



## User Friendly podcast at CES: The next era of connectivity

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**HR:** Hi, this is Heidi Rataj, your host for User Friendly. Today, Hanish Patel is back to discuss the next era of connectivity. Welcome back to the User Friendly Special from CES.

**HP:** Hi, this is Hanish Patel and welcome back to User Friendly. Recording from CES. It's day two of the show and I'm back at the Deloitte lounge space with two new guests from Deloitte. Today, we have Phil Wilson, who has been in the Telecommunications space for over 30 years and Ays Aytolu, the marketing leader in the Telecoms practice. Phil and Ays, welcome to the show.

**AA:** Hi Hanish.

**PW:** Hi Hanish.

**HP:** Phil, Ays, and I have known each other for years. So today, it is going to be a bit of a challenge to keep this thing on point, but I'll do my best. Phil, Ays, how have the first two days been at CES 2018?

**PW:** Pretty exciting. We got very busy. Every year, this show just gets more and more people and more and more things happening. I've probably been coming for 20 years now, and this is the biggest one yet.

**AA:** I agree. Everything is connected in CES, too. Now, it is getting bigger and bigger.

**HP:** So aside from this insanity of CES, we're here today to talk about the new era in connectivity. I'm talking 5G, Wi-Fi, the Internet of Things, and what the future really holds for connected devices. Phil, Ays, we all know through our work at Deloitte with our clients: organizations and individuals want actionable information delivered anytime, anywhere, and framed for a number of platforms or

devices. From smartphones to wearables to smart cars and IoT-enabled products, (on warehouse shelves), a dramatic acceleration is clearly underway. So, with that in mind, if you think way back when the Internet first came to be, there were many theories about how it would impact our lives and most of them never really came true. As it relates to connectivity, how do you think our future is going to be different from the current state?

**PW:** I think it's going to be radically different. If you look at the way things have progressed, back in the mid-eighties, we had less than half of a connected device per person in North America. We're at just over two today. Within the next 10 to 15 years, we will be at anywhere from 30 or 40 through to a 100-plus depending on who's forecast you buy into. That's just profoundly going to change the world.

**AA:** I agree. I cannot imagine the world when my son has grown up and where the world is going to be. I think I won't be able to recognize the world at that point.

**PW:** Yeah, for old guys like me, I will just spend all my time trying to get these things to work.

**HP:** Based on everything that we're seeing and everything we're hearing here at CES, it seems our future is definitely going to be very much connected. Just about everything we see, from devices to the clothes that I'm going to wear to the car that I'm going to drive to the entertainment I'm going to see, it's all going to be connected. And that will be wirelessly in our homes, outside of our homes. How do you think this is really going to impact the carriers who really have the pipes to put all this together?

**PW:** This is going to be very significant for them. Today, they basically have business models that deal with people and they deal with a relatively small number of connections, we're in the hundreds of millions and we haven't moved to the billions. That's going to be a night-and-day shift for the carriers. They will have to build new models because their models are built around quite a lot of interaction, both from the customer end and from their end; that is very high cost and high touch. That's all going to change.

**HP:** At CES, one of the big buzzwords we're hearing is 5G,. Everywhere we go on the floor is all about 5G, that's clearly a big theme. Could one of you define 5G and how soon will it be a reality for us?

**PW:** There are really two sets of innovations that are driving 5G. One is, obviously, that we are going to get a new radio air interface, which is coming, and in fact, even some of the equipment shipping today is 5G capable. At the same time, we're going to get a new wave of architecting cellular, which is probably the more profound side of this. So 5G breaks a lot of the traditional linkages. Traditionally, your phone talks to a tower, it hands off, it talks to the next tower. With 5G, it can talk to multiple points simultaneously. It can actually aggregate different types of wireless connectivity. So it can aggregate Wi-Fi with cellular, it can aggregate multiple devices, and multiple towers. It is very, very sophisticated. And then the other set of innovations are going to give every user a personalized, dynamic experience. What performance you get, when you get it, and where you get it will be very variable and will be customized to what you're trying to achieve, which is quite different from the situation today where you kind of get what you get.

