

1 Purpose and Scope

This document defines set of thinkpipes parameters that external applications can retrieve from thinkpipes client application via DDE interface. It also specifies the details of DDE items format.

2 General Approach

Thinkpipes client application serves as DDE server allowing for any DDE client to connect and start pulling live data. Application provides quotes, instrument profile and other market data as well as position (portfolio) parameters. Any data is available in DDE as long as it is displayed in the application GUI with respect to applied filters and other settings.

Per DDE standard, every data object provided by server is identified by *Application*, *Topic* and *Item*, where *Application* identifies the source of data, *Topic* is associated with data type and *Item* is used to identify the object itself. Note that all three parts are case-sensitive.

Thinkpipes application uses '**Liquid**' as *Application* identifier for all data items. *Topic* and *Item* depend on particular data objects and are defined below.

3 Instrument Data

Instrument related parameters are provided with **parameter name** as *Topic* and **instrument symbol** as *Item*. For example, current volatility of Microsoft stock price is posted with Application=Liquid, Topic=Volatility, Item=MSFT.

The following parameters (Topics) are available for every instrument.

	Topic	Description
1	Bid	Bid price
2	BidSize	Bid size
3	BidExch	Bid source exchange
4	Ask	Ask price
5	AskSize	Ask size
6	AskExch	Ask source exchange
7	Last	Last trade price

8	Net	Net change
9	High	Day high price
10	Low	Day low price
11	Open	Open price
12	Close	Close price
13	Beta	Beta coefficient
14	ModelBeta	Beta coefficient in custom model
15	Volume	Trade vloume
16	Description	Instrument description string
17	Volatility	Current volatility
18	Delta	Instrument delta
19	Gamma	Instrument gamma
20	Theta	Instrument theta
21	Vega	Instrument vega
22	Rho	Instrument rho
23	Strike	Option strike price (available for options only)

4 Position Data

Position related parameters are provided with **parameter name** as *Topic* whereas *Item* is identified by **account number**, user **firm code** and position **symbol** separated by # sign.

For example, size of Dell position on account 987654 in firm 'abc' is posted with *Application=Liquid, Topic=PositionQty, Item=987654#abc#DELL*.

The following parameters (*Topics*) are available for every position.

	Topic	Description
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1	PositionQty	Position size (quantity of shares/contracts)
2	PositionCostBasis	Position cost basis (opening average price)
3	PositionTheo	Position theoretical price
4	PositionDelta	Position delta
5	PositionGamma	Position gamma
6	PositionTheta	Position theta
7	PositionVega	Position vega
8	PositionRho	Position rho

5 Notes About DDE Usage in Excel

DDE *Items* posted by thinkpipes server may contain special characters like whitespaces or slashes (used in instrument symbols, account names and firm codes). Entered as part of DDE link, these characters may be mistreated by Excel and result in incorrect link. In order to prevent this problem the whole *Item* name should be enclosed in single quotes.

For instance, if user wants to get quantity of position on MSFT Jan 2011 30.0 call , on account acc123 in firm NewCompany, Excel formula should look like
`=Liquid|PositionQty!'acc123#NewCompany#.VMFAF'`