

## Description of 2C7 Message

PIP® 2C7

**Released 11.00.00**

<b>Specification Information</b>	
<b>PIP</b>	Request Bill Of Material
<b>Cluster</b>	Product Information
<b>Segment</b>	Product Design Information
<b>Publication Date</b>	22 May 2012
<b>Version Identifier</b>	R11.00

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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.rosettanet.org/>) from requirements gathered during the Milestone Program and in conformance with the methodology.

## 1.5 Related Documents

- Associated PIP Message Schemas (included with PIP Specification only)
- Description of Partner Interface Process for 2C7
- Message Structure

## 1.6 Document Version History

<u>Version</u>	<u>Date</u>	<u>Description</u>
Released 11.00.00	22 May 2012	Released Version

## 1.7 Document Purpose

The purpose of the document is to explain the structure, the association between objects, the content of objects and the definition for single elements to a non-technical audience.

## 2. Interchange Model

### 2.1 BillOfMaterialRequest

#### 2.1.1 Interchange Diagram

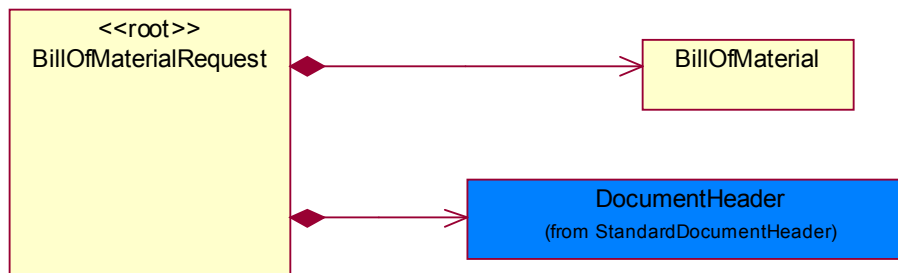


Figure 2-1 Interchange

#### 2.1.2 BillOfMaterial

The collection of business properties that describes a bill of material for a product.

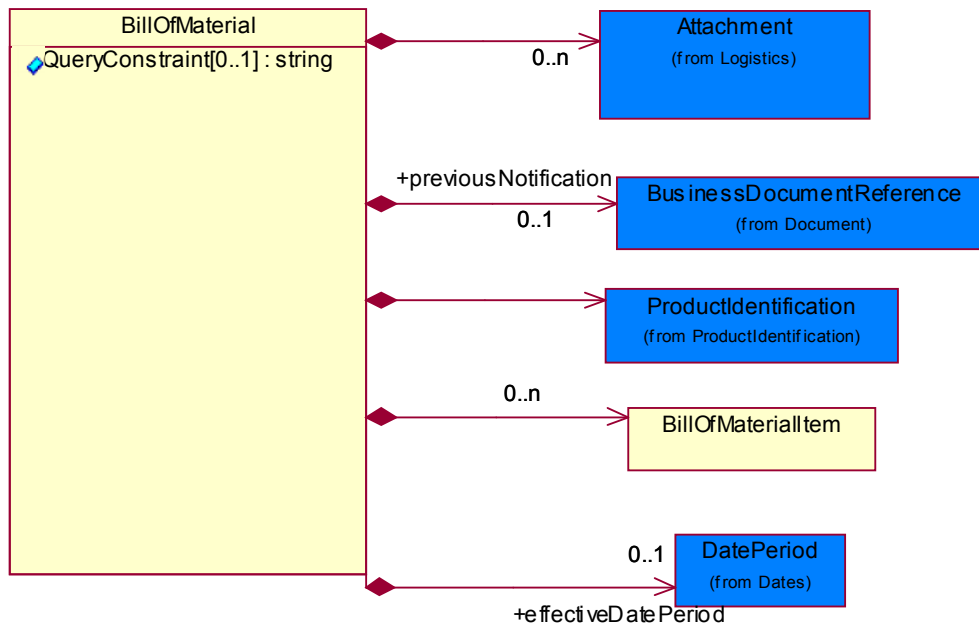


Figure 2-2 BillOfMaterial

Attribute	Type	Documentation
QueryConstraint[0..1]	string	An OCL compliant expression that constrains one or more parameters in a query.

Composition	Cardinality	Type	Documentation
Attachment	0..n	Attachment	A business property that describes additional information regarding a product or process.
BillOfMaterialItem	0..n	BillOfMaterialItem	The collection of business properties that describe an assembly, kit or single item. It may also be used to describe ""phantom"" parts.
effectiveDatePeriod	0..1	DatePeriod	The date range indicating when information or an activity are valid.
previousNotification	0..1	BusinessDocumentReference	Identifies the previous notification message if this is an update to it.
ProductIdentification	1	ProductIdentification	The object provides the identifier(s) of a product.

### 2.1.3 BillOfMaterialItem

The collection of business properties that describe an assembly, kit or single item. It may also be used to describe ""phantom"" parts.

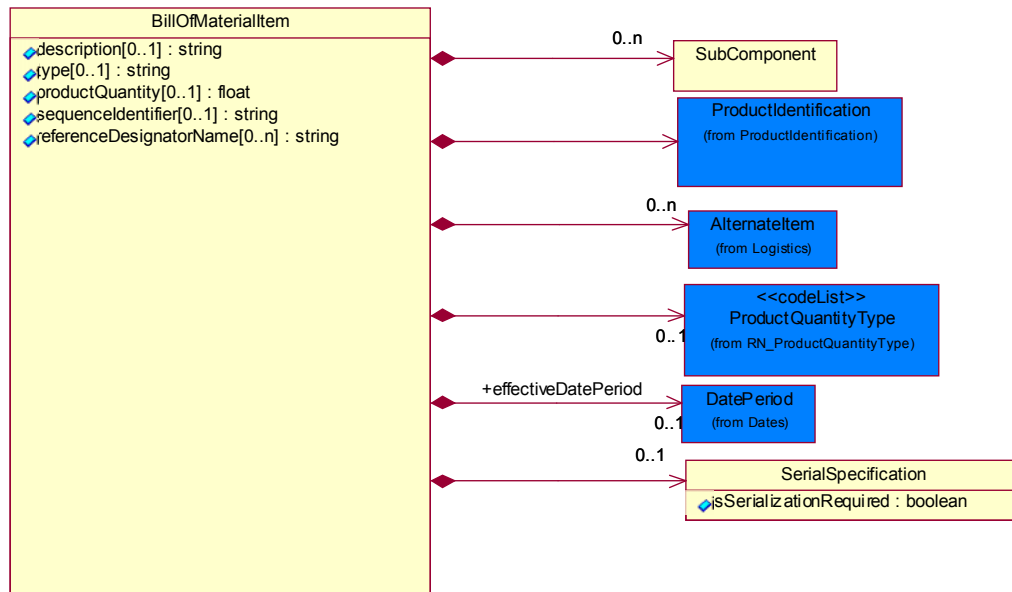


Figure 2-3 BillOfMaterialItem

Attribute	Type	Documentation
description[0..1]	string	A description of a process, thing, action, etc.
type[0..1]	string	Code identifying the type of product or item on the Bill Of Material.
productQuantity[0..1]	float	A quantity specifying the number of product

		units.
sequenceIdentifier[0..1]	string	An identifier which identifies the order of a designated element within a specified set.
referenceDesignatorName[0..n]	string	Identifies a single instance of a component. Normally referenceDesignator is alphabetic, graphically on the schematic and is used in the electrical interconnect description.

Composition	Cardinality	Type	Documentation
AlternateItem	0..n	AlternateItem	The collection of business properties that describe a functional identical or comparable part that may be used in place of a primary or main part.
effectiveDatePeriod	0..1	DatePeriod	The date range indicating when information or an activity are valid.
ProductQuantityType	0..1	ProductQuantityType	Code identifying the type of the quantity needed for assemblies or setting up.
ProductIdentification	1	ProductIdentification	The object provides the identifier(s) of a product.
SerialSpecification	0..1	SerialSpecification	The collection of business properties that describe serial number data used to uniquely identify a finished product.
SubComponent	0..n	SubComponent	The collection of business properties that describe a part of a component.

### 2.1.4 BillOfMaterialRequest

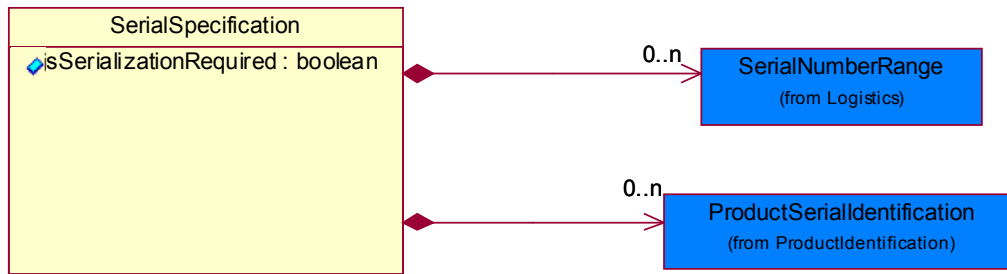
Allows the sender to request Bill Of Material information for a product. The product being queried can be identified using a Global Trade Item Number (GTIN) or proprietary product identifier.

Composition	Cardinality	Type	Documentation
DocumentHeader	1	DocumentHeader	The object allows for the identification of the sender and receiver of the business document.
BillOfMaterial	1	BillOfMaterial	The collection of business properties that describes a bill of material for a product.

### 2.1.5 SerialSpecification

The collection of business properties that describe serial number data used to uniquely identify a finished product.



**Figure 2-4 SerialSpecification**

Attribute	Type	Documentation
isSerializationRequired	boolean	Indicates whether serial numbers must be enumerated.

Composition	Cardinality	Type	Documentation
ProductSerialIdentification	0..n	ProductSerialIdentification	The object provides the serial identifier of a product.
SerialNumberRange	0..n	SerialNumberRange	The collection of business properties that describe a collection of sequential serial numbers.

### 2.1.6 SubComponent

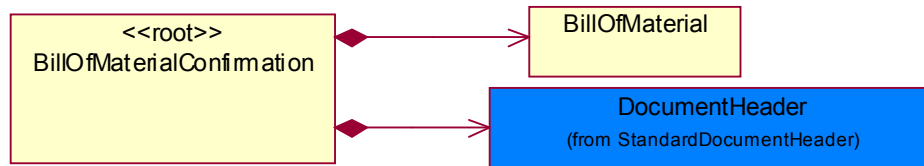
The collection of business properties that describe a part of a component.

**Figure 2-5 SubComponent**

Composition	Cardinality	Type	Documentation
BillOfMaterialItem	1	BillOfMaterialItem	The collection of business properties that describe an assembly, kit or single item. It may also be used to describe ""phantom"" parts.

## 2.2 BillOfMaterialConfirmation

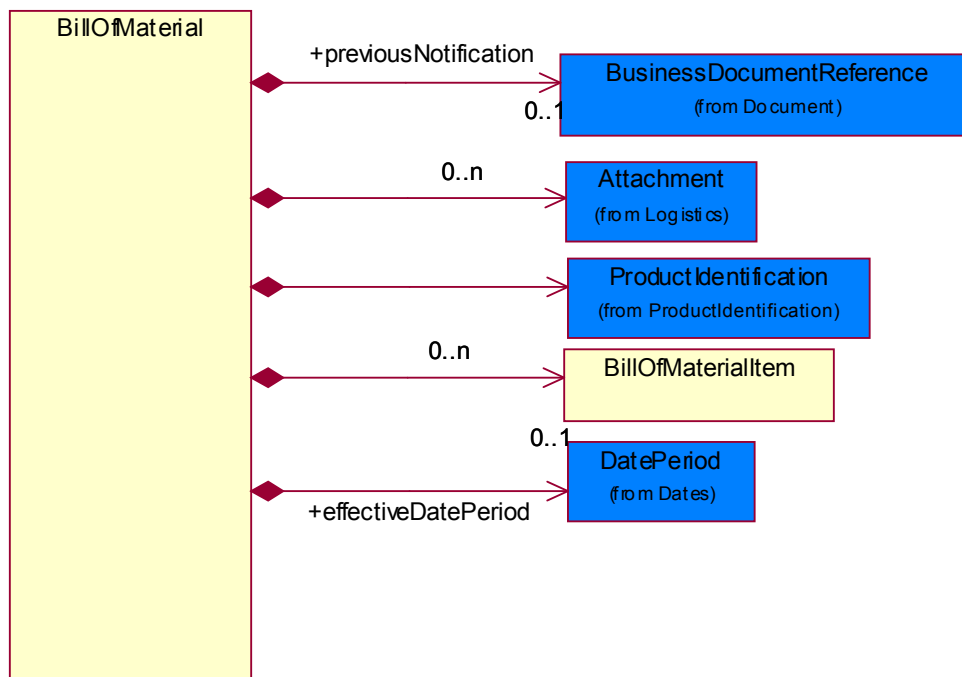
### 2.2.1 Interchange Diagram



**Figure 2-6 Interchange**

### 2.2.2 BillOfMaterial

The collection of business properties that describes a bill of material for a product.



**Figure 2-7 BillOfMaterial**

Composition	Cardinality	Type	Documentation
Attachment	0..n	Attachment	A business property that describes additional information regarding a product or process.
BillOfMaterialItem	0..n	BillOfMaterialItem	The collection of business properties that describe

			an assembly, kit or single item. It may also be used to describe ""phantom"" parts.
effectiveDatePeriod	0..1	DatePeriod	The date range indicating when information or an activity are valid.
previousNotification	0..1	BusinessDocumentReference	Identifies the previous notification message if this is an update to it.
ProductIdentification	1	ProductIdentification	The object provides the identifier(s) of a product.

