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Can A.I. help out in the executive suite?

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Above: Left to right: Guillaume Arnaud, Anaplan; David Gurle, Symphony; Jim McNiel, Netscout; Rob Pickering, Servicenow; and Dean Takahashi, VentureBeat

Image Credit: Net Events

Will artificial intelligence replace humans, or assist humans? That's the great debate in Silicon Valley and the larger world of technology. We'll see this debate play out over and over, from the Westworld HBO television show that begins on Sunday to tech events that happen every week in the Valley.

I recently moderated a debate about artificial intelligence in the CEO suite at the NetEvents Global Press & Analyst Summit at the beautiful Mountain Winery in Saratoga, Calif. It's clear that A.I. is on an accelerated improvement path. Deep learning neural networks have made huge progress in the last five years. We're seeing improvements in a range of tech, such as voice recognition and face recognition; autonomous cars are coming.

So the question is, will we have *The Terminator* and *Skynet?* Or *Minority Report,* where Tom Cruise is aided by all the computers that he needs? Science fiction has taught us to distrust A.I. and to believe in human intuition. But what happens in the CEO suite? How does the CEO benefit from A.I.? Here's an edited transcript of our panel.

Above: NetEvents summit at the Mountain Winery in Saratoga, Calif.

Image Credit: NetEvents

VB: Let's have our panelists introduce themselves.

Rob Pickering: I work in the office of the chief strategy officer at ServiceNow. We're a cloud company that provides enterprise service management for the enterprise.

Jim McNiel: My name is Jim McNiel. I'm the global chief marketing officer for NetScout. We are the market leader in providing service assurance for large service providers around the world and large enterprises. We're also in the cybersecurity business with our division Arbor Networks.

Guillaume Arnaud: My name is Guillaume Arnaud. I work for Anaplan. I'm running special operations at Anaplan, which means I'm taking care of our [strategy] customers, make sure they are successful. Anaplan, in a few words, we are a leading planning and enterprise performance management platform for smart business.

David Gurle: I am David Gurle. I am the founder and CEO of Symphony Communication Services. Symphony was born in October 2014. We serve financial services and other regulated industries with a very secure collaboration platform.

VB: Great. Maybe I'll start with Guillaume on this. The CEO needs help in the suite here to make decisions. You were telling us this morning about HP and how much data it can access through Anaplan. Can you talk a little bit about that?

Guillaume Arnaud: Yeah, sure. HP — that was even before the split, and they kept working with Anaplan after they split into two companies — we solved a huge problem for them, which was how to allocate their sales targets across their entire sales force. Their sales force is 25,000 sales reps around the world, 200 counties. We were talking about 200,000 sales territories that they were managing. Before, it took them four months, four to five months, between the moment the process starts where we have the big sales targets and the time the sales rep in every country receives the letter that tells him, okay you need to sell this product with this discount — four to five months.

This was a huge risk for them. They moved to Anaplan about three years ago. In about five months — that was the time of the project — we moved this five months to a week, sometimes a few days. So the result was they set the target at a high level and after one week, everybody, every sales rep around the world, received his compensation letter. So they know what to sell and at what discount. That was solving this huge problem of…

Above: HP's Skylake-based PC doubles as a conference call phone.

VB: You're sort of dealing with the equivalent of 20 million spreadsheets fully loaded.

Guillaume Arnaud: Yes, it was funny to count how many sales it was corresponding to compared to [Excel]. It was about 100 billion [cells]. That was the entire HP application. So that's like millions of spreadsheets that were circulating, or the equivalent of that. They got this real time platform where they could even make decisions within the process to correct a course when they saw that it wasn't going in the direction that they wanted to. They could make simulations. They could make what-ifs and then make the smart decision in a few days with a highly collaborated process. That was the big change, the big win for them.

VB: So now I open this up to everybody on the panel, but how far are we going to go with this kind of decision support in real time? Where are we now with it in the CEO suite? Is the CEO going to have all these instrumented dashboards that are just going to help them out and get them the things they need to know right when they need to know it?

Jim McNiel: I think what you're hearing today is that there are really three categories of artificial intelligence. There's artificial narrow intelligence, general intelligence and super intelligence. Today

you're hearing about really the growth and transitioning from the slow growth phase into maybe the accelerated phase of A&I. It's demonstrated by things like predictive forecasting for sales teams. It's demonstrated by Siri. It's demonstrated by the autonomous car. It's demonstrated by the Nest thermostat. So we're at the very early days of narrow applications of machine learning and artificial intelligence.