**HP:** Clearly from what you have just defined it is a significant impact for the carriers from an infrastructure perspective, and clearly a huge impact for you and I as consumers. Where do you think the biggest benefit is going to come for the consumer over 5G?

**PW:** Obviously, performance will increase. We will get more speed, we will get more coverage, we will have more capacity. Today, we're at the point where that last link to the end user device is largely wireless. About 80percent of the traffic in the US is going wireless. About 80percent of that 80percent is going over Wi-Fi networks on licensed spectrum. I think we will see that change and I think we will see the tools and the security and the management capabilities of cellular being applied to all spectrum and all devices. As we move into this world, what's happening is the communications in the computing industry has largely been internally focused. They enable things between their own systems. We move data from machine to machine, and I think what we see now is the shift where the machines in the real world and the connectivity in the real world actually are going to interact. Securing that through innovations like blockchain; I think that's where a lot of the power of 5G is going to come in. Helping the customers work through it is a big piece of it. What we've seen so far has been "point solutions;" our watch talks to your phone, your RFID tracker talks to a sensor. It is a very simple ecosystem. Imagine a world where the devices talk to each other and essentially collude. In my case, they collude against me, but they therefore have this limited ability to see into the future. Otherwise, you actually start to remove surprise from the world, which is a scary kind of thought.

**AA:** I How many connected devices do you guys have these days? I don't know, but the ones that I have at least in my home, I am so glad that they're connected at least to a hub. But man, when that power goes down, trying to pull them up together is just really tough. So one of the things that we're seeing at CES is they are coming together, all these connected devices are coming together through voice-activated control centers—that's what I am going to call them—and they're becoming really, really important pieces of our lives. Your point, Phil, is that so many people have so many connected devices and managing them is becoming an issue, like their interoperability is an issue or like their security is an issue. That's because your regular customer doesn't know how to do the optimal things to secure them or break them.

**PW:** They don't know if they are secure or not.

**AA:** Yes, that's the thing.

**PW:** That's the scary thing. It's a big unknown out there. I am old. I am scared... old and afraid.

**AA:** Security; it used to be like if somebody breaks into your home ...

**PW:** Yeah, it was physical. Security was physical... low tech.

**AA:** It was physical... and now it is like I do have house cameras and I always worry that...

**PW:** Yeah, that changes the cops' job. They usually just going to have the neighborhood run up the usual suspects and shake him down. It is hard when they are in different continents.

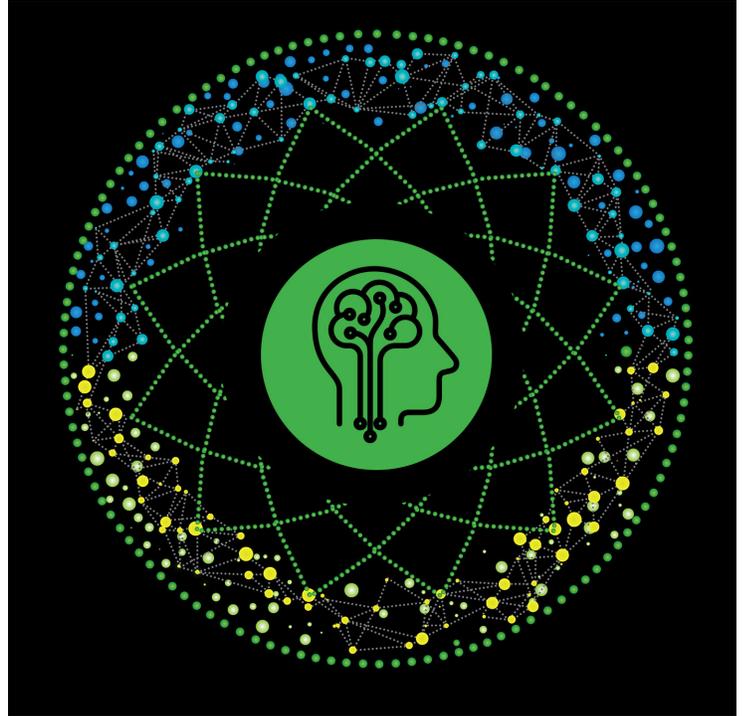
**AA:** Continents, yeah. I have no idea and so that actually makes me very nervous. And one of the themes at CES is everybody says things cannot shut up because voice activation is becoming a really good way of controlling all of these devices, which I am really excited about, by the way.

