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Consumers are the Real 'Things' in the Internet of Things

by *Stuart Armstrong, Group President, ComQi; Sean Anderson, Director of Interactivity, Six Flags Entertainment; Max Stevens-Guille, CTO, ComQi; Luke Wilwerding, Director of Retail Solutions, ELO Touch Solutions; Aaron Kleinhandler, CEO, Spectrio, LLC; and Michael Rocha, Director of Creative Solutions, Panasonic*

This article summarizes a roundtable education session in which top industry signage solutions providers, vendors and end users gathered to talk with Stuart Armstrong, Group President of ComQi about the implications of the Internet of Things. The discussion focused on delivering great experiences with an emphasis on how the customer is always the focus. In the end, it's about the people, not the things.



Stuart Armstrong: What is IoT and is it important, or just a lot of noise?

Sean Anderson: Anything that's programmable and has connectivity is the foundation for IoT. It's similar across a lot of platforms, but the internet is the backbone. The devices can live online or sometimes offline. If offline, they can be connected via technologies like Bluetooth. The bottom line is: What is the device doing? What information can I send it? And what information can it send back to me?

Max Stevens-Guille: To add to that, one of the other things we feel is important is the analytics that you build upon, by bringing all that data back in one form, and then transforming it into something that's more meaningful. Analytics help you understand more about how your infrastructure is working.

IoT has implications for omni-channel. Smartphones add a new communication capability that consumers bring with them to venues. We can look at a lot of data points, or instruments within a given environment, to understand what the consumer is interested in, and what actions they are taking, and form a closed-loop system that helps influence people.

That's particularly interesting in retail, where store form factors are changing constantly. Some are downsizing; some are upsizing. There are brands inside other branded venues, pop-up stores, a lot of variety. IoT helps us bring all that data about what's happening in those environments back into store operations.

Luke Wilwerding: At a high level, we look at it in terms of enhancing the customer experience, store operations, and new channels, both increasing and creating revenue streams.

Aaron Kleinhandler: You really just use these machines to guide the customer journey. When someone walks into a store, what's the best way to control that experience? You can control what the store looks like, for the most part, and what products are there. What you can't control is the customer experience – how they interact with your storefront. Using these connected devices and machines, and analytics, will hopefully help you inform the customer journey and influence the customer – to gain more revenue.

Armstrong: What does fan engagement mean in arenas and sports venues?

Michael Rocha: There are a lot of parallels to what retail is experiencing now and what sports went through five or 10 years ago, in terms of the experience fans had on their home TV. It became so advanced, and so good, that people weren't going to the stadiums anymore. There was a big trend to upgrade the fan experience inside the stadiums, so it was worth going to the stadium again.

Retailers are going through something similar, where they have to enhance the shopping experience or customer engagement, so that people leave the screens at home. Customers want the same data available to them as at home, and want to enjoy the experience.

We do have some parallels, but some of the things that are unique to us are that we have a game or event to react to. In general, customers come to us only when there is an event, and we are trying to reach out to them on a 24/7 basis. So, the minute they leave their house on the way to the stadium, we are engaging with them. When they are in the parking lot – tailgating – hopefully we are engaging with them. Throughout the event, and even on their way home, we have kept that connection. And that's helping create a connection with our client's brand, and helping their ROI.

Armstrong: If we had to invent shopper cards now, where would you like the shopper to give the retailers the card, at the beginning or the end?

Wilwerding: We have seen, both in retail and QSR, people checking in through a kiosk or a localized app. There are also Wi-Fi and beacon-based technologies being used for check-ins. Many retailers are now



leveraging clienteling applications. One thing to think about regarding store associate technology is that it's generally a private experience where the retailer or store associate may know a lot about the customer, but how do I go about intelligently sharing that information in a more social or communal setting – which is typically going to be a larger screen – where multiple people can interact?

There is both the identification and the journey through the retail or QSR environment. For example, in McDonalds or Wendy's, people are using both mobile apps and self-service kiosks to order, and to identify themselves at the restaurant for pick-up. Customer information is also shared when people are reserving tables online or through mobile apps. We are seeing services moving to electronic

formats, which leads to more efficiency and personalization of the customer experience.

Armstrong: How can we connect with consumers before they get to the venue?

