



CLOUD REALITIES

BONUS! CES 2024

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[00:00:00] I love the idea about having an argument with your car. Yeah, so I love that. Turn left, no. No. Music.

Welcome to Cloud Realities, a conversation show exploring the practical and exciting alternate realities that can be unleashed through cloud driven transformation. I'm David Chapman. I'm Sjoukje Zaal, and I'm Rob Kernahan.

And this week we've got a special bonus episode where we are going to be speaking to Sony Honda Mobility about the release of the AFEELA, which is their connected car product, which is being launched at this year's Consumer Electronics Show in Las Vegas. And joining us this week, I'm delighted to say, to talk about the AFEELA, is [00:01:00] Takuya Nishibayashi, the General Manager and Head of End to End System Architecture in the Development Division of Sony Honda Mobility.

Right, so what we've heard, uh, we've just spoken, unfortunately we're not at the Consumer Electronics Show, so we've just had a conversation with Tak, and he's given us the lowdown on the AFEELA itself and what Sony Honda Mobility are trying to do with it. And it's not surprising to hear that Sony Honda in envisaging what the car is and how you experience the car is really quite different, right, Rob?

Well, it's, uh, yeah, it was, um, it's really quite a different take on what the car, um, can be. We've seen for so many years Formula 1 innovate with technology. to actually improve the mechanical aspects of the car and the way the car behaves and the drive. And what we're seeing now is gaming technology and movie technology arrive in the car to really take that experience to the next level with the addition of like [00:02:00] the Unreal Engine driving the user interface and this much more personalized, rich experience, which quite frankly might actually help take a lot of the boredom out of very long journeys.

Yeah, they talk about how going into this, they've tried to make mobility be used as a creative entertainment space. Um, so it's sort of radically rethinking the inside of a car. I think we've seen from other manufacturers, the ability to use the bigger screens that are in particularly into in electric cars, the bigger screens and different sorts of displays to show things like movies, but I think integrating the real engine and the use of screens around the car.

And being able to personalize those screens is trying to provide something that's both much more immersive and personalized, but also I think one of the big takeaways I had from the conversation we had with Tak is the ability to have augmented reality navigation, which allows then the [00:03:00] car to actually take part and be and be part of augmented reality gaming experiences.

I see you're driving past the green and there's a massive dinosaur on it as you look left. That type of thing about the entertainment. Let's hope the autonomous driving system is working at that point. But yeah, it's that experience at the next level and what we might actually be. We're seeing that elsewhere with AR kicking in.

In other technologies that we use, but, but yeah, here at the car, you can see it as it's now right on the fringe of what that next experience is really going to be. This can also open a lot of new opportunities on marketing perspective, right? From the car, when you are driving, new marketing experience, new sales.

Yeah, yeah, yeah. You look at a shop and a coupon pops up and says, would you like to buy? And then you say, I'll have a subway or whatever, or any other fast food joints are available at this time. That's a great shout. shout because actually one of the other things that was that's



great in the [00:04:00] conversation is the use of natural language interface.

They're using Gen AI to provide a, you know, a natural language interface so you can literally speak, but not just issue commands to your car, like literally have conversations with your car. So yeah, that is a, that is a potential you can buy space on that platform to get. the car to conversationally persuade you that it's a good idea to have a burger, for example.

Is it a fascinating idea? Don't need that much persuasion. No. Right. That was perhaps a bad idea. Or a salad. That one might be a little bit harder. Yeah. Uh, and, and Sjoukje, we talked about autonomous, autonomous driving and the need to do that safely. Within this situation and the use of AI in that, did you have any takeaways about the use of AI and how it might connect to things like autonomous driving?

No, what my big takeaway was that he mentioned that generative AI is just for the user interface and a natural language. It's just a small part of the AI that is used inside of a car [00:05:00] with autonomous driving. Yeah. Yeah, I think that's the biggest takeaway. We, uh, often mix up the, um, what, what people can do with generative AI.

And I think this is a very good implementation of it. Indeed. Okay. So any other final observations or takeaways from the chat we just had? And for me, the biggest one is that. There comes a time that I can hook up my PlayStation to it and start playing my games when I'm on the road. Well, you know, not only that, the president of Sony Honda Mobility in the announcement from CES, which is on YouTube, if you want to Google that and have a look at it, actually drove the car on stage using a PlayStation 5 controller.

Did you see that? I did see that. That was very cool, wasn't it? Yeah, it's pretty cool. It's very cool. Yeah. Maybe this is, we often talk about the new interface for the vehicle. Maybe these are the first, uh, tiny steps towards, uh, the, uh, the end of how we understand how we control a vehicle. I think you could well be right there, Rob.

