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## 1. **RTS INTRODUCES TECHNOLOGY ENHANCEMENTS TO FRONT-END SOLUTIONS**

*In March, RTS introduced a series of significant technology enhancements to its RTD and eRTD front-end trading systems. The RTD Realtime Trading Desktop is the firm's high-performance trading platform. eRTD is a Java-based front-end, offering RTS clients and their customers an Internet solution to access both equity and derivatives markets globally.*

The customer-driven technology changes provide new capabilities in performance, performance measurement, Smart Order Routing, options volatility management and market data efficiency.

"We are pleased to offer these enhancements to our front-end trading solutions, based on valuable input from our clients," said Steffen Gemuenden, CEO at RTS. "As the global financial landscape presents new challenges to many users of our services, we are committed to offering powerful, easy-to-use technology

that helps expand capabilities while focusing on improving efficiencies."

### PERFORMANCE & PERFORMANCE MEASUREMENT

#### *The need for speed: Efficiencies beneficial for algorithmic traders*

The technology enhancements have made RTS interfaces to execution venues and liquidity pools faster and more resilient, with major improvements in the RTD core infrastructure. The upgrade has achieved

improved memory capacity and processing efficiency as well as higher throughput.

The volume of market data has grown significantly on a global basis over the last several years. According to some exchanges, today's market maker activity can result in up to 14 changes per second in the order book for a single strike price. Multiplying that across all strike prices and different options series for one exchange alone can quickly turn into a challenge for any software. With that challenge in mind, RTS has improved on its market data capabilities across exchanges with market data subscription rules that are more efficient and flexible. "The upgrade includes three to four times more market data processed than previous versions of RTD," said Mark van Vugt, Executive Board Member who is responsible for Europe.

Many RTS customers wanted to measure their performance, particularly after the introduction of so many performance enhancements. The firm has introduced greatly improved performance measurement functionality in its core system. Making use of the Communication Server measurement capabilities is important in helping users understand how time in the server is spent.

In addition, users of RTD can now rely on improved processing of contract additions and updates, as well as settlement prices. RTS has also reduced the impact of the processes of trading phase changes on other processes, reducing CPU load. Under the new technology, market phase changes are processed in the core system only if a client is present and requesting the information.

The newly integrated system-wide market subscription considerably reduces »

## EDITORIAL

### STEFFEN GEMUENDEN

Chairman & CEO, RTS Realtime Systems



With Spring comes new life, and we are pleased to share with you in this issue of *Screenshot* a feature on the new life we've brought to our front-end trading solutions. Based on customer feedback, the extensive technology enhancements and new features detailed on pages 1 to 3 are designed to generate increased efficiencies for our broad range of customers, while offering greater functionality and enhanced speed. Please take the time to read about the new capabilities to ensure that you're able to take advantage of all that interest you.

As we close the first quarter, we have been quite busy this year already. In addition to the technology upgrade, we have forged important new partnerships such as those with The MathWorks MATLAB and First Insight (see page 4). These partnerships can play an important role in giving proprietary and algorithmic traders "the edge" by incorporating valuable data directly into their trading strategies.

Also in the first quarter, we completed the successful launch of the next generation front-end technology for MexDer. We believe that Latin America presents our clients with vast opportunities, as detailed in "Latin America on the Horizon" on page 3.

We kicked off the year with the first edition of the 2009 series of algorithmic trading seminars in New York. As we continue this series, we are also launching a new series of webinars to allow for maximum participation, and we share in this issue a schedule of upcoming seminars and Webinars. These programs not only provide general information on the subjects but enable participants to interact with presenters.

I hope you enjoy the read and have a wonderful springtime.

Sincerely,

» Technology enhancements, article 1 continued from first page

the number of market updates sent out by the interface. It minimizes the network load, as well as the load on the server. Traders processing a significant number of market updates per second will experience and benefit from the enhanced market data handling. The enhancement minimizes the risk of a CPU overload, reducing consumption of the Communication Server by up to 50 percent. Contract update processing time is nearly twice as fast, as tested in a production environment.

RTS has also introduced enhanced on-demand market message processing and market data subscription, improving speed and efficiency for all market data subscribers. Any RTS client can request market data of interest for a specific contract or exchange (or for a particular trading session). This service was introduced to substantially decrease the load between the Communication Server and the interface to considerably reduce overhead of processing market data in the RTD infrastructure.

