Turquoise Derivatives

BItS Trading Station (BTS) USER MANUAL

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1   Getting Started

1.1   Application Layout

When launching the Bit Trading Station application, a System Login window pops up where **Username**, **Password** and **Member Code** must be entered in order to authenticate.
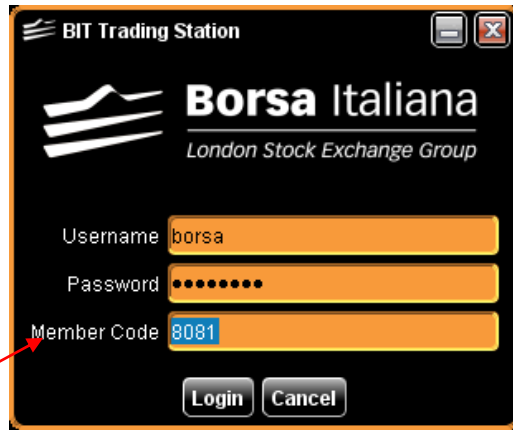
System Login

Once the user has logged in, the **Bit Trading Station** top-level tool bar appears with all available Menus and the virtual desks.

It is possible to have always the tool bar on top of the screen by clicking the 🔴 button.   Menu Bar

Virtual
Desks

The **Bit Trading Station Multi Market Client** main window can be functionally divided into two sections:

o   **Menu Bar**

o   **Virtual Desks** (six by defaults)

The tool bar menus are (depeding on the user's profile): **Session, Market Information, Quoting, Trading, Supervision, Post Trade Transparency, Pricing, Tools, View.**

1.2   User Login and Password Management

Once a new user's account has been created by the System Administrator a username and password are provided to the user. By default, a password related to a new user's account is created with a temporary validity, therefore when the user accesses the **Bit Trading Station Multi Market Client** platform for the first time is asked to change the password. Moreover, a password can be configured to expire after a given number of days, or alternatively it may have no expiration date. When it has expired, the user is asked to enter a new password.

1.3   Default Set Up

It's possible to set some trading default settings by opening the Default Set Up menu from the **Trading Manager window, Configuration** sub-menu. In this window all the default parameters and checks applied to the trading activity are grouped. The window is composed by three different tabs:

➢ Tab "**Default Values**": in this tab it is possible to set at market or instrument level the buy/sell order default values;

➢ Tab "**Order Set-up**": in this tab it is possible to set specific default behaviour in handling the order entry window, such as message confirmations before submitting transactions or the mosue location when a new order entry or order modification window is opened;

➢ Tab **Confirmation**: in this tab it is possible to set additional message of confirmation in case order prices or quantity exceeds specified thresholds;

1.4   Virtual Desks

In **Bit Trading Station** the term Virtual Desk is meant as the set and lay-out of the windows working at the same time on the screen. Right Clicking on a Virtual Desk button is possible to rename it according to the user preferences.

1.4.1   Saving a Desk

In the application it is possible to save up to 6 different virtual desk. In order to save the displayed **Desk** lay-out, it is needed to select from the menu **Session** on the main bar the option **Save Current Desktop**. The selection of the option "**Save All Desk Layouts**" allows to save not only the currently working Desk but also all the changes and set-up applied in the other other virtual Desks not currently opened. When the user logs-out from the application, in case there are unconfirmed changes on any of the virtual Desks, a pop-up message is displayed asking if the changes have to be saved or discarded.

1.4.2   Restoring the last saved Desk

It possible to restore the lay-out of the working Desk to the last saved thanks to the option "**Reload Desk**" included in the **Session** menu

1.4.3   Moving a window from one virtual desk to another

It is possible to move a window from a virtual Desk to another one. This action can be carried out in two different ways:

1- From the individual window, clicking on the **Virtual Desk** icon located on the upper right side and checking the destination desk from the check list combo;

2- From the **Screen Manager** window, available in the **View** menu of the main bar. The **Screen Manager** window is made up by two frames: the left-side tree shows a list of tool sets available to the user, whereas the right pane displays all the windows and the desks they are bound to.

