

Specification

28 April 2015

CURRENEX

Currenex STP Download Schema Described

Please contact Currenex sales representatives and help desk personnel for more information on this documentation.

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1 OVERVIEW

STP XML based downloads are delivered using a variety of methods. This document describes the meaning of the XML that is delivered. Fundamental to this description is the schema itself. The schema is separate document. Fragments are displayed in this document.

The download file has CurrenexDownload as the root. The current version is 3.1 as specified in an attribute on the root level.

The core of the schema is a collection of trades along with a collection of parties and finally a collection of tradeErrors. The most involved of these elements is trade.

Each trade is divided into six sections:

- TradeHeader - This contains information common to any kind of trade. Parties, execution time, users, etc.
- TradeRequest – This describes how the deal was requested by the taker.
- Product - This element contains the financial details of the done deal. Both maker and taker see exactly the same product xml.
- DefinedFields – At the option of the taker user defined fields can be displayed. These are only shown to the taker.
- Quotes – On deals with competitive quotes, all quotes are included.
- OffsettingTrade – Many trades are done through a central party. For the central party they are able to see both of the trades. The offsetting trade is included in this element.

The schema is named CurrenexDownload.xsd and is included in this documentation set.

The remainder of the document will discuss and illustrate each element.

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2 MESSAGE ORDERING

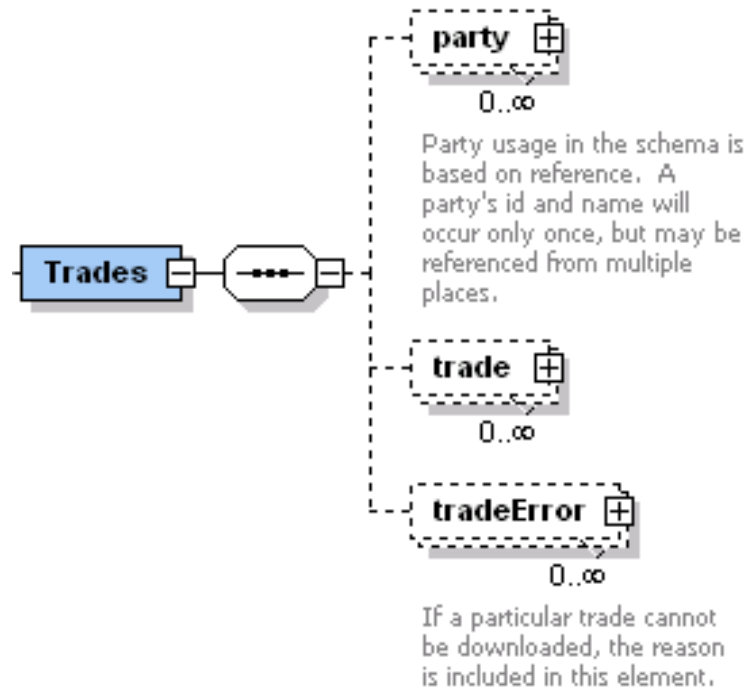
Within a trade XML message, unbounded elements are not guaranteed to be delivered in the same order and should not be taken for granted. Message parsing should be done in accordance with the Currenex XML schema and no assumptions should be made on information ordering where not explicitly indicated.

3 TRADES, PARTY AND TRADEERROR

Prior to discussing trade, we first look at the supporting cast.

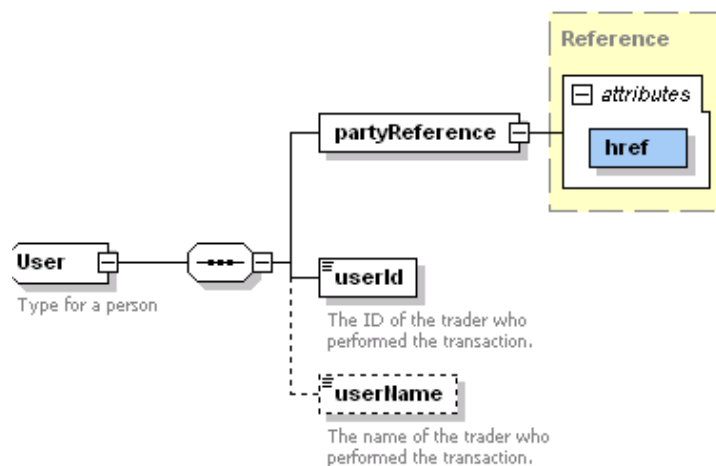
3.1 Trades

This element is the container for all trade information.

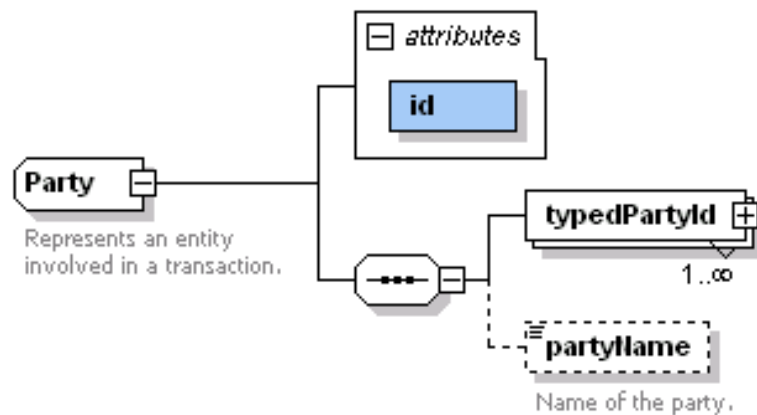


3.2 Party

All uses of party in trade are by reference. For example when specifying a user the party that the user works for is referenced.



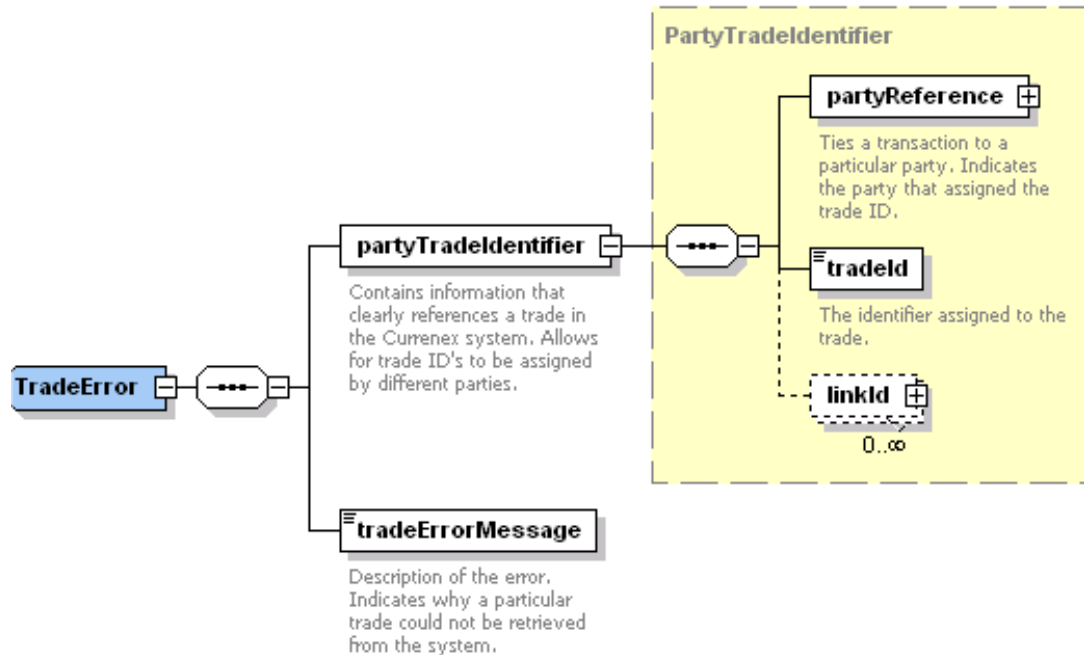
The href is resolved in the following instance of the party.



The collection of party elements insures that the partyId is consistent through all the trades included in the download.

3.3 TradeError

In the event of an error on a specific trade, the download is not aborted. For each problem with a trade a tradeError element will be created.



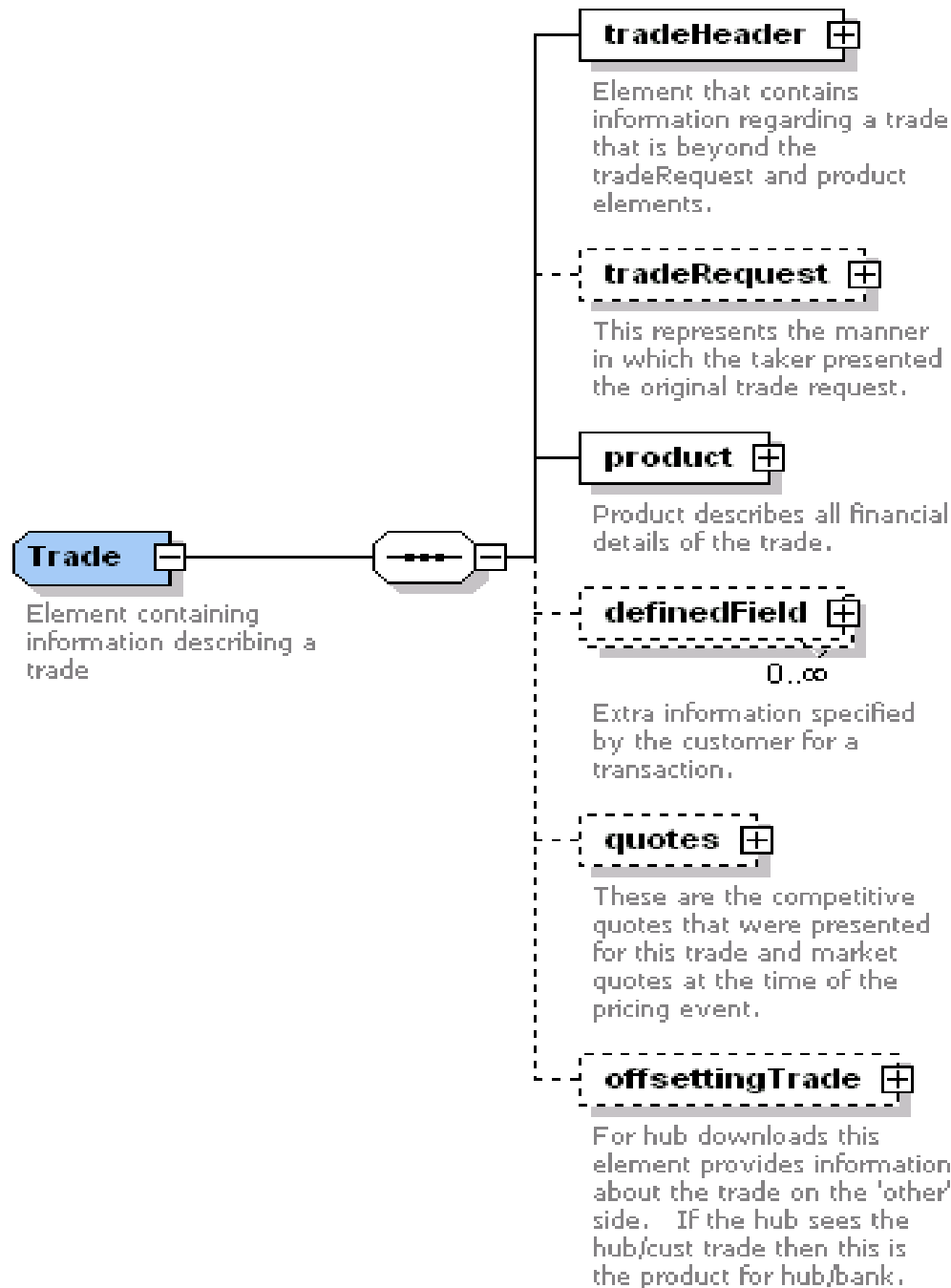
The identification of the trade is included and a message explaining why the trade was not downloaded.