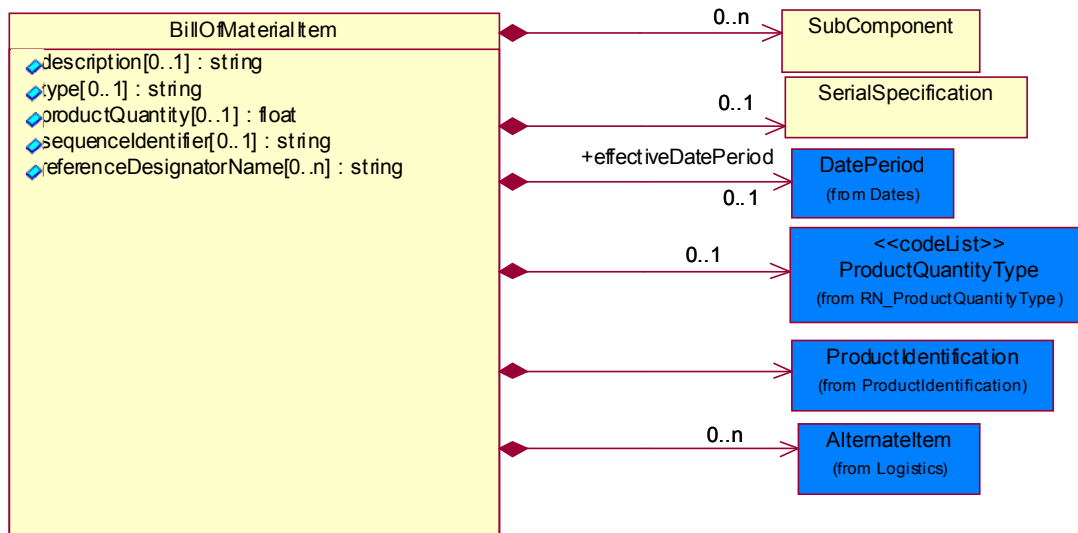
### 2.2.3 BillOfMaterialConfirmation

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.

Composition	Cardinality	Type	Documentation
DocumentHeader	1	DocumentHeader	The object allows for the identification of the sender and receiver of the business document.
BillOfMaterial	1	BillOfMaterial	The collection of business properties that describes a bill of material for a product.

## 2.2.4 BillOfMaterialItem

The collection of business properties that describe an assembly, kit or single item. It may also be used to describe ""phantom"" parts.



**Figure 2-8 BillOfMaterialItem**





Attribute	Type	Documentation
description[0..1]	string	A description of a process, thing, action, etc.
type[0..1]	string	Code identifying the type of product or item on the Bill Of Material.
productQuantity[0..1]	float	A quantity specifying the number of product units.
sequenceIdentifier[0..1]	string	An identifier which identifies the order of a designated element within a specified set.
referenceDesignatorName[0..n]	string	Identifies a single instance of a component. Normally referenceDesignator is alphabetic, graphically on the schematic and is used in the electrical interconnect description.

Composition	Cardinality	Type	Documentation
AlternateItem	0..n	AlternateItem	The collection of business properties that describe a functional identical or comparable part that may be used in place of a primary or main part.
effectiveDatePeriod	0..1	DatePeriod	The date range indicating when information or an activity are valid.
ProductQuantityT	0..1	ProductQuantityType	Code identifying the type

ype			of the quantity needed for assemblies or setting up.
ProductIdentification	1	ProductIdentification	The object provides the identifier(s) of a product.
SerialSpecification	0..1	SerialSpecification	The collection of business properties that describe serial number data used to uniquely identify a finished product.
SubComponent	0..n	SubComponent	The collection of business properties that describe a part of a component.

### 2.2.5 SerialNumberRange

The collection of business properties that describe a collection of sequential serial numbers.

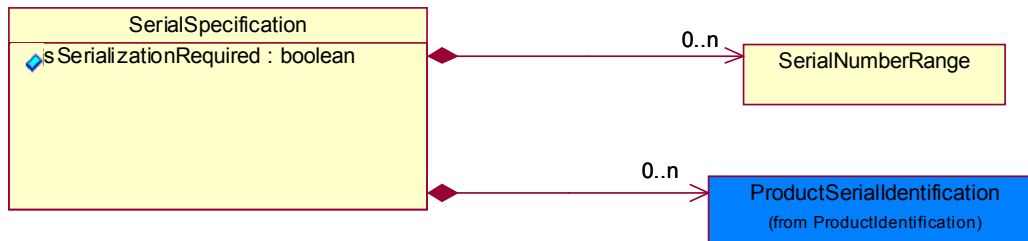
SerialNumberRange
 firstSerialNumber : string  increment : string  lastSerialNumber : string  SequenceNumber : string

**Figure 2-9 SerialNumberRange**

Attribute	Type	Documentation
firstSerialNumber	string	The first or beginning serial number in a range of serial numbers.
increment	string	A factor which when applied to a serial number in a given range will yield the next serial number in that range.
lastSerialNumber	string	The last or ending serial number in a range of serial numbers.
SequenceNumber	string	A positive integer which identifies the order of a designated element within a specified set.

## 2.2.6 SerialSpecification

The collection of business properties that describe serial number data used to uniquely identify a finished product.



**Figure 2-10 SerialSpecification**

Attribute	Type	Documentation
isSerializationRequired	boolean	Indicates whether serial numbers must be enumerated.

Composition	Cardinality	Type	Documentation
ProductSerialIdentification	0..n	ProductSerialIdentification	The object provides the serial identifier of a product.
SerialNumberRange	0..n	SerialNumberRange	The collection of business properties that describe a collection of sequential serial numbers.

## 2.2.7 SubComponent

The collection of business properties that describe a part of a component.



**Figure 2-11 SubComponent**

Composition	Cardinality	Type	Documentation
BillOfMaterialItem	1	BillOfMaterialItem	The collection of business properties that describe an assembly, kit or single item. It may also be used to describe ""phantom"" parts.

## 2.3 Domain Model

### 2.3.1 Logistics

#### 2.3.1.1 Dependency Diagram

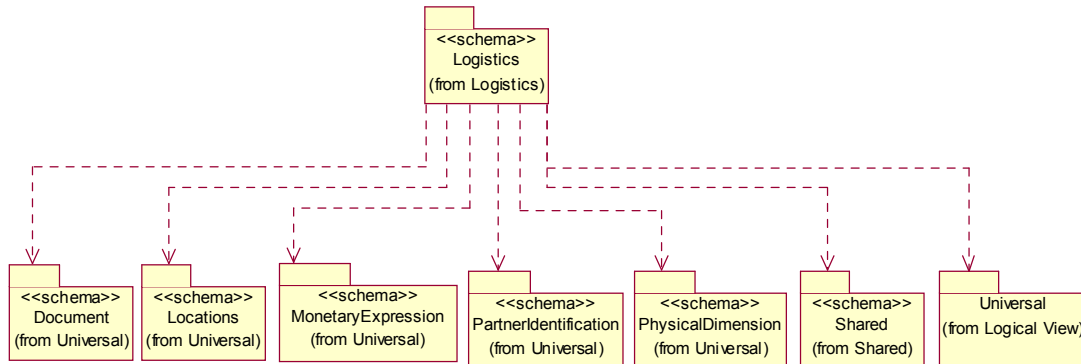


Figure 2-12 Dependency

#### 2.3.1.2 AlternateItem

The collection of business properties that describe a functional identical or comparable part that may be used in place of a primary or main part.

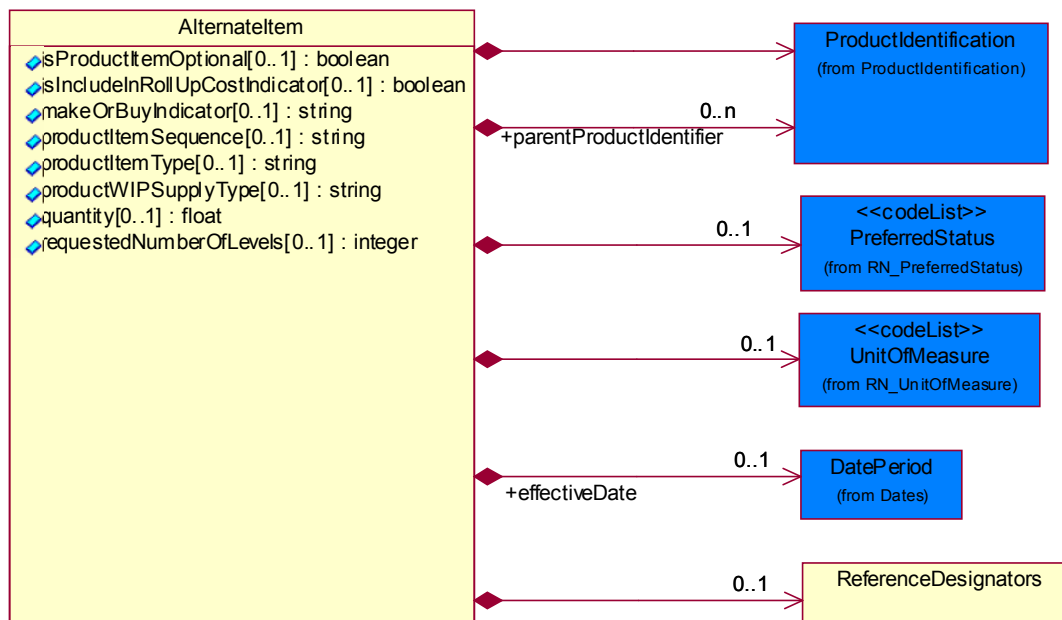


Figure 2-13 AlternateItem

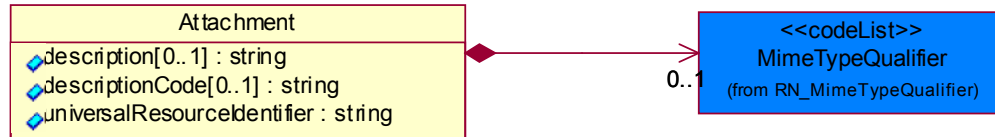
Attribute	Type	Documentation
isProductItemOptional[0..1]	boolean	Determines if the item is optional.
isIncludeInRollUpCostIndicator[0..1]	boolean	Determines whether or not the item is considered for costing roll up.
makeOrBuyIndicator[0..1]	string	This is a make or buy indicator for the item.
productItemSequence[0..1]	string	The item sequence indicates the sequence of the item on the BOM.
productItemType[0..1]	string	This is type of the item. It can be assigned values such as MODEL, OPTION CLASS, etc.
productWIPSupplyType[0..1]	string	This is the supply type, a method of supplying component materials, for the item. It can be assigned values such as push, pull, etc.
quantity[0..1]	float	A quantity specifying the number of product units.
requestedNumberOfLevels[0..1]	integer	This is the requested number of levels of BOM information.

Composition	Cardinality	Type	Documentation
ReferenceDesignators	0..1	ReferenceDesignators	A reference designator unambiguously identifies a component in an electrical schematic (circuit diagram) or on a printed circuitboard (PCB). The reference designator usually consists of one or two letters followed by a number, e.g. R13, C1002.
effectiveDate	0..1	DatePeriod	The business document must allow for the computation or statement of a duration based upon a beginning and an ending date.
parentProductIdentifier	0..n	ProductIdentification	The object provides the identifier(s) of a product.
ProductIdentification	1	ProductIdentification	The object provides the identifier(s) of a product.
UnitOfMeasure	0..1	UnitOfMeasure	Code identifying a product unit of measure.
PreferredStatus	0..1	PreferredStatus	Code identifying the status of an approved product.



### 2.3.1.3 Attachment

A business property that describes additional information regarding a product or process.



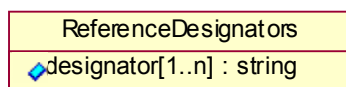
**Figure 2-14 Attachment**

Attribute	Type	Documentation
description[0..1]	string	A description of the attachment.
descriptionCode[0..1]	string	Code identifying the type of product attachment, e.g. assembly instructions, block diagrams, test requirements, etc.
universalResourceIdentifier	string	A network-centric identifier that provides the identity of a resource.

Composition	Cardinality	Type	Documentation
MimeTypeQualifier	0..1	MimeTypeQualifier	The MIME type as defined by IANA. Please refer to <a href="http://www.iana.org/assignments/media-types/">http://www.iana.org/assignments/media-types/</a> for a list of types.

### 2.3.1.4 ReferenceDesignators

A reference designator unambiguously identifies a component in an electrical schematic (circuit diagram) or on a printed circuitboard (PCB). The reference designator usually consists of one or two letters followed by a number, e.g. R13, C1002.







**Figure 2-15 ReferenceDesignators**

Attribute	Type	Documentation
designator[1..n]	string	A designator unambiguously identifies a component in an electrical schematic (circuit diagram) or on a printed circuitboard (PCB).

### 2.3.1.5 SerialNumberRange

The collection of business properties that describe a collection of sequential serial numbers.

SerialNumberRange
 firstSerialNumber : string
 increment : string
 lastSerialNumber : string
 sequenceNumber : string

**Figure 2-16 SerialNumberRange**

Attribute	Type	Documentation
firstSerialNumber	string	The first or beginning serial number in a range of serial numbers.
increment	string	A factor which when applied to a serial number in a given range will yield the next serial number in that range.
lastSerialNumber	string	The last or ending serial number in a range of serial numbers.
sequenceNumber	string	A positive integer which identifies the order of a designated element within a specified set.

## 2.3.2 CodeList

### 2.3.2.1 PreferredStatus

Code identifying the status of an approved product.

Name	Documentation
ALT	Alternate. Alternate approved manufacturer or supplier.
DIS	Disqualified. This particular manufacturer or supplier has been disqualified from supplying this part at the approved revision level.
EOL	End of Life. A particular part that is going to be used in production only until current inventories are exhausted.
NAV	Not Available. This part is not available to the trading partners.
OTH	Other. Need agreement before the transaction may continue.
PAP	Pilot Approved. New Product Introduction (NPI) approved. This is used in a pilot or development of a product or product line and is not meant to be production approved.
PRI	Primary. Primary or preferred approved manufacturer or supplier.
SPL	Split. A particular part that is provided by different suppliers to reduce risk or get a price discount, etc.
UQU	Under Qualification. A particular part that is undergoing qualification testing for use in production.

### 2.3.2.2 ProductQuantityType

Code identifying the type of the quantity needed for assemblies or setting up.

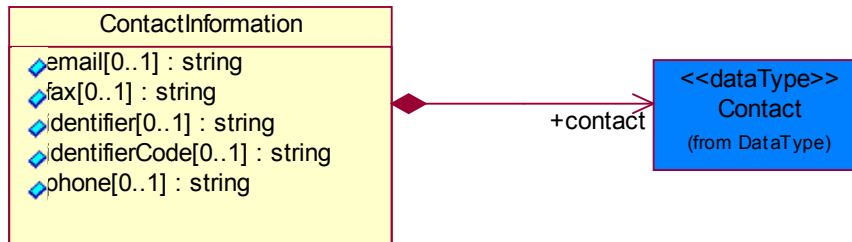
Name	Documentation
ANE	As needed. Quantity is required when specifying bulk items such as adhesive or heat sink paste.
PAS	Per assembly. Quantity is required for an each occurrence, which is usually the case for most components such as resistors, SOC, VLSI, capacitors, etc.
PSE	Per setup. Quantity is required for such as a setup quantity of indirect materials used in a production run and cannot be known with certainty over how many assemblies this applies since it depends upon the quantity of the production run.
SHR	Shrinkage. Quantity is required to correct production quantities being ordered.
UPA	Use per a set quantity of assemblies. Quantity is required to assemble a specific part that consists of several items and that uses several smaller identical assemblies. This is also used to indirect materials spread over on pallet or packed in box.

