

Description of Partner Interface Process® for 2C7

Released 11.00.00

Specification Information	
Name	Request Bill Of Material
Cluster	Product Information
Segment	Product Design Information
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1 Document Management

1.1 Legal Disclaimer

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1.4 Acknowledgments

This document has been prepared by RosettaNet (<http://www.rosettnet.org/>) from requirements gathered during the Milestone Program and in conformance with the methodology.

1.5 Related Documents

- Associated PIP Message Schemas (included within the PIP Specification package only)
- Messages Structure
- XML instance of ebXML BPSS for PIP 2C7

1.6 Document Version History

<u>Version</u>	<u>Date</u>	<u>Description</u>
R11.00.00	Released	Initial release

1.7 Document Structure

A Partner Interface Process (PIP) Specification is comprised of the following two parts:

1. **Business Process.** Captures the semantics of the business process and the flow of the message exchange between roles as they perform business activities.
2. **Network and Implementation Specification.** Specifies the network protocol message formats and communications requirements between peer-protocols supported by network components in the RosettaNet Implementation Framework.

2 Business Process

2.1 Business Process Definition

The "Request Bill Of Material" Partner Interface Process™ (PIP) supports a process in which

1. An Integrator requests the Bill Of Material (BOM) information for a product, and
2. The Design Owner for that product returns the requested information to the Integrator.

The Integrator initiates the process by sending a BOM request to the Design Owner. To facilitate communications, the request document includes both query constraint lines and incomplete results lines. After processing the request, the Design Owner completes the results lines and returns the information to the requesting party.

The Design Owner is the entity responsible for the design of the product and the Integrator is responsible for its manufacture or assembly.

The Integrator may use PIP2C2, "Request Engineering Change", to inform a Design Owner of errors in a BOM or another reason to change it.

Should this transaction not complete successfully, the requesting partner executes PIP0A1, "Notification of Failure."

2.1.1 Executive Summary

This PIP is designed to easily and efficiently communicate BOM information about the parts that go into a product from engineering to manufacturing. It solves a variety of problems that impact the quality, availability, cost, performance and evolution of the product. Product quality is improved by reducing the occurrence of mismatched materials. Better communication of the materials required enables the manufacturer to have the parts available, improving the availability of the product. Support for regional buying, where equivalent materials need to be sourced in different regions worldwide, also enhances availability. Greater visibility of materials across multiple products allows for greater reuse and economies in purchasing. As the product evolves, changes to the BOM can be communicated efficiently.

2.2 PIP Business Documents

Business Documents are generated and exchanged by roles performing activities in this PIP. Business Documents are listed and defined in Table 1.

Table 1: PIP Business Document	
Business Document	Description
Bill Of Material Request	Allows the sender to request Bill Of Material information for a product. The product being queried can be identified using a Global Trade Item Number (GTIN) or proprietary product identifier.
Bill Of Material Confirmation	Contains Bill Of Material data for a given product. The Bill Of Material specifies each component part, listing quantities, serial number requirements and potential alternate parts.