There are errors created if data is not consistent. However these never appear unless a bug exists. The two errors that are common include:

- Incomplete defined fields: This created if a trade is missing a required defined field value. This suspends the download until corrected.
- Too many trades: There is an internal limit on the number of trades in a single download. Typically this is set at 3000. If this occurs then the download date range should be constrained.

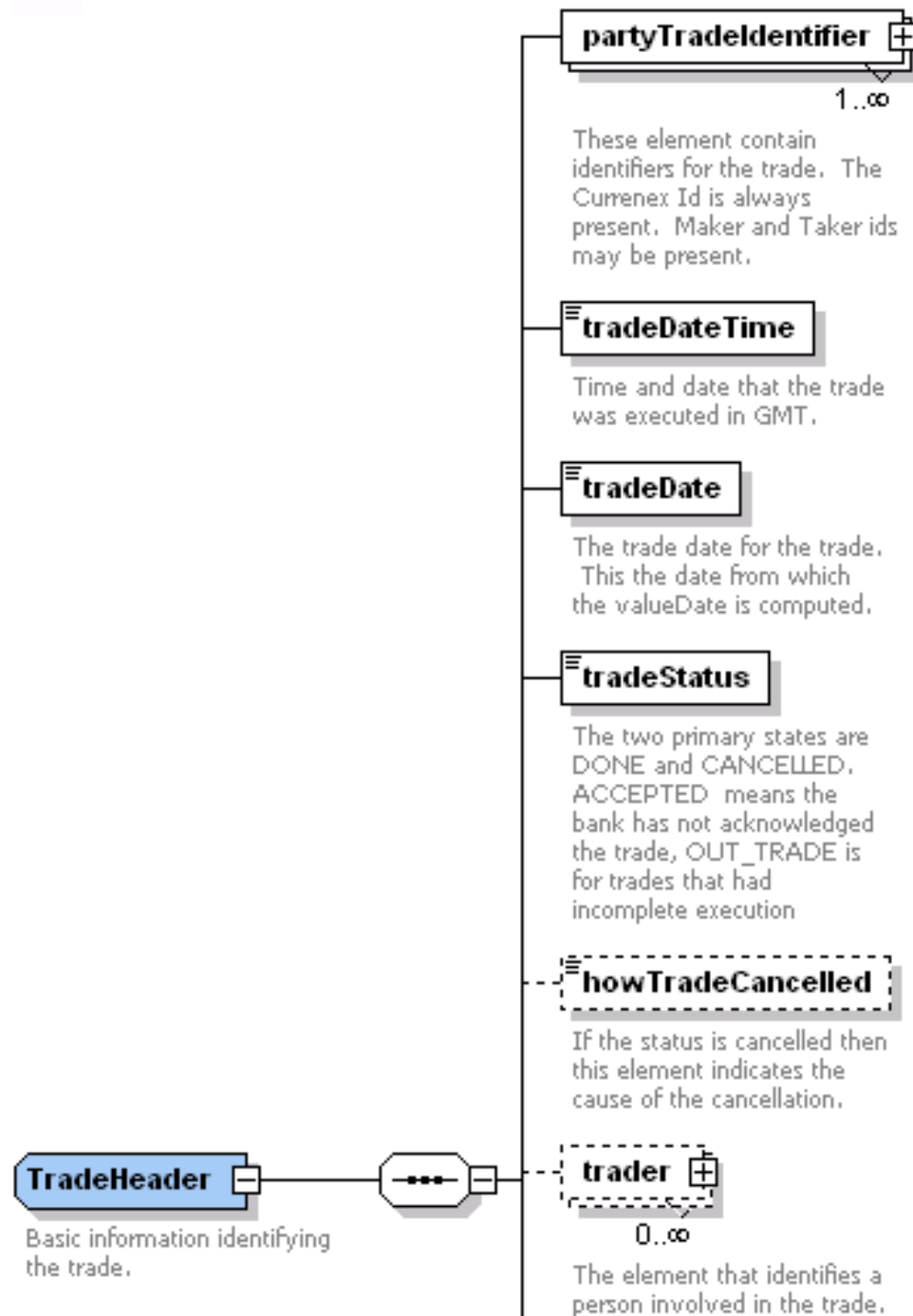
4 TRADE

This type describes a single trade. The components of trade are illustrated and described in the following diagram.

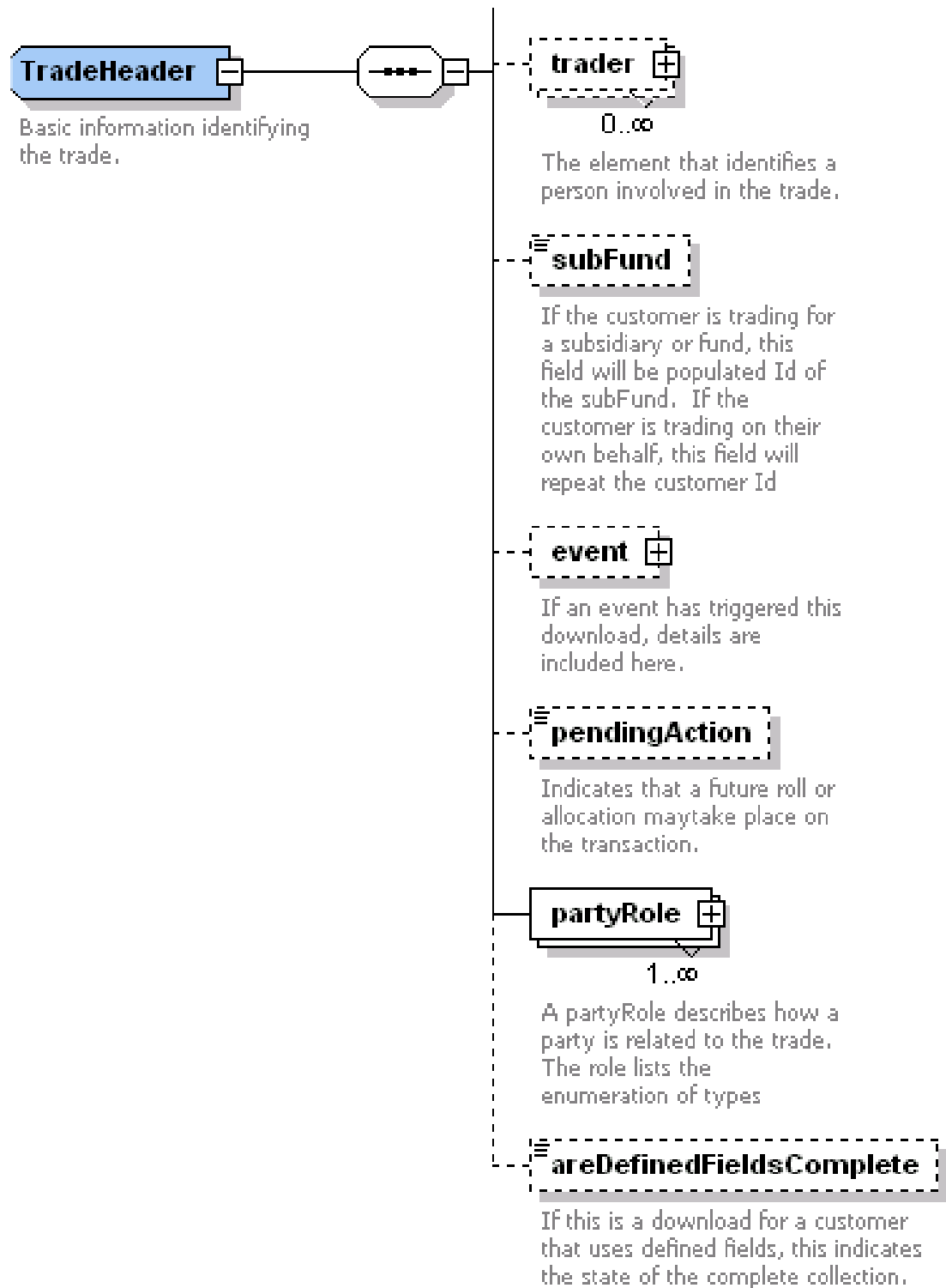


4.1 TradeHeader

The TradeHeader contains information about the trade that identifies the trade. The first half of this element is shown in this diagram. Those elements with no deeper information are explained in the picture. The others detailed in the next section.



The second half of this element is shown here.

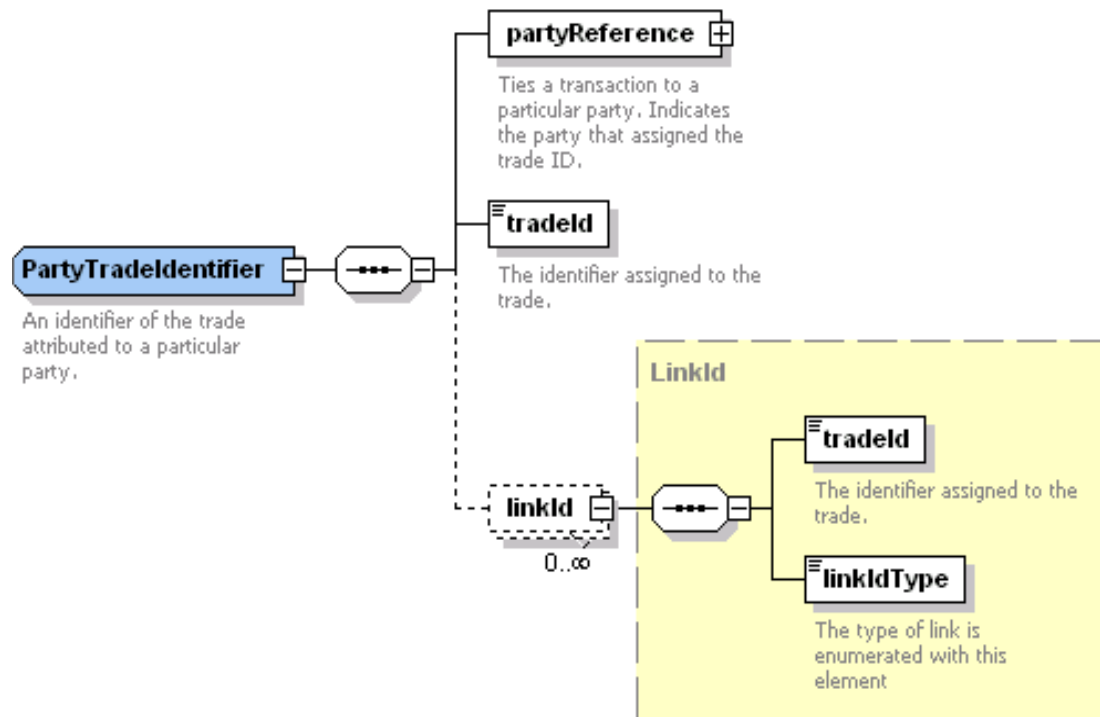


4.1.1 Party TradeIdentifier

Many party identifiers are possible for a given trade. Three are commonly included.