An existing window can be moved from one desk to another via the Screen Manager; after selecting a window in the right-hand pane of the window, its desk can be changed by clicking on the Desk field and selecting the new desk from the combo-box.

Application Layout Handling

Right clicking on the header of columns, an options list pops-up showing the functions available for adjusting the settings of the displayed information.

The following functions are available:
- Sort Asc
- Sort Desc
- Columns
- Colors
- Font
- Format
- Highlights timeout
- Buy/Sell/prices
- Select
- Export to Excel

1.5.1 Column Sorting

Columns can be sorted clicking on the **Sort Asc/Sort Desc** options. After having sorted a column, a triangle symbol appears on the right hand of its header.

The applied sorting can be removed right clicking on the header of the sorted column and selected the item **Remove Sort** from the options list.

Sorting can be applied on multiple columns: in this case the hierarchy among the sorting criteria is given by the time priority of the setting: on each sorted column is indicated (within the triangle symbol) the priority of the criteria applied among the columns.

1.5.2   Columns

From the sub-menu **Columns** it is possible to carry out the following functions:

- **Hide Columns**: allows to hide the selected column;
- **Customize**: allows to recover the hidden columns and to shift the positions of the columns (in alternative to the Drag&Drop);
- **Autofit Column**: resizes the column length on the basis of the contained data;
- **Autofit All Columns**: resizes all the columns length on the basis of the contained data;
- **Sort (Asc/Desc)**: organizes columns

1.5.3   Other functions

Other available functions which can be accessed through the settings pop up are:

- **Colors Background**: Sets row background colour based on market or data availability,instrument status,price,movements etc
- **Colors Foreground**: Sets row text colour based on market or data availability,instrument status etc
- **Font**: Sets font size;
- **Format**: Column values formatting (i.e. number of decimals displayed etc)
- **Buy/Sell Prices:** Sets Buy/Sell ' one Click' order entry properties
- **Highlights Timeout**: Status change blinking duration
- **Select:** Allows to select automatically all the rows that match the search condition
- **Export to Excel**: exports selected rows to an Excel file

1.6   Drag and Drop

This version of the client introduces a pervasive implementation of the **Drag&Drop** mechanism. Specifically, the user can drag and drop (individual or multiple selected instruments) from and to the following windows:

- from **Dictionary**, **Ticker** and **Trading Manager** (Orders and Trades pane) to **Price** Info watchers;
- from **Price Info** watchers to **Flex Combination**;
- from the **Price Info** watchers to the **Tickers**;
- From one **Price Info** watcher to another watcher;

Furthermore the **Drag&Drop** can be used for:
- shifting the position of the columns in all the windows;
- moving rows up and down in the **Price Info** Watcher pane and **Quoting** window

2   Market Data

2.1   Price Info

The **Price Info** window displays real-time market data for a set of financial instruments or indices select-ed by the user and allows order entry as well. The **Price Info** window can be opened by selecting the corresponding command in the Market Information menu . The window is made up by six four sec-tions/areas: **Instrument Selector**, the **Watcher** panes, two **Market** (Prices and Orders) **Depth** panes, the embedded **Ticker**, and the **Orders Entry** pane.

2.1.1   Instrument Selector

The **Instrument Selector** allows to select single or multiple instruments according to the criteria entered in the parameters set. The set of the selection parameters is the following:

- **Type**: contains the list of the asset type currently managed by BTS. The Asset Type parameter is mandatory for carrying out the multiple selection and drives the enabling of the following pa-rameters (i.e. Underlying, Expiry and Issuer);

- **Market**: contains the list of available markets belonging to the selected asset type;

- **Instrument**: contains the list of all the instruments included in the BTS dictionary. In case a market has been selected, the instruments list refers only to that specific market. Multiple se-lection can be performed using the * character;

- **Currency**: contains the list of all the currencies managed by BTS;