**HP:** And actually, to your point around voice activation, again at CES, we've seen so much of it from everyone that has got some kind of voice-activated assistant or what I will call a digital helper.

**AA:** Right, that's a good word...

**HP:** And so how do you see that? In our new world of connectivity, clearly that voice activation has to be connected to many things. And I will touch upon security there as well. As all of those things, if something goes down, where does the consumer stand? There is a helper, but when does it become a hindrance?

**PW:** Well, the thing about the help is it is great. You wake everything up by saying, hey. I want the British version where you would say, excuse me, my good man, is it possible, but I don't think that one is coming for a while. Like you have got six of these things, they all wake up at the same time, which one is going to answer you back. You have to start giving different names and that capability exists in these things that you can rename them but then you have got to remember, what did I call that. It is going to be hard. Clearly that is necessary, think about the product liability aspects of this. Back in the 80s, if I bought a car and it had a bad audio system, the cassette type, I was out a couple of bucks. Now, people can take control of that car through the audio system. That is actually how it was done in California the other year, it was through the audio system. The product liability has changed and I don't think this system is going to be perfect. So, you can start to see what I will call cyber insurance style products coming along based on the assumption that ultimately something could go wrong and therefore you need financial backup. I think you will see more and more of that and I think that's where technology plays a really big role and I think the carriers and others play a really big role. In that, they can reduce the insurance risk and therefore change that dynamic.



**HP:** Clearly there is going to be something for the consumer to be worried about. If I go back to what we are seeing on the floor, there are more and more autonomous vehicles that we are seeing, and the talk again of people having so much more free time and you are going to be connected. So, where does that stand with what 5G is going to enable for the autonomous vehicle and what does that mean—first, for the enterprise, for those who are in an ecosystem for 5G and autonomous vehicles, and second, for the consumers who are now going to have a hell of a lot more time about sitting in traffic.

**AA:** Time is relative, right....

**PW:** 5G really will give you this more dynamic capability to communicate with a car or whatever. Latencies will be down, performance will be up. It is going to be a long time for legislative and socioeconomic reasons before we move to a world where every vehicle is interacting with each other and is autonomous. So we would have this phase where vehicles will be essential standalone, avoiding things, a lot more active and passive systems than we have today and then the communications layer will augment that performance but it won't replace it, it will be a mix of sensor platforms on the vehicle and communications to the vehicle until we get the non-connected vehicles off the roads and until we build out the infrastructure to deal with what I will call the 5percent cases where autonomous vehicles will struggle. I think that is the big deal. What do you do in the car? Probably what you do in your home. The question I think you want to ask is why are you in the car? About half of the journeys in this country are people going to and from work. If you look where we are going from a socioeconomic point of view, through machine learning, artificial intelligence, automation, robotics, etc., we are actually taking a lot of traditional jobs away. Economists debate whether this is sort of like a Luddite fallacy and we will find new roles for these people or not, but the point is we will see machines move into the real world, we will see subsequent productivity and it will be a displacement effect on labor. So, people will actually have more free time. I think governments are struggling with what does it mean if you never have a job in your life. How do you live, how do you survive, how is your self-worth determined? These are big questions I think they are being faced in the next 20 or 30 years but we are talking technology here, not social policy.

**HP:** You mentioned in the future having a lot more available and free time, particularly if my job goes away. If my job goes away and I have got all this free time, I will probably want to fill it with entertainment. Where do you see the entertainment world in this new world of connectivity going forward?

