papiNet

Global Transaction Standards for the Paper Supply Chain

Availability

Papinet Standard - Version 2.10

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Message Documentation

The Availability Message

An Overview of the Availability Message

The purpose of the Availability message is to provide a means to ask a supplier about the availability of the specified product. The amount of the product immediately available (on-hand) is anticipated to be returned. Optionally, the supplier may also provide the anticipated availability of the product in future manufacturing cycles. The Availability message returns to the requestor the answer to the question, "Does the product exist?"

Prior to implementing an Availability message it is assumed that the parties involved have already opened a trading partner relationship and a collaborative agreement has been reached. Such an agreement might include frequency of messages, content details, etc.

A trading partner sends an Availability message to another trading partner on an event basis agreed between them. The event that triggers an Availability message might be the receipt of an InfoRequest message, a time interval, or perhaps a manufacturing stage. An RFQ or a PurchaseOrder may optionally follow in the business process.

Availability Message Contrasted with Other Messages

The Availability message differs from the RFQ/RFQResponse message pair in that:

- The RFQ pair may actually reserve the product for a period of time.
- The RFQ communicates pricing information, shipping conditions, terms of payment, and other financial information.
- A PurchaseOrder frequently follows an RFQ with the PurchaseOrder referencing the RFQResponse number
- An RFQ also has a 'life'. That is, it may continue to exist for a specified length of time before the receiver of the RFQ either receives a Purchase Order that references the RFQ or until the expiry period comes to an end.

The Availability message differs from the Planning message in that:

- the Availability message will not specify purchase order related information
- the Availability message does not specify shipping details related to the product for the requesting party or buyer party
- the available product information itself may or may not be as firm as the same information in the Planning message would be.

The Scope of the Availability Message

The Availability message includes:

- A specific date upon which the Availability is generated
- Sender, Receiver, and Requesting Parties
- Product
- TimePeriod
- Quantity

The Availability message may include:

- Buyer, Ship To, and End User parties.
- InformationalQuantity(s)
- LocationParty and MachineID

Availability Message Types

There are no message types for the Availability message. To get new and/or corrected information a new message must be sent.

Business Rules for the Availability Message

General Business Rules

The following table list the business rules that apply to Availability message

Reference	Rule
AV001	At least one AvailabilityDetail must be present in the message. If neither on-hand nor planned inventory is available for the Product , then a Quantity of zero must be returned.

Processing the Availability message

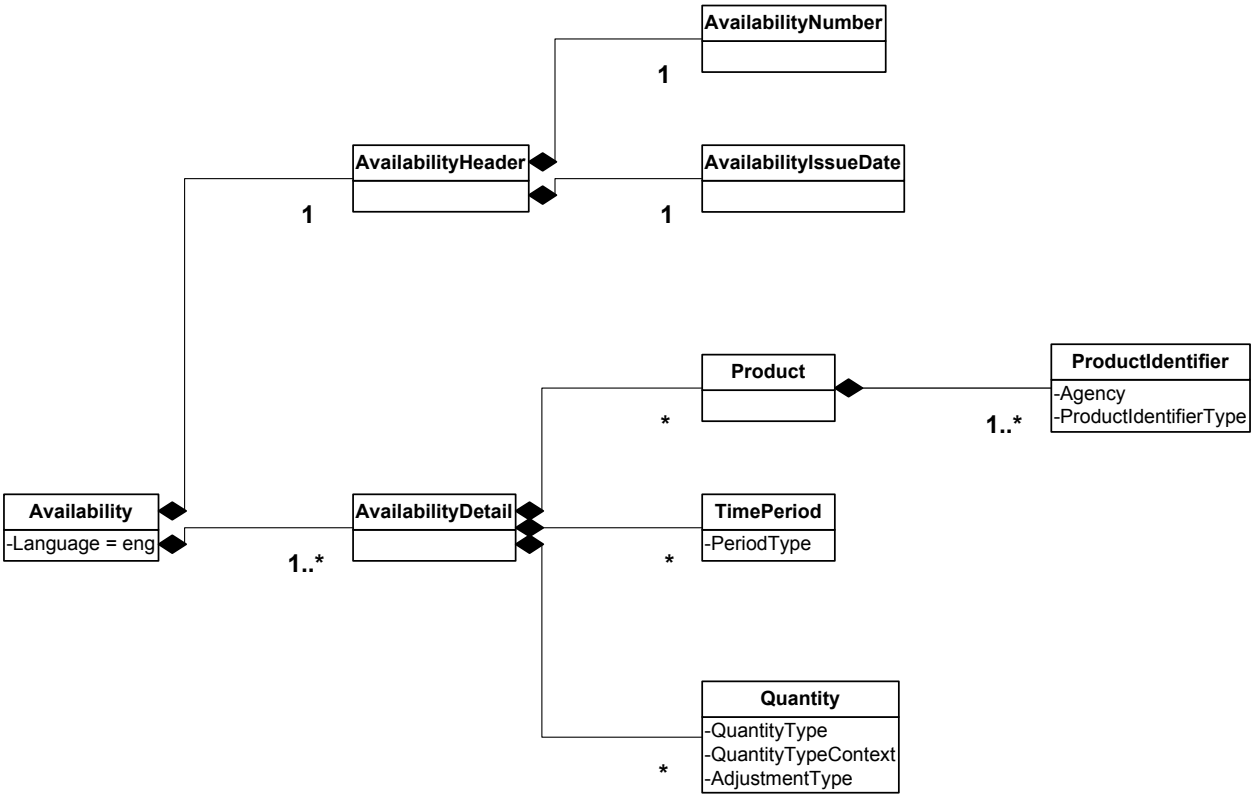
The Availability message is the proper response to an InfoRequest message containing the InfoRequestType of "AvailabilityStatus". Alternatively, it may be published on a previously agreed upon schedule based on time intervals or process manufacturing stages. Under the latter scenario, the supplier would publish the message at the agreed upon schedule without requiring an InfoRequest message as the trigger.

