

CEP05 – Brad Bailey, Aite Group (part 3)

Announcer: Voices in Business presents the Complex Events Podcast, sponsored by BEA Systems. Show Number 5.

[intro music]

Announcer: Hello and welcome back to the Complex Events Podcast, brought to you by Voices in Business and sponsored by BEA Systems. In this, the final segment of our interview with Brad Bailey of Aite Group, Ross Hamilton and Daniel Chait of Lab49 discuss with Brad what Aite Group call 'CEP-enabled business intelligence', using streaming data to provide real-time risk analytics and business intelligence that extends from the front through to the middle and the back office. They also share their expectations for trends in CEP for the coming 12 to 18 months.

Ross Hamilton: One of the things that we look for when we're building these types of architectures and these types of applications is it's become very, very important that you are able to abstract your business logic away from the plumbing, the infrastructure. So you can actually have a scalable infrastructure but be adaptive and innovative on top of that.

Daniel Chait: Well, that really speaks to a sort of secondary or different time scale of performance characteristic. So, we talked earlier...one of the things that people have looked to this for is the millisecond and sub-millisecond latencies and high-speed processing, which is all very important and well and good, but there's another level on which ability to quickly produce applications, to be flexible and adaptive, to have your business logic be in a place where you can readily see it, understand it and change it gives you the ability to compete as the market adopts, which we consider very rapidly but which happens over the course of weeks and months and not in terms of milliseconds or microseconds.

You equally need to be able to be fast and agile in that time scale as well.

Brad Bailey: Absolutely. I mean, people have associated CEP around those millisecond battles, but in terms of the growth in CEP, it's going to play a bigger and bigger role in many types of applications within the capital markets, and not only in the front office. I see eventually, as it combines with other areas, moving into middle and certain back office functions. There's no reason not to.

Ross: One question for both of you, and this is something that we're asked quite a lot, is what really is the difference between CEP vendors and some of the business workflow BAM-type vendors? Is there really a difference in these technologies or is it just on a different time scale?

Daniel: I would say at, at this point, there still is somewhat of a difference, but I agree that increasingly it's more about the time scale in which they operate. So they're both about creating, if you will, a sort of flow of processing and it's triggered by some initial conditions and then works its way downstream through some programs that you've written.

Of course, some of the traditional workflow engines and integration technologies were much more geared around long-live processes, things where it may send a form that the user needs to fill in or write something to a database, whereas a lot of the CEP stuff is really evolved out of the kind of low-latency and high-throughput use cases.

So I think it's more a question of their emphasis, really, at this point. And they may end up co-evolving to the point where you've got essentially the same technologies, just capable of operating on a number of...

Ross: I think it goes back to front-to-back-office integration.

Brad: Absolutely. And I'll just add to that point. I mean, there's certainly, when you think about the intelligence that you can get from streaming data, and this goes way beyond just the financial services, but within the financial services, *if you can get user business intelligence to query real streaming data and get that in real time, that's where we're heading.*

I mean, we see one of the biggest growth areas, the Aite Group called it 'CEP-enabled business intelligence'. But really it's going to be a confluence of these two areas, and people are going to demand knowing what's going on, what's the state of my business, whatever it is, right now.

Daniel: When you talk about business intelligence, of course, you naturally think about OLAP, right, online analytic processing? And I think OLAP has been one of those areas where I think it very much mirrors the evolution of the rest of these kinds of systems.

So OLAP was classically thought of as you take an online transaction processing database and you build this very flexible reporting database on top of that, which lets you kind of drill down and summarize the data, but that the building of that was a very, very time-consuming process and something you did at most once a day, right?

And now what you're starting to see, I think some of the CEP vendors are actually driving some of this, is increasingly kind of in-memory, real-time, event-driven OLAP, where you've got the same capability to do summarization and drill through and find patterns within large volumes of data, but that those are updated increasingly in real time and giving you that kind of real-time business intelligence that people are striving for.

Ross: This seems like there's definitely all this convergence going on. You mentioned in-memory databases. We're definitely seeing the need for scalability and a delineation of lines between messaging and CEP vendors. The things like distributed cache vendors.

There's going to be a big collision here. Some are integrating with them, some are going to become them.

Brad: We've just finished some analysis around this. We focused on the sell side, but we looked at some larger buy-side institutions and what they're doing with these vendor solutions, with distributed cache, with their messaging, with hardware-based messaging. And it really is a very big debate and a very complicated decision, depending on what you have in your infrastructure already, to move to another level.

I mean, one thing is for certain: when you look at certain things within the financial services, I think in the capital markets, things always evolve quickly. I think they've evolved even more quickly than people expected in terms of all this, and there's real challenges.