Anderson: As with many venues, the Six Flags mobile app is the underlying thread that ties everything together. The customer journey starts with people downloading the app or just visiting our website. People then decide a time or date to visit the park. We are not a destination park like a Disney or other Orlando park. We are more of a regional park, where our visitors are more likely to say, "I'm going to pop over this weekend," or "I have time. My family and friends are here. What are we going to do? Let's go to Six Flags!"

We are a very ad hoc, spur of the moment destination. But some level of planning is involved – so it's important for us to have multiple platforms where guests can find the information they are looking for and start their journey.

Once they download the app, the journey starts. We have some people who like to “put their phones down” and enjoy the visual experience in the park, or put on the VR goggles and enjoy those rides. Other times, we have customers who like to optimize their day by getting information, such as what wait times are for particular attractions.

We try to understand the customer journey so we can get them into the park and on as many rides as possible, so they can have as much fun as possible. If we can help them understand that there is a smaller line at another ride (at the other side of the park), and it is something that fits their schedule, maybe they can hop over there. If there is a 20-minute wait for food at the Johnny Rocket's, maybe they can go to the panini place next door, which has a shorter wait.

It's important that this information pops up on their phone while they are in the park because it will help them have a better experience. We are looking at devices and technology at those spots in the park to give that information – which is really difficult.

We are a seasonal park – we hire and fire 45,000 employees every single year. So that means training, onboarding, and potentially firing them at the end of the season. But what we are trying to do is get them onboard and give them as much information as possible, so they can help the guests – and that's a tough thing to do if the employees are new to the environment.

We are always looking at technology – new ways to automate components and gauge information that can supplement data, so we can give the guest the best experience.

Armstrong: How is digital signage being applied as one of the things in the Internet of Things?

Kleinhandler: A lot of my company's focus is in the healthcare industry, which is also going through its own revolution. The idea that the patient is more of a customer, and the experience they are going to have, from way-finding to appointment setting to when they get in for their visit. Facilities are delivering relevant content either through digital signage or even on a patient's own tablet or phone.

There is something similar in the automotive industry, where people are spending more time evaluating their purchase, or are waiting to see someone. This is the time that they will engage with relevant content, and where the customer wants to be engaged is highly important.

The other thing the healthcare industry is looking at is customer consistency. Using digital signage, other assisted selling tools, or interactive screens is all for consistency purposes. It's very hard to have that consistency when you have 45,000 new employees every year. How do you enforce that consistency? Digital signage and assisted selling tools, scent marketing, and music help with that consistency. You want the same consistency and insights that you are getting online. Through omni-channel, you can get that consistency in-store. With the tools we have today, you can approach that very easily.

Armstrong: Are you seeing any innovation in IoT and digital signage to direct customer traffic to drive additional revenues?

Rocha: Yes. As an example, in arenas we are seeing a lot more connectivity between all the different systems. From POS, to inventory, to line control, even parking lots or crowd arrival time. We are able to monitor that and make decisions on what happens within the facility based on that information and data inputs and direct people to a more positive experience. If we know it's a late arrival crowd, we can push back a

“We are always looking at technology – new ways to automate components and gauge information that can supplement data, so we can give the guest the best experience.”

major section of our entertainment set to a little later. If the hot dogs aren't selling as fast, we may put them on sale. So, you are seeing that when everything is connected, it gives a lot more flexibility to us – to be quick in our reaction. Previously we would use the data from one event and hopefully fix it for the next event, or even the next season. Now we can react to something in a period and a half – which is pretty amazing.

Armstrong: Where there are huge amounts of increased data, there are new security risks. What should we be aware of regarding data security?

Wilwerding: Look at self-service kiosks in QSR environments, or a retailer via endless aisle. If you have a digital experience where you can't actually buy at that point of service, you will lose revenue as people walk to the cashier. They may change their mind. If you can close the loop at the point of service, at a kiosk or non-traditional POS station, you'll see attach rates and the volume of impulse purchases grow.

A couple of years back, people were using their e-commerce platform with credit card readers taking payment as a "credit card not present" transaction, and retailers paid a premium for this. But as self-service gathered momentum, brick and mortar retailers realized that they have to start giving stores credit for in-store e-commerce revenue. And they have to offer secure EMV transactions, otherwise called chip and pin transactions. It's complicated, and it's different from how things were being done even a couple of years ago.

