



BBBT Podcast Transcript



About the BBT

The Boulder Business Intelligence Brain Trust, or BBT, was founded in 2006 by Claudia Imhoff. Its mission is to leverage business intelligence for industry vendors, for its members, who are independent analysts and experts, and for its subscribers, who are practitioners. To accomplish this mission, the BBT provides a variety of services, centered around vendor presentations.

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Host:	Claudia Imhoff , Founder, BBT
Guest(s):	Scott Opitz , CEO
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Claudia: Hello, and welcome to this edition of the Boulder BI Brain Trust, or the BBT. We're a gathering of international consultants, analysts, and experts in business intelligence, who meet with interesting and innovative BI companies here in beautiful Boulder, Colorado. We not only get briefed on the latest news and releases, but we share our ideas with the vendor on where the BI industry is going, and help them with their technological directions and marketing messages. I'm Claudia Imhoff and the BBT podcasts are produced by my company, Intelligent Solutions.

I'm pleased to introduce my guest today. He is Scott Opitz. Scott is the CEO for TimelinePI. Welcome Scott.

Scott: Glad to be here Claudia.

Claudia: Let's talk a little bit about your company. It is a very new company. If you don't mind, tell me about it.

Scott: We do have a new company, the company TimelinePI, and it's focused on a new type of data analysis. As you know very well my co-founder and I, Alex Elkin and I, have been in the business intelligence space for the last dozen years or so, formerly with Altosoft, which is now part of the Kofax Lexmark organization. We were focused then on providing a full end-to-end business intelligence platform.

What fewer people are familiar with is prior to that in a company that we co-founded together as well, we were focused on the business process management space.

TimelinePI really reflects the convergence of both business process management, and the types of things you think about there with business intelligence.

Claudia: One of your slides stated, "There's nothing available today that enables users to adequately discover and analyze business process data," and that is the focus of TimelinePI. How do you meet that need?



Scott: We really believe that because, as I said we came out of the business intelligence space. We're very aware of pretty much all the capabilities of all the various products and different segments within that large space.

The one thing that we cannot find anywhere is any tool that really allows me to be able to take data that happens across perhaps many different systems and many different steps in a process, and then look at it holistically end-to-end as part of a process. As you might imagine, there are unique sets of challenges that arise from that type of analysis.

Claudia: All right. Let's get into some detail here. I want you, if you don't mind, to explain the difference between a traditional BI analysis versus what you're calling a timeline analysis, and if you could give me some examples.

Scott: Traditional BI, and this is a generalization but I think it's pretty accurate, typically deals in data sets that you think of in terms of fields and records. Most analysis that you do can best be summarized as aggregation analysis.

I pick a particular field like the value of an order, and then I want to add it up. I want to figure out the total amount of orders, I want to figure out the average order size, I want to figure out how it actually is distributed and broken down region by region.

Really what I'm looking at the entire time no matter how much analysis I do is I'm still just looking at an order value. I'm just looking at it in a bunch of creative ways. The difference with process intelligence and timeline analysis is the fact that you placed an order that somebody purchased something from you, is only one part of a much bigger process.

There's all the interaction that you did to first probably work with that customer to help them understand, answer questions, perhaps provide proposals, perhaps negotiate the terms of the ultimate transaction that led to that sale.



Then there are a number of things that happen afterwards. Did you get paid? Did you get paid on time? Would you do something differently with that customer, based on that information?

If I take all of those many things that happened in the sequence of steps that were involved with processing the order, that's what we define as a timeline. The nature of the questions I might want to ask of a timeline then, could be quite different.

Instead of simply saying, "Tell me the total value of the purchase," I would want to say things like, "Could I see just those cases where a customer spent more than a certain amount of money but we had to talk to them at least five times before they actually made the purchase. Following the purchase of greater than a certain amount of money, how often did they call in for customer support calls?"

When I combine all those things together, there's no way in any BI technology that we know of, and I challenge you to tell me if you think you know of one, that could actually combine all of those parts of that question into a single result.

Claudia: Now there are technologies like Complex Event Processing technologies, or like BAM, the Business Activity Monitoring, that are close to what you do. I think you have a very unique contribution or unique offering here that can string all of the activities together, whether it's within a system or within multiple systems, and be able to analyze that flow of information as it goes from activity to activity. Is that right?

Scott: That's right. The product categories that you refer to – actually in fact sometimes they even talk about a process intelligence capability within those products – what they generally mean, their definition of process intelligence in that case, is really about operational processing of data.

Most of them share in common that they have access to some sort of a real event stream, that as things are happening in whatever systems they feed data into these systems. They're able to evaluate



the data values coming through, and then make decisions about the next best step. Some of them do a quite good job of that from an operational standpoint.

