconnect Device Completion Event in 'Pending' state. SGG validates ability to process Disconnect Device Completion Event. Typically, it checks for Completion Event and its related Activity Type, Sequence number for Completion Events, etc.

Business Objects	Available Algorithms
D4-DisconnectLoadNtf **D1-Completion Event** D1-DisconnectDevice	D4-CDCE (Create Disconnect Completion Event) D1-CEVTINFO (Completion Event - Information) D1-VALCEVT (Validate Completion Event) D1-VALOUTCOM (Validate Outbound Communication) D1-VALTRCEVT (Validate Transition Completion Events)

7.9 Transition Inbound to Completed State

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Group: Inbound Communication Process

Actor/Role: SGG

Description: SGG transitions Inbound Communication to 'Completed' state.

Business Objects	Available Algorithms
D4-DisconnectLoadNtf	F1-AT-RQJ (Transition to Default Next Status (Java))

8.0 Transition Outbound Communication to Completed State

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Group: Inbound Communication Process

Actor/Role: SGG

Description: SGG transitions Outbound Communication to 'Completed' state and updates Event Date/Time.

Business Objects	Available Algorithms
D4-DisconnectLoad **D4-DisconnectLoadNtf**	D1-UPCMEVDTR (Update Parent Communication's Event Date Time Connect) D1-TRANPRBO (Transition Parent Outbound Communication BO)

8.1 Transition Activity to Connection Ready State

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Outbound Communication Process

Actor/Role: SGG

Description: SGG transition the Activity to 'Connection Ready' state.

Business Objects	Available Algorithms
D4-DisconnectLoad **D4-DisconnectLoadNtf**	D1-UCCDFTPA (Update Connect Disconnect Completion Flag and Transition Parent Activity)

8.2 Transition Device Disconnect Completion Event to Executed State

See **Manage Device Remote Disconnect (Echelon) Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG transitions Disconnect Device Completion Event to 'Executed' state.

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType **D1-Completion Event** D1-DisconnectDevice	D1-EXCMPEVTS (Execute Completion Events)

8.3 Update Device Install Event to 'Disconnect' State

See **Manage Device Remote Disconnect (Echelon) Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG updates the install event state to 'Disconnect'.

Business Objects	Available Algorithms
D1-Completion Event D1-DisconnectDevice	D1-DISCDEV (Disconnect Device)

8.4 Transition Meter Read Completion Event to Executed State

See **Manage Device Remote Disconnect (Echelon) Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG transitions Create IMD Completion Event to 'Executed' state.

Business Objects	Available Algorithms
D1-RemoteDisconnect **D1-Completion Event** D1-CreateIMD	D1-EXCMPEVTS (Execute Completion Events)

8.5 Preprocess IMD

See **Manage Device Remote Disconnect (Echelon) Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG invokes to preprocess the IMD by invoking seeder preprocessing. Please refer to process 4.2.1.1 MDM.Upload Device Measurements for further details.

Business Objects	Available Algorithms
D1-Completion Event D1-CreateIMD	D1-CREIMD (Create IMD)

8.6 Transition Activity to Completion Event Error State and Log Error

See **Manage Device Remote Disconnect (Echelon) Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: If any errors are encountered while transitioning Completion Events to 'Executed' state, SGG transitions Activity to 'Completion Event Error' state and logs an error.

Business Object
D1-RemoteDisconnect
D1-Completion Event
D1-DisconnectDevice
D1-CreateIMD

8.7 Transition Activity to Waiting for Measurement State

See **Manage Device Remote Disconnect (Echelon) Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG transitions Activity to 'Waiting for Measurement' state.

Business Objects	Available Algorithms
D1-RemoteDisconnect	F1-AT-RQJ (Transition to Default Next Status (Java))

8.9 4.2.1.2 MDM.Manage VEE and VEE Exceptions

See **Manage Device Remote Disconnect (Echelon) Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: MDM performs the VEE processing of IMD created. Please refer to process 4.2.1.2 MDM.Manage VEE and VEE Exceptions for further details.

9.0 Retrieve Final Measurements

See **Manage Device Remote Disconnect (Echelon) Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG retrieves final measurements and stores as Meter Read on Activity.