- **Expiry**: contains the list of the available expiration for the Asset Type/Market selected. This op-tion is enabled only if a congruent Asset Type (i.e. Derivatives, Bond etc) has been selected;

- **Issuer**: contains the list of all the available Issuers for the Asset Type/Market selected. This op-tion is enabled only if a congruent Asset Type has been selected;

After having filled the **Instrument Selector** parameters, clicking on the **Add** button all the instruments meeting the chosen criteria are entered in the selected Watcher pane. Alternatively, clicking on the **Clear** button, the values entered in the selection parameters are set to blank. Clicking on the orange double arrows button placed above the Selector, the parameters are hidden allowing to save room for displaying more information in the watcher pane.

2.1.2 Watchers

Real-time market data for the contracts selected is displayed in the **Watcher** pane. The default **Watcher** layout can be modified via the drag and drop mouse function. Each single column can be moved inside the Watcher by first placing the mouse cursor on its title bar, clicking the left mouse button and then dragging the selected column to the new position. Furthermore each row can be dragged and dropped within the **Watcher** pane in order to sort the displayed instruments according to the preferences of the user: this feature is available only if no columns has been ordered using ascending/descending sort function,
New Panes can be added to the **Watcher** area by selecting the New Pane option in the **Configuration** menu of the **Price Info** window.

2.1.3 Price Depth/Orders Depth and Ticker Pane

Price Depth/Orders Depth panes shows the aggregated orders by price level/disaggregated orders by time priority for the selected instrument in the Watcher pane
The **Ticker** pane displays real-time data related to all trades executed in one or more markets, also taking into account OTC trades and block trades. **Markets** to be monitored via the **Ticker** window can be selected using the **Markets** option in the **Configuration** menu or through the white arrow in the upper-left corner. Clicking on the funnel icon (red circled in the picture below), the list of trades is filtered according to the selected instrument in the watcher pane.

In order to remove the filter it is sufficient to click again on the funnel icon.
The instruments listed in the **Ticker** can be dragged and dropped into the selected Watcher pane in order to display the related market book.

2.1.4 Order Entry pane

The **Order Entry** pane allows to specify the main parameters characterizing a specific order. Parameters not present in the pane are filled with the default values set in the **Default Set Up** window (included in the **General Settings** menu).
Orders parameters change according to the instrument selected in the Watcher. Clicking on the bid/ask price of the instrument the field price is filled with the clicked price value in the **Order Entry** pane, while clicking on the bid/ask quantity both price and quantity fields are filled.

2.2 Derivatives Price Info

The **Derivatives Price Info** window gives a compact view of all the derivative instruments linked to the same underlying instrument or index. A tray which is created for each underlying will contain three panes: **Underlying**, **Futures** and **Options**.

Several trays can be opened inside the same **Derivatives Price Info** window for different underlying instruments.The **Derivatives Price Info** window can be opened by selecting the corresponding command in the **Market Information** menu.

Select the underlying instrument or index through the **Ctrl+LeftMouseClick** command on the corresponding tab , the three above-mentioned panes will be displayed: the **Underlying** and **Futures** panes will be already receiving real-time data from the corresponding markets, whereas for the **Options** one or more expiry dates are to be picked up from a selection list.

Options panes for different expiry dates can be added to the current tray in two different ways:

- through the **Show Expiry Date Pane**, in this case a multiple selection list will pop up with the remaining expiry dates which the user can select to open one or more option panes

- through the **Add Expiry Date Pane**, in this case one pane will be added to the existing ones and the user can assign an expiry date through the **Ctrl+LeftMouseClick** command on the corresponding tab

Futures and **Options** panes can be-resized or moved inside the tray related to an underlying instrument, whereas the fields related to the underlying instrument are locked in the top part of the tray.

An embedded **Order/Price Depth** window can pop up for each derivative instrument in the Futures or Options pane by right-clicking on the corresponding row and selecting **Order/Price Depth** command.

The settings pop up is visualized by right clicking the mouse on the columns header whereas right clicking on the menu bar makes it possible to insert the items which constitute each menu. Columns position can be shifted through the drag and drop mechanism.