**AA:** We already see the way people consume entertainment or content changing. The younger generations, they don't watch TV anymore. They consume the content, it is just not through TV. It used to be like that. In the past, if we wanted to watch a movie, we would go to the movie theatre, now not so much, especially for younger generation. It is going to continue to evolve the way we distribute content and the content itself is more connected in the past. Now, they are going to get more and more disconnected. The medium is changing. It is the handhelds, it is the tablets, and the smartphones that are taking over. I think that is going to continue and the content is going to be reshaped to fit that experience. That is my guess.

**HP:** No doubt. Just the example of what I saw on the show earlier today was they were showing 4k streaming through 5G and that was incredible in terms of just the quality of picture that was coming through – a real 5G test coming through.

**PW:** That is an interesting debate when you look these large screens and all of this. I have three teenage children and they watch the TV sideways. They have this unique ability to watch television without looking at it. They look at their smartphone and the TV is on the side of the head. How they are watching is a mystery to me. I am old. I said, look at it, it's a tradition. I think that is a new dynamic. To build on Ays' point, if they are interacting with the mobile device, which they do all the time, and there is another media device going on in tablet, TV, or whatever it happens to be, entertainment isn't really designed to fill that medium, but I think entertainment is changing and so will adapt to this multiscreen world. Will they remain multiscreen consumers? My gut tells me they probably will. This is an old guy predicting what young people do, but I think that's a really interesting dynamic. Our own survey says people multiscreen at a very high rate. People interact with their mobile phone at least 50 times a day. I mean this is a very interesting dynamic. You just look at the role of that phone, its people's lifeblood almost.

**AA:** To your point, the number of times people look at their phones, it has always been a debate right. Is it an addiction? It just became part of our lives and it is not only for the sole purposes of work or email or social media, but it's truly connectivity to life. Connected vehicles are going to come into that or have already come into that. The connected home, the connected self... I track my health through my phone. Again, I have family living internationally, so that's very, very important for me to be able to communicate with them. The phones are actually becoming hubs or they have become hubs of our lives and our connectivity has already changed with it. I think we need to talk about their learning capabilities. On phones that people already own about 70percent of them are using machine learning

capabilities and they just don't recognize it. When we say machine learning, everybody thinks about like this really glitzy world of machine learning. But it is as simple as predictive text or like email sourcing, that sort of thing that we actually already use.

**HP:** I want to come back to machine learning. That is a huge topic on that front, but something you mentioned earlier about the hub, the smartphone. We will use it and it pretty much is our connectivity to the world as you described and something Phil mentioned earlier about which device am I going to talk to? Does the hub go away in future with all this connectivity and all these chatty devices or is this going to be this helper that we talked about? What's going to be our new hub?

**PW:** Well I think that is an interesting dynamic because everyone is putting in the virtual assistant into all of their devices. Somebody speaks and the whole room reacts. I think that will have to be resolved and I think there is a need, people have a need I think for something that is theirs and their personality and they react to. I think whilst the code for that can sit out in cyberspace, they need a physical interaction. I saw somebody had a digital teddy bear go-to-sleep comforter on the show floor here, something to hug digitally at night. I think the smartphone is a little bit like that. I am old enough to remember when the average person with a phone, and it was a like a couple of percent of the population, made three phone calls a day. Now everything we do is going through that device. I think it is going to be very difficult to supplant it in consumer's minds and if you look at the price points of a lot of the phones that we buy, they are very expensive -- hundreds and hundreds of dollars --and we throw them away after two years, but we are very attached to them.

**AA:** I am just going to say, 50percent of the people actually wake up in the middle of the night and check their phone. I think it's the fear of missing out and it's a real phenomenon but people check social media in the middle of the night!

**HP:** So let me pivot a little. We talked a fair bit about the connectivity for media and the entertainment part of it. Probably another passion for many people is retail. What's the world going to look like when you are out there with all this connectivity, all this close to zero latency, you are going to get instant information more and more. We are seeing this AI world as well, start putting a few of those things together. What does that mean for the consumer and for the retailer?