Customizable process
D1-CRWT (Command Request Wait - Monitor)

Business Objects	Available Algorithms
D1-RemoteDisconnect	D1-RFINSC (Retrieve Scalar Final Measurements)

9.1 Retrieve Initial Measurements

See **Manage Device Remote Disconnect (Echelon) Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG retrieves IMD measurement and stores as Meter Read on Activity. Depending on the state of IMD measurement availability in the system, SGG has various options of retrieving IMD.

Customizable process
D1-CRWT (Command Request Wait - Monitor)

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	D1-RMVCE (Retrieve Measurements via Completion Events) D1-RSINIMS (Retrieve Scalar Initial Measurements)

9.2 Monitor IMD Availability within Allowable Period

See **Manage Device Remote Disconnect (Echelon) Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG monitors if the IMD measurement becomes available in allowable window period.

Customizable process
D1-CRWT (Command Request Wait - Monitor)

Entities to Configure
Activity Type

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	D1-WFMTO (Wait for Measurement Time Out)

9.3 Transition Activity to Wait Expired Error State and Log Error

See **Manage Device Remote Disconnect (Echelon) Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: If IMD is not available within the Wait time and it expires, SGG transitions Activity to 'Wait Expired' state and logs an error.

Entities to Configure
Activity Type

Business Object
D1-RemoteDisconnect D1-RemoteDisconnectType

9.4 Review Activity Waiting for Measurement

See **Manage Device Remote Disconnect (Echelon) Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User can review and analyze the Activity.

Business Object
D1-RemoteDisconnect D1-RemoteDisconnectType

9.5 Request to Skip Waiting for Measurement

See **Manage Device Remote Disconnect (Echelon) Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: When the Activity is in 'Waiting for Measurement' state, MDM or SGG Authorized User can process the Activity immediately by making a manual request to 'Skip waiting for measurement' to SGG.

Business Object
D1-RemoteDisconnect D1-RemoteDisconnectType

9.6 Transition Activity to Completion State

See **Manage Device Remote Disconnect (Echelon) Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG transitions Activity to 'Completed' state.

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	F1-AT-RQJ (Transition to Default Next Status (Java))

9.7 Create and Send Disconnect Success Notification to Requester

See **Manage Device Remote Disconnect (Echelon) Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG creates the message and sends Disconnect Device success notification to Requester based on the processing method.

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	D1-SRDNTEA (Send Remote Disconnect Notification to Edge Application)

9.8 Create and Send Meter Read to Requester

See **Manage Device Remote Disconnect (Echelon) Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG creates the message and sends Meter Read message to Requester based on the processing method.

Business Objects	Available Algorithms
D1-RemoteDisconnect D1-RemoteDisconnectType	D1-SFMTEA (Send Final Measurement to Edge Application)

9.9 Transition Activity to Completion State

See **Manage Device Remote Disconnect (Echelon) Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG transitions Activity to 'Discard' state indicating that it cannot be further used. However, it remains in the system.

Business Objects	Available Algorithms
D1-RemoteDisconnect	D1-TPATOF (Transition Parent Activity To Failed)

10.0 Cancel Outstanding Completion Events

See **Manage Device Remote Disconnect (Echelon) Page 5** on page 2-6 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: When Activity is discarded, SGG cancels any existing outstanding Completion Events.

Business Objects	Available Algorithms
D1-RemoteDisconnect	D1-COCE (Cancel Outstanding Completion Events)

10.1 Send Response "Command Failed" to Requester

See **Manage Device Remote Disconnect (Echelon) Page 5** on page 2-6 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG creates the message and sends Command Fail response to Requester based on the identified method.

Business Objects	Available Algorithms
D1-RemoteDisconnect	D1-FRER (Send Fail Response to External Requester)

10.2 Analyze Requirements to Create Event

See **Manage Device Remote Disconnect (Echelon) Page 6** on page 2-7 for the business process diagram associated with this activity.

Group: Manual Disconnect Device Completion Event Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User analyzes requirements and gathers information required to create Disconnect Device Completion Event.

Note: In general, creating Disconnect Device Completion Event manually is not the practical business practice.

10.3 Select Completion Event Type and Populate Data

See **Manage Device Remote Disconnect (Echelon) Page 6** on page 2-7 for the business process diagram associated with this activity.

