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

Utility Reference Model

5.6.3.6b SGG-MDM.V2.0.0.Manage Device Device Status Check (Echelon)

April 2013

ORACLE

Oracle Utilities SGG V2.0.0 to MDM V2.0.1 Integration Utility Reference Model 5.6.3.6b

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Chapter 1

Overview

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

- **Brief Description**

Brief Description

Business Process: 5.6.3.6b SGG-MDM.V2.0.0.Manage Device Device Status Check (Echelon)

Process Type: Process

Parent Process: 5.6.3 SGG-MDM.Manage Devices

Sibling Processes:

This process gets initiated when a 3rd Party Application (E.g. Customer Care and Billing Application), makes a request for a Device Status Check or a MDM or SGG Authorized User manually requests for a Device Status Check within SGG system. SGG initiates Device Status Check by communicating with respective Echelon Head-End System that in turn communicates with the Smart Meter device, collects status information, and sends it back to SGG.

Chapter 2

Detailed Business Process Model Description

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

- **Business Process Diagrams**
  - **Manage Device Device Status Check (Echelon) Page 1**
  - **Manage Device Device Status Check (Echelon) Page 2**
  - **Manage Device Device Status Check (Echelon) Page 3**
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  - **D4-ReadLoadStatus**
  - **D4-RetrieveMeterInfo**
  - **D4-ReadLoadStatusNtf**

Business Process Diagrams

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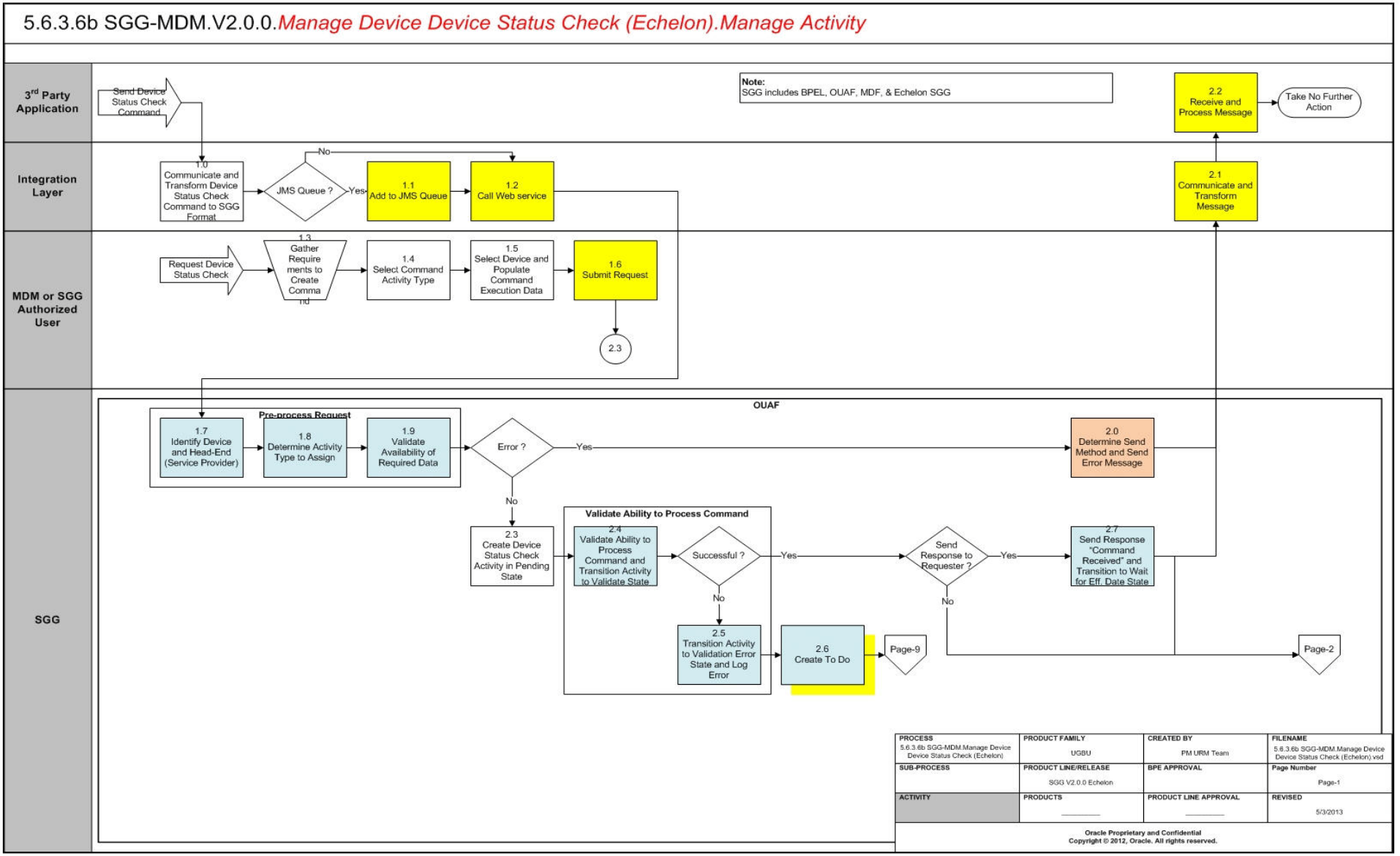
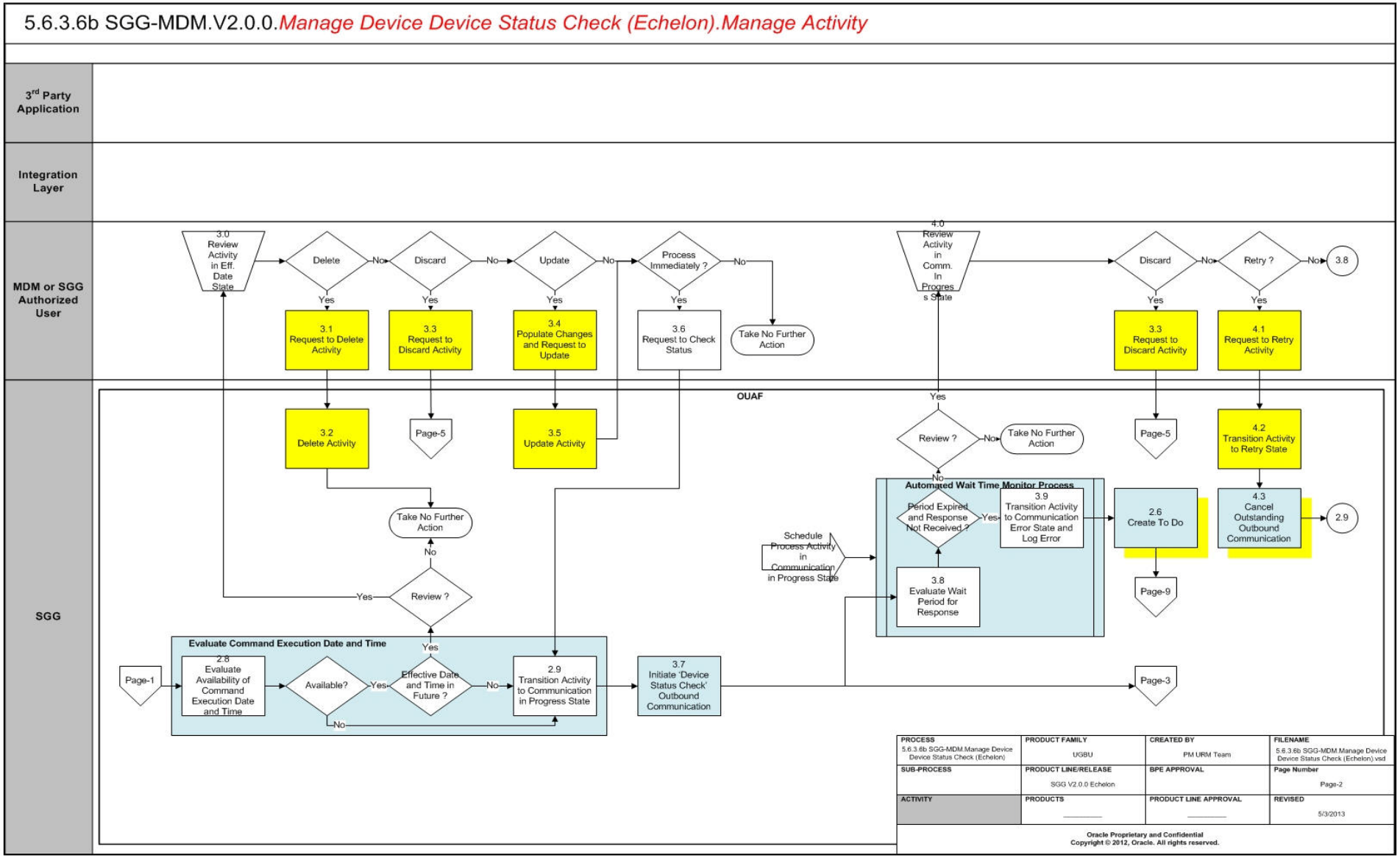
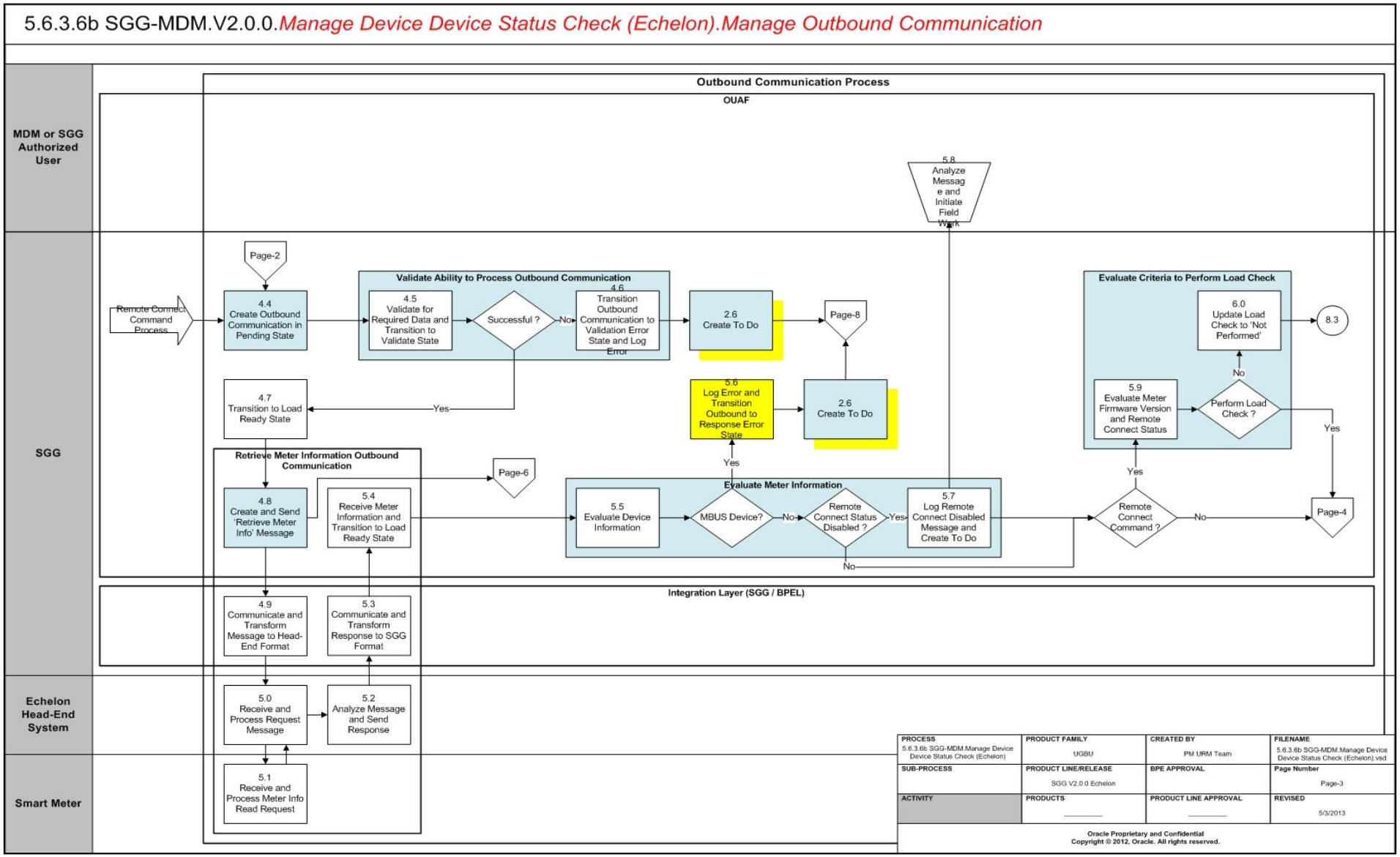