- Currenex identifier
- Taker identifier
- Maker identifier

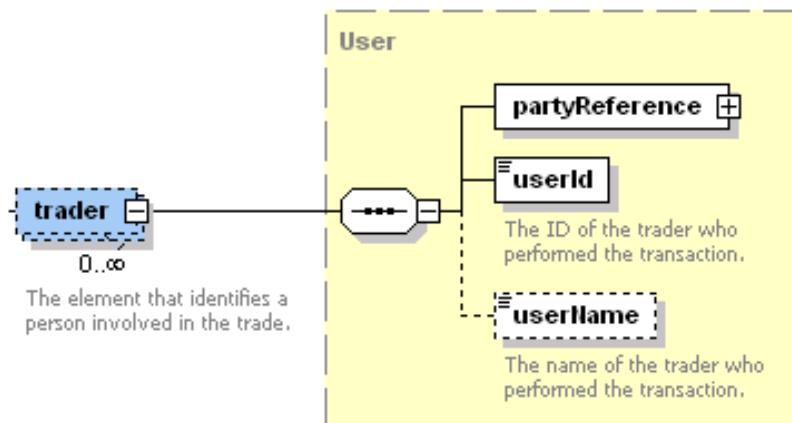
The only guarantee is the Currenex identifier.



Associated with each identifier are additional links. Currently these are only available with the Currenex identifiers. Possible **linkIdTypes** are

Amendment	Reference to amended trade.
SpotBreakoutParent	New trades of a SpBrk point back to their parent
RebookParent	Trades cancelled in a rebook point to the rebook trade
HubBackToBack	Trade done through a hub points to its backtoback
PBBackToBack	Trade done through a PB points to its backtoback
OrderToOrder	Orders crossed with each other point back.
HubParentGiveup	Trade done through a hub will point back to its parent
PBParentGiveup	Trade done through a PB will point back to its parent
Parent (deprecated)	Same as Hub, PB parent but does not indicate context
BackToBack (deprecated)	Same as Hub, PB parent but does not indicate context
AllocateParent	Trade of an allocation will point back to its parent
StagedOrderId	Trade done through a staged order will point to the order.

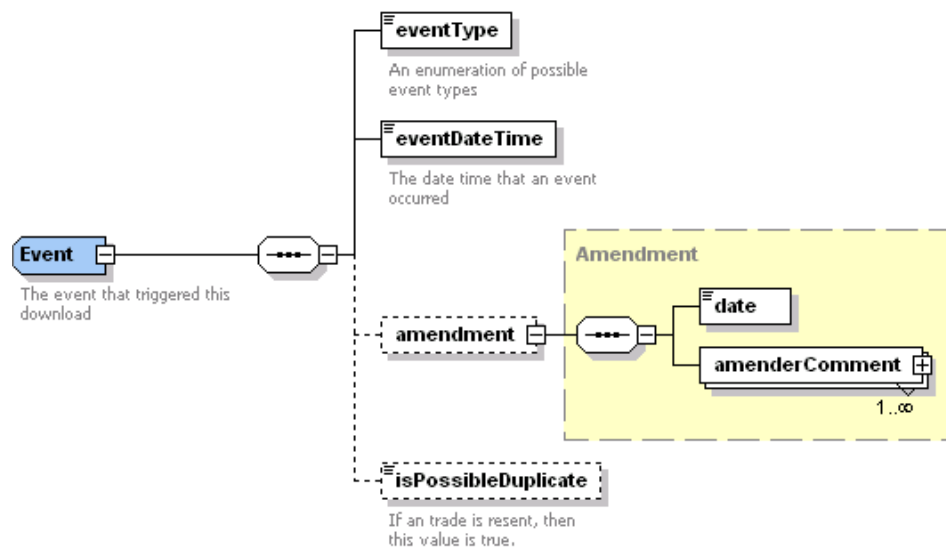
4.1.2 Trader



Each trade has two traders identified: one for the taker one for the maker. The **userId** of the user is included in this element. The party they work for is identified using the **partyReference**. A longer name is included if it's available.

4.1.3 Event

If the trade is being reported as the consequence of an event, this element is included. The most typical is NEWT for new trade. If the trade download is done based on a range of trade or value dates, then there is no event and the element is missing.

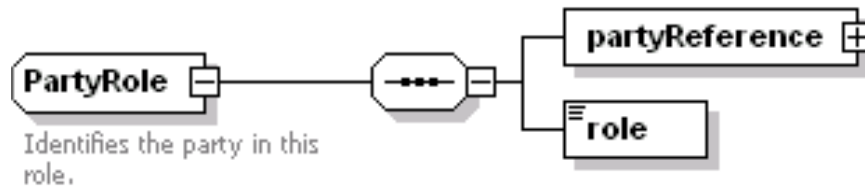


The full **eventType** list includes:

NEWT	New trade
CANC	Cancelled trade
AMND	Amended trade
ALOC	Allocation
SFBK	Spot forward breakout
UDFA	User defined field competition
CNDF	Cancel prior to finishing defined fields
SETL	Settlement event
RBOK	Cancel Rebook
NETTING	Netting

4.1.4 PartyRole

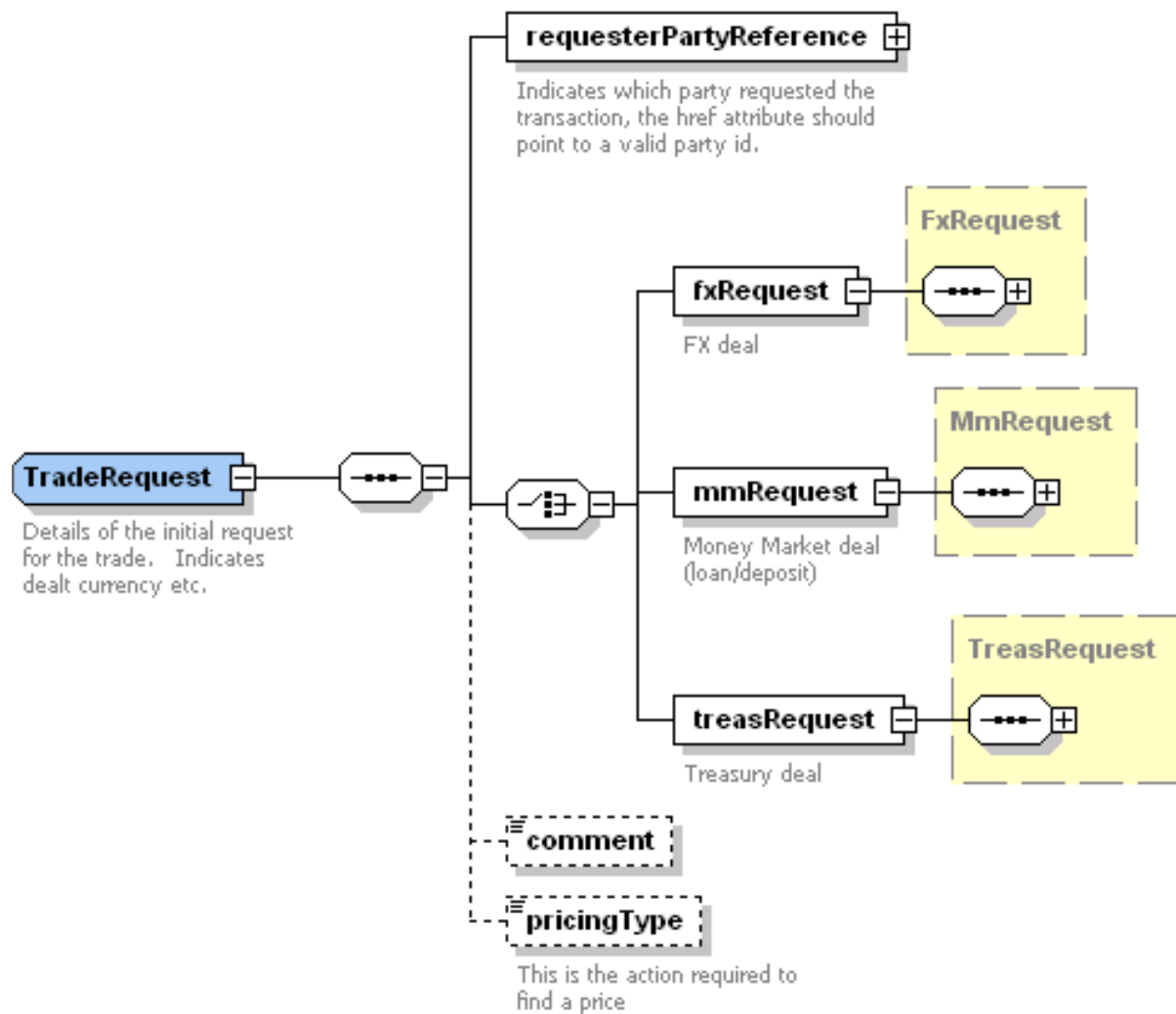
This element identifies the party acting in a particular role on this trade. As usual the party is identified by reference.



Maker	The price make in this trade
Taker	The buy side party in the trade
PrimeBroker	If a PB is involved it is identified. It must be the maker or taker.i
Hub	If a hub is involved it is identified. It must be the maker or taker.
Downloader	The party that downloaded this trade
Aggressor	If there is an aggressor the party is identified. It must be the maker or taker.

4.2 TradeRequest

The trade request identifies the requesting party and then the details of the request. Although technically optional this element is always included in the Currenex download.