I think that what you're going to find is that in any kind of specific category where you can frame a problem you can bring predictive algorithms; you can bring machine learning; you can bring neural networking. Any number of different technologies together to do things more efficiently than humans can do it just by the sheer fact that you can crunch the numbers – that we now have computers on the planet that are stronger than the human brain. Not many, just one, but still it's happening.

So I think the answer is it's going to happen. It's going to happen in an area where the investment justifies the return. It's not going to stop. What I think I care about as an agent for NetScout is that the quality of the work that you're doing in terms of crunching numbers and trying to make decisions faster than humans and better than humans, is going to depend on the quality of the data. You know, we all learned in CIS 101, garbage in garbage out. So if you want to be able to make good decisions, you'd better start with good data. The business that we're in at NetScout is collecting organising and analysing that data and making it available to people like Guillaume to analyse what's going on in large enterprise.
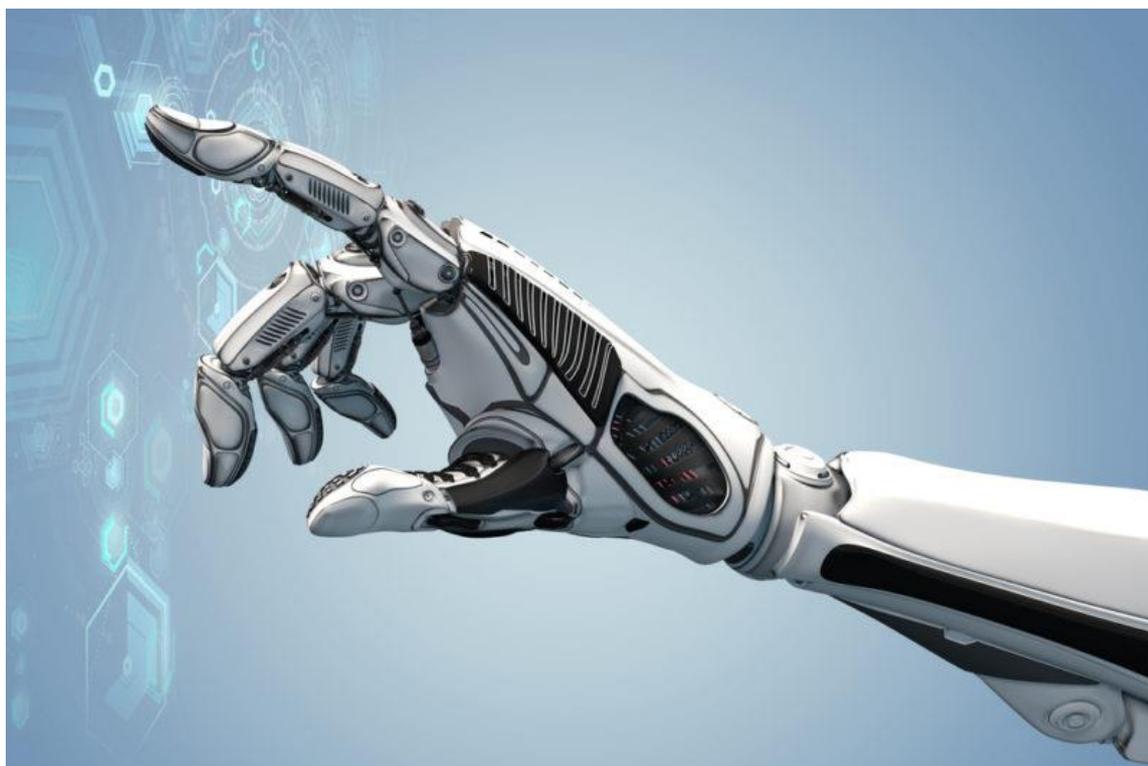
Above: Real A.I.? It is not needed for chatbots.

Rob Pickering: The issue with data, and getting good data, is that that's always going to rely on people. People are making those determinations as to what is quality data and what isn't quality data. Then you can teach machines to identify quality data over time. But as we heard this morning that's difficult. That requires an enormous data set in order to provide that training to those A.I.s. So that – I agreed with Kathryn this morning – we're at the very very early stages in this A.I. growth curve. If you look at all of the companies that are starting in the Valley and in elsewhere – Jason Calacanis does a launch ticker newsletter – you're seeing five, six, eight A.I. companies starting every week. But they're all solving very very specific problems that allow them to get large data sets to do that training.