### SMART ORDER ROUTING

As RTS has offered access to a broad range of multi-lateral trading facilities (MTFs) in Europe, customers now can use the Smart Order Routing (SOR) module that is integrated into the front-end technology. SOR is particularly important where instruments are listed on multiple trading venues, such as the equities trading on MTFs. SOR scans the market for the best-displayed price and routes orders to that market for execution. RTS' SOR module provides support for exchange-prioritized order routing, on a per user, per symbol hierarchical basis. The module is available not only for users of both RTD and eRTD, but also those who connect via the RTD API. Additional capabilities to the SOR module will be added subsequently as Smart Order Routing continues to grow rapidly in both European and US markets, driven largely by regulations such as MiFID in Europe and Regulation NMS in the US. SOR is fully integrated with all other RTS technology, including RTD Tango, order emulation via the Automatic Order Manager, and internalization via the Internal Order Matcher (IOM). Customers using the RTD API can route their orders via the SOR exchange.

#### DID YOU KNOW THAT...

- RTS provides connectivity to the most successful MTFs: Chi-X, Turquoise, BATS, Nasdaq Europe and ARCA Europe?
- All the MTFs are available as DMA solutions through RTS' Data Centers?

### VOLATILITY MANAGER FOR OPTIONS

RTS has long been known for its powerful and versatile options functionality. The newest offering is a re-design of the Volatility Manager, also known as Vola Manager. This technology provides customers with a more accurate and easy-to-use mechanism for pricing out-of-the-money options. The new Vola Manager controls are more intuitive for the user, offering a broad range of new features and enhancements. New features include the ability to import and export data; extended parametric interpolation functionality and configurations capabilities; a new configuration parameter, including the ability to smooth for "up-cuts" and "down-cuts"; the ability to filter out bad volatility points, i.e., those far away from the standard deviation curve; and a new view for Term Structure.

Enhancements to the previous Vola Manager include improved graphical displays (GUIs) and a centrally placed dialog box to easily access major functions. The implied bid or ask volatility now displays separately, distinguished by different colors, and volatility scores are combined by lines that are separate from the fitting model in use. Customers can also interpolate and extrapolate volatilities from unknown option prices. »

» Technology enhancements, article 1 continued from second page

## VENDOR OF RECORD

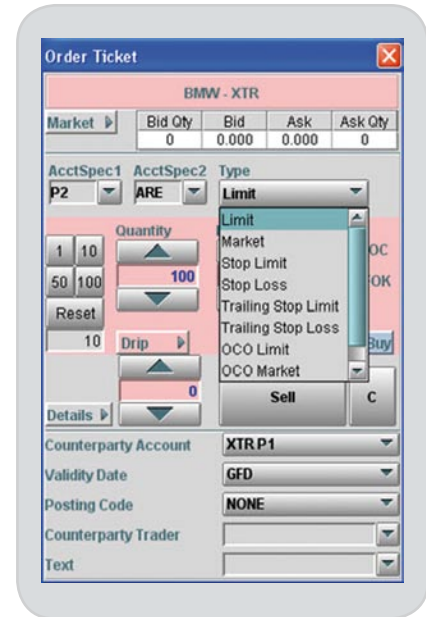
To accommodate regulations at various exchanges, such as the London Stock Exchange, RTS has implemented Vendor of Record (VoR) functionality. VoR provides the ability to limit or monitor market data subscriptions for each of their RTD users. Effectively this tool enables users to further customize market data subscription (down to the level of a single user), through filtering, monitoring and paying for market data “per view only”.

## eRTD

Key enhancements to eRTD include an integrated pop-up Order Ticket for flexible order entry. The feature allows users to open the ticket by a single click on the bid/ask and to change it by clicking an active order. Rather than using the current Order Input Line at the bottom of the screen, traders can now send orders via a adjustable pop-up window.

eRTD also includes a new “tree-based” symbol selection, giving customers the ability to search for contracts easily using the Tree Search tab. The feature displays contracts in groups according to their categories and subcategories, offering yet another method to search for tradable instruments from across 100+ exchanges.

**For more information about these enhancements, contact your local representative or go to [www.rtsgroup.net](http://www.rtsgroup.net) to check out upcoming RTS webinars and seminars.**



» The new pop-up Order Ticket

## 2. LATIN AMERICA ON THE HORIZON

As technology has improved access to markets in Latin America and regulators in those markets increasingly facilitate foreign participation, interest from other continents continues to grow.

Brazil is a prime example of this trend. BM&FBOVESPA is the largest exchange in Latin America and the third largest exchange worldwide in market value. While the Brazilian markets have been affected by the global financial downturn, the effects on Brazil have been less severe as banking and trading have traditionally been more local in focus. The convergence of the increased attractiveness, the will to ease regulation and improving technology have led many to recognize Brazil as a “sleeping giant,” according to John Dempsey, Vice President, Business Development for RTS.

In late 2007, BM&F, the Brazilian Mercantile & Futures Exchange, and Bovespa, the São Paulo Stock Exchange, demutualized and each embarked on initial public offerings. In 2008, the exchanges merged to form BM&FBOVESPA, the Brazilian Securities, Commodities & Futures Exchange. The exchange offers equities, securities, financial assets, indexes, interest rates,

agricultural commodities, and foreign exchange futures and spot contracts.