2.3   Market Statistics

The **Market Statistics** window which can be opened by selecting the corresponding command in the **Market Information** menu. It consists of two panes: **Markets** (upper) and **Underlyings** (lower).

Market Statistics provides users with a breakdown of market trades sizes for derivatives markets per submarkets and, for each submarket, per underlying instrument respectively in the Markets and Underlyings panes.For each sub-market or instrument the following sizes are displayed:**Total**,**Call Options**, **Put Options**, **Futures**, **Other**; grand totals are calculated at the bottton of each pane.

The full list of **sub-markets/underlyings** can be reduced by applying a filter that can be defined by entering a string in the text field of the title bar. After entering a string and pressing the filter button, the list is filtered to contain only those **sub-markets/underlyings** the name of which matches the filter string, filters can be saved as well.

2.4   Order Entry window shortcuts

It is possible to use pre-defined keys for quickly activating the Order Entry window as a separate window. Specifically, the available shortcuts are the following:

Action	Shortcuts
Buy Order	**F5**
Sell Order	**F9**
Order (Buy and Sell)	**F7**
Cross Order	**F6**
Flex Combination	**F11**
New TO (Stop Order)	**Shift+F7**

2.5   Dictionary

The **Dictionary** window displays reference data of all financial instruments and indices currently tradable in all the markets available to the user. Data is organized according to specific markets.
The **Dictionary** window can be opened by selecting the corresponding command in the Configuration menu of the **Price Info** window or from the following information windows: **Trading Conditions**, **Order/Price Depth, Instrument Summary, Technical Analysis, Strategy, Order Entry** pane.
The **Dictionary** window is made up by a selection area and two frames: the left-side tree shows all the markets available to the user, whereas the right pane displays data for all instruments available in the selected market.

Once a market has been selected a list of all financial instruments and indices populates the righ-side pane. By double-clicking one market a list of submarkets is shown below the market entry, the list of financial instruments in the right pane is further on restricted moving to lower knots.

The settings pop up is visualized by right clicking the mouse on the columns header whereas right clicking on the menu bar makes it possible to insert the items which constitute each menu. Columns position can be shifted through the drag and drop mechanism.

2.6   Order/Price Depth

The **Order/Price Depth** window displays market depth and related real-time/static info for the selected instrument. The **Order/Price Depth** window can be opened by selecting the corresponding command in the **Market Information** menu of the top-level tool bar.
The window is made up by a selection area and four frames: **Market Depth**, **Orders**, **Info** and **Last 5 Trades**.The Market Depth area is placed under the menu bar and displays the best five Bid and Ask prices in real-time mode by price level (Price Depth) or by order entry (Order Depth). The Orders area and Last 5 Trades can be added by righ clicking on a header and selecting ShowView menu. All areas can be moved around the window.

2.7   Ticker

The **Ticker** window displays real-time data related to all trades executed in one or more markets, also taking into account OTC trades and block trades.Each new trade will be shown in the first row of the window table:at any time a system-defined maximum number of trades will be made available to the user. The Ticker window can be opened by selecting the corresponding command in the **Market Information** menu. As soon as a new market has been selected in **Configuration** menu, the last trade will be displayed.
Data flow for a given market will stop as soon as it gets removed from the set of active markets selected from the **Configuration** – Market menu.

Selection criteria of the trades to be shown in the **Ticker** window can be configured from the pane activated with the **Filter** command in the **Configuration** menu.

The trades displayed in the **Ticker** table can be filtered by entering one or more instruments (separated by semicolon) in the Filter field. Instruments can be entered in the **Filter** field also using the drag and drop functionality (for instance dragging an instrument from the Orders section from the **Trading Manager** and dropping it in the **Ticker** Filter field)

Fast filters can also be activated by right clicking on the column header and selecting the option **Quick Filter.**

2.8   Intraday

The **Intraday** window displays daily trades executed in a given market for a selected instrument. Data is not retrieved from the market but is stored in the application database. Since this is a query based window, data can be refreshed by selecting the Refresh command in the **Configuration** menu.