David Gurle: As a CEO to answer your question about can A.I. help in the C-suite – you need constant information of most accurate data in order to make a decision every day. It's a 360 degree horizon that you are looking. To the extent that the data which is correct arrives, the next thing you've got to do is correlation.

Correlation is that if there is an action, what is the reaction? Is there a way you can simplify the path to action to reaction thanks to A.I.? I think in the areas of narrow problems as Jim mentioned, we will see the help of A.I. coming to rescue some of the decisions that the CEOs have to make. To the extent that these some of narrow A.I. technologies create a global consciousness in the mind of the CEO, the C-suite, then we can see whether A.I. does or is not going to help. The challenge with science fiction is that we treat A.I. like we treat ourselves. We think that – we project our qualities and flaws into the A.I. that we are building but we have no idea once A.I. gains consciousness whether they like our qualities and flaws and to what decision they're going to make.

Jim McNiel: You had to go there huh? [Laughter]

David Gurle: Right? What decision they're going to make. In the world of the CEO there is a lot of rational decision but there is also a good chunk of emotional decision.

Sometimes a decision that you have to make from a strategic perspective is driven more about keeping your team together than actually making the result that could be the most rational thing to do. To what extent AI is going to be helping around that I have no clue but I'm not ready to give that up yet.

Guillaume Arnaud: It helps for sure. It helps doing a lot of the automation and the legwork. So what we see with our big customers – HP is one of them and we have many others – is when the

whole system manages this whole set of data aggregates and gives the trends of what's happening, then you free up a lot of time for the decision-makers to actually try things based on what happened in the past and see what the result will be. Like the action reaction you just talked about. We see that very very often with our customers. That's the beauty of those platforms. I mean like Anaplan is – that we empower these people to leverage these big data sets, leverage these very complex calculations, the predictive of it, and try things and see what the result will be before they make the decision.

So A.I. will not replace people from making those decisions because the intuition of the business person has still to be here. The A.I. and the automation free up from the legwork and empowers them to make those simulations, those what-ifs, compare. If I do this what's going to happen? If I do that what's going to happen? Hey what do you think here in this department? If I do this – because this is impacting you – so the collaboration combined with the A.I. combined with some predictive, this is where we are going to make so much progress and empower those business people to make those smart decisions.

Above: Bill Gates. Credit: OnInnovation

Jim McNiel: That supports Bill Gates' vision of business at the speed of thought. His notion was first it was information at your fingertips. Now it's intelligence at your fingertips. So everything comes in. So that I can make a decision I can have all the information about all of my sales, all my investment, what the results of those investments are and I can make better decisions faster. I think as

long as this conversation takes place in that kind of narrow space which is, how do I monetize this opportunity or how do I improve this performance? It's a very bounded, very reasonable conversation.

I think when A.I. becomes much broader and we get to artificial general intelligence then it becomes a free for all. Then it gets very scary to a lot of people very quickly. But for A.I., artificial – neural intelligence – I think it comes down to framing the problem, understanding what you want to solve and how you want to improve it. There are so many different companies out there that can help us do that. In the case of a service provider one of the things that we've done with the analytics that we provide is service providers are all stressed to figure out how to find new revenue sources.

One way in which to do that is to look at the patterns of all of us as mobile users and just to solve a simple problem which is to say is Rob currently at Home Depot with his credit card spending $1000? Because his credit card is there but is Rob there? That's a really easy thing for AT&T to solve. So this is a way some of this stuff could be used to make revenue opportunities for new companies.

VB: It seems like things are changing fast. I wonder how fast they're going to change on this particular topic and that is your quarterly reports, you know public companies. Every quarter we see them either spike in their stock price or just crash in their stock price because they didn't properly warn Wall Street about how things were going to go. So every 90 days they're getting this information back telling them how well the company is doing. That seems so archaic in this day and age of what we're talking about here. In real time on day 23 of the quarter you should know whether you're going to hit it or not. So why are we on this 90 day cadence still and failing to actually really predict it?

