Jigsaw*Platform*
Technical Fact Sheet

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Jigsaw Platform is a fully customisable software solution that enables traders, to quickly and easily view financial market data and news from any source in the same application. This unique web-enabled desktop environment allows users to configure display applications and components to meet their individual requirements. Jigsaw utilizes Microsoft ActiveX® (Visual C++)® and is designed to support swift implementation of market data and trading desktops operating on Microsoft Windows. Functionality and data content may be changed incrementally while avoiding the unnecessary costs associated with changing software. Ultimately, Jigsaw Platform provides greater flexibility and choice by allowing the user to decide what information they want and how they want to view it.

DISPLAY COMPONENTS

Jigsaw Display Components may be configured to display real-time data in a variety of different formats. Each component may be fully customised to select the appropriate source of data and display the information required in each layout. Additionally, users may select any source of data without changing the way that the data is displayed.

Jigsaw's proprietary linking mechanism allows data drag and drop between display components (using pop-up or fixed windows) or between a Jigsaw component and MS Excel, or other ActiveX compatible applications. The main Jigsaw components are outlined below.

Quote Displays
Relevant details for a single stock instrument are displayed using a pre-defined template which is supplied with the software. In addition Jigsaw also supports Reuters-style display templates.

Quote Lists
This component allows the user to select which attributes to display for a list of instruments. Names may be fully customised and key attributes may be quickly selected from a drop-down list in the control properties window.

News Headlines
Real-time news headlines retrieved from the news server are displayed in scrolling mode. The news content may be filtered using pre-defined categories (baskets), and the component properties also provide a number of search functions to further refine the filtering. Languages may also be filtered, with full support for Japanese, Korean, European and Chinese (including simplified and traditional) languages.

The Jigsaw News Server may be configured to source data from Reuters, JIJI or other news vendors, and has the ability to cache news data over an extended period of time in order to provide historical news information.

News Story
News stories along with their associated headlines are displayed in this component. Sometimes, news stories consist of successive "takes" when the journalist adds more content to the story. The Jigsaw News Story component accommodates for this and automatically updates the story component accordingly. A fixed font is available for this component (as required for tabulated data) as well as the list of true type scalable fonts.

Ticker Display
The ticker display updates a pre-selected list of instruments by scrolling across the window. Various parameters, such as direction and speed of scroll may be adjusted.

Charts
Jigsaw utilizes the TradeSignal express ActiveX control to provide a comprehensive range of studies, tools and other charting functions.

Historical data viewer
Historical data plotted on the chart component may also be presented in tabular format.

Limit Minder
This feature alerts the user whenever pre-defined price limits for associated real-time data are reached. It also records these events and may be displayed as a history of broken limits in the form of a table or chart.

Event logger
The event logger displays system-related information or warnings about related activities. An optional Message window is also available for clients who would like to publish other kinds of messages (such as product-related) to their users.

Trading Components
Trading components may be integrated with Jigsaw display components to manage the flow of orders and executions data for electronic trading. These consist of order entry, order list, and market message components, which interact with an appropriate gateway (such as FIX, or direct exchange gateways).

JIGSAW CONTAINERS

Jigsaw Containers are specifically developed to manipulate the full functionality of embedded Jigsaw components. Using a Jigsaw Container as the desktop application optimizes the functionality of the Jigsaw architecture. In addition, off-the-shelf ActiveX® controls may also be inserted into a Jigsaw container.

Jigsaw Containers may be ActiveX® controls, or desktop applications:

Jigsaw Terminal Application
This is the main Jigsaw front-end application, which can read, edit and save Jigsaw documents (layouts created and saved within the application). It implements the full functionality of Jigsaw components and provides functionally rich menus, toolbars, status bar, popup windows and Jigsaw's proprietary events linking mechanism between components.

Jigsaw Frame Application
This is a simplified version of the Jigsaw Container, which can only read and display Jigsaw documents, and does not present menus, toolbars, or status-bars for editing the documents. It displays real-time layouts which were previously created using a Jigsaw Container application with editing capabilities, and is aimed at end users who do not intend to redesign the layouts.
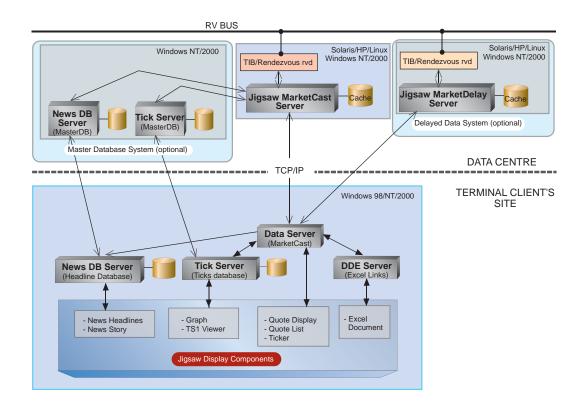
DATAFEED COMMUNICATION COMPONENTS & SERVERS

Jigsaw datafeed components reside on the client PC and manage the incoming real-time data from the network. Datafeed components process price and news data (from Reuters Triarch™, RMDS™, TIB®/Rendezvous™ or other sources). Communication between the datafeed component and the display component use the same internal protocol.

Alternatively, the client PC datafeed components may process incoming data from a Jigsaw MarketCast server on the client network, which in turn communicates with the appropriate data source. This configuration may be used to host additional caching devices and databases which for example may provide data restore facilities to users when they disconnect from the data services.
The diagram below illustrates the way the terminal client's site interacts with the data centre.

The following datafeed components are available in the Jigsaw Platform:

Jigsaw Tick Server Component
Processes price tick data which may be used by a variety of display controls, such as quotes, quote lists, charts and tickers. Incoming data may be sourced from another tick server component (acting as a master) or directly from Jigsaw Dataserver Component.

Jigsaw News DB Server Component
Manages news headlines and stories from a news feed and caches the data in a database, so that when the display control disconnects and reconnects, past news data may be retrieved.

Jigsaw Data Server Component (SSL, RV or MarketCast data delivery)
Handles incoming data from the network and outputs to the appropriate Jigsaw component.

DDE server
Provides real-time links between Excel sheets within the Jigsaw application and the Jigsaw Data Server component.