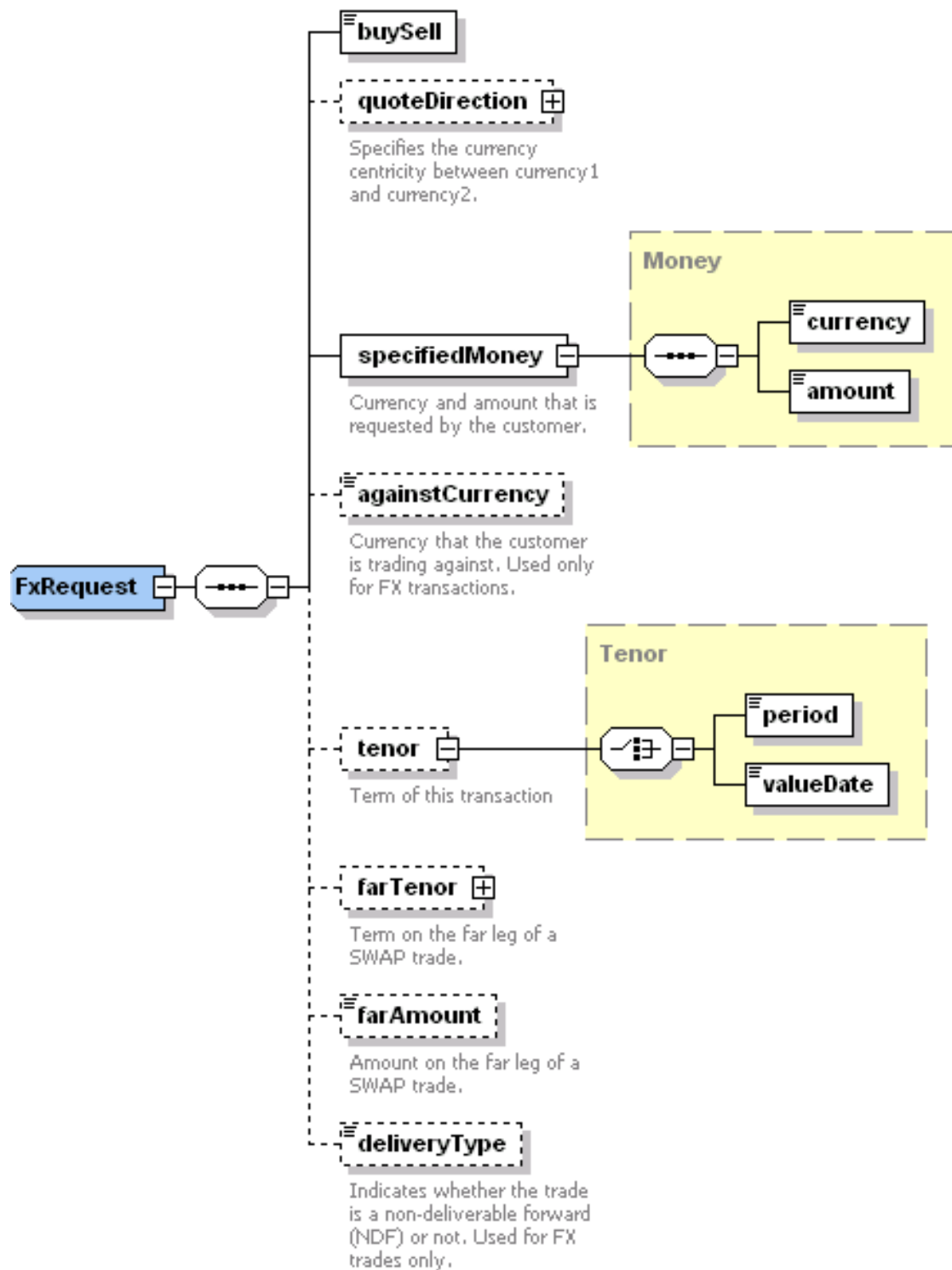


The values for pricingType include:

REQUEST	An RFS deal
ORDER	A parked order
ESP_ORDER	Order submitted to a price book.

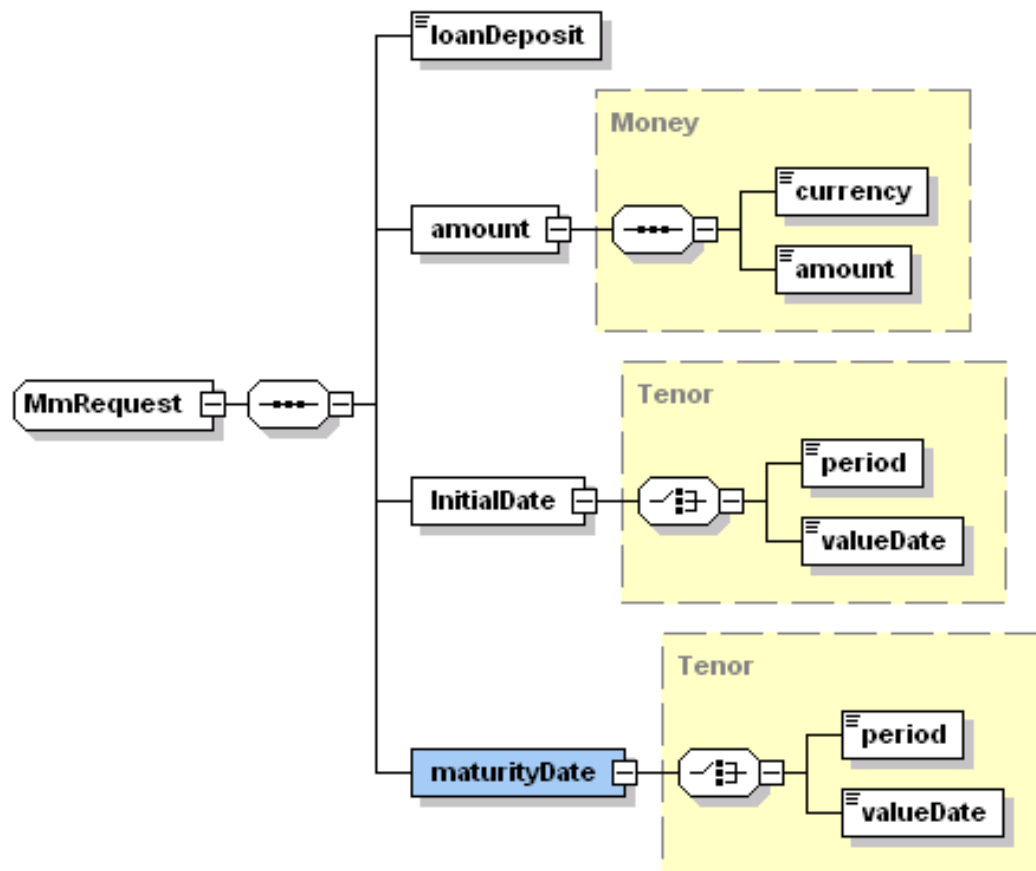
4.2.1 FxRequest

If this was an FX deal then all the details of the requested are included.

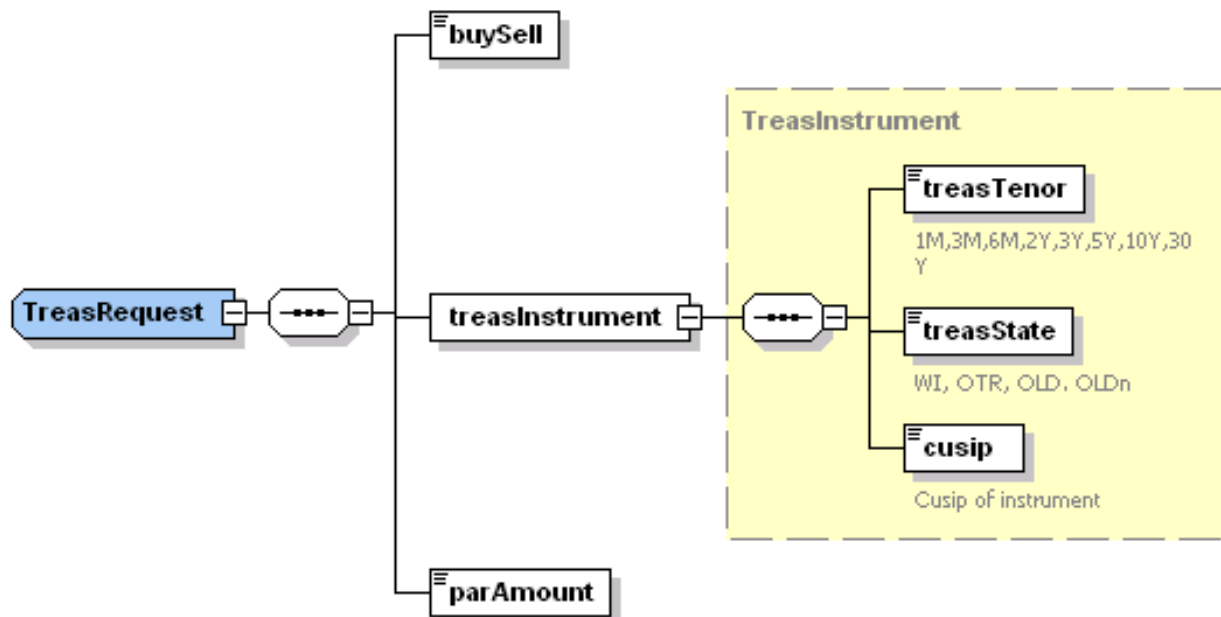


4.2.2 MMRequest

The money market element classifies the type of instrument from the perspective of the taker. The element loanDeposit is an enumeration with values: DEPOSIT or LOAN.

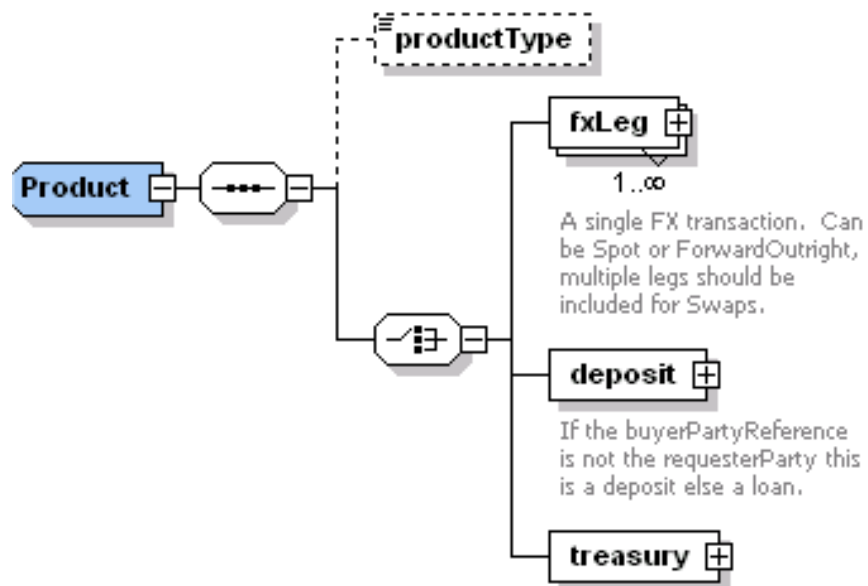


4.2.3 Treasury Request



4.3 Product

This element contains the detailed financial details of the completed deal. Each instrument type has its own element.