David Gurle: I think that is – it's an auto-forecast. I think the whole point of quarterly reporting is not questioning the result. It's questioning the forecast. So to the extent that, again the CFO and CEO have the data that supports the future revenue and future EBITDA based on the past performance and to the extent that they can project that 90, 120 and 360 days ahead you can be very successful with Wall Street. Wall Street just does not want you to fail on your forecast on whatever model that they believe that your model is going to be.

This is where A.I. can be very helpful because there is always a degree of uncertainty when it comes to forecasting your results. We all know that. Things that [we are going to] close this quarter is just pushed to the next quarter. What we don't know most of the time – I do it every day – is that what is it that's causing that delay to happen? Therefore how do we predict that the next five things that have to close this quarter will not close next quarter?

Above: One of the Bee Cave's virtual slot machines.

Rob Pickering: I think it applies to the law of large numbers. This is an easier conversation if you're Apple or HP. It's a tougher conversation is you're a $5 million software start-up who doesn't have bookings coming into the quarter; doesn't have a large number of customers to rely upon. It's like predicting the performance of five slot machines versus 500 slot machines. So you need to be able to appropriate – have the appropriate scale of data to be able to make these kinds of decisions.

Jim McNiel: It also boils down to people. People are creating that data. They're making those forecasts. They're actually putting in their sales as they're making them. Those companies all know what they're quarter looks like long before the quarter ends. They have that data already. What you're going to see is you're going to see a shift for the CEO to be able to make more valuable decisions in the long term. So all of those tiny point decisions are going to get made by the company as a whole or by a machine learning inside the company. To move it forward the CEOs are going to make the emotional decisions, the strategic decisions. Their A.I. is not going to change what they're doing. It's going to make what they're doing more valuable.

Rob Pickering: When is the leading indicator not the sales forecast? That's what's interesting. If you look at the volume of network traffic, if you look at the number of visits to the site, if you look at the downloads, if you look at just everything in its aggregate and it doesn't actually rely on the salesperson predicting – because they're always bad at it – it's an interesting conversation.

Jim McNiel: Absolutely right. That's where IOT starts to play. That's where you're gathering data about the performance of the company from the company itself, not from the people in the company.

Rob Pickering: In total, yeah.

David Gurle: That's where connecting the high level aggregated decisions to what's happening in the field in real time is so critical. Those algorithms and those hardware makes that possible now. The value of that is just incredible because as you said you know what's going to happen at the end of the quarter before the end of the quarter. So what you can do is course-correct. If you know you're going to miss your quarter you're going to minimise the impact. If you know you're going to explode your quarter you're going to start making some noise about it. So those real time platforms combined with A.I. provides this ability to make a change. Organise – or org changes – marketing decision changes, hiring changes.

Above: A huge touchscreen at HP Labs.

Image Credit: Dean Takahashi
VB: So our A.I. timers are already telling us we're running out of time. [Laughter] I think we want to get to some audience questions. See if anybody has one.

Question: Joscelyn Flores from HPC Review in Paris. I'd like to give the example of HP. I think the example you gave was more at the operational level. I think if you keep the example of HP which is interesting, if you go one level up, like the strategic level, CEOs don't take strategic decisions every day. I mean they take many one or two during their whole career. If you keep the example for HP, like 15 years go for HP bigger was the best, they need to be a bigger and bigger company. Today the thing – the strategic decision is to keep focused on the data centre infrastructure. So do you think at that level of decision A.I., data analysis and everything will be interesting to apply? Do you think we will still stay at the level of [rule of thumb], intuition and all that – humans are very able to do it, not the computer [are not able to do it]?

Guillaume Arnaud: That was a long question. As we discussed, and I agree with the people here, it's a combination of automation, artificial intelligence and intuition. So the automation, the big data processing, the management of these business roles in a very complex situation like HP, to the service of the intuition of the business manager. So in order to make smart strategic decisions you need to have the insight. You need to know what's going on. What will happen if I take that decision versus this decision? If you don't have all this data, if you don't have all this collaboration between all your different departments it's likely you're going to make a wrong decision.

You might be lucky because you have a crazy great intuition but you're blind if you don't see that. So if we combine those data, these calculations, this hyper speed processing at the service of those smarts decisions, that's where you become successful and you lower your risk of making a wrong decision. If you take the example of HP but – there is another example of a customer in the wine and spirits here in the United States.