Group: Manual Disconnect Device Completion Event Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User selects the event type as Disconnect Device Completion Event and populates the required data.

10.4 Request to Create Completion Event

See **Manage Device Remote Disconnect (Echelon) Page 6** on page 2-7 for the business process diagram associated with this activity.

Group: Manual Disconnect Device Completion Event Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User makes a request to create a Disconnect Device Completion Event.

10.5 Review Event

See **Manage Device Remote Disconnect (Echelon) Page 6** on page 2-7 for the business process diagram associated with this activity.

Group: Manual Disconnect Device Completion Event Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User can review and analyze the Disconnect Device Completion Event.

Business Object
D1-Completion Event D1-DisconnectDevice

10.6 Request to Delete Event

See **Manage Device Remote Disconnect (Echelon) Page 6** on page 2-7 for the business process diagram associated with this activity.

Group: Manual Disconnect Device Completion Event Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User if determines that the Disconnect Device Completion Event is not required, Authorized User requests to delete it.

Business Object
D1-Completion Event D1-DisconnectDevice

10.7 Delete Completion Event

See **Manage Device Remote Disconnect (Echelon) Page 6** on page 2-7 for the business process diagram associated with this activity.

Group: Manual Disconnect Device Completion Event Process

Actor/Role: SGG

Description: SGG deletes the Disconnect Device Completion Event.

Business Object
D1-Completion Event D1-DisconnectDevice

10.8 Request to Discard Event

See **Manage Device Remote Disconnect (Echelon) Page 6** on page 2-7 for the business process diagram associated with this activity.

Group: Manual Disconnect Device Completion Event Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User if determines that the Disconnect Device Completion Event is not required, Authorized User requests to discard it.

Business Object
D1-Completion Event D1-DisconnectDevice

10.9 Transition to Discard State and Discard Completion Event

See **Manage Device Remote Disconnect (Echelon) Page 6** on page 2-7 for the business process diagram associated with this activity.

Group: Manual Disconnect Device Completion Event Process

Actor/Role: SGG

Description: SGG transitions Disconnect Device Completion Event to 'Discard' state.

Business Object
D1-Completion Event D1-DisconnectDevice

11.0 Request to Update Event

See **Manage Device Remote Disconnect (Echelon) Page 6** on page 2-7 for the business process diagram associated with this activity.

Group: Manual Disconnect Device Completion Event Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User modifies Disconnect Device Completion Event data and requests to perform appropriate updates.

Business Object
D1-Completion Event D1-DisconnectDevice

11.1 Update Completion Event

See **Manage Device Remote Disconnect (Echelon) Page 6** on page 2-7 for the business process diagram associated with this activity.

Group: Manual Disconnect Device Completion Event Process

Actor/Role: SGG

Description: SGG updates the Disconnect Device Completion Event with data populated by Authorized User.

Business Object
D1-Completion Event D1-DisconnectDevice

11.2 Request to Execute

See **Manage Device Remote Disconnect (Echelon) Page 6** on page 2-7 for the business process diagram associated with this activity.

Group: Manual Disconnect Device Completion Event Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User requests to transition Disconnect Device Completion Event to 'Executed' state.

Business Object
D1-Completion Event D1-DisconnectDevice

11.3 Gather Requirements to Cancel Command

See **Manage Device Remote Disconnect (Echelon) Page 7** on page 2-8 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User analyzes requirements and gathers information required to cancel Remote Disconnect command.

11.4 Select Cancel Command Activity Type

See **Manage Device Remote Disconnect (Echelon) Page 7** on page 2-8 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User selects Activity Type as 'Cancel Command' to cancel Disconnect command request.

11.5 Populate Cancel Command Execution Data

See **Manage Device Remote Disconnect (Echelon) Page 7** on page 2-8 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User populates the required data such as request expiration date, recipient information, etc.

11.6 Communicate and Transform Remote Disconnect Cancel Command to SGG Format

See **Manage Device Remote Disconnect (Echelon) Page 7** on page 2-8 for the business process diagram associated with this activity.

Actor/Role: Integration Layer

Description: Integration Layer facilitates the communication between the 3rd Party application and the SGG application. It receives the Cancel Command request, transforms, and converts the request into format compatible with SGG application.