It is unlikely that the Availability message would be received and processed by the recipient's procurement or order generation system. The likeliest scenario is that the Availability message would be received and printed out for distribution to interested parties or alternatively published 'on line' and viewed via a URL or some form of website access designed to display the status.

The Availability message is an information-only message. The Availability message does not alter the legal agreement between the parties regarding order submission and fulfilment. If the Availability message indicates a serious

problem or issue with the ability of the supplier to fulfil the order, then the parties involved must resolve the issue.

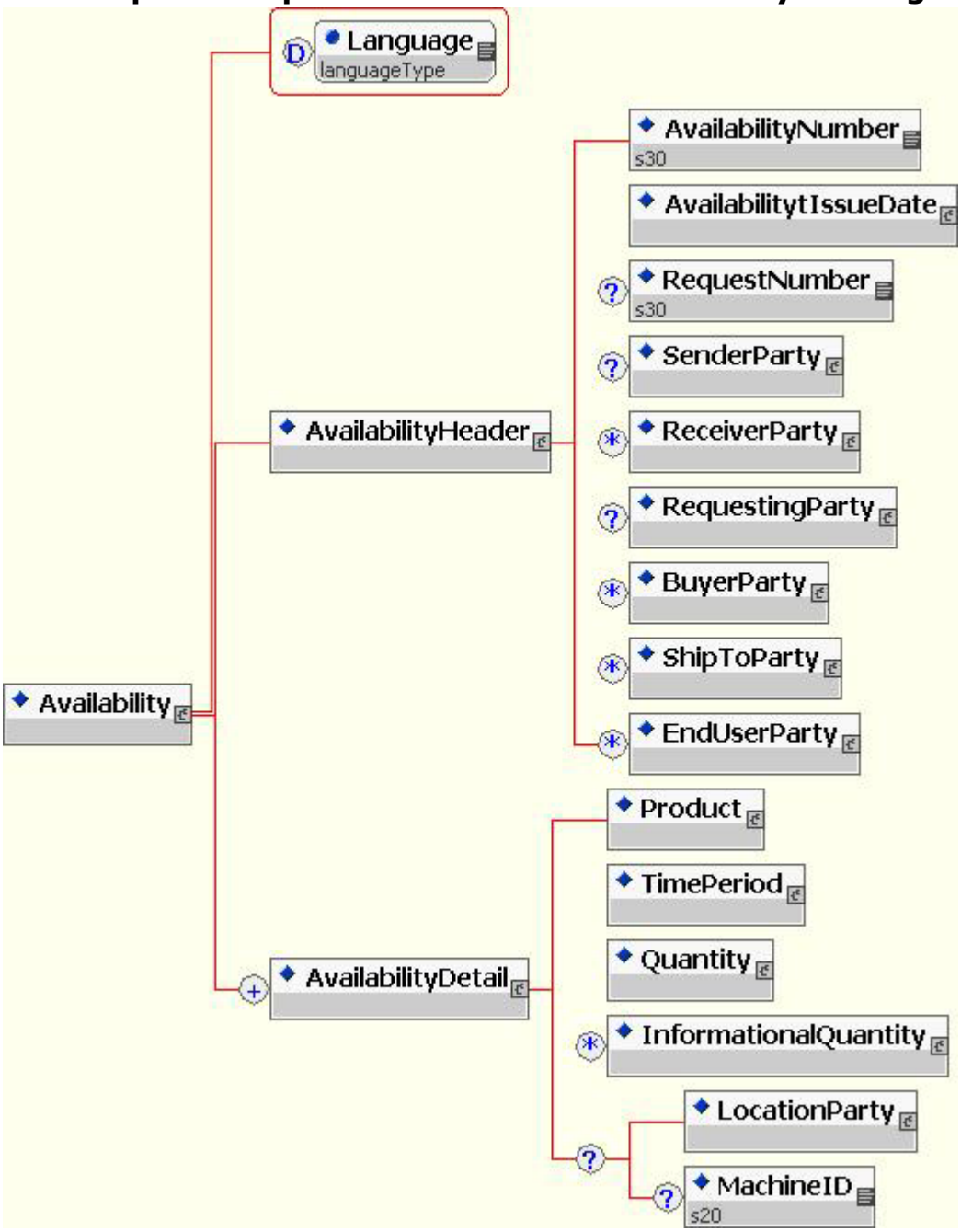
High-level UML Diagram of the Availability Message