People are thinking, "Can I use a distributed cache as a messaging bus?" But we've seen that and combining that with a CEP engine and different types of databases, time series databases, things like that, for their storage is very interesting, and trying to fit together the different pieces of the puzzle is exciting and challenging.

Daniel: Yeah, now that people are starting to understand CEP and its relevance, I think the next frontier of inquiry is sorting out a lot of these different elements of the kind of modern, real-time capital markets infrastructure.

I spend a lot of time with customers, sitting down at the table and seeing the kind of question marks over their head when they stare at all these different products and types of families of products. Do I need a CEP engine, as you mentioned, and a messaging system and a distributed cache and a compute grid and an in-memory database?

How does it play with my client applications? Where does it all fit together? It's an interesting question and something that certainly we spend a lot of time advising our customers on right now. And you may be in a better position than I am, but I don't see clearly where they're going to fall out in terms of convergence or acquisition or overlap or specialization.

Brad: Absolutely. I mean, this is very much in line with conversations we've had. I think it's not clear. I think there's a tremendous amount...for 100 people, there's 120 opinions on this in terms of who's going to be taking the lead of these different vendors? How is this going to play out? And it's happening really quickly.

Ross: In the meantime, people need to actually get systems built.

Daniel: Yeah. That's why my job's fun.

Ross: Likewise. So I just want to turn the conversation a little bit into looking forward. Brad, what kind of market trends - when I say market, I mean business and technology

trends - do you see for the next 12 to 24 months in terms of CEP adoption and its application?

Brad: Well, based on Aite Group analysis that we did, it's interesting certain things are playing out in terms of certain larger players coming in and what the implications are for the market. But I think we're going to see a broadening of the use-case base.

One area that I already mentioned is more focused on risk. There's been a lot of talk about more money going into... it's interesting that RiskMetrics has actually announced it's going public, so I think they see after many years as a private company, seeing an opportunity, you know, it's quite topical because they see this as maybe a defining moment for risk after a certain evolution that is accelerating because of events.

I think we'll see battles being waged in some of the issues we've talked about today in terms of standardization. This is not maybe two years down the road, but five years down the road, when you open up the box, you'll probably know exactly what you're getting.

In the meantime, there's going to be different ways of approaching this. But I do think, as people become more aware of CEP and as they see the various use cases and they start building different types of higher-level, enterprise-like templates that are used by different businesses, it's going to be a whole new generation of people that are thinking from this perspective.

Ross: How about you, Daniel?

Daniel: Yeah, I definitely think looking out over the next year or two, through 2008 and 2009, I certainly expect to see these vendors start to look at competing for the enterprise mindshare. And that means playing like a proper enterprise system: high availability, redundancy, scalability, provisioning and deployment, simulation, backup, authentication and authorization. So a lot of the kind of classic enterprise capabilities that systems need.

Secondly, I think you're clearly going to see a continued evolution of the feature sets that they provide, both from a standpoint of user-facing functionality, developer functionality as core engine capabilities.

And thirdly, I think you're going to continue to see this battle being waged for who owns what pieces of the modern, real-time capital markets infrastructure and how much can they take over of distributed caches and compute grids and messaging systems, and where does that all shake out. That's going to be the battle...

Brad: As well as various combinations of those technologies, I see very strategic alignments of these various companies and that will be very interesting.

Ross: A lot more acquisition, maybe?

Brad: More acquisitions, more partnerships. This is a fast-moving market.

Ross: One thing we didn't really talk about that we certainly, in our projects at Lab49 have to help our clients with, is two things: one is the actual testing, kind of deterministic testing of these systems as you're building them, and secondly, and it's related, is doing market simulations.

So being able, in both cases, to record market data and play it back either to test and regression test your systems or to be able to craft new trading strategies or pricing strategies and see how they would play out against your existing system.

Do you see there being offerings related to that or do you think that's just really a separate and supporting functionality that might be provided by a new suite of players in the marketplace?

Brad: I think that's a very exciting area. When you think about modeling accurately and then creating...either walking forward a model, or taking something that you can go and have all this data with all the realistic implications of what a trade means, or certain types of trade in different liquidity.

I mean, I think we're in a very general and a quite primitive state in many of that type of model. And it's something that quantitative analysts are always talking about, kind of wishing they had.

Ross: Right. Certainly stuff that we've built for clients, you definitely see that as being...really it's going to become required in order for us to be able to figure out how effective your strategies are going to be.

Daniel: And I think that's one of the areas that I've seen probably less talk from the vendors about, so I do think it's an interesting area of new potential, building in a lot of simulation and back testing and other types of kit. It's there in some places, but it's not as widely.