The difference in what we're doing is we're assuming that there might be a lot of questions you want to ask of that same type of data, in order to better understand what's happening in your processes and why. The first fundamental difference, at least in the first iteration of the product, is that it is a data discovery tool but for these timeline type data structures.

The idea is that you as the user will use the tool to go and investigate, and test hypotheses, and really get to understand what's happening in your data initially. Then you can decide what you're going to do to act on this new knowledge.

Claudia: Let's talk about some examples. You gave us a number of different verticals if you will, that could use your technology. Why don't you talk about those a bit?

Scott: It really could be across industry. One of my favorite actually is something that came out of a real world situation we were in where hospitals, which as you can imagine in the healthcare industry today, are under a tremendous amount of pressure to become operationally more efficient.

They're trying to take unnecessary steps, or unnecessary costs out of transactions. One simple thing is to make sure that with less resources they can still cover the same number of patients. You don't want to waste time. A question, that on the surface sounds very simple, is actually quite technical and really impossible with traditional BI technologies. It would be something like, "Show me all the cases where we called for a specialty consult on a particular issue. But that specialty consult we know requires that an x-ray has to be taken, or a CAT scan, or an MRI, or something within 24 hours prior for it to be valid for them to give an appropriate consultation. Yet the consult was called without that x-ray having happened within that 24 hour period."



If you think about trying to answer all those questions, you literally would have to answer them step by step by step, and build a bunch of custom logic to do that. In our environment, we believe that that should be handled by a simple query.

"Define my conditions. I want to see those cases where this type of consult was called. The outcome was perhaps negative, but there wasn't an x-ray taken in the proper time window, but yet we still wasted the time of having that person show up to try to do the consult although they didn't have what they needed when they got there."

Claudia: Yeah. Why don't you talk a little bit about the market need then for TimelinePI?

Scott: The view that we have is that much like the evolution you've seen with other specialty analysis tools that really grew out of the business intelligence space – things like geospatial and mapping analysis – where people wanted to understand how data was distributed over some geography and wanted to be able to ask questions like, "Show me all my sales within a 25 mile radius," or something like that, or more recently with things like being able to do analysis of unstructured textual data to try to derive sentiment or other things.

There are special tools that have grown out of that, to answer different types of question. We see timeline analysis as being the same idea. You're still going to need BI, you're still going to use all of those other ones as well.

For certain types of questions that you're going to want to ask such as these complex questions that comprise of different conditions that span across the multiple steps of a process and multiple values associated with those steps, you're going to need a specialized tool not only to ask the questions but then also to be able to visualize the information that you get back so that it makes sense to you.

Again historically there have been no visualization components or technologies that have lent themselves to visualizing collections of



these different timelines or process instances. It demands another new way of looking at things.

Claudia: Let's get into some of the technical details if you don't mind – A little bit about the architecture. What's under the covers a little bit there?

Scott: Sure. The first thing, we're very proud of the architecture actually. One of the things we were set on doing is it's delivered via a SaaS model. It is a completely hosted cloud based solution. There is no on-premises component to the core product itself.

The idea behind that is, just in keeping with the general trends in the industry, you need to be able to provide these kinds of services in an easily accessible model for organizations and departments within organizations. They might not have the wherewithal to spin up an internal instance of something.

The other thing is that in order to do that, and to do that successfully, you also have some very high demands on performance. The world we live in now is a Google world as I like to say. You expect to be able to do a query and get 1.7 billion responses in less than a second. Whether people understand what that really means or not doesn't matter. They have an expectation and they deserve to get what they're looking for. For us it was critical to come up with an environment where you could get true sub-second discovery type responses.

We've actually used under the covers some pretty advanced technology in the area of the latest technology around web development, for the technical folks in the audience, things like Angular and Node.js, and some really bleeding edge technologies.

Claudia: Talk to me a little bit about some of your favorite features. You gave us a terrific detailed demo of the product, many, many features. I couldn't even begin to list them. I guess I'm going to ask you, what are your favorite ones?

Scott: I think my personal preference is driven by how I know I use the tool as I show it to people, and how I've seen people who have started



working with us, testing the tool as part of our beta process, are using the tool, and the ones they gravitate to. The two that really stand out are what we call our structured query, or building search sets.

The ability to build potentially very complex types of questions like, "I want to find all cases where this activity happens, but within a certain amount of time this other activity happens, but yet some other activity was repeated three times without some fourth activity happening, but only for those activities when they happened on Sundays."