Overview of Availability Structure

	Type	Required	Occurrence
Availability	Root	Required	Single
@Language	Attribute	Optional	Single
AvailabilityHeader	Element	Required	Single
AvailabilityNumber	Element	Required	Single
AvailabilityIssueDate	Element	Required	Single
RequestNumber	Element	Optional	Single
SenderParty	Element	Optional	Single
ReceiverParty	Element	Optional	Multiple
RequestingParty	Element	Optional	Single
BuyerParty	Element	Optional	Multiple
ShipToParty	Element	Optional	Multiple
EndUserParty	Element	Optional	Multiple
AvailabilityDetail	Element	Required	Multiple
Product	Element	Required	Single
TimePeriod	Element	Required	Single
Quantity	Element	Required	Single
InformationalQuantity	Element	Optional	Multiple
LocationParty	Element	Optional	Single
MachineID	Element	Optional	Single

Graphical Representation of the Availability Message Structure



Availability Schema – Structure and Processing Logic

This section provides a detailed graphical view of the Availability message schema for the Availability root element, AvailabilityHeader, and AvailabilityDetail. A review of the data types can be found in the data dictionary (available at www.papiNet.org). This section also contains a review of the processing logic that is special to the Availability message.

The graphical display of the Schema contains occurrence indicators and data type information. These indicators appear to the left of the boxes in the schema graphic and they have the following meanings:

- (Blank) Required, single instance
- (+) Required, multiple instances
- (?) Optional, single instance
- (*) Optional, multiple instances

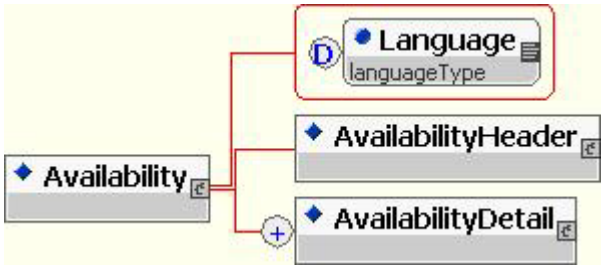
Availability Root Element

The Availability root element has one optional attribute:

- Language

Availability contains two elements:

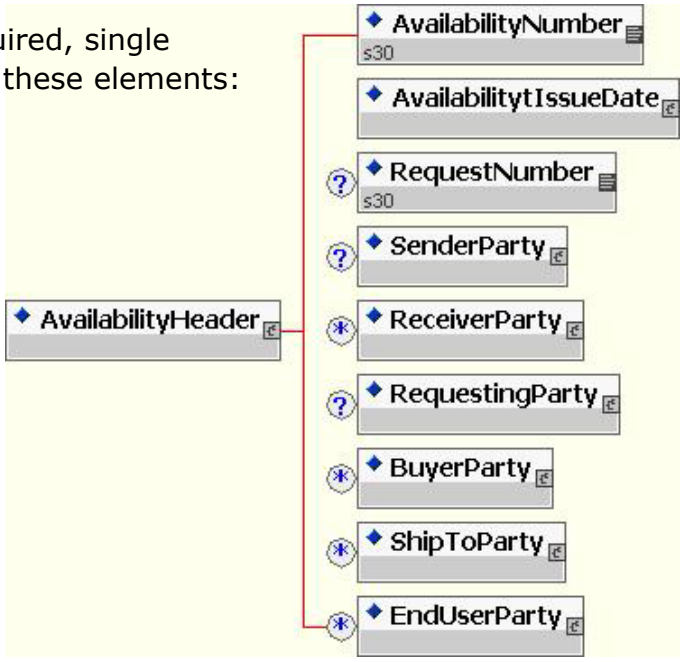
- AvailabilityHeader
- AvailabilityDetail