In the past, BM&F was largely a phone broker market, and those who wished to participate needed to speak Portuguese. Electronic trading, which now accounts for 95 percent of the volume, has removed those barriers.



In recent months, the exchange has combined with CME Group to launch its North-to-South and South-to-North order routing links between CME's Globex and BM&F's GTS electronic trading platforms.

Now the BM&F segment is focusing on providing direct market access (DMA) to its popular products from those outside of Brazil, as well as enhanced electronic trading nationally. Given the multi-asset nature of the exchange, low latency access and multi-asset capabilities are important components for any trading solutions offering.

BM&F began offering co-location in December 2008, enabling clients of local brokers to access its markets directly. International participants, including proprietary traders looking for new liquidity sources, are anxious to tap into new marketplaces such as the Brazilian markets. The exchange's broad offering of liquid, dollar-settled agricultural products are also attractive to investors in countries in Asia such as Japan and China, where commodities are popular.

RTS is well positioned to benefit from this new emphasis, given the firm's strengths in multi-asset class, data center capabilities, broad connectivity and strength with algorithmic, proprietary, brokerage and hedge fund members of the international trading community. Said Christophe

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Rilinger, RTS Vice President, Marketing & Communication: “We are pleased to work closely with BM&FBOVESPA to ensure that we help broaden international access to this valued marketplace, as well as meet the needs of its domestic members.”

**On Tuesday, April 28, in cooperation with BM&FBOVESPA and CME Group, RTS will host a Webinar entitled:**

**“Brazil – The Sleeping Giant.”**

**Participating in the seminar with RTS will be officials from BM&FBOVESPA and CME Group.**

Please check [www.rtsgroup.net](http://www.rtsgroup.net) for details, or email [info@rtsgroup.net](mailto:info@rtsgroup.net).

The outreach into South America follows the recent successful deployment in Central America of the RTS front-end trading solutions at the Mexican Derivatives Exchange (MexDer). The exchange selected RTS last summer to provide the next generation front-end technology for MexDer’s electronic trading platform, replacing the MexDer proprietary trading terminals for Mexican members of the exchange. RTS customized the RTD and eRTD front-end solutions for Mexican traders and provided intensive on- and off-site training courses for all participants.

MexDer and RTS co-hosted a February 25 reception for members of the Mexican trading community to celebrate the successful launch.

### 4. ALGORITHMIC TRADING SEMINARS & WEBINARS

#### SEMINARS:

If you are considering or currently employing algorithmic trading strategies, this session is for you. During the course of this fast-paced seminar, you will learn how to code, develop, back test and trade your strategies out of one solution: RTD Tango.

- London – May 7  
co-host: The MathWorks
- San Francisco – April 28  
co-host: Eurex

Additional events will be hosted shortly in New York, Paris, Frankfurt and Singapore. If you are interested in attending in any of these markets, please e-mail [info@rtsgroup.net](mailto:info@rtsgroup.net).

Interviews and reviews of seminars are available on [www.automatedtrader.net](http://www.automatedtrader.net) or [www.rtsgroup.net/download-center.html](http://www.rtsgroup.net/download-center.html)

#### WEBINARS:

##### **The Next Competitive Advantage in Algorithmic Trading**

Listen to this lively discussion about algorithmic trading – no pitches, no product demos, no hype – just information and education. Moderated by Ben Van Vliet, Professor at the IIT Stuart School of Business in Chicago, experts from Eurex and RTS reflect on how algorithmic trading has changed the business and what to expect in the future.

- Professor Ben Van Vliet, Stuart School of Business, IIT
- Brian Haag, VP, Algorithmic Trading, RTS Realtime Systems
- Timothy Levandoski, VP, Eurex

To listen to the recent webinar, please go to [www.rtsgroup.net/download-center.html](http://www.rtsgroup.net/download-center.html)

### 3. RTS & FIRST INSIGHT FORGE ALLIANCE

#### **Leveraging the advanced RTD Tango algorithmic trading technology**

RTS recently launched a new technology partnership with First Insight, the fastest provider of weather information to the trading and financial markets. The alliance enables commodity traders employing algorithmic trading to feed digitized real-time data on weather forecasts and technical indicators into their automated or semi-automated trading strategies and execution. The initiative leverages the advanced RTD Tango algorithmic trading technology and First Insight’s news and data feeds as well as Trader Dashboard. It gives algorithmic commodity traders the ability to synthesize real-time weather data directly into their trading strategies to ensure rapid execution, based on high-speed delivery of customized information. RTS has built a low-latency feed API to seamlessly integrate the data into RTD Tango.

The new offering has been employed by select trading firms for energy and commodity trading in Chicago and New York, with more firms expected to sign up soon. RTS and First Insight co-hosted an educational algorithmic trading seminar in New York on January 22 at the ICE Trading Center to educate interested energy traders on the product.

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