11.7 Identify Remote Disconnect Activity based on Transaction ID

See **Manage Device Remote Disconnect (Echelon) Page 7** on page 2-8 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG identifies the Remote Disconnect Activity to cancel based on the transaction ID which was created in SGG, when the request originally came from 3rd party application, and sent later to 3rd party application. However, in case of manual request from Authorized User, the Activity is identified based on manual selection while populating the required data for cancel command request.

11.8 Analyze Error and Work To Do

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User analyzes the error logged and respective To Do created to determine the corrective action and to perform work.

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Business Object
D1-RemoteDisconnect
D4-DisconnectLoad
D4-DisconnectLoadNtf

11.9 Request to Delete

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Group: Inbound Exception Process

Actor/Role: MDM or SGG Authorized User

Description: If MDM or SGG Authorized User determines that the Inbound Communication is not required, Authorized User can request to delete it.

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Business Object
D4-DisconnectLoadNtf

12.0 Delete Inbound Communication

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Group: Inbound Exception Process

Actor/Role: SGG

Description: SGG deletes Inbound Communication.

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Business Object
D4-DisconnectLoadNtf

12.1 Request to Discard

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Group: Inbound Exception Process

Actor/Role: MDM or SGG Authorized User

Description: MDM or SGG Authorized User, if determines that the Inbound Communication is not required, Authorized User can request to discard it.

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Business Object
D4-DisconnectLoadNtf

12.2 Complete To Do(s)

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Actor/Role: SGG

Description: SGG finds all non-completed To Do entries and completes them.

Business Objects	Available Algorithms
D1-RemoteDisconnect **D4-DisconnectLoad** **D4-DisconnectLoadNtf**	D1-GTDCBO (Generic To Do Completion for BOs)

12.3 Transition Inbound Communication to Discard State

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Group: Inbound Exception Process

Actor/Role: SGG

Description: SGG transitions Inbound Communication to 'Discard' state

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Business Object
D4-DisconnectLoadNtf

12.4 Log Error and Transition Outbound Communication to Response Error State

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Group: Inbound Exception Process

Actor/Role: SGG

Description: SGG logs error and transitions Outbound Communication to Response Error state.

Business Objects	Available Algorithms
D4-DisconnectLoadNtf	D1-FAILPCOUT (Fail Parent Outbound Activity)

12.5 Request to Validate

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Group: Inbound Exception Process

Actor/Role: MDM or SGG Authorized User

Description: If Authorized User wants to reprocess the inbound communication, can request to validate it.

Business Object
D4-DisconnectLoadNtf

12.6 Transition to Validate State and Initialize Reprocessing

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Group: Inbound Exception Process

Actor/Role: SGG

Description: SGG transitions Inbound Communication to 'Validate' state and initializes reprocessing.

Business Objects	Available Algorithms
D4-DisconnectLoadNtf	D1-RBOE (Retry BO in Error)

12.7 Identify Inbound Communication in Validation Error State

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Group: Inbound Exception Process

Actor/Role: SGG

Description: SGG identifies Inbound Communication in 'Validation Error' state.

Customizable Process
D1-ICERR (Inbound Communication Error - Retry)

Business Object
D4-DisconnectLoadNtf

12.8 Evaluate Criteria to Run Automated Retry Process

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Group: Inbound Exception Process

Actor/Role: SGG

Description: SGG evaluates criteria to run automated retry process. A Batch process is configured for this.

Note: If Business requires different criteria to retry the process, those criteria could be configured in parameter section of batch process.

Customizable Process
D1-ICERR (Inbound Communication Error - Retry) D1-OCERR (Outbound Communication Error - Retry) D1-CRERR (Command Request Error - Retry)

Business Object
D1-RemoteDisconnect **D4-DisconnectLoad** **D4-DisconnectLoadNtf**

12.9 Request to Delete

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Group: Outbound Exception Process

Actor/Role: MDM or SGG Authorized User

Description: If MDM or SGG Authorized User determines that the Outbound Communication is not required, Authorized User can request to delete it.

Business Object
D4-DisconnectLoadNtf

13.0 Delete Outbound Communication

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Group: Outbound Exception Process

Actor/Role: SGG

Description: SGG deletes Outbound Communication from the system.