AvailabilityHeader

The AvailabilityHeader is a required, single instance element that contains these elements:

- AvailabilityNumber
- AvailabilityIssueDate
- RequestNumber
- SenderParty
- ReceiverParty
- RequestingParty
- BuyerParty
- ShipToParty
- EndUserParty

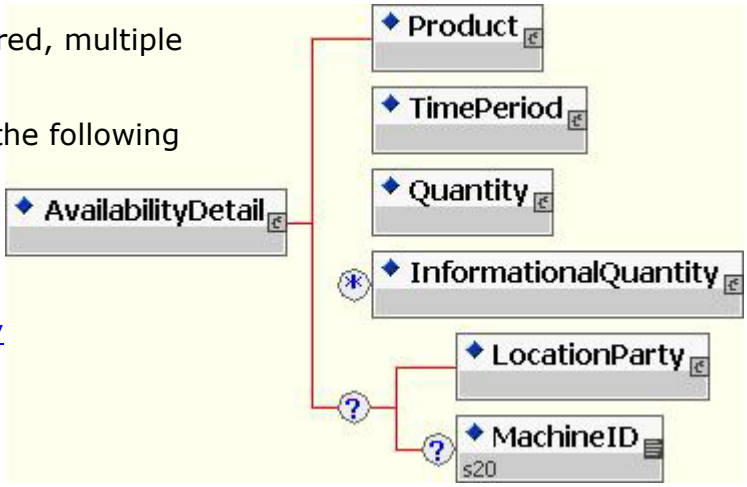


AvailabilityDetail

AvailabilityDetail is a required, multiple instance element.

AvailabilityDetail contains the following elements:

- Product
- TimePeriod
- Quantity
- InformationalQuantity
- LocationParty
- MachineID



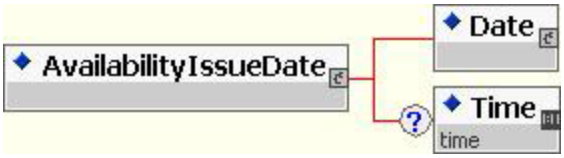
Common Definition References - Elements

AvailabilityIssueDate

The date and time that the Availability message was created.

AvailabilityIssueDate contains:

- Date
- Time

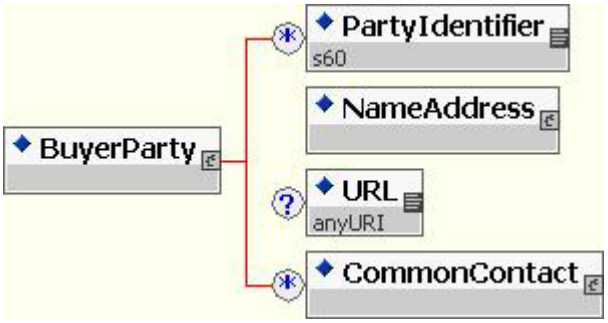


AvailabilityNumber

An element that contains the unique identifying number of the Availability message.

BuyerParty

The organisation or legal entity authorised to issue the purchase order. See Party for structure.



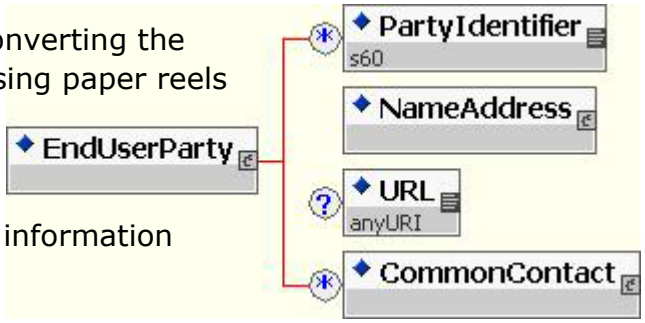
BuyerParty contains the following elements:

- PartyIdentifier
- NameAddress
- URL
- CommonContact

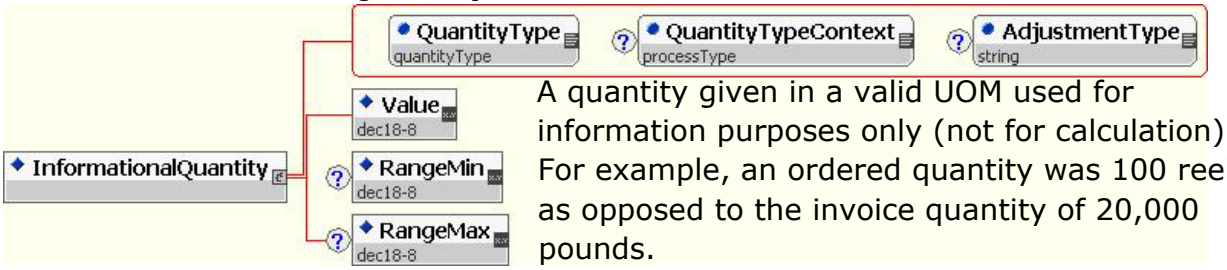
Refer to Party for additional information

EndUserParty

The party using, consuming, or converting the product. For example, a printer using paper reels for a print job for a publisher. The final ShipTo destination for a product is normally to the end user's facilities. Refer to Party for information about the structure.



InformationalQuantity



A quantity given in a valid UOM used for information purposes only (not for calculation). For example, an ordered quantity was 100 reels as opposed to the invoice quantity of 20,000 pounds.

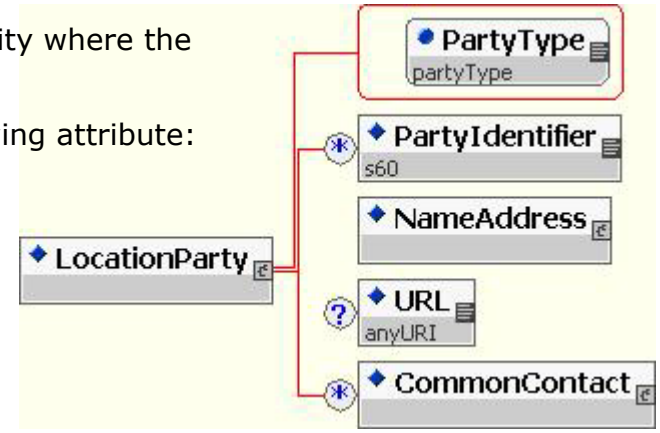
InformationalQuantity contains the following attributes:

- QuantityType
- QuantityTypeContext
- AdjustmentType

And the following elements:

- Value
- RangeMin
- RangeMax

LocationParty



The organization or business entity where the product event take place.

LocationParty contains the following attribute:

- PartyType

It also contains the following elements:

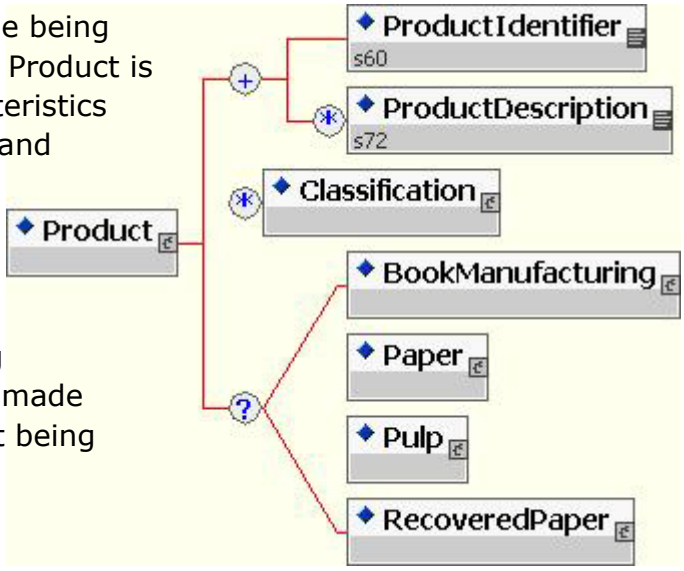
- PartyIdentifier
- NameAddress
- URL
- CommonContact

LocationParty is based on the Party element group.

MachineID

An identifier assigned to the particular machine being referenced. For example, a machine could be a paper machine, an off-line coater, a sheeter, or a printing press. The particular machine being referenced will be determined by the business event being supported.

Product



A group item defining the article being ordered and its characteristics. Product is used to specify product characteristics organized by ProductIdentifier and Classification.