## 3. Universal Structure

### 3.1 ContactInformation

#### 3.1.1 ContactInformation

The business document must allow for the identification of the name of the department, service or individual to be contacted regarding the context of the business document.



**Figure 3-1 ContactInformation**

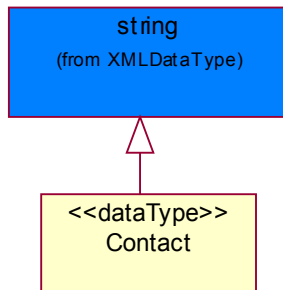
Attribute	Type	Documentation
email[0..1]	string	The electronic mail for the specified contact.
fax[0..1]	string	The fax number for the specified contact.
identifier[0..1]	string	Identifies the role of the contact (i.e. Service Technician, Account Manager) in the Business Process.
identifierCode[0..1]	string	IdentifierCode is a unique security authorization code to identify the contact- ie. badge ID.
phone[0..1]	string	The telephone number for the specified contact.

Composition	Cardinality	Type	Documentation
contact	1	Contact	The name of the department, service or individual to be contacted within the organization.

## 3.2 DataType

### 3.2.1 Contact

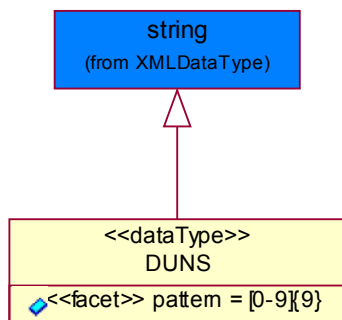
The name of the department, service or individual to be contacted within the organization.



**Figure 3-2 Contact**

### 3.2.2 DUNS

A number assigned by Dun and Bradstreet to identify a business location.

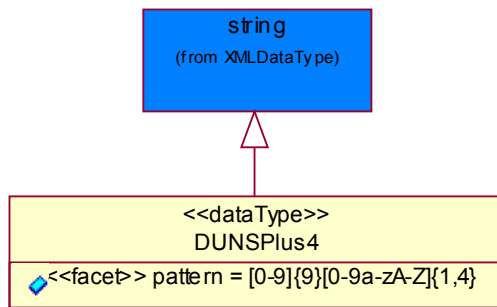


**Figure 3-3 DUNS**

Attribute	Type	Documentation
pattern		[0-9]{9}

### 3.2.3 DUNSPlus4

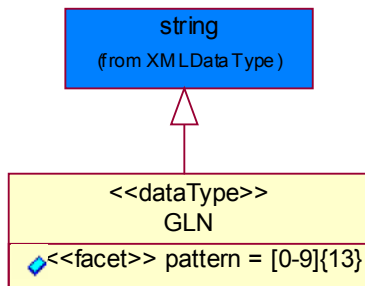
A identifier to specify a specific location within a business location.

**Figure 3-4 DUNSPlus4**

Attribute	Type	Documentation
pattern		Data Universal Numbering System +4 (DUNS+4) number means the DUNS number assigned by Dun and Bradstreet, Inc. (D&B) plus an alphanumeric of length 4 suffix that may be assigned by a business concern.

### 3.2.4 GLN

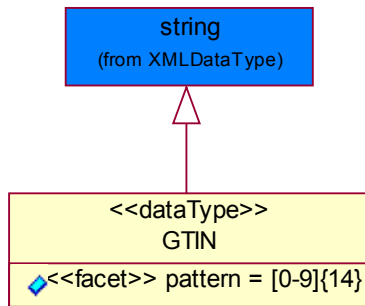
Global Location Number (GLN) - A identifier to identify legal entities, trading parties and location.

**Figure 3-5 GLN**

Attribute	Type	Documentation
pattern		[0-9]{13}

### 3.2.5 GTIN

Global Trade Identification Number (GTIN).

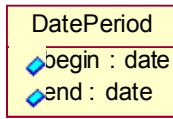
**Figure 3-6 GTIN**

Attribute	Type	Documentation
pattern		[0-9]{14}

## 3.3 Dates

### 3.3.1 DatePeriod

The business document must allow for the computation or statement of a duration based upon a beginning and an ending date.



**Figure 3-7 DatePeriod**

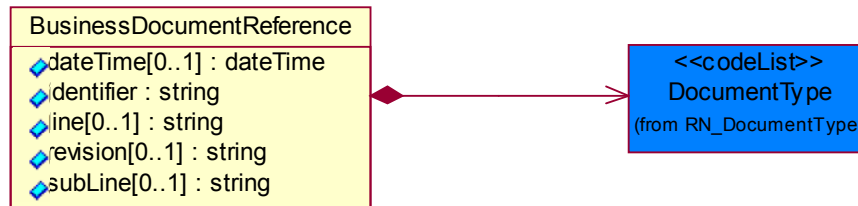
Attribute	Type	Documentation
begin	date	The date indicating the beginning of the date period.
end	date	The date indicating the ending of the date period.



## 3.4 Document

### 3.4.1 BusinessDocumentReference

The business document reference object allows for the indirect referencing of a relationship to other business related documents.



**Figure 3-8 BusinessDocumentReference**

Attribute	Type	Documentation
dateTime[0..1]	dateTime	The date-time stamp indicating on the referenced business document.
identifier	string	Unique identification of the referenced business document.
line[0..1]	string	References the specific line number of the specified business document.
revision[0..1]	string	Referenced the revision of the specified business document.
subLine[0..1]	string	References the specific subline number of the specified business document.

Composition	Cardinality	Type	Documentation
DocumentType	1	DocumentType	A code identifying the business context of a document.

## 3.5 Locations

### 3.5.1 AlternativeIdentifier

Identifies the specified code and the name of the organization that a code is utilized from.

AlternativeIdentifier
authority : string
identifier : string

**Figure 3-9 AlternativeIdentifier**

Attribute	Type	Documentation
authority	string	The name of the organization that a code is utilized from.
identifier	string	The specified code to represent an entity (e.g. product, location, partner, etc.).

## 3.6 PartnerIdentification

### 3.6.1 PartnerIdentification

The business document must allow for the identity of one or more parties to the transaction.

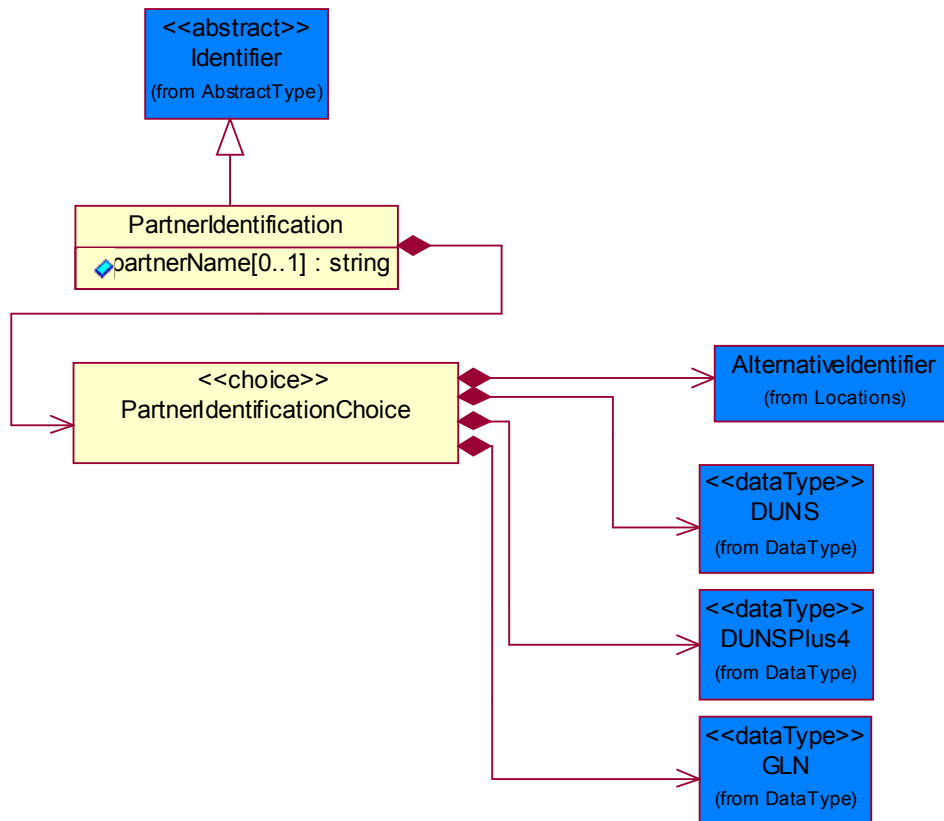


Figure 3-10 PartnerIdentification

Attribute	Type	Documentation
partnerName[0..1]	string	The name of the partner's company/business.

Composition	Cardinality	Type	Documentation
PartnerIdentificationChoice	1	PartnerIdentificationChoice	

### 3.6.2 PartnerIdentificationChoice

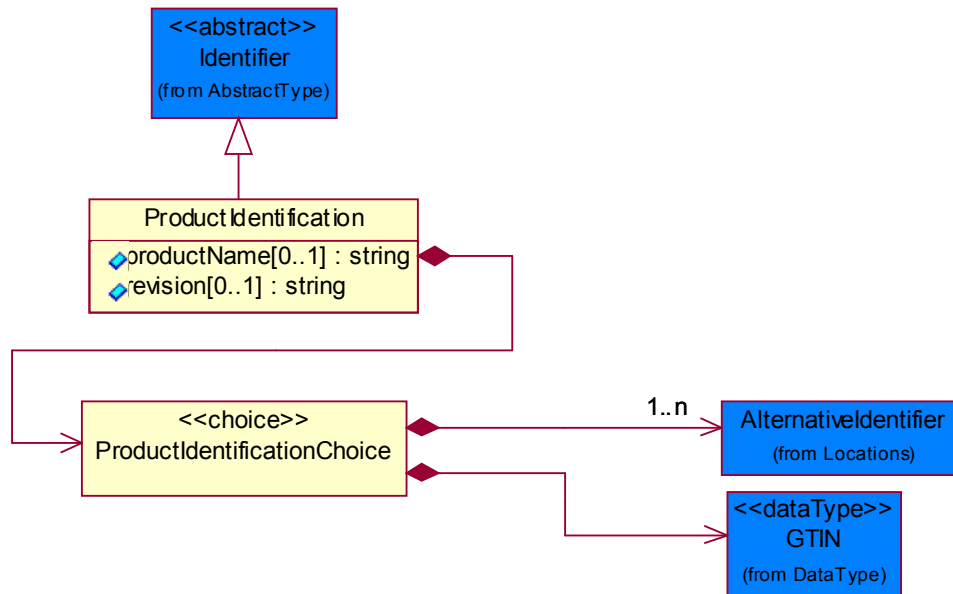
Composition	Cardinality	Type	Documentation
AlternativeIdentifier	1	AlternativeIdentifier	Identifies the specified code and the name of the organization that a code is utilized from.

DUNS	1	DUNS	A number assigned by Dun and Bradstreet to identify a business location.
DUNSPPlus4	1	DUNSPPlus4	A identifier to specify a specific location within a business location.
GLN	1	GLN	Global Location Number (GLN) - A identifier to identify legal entities, trading parties and location.

## 3.7 ProductIdentification

### 3.7.1 ProductIdentification

The object provides the identifier(s) of a product.



**Figure 3-11 ProductIdentification**

Attribute	Type	Documentation
productName[0..1]	string	The name of the product.
revision[0..1]	string	Referenced the specified product revision.

Composition	Cardinality	Type	Documentation
ProductIdentificationChoice	1	ProductIdentificationChoice	

### 3.7.2 ProductIdentificationChoice

Composition	Cardinality	Type	Documentation
AlternativeIdentifier	1..n	AlternativeIdentifier	Identifies the specified code and the name of the organization that a code is utilized from.
GTIN	1	GTIN	Global Trade Identification Number (GTIN).

### 3.7.3 ProductSerialIdentification

The object provides the serial identifier of a product.

**Figure 3-12 ProductSerialIdentification**

Attribute	Type	Documentation
identifier	string	A unique serial identifier assigned to a product.

Composition	Cardinality	Type	Documentation
ProductIdentification	1	ProductIdentification	The object provides the identifier(s) of a product.

## 3.8 CodeList

### 3.8.1 Language

For representation of Language name RosettaNet has adopted ISO 639-2; 1998. Refer to the following web page to get the latest version of the standard:

<http://www.loc.gov/standards/iso639-2/iso639jac.html>

If you need more information about the ISO standard please contact ISO for more details.

### 3.8.2 DocumentType

A code identifying the business context of a document.

Instance	Documentation
APM	Applied Promotions.
ARA	Authorization Request Approval.
CAR	Certificate of Analysis Response.
CBN	Product batch number of customer.
CCN	Customs clearance number.
CFA	Failure Analysis - Request document that will accompany the product providing characteristics of the component failure.
CIN	Commercial Invoice.
CNM	Traditional credit note or memo.
COA	Certificate of Analysis.
CON	In a virtual sourcing relationship, a third party trading partner is supplying a part to a customer on behalf of another company that has taken the order for the customer. In this case a Customer Order Number is associated to the request for material that is sent to the virtual trading partners.
COS	Consumption Notice.
COT	Contract.
CRN	Unique consumption reference number identifying the product consumption issue i.e. one-to-one relationship with physical flow.
DEM	Traditional debit note or memo.
DEN	Delivery Note.
DIN	Discontinuation Notice.
DOR	Delivery Order.
DRN	Drawing Number.
DRR	Design Registration Request.
ECO	Engineering Change Order - The proprietary unique identification number that represents an engineering change order.
EDD	Export Declaration Document.
EIR	Engineering Information Request.
EOL	End of Life.
FUO	Sales order or transfer order fulfilling demand out of a facility (outbound shipment).
IDD	Import Declaration Document.
INV	Invoice.