Ross: We kind of mentioned some more horizontal use cases where people are using CEP to instrument their applications and their architectures. And I think as part of that, as you're actually regression testing and doing performance testing on these systems, you can really tune your performance instrumentation of those systems as well.

Brad: It's key. I mean, despite all the talk about quantitative trading... I'll get in trouble for saying this, but everyone now is a quantitative trader to some degree. Even the most fundamental shops rely on certain tools for their stock picking.

So there's an extreme from most fundamental of asset pickers making fundamental decisions to the micro latency-type players, looking for micro-opportunities, intramarket, intermarket.

But between that, everyone is using various tools, and when we look at the evolution of the research management process, the whole trade life cycle, how you make a trade, from

the point of the idea generation of that trade to the point where it's actually executed and everything comes back to you, it's very interesting. All these areas are quite exciting.

Vicki Zesses: I'd like to ask a few questions. There are such far-reaching applications for CEP. And, yet it is still in the innovation stages. It is not like there is a clear-cut, "Here is all that CEP can do and all the ways it can do it for a financial institution", that one can say, "Hey! Yes, we need it, we love it, we want it." "Where do we begin? We don't want just the trading desk over here having the advantage of that but the rest of the organization missing out."

Who should be the individual or individuals within these large buy-side and sell-side financial institutions that grab hold of this and say, "Okay. I really need to sit down. I really need to talk to people, both internally and externally, to see what we should be doing across the organization."

Brad: Going back to your question, Vicki, it is complicated. It's usually, there's a problem and a solution needed. And the problem could be generated by a business head, a head of trading or some other, and that might go to his or her particular IT people or move up into corporate level.

And I think what's happening in the CEP is a lot of it... I think a lot of the evolution has come from what we'll call a 'desk level' or a specific business unit level, and then it's migrated out and expanded out to people who are looking at this technology to solve a variety of problems across their enterprise.

Ross: You're definitely seeing core IT, core enterprise IT groups within the banks looking at this because they see the wave of what's coming. They're already seeing the innovation happening across the desks.

They know they need to solve the problems both from an infrastructure standpoint and in terms of providing some kind of standard platform in terms of total cost of ownership and all the business cases for why you would pick one technology over another, or what the suite of technologies are. And we definitely see the enterprise architects looking at this at their kind of macro level.

Brad: It's important not to succumb to "analysis paralysis" as well. The space is so complex and is changing so rapidly that if you decide to sit down and spend a huge amount of time and go through an enormous evaluation period, things are going to change out from underneath you to the point where you could have built the whole thing by the time you finish your first report in some cases.

So in many cases, we've seen firms that are very, very quickly able to get into the space, buy or download some platform or other, and actually build their application and have it up and running and testing in a very, very short amount of time.

And so you have to consider the cost benefit analysis of how much is it worth it to you to

really step back and plough through an analysis process versus build a few of these things, be using them and be taking advantage of the real business value that they're delivering during that time period. And then if you need to find some enterprise-wide standards in a year or two, you standardize then.

Ross: I think there's a core design consideration, though, that in the right places you don't always want to do this, in that you're abstracting yourself away from the underlying implementation, right?

And that's just good design practices where appropriate. And it also can help you, if you need to, hedge yourself on specific point solutions if you're concerned about that.

Brad: Absolutely. We've seen in at least one case and more of major Tier 1, sell-side institutions' banks really developing a CEP either center or department and thinking about this in a big way. You know, what the implications are, what it's going to mean for their institution.

Vicki: So it's fair to say then, from what I'm hearing, that the head of IT of the architecture group, or head of IT for a specific area really should be considering CEP, and taking it even one step further at this point, looking into it, researching, however they choose to do that, tapping into the expertise here in the room we have today or somehow moving forward. Is that fair?

Brad: Yeah, absolutely.

Ross: Totally agree with that.

Vicki: I hope that we can use this series then to speak to some of those people to get the very feedback that you're talking about, about what their needs are, because it's new enough, this is new enough to where I would think they would like to also hear what others are thinking, other people in their chair down the Street.

Brad: Yep.

Ross: Yeah.

Vicki: Okay. Excellent.

Ross: Great, thank you.

Announcer: That was Brad Bailey of Aite Group speaking with Ross Hamilton and Daniel Chait of Lab49 and Vicki Zesses of Voices in Business. For more information on Aite Group, Lab49 and BEA Systems, who are sponsoring this series, go to our website, www.complexeventspodcast.com, where you'll find details of how to subscribe to the podcast and how to get in touch if you want to leave comments or feedback.

The Complex Events Podcast was brought to you today by Voices in Business, helping



our sponsors achieve thought leadership in their business sector. For more details of what we offer, go along to www.voicesinbusiness.com.

Thanks for listening. Goodbye.

[music]