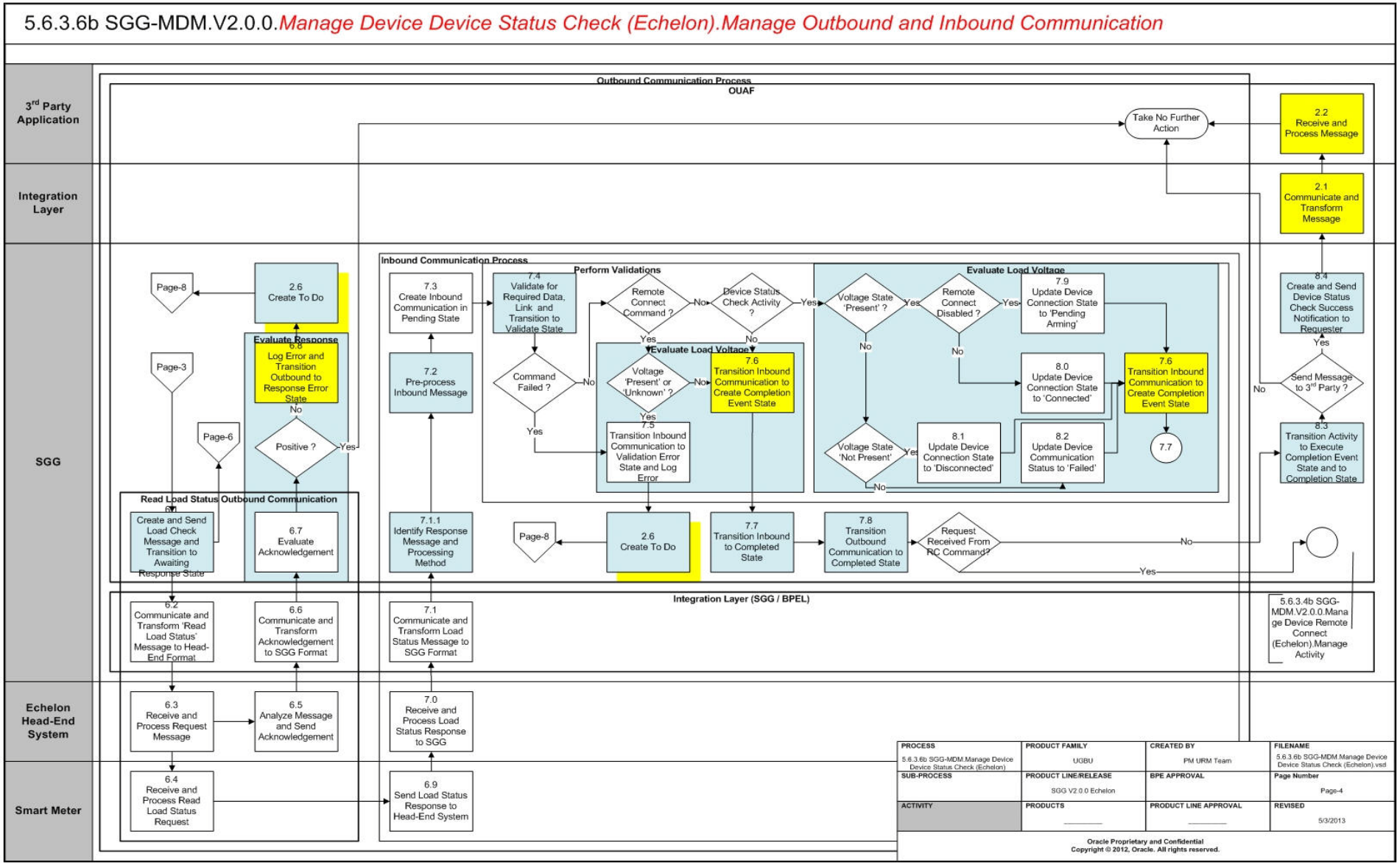
Manage Device Device Status Check (Echelon) Page 2



