



## RosettaNet Implementation Guide

---

### Implementation Fundamentals

---

v1.1  
22 January 2003

---



---

## Table of Contents

1	Document Management.....	ii
1.1	Legal Disclaimer .....	ii
1.2	Copyright .....	ii
1.3	Trademarks .....	ii
1.4	Document Version History.....	ii
2	Document Overview.....	iii
2.1	Document Purpose.....	iii
2.2	Related Documents.....	iii
3	Introduction.....	1
4	Implementation Fundamentals .....	2
4.1	Importance of the entire Specification package.....	2
4.2	Message Guideline Cardinality Definitions .....	2
4.3	Customization of Standards .....	2
4.4	Optional Elements and XML Tags .....	2
4.5	Time zone for PIPs® .....	3
4.6	Data Hierarchy .....	3
4.7	Business Dictionary Entity Instances .....	3
5	Data Elements.....	4
5.1	Document Identification .....	4
5.1.1	thisDocumentIdentifier.ProprietaryDocumentIdentifier .....	4
5.1.2	requestingDocument.ProprietaryDocumentIdentifier .....	4
5.1.3	DocumentReference .....	4
5.2	Global Company Identification.....	4
5.2.1	BusinessDescription.....	5
5.2.1.1	GlobalBusinessIdentifier (GBI) - aka DUNS.....	5
5.2.1.2	ProprietaryDomainIdentifier (PDI) .....	5
5.2.1.3	ProprietaryIdentifierAuthority (PIA) .....	5
5.2.1.4	ProprietaryBusinessIdentifier (PBI) .....	5
5.2.2	PhysicalLocation.....	5
5.2.2.1	GlobalLocationIdentifier (GLI) - aka DUNS+4.....	5
5.2.2.2	Partner Location Identification .....	5
5.2.2.3	ProprietaryDomainIdentifier (PDI) .....	6
5.2.2.4	ProprietaryIdentifierAuthority (PIA) .....	6
5.2.2.5	ProprietaryLocationIdentifier (PLI).....	6
5.2.3	Physical Address .....	6
5.3	Global Product Identification .....	6
5.3.1	ProductIdentification .....	6
5.3.1.1	GlobalProductIdentifier .....	6
5.3.1.2	PartnerProductIdentification .....	6
5.4	LineNumber .....	7
5.5	GlobalDocumentFunctionCode .....	7
5.6	GlobalSupplyChainCode.....	7
5.7	AffirmationIndicator .....	7

# 1 Document Management

## 1.1 *Legal Disclaimer*

RosettaNet™, its members, officers, directors, employees, or agents shall not be liable for any injury, loss, damages, financial or otherwise, arising from, related to, or caused by the use of this document or the specifications herein, as well as associated guidelines and schemas. The use of said specifications shall constitute your express consent to the foregoing exculpation.

## 1.2 *Copyright*

©2003 RosettaNet. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. Printed in the United States of America.

## 1.3 *Trademarks*

RosettaNet, Partner Interface Process, PIP and the RosettaNet logo are trademarks or registered trademarks of "RosettaNet," a non-profit organization. All other product names and company logos mentioned herein are the trademarks of their respective owners. In the best effort, all terms mentioned in this document that are known to be trademarks or registered trademarks have been appropriately recognized in the first occurrence of the term.

## 1.4 *Document Version History*

<u>Version</u>	<u>Date</u>	<u>Document in Development - Update Information</u>
1.0	11/30/02	Initial Release
1.1	1/22/03	Addition of AffirmationIndicator

## 2 Document Overview

### 2.1 *Document Purpose*

The purpose of this document is to provide fundamental implementation guidelines. The scope of this document is limited to general implementation rules and universal data elements.

This document can contain ANY type of documentation or pointers to other documentation needed to establish a clearer and definitive statement of use for the guideline and/or data element in question.

***Disclaimer*** – It is ***NOT*** the intent of this document to provide information for ***every data element***.

### 2.2 *Related Documents*

- PIP Specification package
- Specific PIP Usage Notes document
- Design Guidelines v1.2
- RosettaNet Implementation Guide (RIG)

### 3 Introduction

As more PIPs® are developed and existing PIPs are used for real-world data exchange, basic implementation information is required to facilitate the implementation of RosettaNet standards.