LID	Location Identifier. Data for on-site work that have to be done on the machine (associated with preventive maintenance order).
MEN	Master Event Number.
MID	Machine Identifier. Data for on-site work that have to be done on the machine (associated with preventive maintenance order).
MON	Model Number.
NTS	Notes.
OCL	The unique identifier assigned by the OEM for a warranty claim.
OGA	Other governmental agency issued document.
OPO	The unique identifier assigned by the OEM for a part order.
OPR	The unique identifier assigned by the OEM for a part return.
PCN	Product/Process Change.
PFA	Failure Analysis - Request document that will accompany the product providing characteristics of the product failure.
PII	Refers to previously issued invoice.
PLS	Unique number that identifies packing form prior to shipment.
POI	Purchase Order IN.
PON	Production order number for material release.
POO	Purchase Order OUT.
PRC	Product Catalog.
PSI	Refers to previously issued self-billing invoice.
PUO	Purchase Order.
QUO	Quote.
REC	Document identifying the receipt of materials or products into a facility against a purchase order or transfer order (inbound shipment).
REN	Release Number.
REO	Purchase order or transfer order replenishing inventory into a facility (inbound shipment).
REQ	Requisition.
RMA	Returned Material Authorization.
RPO	Purchase order for materials or product returned to and reworked by a supplier.
RTA	Remittance Advice - Remittance details.
SAO	Sales Order.
SBC	Credit Memo used in self-billing scenario.
SBD	Debit Memo used in self-billing scenario.
SBI	Invoice in self billing scenario.
SBN	Product batch number of supplier.
SCA	Similar to contracts - Contains the quantity of an article that is to be ordered from a vendor and the price for article or service that is to be procured.
SEN	Serial Number.
SEO	A document that gives a repair provider the necessary authorization to repair or upgrade a product either at the customer site or at the repair provider's site.
SHD	Shipping Document.
SNC	Shipset Number on Code List.
SPC	The unique identifier assigned by the ASP for a warranty claim.
SPN	Spec Number.
SPO	The unique identifier assigned by the ASP for a part order.
SPR	The unique identifier assigned by the ASP for a part return.



SPW	The unique identifier assigned by the ASP to reference a work order.
SRI	A document that contains the shipping reference number which allows the product to be tracked within the outsourced logistic providers network.
SWT	Switch Authorization.
TCS	Terms and Conditions.
TRO	Order which results in materials or products being moved from one facility to another (outbound shipment and inbound shipment).
WAB	Waybill.
WAC	Denotes a warranty claim.
WOO	Work Order.

### 3.8.3 MimeTypeQualifier

The MIME type as defined by IANA.

Please refer to <http://www.iana.org/assignments/media-types/> for a list of types.

Instance	Documentation
application/activemessage	[Shapiro]
application/andrew-inset	[Borenstein]
application/applefile	[Faltstrom]
application/atomicmail	[Borenstein]
application/batch-SMTP	[RFC2442]
application/beep+xml	[RFC3080]
application/cals-1840	[RFC1895]
application/cnrm+xml	[RFC2442]
application/commonground	[Glazer]
application/cpl+xml	
application/cybercash	[Eastlake]
application/dca-rft	[Campbell]
application/dec-dx	[Campbell]
application/dicom	[RFC3240]
application/dvcs	[RFC3029]
application/EDI-Consent	[RFC1767]
application/EDIFACT	[RFC1767]
application/EDI-X12	[RFC1767]
application/eshop	[Katz]
application/font-tdpfr	[RFC3073]
application/http	[RFC2616]
application/hyperstudio	[Domino]
application/iges	[Parks]
application/index	[RFC2652]
application/index.cmd	[RFC2652]
application/index.obj	[RFC2652]
application/index.response	[RFC2652]
application/index.vnd	[RFC2652]
application/iotp	[RFC2935]
application/ipp	[RFC2910]
application/isup	[RFC3204]
application/mac-binhex40	[Faltstrom]

application/macwriteii	[Lindner]
application/marc	[RFC2220]
application/mathematica	[Van Nostern]
application/msword	[Lindner]
application/news-message-id	[RFC1036, Spencer]
application/news-transmission	[RFC1036, Spencer]
application/ocsp-request	[RFC2560]
application/ocsp-response	[RFC2560]
application/octet-stream	[RFC2045, RFC2046]
application/oda	[RFC2045, RFC2046]
application/ogg	[RFC-walleij-ogg-mediatype-08.txt]
application/parityfec	[RFC3009]
application/pdf	[Lindner]
application/pgp-encrypted	[RFC3156]
application/pgp-keys	[RFC3156]
application/pgp-signature	[RFC3156]
application/pkcs10	[RFC2311]
application/pkcs7-mime	[RFC2311]
application/pkcs7-signature	[RFC2311]
application/pkix-cert	[RFC2585]
application/pkixcmp	[RFC2510]
application/pkix-crl	[RFC2585]
application/postscript	[RFC2045, RFC2046]
application/prs.alvestrand.titrax-sheet	[Alvestrand]
application/prs.cww	[Rungchavalnont]
application/prs.nprend	[Doggett]
application/prs.plucker	[Janssen]
application/qsig	[RFC3204]
application/reginfo+xml	[RFC-ietf-sipping-reg-event-00.txt]
application/remote-printing	[RFC1486, Rose]
application/riscos	[Smith]
application/rtf	[Lindner]
application/sdp	[RFC2327]
application/set-payment	[Korver]
application/set-payment-initiation	[Korver]
application/set-registration	[Korver]
application/set-registration-initiation	[Korver]
application/sgml	[RFC1874]
application/sgml-open-catalog	[Grosso]
application/sieve	[RFC3028]
application/slate	[Crowley]
application/timestamp-query	[RFC3161]
application/timestamp-reply	[RFC3161]
application/tve-trigger	[Welsh]
application/vemmi	[RFC2122]
application/vnd.3gpp.pic-bw-large	[Meredith]
application/vnd.3gpp.pic-bw-small	[Meredith]
application/vnd.3gpp.pic-bw-var	[Meredith]
application/vnd.3gpp.sms	[Meredith]
application/vnd.3M.Post-it-Notes	[O'Brien]

application/vnd.accpac.simply.aso	[Leow]
application/vnd.accpac.simply.imp	[Leow]
application/vnd.acucobol	[Lubin]
application/vnd.acucorp	[Lubin]
application/vnd.adobe.xfdf	[Perelman]
application/vnd.aether.imp	[Moskowitz]
application/vnd.amiga.ami	[Blumberg]
application/vnd.anser-web-certificate-issue-initiation	[Mori]
application/vnd.anser-web-funds-transfer-initiation	[Mori]
application/vnd.audiograph	[Slusanschi]
application/vnd.blueice.multipass	[Holmstrom]
application/vnd.bmi	[Gotoh]
application/vnd.businessobjects	[Imoucha]
application/vnd.canon-cpdl	[Muto]
application/vnd.canon-lips	[Muto]
application/vnd.cinderella	[Kortenkamp]
application/vnd.claymore	[Simpson]
application/vnd.commerce-battelle	[Applebaum]
application/vnd.commonspace	[Chandhok]
application/vnd.contact.cmsg	[Patz]
application/vnd.cosmocaller	[Dellutri]
application/vnd.ctc-posml	[Kohlhepp]
application/vnd.cups-postscript	[Sweet]
application/vnd.cups-raster	[Sweet]
application/vnd.cups-raw	[Sweet]
application/vnd.curl	[Byrnes]
application/vnd.cybank	[Helmee]
application/vnd.data-vision.rdz	[Fields]
application/vnd.dna	[Searcy]
application/vnd.dpgraph	[Parker]
application/vnd.dreamfactory	[Appleton]
application/vnd.dxr	[Duffy]
application/vnd.ecdis-update	[Buettgenbach]
application/vnd.ecowin.chart	[Olsson]
application/vnd.ecowin.filerequest	[Olsson]
application/vnd.ecowin.fileupdate	[Olsson]
application/vnd.ecowin.series	[Olsson]
application/vnd.ecowin.seriesrequest	[Olsson]
application/vnd.ecowin.seriesupdate	[Olsson]
application/vnd.enliven	[Santinelli]
application/vnd.epson.esf	[Hoshina]
application/vnd.epson.msf	[Hoshina]
application/vnd.epson.quickanime	[Gu]
application/vnd.epson.salt	[Nagatomo]
application/vnd.epson.ssf	[Hoshina]
application/vnd.ericsson.quickcall	[Tidwell]
application/vnd.eudora.data	[Resnick]
application/vnd.fdf	[Zilles]

application/vnd.ffsns	[Holstage]
application/vnd.FloGraphIt	[Floersch]
application/vnd.framemaker	[Wexler]
application/vnd.fsc.weblaunch	[D.Smith]
application/vnd.fujitsu.oasys	[Togashi]
application/vnd.fujitsu.oasys2	[Togashi]
application/vnd.fujitsu.oasys3	[Okudaira]
application/vnd.fujitsu.oasysgp	[Sugimoto]
application/vnd.fujitsu.oasysprs	[Ogita]
application/vnd.fujixerox.ddd	[Onda]
application/vnd.fujixerox.docuworks	[Taguchi]
application/vnd.fujixerox.docuworks.binder	[Matsumoto]
application/vnd.fut-misnet	[Pruulmann]
application/vnd.grafeq	[Tupper]
application/vnd.groove-account	[Joseph]
application/vnd.groove-help	[Joseph]
application/vnd.groove-identity-message	[Joseph]
application/vnd.groove-injector	[Joseph]
application/vnd.groove-tool-message	[Joseph]
application/vnd.groove-tool-template	[Joseph]
application/vnd.groove-vcard	[Joseph]
application/vnd.hbci	[Hammann]
application/vnd.hhe.lesson-player	[Jones]
application/vnd.hp-HPGL	[Pentecost]
application/vnd.hp-hpid	[Gupta]
application/vnd.hp-hps	[Aubrey]
application/vnd.hp-PCL	[Pentecost]
application/vnd.hp-PCLXL	[Pentecost]
application/vnd.httpphone	[Lefevre]
application/vnd.hzn-3d-crossword	[Minnis]
application/vnd.ibm.afplinedata	[Buis]
application/vnd.ibm.electronic-media	[Tantlinger]
application/vnd.ibm.Minipay	[Herzberg]
application/vnd.ibm.modcap	[Hohensee]
application/vnd.ibm.secure-container	[Tantlinger]
application/vnd.informix-visionary	[Gales]
application/vnd.intercon.formnet	[Gurak]
application/vnd.intertrust.digibox	[Tomasello]
application/vnd.intertrust.nncp	[Tomasello]
application/vnd.intu.qbo	[Scratchley]
application/vnd.intu.qfx	[Scratchley]
application/vnd.irepository.package+xml	[Knowles]
application/vnd.is-xpr	[Natarajan]
application/vnd.japannet-directory-service	[Fujii]
application/vnd.japannet-jpnstore-wakeup	[Yoshitake]
application/vnd.japannet-payment-wakeup	[Fujii]
application/vnd.japannet-registration	[Yoshitake]
application/vnd.japannet-registration-wakeup	[Fujii]
application/vnd.japannet-setstore-wakeup	[Yoshitake]

application/vnd.japannet-verification	[Yoshitake]
application/vnd.japannet-verification-wakeup	[Fujii]
application/vnd.jisp	[Deckers]
application/vnd.kde.karbon	[Faure]
application/vnd.kde.kchart	[Faure]
application/vnd.kde.kformula	[Faure]
application/vnd.kde.kivio	[Faure]
application/vnd.kde.kontour	[Faure]
application/vnd.kde.kpresenter	[Faure]
application/vnd.kde.kspread	[Faure]
application/vnd.kde.kword	[Faure]
application/vnd.kenameaapp	[DiGiorgio-Haag]
application/vnd.koan	[Cole]
application/vnd.liberty-request+xml	[McDowell]
application/vnd.llamagraphics.life-balance.desktop	[White]
application/vnd.lotus-1-2-3	[Wattenberger]
application/vnd.lotus-approach	[Wattenberger]
application/vnd.lotus-freelance	[Wattenberger]
application/vnd.lotus-notes	[Laramie]
application/vnd.lotus-organizer	[Wattenberger]
application/vnd.lotus-screencam	[Wattenberger]
application/vnd.lotus-wordpro	[Wattenberger]
application/vnd.mcd	[Gotoh]
application/vnd.mediastation.cdkey	[Flurry]
application/vnd.meridian-slideshow	[Wedel]
application/vnd.micrografx.flo	[Prevo]
application/vnd.micrografx.igx	[Prevo]
application/vnd.mif	[Wexler]
application/vnd.minisoft-hp3000-save	[Bartram]
application/vnd.mitsubishi.misty-guard.trustweb	[Tanaka]
application/vnd.Mobius.DAF	[Kabayama]
application/vnd.Mobius.DIS	[Kabayama]
application/vnd.Mobius.MBK	[Devasia]
application/vnd.Mobius.MQY	[Devasia]
application/vnd.Mobius.MSL	[Kabayama]
application/vnd.Mobius.PLC	[Kabayama]
application/vnd.Mobius.TXF	[Kabayama]
application/vnd.mophun.application	[Wennerstrom]
application/vnd.mophun.certificate	[Wennerstrom]
application/vnd.motorola.flexsuite	[Patton]
application/vnd.motorola.flexsuite.adsi	[Patton]
application/vnd.motorola.flexsuite.fis	[Patton]
application/vnd.motorola.flexsuite.gotap	[Patton]
application/vnd.motorola.flexsuite.kmr	[Patton]
application/vnd.motorola.flexsuite.ttc	[Patton]
application/vnd.motorola.flexsuite.wem	[Patton]
application/vnd.mozilla.xul+xml	[McDaniel]