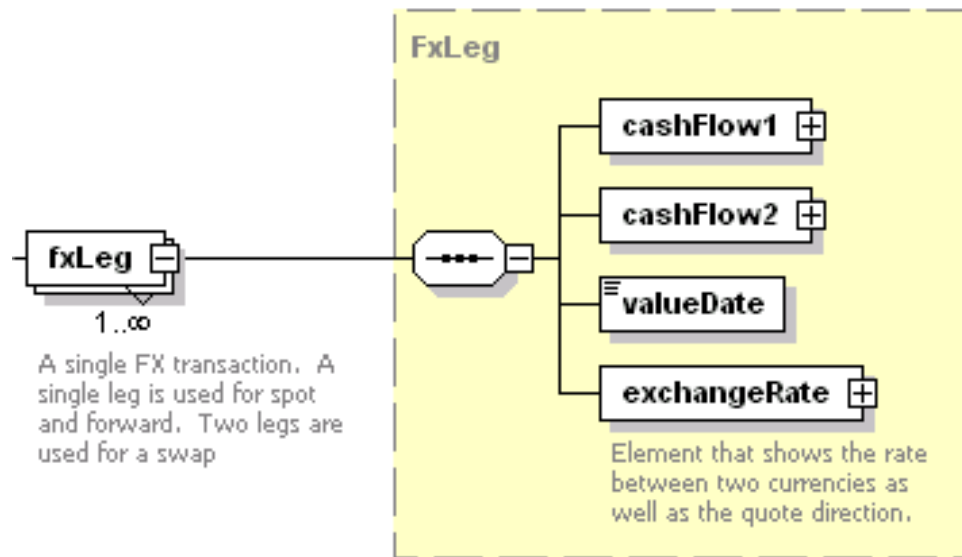


Possible values for productType are:

SP Spot FX
 OR FX Forward (outright)
 SW FX Swap
 LD Loan/Deposit
 TREAS Treasury

4.3.1 FX Product

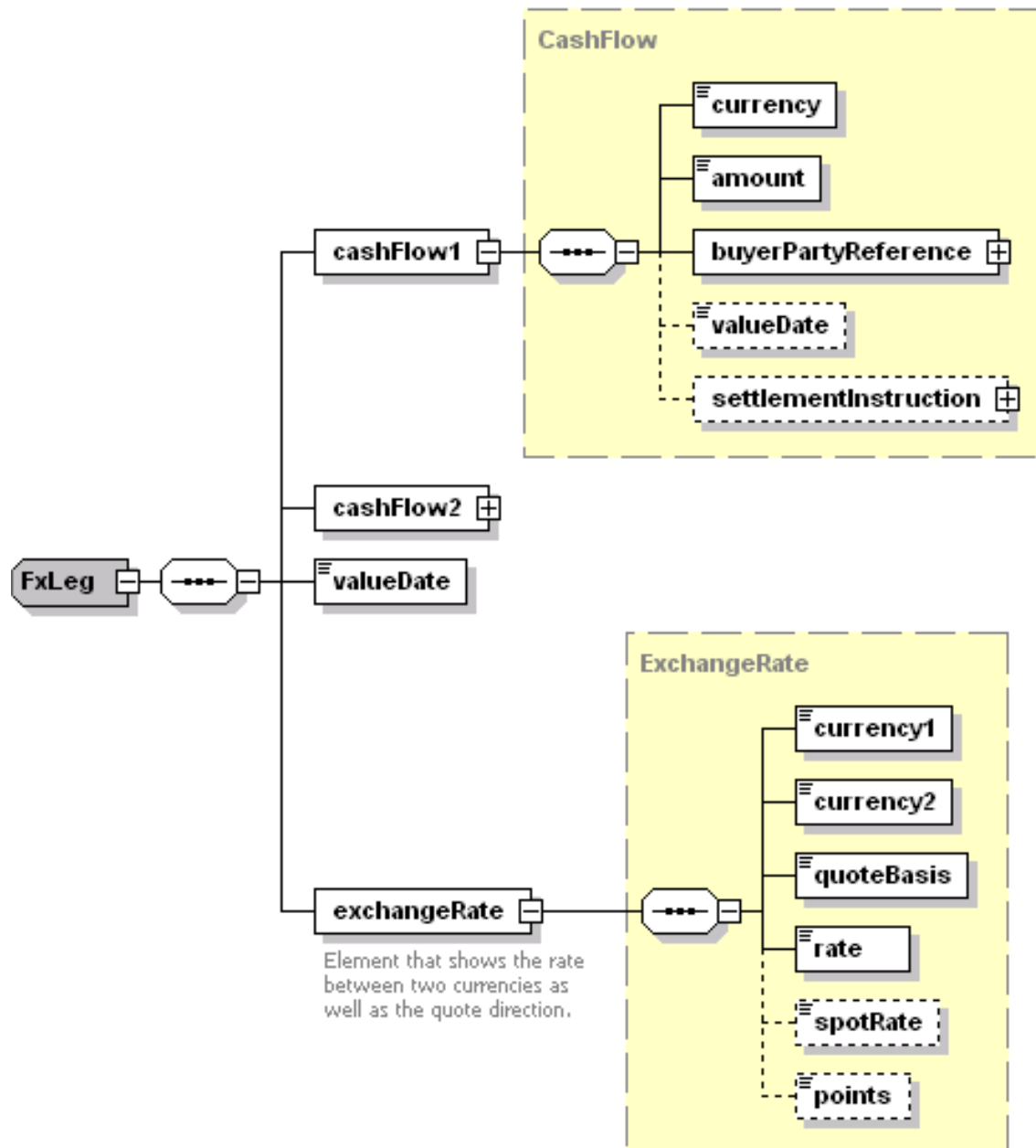
Each FX deal has one or two fxLegs: one leg for spots and forward, two legs for swaps.



Each leg represents the exchange of two currencies. Each of the parties are represented in one of cashFlows.

4.3.1.1 FxLeg

The FxLeg details the cash flows and the exchange rate used.



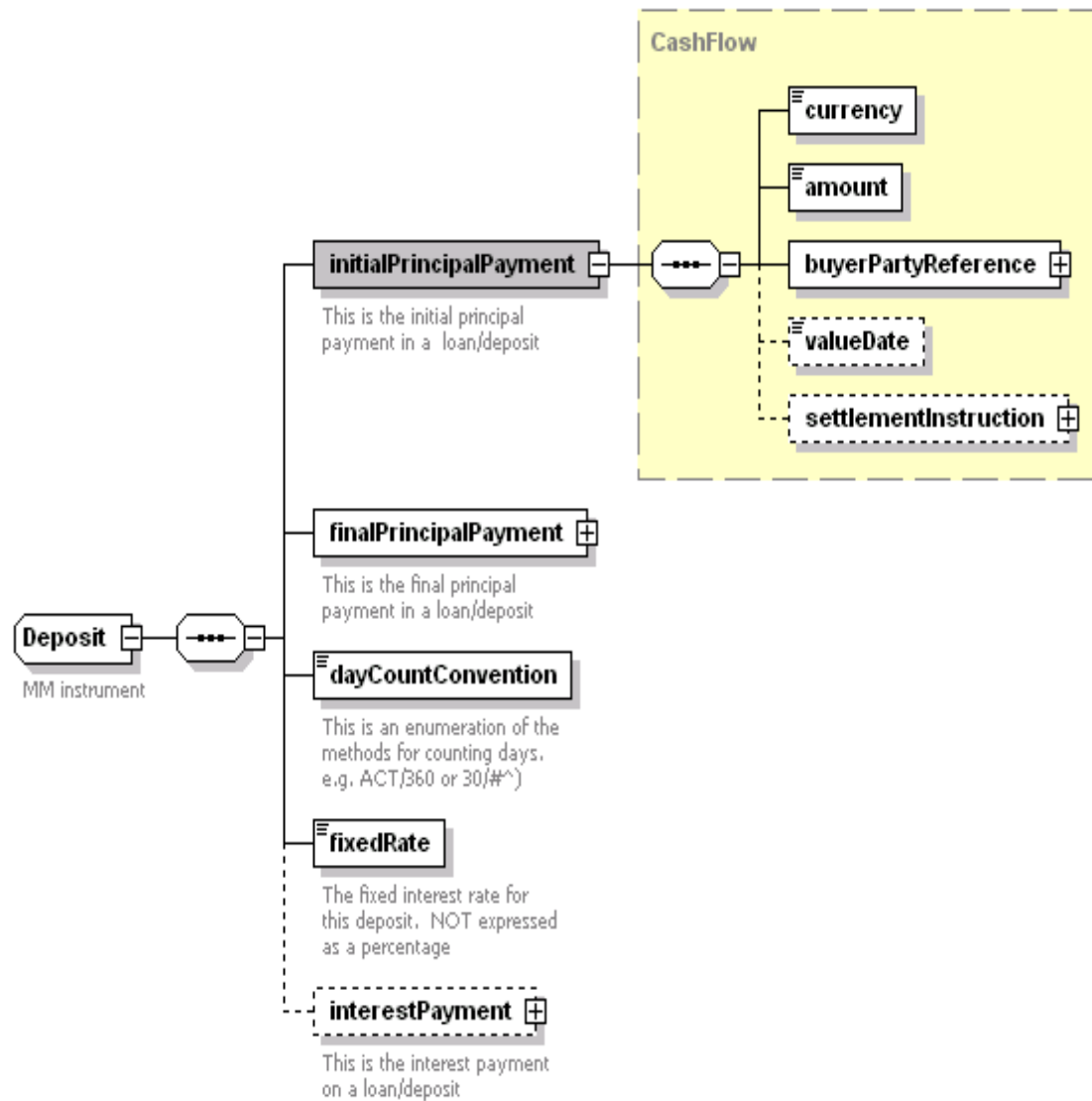
Each cashFlow has the same pattern. The receiving (buying) party is identified by reference as are all parties. Optional settlement instructions can be included.

The exchangeRate contains the two currencies involved and quoteBasis defines the order of these two currencies. The values of quoteBasis are: currency1percurrency2 or currency2percurrency1.