Manage Device Device Status Check (Echelon) Page 3



Manage Device Device Status Check (Echelon) Page 4



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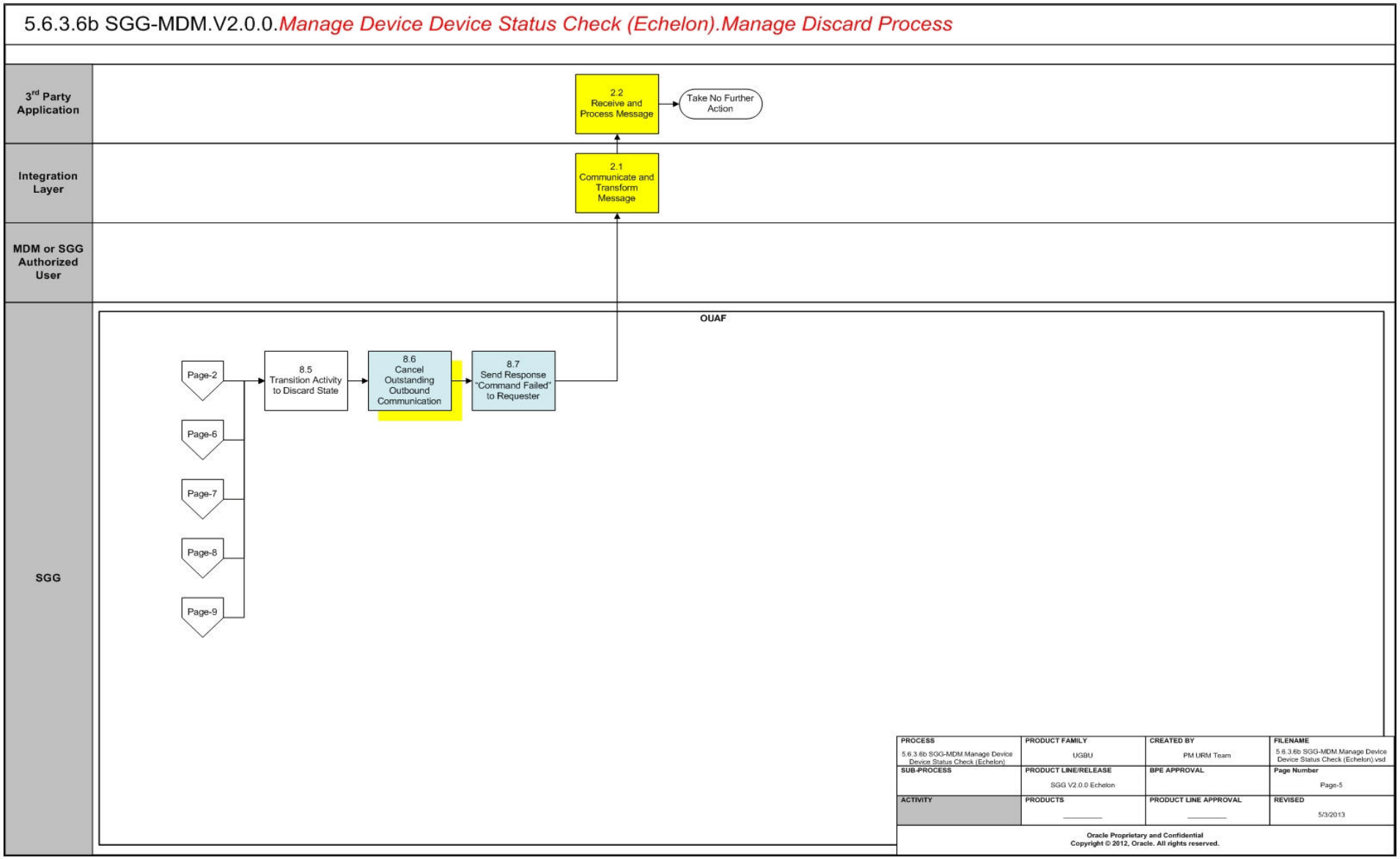
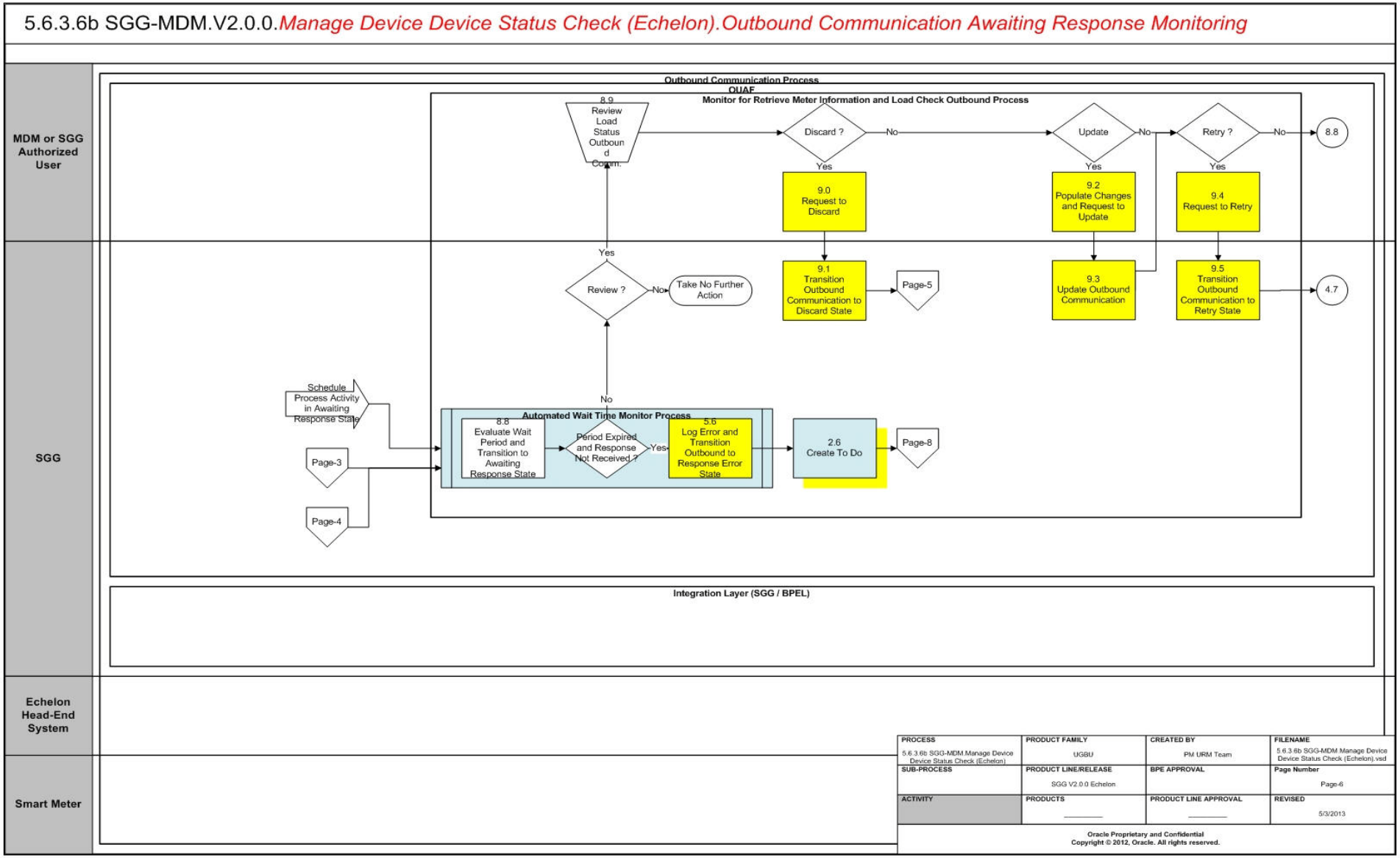
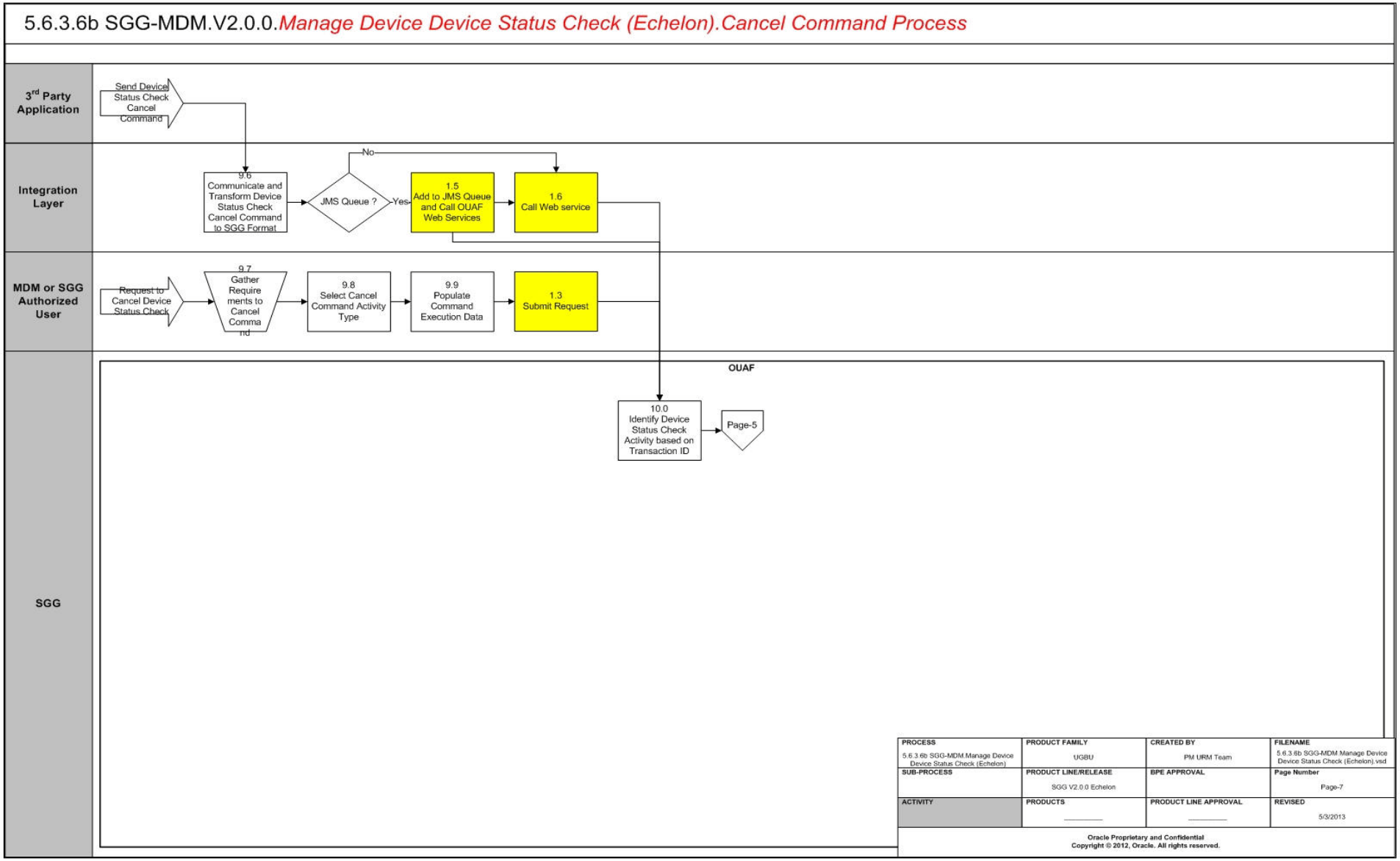