The contents of this document are limited in scope to the following implementation fundamentals and data elements:

Implementation Fundamentals:

- 1) Importance of the entire Specification package
- 2) Cardinality definitions
- 3) Customization of the standard
- 4) Optional Elements and XML Tags
- 5) Time zone
- 6) Data Hierarchy
- 7) Business Dictionary Entity Instances

Data Element Use:

BusinessDescription  
PhysicalLocation  
ProductIdentification  
DocumentReference  
thisDocumentIdentifier.ProprietaryDocumentIdentifier  
requestingDocument.ProprietaryDocumentIdentifier  
GlobalDocumentFunctionCode  
GlobalSupplyChainCode  
AffirmationIndicator

## 4 Implementation Fundamentals

### 4.1 *Importance of the entire Specification package*

It is critical for the user to utilize the entire specification package (PIP Specification, Message Guideline and DTD) when implementing a RosettaNet Standard.

- The PIP Specification provides the business performance controls (also known as the choreography of the exchange). In addition, the Specification defines the purpose of the business process and the roles that participate in the process.
- The Message Guideline defines the cardinality, vocabulary, structure, and allowable data element values and value types for each message exchanged during the execution of a PIP.
- The DTD provides the order or sequence of the elements, element naming, composition, and attributes.

The Message Guideline defines the RosettaNet Message structure using a hierarchical or “tree” presentation. The DTD is based on the information from the Message Guideline. However, due to technical limitations of the DTD, point-to-point consistency cannot be captured by the DTD alone. For example, if an element is utilized two times within the Message Guideline with different sub-element cardinalities, the DTD cannot express or constrain the two instances with different cardinalities. Therefore, the DTD will reflect the less restrictive cardinality to support both occurrences.

For a more explicit description of document conformance, please refer to RosettaNet Implementation Framework: Core Specification V02.00.00, section 2.1.2.2, Validation Rules.

### 4.2 *Message Guideline Cardinality Definitions*

Value	Description
0..1	Zero or one (Optional and one)
0..n	Zero or more (Optional and many)
1	One (Mandatory and one)
1..n	One or more (Mandatory and many)

### 4.3 *Customization of Standards*

Do not customize the standard. The specification package must be used, as it exists in the downloaded files and cannot be altered to facilitate the execution of PIPs among partners within the RNIF specification. If trading partners desire a change to the defined standard, they must submit a Change Request. Customization of the standard is non-compliance to the standard.

### 4.4 *Optional Elements and XML Tags*

If an element is defined as optional within the DTD, it is NOT required by the XML Core Standard that the corresponding tags be used in every conforming document. Additionally, it is not forbidden that they exist.

From the point of view of validity (i.e. conformity to a DTD), if an optional (according to the DTD) element is declared as nonexistent at a particular location by the Message Guideline,

its empty tag (or an empty-element tag) MAY be present in that location for the document to conform to the Message Guidelines.

**Note: The XML requirements must follow the RosettaNet specifications for that specific optional element. For example, if the element has a minimum character constraint specified, then the constraint must be validated.**

For an optional element with no additional constraints defined in the Message Guideline, empty XML tags are not required but also not forbidden. For an optional element with a minimum character requirement constraint defined in the Message Guideline, empty XML tags are not allowed because if the tags are there it must be populated with the minimum character required.

Additionally, there may be additional constraints expressed in the PIP specification, which could apply to an optional element, for example, a change in the cardinality from optional to mandatory. All additional constraints are valid and have to be considered during message generation and message validation to create a RosettaNet compliant message.

#### **4.5 Time zone for PIPs®**

Because RosettaNet is based on global e-commerce, Greenwich Mean Time (GMT) is used for all date and time references, including business content and Message Guideline transactions, so that there is only one "clock".

#### **4.6 Data Hierarchy**

If a message in a PIP contains data elements at multiple levels, as in the Purchase Order Management PIPs, the general rule is that values populated at the **lowest level** of the PIP message data hierarchy **override** the higher levels of the same-named data elements. Non-populated same-named data elements at lower levels of a populated portion of a message data hierarchy inherit the value from the preceding same-named data element.