application/vnd.ms-artgalry	[Slawson]
application/vnd.ms-asf	[Fleischman]
application/vnd.mseq	[Le Bodic]
application/vnd.ms-excel	[Gill]
application/vnd.ms-sign	[Borcherding]
application/vnd.ms-lrm	[Ledoux]
application/vnd.ms-powerpoint	[Gill]
application/vnd.ms-project	[Gill]
application/vnd.ms-tnef	[Gill]
application/vnd.ms-works	[Gill]
application/vnd.ms-wpl	[Plastina]
application/vnd.musician	[Adams]
application/vnd.music-niff	[Butler]
application/vnd.netfpx	[Mutz]
application/vnd.noblenet-directory	[Solomon]
application/vnd.noblenet-sealer	[Solomon]
application/vnd.noblenet-web	[Solomon]
application/vnd.novadigm.EDM	[Swenson]
application/vnd.novadigm.EDX	[Swenson]
application/vnd.novadigm.EXT	[Swenson]
application/vnd.obn	[Hessling]
application/vnd.osa.netdeploy	[Klos]
application/vnd.palm	[Peacock]
application/vnd.pg.format	[Gandert]
application/vnd.pg.osacli	[Gandert]
application/vnd.powerbuilder6	[Guy]
application/vnd.powerbuilder6-s	[Guy]
application/vnd.powerbuilder7	[Shilts]
application/vnd.powerbuilder75	[Shilts]
application/vnd.powerbuilder75-s	[Shilts]
application/vnd.powerbuilder7-s	[Shilts]
application/vnd.previewsystems.box	[Smolgovsky]
application/vnd.publishare-delta-tree	[Ben-Kiki]
application/vnd.pvi.ptid1	[Lamb]
application/vnd.pwg-multiplexed	[RFC3391]
application/vnd.pwg-xhtml-print+xml	[Wright]
application/vnd.Quark.QuarkXPress	[Scheidler]
application/vnd.rapid	[Szekely]
application/vnd.s3sms	[Tarkkala]
application/vnd.sealed.net	[Lambert]
application/vnd.seemail	[Webb]
application/vnd.shana.informed.formdata	[Selzler]
application/vnd.shana.informed.formtemplate	[Selzler]
application/vnd.shana.informed.interchange	[Selzler]
application/vnd.shana.informed.package	[Selzler]
application/vnd.smaf	[Takahashi]
application/vnd.sss-cod	[Dani]
application/vnd.sss-dtf	[Bruno]
application/vnd.sss-ntf	[Bruno]

application/vnd.street-stream	[Levitt]
application/vnd.svd	[Becker]
application/vnd.swiftview-ics	[Widener]
application/vnd.triscape.mxs	[Simonoff]
application/vnd.trueapp	[Hepler]
application/vnd.truedoc	[Chase]
application/vnd.ufdl	[Manning]
application/vnd.uplanet.alert	[Martin]
application/vnd.uplanet.alert-wbxml	[Martin]
application/vnd.uplanet.bearer-choice	[Martin]
application/vnd.uplanet.bearer-choice-wbxml	[Martin]
application/vnd.uplanet.cacheop	[Martin]
application/vnd.uplanet.cacheop-wbxml	[Martin]
application/vnd.uplanet.channel	[Martin]
application/vnd.uplanet.channel-wbxml	[Martin]
application/vnd.uplanet.list	[Martin]
application/vnd.uplanet.listcmd	[Martin]
application/vnd.uplanet.listcmd-wbxml	[Martin]
application/vnd.uplanet.list-wbxml	[Martin]
application/vnd.uplanet.signal	[Martin]
application/vnd.vcx	[T.Sugimoto]
application/vnd.vectorworks	[Pharr]
application/vnd.vidsoft.vidconference	[Hess]
application/vnd.visio	[Sandal]
application/vnd.visionary	[Aravindakumar]
application/vnd.vividence.scriptfile	[Risher]
application/vnd.vsf	[Rowe]
application/vnd.wap.sic	[WAP-Forum]
application/vnd.wap.slc	[WAP-Forum]
application/vnd.wap.wbxml	[Stark]
application/vnd.wap.wmlc	[Stark]
application/vnd.wap.wmlscriptc	[Stark]
application/vnd.webturbo	[Rehem]
application/vnd.wrq-hp3000-labelled	[Bartram]
application/vnd.wt.stf	[Wohler]
application/vnd.wv.csp+wbxml	[Salmi]
application/vnd.xara	[Matthewman]
application/vnd.xfdl	[Manning]
application/vnd.yellowriver-custom-menu	[Yellow]
application/whoispp-query	[RFC2957]
application/whoispp-response	[RFC2958]
application/wita	[Campbell]
application/wordperfect5.1	[Lindner]
application/x400-bp	[RFC1494]
application/xhtml+xml	[RFC3236]
application/xml	[RFC3023]
application/xml-dtd	[RFC3023]
application/xml-external-parsed-entity	[RFC3023]
application/zip	[Lindner]

audio/32kadpcm	[RFC2421,RFC2422]
audio/AMR	[RFC3267]
audio/AMR-WB	[RFC3267]
audio/basic	[RFC2045,RFC2046]
audio/CN	[RFC3389]
audio/DAT12	[RFC3190]
audio/DVI4	
audio/EVRC	[RFC-ietf-avt-evrc-smv-03.txt]
audio/EVRC0	[RFC-ietf-avt-evrc-smv-03.txt]
audio/G.722.1	[RFC3047]
audio/G722	
audio/G723	
audio/G726-16	
audio/G726-24	
audio/G726-32	
audio/G726-40	
audio/G728	
audio/G729	
audio/G729D	
audio/G729E	
audio/GSM	
audio/GSM-EFR	
audio/L16	[RFC2586]
audio/L20	[RFC3190]
audio/L24	[RFC3190]
audio/L8	
audio/LPC	
audio/MP4A-LATM	[RFC3016]
audio/MPA	
audio/mpa-robust	[RFC3119]
audio/mpeg	[RFC3003]
audio/parityfec	[RFC3009]
audio/PCMA	
audio/PCMU	
audio/prs.sid	[Walleij]
audio/QCELP	
audio/RED	
audio/SMV	[RFC-ietf-avt-evrc-smv-03.txt]
audio/SMV0	[RFC-ietf-avt-evrc-smv-03.txt]
audio/telephone-event	[RFC2833]
audio/tone	[RFC2833]
audio/VDVI	
audio/vnd.3gpp.iufp	[Belling]
audio/vnd.cisco.nse	[Kumar]
audio/vnd.cns.anp1	[McLaughlin]
audio/vnd.cns.inf1	[McLaughlin]
audio/vnd.digital-winds	[Strazds]
audio/vnd.everad.plj	[Cicelsky]
audio/vnd.lucent.voice	[Vaudreuil]
audio/vnd.nortel.vbk	[Parsons]



audio/vnd.nuera.ecelp4800	[Fox]
audio/vnd.nuera.ecelp7470	[Fox]
audio/vnd.nuera.ecelp9600	[Fox]
audio/vnd.octel.sbc	[Vaudreuil]
audio/vnd.qcelp	[Lundblade]
audio/vnd.rhetorex.32kadpcm	[Vaudreuil]
audio/vnd.vmx.cvsd	[Vaudreuil]
image/cgm	Computer Graphics Metafile
image/g3fax	[RFC1494]
image/gif	[RFC2045,RFC2046]
image/ief	[RFC1314] Image Exchange Format
image/jpeg	[RFC2045,RFC2046]
image/naplps	[Ferber]
image/png	[Randers-Pehrson]
image/prs.btif	[Simon]
image/prs.pti	[Laun]
image/t38	[RFC3362]
image/tiff	[RFC3302] Tag Image File Format
image/tiff-fx	[RFC3250] Tag Image File Format Fax eXtended
image/vnd.cns.inf2	[McLaughlin]
image/vnd.djvu	[Bottou]
image/vnd.dwg	[Moline]
image/vnd.dxf	[Moline]
image/vnd.fastbidsheet	[Becker]
image/vnd.fpx	[Spencer]
image/vnd.fst	[Fuldseth]
image/vnd.fujixerox.edmics-mmr	[Onda]
image/vnd.fujixerox.edmics-rlc	[Onda]
image/vnd.globalgraphics.pgb	[Bailey]
image/vnd.mix	[Reddy]
image/vnd.ms-modi	[Vaughan]
image/vnd.net-fpx	[Spencer]
image/vnd.svf	[Moline]
image/vnd.wap.wbmp	[Stark]
image/vnd.xiff	[S.Martin]
message/delivery-status	[RFC1894]
message/disposition-notification	[RFC2298]
message/external-body	[RFC2045,RFC2046]
message/http	[RFC2616]
message/news	[RFC 1036, H.Spencer]
message/partial	[RFC2045,RFC2046]
message/rfc822	[RFC2045,RFC2046]
message/s-http	[RFC2660]
message/sip	[RFC3261]
message/sipfrag	[RFC3420]
model/iges	[Parks]
model/mesh	[RFC2077]
model/vnd.dwf	[Pratt]
model/vnd.flatland.3dml	[Powers]

model/vnd.gdl	[Babits]
model/vnd.gs-gdl	[Babits]
model/vnd.gtw	[Ozaki]
model/vnd.mts	[Rabinovitch]
model/vnd.parasolid.transmit.binary	[Parasolid]
model/vnd.parasolid.transmit.text	[Parasolid]
model/vnd.vtu	[Rabinovitch]
model/vrml	[RFC2077]
multipart/alternative	[RFC2045,RFC2046]
multipart/appledouble	[Faltstrom]
multipart/byteranges	[RFC2068]
multipart/digest	[RFC2045,RFC2046]
multipart/encrypted	[RFC1847]
multipart/form-data	[RFC2388]
multipart/header-set	[Crocker]
multipart/mixed	[RFC2045,RFC2046]
multipart/parallel	[RFC2045,RFC2046]
multipart/related	[RFC2387]
multipart/report	[RFC1892]
multipart/signed	[RFC1847]
multipart/voice-message	[RFC2421,RFC2423]
text/calendar	[RFC2445]
text/css	[RFC2318]
text/directory	[RFC2425]
text/enriched	[RFC1896]
text/html	[RFC2854]
text/parityfec	[RFC3009]
text/plain	[RFC2646,RFC2046]
text/prs.lines.tag	[Lines]
text/rfc822-headers	[RFC1892]
text/richtext	[RFC2045,RFC2046]
text/rtf	[Lindner]
text/sgml	[RFC1874]
text/t140	[RFC2793]
text/tab-separated-values	[Lindner]
text/uri-list	[RFC2483]
text/vnd.abc	[Allen]
text/vnd.curl	[Byrnes]
text/vnd.DMClientScript	[Bradley]
text/vnd.fly	[Gurney]
text/vnd.fmi.flexstor	[Hurtta]
text/vnd.in3d.3dml	[Powers]
text/vnd.in3d.spot	[Powers]
text/vnd.IPTC.NewsML	[IPTC]
text/vnd.IPTC.NITF	[IPTC]
text/vnd.latex-z	[Lubos]
text/vnd.motorola.reflex	[Patton]
text/vnd.ms-mediapackage	[Nelson]
text/vnd.net2phone.commcenter.command	[Xie]
text/vnd.sun.j2me.app-descriptor	[G.Adams]

text/vnd.wap.si	[WAP-Forum]
text/vnd.wap.sl	[WAP-Forum]
text/vnd.wap.wml	[Stark]
text/vnd.wap.wmlscript	[Stark]
text/xml	[RFC3023]
text/xml-external-parsed-entity	[RFC3023]
video/BMPEG	
video/BT656	
video/CelB	
video/DV	[RFC3189]
video/H261	
video/H263	
video/H263-1998	
video/H263-2000	
video/JPEG	
video/MP1S	
video/MP2P	
video/MP2T	
video/MP4V-ES	[RFC3016]
video/mpeg	[RFC2045,RFC2046]
video/MPV	
video/nv	
video/parityfec	[RFC3009]
video/pointer	[RFC2862]
video/quicktime	[Lindner]
video/SMPTE292M	[RFC-avt-smpte292-video-08.txt]
video/vnd.fvt	[Fuldseth]
video/vnd.motorola.video	[McGinty]
video/vnd.motorola.videoop	[McGinty]
video/vnd.mpegurl	[Recktenwald]
video/vnd.nokia.interleaved-multimedia	[Kangaslampi]
video/vnd.objectvideo	[Clark]
video/vnd.vivo	[Wolfe]

### 3.8.4 UnitOfMeasure

Code identifying a product unit of measure.

Instance	Documentation
10P	10-pack.
1BF	100 Board Feet.
1FC	20 Foot Container.
1GR	Gram/Cubic Centimeter.
1GT	10,000 Gallon Tankcar.
1KB	25 Kilogram Bulk Bag.
1KD	10 Kilogram Drum.
1KP	1000-pack.
1M2	1/Square Meter (1/M2).
1PA	20-Pack.
1PB	50 Pound Bag.
1PD	100 Pound Drum.

1PM	1/minute (1/min).
22S	Square Millimeter/Second (mm <sup>2</sup> /s).
2FC	40 Foot Container.
2GR	Gram/square meter.
2GT	20,000 Gallon Tankcar.
2KB	300 Kilogram Bulk Bag.
2KD	15 Kilogram Drum.
2PA	100-Pack.
3GR	Grams Per 100 Centimeters.
3KB	500 Kilogram Bulk Bag.
3KD	55 Gallon Drum.
3MH	Cubic Millimeters/Hour (mm <sup>3</sup> /hour).
4GR	Grams Per 100 Grams.
4KD	115 Kilogram Drum.
50P	50-pack.
5GR	Grams Per Cubic Centimeter.
6GR	Grams Per Square Centimeter.
7GR	Grams Per Square Meter.
ABC	Absorbance per centimeter (Absorbance per cm).
ABU	Absorbance per Unit (absorbance per unit).
ACC	Atoms per Cubic Centimeters (atoms per cu cm).
ACR	Acre.
ACS	Acidic strength/concentration.
ACT	Actual Pounds.
ACU	Activity unit (Activ.unit).
ALU	Aluminum Pounds Only.
AM1	Ampoule.
AMN	Ångstroms/Minute (Ångst/min).
AMP	Ampere.
ANG	Angstrom (Å).
APB	Atomic Parts per Billion (atomic ppb).
APG	API Specific Gravity (API Grav).
APM	Atomic Parts per Million (atomic ppm).
APT	Atomic Parts per Trillion (atomic ppt).
APU	APHA Units (apha).
ASC	Atoms per Square Centimeters (atoms per sq cm).
ASM	Angstrom.
ASY	Assembly (ASY).
ATG	Atmospheric gauge.
ATM	Atmosphere absolute.
ATP	Atomic %.
ATY	Activity.
BAB	Base Box.
BAC	Batch.
BAE	Bale.
BAG	Bag.
BAL	Ball.
BAN	Band.
BAP	Batting Pound.
BAR	Bar.