I think you could well be right. And it's like new paradigm stuff. Yeah, it does feel [00:06:00] it does feel like a barrier has been broken and and I know it's the cars Still in development and it will be released in a year or two But you know in the next sort of 12 months you can see that concept coming on Massively so the consumer experience will be what's been released plus plus plus plus right exciting and the barrier being broken is almost to a level of, it's quite hard to get your head around.

It's actually quite hard to conceptualize some of this stuff where it is right now. So really, really exciting stuff. So on that note, let's go to our conversation with uh, with Takuya Nishibayashi, the General Manager and head of end to end system architecture at Sony Honda Mobility.

Takuyasan, thank you so much for joining us for this conversation today. I know that You must be very busy at CES this week, so [00:07:00] we really appreciate you taking the time to uh, spend with us today. Maybe you could just introduce yourself, tell us what role you do at Sony Honda. Okay, I'm Takuya Nishibayashi

My last name is quite wrong, and even, even though, how can I say, my Canadian friend who can speak Japanese very well, but it's very difficult for him to pronounce my name correctly, then he's He just called me, just Tak for short. I think that could be helpful. Okay. So please call me Tak for short. I think it is convenient for you to call me.

Quite easy. Then, now, um, I'm a general manager of e Android system architecture development division at Sony Honda Mobility. I needed to cover entire computer system in car. And not only in car, but also cloud. You know, we are now developing, how can I say, for



NFT in car. Then probably I think, uh, after that, this conversation, I think, uh, so [00:08:00] you would like to introduce our architecture itself though.

So I strongly would like to realize true connected to car. In that case, you know, if we were to have separate group, it would mean who is responsible for car, who is responsible of cloud system. Then I think it is impossible for us to make a new things. Of course, you know, uh, if we were to follow pharma, how can I say, architecture of a pharma product, it's enough.

But we are now so totally the new company to build up a new car Then I was asked from my president to consider not control consider how to utilize Not only cloud but also car itself Then i'm responsible for that and I came from Sony and I have been I guess I've been a software engineer for a long time.

My main responsibility area is just definitely for software, but I also need to consider hardware. It means how to utilize software by using software power. So that is an important thing. So that is my [00:09:00] role and responsibility. Well, thank you. And what an amazing bit of innovation that you have been involved in.

So for the listener at CES this year, the Sony and Honda Corporation have released their connected car, which is called the AFEELA. And we're going to talk to Tak today a little bit about some different elements and some design principles on some new technology that's gone into the AFEELA. Uh, but before we get to that Tak.

Why now? So why have Sony Honda chosen this point in, in the connected car game to release the AFEELA and to get involved in, uh, automotive? Yeah, good question. You know, so from our point of view, You know, many computers should be connected to internet. So, uh, before joining Sony Honda Mobility, I was responsible for AIBO, Sony puppy robot, and the drone system.

[00:10:00] Then AIBO is quite a unique product from my point of view. So AIBO is designed for connected puppy robot. It means AIBO's AI system is not only in AI system, but also in cloud system. Then together with the cloud system and edge computing system, Ivo can realize a new generation AI system. Then from that point of view, we, we Sony were thinking, uh, we can make a kind of innovation by using cloud technology for car based on our Ivo experience or the smartphone experience.

Then this is the reason we decided to enter this area. Also, Sony has good sensor, sensing technologies, like image sensor or other sensors. And on the other hand, Honda, Honda also want to change their own car, how can I say, strategy itself. But of course, you know, Honda needs to [00:11:00] care. Today's product portfolio, it means Honda is a good company.

Honda also wants to change something. This might be a reason Honda decided to work with Sony. Then, uh, we established Sony Honda Mobility as a joint venture. Right. What an exciting move. And the thing that caught my eye when looking at the AFEELA. and looking at how you guys are talking about the car is the purpose of redefining how mobility can be used as a creative entertainment space.

So rather than just coming at the car from a point of view of, you know, autonomous driving or, um, you know, kind of software updating and such like there is a real difference here, I think, in terms of how you guys are thinking about transportation and mobility. Maybe you could tell us a little bit about that.

So now, uh, we are thinking, uh, we can redefine the relationship between car and how can I say, person. Then, [00:12:00] so as I mentioned, I, uh, our president Kawanishi and I used to be responsible for robotics, uh, Sony, uh, puppy robot. Then we certainly want to change, uh,



the, how can I say, relationship with machine and the human.

Then, you know, I would try to communicate with his or her owner as much as possible. So we are thinking, we believe we can change the relationship between car and mobility and people. In that sense, sooner or later, mobility will be trying to communicate with driver or passenger. for actively. So, so that is our source for AFEELA.