Business Object
D4-DisconnectLoad

13.1 Request to Validate

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Group: Outbound Exception Process

Actor/Role: MDM or SGG Authorized User

Description: If Authorized User wants to reprocess the Outbound Communication, can request to validate it.

Business Object
D4-DisconnectLoad

13.2 Transition to Validate State and Initialize Reprocessing

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Group: Outbound Exception Process

Actor/Role: SGG

Description: SGG transitions Outbound Communication to 'Validate' state and initializes reprocessing.

Business Object
D4-DisconnectLoad

13.3 Identify Outbound Communication in Validation Error State

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Group: Outbound Exception Process

Actor/Role: SGG

Description: SGG identifies Outbound Communication in 'Validation Error' state.

Customizable Process
D1-OCERR (Outbound Communication Error - Retry)

Business Objects	Available Algorithms
D4-DisconnectLoad	D1-RBOE (Retry BO in Error)

13.4 Transition Outbound Communication to Retry State

See **Manage Device Remote Disconnect (Echelon) Page 8** on page 2-9 for the business process diagram associated with this activity.

Group: Outbound Exception Process

Actor/Role: SGG

Description: SGG transitions Outbound Communication to 'Retry' state.

Business Objects	Available Algorithms
D4-DisconnectLoad	D1-RBOE (Retry BO in Error)

13.5 Identify Outbound Communication in Response Error State

See **Manage Device Remote Disconnect (Echelon) Page 9** on page 2-10 for the business process diagram associated with this activity.

Group: Outbound Exception Process

Actor/Role: SGG

Description: SGG identifies Outbound Communication in 'Response Error' state.

Customizable Process
D1-OCERR (Outbound Communication Error - Retry)

Business Objects	Available Algorithms
D4-DisconnectLoad	D1-RBOE (Retry BO in Error)

13.6 Request to Revalidate

See **Manage Device Remote Disconnect (Echelon) Page 9** on page 2-10 for the business process diagram associated with this activity.

Group: 'Validation Error' Exception Process

Actor/Role: MDM or SGG Authorized User

Description: If Authorized User wants to reprocess the Activity, can request to validate it.

Business Object
D1-RemoteDisconnect

13.7 Transition Activity to Validate State and Initialize Reprocessing

See **Manage Device Remote Disconnect (Echelon) Page 9** on page 2-10 for the business process diagram associated with this activity.

Group: 'Validation Error' Exception Process

Actor/Role: SGG

Description: SGG transitions Activity to 'Validate' state and initializes reprocessing.

Business Objects	Available Algorithms
D1-RemoteDisconnect	D1-RBOE (Retry BO in Error)

13.8 Identify Activity in Validation Error State

See **Manage Device Remote Disconnect (Echelon) Page 9** on page 2-10 for the business process diagram associated with this activity.

Group: 'Validation Error' Exception Process

Actor/Role: SGG

Description: SGG identifies Activity in 'Validation Error' state.

Customizable Process
D1-CRERR (Command Request Error - Retry)

Business Object
D1-RemoteDisconnect

13.9 Transition Activity to Retry State

See **Manage Device Remote Disconnect (Echelon) Page 9** on page 2-10 for the business process diagram associated with this activity.

Group: "Communication Error' Exception Process

Actor/Role: SGG

Description: SGG transitions Activity to 'Retry' state.

Business Objects	Available Algorithms
D1-RemoteDisconnect	D1-RBOE (Retry BO in Error)

14.0 Identify Activity in Communication Error State

See **Manage Device Remote Disconnect (Echelon) Page 10** on page 2-11 for the business process diagram associated with this activity.

Group: "Communication Error' Exception Process

Actor/Role: SGG

Description: SGG identifies Activity in 'Communication Error' state.

Customizable Process
D1-CRERR (Command Request Error - Retry)

Business Object
D1-RemoteDisconnect

14.1 Transition Activity to Connection Ready State

See **Manage Device Remote Disconnect (Echelon) Page 10** on page 2-11 for the business process diagram associated with this activity.

Group: "Communication Error' Exception Process

Actor/Role: SGG

Description: SGG transitions the Activity to 'Connection Ready' state.