2.3 PIP Business Process Flow Diagram

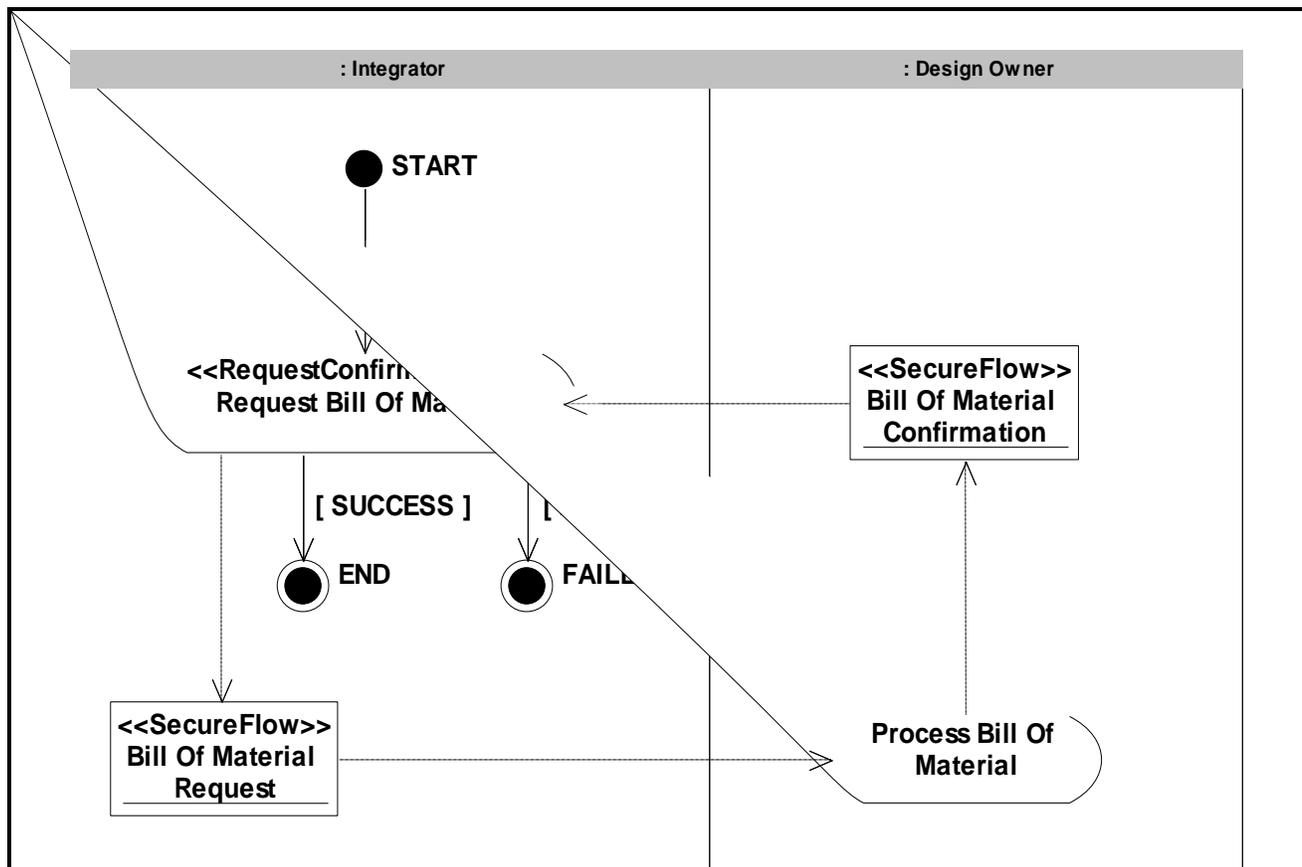


Figure 1: Activity Diagram of 2C7

2.4 PIP Start State

The start state is comprised of the following conditions:

Table 2: PIP Start State							
	Approved	Exist		Valid	Non-Repudiated	Retry Count	Authorized
		Party	In Backend System				
TPA	✓		✓				
Sending Partner		✓		✓			
Receiving Partner		✓					
Business Document			✓	✓	✓		✓

2.5 PIP End States

The end state is comprised of the following conditions:

Table 3: PIP End State							
	Approved	Exist		Valid	Non-Repudiated	Retry Count	Authorized
		Party	In Backend system				
Acknowledgment of Receipt Receiving Partner			✓	✓	✓		✓

The PIP failure state is comprised of one or more of the following conditions:

Table 4: PIP Failure State		
	NO	Exceeded
Success	✓	
Retry Count		✓

2.6 Partner Role Descriptions

Table 5 describes the partner roles in this PIP.

Table 5: Partner Role Description	
Role Name	Role Description
Integrator	The organization responsible for the production of the product, as defined by the BOM. Change requests are communicated back to the Design Owner.
Design Owner	The organization responsible for the design of the product. The Design Owner defines and maintains the BOM for the product.

2.7 Business Process Activity Controls

Table 6 describes the interactions between roles performing business activities in this PIP.

Table 6: Business Activity Description		
Role Name	Activity Name	Activity Description
Integrator	Request Bill Of Material	This activity generates and sends a Request Bill Of Material to a Design Owner.

Table 7 details the security, audit and process controls relating to activities performed in the PIP.

Table 7: Business Activity Performance Control							
Role Name	Activity Name	Acknowledgment of Receipt		Time to Perform	Retry Count	Is Authorization Required?	Non-Repudiation of Origin and Content?
		Non-Repudiation Required?	Time to Acknowledge				
Integrator	Bill Of Material Request	Y	2 hrs	24 hrs	3	Y	Y
Design Owner	Bill Of Material Confirmation	Y	2 hrs	N/A	3	Y	Y

Note: All time parameters are defined as (hrs or mins), i.e. 2 hrs

3 Network and Implementation Specification

Each network component maps into a role of the PIP model. Table 8 specifies the mapping between roles and network components.