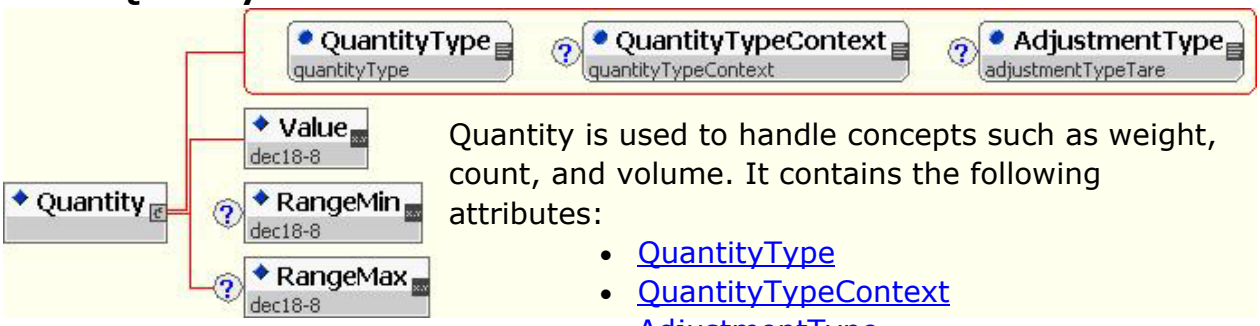
- ProductIdentifier
- ProductDescription
- Classification

A choice of one of the following "market-segment" elements is made based upon the type of product being ordered.

- BookManufacturing
- Paper
- Pulp
- RecoveredPaper

Pulp and Paper are the only products whose characteristics and conversion features have been implemented in papiNet. Recovered Paper and Book Manufacturing are in process and additional product types are under consideration based upon user input.

Quantity



Quantity is used to handle concepts such as weight, count, and volume. It contains the following attributes:

- QuantityType
- QuantityTypeContext
- AdjustmentType

Quantity uses the Measurement group and has the following elements:

- Value
- RangeMin
- RangeMax

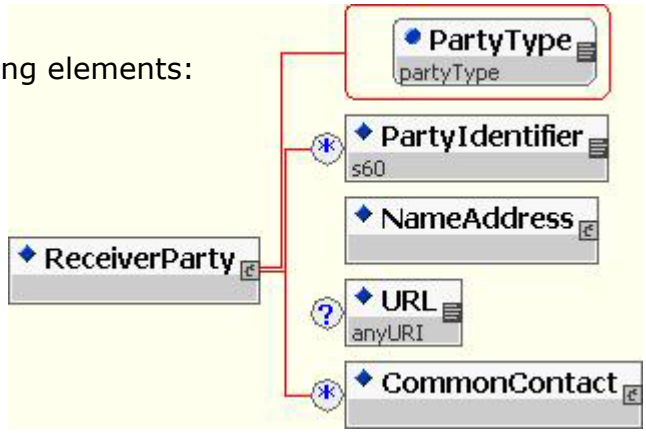
ReceiverParty

The party for whom the information (message) is intended, typed by the attribute PartyType.

ReceiverParty contains the following elements:

- PartyIdentifier
- NameAddress
- URL
- CommonContact

Refer to Party (in the Glossary) for additional information.



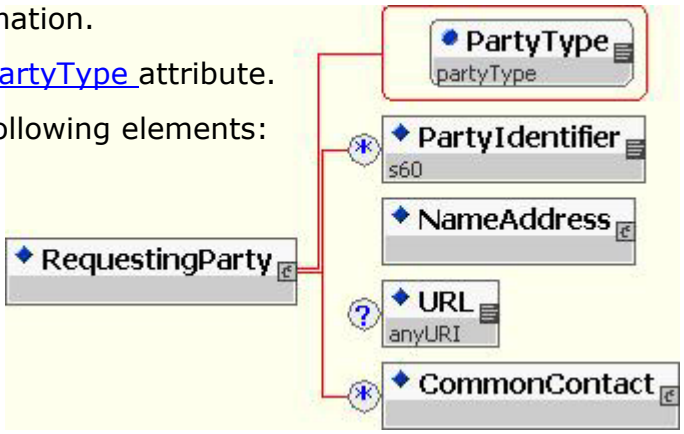
RequestingParty

The party requesting the information.

RequestingParty contains the PartyType attribute.

RequestingParty contains the following elements:

- PartyIdentifier
- NameAddress
- URL
- CommonContact



RequestNumber

A unique tracking number specifically identifying this InfoRequest message to the originator.

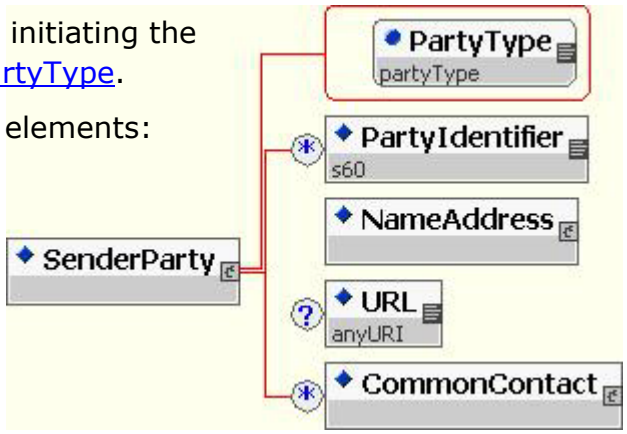
SenderParty

The organisation or business entity initiating the message, typed by the attribute PartyType.