Business Object
D1-RemoteDisconnect

14.2 Request to Execute Completion Event

See **Manage Device Remote Disconnect (Echelon) Page 10** on page 2-11 for the business process diagram associated with this activity.

Group: "Communication Error' Exception Process

Actor/Role: MDM or SGG Authorized User

Description: If Authorized User wants to reprocess the Activity, can request to execute Completion Event.

Business Object
D1-RemoteDisconnect

14.3 Transition Activity to Execution Completion Event State and Initialize Reprocessing

See **Manage Device Remote Disconnect (Echelon) Page 10** on page 2-11 for the business process diagram associated with this activity.

Group: "Completion Event Error' Exception Process

Actor/Role: SGG

Description: SGG transitions Activity to 'Execution Completion Event' state and initializes reprocessing.

Business Objects	Available Algorithms
D1-RemoteDisconnect	D1-RBOE (Retry BO in Error)

14.4 Identify Activity in Completion Event Error State

See **Manage Device Remote Disconnect (Echelon) Page 10** on page 2-11 for the business process diagram associated with this activity.

Group: "Completion Event Error' Exception Process

Actor/Role: SGG

Description: SGG identifies Activity in 'Completion Event Error' state.

Customizable Process
D1-CRERR (Command Request Error - Retry)

Business Object
D1-RemoteDisconnect

14.5 Request to Continue Waiting

See **Manage Device Remote Disconnect (Echelon) Page 10** on page 2-11 for the business process diagram associated with this activity.

Group: 'Wait Expired Error' Exception Process

Actor/Role: MDM or SGG Authorized User

Description: If Authorized User wants to reprocess the Activity, can request to continue waiting.

Business Object
D1-RemoteDisconnect

14.6 Transition Activity to Waiting for Measurement State and Initialize Reprocessing

See **Manage Device Remote Disconnect (Echelon) Page 10** on page 2-11 for the business process diagram associated with this activity.

Group: 'Wait Expired Error' Exception Process

Actor/Role: SGG

Description: SGG transitions Activity to 'Waiting for Measurement' state and initializes reprocessing.

Business Objects	Available Algorithms
D1-RemoteDisconnect	D1-RBOE (Retry BO in Error)

14.7 Identify Activity in Wait Expired Error State

See **Manage Device Remote Disconnect (Echelon) Page 10** on page 2-11 for the business process diagram associated with this activity.