The user can display data listed inside the Intraday window by filtering them. It is possible to display the **Filter** pane of the **Intraday** window by selecting the **Filter** command in the **Configuration** menu.

Each filter must be enabled before entering the suitable settings for its use. The Intraday window can be filtered via: **Trade Price, Trade Size, Trade Time, Trade Type**.

Data can be extracted from the **Intraday** Table and copied into an Excel spreadsheet

The settings pop up is visualized by right clicking the mouse on the columns header whereas right clicking on the menu bar makes possible to insert the items which constitute each menu. **Columns** position can be shifted through the drag and drop mechanism.

3   Trading

3.1   Trading Manager window

The **Trading Manager** window allows to perform all trading operations. It shows orders and trades for a single market, which can be selected via the Markets options in the **Configuration** menu. Several **Trading Manager** windows can be opened for one or more markets.

Depending on the functionality level set for the group the user belongs to the **Trading Manager** window displays only the orders and trades related to the user (functionality level: operator) or all the orders and trades of all users belonging to the same member (functionality level: member).

The **Trading Manager** is made out of three sections: **Orders** (upper**), Trades** (middle) and **Position Keeping** (lower).

3.1.1   Order Management Section

The **Orders** Section shows all orders, triggered orders and cross orders entered by the user (or all users of the member, depending on the functionality level) into the selected market. Each order is shown as a single row marked with its most recent status. Right clicking on a selected order row an options list pops-up.

Clicking on the items of the list the following actions can be performed:

- **Modify**: allows to change price and size of the order entered

- **Remove:** cancels order form the market and orderbook

- **Deactivate:** cancels order from market but keep it on orderbook in "inactive" status

- **Duplicate:** proposes a new order entry window filled with the same values of the selected order;

- **Show History**: displays the history of the selected order;

- **Order/Price Depth**: opens the Order/Price Depth window for the instrument of the select-ed order;
- **Outbound Hand-Over:** allows an user to transfer the control of its own order to another company user;

3.1.2   Trades Section

The **Trades Section** shows all trades executed from orders, cross orders and double quotations entered by the user (or all users of the member,depending on the functionality level) into the selected market.

3.1.3   Position Keeping Section

The **Position Keeping** Section is located below the **Trades** section of the **Trading Manager** window.This area displays the trader's position and Profit&Loss (if the functional level is operator) or the company's position and Profit&Loss (if the functional level is member), depending on the functionality level set for the trading tool. The positions are aggregated according to different criteria, generating the following views:

- Clearing Instruction (IDEM specific);
- Customer;
- Portfolio;
- User;
- Market;
- Instrument;

The settings pop up is visualized by right clicking the mouse on the columns header whereas right click-ing on the menu bar makes it possible to insert the items which constitute each menu. Columns posi-tion can be shifted through the drag and drop mechanism.

3.2   Cross Order

This function can be used to match two orders of opposite side for different accounts within the same member without exposing them to the market.
A **Cross Order** entry window can be opened by:
- right clicking in the watcher pane area of the **Price Info** window or, alternatively, pressing the key button **F6** on the keyboard, after having selected one instrument;
- selecting the **Cross** item in **Orders** menu of the **Price Info** window;

3.3   Flexible Combination Order (Flexco)

Flex Combination (**Flexco**) are available on derivatives market only and provide a mechanism to create and trade combinations of financial instruments (currently up to 2), usually defined as legs, from the same market. Once a **Flexco** has been defined it is forwarded to the market where it acquires a standard name. The **Flexco** can be traded as a new financial instrument and all trading and watching operations are allowed on it.
A **Flex Combination** entry window can be opened by:
- right clicking in the watcher pane area of the **Price Info** window or in the Futures/Options panes of the **Derivatives Price Info** window and selecting the item **Flexco** from the proposed

options list (or, alternatively, pressing the key button **F11** on the keyboard, after having selected one instrument);

o   selecting the **Flexco** item in Orders menu of the Price Info window;

o   selecting the **Flexco** item in the Orders menu of the Trading Manager window

