

ZAPTHINK ZAPNOTE™

TAMESIS *MANAGING RISK WITH XML*

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Analyst: Ronald Schmelzer

Abstract

Financial traders depend on information feeds from many different systems and consolidate these feeds into a single view that hopefully gives them the information they need to make educated decisions. What is needed is a real-time, accurate, integrated, and efficient system for aggregating information from multiple sources. Tamesis is focusing squarely on this problem by providing an XML and Web Services-enabled product that aims to be a real-time, accurate, and highly integrated solution. The company has built a product called Tamesis Risk Informer that aims to extract data from different data sources, normalize to an XML format and present aggregated information in a customizable view to end trader users.

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Financial Trading is All About Managing Risk

Financial traders lead a very complicated and high-paced life. They have to keep track of dozens, hundreds, and sometimes thousands of positions in different kinds of financial instruments: stocks, bonds, commodities, futures, options, currencies, derivatives, and every type of representation of wealth possible in the capitalist system. These traders depend on information feeds from many different systems and consolidate these feeds into a single view that hopefully gives them the information they need to make educated decisions. In a typical sell-side trading firm, individual traders sit at specific trade desks that specialize the different products such as bonds, futures, currencies, etc. These days, the financial products are getting more complicated and sophisticated. Nowadays, traders are trading with a much wider variety of products than they used to. As a result, they need to understand risks such as interest rates and currency fluctuations, and their exposure to these risks.

However, trading positions are split between many different trade capture systems, some of which are good at processing swaps but not bonds, and vice-versa. The end result is that they need a single report that has a current, consolidated view of risk. They best that many of these traders can do is to get an overnight view of this report. As such, there are legions of people in the "middle office" who pull together generated reports and see what their exposure was the night before, much of which is already obsolete. Typically, this report is a spreadsheet that has different data from different systems that adds up numbers in a useful way.

What is needed is a real-time, accurate, integrated, and efficient system for aggregating information from multiple sources. The system needs to hook up to lots of different trade capture systems, get the data out, run risk analysis and give answers to trader and management in near real-time. However, this is a complex problem as there are many different, heterogeneous trade capture systems, and the financial instruments themselves are quite complex. Basically, the system needs to address issues of data in lots of different formats and present results in a highly personalized, customized manner. That sounds an awful lot like what XML and Web Services promise to deliver.

Tamesis Risk Informer

Tamesis is focusing squarely on this problem by providing an XML and Web Services-enabled product that aims to be a real-time, accurate, and highly integrated solution. The company has built a product called Tamesis Risk Informer that aims to extract data from different data sources, normalize to an XML format and present aggregated information in a customizable view to end trader users.

The system consolidates traders' cross-product positions allowing position management,

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estimation of profit and loss (P&L) and intra-day risk management for each trading unit within a firm's business. Risk Informer uses an event-driven model to deliver intra-day risk data at any level of granularity and allows users to define configurable risk views, such as credit exposure and curve risk, together with limits and alerts that are triggered by contingent data changes. The user is immediately informed of any activity affecting the portfolio position and can take mitigating action. Users can configure levels of aggregation within a view according to hierarchies such as trade-level data, rolled up to book, sub-desk and desk levels. Pricing methodologies, parameters and risk metrics may be selected from different calculation libraries and controlled at multiple levels. In addition, users have the ability to trace the factors that cause a metric value to change, such as a market data movement, a rate reset or a new deal, and can plug in new analytics. Risk data is updated dynamically across positions and can be viewed at differing levels of aggregation by drilling down.

The Tamesis Application Framework provides a suite of software tools based on Java and J2EE technologies. The system uses XML and other standard APIs to simplify integration and comply with organizations' technology policies including those for databases, messaging and security. The system operates in a distributed manner, relying mostly on server computing power for aggregation and customized display capabilities. Because Tamesis uses XML, its data is self-describing, which means it can readily be used in other applications and provides the capability for in-house staff to add new functionality.