Group: 'Wait Expired Error' Exception Process

Actor/Role: SGG

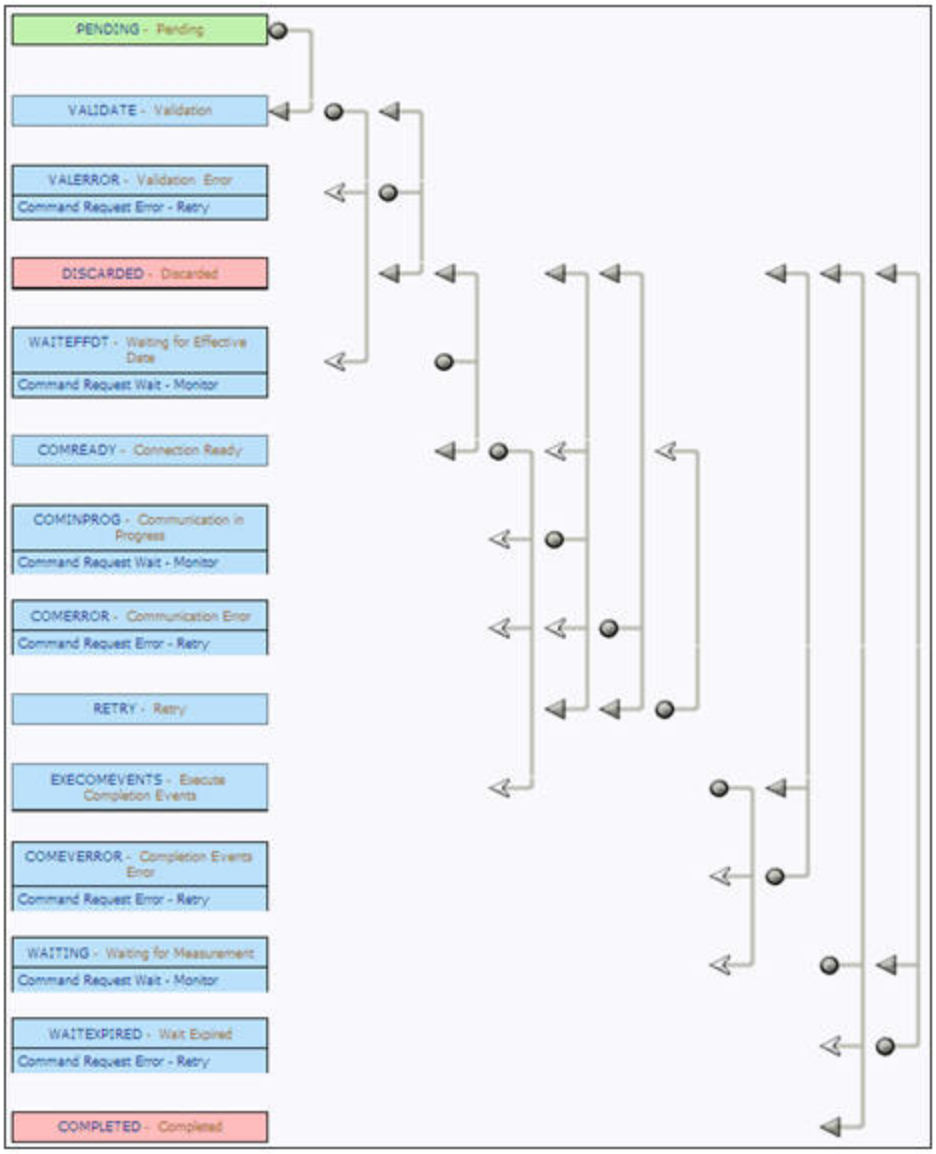
Description: SGG identifies Activity in 'Wait Expired Error' state.

Customizable Process
D1-CRERR (Command Request Error - Retry)

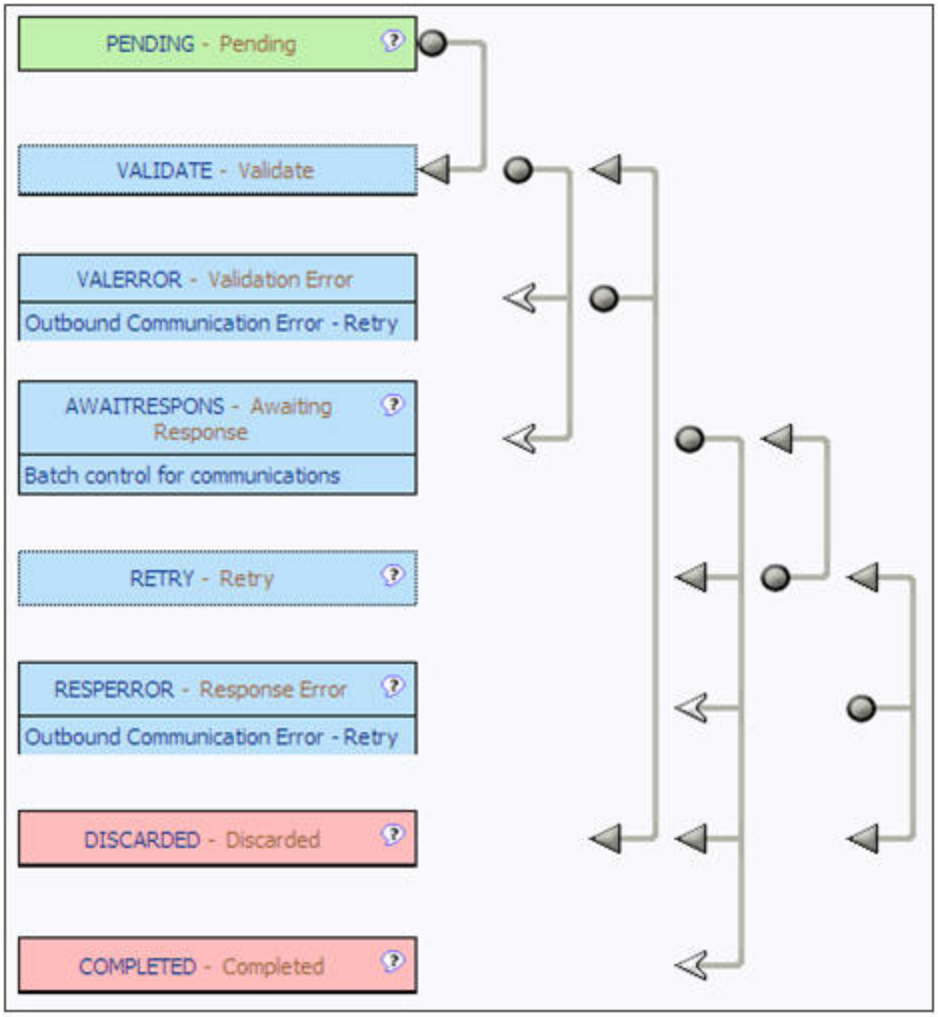
Business Objects	Available Algorithms
D1-RemoteDisconnect	D1-RBOE (Retry BO in Error)