To create a **Flexco** the user can select 2 legs: for each leg, it's possible to pick up a tradable instrument in the Leg combo box, specify the **Ratio** and add it to the combination by clicking the **Buy Leg** or **Sell Leg** button at the right of the Legs list. The selected legs are displayed under the Leg combo box:the leg sequence doesn't affect the **Flexco** creation.The same leg can't be added twice. Before placing an order on a new **Flexco**, the user can modify the **Ratio/Side** value for one or more legs.The creation of a **Flexco** takes place only when the user enters an order for it.

For Exchange users only:

A new parameter has been added in the Default Set-up parameters (**TM Member**) in which the trader id for the creation of the flexible combination shall be entered.
Thanks to this intervention, the Flexco creation will be carried out using the trader id entered in the TM Member ID and the order creation will use the Member entered in the Member ID combo box available in the Flexco window.

Flexco window is divided into three different sections:

1) Upper section, **Flexco structure**: the first section is about the creation of the **Flexco** structure. In order to create a **Flexco** the user has to choose the two instruments (legs) that will compose the combination. Each leg can be selected according to the following:

    a) By entering the leg name into the instrument box, setting the **Ratio** (default is 1) and then clicking on BUY LEG /SELL LEG button in order to populate the legs box;

    b) By dragging the instrument from the Price Info window (or the Derivatives Price Info or the Instrument Dictionary) and then dropping it into the legs box. In this case the side of each leg is set by default to "BUY"and ratio 1: after the dropping the user can change the side selecting the leg and then clicking on "SELL LEG". Ratio can be changed as well, selecting the leg, modifying the Ratio and then confirming the leg side

    When the instrument is added to the legs box, automatically the real time market information is displayed (best bid/ask).

2) **Strategy Market Implied Price** (middle section): the second section displays the market implied spread price (if existing) for the strategy (**the two fields are NOT editable**).

    a) If the current market implied spread price is positive the PAY field is populated (i.e. the market is on bid for immediately executing one lot of the strategy);

    b) If the market implied price is negative the CASH field is populated (i.e. the market is on offer for immediate execution of one lot of the strategy)

    The strategy market implied spread is updated real-time according to the change of the best bid/offer of the individual instruments composing the combination

3) **Strategy Order** (lower section): the third section of the window is about the order parameters that will be entered on the combination once created.

    a) Price: this is the spread price requested by the user for trading the strategy: this field allows values positive or equal to zero;

    b) **PAY / CASH** buttons:

        –   if the **PAY** button is clicked, the user is wants to pay the specified price for trading one lot of the created strategy;

- if the **CASH** is clicked, the user wants to get at least the specified price for trading one lot of the created strategy

After the PAY/CASH button is clicked, the system requires the user to confirm the strategy creation and then the ID of the new strategy is displayed in the Created Flexco box. The new synthetic instrument can be dragged from here to the Price Info, in order to display the instrument book.
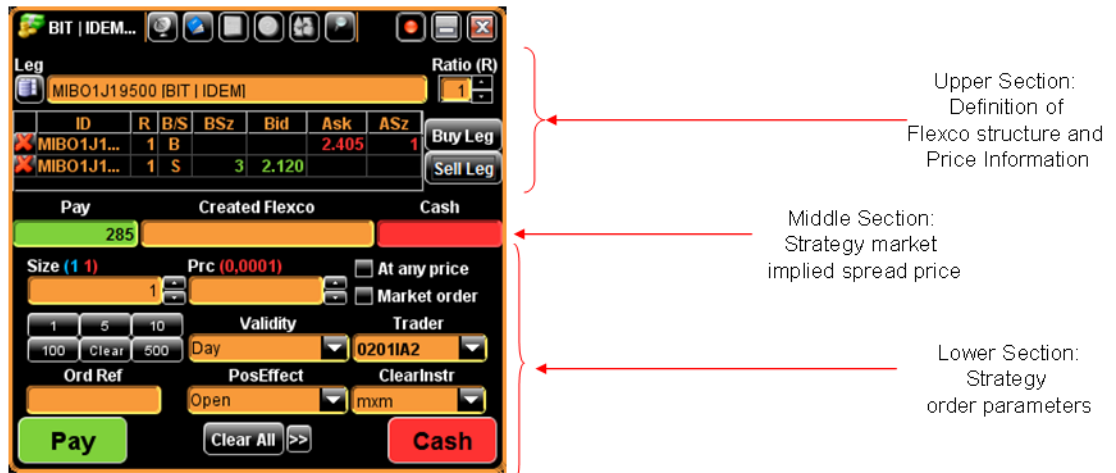
3.4   Care Order Management