**PW:** I think retail is going to profoundly change. I mean, if you look, we are driving the price points of connected devices down dramatically, so everything is going to be connected. If you imagine talking to the inventory in a store, that is just going to fundamentally change stores. Obviously, we have got robotic delivery systems, drones are becoming a big thing, and that is what I mean about the technology getting out of its digital box and interacting with the real world. It's sort of moving to this point where I can deal with the real world with real goods; whether this is inventory in a stall, whether this is delivery of goods. And then with the capabilities of video and so on, you can virtually shop and that is why I was wondering, how much time will we spend in our cars? It is kind of scary thought, it does it make us more insular. Today if you want to personal shop, you will spend a lot of money with Niemann Marcus, but you can do this technologically and that makes it open to everybody. The way we shop, what influences our tastes, all these things I think are set up to change.

**HP:** No doubt, if I think about what you have just said I can pretty much do all of that remote now as well. Obviously, some sizes and all of those things that matter, there is that shopping experience that many people just love to do, for many good reasons. They want to go into a store, they want to try something on, they want to see how it all matches, and again, that is the experience. I get the transactional part, we can do online and I can be absolutely remote and it can be delivered to me instantaneously or as close to as possible. How does that experience get replicated?

**PW:** I think the nature of browsing has become much more personal. How often have you been frustrated when you have gone to a store for something and they don't have it or you can't see it or you can't find it. Those conditions are unlikely to exist going forward. With a recommendation engine, you go in looking for something and maybe it shows you other things that it thinks you might like. The recommendation engines don't work well for me because I think I am a bit too random and eclectic, but they are getting better and better. It can change the actual nature of browsing in a store. I find store experiences rather binary. One is like floundering around by yourself trying to figure out what you want, while the other is when you are getting harassed by somebody on the commission-based sale, trying to move something. I think you can create a much better and much richer experience between the two through technology and still have the physical aspect of being in a store.

**AA:** I don't want to be gender specific here, but from a women's perspective of shopping, I think there is always that enjoyment that I don't think is going to go away. To your huggable digital teddy bear example back there, there is always going to be, in my opinion, the value of touch and feel of certain things, the experience. I don't think that is going to go away, but I think the digital part of retail is here to stay for sure. About 90percent of the people use their phones when they are shopping, I don't know if it is to browse other

places for similar items or browse the Web for price comparisons. What I do personally is I just look at the reviews if I am going to buy something, especially something that I don't know a lot about. I refer back to those; that is super helpful. So, the digital part of shopping in retail, I don't think is going to go anywhere, but what it is going to look like in 20 to 30 years, that is a completely different scenario. I am really curious to see what is going to come of it.

**PW:** Looking at how you collect retail information, there is a lot of technology on the showroom floor. Cameras and facial recognition are trying to identify the types of customer and the mix of customers and what products they are interested in. This technology down there, is looking at people's footwear because it is less personal than looking at their face to try and make those decisions. It is interesting how you can determine gender and socioeconomic class and things from footwear, but obviously, there are algorithms out there that attempt to do that.

**HP:** Taking that example, just the algorithms, clearly it is capturing a lot of data, which means there is a lot of data that has been pushed back and forth to different devices, incredibly chatty devices. If I was to pivot that with all of that data going around about ourselves, the security aspect has to be a huge concern for the carriers and for those who own that personalized data about us as individuals and consumers.

**AA:** I think one of the first question that we should ask is "who owns that data." Let's give an example like the shoe example. If somebody captures a picture of my shoe, do I care? But if somebody captures millions of shoe images and then ties it to data, I think it provides some sort of value to somebody, but who owns that data and who manages that? I don't know. Phil, any thoughts there?