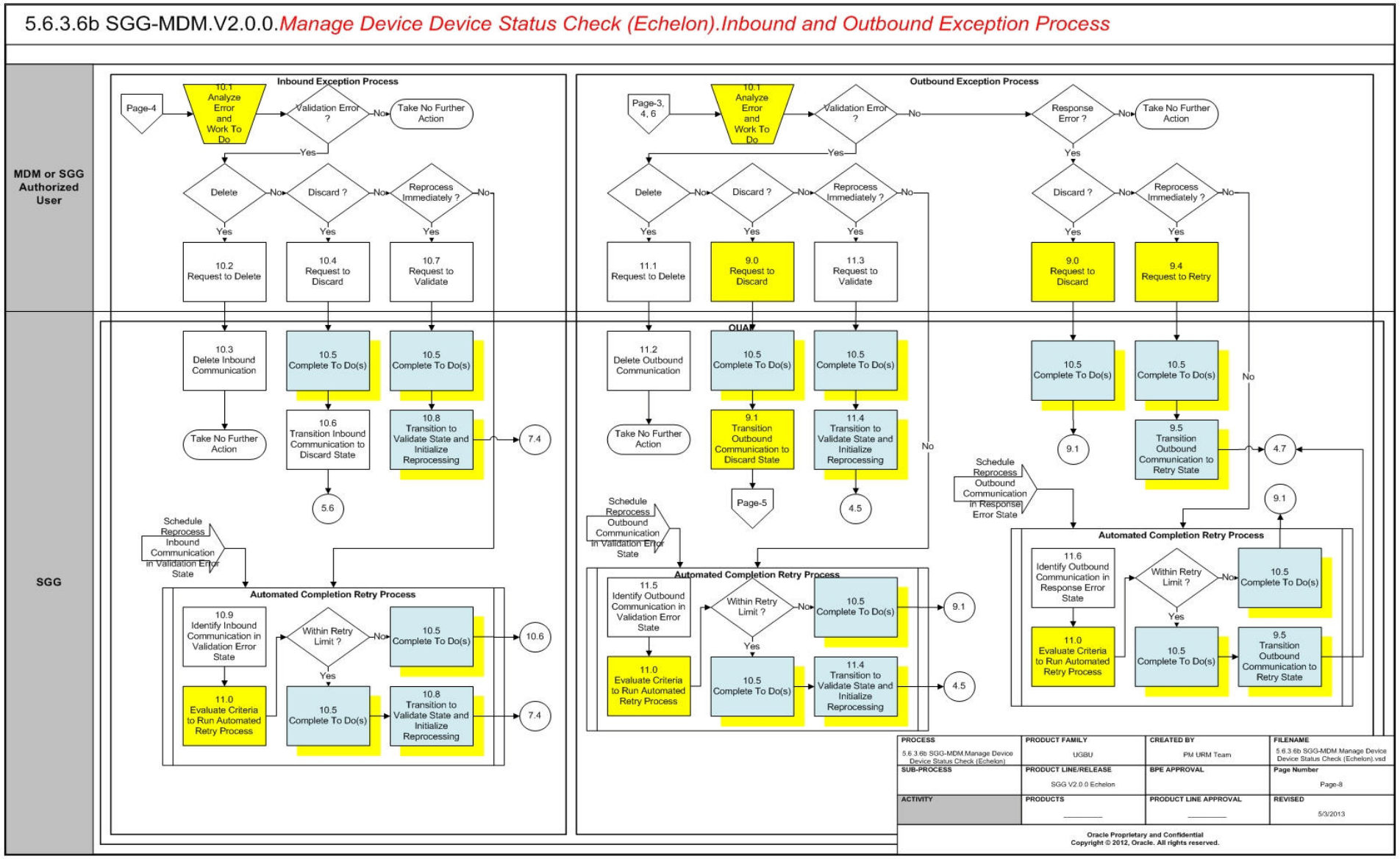
Manage Device Device Status Check (Echelon) Page 6



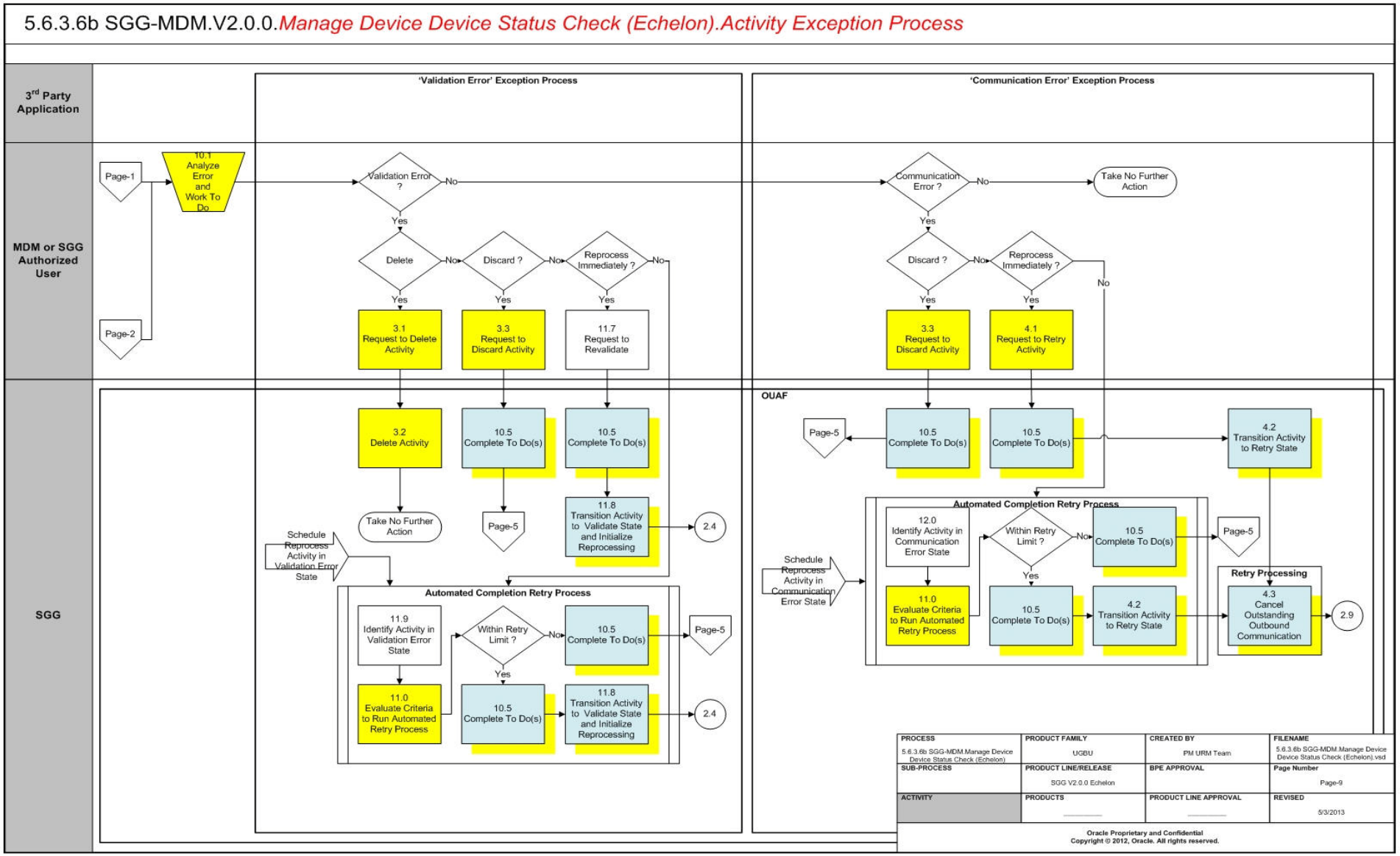
Manage Device Device Status Check (Echelon) Page 7



Manage Device Device Status Check (Echelon) Page 8



Manage Device Device Status Check (Echelon) Page 9



SGG-MDM Manage Device Device Status Check (Echelon) Description

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

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

- **4.4 Create Outbound Communication in Pending State**
- **4.5 Validate for Required Data and Transition to Validate State**
- **4.6 Transition Outbound Communication to Validation Error State and Log Error**
- **4.7 Transition to Load Ready State**
- **4.8 Create and Send 'Retrieve Meter Info' Message**
- **4.9 Communicate and Transform Message to Head-End Format**
- **5.0 Receive and Process Request Message**
- **5.1 Receive and Process Meter Info Read Request**
- **5.2 Analyze Message and Send Response**
- **5.3 Communicate and Transform Response to SGG Format**
- **5.4 Receive Meter Information and Transition to Load Ready State**
- **5.5 Evaluate Device Information**
- **5.6 Log Error and Transition Outbound to Response Error State**
- **5.7 Log Remote Connect Disabled Message and Create To Do**
- **5.8 Analyze Message and Initiate Field Work**
- **5.9 Evaluate Meter Firmware Version and Remote Connect Status**
- **6.0 Update Load Check to 'Not Performed'**
- **6.1 Create and Send Load Check Message and Transition to Awaiting Response State**
- **6.2 Communicate and Transform 'Read Load Status' Message to Head-End Format**
- **6.3 Receive and Process Request Message**
- **6.4 Receive and Process Read Load Status Request**
- **6.5 Analyze Message and Send Acknowledgement**
- **6.6 Communicate and Transform Acknowledgement to SGG Format**
- **6.7 Evaluate Acknowledgement**
- **6.8 Log Error and Transition Outbound to Response Error State**
- **6.9 Send Load Status Response to Head-End System**
- **7.0 Receive and Process Load Status Response to SGG**
- **7.1 Communicate and Transform Load Status Message to SGG Format**
- **7.1.1 Identify Response Message and Processing Method**
- **7.2 Pre-process Inbound Message**
- **7.3 Create Inbound Communication in Pending State**
- **7.4 Validate for Required Data, Link and Transition to Validate State**
- **7.5 Transition Inbound Communication to Validation Error State and Log Error**
- **7.6 Transition Inbound Communication to Create Completion Event State**
- **7.7 Transition Inbound to Completed State**
- **7.8 Transition Outbound Communication to Completed State**
- **7.9 Update Device Connection State to 'Pending Arming'**
- **8.0 Update Device Connection State to 'Connected'**