BAS	Basket.
BAT	Batt.
BAW	Base Weight.
BEA	Beam.
BEC	Becquerel/kilogram.
BEL	Belt.
BHP	Brake HP.
BIL	Billet.
BIN	Bin.
BIT	Bit.
BKC	Bulk Car Load.
BLN	Balance.
BLO	Block.
BOA	Board.
BOF	Board Feet.
BOL	Bolt.
BOT	Bottle.
BOX	Box.
BRB	Bar absolute.
BRD	Barrels Per Day.
BRE	Barrel.
BRI	Barrel (Imperial).
BRM	Barrels Per Minute.
BTF	British Thermal Units (BTUs) Per Cubic Foot.
BTP	British Thermal Units (BTUs) Per Pound.
BTU	British Thermal Unit (BTU).
BUB	Bubbler.
BUC	Bucket.
BUD	Bushel, Dry Imperial.
BUK	Bunks.
BUL	Bulk.
BUN	Bundle.
BUP	Bulk Pack.
BUS	Bushel.
BYT	Bytes.
C0W	Counts per Wafer (Counts/wf).
C3M	Cubic centimeter per minute (cm3/minute).
CAA	Carat.
CAB	Carboy.
CAC	Card.
CAD	Candela.
CAG	Cartridge.
CAK	Cask.
CAL	Calorie.
CAN	Can.
CAO	Carload.
CAR	Car.
CAS	Case.
CAT	Canister.
CAW	Catchweight.

CC2	Centipoises per hour per square centimeters (cps per hr per sq cm).
CCC	Counts per Square Centimeters (Counts/cm <sup>2</sup> ).
CD3	Cubic decimeter (Cubic dec).
CEL	Cell.
CEM	Centimeter.
CEP	Centipoises (CPS).
CET	Centiliter.
CGM	Centigram.
CHA	Chains (Land Survey).
CHE	Chest.
CM2	Square centimeter (cm <sup>2</sup> ).
CMH	Centimeter/hour (cm/h).
CML	Colony/Milliliter (col/ml).
CMS	Centimeter/Second (cm/s).
CNN	Connector.
COG	Coil Group.
COI	Coil.
COL	Coulomb.
COM	Composite Product Pounds (Total Weight).
CON	Cone.
COT	Container.
COV	Cover.
CRA	Crate.
CRT	Carton.
CSE	Cassette.
CST	Centistokes.
CUB	Cubic centimeter.
CUC	Cubic centimeter/second.
CUF	Cubic Foot.
CUI	Cubic inch.
CUM	Cubic meter.
CUP	Cup.
CUY	Cubic yard.
CYC	Cycles.
CYL	Cylinder.
DAL	Dalton units (dalton).
DAY	Day.
DCB	Decibels.
DCG	Decagram.
DCL	Deciliter.
DCM	Defects per Square Centimeters (Defects/cm <sup>2</sup> ).
DE1	Defects.
DE2	Degrees in Angles.
DE3	Degree.
DEA	Deal.
DEC	Decimeter.
DEF	Degree Fahrenheit.
DEG	Degree Celsius.
DEP	Dep. Factor.
DFW	Defects per Wafer (Defects/Wafer).

DGM	Decigram.
DIE	Die.
DIL	Display.
DIP	Dispenser.
DNC	Dynes per centimeter (Dynes per cm).
DOZ	Dozen.
DPM	Parts per Million per Day (ppm per day).
DRA	Dram.
DRU	Drum.
DRY	Dry Pounds.
EAC	Each.
ELE	Electrical Capacitance.
EML	Enzyme Units/Milliliter (Enzyme/ml).
ENU	Enzyme Units (Enzy.Units).
EQ2	Milliequivalent per 30 Kg (mequ/30Kg).
EQG	Milliequivalent per gram (milliequivalent per g).
EQK	Milliequivalent per Kilogram (mequ/Kg).
EQM	Milliequivalent per Millimeter (milliequivalent per mm).
FAR	Farads.
FFA	Femtofarad.
FIN	1/32 inch.
FLO	Fluid Ounce.
FOI	Fluid Ounce (Imperial).
FOO	Foot.
FOU	Fluid Ounce US.
FPS	Feet per second (Feet/s).
FRH	Sales FT3 at 60°F per hour (FTR/hour).
FRM	Sales FT3 at 60°F per minute (FTR/min).
FTR	Sales FT3 at 60°F, 14.7 psia (SFT3_60F_S).
FTS	Sales FT3 at 70°F, 14.7 psia (SFT3_70F_S).
FTT	1000 FT3 at 60°F, 14.7 psia (KFT3_60F_S).
FTU	1000 FT3 at 70°F, 14.7 psia (KFT3_70F_S).
FUU	Fuel Usage (Gallons).
G2S	Gram square per second (g <sup>2</sup> /s).
GAI	Gram act. ingr. (g act.ing).
GAL	Gallon.
GAS	Gage Systems.
GAU	Gram Gold.
GCL	Gardner Color.
GEG	Keim/Gramm (keim/g).
GEQ	Gram per Equivalent (g/Eq).
GGM	Gram per gram mole (g/gmole).
GHG	Gram per Hectogram (g/hg).
GIH	Gigahertz.
GIJ	Gigajoules.
GIL	Gill (Imperial).
GM4	Gram per 100 Milliliters (g/100ml).
GME	Gram per Mole Equivalent (g/mole Eq).
GMO	Gram per Mol (g/mol).
GNL	Gram act.Ingrd per Liter (gai/liter).

GOB	Gross Barrels.
GOG	Gross Gallons.
GOH	Gigaohm (GOhm).
GOK	Gross Kilogram.
GOT	Gross Ton.
GOY	Gross Yard.
GPN	US Gallon per minute (gpm US).
GRA	Gram.
GRG	Great Gross (Dozen Gross).
GRK	Grams Per Kilogram.
GRL	Grams Per Liter.
GRM	Grams Per Milliliter.
GRN	Grain.
GRO	Gross.
GRP	Group.
HAG	Half Gallon.
HAH	Half Hour.
HAL	Half Liter.
HAN	Hank.
HEA	Heat lots.
HEC	Hectare.
HEL	Hectoliter.
HEP	Hectopascal.
HER	Hertz.
HGM	Hegman.
HNY	Henry.
HOS	Hours.
HOU	Hour.
HUA	Hundredth of a Carat.
HUB	Hundred Boxes.
HUC	Hundred Count.
HUS	Hundred Sheets.
HZM	Hertz per Minute (Hertz per min).
IH2	Inches of Water Gauge (inH2O-g).
IHG	Inches of Mercury Gauge (inHg-g).
ILB	Inch pounds (in.lb).
IMG	Imperial Gallons.
INC	Inch.
IPS	Inch per second (inch / sec).
JAR	Jar.
JKG	Joule/Kilogram (J/kg).
JMO	Joule/Mol (J/mol).
JOI	Joint.
JOU	Joule.
KAI	Kilogram act. Ingrd. (kg ac.ing.).
KAK	kg act.ingrd. / kg (kai/kg).
KBY	Kilobyte.
KCM	Kilogram per cm2 gauge (kg/cm2-g).
KD3	Kilogram per Cubic Decimeter (kg/dm3).
KEG	Keg.



KEL	Kelvin.
KGE	Container Fill Weight in Kg/Ea.
KGH	Kilogram per Hour (kg/h).
KGL	Kilograms per Liter (kg/L).
KGM	Kilogram/Mol (kg/mol).
KGS	Kilogram per Second (kg/s).
KHO	Kilometer/hour.
KIC	Kilogram per cubic meter.
KIE	Kilometer.
KIG	Kilogram.
KIH	Kilohertz.
KIK	Kilobecquerel/Kilogram.
KIL	Kiloampere.
KIM	Kilogram/square meter.
KIO	Kiloohm.
KIS	Kilogramm pro Sekunde.
KIT	Kit.
KIV	Kilovolt.
KIW	Kilowatt.
KJK	Kilojoule per kilogram (KJ/kg).
KJL	Kilojoule.
KJM	Kilojoule/Mol (KJ/mol).
KKG	Kilogram/Kilogram.
KMK	Cubic meter/Cubic meter (m3/m3).
KMN	Kelvin per Minute (K/min).
KMS	Kelvin per Second (K/s).
KNM	Kilonewton per square meter (kN/m2).
KNT	Kilonewton (ND).
KPA	Kilopascal (kPa).
KRU	Kreb Unit.
KTN	Kilotonne (kt).
KUD	Kubikdezimeter.
KUM	Kubikmeter pro Sekunde.
KVA	Kilovoltampere (kVA).
KWH	Kilowatt-hour.
KWR	Kilovolt ampere reactive hours (KVAH reac.).
LBH	US Pound per Hour (lb/hour).
LBM	US Pound per minute (lb/min).
LG2	Liter per Gram per Centimeter (l/g/cm).
LGC	Liters per Gram-Centimeters (l/g-cm).
LHK	Liter per 100 km (l/100 km).
LIF	Lifts.
LIM	Link.
LIQ	Liquid Pounds.
LIT	Liter.
LMI	Liter per Minute (l/min).
LMS	Liter per Molsecond (l/mol.s).
LOA	Load.
LOT	Lot.
LPD	Light Point Defects per Wafer (LPD/Wafer).

LPH	Liter per hour (l/hr).
LUG	Lug.
M15	Micron per 15 Square Millimeters (mu per 15 sq mm).
M20	Micron per 20 Square Millimeters (mu per 20 sq mm).
M25	Micron per 25 Square Millimeters (mu per 25 sq mm).
M26	Micron per 26 by 8 Millimeters (mu per 26 by 8 mm).
M2G	Meters square per gram (m sq per gram).
M3A	Sales m3 at 15 °C, 1 atmos (Sm3_15C_S).
M3B	Sales m3 at 21 °C, 1 atmos (Sm3_21C_S).
M3C	Sales m3 at 10 °C, 1 atmos (Sm3_10C_S).
M3D	Sales m3 at 43 °C, 1 bar (Sm3_43C_D).
M3E	Sales m3 at 9 °C, 1 bar (Sm3_9C_D).
M3F	Sales m3 at 15 °C, 1 bar (Sm3_15C_D).
M3G	Sales m3 at 27 °C, 1 atmos (Sm3_27C_S).
M3H	Cubic Meter per Hour (m3/h).
M3J	Sales m3 at 35 °C, 1 atmos (Sm3_35C_S).
M3K	Cubic Meter/Kilogram (m3/Kg).
M3M	Milliliter per Cubic Meter (ml/m3).
M3N	Mol per Cubic Meter (Mol/m3).
MAM	Milliamps/mm.
MAT	Mat.
MBY	Megabyte.
MBZ	Meterbar per Second (m.bar/s).
MC2	Millisecond per Centimeter (mS/cm).
MCA	Microampere (µA).
MCG	Microgram.
MCH	Micromhos (µmhos).
MCK	Microcuries per Kilogram (µci/kg).
MCL	Microcuries per Gaseous Liter (µc/l).
MCM	Milligrams Per Cubic Meter.
MCN	Metal Can.
MCP	Manifolded Cylinder Pack.
MCR	Micron.
MEG	Megagram.
MEH	Megahertz.
MEJ	Megajoule (MJ).
MEP	Megapascal.
MET	Meter.
MEW	Megawatt.
MFD	Microfarad (µF).
MGA	Milligram per Amp (mg per amp).
MGF	Milligram per Square Centimeter (mg/cm2).
MGG	Milligram per Gram (mg/g).
MGL	Microgram per Liter (µg/l).
MGM	Milligram.
MGO	Megohm (MOhm).
MGR	Micrograms per Gram (µg/g).
MGS	Milligram per Second (mg per sec).
MH1	Millimeter per Hour (mm/h).
MHC	Micromhos per Centimeter (µmhos/cm).

MHR	Meter per Hour (m/h).
MHV	Megavolt.
MIB	Million BTU's.
MIC	Mikrogram/cubic meter.
MIG	Micrograms Per Cubic Meter.
MIL	Mile.
MIM	Micrometer.
MIN	Minute.
MIP	Millipascal seconds.
MIS	Microsecond.
MIT	Miter.
MIV	Millivolt.
MIW	Milliwatt.
MJM	Wobbe Number (MJ/m3).
MJO	Millijoule.
MKG	Milligrams of KOH per Gram (mg KOH per g).
MKL	Millimol per Gram (mmol/g).
ML1	Milliliter per Liter (ml/l).
ML2	Milliliter per Liter (ml/l).
ML3	Mol per Liter (Mol/Liter).
ML4	Millimol per Liter (Millimol/l).
MLA	Milliampere.
MLB	Millibar.
MLC	Milligram/cubic meter.
MLG	Milliliter per Gallon (ml per gal).
MLI	Milliliter.
MLK	Milligram/kilogram.
MLL	Milligram/Liter.
MLM	Mole per Mole (mole/mole).
MLP	Mole Percent (% mole).
MLR	Microliter (μl).
MLS	Miles.
MLW	Milliliter act. Ingr. (ml act.in.).
MM3	Cubic Millimeter (mm3).
MMA	Millimeter per Year (mm/a).
MME	Millimeter.
MMG	Millimol/gram (mmol/g).
MMH	Millimeter H2O.
MMK	Millimol/kilogram.
MMM	0.000001 meter (1 millionth of a meter). (Micrometer/Micron).
MMN	Meter per Minute (m/min).
MMO	Millimol.
MMS	Millimeter per Second (mm/s).
MNM	Millinewton per meter (mN/m).
MNT	Meganewton (MN).
MOK	Mol/kilogram.
MOL	Mol.
MON	Month.
MPB	Mass parts per billion (ppb(m)).
MPG	Miles per Gallon (US) (Mi/Gal(US)).

MPH	Megagrams Per Hour.
MPM	Mass Parts per Million (ppm(m)).
MPT	Mass Parts per Trillion (ppt(m)).
MPZ	Meterpascal per Second (m.Pa/s).
MQG	Mircoequivalent per Gram (microeq/g).
MRF	Millifarad (mF).
MS1	MilliSiemen per Centimeter (mS/cm).
MS2	Meter per Second Squared (m/s <sup>2</sup> ).
MS3	Microsiemens per Centimeter (μS/cm).
MSC	Millisecond.
MSM	Milligrams Per Square Meter.
MTA	Millitesla.
MTQ	Meter pro Quadratsekunde.
MTR	Meter (m).
MTS	Meters per second.
MUL	Multichip - When 2 or more dies (chips) are merged into one package.
MVA	Megavoltampere (MVA).
MVS	Millivolts.
MVT	Millivolt.
MWH	Megawatt Hours (mwh).
MWR	Megavolt Ampere Reactive Hours (MVAH reac.).
MWT	Molecular Weight (mW).
MYS	Micro Siemens (mic. Siem.).
N2M	Newton/Square millimeter (N/mm <sup>2</sup> ).
NAA	Nanoamps.
NAM	Nanometer.
NAS	Nanosecond.
NEB	Net Barrels.
NEG	Net Gallons.
NEI	Net Imperial Gallons.
NEL	Net Liters.
NEW	Newton.
NM2	Newton per Square Meter (N/m <sup>2</sup> ).
NM3	Normal m3 at 0°C, 1 atmos (Normal m3).
NMH	Newton per Hour (N/h).
NMM	Newton per Millimeter (N/mm).
NMR	Normal m3 per Hour (Nm3/h).
NOL	Normality.
NPK	Nowpac Container (Nowpac).
NRG	Bar Gauge.
NRU	Nanofarad (nF).
NTU	Nephelometric Turbidity Units (NTU).
NTY	Equivalents per Liter (equ/l).
NUM	Numbers.
NWM	Newton per Meter (N/m).
NXM	Newton per 25 mm (N/25mm).
O2P	Percent Oxygen (% Oxygen).
OCT	Ohm/ct.
OHC	Ohm-Centimeter (ohm cm).
OHM	Ohm.