The **Care Order Manager** is a multi-market window showing the user's own care orders.The **Care Order Manager** consists of a **Menu Bar** and a **Care Orders** Area.
Depending on the functionality level (operator or member) of this window set for the group the user belongs to the **Care Order Manager** window displays only the care orders related to the user (function-ality level: operator) or the care orders of all users belonging to the same **member** (functionality level: member).

The **Care Orders Area** is located under the **Care Order Manager** window tool bar. It displays all care or-ders entered by the user.The Care Order Area is made up by multiple rows [Care Orders] structured as a two-level hierarchical tree. By clicking the icon placed at the left-side of each parent order the tree opens up, thus showing all related child order(s).

It is possible to create one or more **Child Orders** withouth exceeding the maximum capacity of the **Par-ent order**, by first highlighting a **Parent order** in the Care Orders Area and then selecting the Trade Care Order command in the Trading menu, right clicking the mouse on the specific row or via the [Ctrl-F7] function-key. **Child orders** exceeding the remaining parent order capacity will be rejected by the market. The **Child Orders** created by the user are displayed in the Care Orders Area as a two-level hierarchical tree of the parent order and are sent to the market.

4   Quoting

The **Bit Trading Station** platform provides market makers with a high-performance low-latency envi-ronment for automated quoting of multiple instruments across several markets and/or information pro-viders. Prices can be injected into the Bit Trading Station quoting engine from several sources:

- external pricing engines through either native APIs or the **Bit Trading Station** multicast message bus;

- **algorithmicpath**® service with the embedded **analyticpathpath**® financial library;

- direct market feeds;

- Excel spreadsheets running on any LAN or WAN workstation;

- manual input.

4.1   Auto Quoter

Quoting Manager window allows users to control and monitor single and/or double quotes in multiple markets, after setting them up. Each **Quoting Manager** window consist of two areas: **Quotes** (upper) displaying quotes set up by the user and **Trades** (lower) , showing all Ask or Bid trades related to the highlighted quote. The default **Quoting Manager** window layout can be modified according to the user's needs by clicking the arrows located above the Trades pane in order to respectively maximize the **Trades** and **Quotes** areas or to restore the default layout.
The **Quoting Manager** window can be opened by selecting the **Auto Quoter** command in the **Quoting** menu of the top-level tool bar.

4.2   Excel Data Set Up

The **Excel Data Source Setup** allows the configuration of subscription classes to Excel files and the assignments of a single class to a new data source for the contribution. A subscription class is a set of info identifying data to be sent to the quotation service for an instruments group together with the fields that identify the request Key for the single group instrument.
The **Excel Data Source Setup** window is made up by two **areas**:

- The **Member/User/Class** area on the left

- The **Data Source** area on the right

The **Member/User/Class** tree is made up by multiple rows structured as a two-level hierarchical tree: a root item for the **Member** and one or more Users items, each showing one or more predefined **Classes.** An **Excel Data Source** can be assigned to a specific user's class pressing **New DS** button and then entering the **Data Source** and the Book (.xls file) names, together with the Range data in the corresponding fields.
A **Range** row is made up by multiple fields some of them are of orange colour and identify Key fields. Each configuration can be saved only if data is entered in **Data Source Name**, in the **Book** or in one or more Range fields.