Table 8: Network Component Specification		
Network Component	Classification	Maps to Role in Business Process
Integrator Service	Business Service	Integrator
Design Owner Service	Business Service	Design Owner

3.1 Business Action and Business Signal Specifications

Each business action maps to a Business Document of the PIP model. Table 9 specifies the mapping between Business Documents and business actions.

Table 9: Business Action – Business Document Mapping		
Business Action	Business Document	Document Function
Bill Of Material Request Action	Bill Of Material Request	Request
Bill Of Material Confirmation Action	Bill Of Material Confirmation	Response

3.2 Business Transaction Dialog Specification

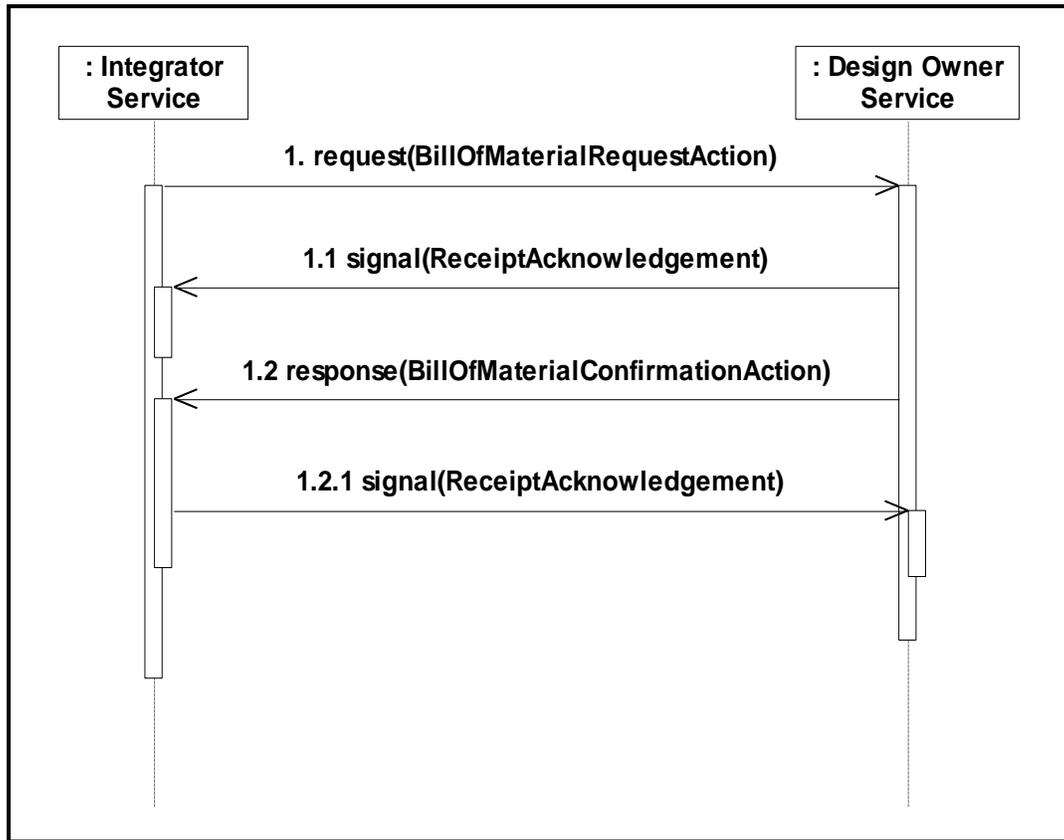


Figure 2: Sequence Diagram of 2C7

3.2.1 Message Exchange Controls

Table 10: Message Exchange Control							
#	Name	Time to Acknowledge Receipt Signal	Time to Respond to Action	Included in Time to Perform	Is Authorization Required?	Is Non-Repudiation Required?	Is Secure Transport Required?
1.	Bill Of Material Request	2 hrs	24 hrs	Y	Y	Y	Y
1.1.	Receipt Acknowledgment	N/A	N/A	Y	Y	Y	Y
2.	Bill Of Material Confirmation	2 hrs	N/A	Y	Y	Y	Y
2.1.	Receipt Acknowledgment	N/A	N/A	N	Y	Y	Y

Note: All time parameters are defined as (hrs or mins), i.e. 2 hrs

3.2.2 Communications Specification

Table 11: Dialog: Service-Service			
#	Business Message	Digital Signature Required?	SSL Required?
1.	Bill Of Material Request	Y	Y
1.1.	Receipt Acknowledgment	Y	Y
2.	Bill Of Material Confirmation	Y	Y
2.1.	Receipt Acknowledgment	Y	Y