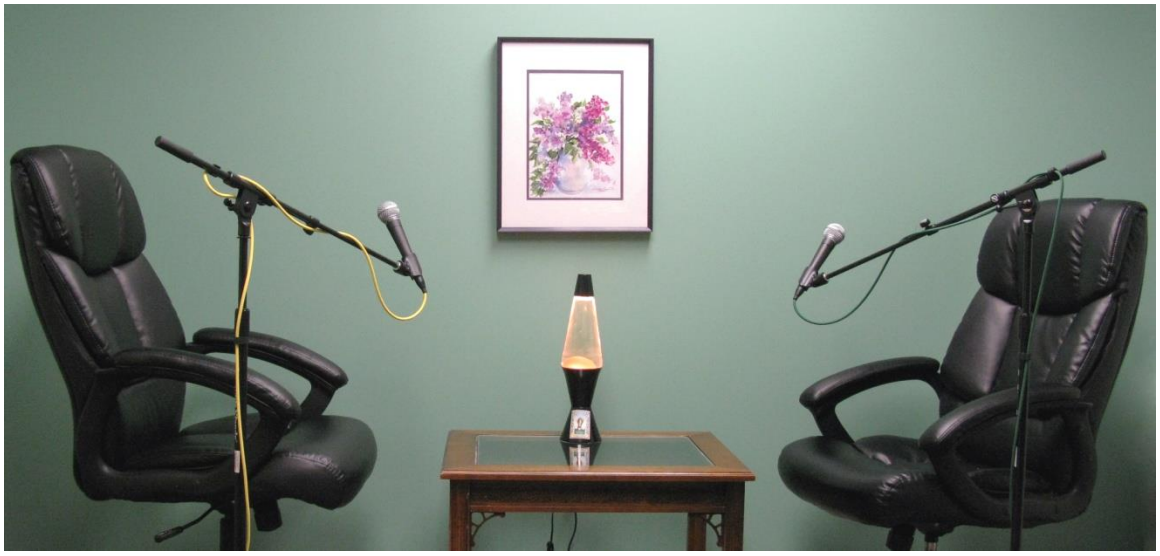
BBBT Podcast Transcript



About the BBBT

The Boulder Business Intelligence Brain Trust, or BBBT, 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 BBBT provides a variety of services, centered around vendor presentations.

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Host:	**Claudia Imhoff**, President, BBBT
Guest(s):	**Steve Ehrlich**
	Senior VP, Marketing & Product Management
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Claudia Imhoff: Hello, and welcome to this edition of the Boulder BI Brain Trust, or the BBBT. 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 BBBT Podcasts are produced by my company, Intelligent Solutions.

I'm pleased to introduce my guest today. He is Steve Ehrlich. Steve is the Senior Vice President of Marketing and Product Management for Space-Time Insight. I'm so excited to have you here. Welcome, Steve.

Steve Ehrlich: Thank you, Claudia. It's great to be here.

CI: Let's start with, "What is Space-Time Insight?" It's a relatively new company for many of us in the BI space. If you don't mind, give me a little bit of history and the focus of Space-Time Insight.

SE: The company shipped its first product in 2008. We focused initially on selling into the utilities market and have since expanded into other industries. The product is really focused on helping companies really understand data across their organization. With the trend towards Big Data, "How do you understand what's in that data and then make critical decisions based on that data?"

CI: Let's talk about the industries a little bit. You started out by saying they were "asset intensive" industries. I thought that was an interesting term. What you do is you bring together -- we'll talk about it in a moment -- you bring together so many forms of intelligence. So, "asset intensive", what do you mean by that?

SE: Asset intensive are companies that have a lot of assets that are typically geographically dispersed, very often in remote areas. The assets are expensive. They require a lot of maintenance and are very expensive to replace. They require a lot of monitoring.

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There are assets that are producing large amounts of data. Understanding what that data means and how to best apply it is part of that. Utilities, telecom companies, transportation companies...

CI: Wind farms, anything that has dispersed...

SE: Sure.

CI: …out of the way…

SE: Yes. Any company...

CI: …expensive…

SE: Think about assets not just as assets that are fixed in one place, but moving, whether it's mobile field service people, whether it's transportation people delivering things, and so on, as well.

