

TECHNOLOGY

In general, what kind of feedback has IT&E received from clients?

All our clients are very satisfied with our systems and we recently went live with Razor in Canada. We have been very consistent with all the projects we've undertaken and we haven't made the mistake of taking on too much on soon. Making clients happy is our top priority.

What are the company's hopes and goals for the future?

Other than expanding our sales distribution, we are looking to offer Razor as a subscription service. This will allow people to easily access our more sophisticated analytics for their portfolio and on a lower price plan versus having to install the

Regulators are at the same time pressing for higher quality data, so I think the demand for high performance data and analytics management is only set to grow

software from scratch. We have had strong interests from central counterparties and we will be expanding the market space that we sell into, including new geography.

Which new geographies will the company be looking into?

Historically, we've only sold in Australia and Asia. Now, we're looking at the rest of Asia, Central and Latin America, Eastern Europe, Middle Eastern Africa, and of course not losing the focus on the big financial centers like London and New York, but in a much broader sense.

With the credit crisis, subprime, and other market conditions, there is a higher demand for risk management. What kind of technological challenges does that pose to the company?

In the very short term, the crisis makes things a bit tricky because banks are very focus on minimizing their losses and how they can organize themselves to stop similar events from happening. Hence, banks can become more internally focused and cause some delay to our sale cycles.

But it has also been very positive for us because banks now recognize that their existing risk infrastructure is inadequate and they want to invest in more sophisticated

infrastructure and more sophisticated risk management product. As a result, there is more demand for Razor.

What banks are moving towards is a simulation based way of measuring credit exposure and that is something we always believe as the best way of measuring credit risk. Our product already does what the market now recognizes as important. The one thing for us to do is to invest more in sales and market infrastructure to take advantage of the larger sets of opportunities.

Brian Sentence, CEO of Xenomorph

In your opinion, what is the next big thing with regards to technology in quantitative finance and how does that relate to the company?

The main thing that will change things are the increased usage of HPC, clustering and grid computing. I think on the quantitative trading side of things, if you want to do statistical analysis on market data, one of the issues of the recent years has been that there's too much data to analyze.

As far as risk management is concerned, I think all organizations will find grid computing becoming more accessible and commonplace because Microsoft is going to make it much easier to hook grid compute power behind Excel — making valuations and simulations run a lot quicker. Over-use of Excel will still be a problem though, but its calculations will have the potential to run faster.

With regards to cloud computing and service oriented architectures (SOA), I think there will always be a bit of trade off as people want interoperability between services, but that comes with a performance cost. Within automated trading, I think there is still pressure to squeeze out the latest millisecond/microsecond out of performance using a combination of hardware and software. In the US, hardware acceleration is being used to speed things up and also trying to make generic systems which can talk to each other.

What do you think will drive technological advancement in quantitative finance in the future?

I think the credit crisis is slowing down innovation for a while. For

the more complex products, that is something that is inevitable. It's a little bit of a kickback, but there are new markets, new types of products to price, hedge and innovate. On the trading side of things, one of the drivers is that automated trading is driving a lot of innovation on the execution side and front office, particularly in the simple asset classes. That kind of real time approach to automated approach puts a lot of pressure on middle and back office systems to keep up.

But I think automated trading will slowly expand to other asset classes as they become better understood. So if they can, they would obviously automate trading around fixed income, options, and FX, which also seems to be a big growth area right now.

After the credit crisis, I think a very broad and important driver is transparency - transparency around data, calculations and process applied within institutions and across the industry.

How do issues like automated trading impact on the company's product development?

For us, our specialization is in managing and analyzing data, so automated trading is obviously a positive driver for us of clients wanting to store high volumes of data. Regulators are at the same time pressing for higher quality data, so I think the demand for high performance data and analytics management is only set to grow. Some of the recent testing and development we've done involves getting back to data basics, having the time series work inside SQL server.

We're also looking at integrating some of the HPC technology into our Timescape data and analytics



Brian Sentence

management suite. An initial project on this roadmap involves using HPC for very large correlation matrices, so you can calculate them in near real-time. We're also looking at data grid distributed cache technology, so that we can ensure data is available both within a cluster and grid environment, and is available in a distributed manner across various remote locations.

Our main focuses are around the size of data, computational power, means of analyzing data, data distribution and accessibility. I do think that regulators and automated trading are driving a lot of that growth, so it's a positive market for us despite some of the pressure that the market has been under.

In general, what kind of feedback has Xenomorph received from clients?

There's still a lot of usage and in fact overuse of Excel. Again, with all the regulatory pressures, there are concerns about decision making. A lot of our clients seem to want to move away from managing and running everything on a spreadsheet. The need for data management in

the front office is increasing due to the need for greater transparency, expanding from middle and back office. Many of the decisions that start at the front office need to be brought under more control, but one has to make sure it doesn't take too much flexibility away from the traders and the risk managers.

Regulation wise, the main driver seems to be audit trail so that the firms can see how any piece of data has changed. The regulators and the compliance departments are pressing for audit trail on more complex data, such as tick data, but also over changes to curves and volatility surfaces. The regulators play a big part in driving these requirements for what risk manager need.

There still seems to be a lot of growth in the usage of derivatives at the buy side institutions. Regulation such as Ucits III are allowing more usage of derivatives in return for more transparent risk management reporting. Although the buy side would like to use more derivatives, they have limited experience relative to the sell side investment banks.

There is still a big gap between derivatives pricing in spreadsheets and the management of data needed to do the pricing, and this is a key gap that Xenomorph is filling with our combined approach of managing both data and analytics.

What is the biggest challenge the company is facing?

I supposed the biggest challenge is making sure all these pieces come together and work. We are basically dealing with the same kinds of problems, but these problems manifest themselves in slightly different ways. For instance, simple asset classes require a lot of analysis because they have high volumes of data, and

we also have complex asset classes, which constitutes a heavier compute load. So we're trying to balance all of those things like any software company would. We have got so many different things we can work on that the challenge is to resource all of the things that we could do and decide which is a priority.

What are Xenomorph's hopes and goals for the next 12 months?

We're looking at more audit trail, more data validation across more data types, expanding the kinds of data that we look at from the perspective of time series storage or any kind of data.

Our biggest technical challenges will be around HPC, things like distributing HPC and workflow, simplifying the whole process of capturing, cleansing, storing, ultimately analyzing and making decisions across data on various asset classes. We are well on our way to integrate that

We're looking at more audit trail, more data validation across more data types, expanding the kinds of data that we look at from the perspective of time series storage

technology into our systems. I think with our clients pressured by the regulators to improve data quality, the demand to ensure the quality of data in risk management will be high.

How important is the mobility and accessibility of a software or compute

power, such as the usage of mobile devices and cloud computing?

I think it's particularly relevant for the corporate clustering and grid environment. Within the banks, there is a lot of pressure to try to associate utilization cost back to the actual department that are making use of that grid. I see some banks already starting to kick start a usage metering process, making it very transparent and very clear. That's something which, almost culturally, is a big change. We may have some resistance from the front office, but I believe there is enough management and regulatory pressure to enforce a more coherent approach across different trading environments and trading desks.

Cloud computing has a lot of implications from my point of view. Obviously, most of the banks are looking at SOAs and as systems get organized along the lines of 'services', it will be easier to host them

'in the cloud'. But I guess there are trust and security concerns or rather mindsets to overcome. This is particularly true in data management where there is the issue of contractual agreements with market data vendors to use data within third party centers.