OMM	Ohm/mm.
ONE	One.
OPH	Operating hour (Oper. Hour).
OSQ	Ohm/sq.
OTP	One Thousand Pieces.
OUN	Ounce.
OVI	Ohm/via.
OZG	Ounce per Gallon (oz per gal).
PAC	Parcel.
PAD	Pad.
PAG	Package.
PAI	Pail.
PAK	Pack (PAK).
PAL	Pallet.
PAN	Panel.
PAR	Pair.
PAS	Pascal.
PAT	Packet.
PBA	PPBA Silicon (ppba Si).
PBW	Parts Per Billion by Weight (ppbw).
PC2	Parts per Square Centimeters (part per sq cm).
PCA	Percent Active (% Active).
PCL	Picocuries per Liter (pCi/l).
PEC	Percent.
PEG	Percentage.
PEH	Percent Per 1000 Hours.
PEN	Pennyweight.
PER	Per Hundred Pieces.
PEW	Percent Weight.
PF3	Per Cubic Foot (per cu ft).
PF4	Particles per Cubic Feet (particles per cu ft).
PFA	Percent Failed Area (Failed Area %).
PFR	Picofarad.
PH	PH Factor (pH).
PI2	Parts per Square Inch (part per sq in).
PID	Pint U.S. Dry.
PIE	Piece.
PIL	Pint - US liquid.
PL1	Parts per Liter (parts per l).
PL2	Parts per Milliliter (parts per ml).
PL3	Part per Millilitre (Part/ml).
PLA	Plate.
PLI	Pounds per Linear Inch (lb/Lin. In).
PLL	Pallet (Lift).
PLR	Per Liter.
PLT	Palette.
PLU	Pallet/Unit Load.
PMA	Percent Mass (%(m)).
PMI	Per Mille (‰).
PML	Particles per Milliliter (particles/mL).

PMO	Per Mille mass (%0(mass)).
PMP	Parts Per Million Platinum (ppm Pt).
PMV	Parts Per Million (weight/Vol) (ppm (w/v)).
PMW	Parts Per Million by Weight (ppmw).
PNJ	Particles per Injection (particles per inj).
PNT	Points.
POF	Pounds Per Foot.
POG	Pounds Per Gallon.
PON	Pound.
POP	Pounds Per Piece of Product.
POR	Pores.
POS	Pounds Per 1000 Square Feet.
POT	Pounds Per Thousand.
PP3	Parts per Million mole (ppm mole).
PP4	Parts per Billion Mole (ppb mole).
PPB	Parts per billion (US).
PPF	Parts per Ft3 (Parts/Ft3).
PPH	Parts Per Hundred (pph).
PPM	Parts per million.
PPP	Pounds Per Pound of Product.
PPT	Parts per Trillion (ppt).
PRS	Number of Persons.
PSA	Pounds per Square Inch Absolute.
PSC	Picosecond.
PSG	Pound per Square Inch Gauge (psi gauge).
PSI	PSI Unit (PSI).
PSS	Pascal second.
PSV	Poise.
PTL	Particles per Liter (Part/Liter).
PWF	Particles per Wafer (particles/wf).
QML	Kilomol (kmol).
QUA	Quart - US liquid.
RAC	Rack.
REA	Ream of 500 Sheets.
REE	Reel.
RIN	Ring.
RLU	Relative Light Unit (RLU).
ROD	Rod.
ROL	Roll.
RPM	Revolutions per Minute (Revs/min).
SAC	Sack.
SBB	Super Bulk Bag.
SCL	Scales.
SEC	Second.
SET	Set.
SHE	Sheet.
SHI	Shipment.
SHM	Sheet - Metric measure.
SHO	Shot.
SID	Disk (Disc).

SIE	Siemens per Meter (Siemens/m).
SKE	Skein.
SKI	Skid.
SLE	Sleeve.
SLI	Slip Sheet.
SMI	Square mile.
SMM	Square millimeter.
SPO	Spool.
SQF	Square foot.
SQI	Square inch.
SQK	Square kilometer.
SQM	Square meter.
SQS	Square meter/second.
SQU	Square.
SQY	Square Yard.
STI	Stick.
STM	Statute Mile.
STP	Steps.
STR	Strip.
STU	Stabilizer Units (SU).
SVU	Say Bolt Viscosity Units (SVU).
TAB	Tablet.
TAN	Tank.
TAR	Target pieces (target).
TAT	Tank Truck.
TES	Tesla.
THO	Thousand.
TM3	1/Cubic Meter (1/m3).
TNN	Tonne.
TOM	Ton per Cubic Meter (t/m3).
TON	Ton.
TOR	Torr.
TOT	Tote.
TPT	Pass Test (Pass).
TRA	Train.
TRF	Track Foot.
TRL	Trailer.
TRO	Troy.
TRU	Truckload.
TRY	Tray.
TRZ	Troy OZ.
TUB	Tube.
ULU	Unitless Unit of Measure.
UNT	Unit.
USG	US gallon.
USP	US pound.
UST	US ton.
VAL	VO mat. (Value).
VAP	Voltampere (VA).
VHN	Vickers Micro-Hardness (VHN10).

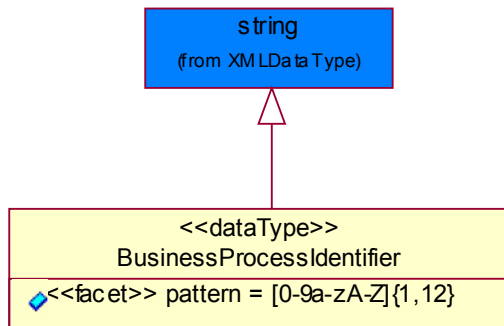
VIA	Vial.
VMP	Molar %.
VOL	Volt.
VPB	Volume Parts per Billion (ppb(V)).
VPC	Percent Volume (%(V)).
VPM	Volume Parts per Million (ppm(V)).
VPR	Per Mille Volume (%O(V)).
VPT	Volume parts per Trillion (ppt(V)).
VTa	Volts (Alternating Current).
VTd	Volts (Direct Current).
VTM	Volts Per Meter.
WAF	Wafer.
WAR	Watt.
WEE	Week.
WPT	Parts Per Trillion by Weight (pptw).
WRA	Wrap.
YAR	Yard.
YEA	Year.



## 4. System Structure

### 4.1 BusinessProcessIdentifier

A Business Process Identifier to uniquely define the TPIR-PIP 'role' within a Business Scenario at a company or MNC level. The identifier **MUST** be composed of alphanumeric characters only and its length **MUST** be between one and twelve characters.

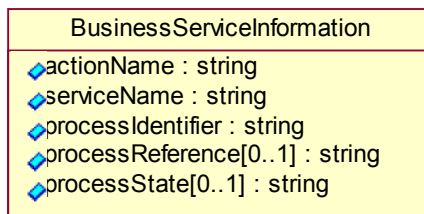


**Figure 4-1 BusinessProcessIdentifier**

Attribute	Type	Documentation
pattern		[0-9a-zA-Z]{1,12}

### 4.2 BusinessServiceInformation

The object allows the specification of the business service utilized within the partner company. This may or may not be the same as the information sent by the RNIF.



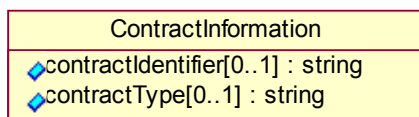
**Figure 4-2 BusinessServiceInformation**

Attribute	Type	Documentation
actionName	string	The name of Action. For RosettaNet usually any of Request/Confirm/Notify/Query/Response.
serviceName	string	The name of the Business Activity with the "Request/Confirm" part removed. E.g., for the Activity "Request Purchase Order"==> "Purchase Order".
processIdentifier	string	The name of the PIP e.g. Notify of Forecast Reply.
processReference[0..1]	string	The URN for the PIP that includes

		Cluster/Segment/Process pattern used to identify the interface process (such as PIP3A4)
processState[0..1]	string	The business process (or service) state of the sender of a document. When a service receives this document, the receiver may use the state as a precondition.

### 4.3 ContractInformation

A block of information used to correlate a contract in an executing choreography.

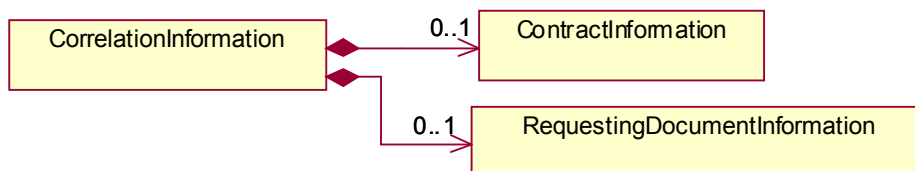


**Figure 4-3 ContractInformation**

Attribute	Type	Documentation
contractIdentifier[0..1]	string	Unique identification of a contract between the Sender and the Receiver
contractType[0..1]	string	The type of the contract: an attribute describing the type of the ContractIdentification. Valid values are URI, URN, ebXMLCPA, or other values defined by partners.

### 4.4 CorrelationInformation

A block of information used to correlate a requesting document to a responding document and to the contract in an executing choreography.

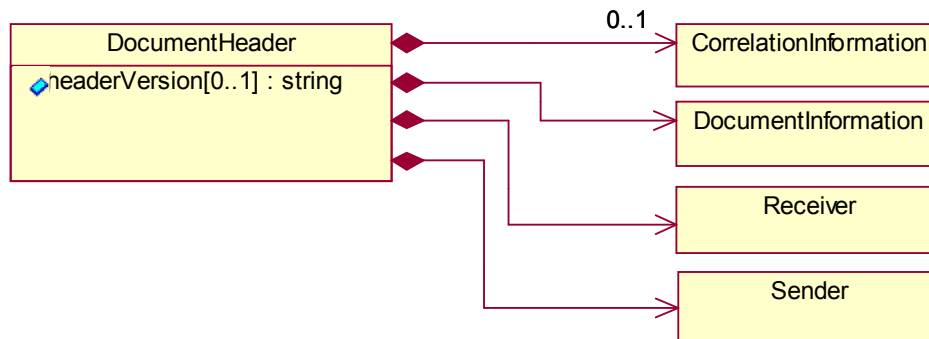


**Figure 4-4 CorrelationInformation**

Composition	Cardinality	Type	Documentation
ContractInformation	0..1	ContractInformation	A block of information used to correlate a contract in an executing choreography.
RequestingDocumentInformation	0..1	RequestingDocumentInformation	A block of information used to correlate a requesting document to a responding document in an executing choreography.

## 4.5 DocumentHeader

The object allows for the identification of the sender and receiver of the business document.



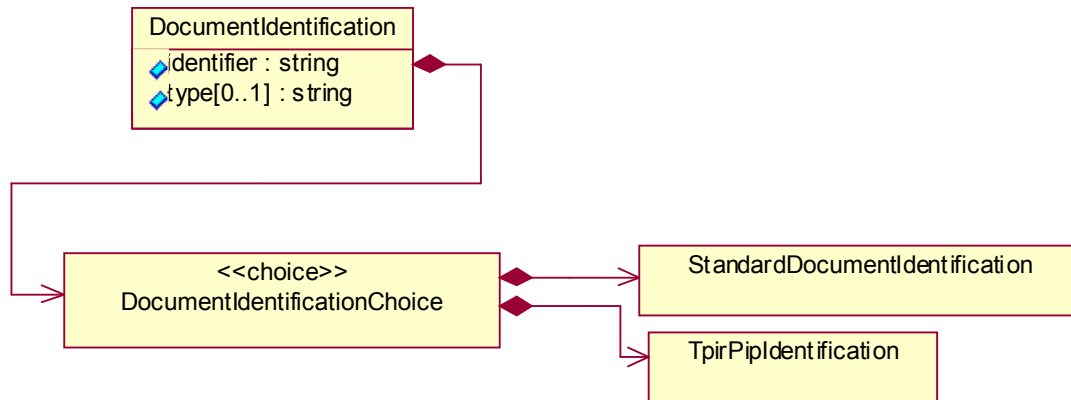
**Figure 4-5 DocumentHeader**

Attribute	Type	Documentation
headerVersion[0..1]	string	The UN/CEFACT version of the document header.

Composition	Cardinality	Type	Documentation
Sender	1	Sender	The object allows the identification of the initiating party of the business message.
CorrelationInformation	0..1	CorrelationInformation	A block of information used to correlate a requesting document to a responding document and to the contract in an executing choreography.
DocumentInformation	1	DocumentInformation	The object specifies information to identify the business document, a summary of attachments, and information about the business document security.
Receiver	1	Receiver	The object allows the identification of the receiving party of the business message.

## 4.6 DocumentIdentification

The object specifies all information necessary to identify the business document.

**Figure 4-6 DocumentIdentification**

Attribute	Type	Documentation
identifier	string	The unique identifier for the document being sent.
type[0..1]	string	Name of the Action Message

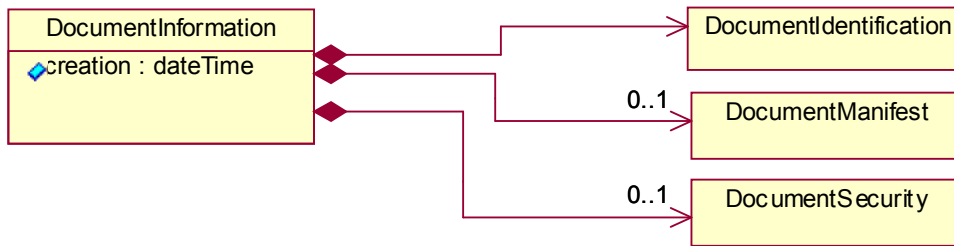
Composition	Cardinality	Type	Documentation
DocumentIdentificationChoice	1	DocumentIdentificationChoice	

## 4.7 DocumentIdentificationChoice

Composition	Cardinality	Type	Documentation
StandardDocumentIdentification	1	StandardDocumentIdentification	The object specifies additional information necessary to identify the standard business document.
TpirPipIdentification	1	TpirPipIdentification	The object specifies all information necessary to uniquely identify a TPIR-PIP within a Registry or trading partner repository.