- **8.1 Update Device Connection State to 'Disconnected'**
- **8.2 Update Device Communication Status to 'Failed'**
- **8.3 Transition Activity to Execute Completion Event State and to Completion State**
- **8.4 Create and Send Device Status Check Success Notification to Requester**
- **8.5 Transition Activity to Discard State**
- **8.6 Cancel Outstanding Outbound Communication**
- **8.7 Send Response "Command Failed" to Requester**
- **8.8 Evaluate Wait Period and Transition to Awaiting Response State**
- **8.9 Review Load Status Outbound Comm.**
- **9.0 Request to Discard**
- **9.1 Transition Outbound Communication to Discard State**
- **9.2 Populate Changes and Request to Update**
- **9.3 Update Outbound Communication**
- **9.4 Request to Retry**
- **9.5 Transition Outbound Communication to Retry State**
- **9.6 Communicate and Transform Device Status Check Cancel Command to SGG Format**
- **9.7 Gather Requirements to Cancel Command**
- **9.8 Select Cancel Command Activity Type**
- **9.9 Populate Command Execution Data**
- **10.0 Identify Device Status Check Activity based on Transaction ID**
- **10.1 Analyze Error and Work To Do**
- **10.2 Request to Delete**
- **10.3 Delete Inbound Communication**
- **10.4 Request to Discard**
- **10.5 Complete To Do(s)**
- **10.6 Transition Inbound Communication to Discard State**
- **10.7 Request to Validate**
- **10.8 Transition to Validate State and Initialize Reprocessing**
- **10.9 Identify Inbound Communication in Validation Error State**
- **11.0 Evaluate Criteria to Run Automated Retry Process**
- **11.1 Request to Delete**
- **11.2 Delete Outbound Communication**
- **11.3 Request to Validate**
- **11.4 Transition to Validate State and Initialize Reprocessing**
- **11.5 Identify Outbound Communication in Validation Error State**
- **11.6 Identify Outbound Communication in Response Error State**
- **11.7 Request to Revalidate**

- **11.8 Transition Activity to Validate State and Initialize Reprocessing**
- **11.9 Identify Activity in Validation Error State**
- **12.0 Identify Activity in Communication Error State**

1.0 Communicate and Transform Device Status Check Command to SGG Format

See **Manage Device Device Status Check (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 Device Status Check command request, transforms, and converts the request into format compatible with SGG Application.

1.1 Add to JMS Queue

See **Manage Device Device Status Check (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 Device Status Check request to JMS queue.

1.2 Call Web service

See **Manage Device Device Status Check (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 Device Status Check request

1.3 Gather Requirements to Create Command

See **Manage Device Device Status Check (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 Device Status Check command.

1.4 Select Command Activity Type

See **Manage Device Device Status Check (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 Device Status Check request.

Entities to Configure
Activity Type

1.5 Select Device and Populate Command Execution Data

See **Manage Device Device Status Check (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 and expiration dates, priority.

1.6 Submit Request

See **Manage Device Device Status Check (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 command request using Device Status Check Manual Request screen.

Business Object(s)
D1-DeviceStatusCheck

1.7 Identify Device and Head-End (Service Provider)

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

Group: Pre-process Request

Actor/Role: SGG

Description: SGG initiates pre-processing of the Device Status Check request that came from 3rd Party Application. It attempts to read the request message and determines the Device for which the status 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-DeviceStatusCheck	D1-DDR (Determine Device and Recipient)

1.8 Determine Activity Type to Assign

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

Group: Pre-process Request

Actor/Role: SGG

Description: SGG identifies the Activity Type to be assigned for the Device Status Check Activity to be created.

Entities to Configure
Activity Type
To Do Type
To Do Role

Business Objects	Available Algorithms
D1-DeviceStatusCheck	D1-DETACTTYP (Determine Activity Type)

1.9 Validate Availability of Required Data

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

Group: Pre-process Request

Actor/Role: SGG

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

Entities to Configure
Device
3rd Party Application (Requester)

Business Objects	Available Algorithms
D1-DeviceStatusCheck	D1-GINPVAL (Common Input Validation)

2.0 Determine Send Method and Send Error Message

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

Actor/Role: SGG

Description: SGG determines the send 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 Device Status Check (Echelon) Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: Integration Layer

Description: Integration Layer 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 Device Status Check (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 Create Device Status Check Activity in Pending State

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

Actor/Role: SGG

Description: SGG creates Device Status Check Activity in 'Pending' state.

Business Object(s)
D1-DeviceStatusCheck

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

See **Manage Device Device Status Check (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 Device Status Check command request. Typically system validates for Activity type, Ability of the Head-End system to support Device Status Check command, etc. User can also specify to check for any existing Device Status Check command before processing the current request.

Entities to Configure
Activity Type
Device Status Check Processing Method

Business Objects	Available Algorithms
D1-DeviceStatusCheck	D1-VALACTTDI (Validate Activity Type and Transition to Error State If Invalid) D1-HECAPVAL (Validate Head-End's Capability to Perform Activity) D1-EDSCHKCR (Check for Existing Active Device Status Check Command Request) F1-AT-RQJ (Transition to Default Next Status (Java))

2.5 Transition Activity to Validation Error State and Log Error

See **Manage Device Device Status Check (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-DeviceStatusCheck

2.6 Create To Do

See **Manage Device Device Status Check (Echelon) Page 2** on page 2-3 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
Device Status Check Activity Type
Read Load Status Communication Type
Read Load Status Notification Communication Type

Business Objects	Available Algorithms
D1-DeviceStatusCheck **D4-ReadLoadStatus** **D4-ReadLoadStatusNtf**	D1-CTDEBOE (Create To Do Entry for BO in Error)

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

See **Manage Device Device Status Check (Echelon) Page 2** on page 2-3 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-DeviceStatusCheck	D1-DSCRRER (Send Received Response to External Requester)

2.8 Evaluate Availability of Command Execution Date and Time

See **Manage Device Device Status Check (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 is available, SGG uses it to determine execution date and time. If the effective Date and Time is not available, SGG processes the Outbound Communication immediately. If effective Date and Time is in the future System it waits in 'Wait for Effective Date' state, else, it processes the Outbound Communication.

Entities to Configure
Effective Date and Time

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

2.9 Transition Activity to Communication in Progress State

See **Manage Device Device Status Check (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 initiate outbound communication when command effective date and time has reached. The other possible option of transition and initiation is when the Authorized User makes a manual request to Check Status.

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

3.0 Review Activity in Eff. Date State

See **Manage Device Device Status Check (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-DeviceStatusCheck

3.1 Request to Delete Activity

See **Manage Device Device Status Check (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-DeviceStatusCheck

3.2 Delete Activity

See **Manage Device Device Status Check (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-DeviceStatusCheck

3.3 Request to Discard Activity

See **Manage Device Device Status Check (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-DeviceStatusCheck

3.4 Populate Changes and Request to Update

See **Manage Device Device Status Check (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-DeviceStatusCheck

3.5 Update Activity

See **Manage Device Device Status Check (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-DeviceStatusCheck

3.6 Request to Check Status

See **Manage Device Device Status Check (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-DeviceStatusCheck

3.7 Initiate 'Device Status Check' Outbound Communication

See **Manage Device Device Status Check (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 Device Status Check Outbound Communication and initiates the Outbound Communication process.

Entities to Configure
Device Status Check Processing Method

Business Objects	Available Algorithms
D1-DeviceStatusCheck	D1-CREDVSTCK (Create Device Status Check Outbound Communication)

3.8 Evaluate Wait Period for Response

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

Actor/Role: SGG

Description: SGG periodically check 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-DeviceStatusCheck	D1-WTTMOUTEX (Wait Time Out - Transition to Exception)

3.9 Transition Activity to Communication Error State and Log Error

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

Actor/Role: SGG

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

Business Object
D1-DeviceStatusCheck

4.0 Review Activity in Comm. In Progress State

See **Manage Device Device Status Check (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-DeviceStatusCheck

4.1 Request to Retry Activity

See **Manage Device Device Status Check (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-DeviceStatusCheck

4.2 Transition Activity to Retry State

See **Manage Device Device Status Check (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-DeviceStatusCheck

4.3 Cancel Outstanding Outbound Communication

See **Manage Device Device Status Check (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-DeviceStatusCheck	D1-COOC (Cancel Outstanding Outbound Communication)

4.4 Create Outbound Communication in Pending State

See **Manage Device Device Status Check (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 Device Status Check Outbound Communication in 'Pending' state. The creation may also consider the priority of execution if provided. The outbound communication creation can also be initiated from Remote Connect Command process.

Entities to Configure
Device Status Check Processing Method

Business Objects	Available Algorithms
D4-ReadLoadStatus	D1-COMMINFO (Communication Information) D1-GDRFFPA (Default required fields from Parent Activity) D4-DRFFPA (Generic default required fields from Parent Activity)

4.5 Validate for Required Data and Transition to Validate State

See **Manage Device Device Status Check (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 for D4-ReadLoadStatus

Business Objects	Available Algorithms
D4-ReadLoadStatus	D1-VALCOMTP (Validate Communication Type)

4.6 Transition Outbound Communication to Validation Error State and Log Error

See **Manage Device Device Status Check (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-ReadLoadStatus

4.7 Transition to Load Ready State

See **Manage Device Device Status Check (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 Load Ready state.

Business Object
D4-ReadLoadStatus

4.8 Create and Send 'Retrieve Meter Info' Message

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

Group: Outbound Communication Process

Group: Retrieve Meter Information Outbound Communication

Actor/Role: SGG

Description: SGG creates and sends Retrieve Meter Information Outbound Communication to Head-End System.

Entities to Configure
Processing Method for D4-RetrieveMeterInfo

Business Objects	Available Algorithms
D4-ReadLoadStatus	D4-CRMIOCOM (Create Retrieve Meter Information Outbound Communication)

4.9 Communicate and Transform Message to Head-End Format

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

Group: Outbound Communication Process

Group: Retrieve Meter Information Outbound Communication

Actor/Role: SGG

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

5.0 Receive and Process Request Message

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

Group: Outbound Communication Process

Group: Retrieve Meter Information Outbound Communication

Actor/Role: Echelon Head-End System

Description: Head-End System receives the Retrieve Meter Information request from SGG and processes it.