CI: We're going to talk about a couple of case studies a little bit later on because I thought they were fascinating. But I want to get a little more detail in what exactly it is that you do. You describe the company as supporting "situational intelligence".

First of all, I love the term. It does depend on the situation. It is geospatial in nature. But it's so much more than just geospatial information. You really do bring in the whole ball of wax. Tell me a little bit about that.

SE: It's, of course, as you mentioned, about understanding where people, assets are. It's also about understanding what happened, why something happened, and when it happened.

It could be a crisis type situation. A storm has occurred, and you want to know the impact on your assets and your customers. It could be a storm's about to occur, and you also want to know that.

It could also be a daily maintenance type of event as well. Situational doesn't have to be an extreme event. It could be something that's happening on a daily basis that you want to pay attention to.

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In all cases, it's about bringing the data together from across the organization to understand the meaning of that situation so you can make the best decisions and take the appropriate action.

CI: The way that I would explain it to someone who didn't know what you did is I would say that you bridge the world of complex event processing with the world of business intelligence. In other words, business intelligence, by far, has been much more in the descriptive analytics, describing what happened.

There, now, you're also bridging the predictive part of BI, what will happen. It's that complex event processing, bringing that into the mix that says "I've got these multiple streams of information. I've got a lot of balls in the air. How do I juggle all these and make sense out of them?"

The other thing that we talked about was another bridge, which I thought was quite interesting. It was a new term for me, so I've learned something today. That was the situational intelligence bridges the gap between IT, Information Technology, and OT, which is Operational Technology.

It took me a while to figure out what you were talking about when you said, "OT." Why don't you just give the audience an example of what is OT?

SE: As a lot of companies are investing in smarter technology to better understand their operations, whether it's a smart grid or a communications network or just even a transportation network, there's a lot being invested in how to better understand what is happening.

There are sensors being placed. There are meters being placed and so on in various places. Those are generating a huge amount of data that they never used to. There's a need to impose a somewhat IT infrastructure on top of those operational systems.

Then we come back to situational intelligence, which is really about understanding everything that's going on in your business. It's not just about understanding which meters are working and not. It's also about understanding the IT impact of that.

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What is the cost? What are the financial implications? What are my revenue implications? Which are sitting in my traditional IT systems. Bringing all of that together in one place is what we call bridging the gap between IT and OT.

CI: We had an interesting conversation. Years ago, I was a consultant for a power production plant. They had none of that. They had people walking around with pads of paper, making note of how much power was being produced.

What's interesting is all of that information is generated, certainly, but now it is being captured. This machine generated data is actually being captured in these operational technologies. We can now use that in so many analyses throughout the organization.

SE: That's right. The guy who came to measure your meter once a month or read your meter once a month... Now your smart meter's being read every 15 minutes. Each time, there are 150 events that are being recorded. The volume of data is significantly higher, of course.

That's only part of the problem. Getting the data is just step one. What to do with the data and how to interpret it is really the hardest part. Many of the companies are now just starting to think about it. Having collected that data, what do we do with it?

CI: We're going to get to the technologies underneath the covers in your suite. Before we do, this is a good time to talk about some of those companies. You gave us a whole batch of good case studies. Why don't you talk about those a little bit?

SE: We can start with the California ISO. This is an organization responsible for maintaining the California grid, about 25,000 miles of transmission line. They have an operations center with about 250 people sitting there with large screens that they're using to monitor what's happening on the grid.

They essentially have to balance the demand and supply of energy every four seconds. There's real time data. There are fires, floods, and, of course, earthquakes to worry about.

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CI: And weather. Everything.

SE: Weather. Understanding that, they have to deal with renewable energy that's being presented to them from wind and solar farms. They have to determine how much, and forecast how much, of that is going to be presented so they can balance the rest with traditional energy.

It's a really good case of how the real time needs of an organization are being addressed through situational intelligence.

Another use case is at Hydro One, a large utility in Toronto. Their problem is one of aging assets. They have millions of assets across their entire infrastructure. A lot of them have been deployed 30 or 40 years ago.