Anderson: As a brand, you have to focus on standards. Six Flags' CIO made a decision some 10 years ago to do so. And these standards are being implemented not only in the new and future parks, but also the existing ones. These standards help build security in a way that allows us to grow and expand really fast, and basically replicate the same model. For example, our data centers all look exactly the same. That helps reduce staff and keep a small set of knowledge and data that we maintain.

Our POS is also always connected and online, and from there we were able to light up other devices like digital screens, et cetera. Security is very important to us; we have to maintain certain certification. We get audited, as well, and we always aim at surpassing those requirements. And now, we are expanding into Wi-Fi.

With IoT, you should also set policies and standards for any devices that are entering your network. So we go through this process before adding new devices to our network. We ask questions like, "How long will the device be on our network? What happens if the manufacturer goes out of business? What are the plans in place if a massive vulnerability is found? Will the manufacturer patch it? How fast can they patch it? Does the device know how to be patch itself? What are the credentials?"

Armstrong: How can retailers use that data to improve their operations?

Kleinhandler: Employees are a very important part of this customer journey. We did a concept store for a tire retailer – completely re-did the store, got rid of the counters, got the employees out front to be more consultative. They knew who their customers were, for the most part, but they didn't train the employees in this new way of selling. There was this big disconnect. They were not hiring people who were comfortable with that style. You can use the data to design the store, but you also have to pay attention to employees and make sure they can interact with customers.



Another thing that I hear about in-store data is that we know what they bought, and when they bought it, but it is too late to influence the customer, at that point ... and get them to buy more. So, it is important to recognize who is coming in, and incorporate things like social sharing.

Armstrong: How do you manage Big Data science and real-time analytics?

Rocha: Coming from the sports side, we have real-time data visualization all the time, and we use those tools. For example, in racing, we have the data

regarding the tire pressure and engine/oil temperature of every car on every track coming at me five times a second. It's a tremendous amount of real-time data that we have to parse through, and then, in real-time, decide what is the most relevant story we want to tell.

And what we are seeing is that these same tool sets are being applied to retail environments, where we are trying to take the customer through a journey. The difference is that in a stadium, thousands of people are taking the same journey at once, but in retail stores we are trying to take everyone through their own individual journeys. And the tools that we use for data visualization are being applied to these environments.

Wilwerding: I would like to add something about catalogs. When people think about shopping on their phones or online, there is cached data, which is past searches. For example, he or she looked at a particular pair of jeans and items to go with them. When you move the shopping experience in-store, you don't have the previous search data to go with it. There are several unique artificial intelligence platforms we are partnering with to provide some of the predictive experiences you would expect when shopping online or in-store. We also see RFID coupled with endless aisle concepts that help augment the data and hopefully, enhance the shopper experience

Armstrong: Are RFID tags being used in consumer venues?

Anderson: No, we haven't worked with a lot of RFID, except for maybe in our retail stores, or for some supply chain applications. However, we are actively looking at Bluetooth for different use cases. We have a couple of ways to capture wait times, and Bluetooth will help us to some degree, and will also give us better ways to engage with customers and make announcements throughout the park or through their journey during the day. We also are very interested in heat-mapping and facial tracking technologies, and using that to understand how long people are taking to get from one section of the park to another.

Wilwerding: On the retail front, however, we do see a lot more adoption of RFID. Many RFID programs first started on the supply chain side, but as we see more and more "buy-online and pick-up in-store" concepts, the technology previously utilized to manage inventory is now migrating into endless aisles, connected fitting rooms, and those types of experiences. And there are quite a few pilots going on that will soon make the news. So, to answer your question, RFID is being utilized more frequently than ever before for customer and front-of-house experiences.

"It's important for retailers to focus on data that is meaningful to them," said Max Stevens-Guille. In summarizing the roundtable discussion, he said that "IoT is more about evolution than revolution. The revolutionary aspects are what retailers can get out of it. However, you don't need to completely rip out your existing infrastructure to do so. It's important to talk to retailers and understand their objectives and the technologies that they are currently deploying."



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