5.1 Receive and Process Meter Info Read Request

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

Group: Outbound Communication Process

Group: Retrieve Meter Information Outbound Communication

Actor/Role: Smart Meter

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

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

5.2 Analyze Message and Send Response

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

Group: Outbound Communication Process

Group: Retrieve Meter Information Outbound Communication

Actor/Role: Echelon Head-End System

Description: Head-End System on receipt of Meter Information analyzes and sends a real-time acknowledgement back to SGG.

5.3 Communicate and Transform Response to SGG Format

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

Group: Outbound Communication Process

Group: Retrieve Meter Information Outbound Communication

Actor/Role: Integration Layer

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

5.4 Receive Meter Information and Transition to Load Ready State

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

Group: Outbound Communication Process

Group: Retrieve Meter Information Outbound Communication

Actor/Role: SGG

Description: SGG receives meter information acknowledgement and transitions Outbound Communication to Load Ready state.

Business Object
D4-ReadLoadStatus

5.5 Evaluate Device Information

See **Manage Device Device Status Check (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 device information. It mainly evaluates the type of device and ability for remote connect for the device.

Entities to Configure
Remote Connect Status
Arming Required Information

Business Objects	Available Algorithms
D4-ReadLoadStatus	D4-EVDVCINFO (Evaluate Device Information)

5.6 Log Error and Transition Outbound to Response Error State

See **Manage Device Device Status Check (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 device type is MBUS or if the wait time for Outbound Communication response has expired, SGG transitions the Outbound Communication to 'Response Error' state and logs an error.

Business Objects	Available Algorithms
D4-ReadLoadStatus	D4-EVDVCINFO (Evaluate Device Information)

5.7 Log Remote Connect Disabled Message and Create To Do

See **Manage Device Device Status Check (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 Remote Connect disabled message along with arming requirement details and creates a To Do for User.

Business Objects	Available Algorithms
D4-ReadLoadStatus	D4-EVDVCINFO (Evaluate Device Information)

5.8 Analyze Message and Initiate Field Work

See **Manage Device Device Status Check (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 analyzes To Do message and Initiates field work.

5.9 Evaluate Meter Firmware Version and Remote Connect Status

See **Manage Device Device Status Check (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 Meter firmware version and Remote Connect status. This is to ensure that for meters with firmware version lower than 3.1, Load Check process is performed.

Business Objects	Available Algorithms
D4-ReadLoadStatus	D4-EVCPLDCK (Evaluate criteria to perform Load Check)

6.0 Update Load Check to 'Not Performed'

See **Manage Device Device Status Check (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 if determines that the Meter firmware version is found to be not lower than 3.1, transitions Load Check to 'Not Performed' state.

Business Objects	Available Algorithms
D4-ReadLoadStatus	D4-EVCPLDCK (Evaluate criteria to perform Load Check)

6.1 Create and Send Load Check Message and Transition to Awaiting Response State

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

Group: Outbound Communication Process

Group: Read Load Status Outbound Communication

Actor/Role: SGG

Description: SGG transitions Outbound Communication to 'Awaiting Response' state, Creates, and Sends Load Check Outbound Message to Head-End System.

Entities to Configure
Processing Method for Load Check

Business Objects	Available Algorithms
D4-ReadLoadStatus	D4-PORDSTSD (Populate Read Load Status Send Detail) D4-CRCOUTMSG (Create Outbound Message For Read Load Status)

6.2 Communicate and Transform 'Read Load Status' Message to Head-End Format

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

Group: Outbound Communication Process

Group: Read Load Status Outbound Communication

Actor/Role: SGG

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

6.3 Receive and Process Request Message

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

Group: Outbound Communication Process

Group: Read Load Status Outbound Communication

Actor/Role: Echelon Head-End System

Description: Head-End System receives the Load Check request from SGG and processes it.

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

6.4 Receive and Process Read Load Status Request

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

Group: Outbound Communication Process

Group: Read Load Status Outbound Communication

Actor/Role: Smart Meter

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

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

6.5 Analyze Message and Send Acknowledgement

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

Group: Outbound Communication Process

Group: Read Load Status Outbound Communication

Actor/Role: Echelon Head-End System

Description: Head-End System on receipt of Load Status request analyzes and sends a real-time acknowledgement back to SGG.

6.6 Communicate and Transform Acknowledgement to SGG Format

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

Group: Outbound Communication Process

Group: Read Load Status Outbound Communication

Actor/Role: SGG

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

6.7 Evaluate Acknowledgement

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

Group: Outbound Communication Process

Group: Read Load Status Outbound Communication

Actor/Role: SGG

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

Business Objects	Available Algorithms
D4-ReadLoadStatus	D4-EVALRESPC (Evaluate Response Remote Connect)

6.8 Log Error and Transition Outbound to Response Error State

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

Group: Outbound Communication Process

Actor/Role: SGG

Description: If the acknowledge is not positive, SGG transitions the Outbound Communication to 'Response Error' state and logs an error.

Business Objects	Available Algorithms
D4-ReadLoadStatus	D4-EVALRESPC (Evaluate Response Remote Connect)

6.9 Send Load Status Response to Head-End System

See **Manage Device Device Status Check (Echelon) Page 4** on page 2-5 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 a Load Status response.

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

7.0 Receive and Process Load Status Response to SGG

See **Manage Device Device Status Check (Echelon) Page 4** on page 2-5 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.

7.1 Communicate and Transform Load Status Message to SGG Format

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

Group: Outbound Communication Process

Group: Inbound Communication Process

Actor/Role: SGG

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

7.1.1 Identify Response Message and Processing Method

See **Manage Device Device Status Check (Echelon) Page 4** on page 2-5 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)

7.2 Pre-process Inbound Message

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

Group: Outbound Communication Process

Group: Inbound Communication Process

Actor/Role: SGG

Description: SGG preprocesses response and initiates creation of Inbound Communication.

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

7.3 Create Inbound Communication in Pending State

See **Manage Device Device Status Check (Echelon) Page 4** on page 2-5 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-ReadLoadStatusNtf

7.4 Validate for Required Data, Link and Transition to Validate State

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

Group: Outbound Communication Process

Group: Inbound Communication Process

Group: Perform Validations

Actor/Role: SGG

Description: SGG validates ability to process Inbound Communication. Typically, it checks for Communication Type. It also determines the Outbound Communication that initiated it and links to it.

Entities to Configure
Communication Type for D4-ReadLoadStatusNtf

Business Objects	Available Algorithms
D4-ReadLoadStatusNtf	D4-FPCOMMBO (Find Initiating Outbound Communication) D1-VALCOMTP (Validate Communication Type)

7.5 Transition Inbound Communication to Validation Error State and Log Error

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

Group: Outbound Communication Process

Group: Inbound Communication Process

Group: Perform Validations

Actor/Role: SGG

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

Business Objects	Available Algorithms
D4-ReadLoadStatusNtf	D4-EVLSRC (Evaluate Load Status for Remote Connect Activity)

7.6 Transition Inbound Communication to Create Completion Event State

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

Group: Outbound Communication Process

Group: Inbound Communication Process

Group: Perform Validations

Actor/Role: SGG

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

Business Objects	Available Algorithms
D4-ReadLoadStatusNtf	D4-EVLSRC (Evaluate Load Status for Remote Connect Activity)

7.7 Transition Inbound to Completed State

See **Manage Device Device Status Check (Echelon) Page 4** on page 2-5 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-ReadLoadStatusNtf	F1-AT-RQJ (Transition to Default Next Status (Java))

7.8 Transition Outbound Communication to Completed State

See **Manage Device Device Status Check (Echelon) Page 4** on page 2-5 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 on Outbound Communication.

Business Objects	Available Algorithms
D4-ReadLoadStatusNtf	D1-UPCMEVDTR (Update Parent Communication's Event Date Time Connect) D4-ULCFTPC (Update Read Load status Flag and Transition Parent Communication)

7.9 Update Device Connection State to 'Pending Arming'

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

Group: Outbound Communication Process

Group: Inbound Communication Process

Group: Perform Validations

Actor/Role: SGG

Description: SGG updates Device Connection status to 'Pending Arming'.

Business Objects	Available Algorithms
D4-ReadLoadStatusNtf	D4-EVLSDSC (Evaluate Load Status for Device Status Check)

8.0 Update Device Connection State to 'Connected'

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

Group: Outbound Communication Process

Group: Inbound Communication Process

Group: Perform Validations

Actor/Role: SGG

Description: SGG updates Device Connection status to 'Connected'.

Business Objects	Available Algorithms
D4-ReadLoadStatusNtf	D4-EVLSDSC (Evaluate Load Status for Device Status Check)

8.1 Update Device Connection State to 'Disconnected'

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

Group: Outbound Communication Process

Group: Inbound Communication Process

Group: Perform Validations

Actor/Role: SGG

Description: SGG updates Device Connection status to 'Disconnected'.

Business Objects	Available Algorithms
D4-ReadLoadStatusNtf	D4-EVLSDSC (Evaluate Load Status for Device Status Check)

8.2 Update Device Communication Status to 'Failed'

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

Group: Outbound Communication Process

Group: Inbound Communication Process

Group: Perform Validations

Actor/Role: SGG

Description: SGG updates Device Communication to 'Failed'.

Business Objects	Available Algorithms
D4-ReadLoadStatusNtf	D4-EVLSDSC (Evaluate Load Status for Device Status Check)

8.3 Transition Activity to Execute Completion Event State and to Completion State

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

Actor/Role: SGG

Description: SGG transitions Activity to Execute Completion Event state and subsequently to Completion State. If the initiating command is Remote Connect request, then the transition will take place in Remote Connect activity.