Business Objects Lifecycle

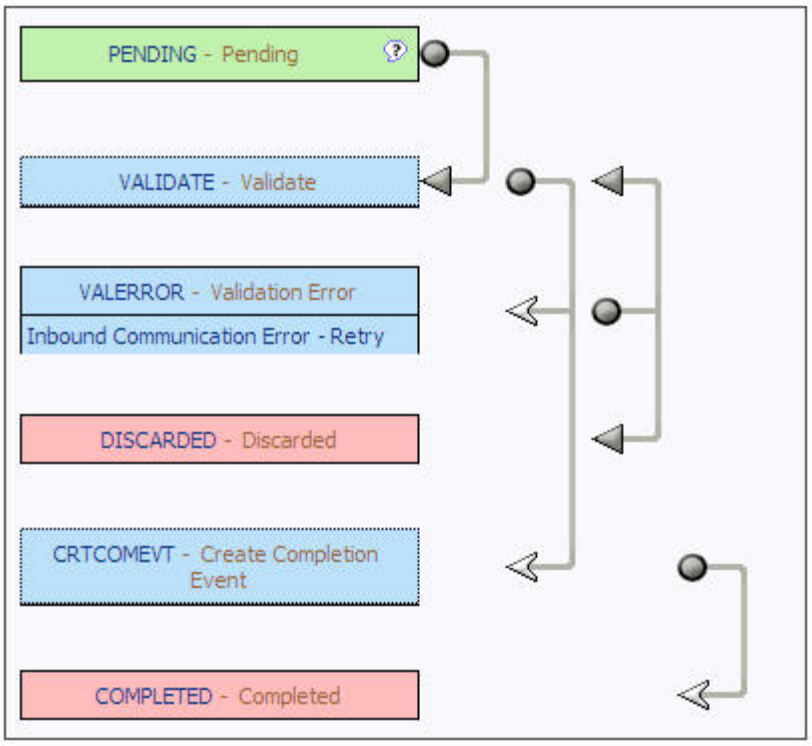
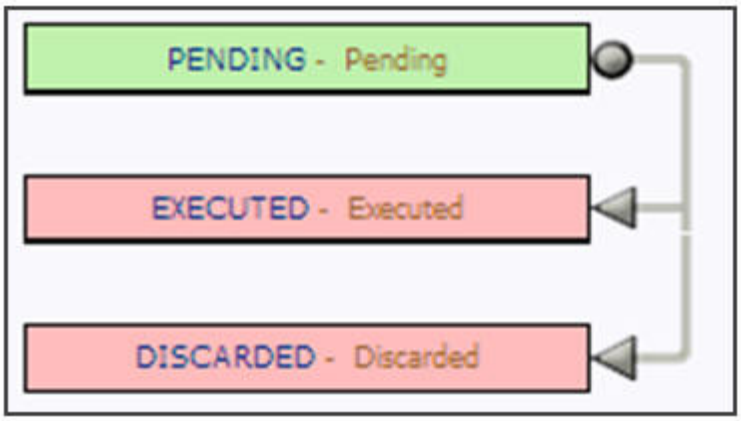
D1-RemoteDisconnect



D4-DisconnectLoad



D4-DisconnectLoadNtf



D1-Completion Event