#### **4.7 Business Dictionary Entity Instances**

When implementing a PIP, please refer to the RosettaNet Business Dictionary (RNBD) Technical Advisory #1, which maintains a list of additional entity instances for specific data elements between PIP releases.

## 5 Data Elements

### 5.1 Document Identification

Each PIP requires identification of the specific business document. Document identification is primarily conveyed by use of the data element, `thisDocumentIdentifier.ProprietaryDocumentIdentifier`. However, there are other document identifiers that convey necessary information dependent upon the business scenario.

#### 5.1.1 *thisDocumentIdentifier.ProprietaryDocumentIdentifier*

The `thisDocumentIdentifier.ProprietaryDocumentIdentifier` element denotes the business document identifier of the business document associated with the ***Sender of the message***.

For example, in PIP3A4 V02.00.00 (PurchaseOrderRequest), “`thisDocumentIdentifier.ProprietaryDocumentIdentifier`” denotes the Buyer’s Purchase Order (PO) number. However, in the PurchaseOrderConfirmation (of the same PIP), it denotes the Seller’s Sales Order (SO) number.

#### 5.1.2 *requestingDocument.ProprietaryDocumentIdentifier*

The `requestingDocumentIdentifier.ProprietaryDocumentIdentifier` element denotes the business document identifier of the business document that triggered the response message of the PIP instance.

For example, in PIP3A4 V02.00.00 (PurchaseOrderConfirmation), the “`requestingDocument.ProprietaryDocumentIdentifier`” denotes the Buyer’s PO number from the PurchaseOrderRequest. This is how a generic cross-reference between different business documents of different messages of a single given PIP is established.

#### 5.1.3 DocumentReference

The Document Reference data block contains components to describe a referencing document, which includes the date and time of the specific document (i.e. May 3, 2002), the identification of the document (i.e. Invoice, Purchase Order, Work Order, etc) and the proprietary document identifier (i.e. Invoice: 3456, PO873, WO812, etc.).

## 5.2 Global Company Identification

**BACKGROUND** There is a challenge associated with using the existing company identification, which has often impeded Partner PIP implementations. To immediately sidestep these challenges, Partners recommended that RosettaNet modify selected PIPs to allow for proprietary company identification references.

RosettaNet will enable companies to send either the Global Business Identifier or Global Location Identifier or their own proprietary identifier within RosettaNet PIPs. The only PIPs that will be modified to include proprietary identifiers are those PIPs that are currently in development **and** those specifically requested by the development team. This action allows companies to move forward with implementing RosettaNet e-business processes using their current proprietary company identification references.

### **5.2.1 BusinessDescription**

When identifying a business entity, an implementer has the option to utilize the Global Business Identifier and/or the Partner Business Identification data block and/or a free form text field to provide the Business Name (dependent upon the business requirements gathered at development).

#### **5.2.1.1 GlobalBusinessIdentifier (GBI) - aka DUNS**

The GlobalBusinessIdentifier requests the identification of a given business entity. This information is identified by use of the DUNS number.

#### **5.2.1.2 ProprietaryDomainIdentifier (PDI)**

The ProprietaryDomainIdentifier requests the identification of the proprietary business classification (i.e. carrier), identification of the issuing system (i.e. sales), or proprietary business role (i.e. Manufacturing).

#### **5.2.1.3 ProprietaryIdentifierAuthority (PIA)**

The ProprietaryIdentifierAuthority requests the identification of the business organization that the proprietary classification is managed by (i.e. Intel).

#### **5.2.1.4 ProprietaryBusinessIdentifier (PBI)**

The ProprietaryBusinessIdentifier requests the proprietary identification of a given business entity.

### **5.2.2 PhysicalLocation**

When identifying the location of a business entity, an implementer has the option to utilize the Global Location Identifier and/or the Partner Location Identification data block and/or the Physical Address data block (dependent upon the business requirements gathered at development).