4.3.2 Deposit

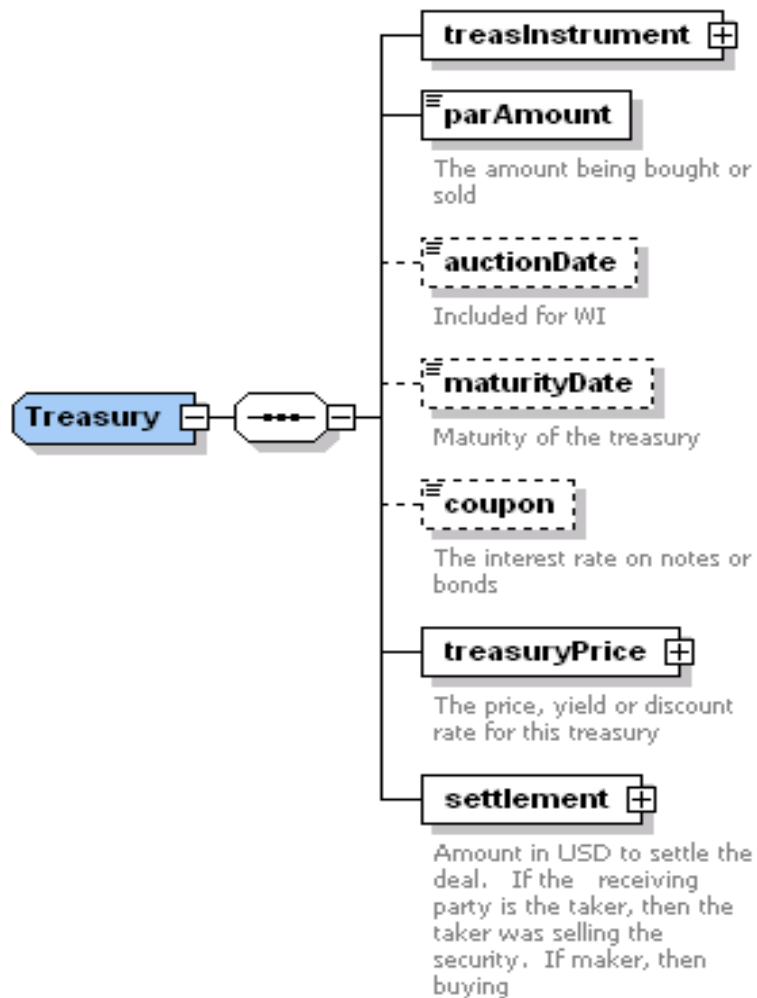
Loans or deposits are represented by a single instance of a deposit element. If the party to the initialPrincipalPayment is the taker, then the deal is a loan else it's a deposit.

All payments are represented using a CashFlow type element.



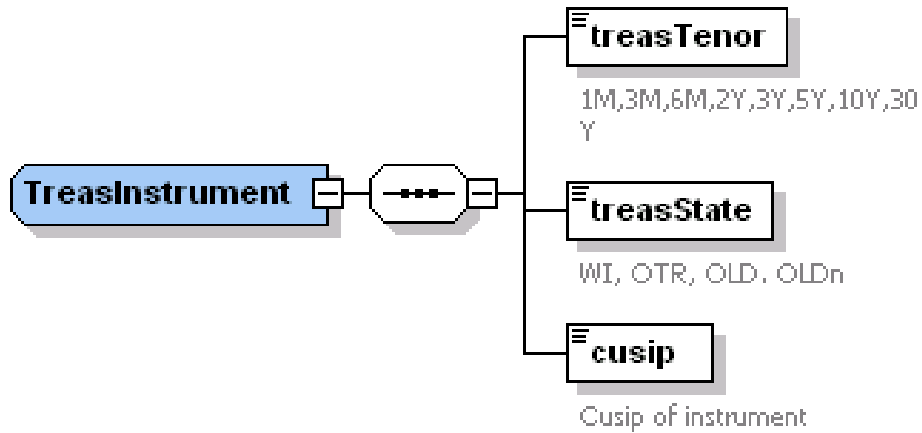
4.3.3 Treasury

This element is used to describe a treasury deal. The instrument is described in the `treasInstrument` element.



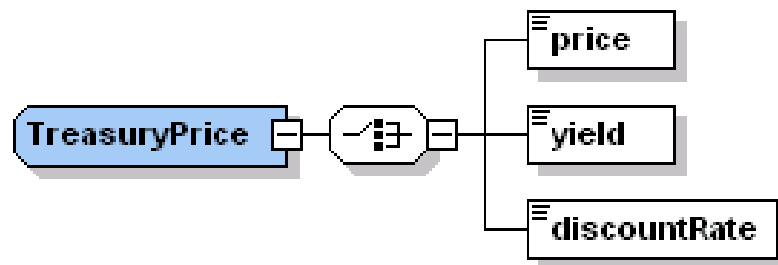
4.3.3.1 TreasInstrument

The instrument is defined uniquely by its cusip. The treasury state indicates the stage in the life cycle of the treasury and the time of the deal.



4.3.3.2 TreasuryPrice

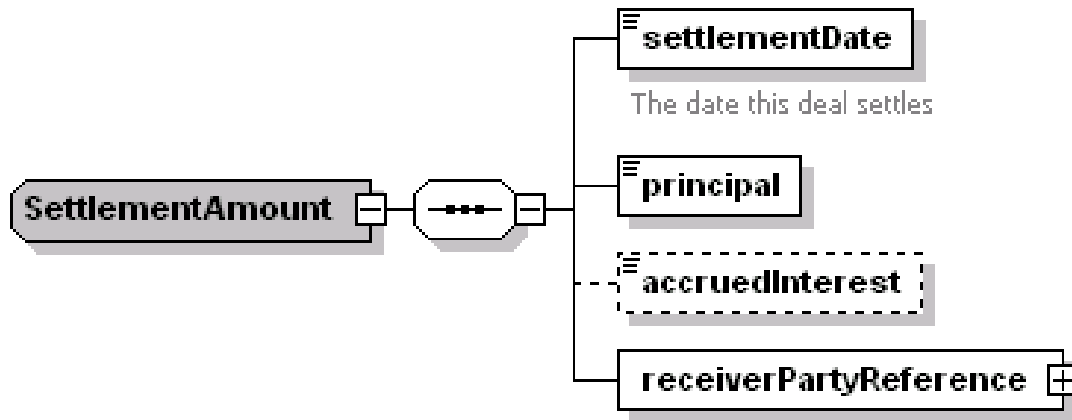
The price is one of three types as shown in the TreasuryPrice type.



4.3.3.3 SettlementAmount

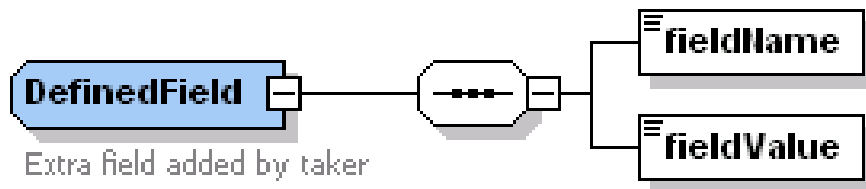
This element contains details of the cash settlement. Principal is always included and accrued interest is included for all Note and Bond deals. The receiving party can be either the taker or maker. If the taker receives the cash, then they were selling a security.

Note that the currency of this settlement is always USD as they are US government securities.



4.4 DefinedFields

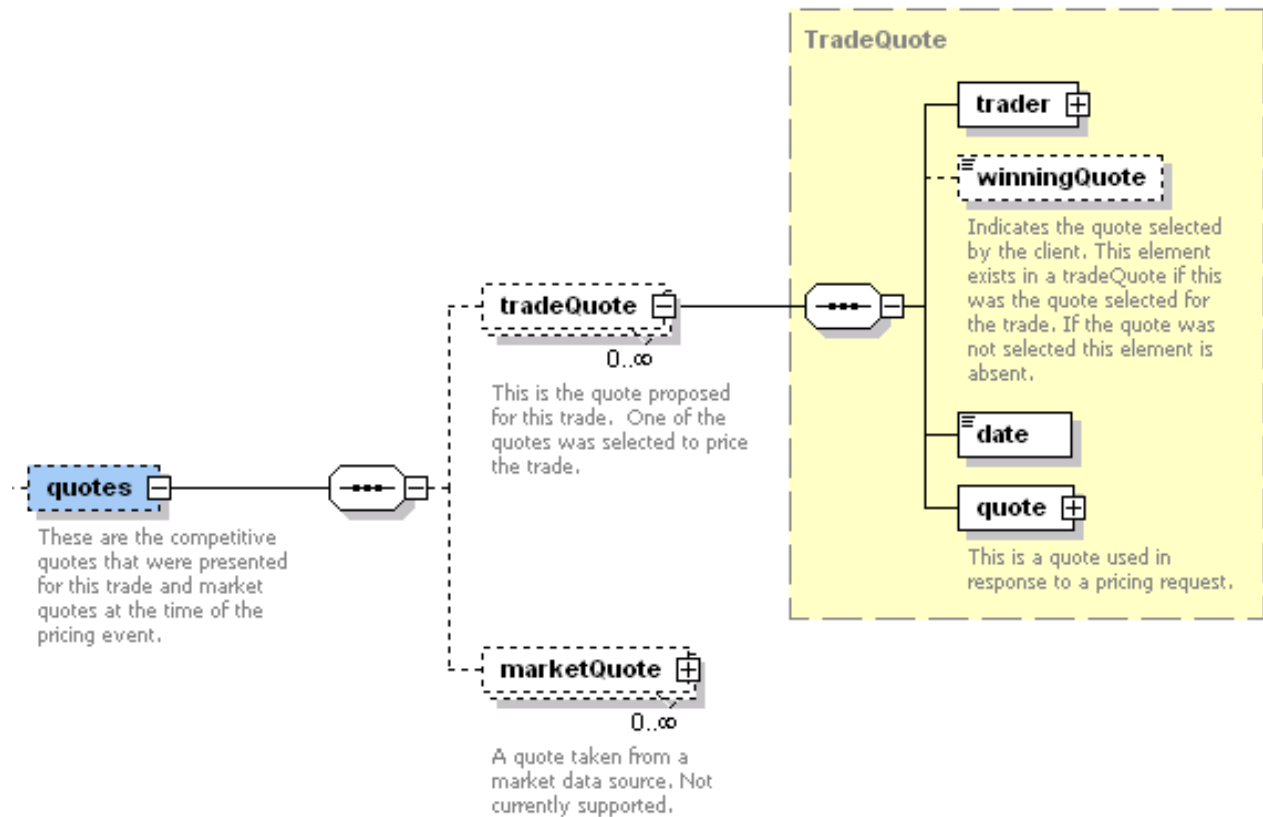
If this is a download being presented to the taker, then defined fields may be present. Each of these represents an attribute that the taker needs for they own internal integration processes. The number of fields is not limited.



Each field has a name and an associated value.

4.5 Quotes

If the download party is a taker and this was an RFS trade, then all of the competitive quotes to the deal are included. The winning quote is also included in this list and is so indicated.