It's big. They have $1 billion in marketing to spend every year. They need to spend very carefully because the competition is intense. They need to sell the right bottle at the right size at the right place. So in order to make this decision they need to have this algorithm, this predictive algorithm, the collaboration of people in the field to tell them this is the brand that is successful, that will be successful in this size because this is what's happening here in this location. This is across the world, across – in all the different places they are selling their products to. So if you apply this processing, this big data, and connect the smart strategic decision to the operational decision in the field you will lower your risk of failing in your strategic decisions.

Jim McNiel: So Guillaume if a Google car crashes is it your fault? [Laughter]. If that CEO chooses your software and makes a decision and he fails, does he get fired?

VB: We've got a question over here. Go ahead.

Question: Sathya Atreyam from IDC from USA. A question for Jim – actually you brought up a very fantastic point of Home Depot where the mobile service providers actually get to know the whole picture versus the credit card. NetScout is rightly placed with enterprises and service providers. The question is how much friction do you see on the business side of things where they have to share data in order to achieve the scenario which you mentioned, to know that Jim actually was the one using the credit card?

Jim McNiel: That's an excellent question. The answer is they're not doing it. American Express, Discover Card, MasterCard, all of these banking interests could happily pay, I don't know, ten cents per transaction of over $100 to ensure that it was actually you holding your credit card. But in order to do that Verizon, T-Mobile and Sprint and all the American cell carriers have to agree on sharing the data. Because American Express is not going to send a [restful] API out to five or six different vendors. It's just not going to happen. So a lot of these problems can be solved. But we need collaboration and we need co-operation amongst these parties.

Then of course if you take this conversation into foreign markets like into Europe there may be governmental restrictions on the fact that you can't do it because you can't share that kind of user data. But I think that to a certain degree we have now the compute power. We have the bandwidth. We have the software that's smart enough to learn and make decisions. The real question is what problems are we going to solve in the near term? We can solve these problems but companies do have to work together.

Rob Pickering: We also need the co-operation of the end user as well. So the end user ultimately should be in charge of their location data and so without them being a willing participant in that transaction the cell carriers aren't going to be able to provide the data. The credit card companies aren't going to be able to provide the data. So you also need to understand the benefits as a consumer for having those kinds of protections in place and why maybe you want your phone to geolocate you 24 seven.

Above: Minority Report

Question: Guy Kindermans, Data News Belgium. Actually it's because I'm from Belgium and raise this question – what is the relevance of these kinds of products for smaller and mid-sized companies because to an extent you're talking about the HPs, the Targets et cetera of this world. It seems to be almost like a gold plated toy for large companies. So what's the relevance for smaller companies, mom and pop mid-sized companies? Because otherwise this sounds like fun but what's the real relevance?

David Gurle: We are less than 200 people – 192 people exactly. So I fit in the category of a small or medium-sized company. But any company that is in business wants to grow. That growth is very much dependent on the data and the quality of the data and the quality of the decision you're going to make about it. So it doesn't really matter whether the data set you are working on is small or big or medium. It's about what quality [decision] you can make. If A.I. does give us the quality then I am going to go for it without even thinking about it. Because any good decision I make it is better than five bad decisions that I have made in the past and which I have to redo because I did not do at that time.

So while the big data enables us to make more accurate decisions in an organisation like mine, I'm a big buyer of any accuracy that I could get in order to have better visibility in real time for the future that I'm working on. Constantly, every day, every minute, every second.

Jim McNiel: To add to that I would say that all of us are experiencing A.I. benefits every single day that we don't even realise. How many people here have used Waze to drive from point A to point B? How many people have been on Amazon that said well people who bought this also bought that? How many people have used a scheduling program to manage their calendar? These are very minor pieces of A.I. but they affect us all. They certainly affect small and medium-sized businesses and give them more capabilities than they would otherwise have.

Rob Pickering: I also think that the big opportunity for all of this is in smaller companies. Because ServiceNow did a study about the state of work. What we found was two days a week are being absorbed in menial, manual tasks by the management teams. So if you have the ability to automate even half of that you're gaining 20 per cent productivity gains by doing automation.

Automation is a form of A.I. Over time those automations can be fed into learning algorithms to improve them over time and just gain even more productivity. So I think small companies are…

Jim McNiel: [If you could figure out] how to set up a WebEx that would be good.