## 4.8 DocumentInformation

The object specifies information to identify the business document, a summary of attachments, and information about the business document security.

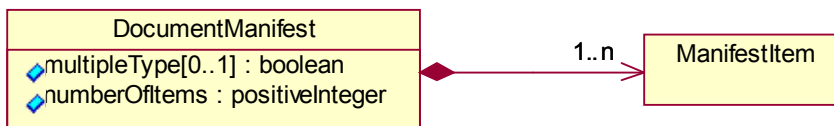
**Figure 4-7 DocumentInformation**

Attribute	Type	Documentation
creation	dateTime	The creation date and time of the specified Business Document (i.e. the Purchase Order date).

Composition	Cardinality	Type	Documentation
DocumentIdentification	1	DocumentIdentification	The object specifies all information necessary to identify the business document.
DocumentSecurity	0..1	DocumentSecurity	The object provides additional granularity in specifying business document security (this is in addition to the specified PIP security).
DocumentManifest	0..1	DocumentManifest	The block provides a brief summary of attachments and Service Content.

## 4.9 DocumentManifest

The block provides a brief summary of attachments and Service Content.

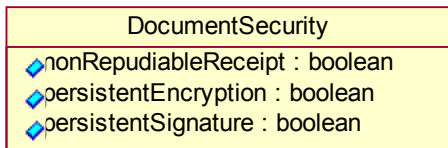
**Figure 4-8 DocumentManifest**

Attribute	Type	Documentation
multipleType[0..1]	boolean	Indicates whether the manifest contains documents of multiple types. True if yes, and False if no.
numberOfItems	positiveInteger	Total number of documents in the message. The physical count of the attachments in the payload plus the RosettaNet Business Message (for Service Content). The value of this field will be at least 1.

Composition	Cardinality	Type	Documentation
ManifestItem	1..n	ManifestItem	The object provides details about the specific attachment(s).

## 4.10 DocumentSecurity

The object provides additional granularity in specifying business document security (this is in addition to the specified PIP security).

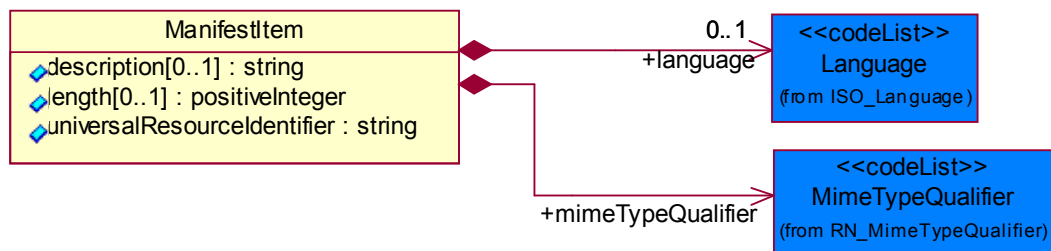


**Figure 4-9 DocumentSecurity**

Attribute	Type	Documentation
nonRepudiableReceipt	boolean	The value "true" will indicate that a signed acknowledgement for the business document is necessary.
persistentEncryption	boolean	The value "true" will indicate that the Business Document (including the header) needs to be encrypted when stored or transported.
persistentSignature	boolean	The value "true" will indicate that a signature is required to be stored with the document while stored or transported.

## 4.11 ManifestItem

The object provides details about the specific attachment(s).



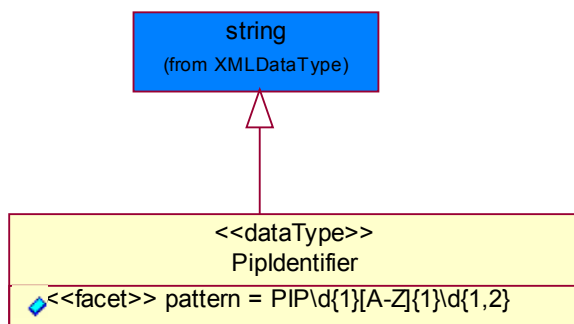
**Figure 4-10 ManifestItem**

Attribute	Type	Documentation
description[0..1]	string	A description of the attachment.
length[0..1]	positiveInteger	The size of the attachment in bytes (i.e. 1 000 000 bytes)
universalResourceIdentifier	string	The generic set of all names/addresses that are short strings that refer to resources.

Composition	Cardinality	Type	Documentation
contentTypeQualifier	1	MimeTypeQualifier	The MIME type as defined by IANA. Please refer to <a href="http://www.iana.org/assignments/media-types/">http://www.iana.org/assignments/media-types/</a> for a list of types.
language	0..1	Language	For representation of Language name RosettaNet has adopted ISO 639-2; 1998. Refer to the following web page to get the latest version of the standard: <a href="http://www.loc.gov/standards/iso639-2/iso639jac.html">http://www.loc.gov/standards/iso639-2/iso639jac.html</a> If you need more information about the ISO standard please contact ISO for more details.

## 4.12 PipIdentifier

Pip Identification.[ i.e. PIP3A4]

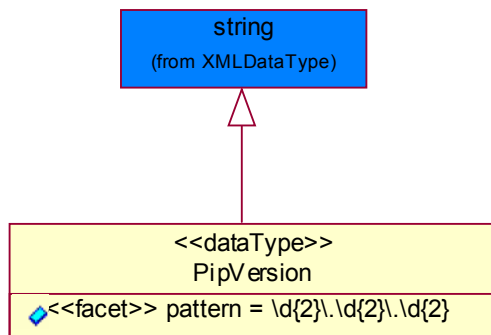


**Figure 4-11 PipIdentifier**

Attribute	Type	Documentation
pattern		PIP\d{1}[A-Z]{1}\d{1,2}

## 4.13 PipVersion

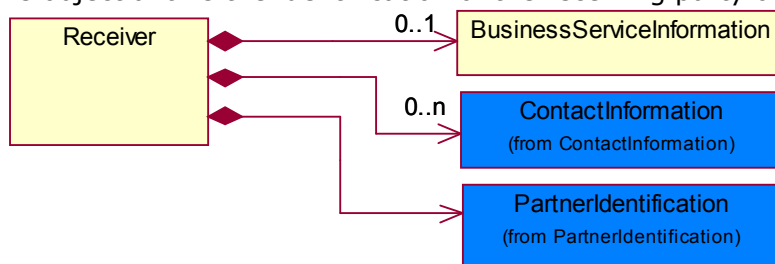
Pip version number (i.e. 02.02.00).

**Figure 4-12 PipVersion**

Attribute	Type	Documentation
pattern		\d{2}\.\d{2}\.\d{2}

## 4.14 Receiver

The object allows the identification of the receiving party of the business message.

**Figure 4-13 Receiver**

Composition	Cardinality	Type	Documentation
BusinessServiceIn formation	0..1	BusinessServiceIn formation	The object allows the specification of the business service utilized within the partner company. This may or may not be the same as the information sent by the RNIF.
PartnerIdentificati on	1	PartnerIdentificati on	The business document must allow for the identity of one or more parties to the transaction.
ContactInformatio n	0..n	ContactInformatio n	The business document must allow for the identification of the name of the department, service or individual to be contacted regarding the context of the business document.



## 4.15 RequestingDocumentInformation

A block of information used to correlate a requesting document to a responding document in an executing choreography.

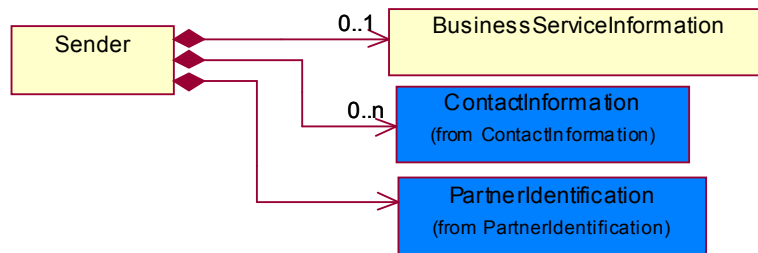
RequestingDocumentInformation
<ul style="list-style-type: none"> <li>◆businessProcessInstanceIdentifier[0..1] : string</li> <li>◆responseDateTime[0..1] : dateTime</li> <li>◆requestingDocumentCreationDateTime[0..1] : dateTime</li> <li>◆requestingDocumentInstanceIdentifier : string</li> </ul>

**Figure 4-14 RequestingDocumentInformation**

Attribute	Type	Documentation
businessProcessInstanceIdentifier[0..1]	string	The identifier for the public business process instance being sent that both the sender and receiver can identify.
responseDateTime[0..1]	dateTime	The expected time to receive the response. This can not be greater than the PIP TimeToPerform.
requestingDocumentCreationDateTime[0..1]	dateTime	The date-time of the requesting business document.
requestingDocumentInstanceIdentifier	string	The Business Document identification number that identifies the requesting Business Document.

## 4.16 Sender

The object allows the identification of the initiating party of the business message.



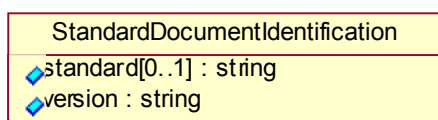
**Figure 4-15 Sender**

Composition	Cardinality	Type	Documentation
PartnerIdentification	1	PartnerIdentification	The business document must allow for the identity of one or more parties to the transaction.
BusinessServiceInformation	0..1	BusinessServiceInformation	The object allows the specification of the business service utilized within the partner company. This may or may not be the same as the information sent by the

			RNIF.
ContactInformation	0..n	ContactInformation	The business document must allow for the identification of the name of the department, service or individual to be contacted regarding the context of the business document.

## 4.17 StandardDocumentIdentification

The object specifies additional information necessary to identify the standard business document.

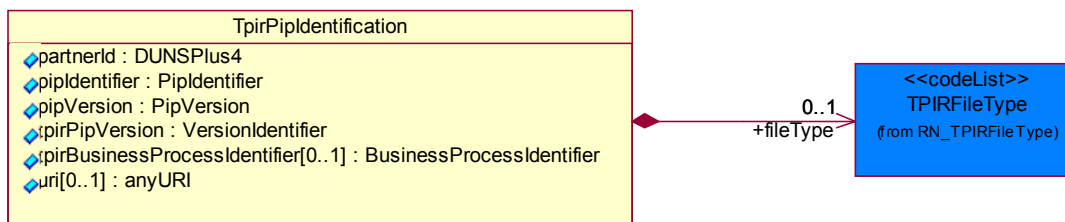


**Figure 4-16 StandardDocumentIdentification**

Attribute	Type	Documentation
standard[0..1]	string	Identifies the standard used to submit the business document. (e.g. RosettaNet).
version	string	PIP3A4v01.00

## 4.18 TpirPipIdentification

The object specifies all information necessary to uniquely identify a TPIR-PIP within a Registry or trading partner repository.



**Figure 4-17 TpirPipIdentification**

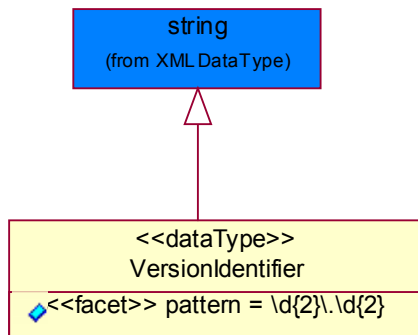
Attribute	Type	Documentation
partnerId	DUNSPlus4	The Trading Partner Identification of MNC that is creating this TPIR PIP.
pipIdentifier	PipIdentifier	A TPIR PIP Identification [i.e., 3A4 ).
pipVersion	PipVersion	A TPIR PIP version number (i.e., 02.02.00)
tpirPipVersion	VersionIdentifier	A TPIR-PIP Version Number (i.e., major and minor version number as XX.XX).
tpirBusinessProcessIdentifier[0..1]	BusinessProcessIdentifier	A Business Process Identifier to uniquely define the TPIR-PIP 'role' within a Business Scenario at a company or MNC level. The identifier MUST be composed of

		alphanumeric characters only and its length MUST be between one and twelve characters.
uri[0..1]	anyURI	Describes the destination uri for the TPIR form.

Composition	Cardinality	Type	Documentation
fileType	0..1	TPIRFileType	Describes the file type of the TPIR form (PDF, XDP or XML).

## 4.19 VersionIdentifier

Version Number (i.e., major and minor version number as XX.XX).



**Figure 4-18 VersionIdentifier**

Attribute	Type	Documentation
pattern		\d{2}\.\d{2}

## 4.20 CodeList

### 4.20.1 TPIRFileType

A code identifying the file type of TPIR form.

Name	Documentation
PDF	Portable Document Format.
XDP	XML Data Package.
XML	eXtensible Markup Language.

## 5. XML Data Type

### 5.1 anyURI

Represents a URI as defined by RFC 2396. An anyURI value can be absolute or relative, and may have an optional fragment identifier.

### 5.2 boolean

Represents Boolean values, which are either "true" or "false".

### 5.3 date

For the represents a calendar date.

The pattern for a date is CCYY-MM-DD where CC represents the century, YY the year, MM the month, and DD the day, with an optional time zone indicator as allowed for dateTime.

### 5.4 dateTime

Represents a specific instance of time.

The pattern for dateTime is CCYY-MM-DDThh:mm:ss where CC represents the century, YY the year, MM the month, and DD the day, preceded by an optional leading negative (-) character to indicate a negative number. If the negative character is omitted, positive (+) is assumed. The T is the date/time separator and hh, mm, and ss represent hour, minute, and second respectively. Additional digits can be used to increase the precision of fractional seconds if desired. For example, the format ss.ss... with any number of digits after the decimal point is supported. The fractional seconds part is optional.

This representation may be immediately followed by a "Z" to indicate Coordinated Universal Time (UTC) or to indicate the time zone. For example, the difference between the local time and Coordinated Universal Time, immediately followed by a sign, + or -, followed by the difference from UTC represented as hh:mm (minutes is required). If the time zone is included, both hours and minutes must be present.

### 5.5 float

Represents single-precision 32-bit floating-point numbers.

### 5.6 integer

Represents a sequence of decimal digits with an optional leading sign (+ or -). This data type is derived from decimal.

### 5.7 positiveInteger

Represents an integer that is greater than zero. This data type is derived from nonNegativeInteger.

### 5.8 string

Represents character string.