**PW:** I think the policy framework hasn't really caught up with this issue of information, how it is held and how it is created. We are seeing customers having the right to delete data and to edit what they have got. Many of these artificial virtual systems have technology where you can edit them. Imagine editing everything that you have put in whenever you said, "hey." Back to my point, that cannot be placed on the individual. There has got to be a legislative and policy framework from the company side; this stuff is very personally identifiable. You know what I do, you know where I am, you know what concerns me, and you know what I am interested in. The security of this is going to be quite dramatic. Imagine the situation where you have a young child, they grow up talking to one of the virtual assistants, putting that whole life through the virtual assistant. That machine knows more about them than they know about themselves. So, firstly, how do they switch? If they decide they don't want to go with vendor A and go with vendor B, how do they actually get off the one that has learned about them for 25 years, where is the policy, legislative interexchange protocols, etc. to allow that to happen? Secondly, imagine if that vendor is hacked, you've got so much information on that person that it is kind of scary. You've got that whole life available to you. So, the risk on this is quite dramatic, and I think there is a big need for a policy framework, and unfortunately, it is not really in the realm of national policy because this data is no longer respecting national borders, and that makes it very difficult for government and legal systems, which work in states or countries and are very much focused on the physical world not the virtual world.

**HP:** Like you said, that kind of restriction element and security of data, do you think the onus is on the enterprise? The reason I ask that question is clearly we are in a world where people love to share, across social. They are less and less worried about their personal information being out in the world. So, do you think it is absolutely going to be that the consumer wants this. The consumer is driving the need, but it is going to be the enterprise and the businesses that are really taking their time to deliver this because of those risk aspects?

**PW:** Ays knows this better than I do. We have done a lot of surveys and people generally are not that concerned about privacy and are happy to give up privacy if they think they get something in return from it. However, people are very concerned about security. Actually, our surveys would suggest this is becoming an increasing concern as people understand more about the virtual world. So, security is important and privacy is not, and I think that is a big deal. You talked earlier about autonomous vehicles. That is another sort of policy framework. Are autonomous vehicles better than most drivers? Absolutely. Are people going to have accidents and potential death in autonomous vehicles? Probably, but it is still better, one would argue, than the current situation. The policy framework is putting such a high bar in fields like on some of these things that you can't afford a little bit of leakage.

**AA:** We were just talking about this in our panel yesterday. From just a privacy perspective, it almost feels like at this point in time people don't have that much of choice either, or to Phil's point, they don't really care as long as they get something back in return. Over 90 percent of the people just accept terms and conditions without reading them and I am one of them. I mean, how many times have you read those really detailed things before you upgrade software. It is just not possible, but at the same time the consumers don't seem to be that concerned about it, at this point in time. What's going to happen in the next few years? It is similar to the curve of security. They were not worried about it earlier, but now it's becoming more of a reality, the connected world is becoming more of a reality, and they are realizing the issues that go with it. With the connected homes, somebody can hack into your home; the connected car, somebody can hack into your car. From a privacy perspective, I don't know how it is going to be.

**PW:** And I think that's the importance of brand to companies right, like you know consumers trust brands.

**AA:** Right.

**HP:** Right.

**PW:** And I think that a huge piece of corporate brand building down the road, is to have that trust and then your policy is to maintain it because it's very easy to lose that trust. That will become critical.

**AA:** Right, right.

**HP:** Something that you touched upon earlier with machine learning. Phil, I love that delineation between privacy and security. Now I want to go to that machine learning route and AI and machine learning, they have been strutting their stuff at CES for a number of years, but it's really big this year. Where does that factor in, particularly as you mentioned earlier around the security, privacy aspect, and machine learning, how does that all factor into this new connected world that we are living in?

**AA:** We did annual survey and we asked our consumers about the upcoming trends in the mobile world and one of the things that we asked this year was about machine learning and AI. Most of the consumers don't realize that they use actual machine learning and AI in their mobile phones now, but they do and the most commonly used one was predictive texting. I don't think they think of it as machine learning, but it is. There is so much data out there and feeding into these algorithms, it's so normal that machine learning is going to be very prominent and very important in our lives in the coming years.