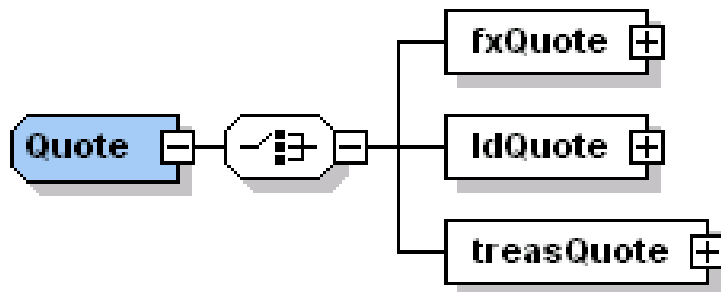


Each tradeQuote contains the identifier of the trader making the quote and the time it was done. If this was the winningQuote then this element is present. The quote itself is detailed on the next page.

MarketQuotes are not used a present.

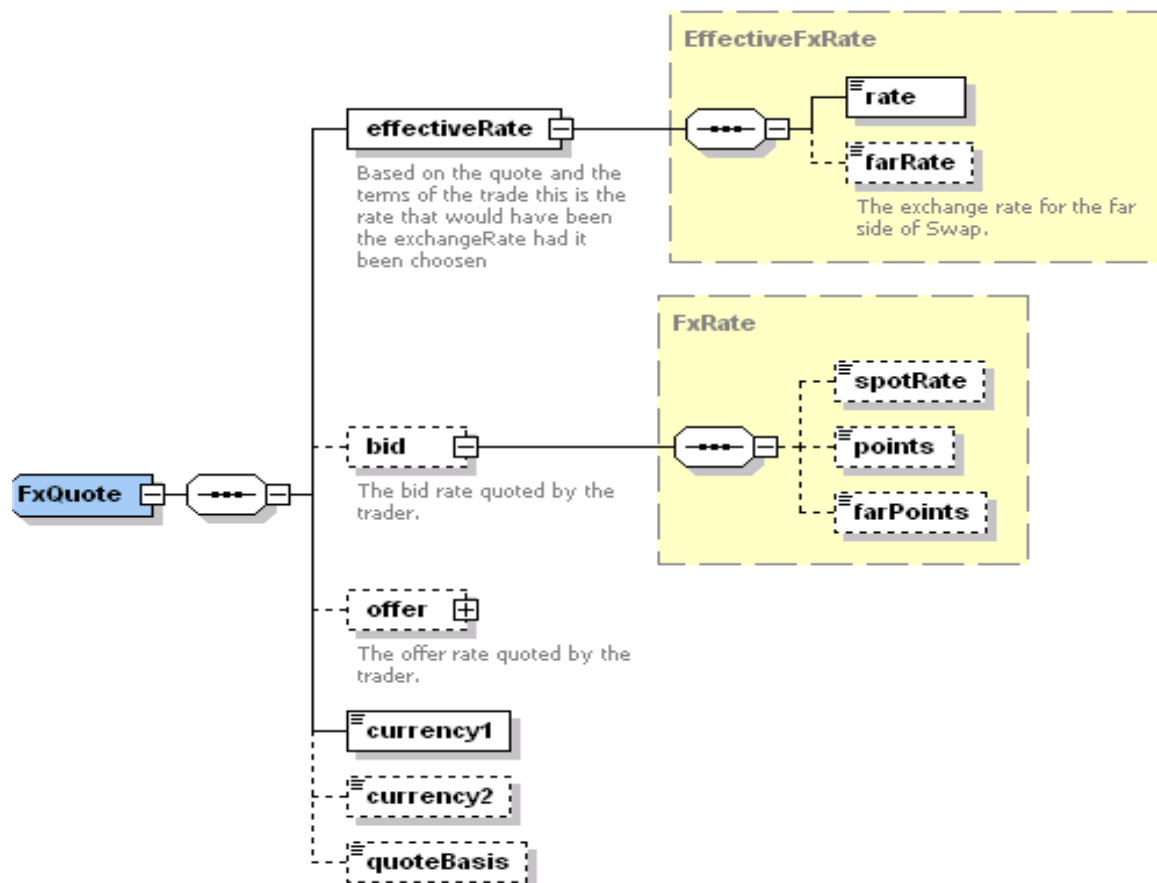
4.5.1 Quote

Each quote has a timestamp (element date) and the effectiveRate used for this deal. If two-way prices were received then both the bid and offer price will be included. Each instrument class has a different type of quote presentation as the following diagram illustrates.



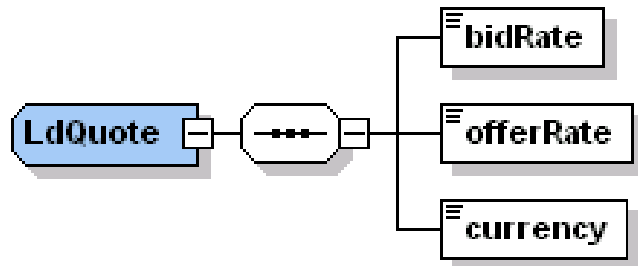
4.5.1.1 FxQuote

For FX deals this is the format.



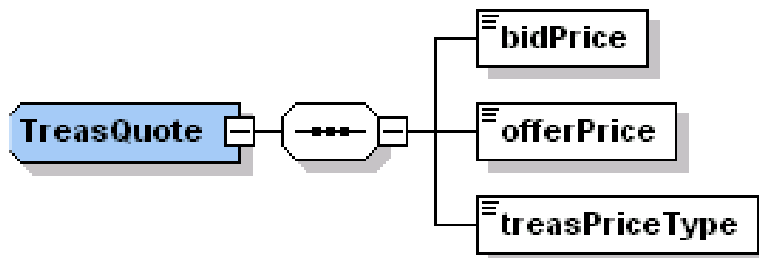
4.5.1.2 LdQuote

If a loan/deposit is the target, then the following quote structure is used. The rates are simple decimals.



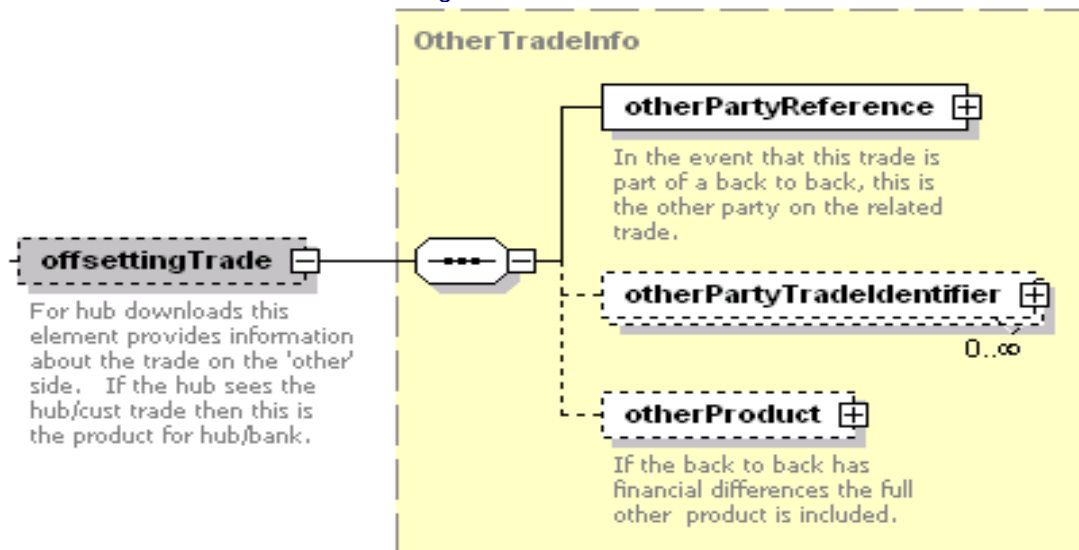
4.5.1.3 Treasury Quote

For treasuries the price type can be one of three: Price, Yield or Discount.

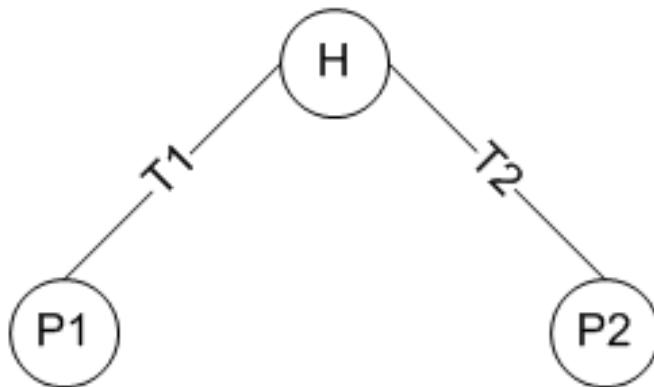


4.6 Offsetting Trade

The final element in trade is OffsettingTrade.



The OffsettingTrade type contains three elements: otherPartyReference, otherPartyTradeIdentifier and otherProduct. OffsettingTrade will be included for any hub or prime broker download. The diagram below illustrates which party is identified as an 'otherPartyReference.'



In this picture, if T1 is the primary trade being reported then P2 is the 'other' party. The otherPartyReference element identifies P2.

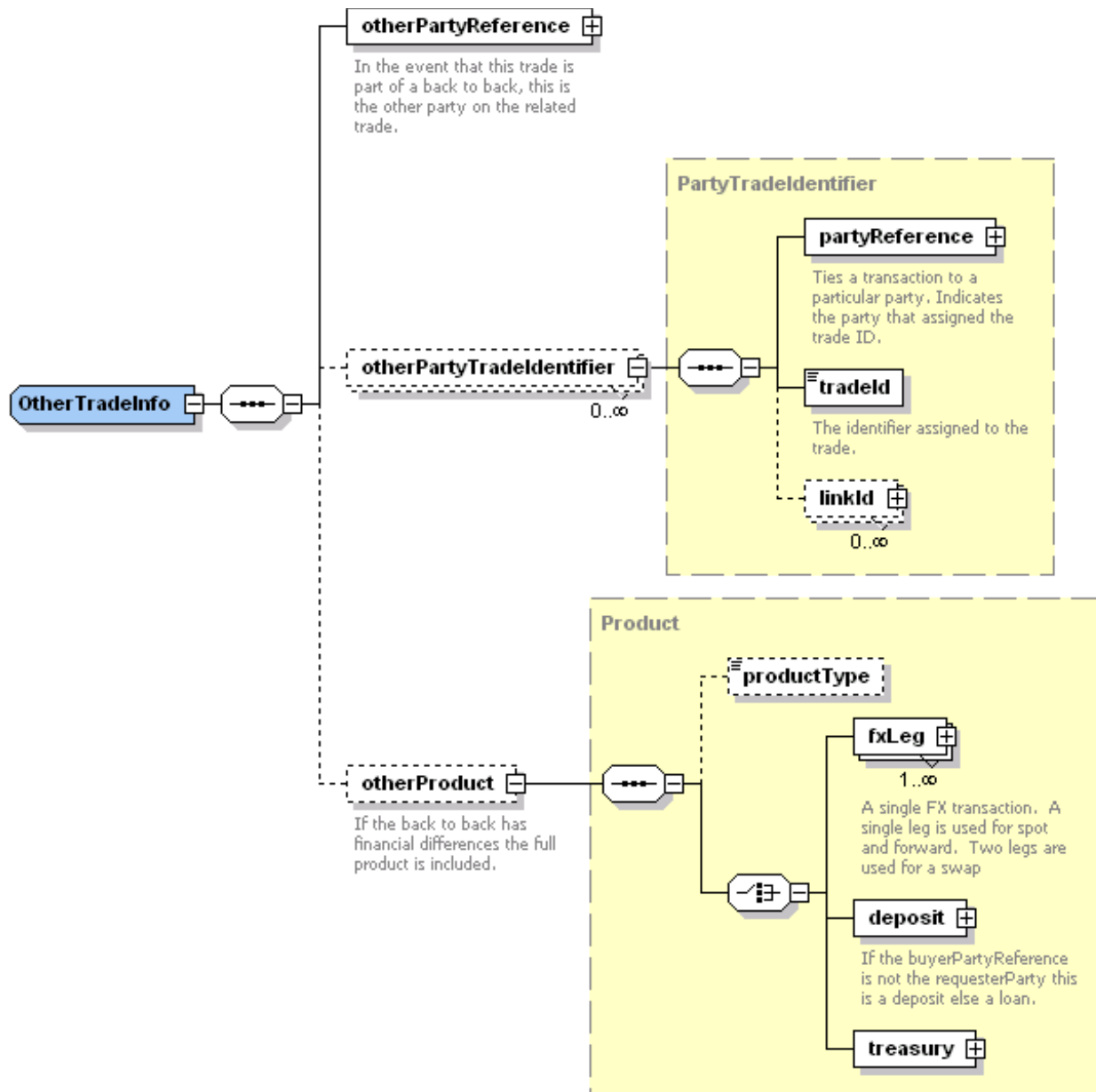
T2 has a collection of trade identifiers including the Currenex ID together with id's that may be provided by party H or party P2. These are included in otherPartyTradeIdentifier elements.