Business Objects	Available Algorithms
D1-DeviceStatusCheck	D4-ULCCFLTPA (Update Load Check Complete Flag And Transition Parent Activity)

8.4 Create and Send Device Status Check Success Notification to Requester

See **Manage Device Device Status Check (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 Device Status Check success notification to Requester based on the processing method.

Business Objects	Available Algorithms
D1-DeviceStatusCheck	D1-SNDDVSTCK (Send Device Status Check Notification to Edge Application)

8.5 Transition Activity to Discard State

See **Manage Device Device Status Check (Echelon) Page 5** on page 2-6 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-DeviceStatusCheck	D1-TPATOF (Transition Parent Activity To Failed)

8.6 Cancel Outstanding Outbound Communication

See **Manage Device Device Status Check (Echelon) Page 5** on page 2-6 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-DeviceStatusCheck	D1-COOC (Cancel Outstanding Outbound Communication)

8.7 Send Response "Command Failed" to Requester

See **Manage Device Device Status Check (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-DeviceStatusCheck	D1-DSCFRER (Send Fail Response to External Requester)

8.8 Evaluate Wait Period and Transition to Awaiting Response State

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

Group: Outbound Communication Process

Group: Monitor for Retrieve Meter Information and Load Check Outbound 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
Communication Type for D4-ReadLoadStatusNtf

Business Objects	Available Algorithms
D4-ReadLoadStatus	D1-TIMEOUT (Time Out)

8.9 Review Load Status Outbound Comm.

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

Group: Outbound Communication Process

Group: Monitor for Retrieve Meter Information and Load Check Outbound Process

Actor/Role: MDM or SGG Authorized User

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

Business Object
D4-ReadLoadStatus

9.0 Request to Discard

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

Group: Outbound Communication Process

Group: Monitor for Retrieve Meter Information and Load Check Outbound 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-ReadLoadStatus

9.1 Transition Outbound Communication to Discard State

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

Group: Outbound Communication Process

Group: Monitor for Retrieve Meter Information and Load Check Outbound 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-ReadLoadStatus

9.2 Populate Changes and Request to Update

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

Group: Outbound Communication Process

Group: Monitor for Retrieve Meter Information and Load Check Outbound 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-ReadLoadStatus

9.3 Update Outbound Communication

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

Group: Outbound Communication Process

Group: Monitor for Retrieve Meter Information and Load Check Outbound Process

Actor/Role: SGG

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

Business Object
D4-ReadLoadStatus

9.4 Request to Retry

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

Group: Outbound Communication Process

Group: Monitor for Retrieve Meter Information and Load Check Outbound Process

Actor/Role: MDM or SGG Authorized User

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

Business Object
D4-ReadLoadStatus

9.5 Transition Outbound Communication to Retry State

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

Group: Outbound Communication Process

Group: Monitor for Retrieve Meter Information and Load Check Outbound Process

Actor/Role: SGG

Description: SGG transitions Outbound Communication to 'Retry' state. The other possible option for retry processing, is when the outbound is in error state, and retry is processed.

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

9.6 Communicate and Transform Device Status Check Cancel Command to SGG Format

See **Manage Device Device Status Check (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.

9.7 Gather Requirements to Cancel Command

See **Manage Device Device Status Check (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 Device Status Check command.

9.8 Select Cancel Command Activity Type

See **Manage Device Device Status Check (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 command request.

9.9 Populate Command Execution Data

See **Manage Device Device Status Check (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.

10.0 Identify Device Status Check Activity based on Transaction ID

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

Actor/Role: SGG

Description: SGG identifies the Device Status Check 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 Device Status Check Activity is identified based on manual selection while populating the required data for cancel command request.

10.1 Analyze Error and Work To Do

See **Manage Device Device Status Check (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 perform work.

Business Object
D1-DeviceStatusCheck
D4-ReadLoadStatus
D4-ReadLoadStatusNtf

10.2 Request to Delete

See **Manage Device Device Status Check (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.

Business Object
D4-ReadLoadStatusNtf

10.3 Delete Inbound Communication

See **Manage Device Device Status Check (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.

Business Object
D4-ReadLoadStatusNtf

10.4 Request to Discard

See **Manage Device Device Status Check (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.

Business Object
D4-ReadLoadStatusNtf

10.5 Complete To Do(s)

See **Manage Device Device Status Check (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 finds all non-completed To Do entries and completes them.

Business Objects	Available Algorithms
D1-DeviceStatusCheck **D4-ReadLoadStatus** **D4-ReadLoadStatusNtf**	D1-GTDCBO (Generic To Do Completion for BOs)

10.6 Transition Inbound Communication to Discard State

See **Manage Device Device Status Check (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.

Business Object
D4-ReadLoadStatusNtf

10.7 Request to Validate

See **Manage Device Device Status Check (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-ReadLoadStatusNtf

10.8 Transition to Validate State and Initialize Reprocessing

See **Manage Device Device Status Check (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 Object
D4-ReadLoadStatusNtf

10.9 Identify Inbound Communication in Validation Error State

See **Manage Device Device Status Check (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 Objects	Available Algorithms
D4-ReadLoadStatusNtf	D1-RBOE (Retry BO in Error)

11.0 Evaluate Criteria to Run Automated Retry Process

See **Manage Device Device Status Check (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 Objects
D1-DeviceStatusCheck
D4-ReadLoadStatus
D4-ReadLoadStatusNtf

11.1 Request to Delete

See **Manage Device Device Status Check (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-ReadLoadStatus

11.2 Delete Outbound Communication

See **Manage Device Device Status Check (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-ReadLoadStatus

11.3 Request to Validate

See **Manage Device Device Status Check (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-ReadLoadStatus

11.4 Transition to Validate State and Initialize Reprocessing

See **Manage Device Device Status Check (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-ReadLoadStatus

11.5 Identify Outbound Communication in Validation Error State

See **Manage Device Device Status Check (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-ReadLoadStatus	D1-RBOE (Retry BO in Error)

11.6 Identify Outbound Communication in Response Error State

See **Manage Device Device Status Check (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 'Response Error' state.

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

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

11.7 Request to Revalidate

See **Manage Device Device Status Check (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-DeviceStatusCheck

11.8 Transition Activity to Validate State and Initialize Reprocessing

See **Manage Device Device Status Check (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 Object
D1-DeviceStatusCheck

11.9 Identify Activity in Validation Error State

See **Manage Device Device Status Check (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 Objects	Available Algorithms
D1-DeviceStatusCheck	D1-RBOE (Retry BO in Error)

12.0 Identify Activity in Communication Error State

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

Group: 'Communication Error' Exception Process

Actor/Role: SGG

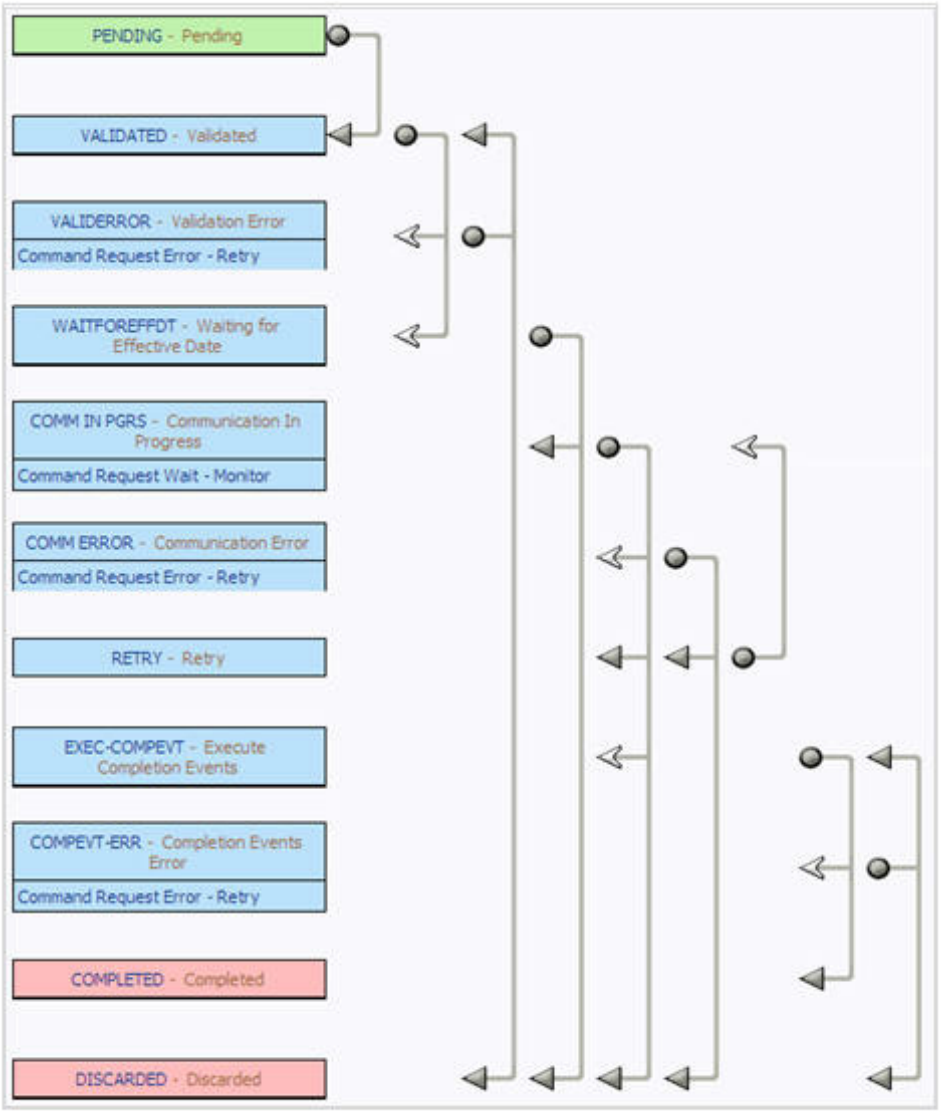
Description: SGG identifies Activity in 'Communication Error' state.