The data normalization layer, provided by Tamesis Repositories, presents an interface to the rest of the system that wraps databases. Since most typical trading systems are based on relational databases, the company has built a series of adapters that extract information from the "legacy" system and convert to a neutral XML representation. Tamesis supplies several persistence mechanisms, alternatively customers can implement their own persistence. The product handles the issue of distributed data by enabling objects to reside in multiple databases. Data Selectors perform the actual aggregation of information from multiple Repositories by forming views that are kept up-to-date as the source data changes. Based on these views, Results Generators, using discrete pluggable components called Engines, perform business operations on the data in order to provide calculation-based services to clients. Examples include P&L, cash position and risk analysis servers. The Results Generator contains a sophisticated event-driven OLAP component called the Aggregator that aggregates output from engines into hyper-cubes that can be queried dynamically using "slice and dice queries". The output can be used in another calculation or displayed as a two-dimensional grid. The Aggregator is able to keep the views up-to-date as new trades are done and reference and market data changes. The Personal Results Organizer takes the final aggregated matrices and constructs customizable grids or tables that are dynamically and constantly updated. The end result is displayed through either Java Swing applications or standard web interfaces.

Tamesis is a distributed application that relies heavily on passing objects by value, rather than by reference, using industry standard protocols and APIs, such as HTTP, XML, and JMS, to provide scalability. Tamesis employs an n-tier architecture for all aspects of data distribution and result generation. It makes intelligent decisions about sharing and reusing system resources on the fly. In many circumstances, additional users are able to share the computational load of the existing users without degrading performance.

Customers & Release History

Tamesis Risk Informer was released in November 2001. The company has a number of clients, such as Merrill Lynch with whom they have an ongoing business relationship.

Key Conclusions & Recommendations

- Tamesis Risk Informer illustrates a good use of XML for real-time integration and aggregation of information to individual client desktops. Companies looking for examples and case-studies for highly scalable XML implementations should investigate the Tamesis solution
- Tamesis should investigate increased support of Web Services standards and technologies in their product as they seek additional means to integrate with existing and legacy systems.

Profile: Tamesis	(December 2001)
Date Founded: 1998	
Funding: Privately-Held	
CEO: James Tomlin	
Employees: N/A	
Profiled Products:	
• Tamesis Risk Informer	
Address (London):	
22 Cousin Lane	
London EC4R 3TE	
Address (New York):	
111 John Street, Suite 1100	
New York, NY 10038	
URL: www.tamesis.com	
Main Phone: +44 (0)20 7236 2850 or +1 212 285 8299	
Contacts:	
Chris Horril chris.horril@tamesis.com	
Leonie Alsop leonie.alsop@tamesis.com	
James Tomlin james.tomlin@tamesis.com	

Related Research

- *XML in Financial Services* Report (ZTR-VI100)
- *IFX* ZapNote (ZTZN-0155)
- *Clareon* ZapNote (ZTZN-0236)
- *Fidesic* ZapNote (ZTZN-0183)
- *MISMO* ZapNote (ZTZN-0133)

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About ZapThink, LLC

ZapThink is an IT market intelligence firm that provides trusted advice and critical insight into XML, Web Services, and Service Orientation. We provide our target audience of IT vendors, service providers and end-users a clear roadmap for standards-based, loosely coupled distributed computing – a vision of IT meeting the needs of the agile business.

ZapThink's role is to help companies understand these IT products and services in the context of SOAs and the vision of Service Orientation. ZapThink provides market intelligence to IT vendors who offer XML and Web Services-based products to help them understand their competitive landscape and how to communicate their value proposition to their customers within the context of Service Orientation, and lay out their product roadmaps for the coming wave of Service Orientation. ZapThink also provides implementation intelligence to IT users who are seeking guidance and clarity into how to assemble the available products and services into a coherent roadmap to Service Orientation. Finally, ZapThink provides demand intelligence to IT vendors and service providers who must understand the needs of IT users as they follow the roadmap to Service Orientation.

ZapThink's senior analysts are widely regarded as the "go to analysts" for XML, Web Services, and SOAs by vendors, end-users, and the press. They are in great demand as speakers, and have presented at conferences and industry events around the world. They are among the most quoted industry analysts in the IT industry.

ZapThink was founded in October 2000 and is headquartered in Waltham, Massachusetts. Its customers include Global 1000 firms, public sector organizations around the world, and many emerging businesses. ZapThink Analysts have years of experience in IT as well as research and analysis. Its analysts have previously been with such firms as IDC and ChannelWave, and have sat on the working group committees for standards bodies such as RosettaNet, UDDI, CPExchange, ebXML, EIDX, and CompTIA.

Call, email, or visit the ZapThink Web site to learn more about how ZapThink can help you to better understand how XML and Web Services impact your business or organization.

ZAPTHINK CONTACT:

ZapThink, LLC
11 Willow Street
Suite 200
Waltham, MA 02453
Phone: +1 (781) 207 0203
Fax: +1 (786) 524 3186
info@zapthink.com