5   Pricing

In order to set up the parameters required for real-time calculations the following functions are provided via the **Pricing** menu of the top-level tool bar:

- Derivatives Settings
- Interest Rate

5.1   Derivatives Settings

Parameters required for real-time calculations can be set up by underlying instrument for all expiry dates or for selected ones, covering futures and options in either case.
The first step of this process is the selection of an **underlying** instrument in a given market, possibly for a specific **expiry date**.

Once an **underlying** instrument has been added to the top table of the **Derivatives Settings** window the following values can be assigned to it:**AdjBid, AdjAsk, OverrideBid,OverrideAsk**.

The form is made up by two panes ie **Options** and **Futures,** with the former including two sub-panes Volatilities and Details.

The **Volatilities** sub-pane allows entering volatility values to be used in the calculation of **theoretical prices** for call and put options. Default values to be applied to all derivatives on the current underlying instrument must be assigned to the GENERAL entry whereas different values can be entered for individual options. A set of commands at the right-hand side allows to assign/modify volatilities by instrument, option type or side.

The **Details** sub-pane is used to select the algorithm to be applied by the **Pricing Service** in order to calculate real-time data for all options on the current underlying instrument and enter all the input values required by the specific algorithm.

The **Futures** pane is used to select the algorithm to be applied by the **Pricing Service** in order to calculate real-time data for all futures on the current underlying instrument and enter the input values required by the specific algorithm.

5.2   Interest Rate

All the algorithms used in real-time calculations require interest rate curves to be defined for the currencies that derivatives instruments are traded in. After selecting a currency by clicking on the corresponding pane tab, users have two options to enter discrete values for interest rate curves:

- Via **Calendar** toolbox and the **Interest Rate** field
- Double-clicking the desired value for a given date directly in the chart pane

The so defined parameters will be graphically displayed in the chart pane of the **Interest Rate** window. Previuously-defined curve values can be subsequently modified via **Calendar** toolbox and the **Interest Rate** field, via drag and drop a specific node along the Y-axis and finally double-clicking above or below a specific curve node along the Y-axis to modify its value.

6   Options Calculator

The **Options Calculator** window can be used for one-off calculation of theoretical price, risk ratios or Greeks and implied volatility for any individual option: theoretical prices will always be calculated using **Black-Scholes, Black 76** and **Binomial AM algorithms**. It is possible to activate this functionality via the Market Information menu of the top-level tool bar by clicking the **Options Calculator** option.The list of values to be entered by the user is displayed in the left section while calculated values will be displayed in the right-hand table of the window after pressing the **Calculate** button.Furthermore a set of new values can be entered after pressing the **Clear** button.

7   Tools

7.1   Authorization Service

The **Authorization Service** can be accessed by selecting the corresponding command in the Tools menu. This window is made up by two areas:

- The **Members** or **Company** area on the left
- The **Filters** area on the right

The **Members** or **Company** tree has a root item for the **Company** and one or more User Group items, each showing one or more **Users** according to the company structure set up by the system administrator via the Administration Console.

Filters can be set on either **member** or **user** group or user basis and can be defined on four levels. Ie: **General, Submarket,Group,Instrument**.

By double clicking the **Company** item it is possible to show/hide all the User Groups that populate the company.

In a similar manner, by double clicking a **User Group** name it is possible to show/hide the list of Users making up the selected group.

In order to add a **new filter**, an item (member, user group or user) has to be selected in the tree area and then the mouse has to be moved onto one specific pane in the **Filters** area. By clicking the right mouse button a pop up menu appears with the **Add** command which will add a new line in the **Filters** area, the **Remove** command will delete it.

Filters can be saved by selecting the corresponding tree item and clicking the right mouse button.A pop-up menu appears with the **Update** command, which will save all filter values for the current level.After moving to another tree item without saving changes for the previous one, it will be shown in yellow until changes at this level will be made permanent.

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