In other words just what are extremely complex questions, but might actually be the exact question you have to ask to get to the root of something you're trying to figure out. The reason it's one of my favorite features is we feel very proud about the fact that we've come up with a very simple point and click configurable graphical interface for that, where you literally just pick and choose what you want and say search. It just feeds it to the engine and gets your result back.

The other one that stands out to me is when I think along the lines of a lot of the specific specialty areas that we deal with in organizations. We deal a lot with process improvement people, a lot of people who are quite good practitioners, and Lean and Six Sigma and those techniques.

They have to work unfortunately historically in a very tedious manual way, to do a lot of the time and motion studies and things that they do. In the end what they're really trying to get to is just an understanding of how consistent are we, or where do we have variations in things that are either good or bad?

My second one that I would really favor is what we call our permutations analysis. We would also refer to that graphically to more of a swim lane analysis, where we actually can show you across the many instances that you may have of where you've done what you think is the same process over and over again, all of



the variations, and actually show you a distribution of how often it's done one way versus another way versus the 50th variation.

The ability to see that in one place and be able to immediately see the variations, but then pick any one of those variations and then drill down, and be able to understand, “is it the same people who are involved when that happens, is it the same type of order or the same type of product, whatever might be a root cause?”

The ability again to do that – just through a series of quick mouse clicks to be able to get to your answer. That's pretty rewarding for those folks.

Claudia: I love the swim lane analysis. I really do. What I find fascinating is it is really the best way to get to the actionable stage. When you see someone skipping a step and then going back and doing it, and going forward again and then going back, back and forth, back and forth, something's wrong.

They either need training, or they don't understand the process, or they're just doing something stupidly. I think it's a very clear indication that something is wrong, right?

Scott: I agree with that. I think that probably the reason I like it the most is the fact that, unless you know too explicitly even to go look for something that seems so odd why anybody would ever do it that way, it is the proverbial needle in the haystack.

The ability to see it right in front of you and be able to spot that, yes they repeated that so many times, or they did it in an order that would make no logical sense to you as the observer, it's obvious right in front of you. Even if you never thought to ask the question, it just begs your attention to want to go down and find out why.

Claudia: We mentioned that it is a new company, and you actually have version 1.0. When is that coming out?

Scott: Version 1.0 right now is in beta. We expect right now to be in general availability some time by early August. Again that will be



driven by feedback through the beta process, but we think August is a fairly safe date at this point.

Claudia: What a wonderful time. All right, and what's in the future?

Scott: For us I always think about the future from a road-map perspective. What's coming in the product, and what cool new things do we think we need to add? I'd say probably two things that really stand out there in our near term horizon, which would mean probably delivered in the next six to seven months or so.

We've always been driven by in our previous companies as well as TimelinePI, the ability to have the software get smarter and smarter so that it can actually suggest things to you that you might not have thought to even go looking for.

In other words, have it auto detect anomalies if possible. Have it find patterns and execution of these processes or timelines, that again you might not even know how to form the question. Once you see that something has happened, it would become very obvious to you why that might be important to you. The ability to add features like that that anticipate the types of things that you might want to know, and give you a concise answer on that.

The second one is – and this is a very big part of working with some of the larger customers that we have – to get into the area of operational monitoring and alerting.

If you think about it, yes we do work a lot with those Lean, Six Sigma teams I mentioned and process improvement folks, and quality people, and risk managers, but they tend to be a fairly small percentage of the overall population of employees in most organizations. Having them be the only beneficiaries of this is somewhat limiting.

One of the things that we recognized is that, maybe through their good analysis, they might detect that in fact there is a particular behavior that's either negative or positive, and the company may in fact make an initiative to say, "Well if it's a positive, let's make sure



more people do that. If it's a negative, let's train them or do whatever we have to do to make sure they understand that's inappropriate."

In either of those cases though, once you take the initiative as the organization, how do you know that you're actually adhering to this new model? Through operational monitoring and alerting, the idea would be, since we knew what we were looking for and what we were fixing, we can simply continue to monitor robotically to see if those conditions ever arise, and then notify the appropriate parties so that they can take up further action.

Claudia: That's brilliant. I tell you I'm very impressed with the technology. I so look forward to the GA day. I think that's going to be a big one. Unfortunately we're out of time for this edition anyway, of the "BBBT Podcast."

Again I'm Claudia Imhoff. It's been such a pleasure to speak with Scott Opitz of TimelinePI today. Thank you so much Scott.

Scott: Thank you Claudia, my pleasure as well.

Claudia: I hope you enjoyed today's podcast. You'll find more podcasts from other vendors at our web site www.bbbt.us. If you want to read more about today's session, please search for our hash tag on Twitter. That's #BBBT. And please join me again for another interview. Good-bye and good business!