SenderParty contains the following elements:

- PartyIdentifier
- NameAddress
- URL
- CommonContact

Refer to Party (in the Glossary) for additional information.

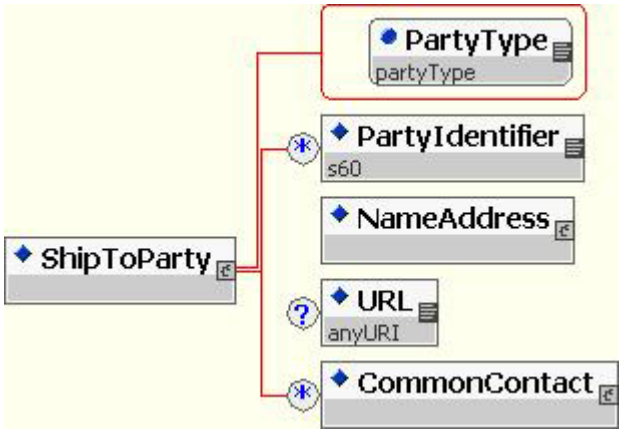


ShipToParty

The name and/or address to which the goods should be delivered with the party type indicated by the PartyType attribute.

ShipToParty contains the following elements:

- PartyIdentifier
- NameAddress
- URL
- CommonContact

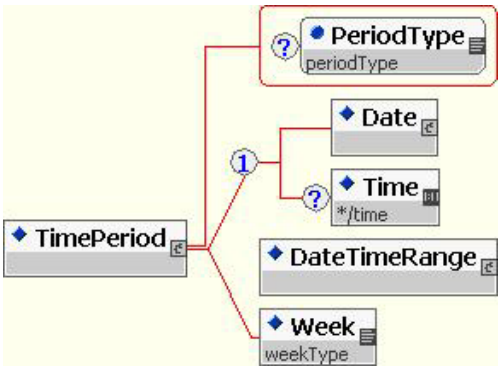


TimePeriod

The TimePeriod element is used to communicate a duration period of time as indicated in PeriodType.

TimePeriod contains the following elements:

- Date
- Time
- DateTimeRange
- Week



Common Definition References - Attributes

Language

XML has embraced 2 and 3 digit language codes through the application of an addendum to the standard. The various references are provided below.

papiNet has set the default value for Language to "eng". RFC3066 would indicate that it should be set to "en" however, we feel that it is more appropriate to use the content-rich 3-digit codes whenever possible.

Used in:

- Availability
- BusinessAcknowledgement
- CallOff
- Complaint
- ComplaintResponse
- CreditDebitNote
- DeliveryMessage
- DeliveryMessageBook
- EndUses
- GoodsReceipt
- InfoRequest
- InventoryChange
- InventoryStatus
- Invoice
- OrderConfirmation
- OrderStatus
- PackagingDescription
- ProductDescription
- ProductQuality
- PurchaseOrder
- RFQ
- RFQResponse
- ShippingInstructions
- SenderProduct-AttributesDescription
- TermsAndDisclaimers
- Usage

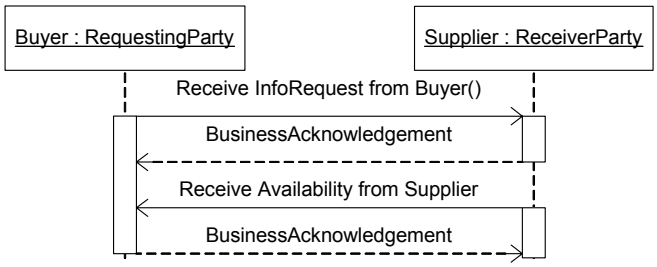
Choices:

- http://www.loc.gov/standards/iso639-2/
  This is the official site of the ISO 639-2 Registration Authority.
- http://www.w3.org/International/O-HTML-tags.html
  Provides an explanation of the errata updating XML.
- http://www.ietf.org/rfc/rfc3066.txt
  is the key document that is referenced in the above errata.