The final element included in otherProduct is the full product definition for trade T2. This is only included if T1 is financially different from T2.

If the downloader is a prime broker then the financials on the 'other' trade are identical to the primary download trade. For this reason otherProduct will be absent in this scenario.

If the downloader is a hub, then there is a possibility that the other trade has some financial differences. If this is the case then the entire product for the other side is included.

The design covers all instrument types including treasuries.



5 EXAMPLES

5.1 Spot

party (4)

id	typedPartyId
1 Currenex_X	typedPartyId partyId Currenex partyIdType Currenex
2 test_c4_C	typedPartyId partyId test_c4 partyIdType Currenex
3 test_b1_B	typedPartyId partyId test_b1 partyIdType Currenex
4 test_c4_B	typedPartyId partyId test_c4 partyIdType Currenex

trade

tradeHeader

partyTradeIdentifier (2)

partyReference

1

partyReference

href

test_c4_C

partyReference

2

partyReference

href

Currenex_X

tradeId

A200824701SJV00

tradeDateTime

2008-09-03T11:50:36Z

tradeDate

2008-09-03

tradeStatus

DONE

trader (2)

partyReference

1

partyReference

href

test_c4_C

partyReference

2

partyReference

href

test_b1_B

userId

test_c4u2

userId

whs_test_b1

subFund

test_c4SF0

partyRole (4)

partyReference

1

partyReference

href

test_c4_C

partyReference

2

partyReference

href

test_b1_B

partyReference

3

partyReference

href

test_c4_C

partyReference

4

partyReference

href

test_c4_C

role

Taker

role

Maker

role

Downloader

role

Agressor

tradeRequest

requesterPartyReference

href

test_c4_C

fxRequest

buySell

SELL

specifiedMoney

currency

EUR

amount

200000.00

againstCurrency

USD

tenor

period

SP

deliveryType

DEL

comment

Test is a test!!

pricingType

REQUEST

product

product	productType	SP
	fxLeg	
	cashFlow1	
		currency USD
		amount 288400.00
		buyerPartyReference
		href test_c4_C
	cashFlow2	
		currency EUR
		amount 200000.00
		buyerPartyReference
		href test_b1_B
	valueDate	2008-09-05
	exchangeRate	
		currency1 USD
		currency2 EUR
		quoteBasis currency1percurrency2
		rate 1.44200000
		spotRate 1.44200000
		points 0.00000000
quotes	tradeQuote	
	trader	
		partyReference
		href test_b1_B
		userId whs_test_b1
	winningQuote	
	date	2008-09-03T00:00:00Z
	quote	
		fxQuote
		effectiveRate
		rate 1.44200000
		bid
		spotRate 1.44200000
		currency1 USD
		currency2 EUR
		quoteBasis currency1percurrency2

5.2 Outright

party (4)	
id	typedPartyId
1 Currenex_X	typedPartyId
	partyId Currenex
	partyIdType Currenex
2 test_c2_C	typedPartyId
	partyId test_c2
	partyIdType Currenex
3 test_b2_B	typedPartyId
	partyId test_b2
	partyIdType Currenex
4 test_c2_B	typedPartyId
	partyId test_c2
	partyIdType Currenex
trade	
tradeHeader	
partyTradeIdentifier (2)	
partyReference	
1	partyReference
	href test_c2_C
2	partyReference
	href Currenex_X
	tradeId 520082699dt116
	tradeId A2008235008N500
tradeDateTime	2008-08-26T16:24:58Z
tradeDate	2008-08-27
tradeStatus	DONE
trader (2)	
partyReference	
1	partyReference
	href test_c2_C
2	partyReference
	href test_b2_B
	userId test_whs
	userId whs_b_2
subFund	test_c2
partyRole (4)	
partyReference	
1	partyReference
	href test_c2_C
2	partyReference
	href test_b2_B
3	partyReference
	href test_c2_C
4	partyReference
	href test_c2_C
	role Taker
	role Maker
	role Downloader
	role Aggressor
areDefinedField...	false
tradeRequest	
requesterPartyReference	
	href test_c2_C
fxRequest	
buySell	SELL
specifiedMoney	
	currency EUR
	amount 3000000.00
againstCurrency	USD
tenor	
	period 1W
deliveryType	DEL
comment	comment
pricingType	REQUEST
product	

▲ product	() productType		OR
	▲ fxLeg		
	▲ cashFlow1		
	() currency		USD
	() amount		4416300.00
	▲ buyerPartyReference		
	= href		test_c2_C
	▲ cashFlow2		
	() currency		EUR
	() amount		3000000.00
	▲ buyerPartyReference		
	= href		test_b2_B
	() valueDate		2008-09-05
	▲ exchangeRate		
	() currency1		USD
	() currency2		EUR
	() quoteBasis		currency1percurrency2
	() rate		1.47210000
	() spotRate		1.47200000
	() points		0.00010000
▲ quotes	▲ tradeQuote		
	▲ trader		
	▲ partyReference		
	= href		test_b2_B
	() userId		whs_b_2
	() winningQuote		
	() date		2008-08-26T00:00:00Z
	▲ quote		
	▲ fxQuote		
	▲ effectiveRate		
	() rate		1.47210000
	▲ bid		
	() spotRate		1.47200000
	() points		0.00010000
	() currency1		USD
	() currency2		EUR
	() quoteBasis		currency1percurrency2

5.3 FX Swap

tradeHeader	
partyTradeIdentifier (2)	
partyReference	tradeId
1 partyReference	Block28
2 partyReference	A200819600HA900
tradeDateTime	2008-07-22T10:25:41Z
tradeDate	2008-07-22
tradeStatus	DONE
trader (2)	
partyReference	userId
1 partyReference	direct_c4u2
2 partyReference	direct_b4u2
subFund	direct_c4
partyRole (4)	
partyReference	role
1 partyReference	Taker
2 partyReference	Maker
3 partyReference	Downloader
4 partyReference	Agressor
tradeRequest	
requesterPartyReference	
fxRequest	
buySell	BUY
specifiedMoney	
currency	AUD
amount	2000000.99
againstCurrency	CAD
tenor	
valueDate	2008-07-28
farTenor	
period	1M
farAmount	2000000.99
deliveryType	DEL
comment	test
pricingType	REQUEST

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5.4 Treasury

party (4)	
id	typedPartyId
1 Currenex_X	typedPartyId
	partyId Currenex
	partyIdType Currenex
2 mgopalakrishnanxp_C4_C	typedPartyId
	partyId mgopalakrishnanxp_C4
	partyIdType Currenex
3 mgopalakrishnanxp_PB_0_B	typedPartyId
	partyId mgopalakrishnanxp_PB_0
	partyIdType Currenex
4 mgopalakrishnanxp_C4_B	typedPartyId
	partyId mgopalakrishnanxp_C4
	partyIdType Currenex
trade	
tradeHeader	
partyTradeIdentifier (2)	
partyReference	tradeId
1 partyReference	mgopalakrishnanxp_c4_u01219782751899
	href mgopalakrishnanxp_C4_C
2 partyReference	A200823903K4T00
	href Currenex_X
tradeDateTime	2008-08-26T13:32:31Z
tradeDate	2008-08-26
tradeStatus	DONE
trader (2)	
partyReference	userId
1 partyReference	mgopalakrishnanxp_c4_u0
	href mgopalakrishnanxp_C4_C
2 partyReference	mgopalakrishnanxp_pb_0bu0
	href mgopalakrishnanxp_PB_0_B
subFund	mgopalakrishnanxp_C4SF0
partyRole (5)	
partyReference	role
1 partyReference	Taker
	href mgopalakrishnanxp_C4_C
2 partyReference	Maker
	href mgopalakrishnanxp_PB_0_B
3 partyReference	Hub
	href mgopalakrishnanxp_PB_0_B
4 partyReference	Downloader
	href mgopalakrishnanxp_C4_C
5 partyReference	Agressor
	href mgopalakrishnanxp_PB_0_B
tradeRequest	

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tradeRequest	
requesterPartyReference	href mgopalakrishnanxp_C4_C
treasRequest	buySell BUY
treasInstrument	treasTenor 30Y
	treasState OLD
	cusip 912810PT9
	parAmount 1000.00
pricingType	ESP_ORDER
product	
productType	TREAS
treasury	treasInstrument
	treasTenor 30Y
	treasState OLD
	cusip 912810PT9
	parAmount 1000.00
	maturityDate 2037-02-15
	coupon .0475
	treasuryPrice
	price 97.31000000
	settlement
	settlementDate 2008-08-27
	principal 973.10
	accruedInterest 0.88

6 APPENDICES

6.1 Revision history

Revision Number	Revision Date	Page Number	Update
1	09 October 2008	*	Initial Draft
2	15 October 2008	*	Add Examples
3	05 July 2013	*	Format updated
4	28 April 2015	4	Added Section 2: Message Ordering .

6.2 Document Reviewers/Approvers

Name	Role	Rev. / App.
Sean Gilman	CTO	Approver
Tom Zikas	Product Management	Approver
Harsha Bhat	Development	Reviewer
Uri Leman	Product Management	Reviewer