**PW:** If you connect everything in my home, for example, if every device is connected, if I am the critical interface between all these devices, if I am the interface between the thermostat and the blinds or whatever it happens to be, that puts a lot of work on me. These things are going to talk to each other and they are going to do things on my behalf. They are going to collectively, almost as a system, decide it's morning the alarm should ring, the blind should go up, the thermostat should be set at x and the coffee should start brewing.

**HP:** Right.

**PW:** They are going to do that by themselves and that I think is how we will see a lot of this machine learning coming on as we start to create systems of multiple devices. At the moment most of these devices work in a standalone mode or there are little kind of a closed ecosystems of a select subset of devices. I think that's the big breakthrough, machine learning. The same obviously is true in a commercial and industrial setting. I think just like when we brought electricity into factories, there will be a long learning curve as we reengineer our commercial world to deal with these capabilities.

**HP:** It very much feels the future is now, that even we don't recognize some of these things.

**PW:** Now, the future is always the future.

**HP:** Let me put it in another way. The things that I imagine will be taking place in the future, I am walking the floor and I am seeing it today.

**AA:** Right.

**HP:** Let me fast forward a few years from now, where do you really see the connected world being and what it is going to mean for the consumer?

**PW:** Well I think you will see this massive proliferation of devices. I think you will see this complicated period where we have little islands of stuff that work together but don't play nice with each other. We will see a lot of confusion, a lot of failed experiments, a lot of blind technological paths, but I think we will come out of the other end of it where the real world and the technology world are intimately intertwined; things are secure, they communicate with each other, a lot of stuff is done on my behalf right and that really changes what I do right. My daily life will change, I don't need to do a lot of sort of menial tasks. A lot of the job roles that we have out there are going to disappear.. I mean I think the US government predicts 40 to 50 percent of the jobs will be made technologically obsolescent in the next 20 years. It will give people more leisure time, it will give them a different sort of lifestyle to the one they have today. There are profound implications for the world of real estate. There is a big retrofit cost in some of this technology, very rapid lifecycles... Devices are going to

have to work on technological life cycles. Hopefully, we will move to a world where a software upgrade allows devices to sustain, instead of those devices being thrown away because they are technically obsolete.

**HP:** Right.

**PW:** Do I replace my washing machine every 3 years because I need a better AI system in it?

**AA:** I think the word of stability is going to come into our words, take our mobile phone usage right. The smartphones effectively have been in our lives almost a decade now with the iPhone introduction and now we have been through this whole journey of overusing them or maybe using them too much and now where it is stabilizing our usage. I kind of think of connected items in the same manner, too. We are almost trying to find good usecases where they are going to be meaningful in our lives. We have seen so many products come into market and consumers eventually made the decision that the amount of time you invest in trying to use them is not worth the time that they save in your lives. They don't stick around and there are some others that actually do, which is great. There is going to be that stabilization of what's going to end up in our lives in the future. Then, of course, the whole angle of machine learning, data, and security; that's going to continue to be very important for us.

**HP:** If I move forward in those few years in terms of the era of connectivity, a lot more connectivity, things do get more and more stable as it really sort of proves out. What is going to be the hub, what is the way that we are going to use it?

**PW:** Just like our little islands of technology, within the household you will have my personal island of technology, you will have other family members on technology, much of which can be common and then you have got friends and so on; and how does that technology interact with your technology? All of these boundaries are very interesting areas that we really are just starting to think about.

**HP:** It's going to be interesting for sure, right.

**AA:** Very exciting for sure, very exciting.

**HP:** Fantastic. All right, that's it for day two of our podcast series. Thank you Phil, thank you Ays for joining me to discuss the next era of connectivity.

**PW:** Okay.

**AA:** It's a pleasure.

**HR:** Thanks for tuning in. Tomorrow is the last day of our user friendly special at CES and Hanish will be back with more surprise guests and hot topics from the show. See you then.

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