#### **5.2.2.1 GlobalLocationIdentifier (GLI) - aka DUNS+4**

The GlobalLocationIdentifier requests the location identification of a business entity. This information is identified by use of a DUNS+4, which is a D&B DUNS number with a proprietary four-digit location identification that your company creates and supplies attached to it.

#### **5.2.2.2 Partner Location Identification**

When identifying a partner's location, an implementer has the option to utilize the Global Location Identifier and/or the Partner Location Identification data block and/or the Physical Address data block, which includes free form text fields for street address, city, postal code, etc. (dependent upon the business requirements gathered at development).

#### **5.2.2.3 ProprietaryDomainIdentifier (PDI)**

The ProprietaryDomainIdentifier requests the identification of the proprietary business classification (i.e. carrier), identification of the issuing system (i.e. sales), or proprietary business role (i.e. Manufacturing).

#### **5.2.2.4 ProprietaryIdentifierAuthority (PIA)**

The ProprietaryIdentifierAuthority requests the identification of the business organization that the proprietary classification is managed by (i.e. Intel).

#### **5.2.2.5 ProprietaryLocationIdentifier (PLI)**

The ProprietaryLocationIdentifier requests the proprietary identification of the location of a business entity.

#### **5.2.3 Physical Address**

The PhysicalAddress data block contains all the components that describe a physical location, which include: Street Address, City, State, Country, etc.

### **5.3 Global Product Identification**

**BACKGROUND** There is a challenge associated with using the existing product identification option. Partners recommended that RosettaNet allow for proprietary product identification.

RosettaNet has enabled companies to send either the Global Product Identifier or their own proprietary identifier within RosettaNet PIPs. This action allows companies to move forward with implementing RosettaNet e-business processes using their current proprietary product identification references.

#### **5.3.1 Product Identification**

When identifying a product, an implementer has the option to utilize the Global Product Identifier and/or the Partner Product Identification data block.

##### **5.3.1.1 GlobalProductIdentifier**

The GlobalProductIdentifier requests the identification of a given product. This information is identified by use of the GTIN. A GTIN is the EAN.UCC system standard for product identification. It is a globally unique 14-digit number assigned to each packaging level of a product or service.

##### **5.3.1.2 PartnerProductIdentification**

The PartnerProductIdentification requests proprietary identification of a given product.

#### 5.4 *LineNumber*

The "primary" numbering attributes of a given message of a PIP (e.g. LineNumber, etc.) should be used to denote the business document associated with the ***Sender of the message***.

For example, in PIP3A4 R0200 MG-1 line-item attribute LineNumber should be used to denote the Buyer PO Line Item number, and in MG-2 of the same PIP line-item attribute LineNumber should be used to denote the Seller's SO Line Item number, etc.

**Note:** It is ***recommended*** that the TPs of the implementation clearly document any desired and/or required variances to these rules so as to reduce confusion and provide clarity in specific situations.

#### 5.5 *GlobalDocumentFunctionCode*

GlobalDocumentFunctionCode is used to provide an indication of whether a given instance of a message is:

- A new "request" for processing on the part of the recipient, versus
- A "response" that must be paired with a previous request.

Consider "request" as a request for action, therefore all initial messages (one-way PIPs), including distributions and notifications, require action though not all will require a response.

#### 5.6 *GlobalSupplyChainCode*

The GlobalSupplyChainCode allows implementers to employ different processing rules based upon the supply chain of the member sending the request.

#### 5.7 *AffirmationIndicator*

Per the RosettaNet Business Dictionary (RNBD), the AffirmationIndicator element is used to indicate, "yes" "no" statements. When populating this field, the RosettaNet compliant response must be either "Yes" or "No".

RosettaNet acknowledges that previously released PIPs may contain inconsistent or contrary specification than what is stated above. To remedy this, the following rules should be followed:

- PIPs containing AffirmationIndicator, published **prior to 1/1/03** and containing multiple "responses" (such as "yes"/"no", "Y"/"N", or "Yes"/"No"), the trading partners must determine which responses to accept.
- PIPs containing AffirmationIndicator and published **after 1/1/03**, the appropriate response **must be "Yes"/"No"**.