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

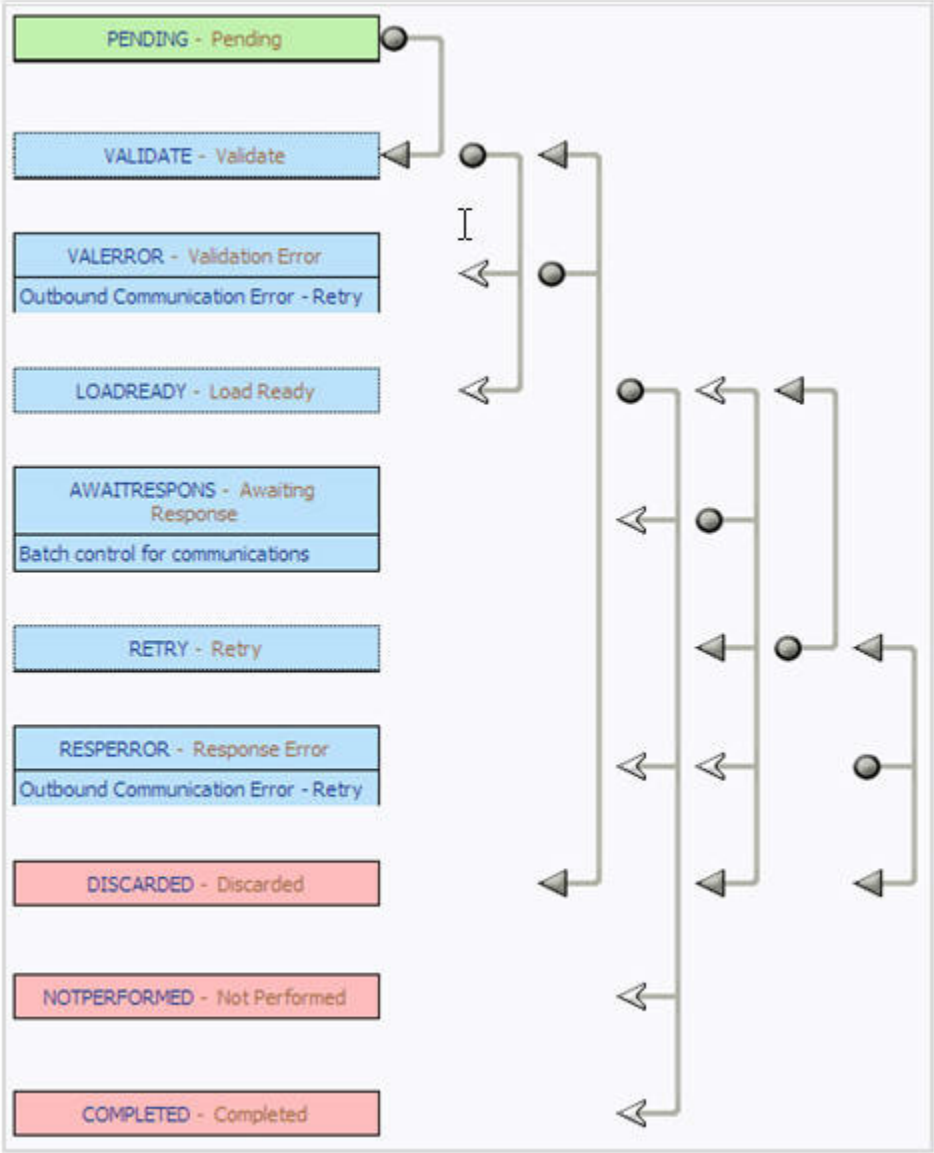
Business Objects	Available Algorithms
D1-DeviceStatusCheck	D1-RBOE (Retry BO in Error)

Business Objects Life Cycle

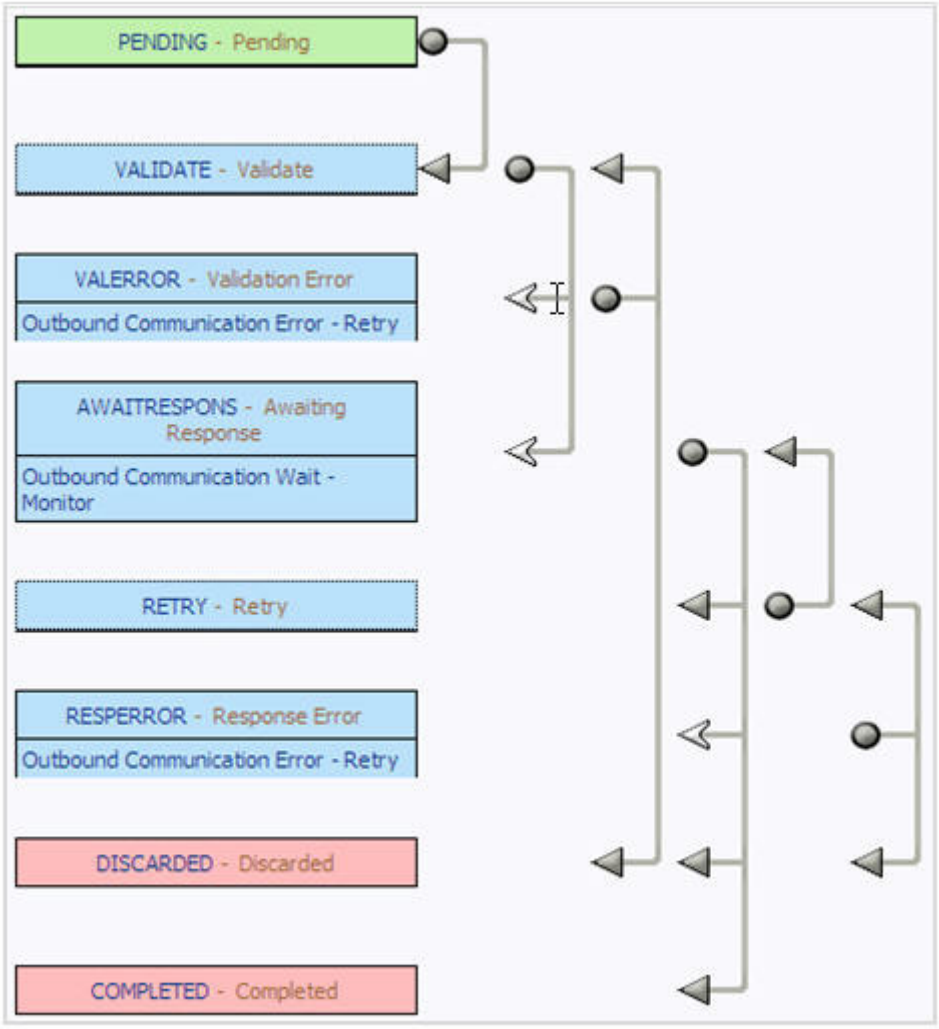
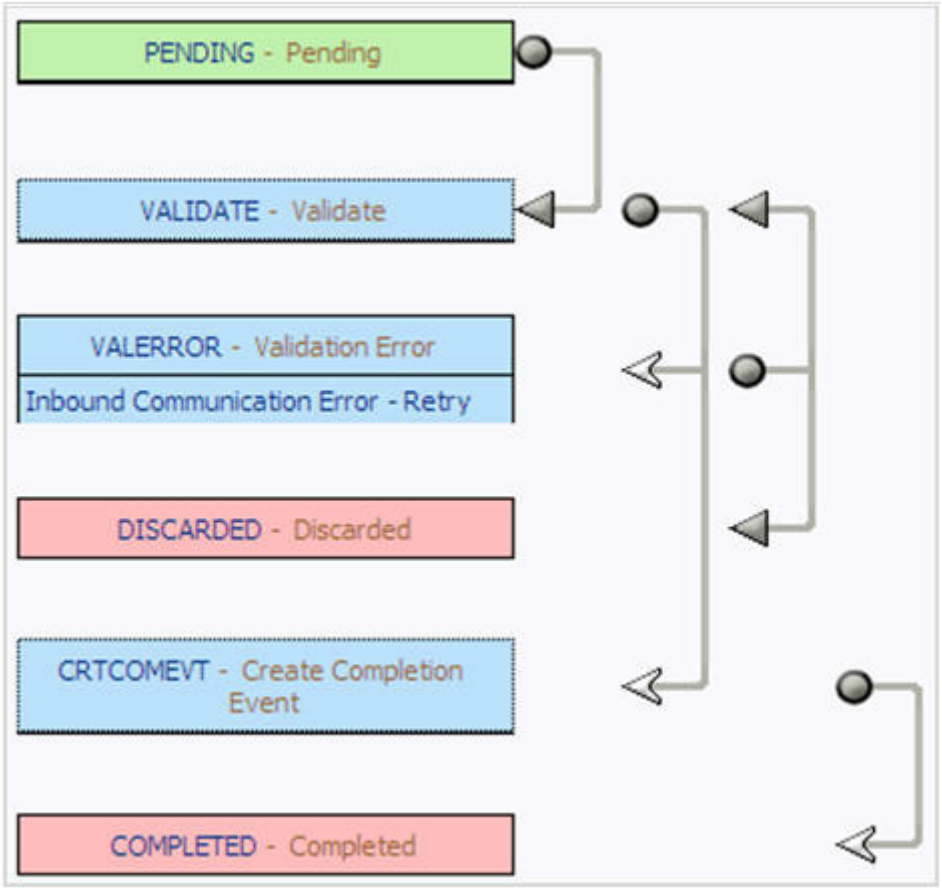
D1-DeviceStatusCheck



D4-ReadLoadStatus



D4-RetrieveMeterInfo



D4-ReadLoadStatusNtf