The problem is they're expensive to replace. How do they know which ones to replace first? How do they make a justification to replace certain assets?

The system is really helping them visualize which assets are in trouble, which ones are ahead or behind expectations in terms of their life expectancy, and helping them figure out which ones should be replaced or maintained, as appropriate.

There are many other examples. One I wanted to point out is a smart meter example. It points out that just getting the data is not sufficient. If I can determine that a meter hasn't been read, the question is, "Why?"

Knowing that it hasn't been read is relatively easy. Why it hasn't been read is a lot harder. It could be that the meter's broken. It could be that communication to the meter is down. It could be that there's an outage in an entire area.

It could be there's a field crew working in there, and they've turned off the power temporarily. It could be that the house is underwater. It could be any number of reasons. It could be tampering or theft.

It's that kind of analysis, trying to understand all of the different conditions around that particular meter, that our software really helps an organization with.

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CI: It really is. Let's talk about your software. Thank you for the lead in to that. Under the covers, you've got to be able handle these various feeds of data. Some are historic. Some are real time. They're all over the place.

You stated that they have to be available across space, time, and node. Why don't we talk a little bit about what is under the covers that helps you do this?

SE: First, there are about 30 different data interfaces. You can get data from anywhere. The data is pulled into memory and processed there. The data's not re-stored in another database because you don't want to be creating yet another data silo in your organization.

The data's then processed, analyzed, and correlated, as you said, across space, time, and node. Understanding, for example, how many customers are within a five mile radius of a particular asset that's under stress, perhaps on fire or exposed to a wind storm or something. That's a spatial type analysis.

A temporal analysis would be understanding how that situation has evolved over a period of time. You want to know that, if that fire, perhaps, has been ongoing for a day, what stress has that placed on the rest of my network? How are those particular assets affected?

CI: Has it happened in the past? And so forth. Is there a pattern, a seasonality to this?

SE: Exactly. If there's a lightning storm that has passed through there, you want to know that.

Then there's the nodal analysis, understanding how that particular asset relates to others on your network. If a transformer or substation, for example, is down, you implicitly know that all customers downstream from that transformer are not going to have power.

That nodal analysis, that understanding, is very important. I used the example earlier of a warehouse supplying stores. The warehouse is not able to deliver to the stores. Those stores are not going to have the goods in stock that they need.

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Understanding that, understanding when the warehouse will be able to catch up, understanding if that warehouse burned down, where are those stores going to get supplies from, is it at another warehouse, how long is it going to take them to get there, and all those things.

That's totally a spatial problem, a spatial, nodal problem, and a temporal problem of understanding.

CI: All mixed up.

SE: We're bringing all of those together into one place.

CI: The other example you gave... We've only got a minute so left, but I would like to bring that one in… was the situation where a hurricane was heading toward the southeastern part of the United States.

The storm is always projected. There's always a wide swath of where it may go. It's obviously going to affect the utilities. Trees are going to go down. Wires are going to go down. Things are going to blow up. Whatever it is that's going to happen, be underwater, something.

What I found interesting in that case study, and I'll let you talk about it, was the preemptive capability that the utility company was trying to do. Talk about that just a moment.

SE: Very important, if a storm's going to occur, that you place your crews ahead of time in the right place. When the trees are on roads, they can't get there.

Understanding the path of the storm, understanding where your customers are, understanding where your assets are, and understanding the vegetation in that particular area because typically that's what causes the most damage. If you can understand those various factors and apply them in a model, then you can make some predictions about where's the best place to place crews in advance of that storm.

CI: Stage them, get them ready to go.

SE: Exactly.

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CI: Fascinating. Absolutely fascinating. Unfortunately, we are out of time. You have a wonderful story that you're telling.

SE: Thank you.

CI: It's been a most interesting BBBT. Unfortunately, that is it for this edition of the BBBT podcast. Again, I'm Claudia Imhoff. It's been a great pleasure for me to speak with Steve Ehrlich of Space-Time Insight today. Thanks so much, Steve.

SE: Thanks for having us.

CI: I hope you enjoyed today's podcast. You'll find more podcasts from other vendors at our web site, www.boulderbibraintrust.org. If you want to learn 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!

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