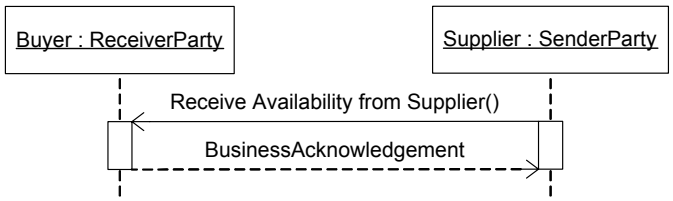
Availability Business Scenarios

Scenario A	Buyer/Publisher has a potential job to source a specific type of paper for. The InfoRequestType is "Availability".
Scenario B	Partners have previously agreed upon the Supplier publishing a periodic Availability update on a specific schedule. There is no InfoRequest.
Scenario C	A small enterprise wants to check the availability of a product via a web browser or at an online marketplace. The InfoRequestType is "Availability".

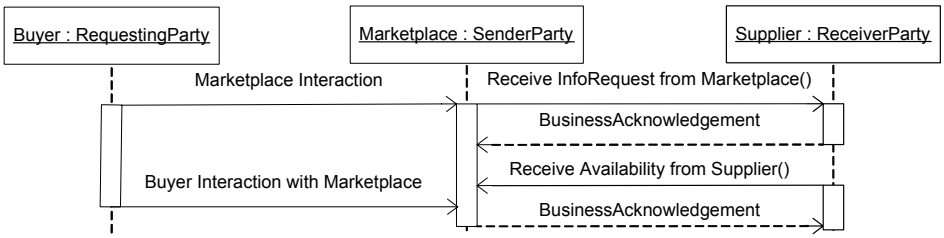
Scenario A

Message	Availability
Business Scenario	Buyer has a potential job to source a specific type of paper for. The InfoRequestType is "Availability". (Note: a Publisher may be substituted for the Buyer in this scenario.) 
Outcome	An InfoRequest is generated by the Buyer.
Initiator	Buyer
Receiver	Supplier
Trigger	None
Step 1	Buyer records an original request into their system then sends it to the Supplier. • InfoRequestType = "Availability" • RequestNumber = unique number • SenderParty = buyer • RequestingParty = buyer • ReceiverParty = supplier • Product = specified product id
Step 2	Seller receives an InfoRequest and responds with Availability. The seller is expected to return the quantity that is available on-hand and optionally return any planned inventory runs. • AvailabilityNumber = unique number • AvailabilityIssueDate = response date • SenderParty = supplier • RequestingParty = buyer • ReceiverParty = publisher For on hand inventory: • TimePeriod = today • Product = specified product id • Quantity = quantity of on hand inventory • QuantityTypeContext="OnHand" Optionally for each manufacturing run: • TimePeriod = date of planned run • Quantity = quantity of planned inventory • QuantityTypeContext="Planned"

Scenario B

Message	Availability
Type	N/A
Business Scenario	Partners have previously agreed upon the Supplier publishing a periodic Availability update on a specific schedule. 
Outcome	An Availability message is generated by the Supplier's system and received into the Buyer's system.
Initiator	NA
Receiver	Buyer
Trigger	Prearranged schedule
Step 1	Supplier initiates an Availability message for each agreed upon product at predefined intervals. At a minimum, all required elements and corresponding attributes are recorded: • AvailabilityNumber = unique number • AvailabilityIssueDate = response date • SenderParty = supplier • RequestingParty = buyer • ReceiverParty = buyer For on hand inventory: • TimePeriod = today • Product = specified product id • Quantity = quantity of on hand inventory • QuantityTypeContext="OnHand" Optionally, for each manufacturing run: • TimePeriod = date of planned run • Quantity = quantity of planned inventory • QuantityTypeContext="Planned"

Scenario C

Message	Availability
Business Scenario	A small enterprise wants to check the availability of a product via a web browser or at an online marketplace. The InfoRequestType is "Availability". 
Scenario Outcome	An Availability message is generated by the Supplier's system and received into the Buyer's system.
Initiator	Buyer/marketplace
Receiver	Supplier
Trigger	InfoRequest
Step 1	Buyer logs on to the marketplace's website and views open orders online and indicate orders for which status is requested. Marketplace creates InfoRequest and sends it to the Supplier. • InfoRequestType = "Availability" • RequestNumber = unique number • SenderParty = marketplace • RequestingParty = buyer • ReceiverParty = supplier • Product = specified product id
Step 2	Supplier receives InfoRequest and responds with Availability. • AvailabilityNumber = unique number • AvailabilityIssueDate = response date • SenderParty = supplier • RequestingParty = buyer • ReceiverParty = marketplace For on hand inventory: • TimePeriod = today • Product = specified product id • Quantity = quantity of on hand inventory • QuantityTypeContext="OnHand" Optionally, for each manufacturing run: • TimePeriod = date of planned run • Quantity = quantity of planned inventory • QuantityTypeContext="Planned"