So what would be my, if I was in a normal car or I got into an AFEELA, what would I, what would I experience as being different between the two? Good, [00:13:00] good points. You know, we are now so developing a feel itself, and we are also thinking to update a feel of software by using OTA. Then it is a little bit difficult for me to say what this difference from today's our prototype comparing to your today's car.

But I think, uh, Even though today's prototype, I think you can enjoy good sound quality and a good picture, movie quality, and also you can see many, how can I say, messaging from car from our Mediavir. So, do you know our Mediavir system? No. Please, please tell us about it. Okay. So Mediavir is a kind of, how can I say, display for outside of a car and between, how can I say, head right.

We have dedicated the LCD panel, then we can show by using that LCD panel. AFEELA can show [00:14:00] several message, not only, uh, how can I say message, but also picture itself. Then, so we are now also thinking, so how to utilize this, how can I say display though. But so far, uh, we are now also thinking to show, for example, battery status or weather forecast.

Once, uh, you want to, how can I say, ride our AFEELA, then you, of course you need to cross our car, then AFEELA is ready to detect you. Then once AFEELA can understand you are coming to AFEELA, then AFEELA just shows, hey, I'm full charge. Or, with the forecast is today, uh, for example, uh, 20 celsius, then, uh, you don't need to wear long coat, for example.

I think such kind of communication might be happened. Right. Yeah, exactly. And, and what I also noticed was that the AFEELA's internal screens and such like will all take on, you know, whatever personality you want it to have [00:15:00] and like maybe connects to your phone off to your PlayStation and things like that.

Is that right? All right. Right. Of course, you know, many of our customers, once you enjoy our PlayStation game in AFEELA, but in addition to that, uh, probably, I think you might be, you might see our cover niches. Press conference two days ago. So Connie just mentioned, we are not, uh, we are using Unreal Engine, uh, for, how can I say, realizing a new user interface.

Then Bluebird, I think you might be very surprised when you saw our new user, our interface itself. So for those, for listeners who aren't aware, the real engine five that's utilized, I think within the platform and the AFEELA is a gaming platform. So how have you leveraged a gaming platform within the connected car to, to provide a different experience?

Yeah, good, good, good question. You know, Yeah. Again, so I used to be responsible for smartphone, [00:16:00] so I used to be responsible for smartphone development, then at that time, so many smartphones, user interfaces is for work, just showing, how can I say, tile or how can I say, entire window, then the transition is not so, how can I say, So harsh.

Uh, just how to say, quick transition. Right. Of course, you know, it is quite, uh, how to say, important things for a smartphone user to change, uh, such kind of thing as soon as possible. That must be a good user interface for smartphone. But if, uh, we were to use the same terminology for car, I think it is not so impressive.

Then, on the other hand, Unreal Engine is gaming, gaming engine. Then, I think, uh, You



can see totally different user experience in game. It means many, how can I say, fantastic transition or effect is happened. And Unreal Engine is [00:17:00] also a 3D graphics engine. Then we, we can display many realistic characters inside as CZ.

We can show our AFEELA itself by using Unreal Engine, and we can, we can display bunch of objects outside of cars. By using Unreal Engine. Right. What's nice about that is that next level of experience, so we've, we've come from the film and movies and the games where we see this really rich graphical environment that's almost lifelike and then you're bringing this to the car.

So suddenly when we get into the car, it's not this boring display, but it's much more exciting and compelling to sit and look at and use. That's, that's nice that you've lifted the user interface and the experience to the next level. And we've been using that technology in some fantastic games. For years and now it's in a, you know, the next platform, which is quite exciting.

Yeah, that's, that's must be our point. Yeah, we are, we are always saying, uh, [00:18:00] just, uh, we want to change, uh, today's car to more entertainment platform. Then in that sense, you know, of course we strongly want to support gaming itself in car though. But you know, we are also thinking entertainment should be, how can I say, moving experience itself.

For enhancing such kind of experience, we want to, how can I say, use more rich graphics technology or moving technology. And as you mentioned, we also need to support good, how can I say, movie playback and audio playback technologies. And do you see, in terms of the usage of the car itself as transportation, the fact that, and we're going to come on to how you're utilizing Gen AI in, in autonomous driving in a second, but do you envisage a world where it's not just the passengers, but it could be the drivers that are interacting with the entertainment experience within the, a feeler, or do you see it mainly to support the passengers?[00:19:00]

Yeah, good question. So, I think there are several, how can I say, discussion points, even though in Sony Honda Mobility, though, of course, you know, in the future, we can realize, uh, true autonomous driving. In that, in that case, you know, driver and passenger can enjoy content itself. But until that, you know, for a while, I think, uh, our ADAS level should be level two plus.

Then in that case, you know, driver also need to care about driving itself for a while. If we were to support only content playback, I think a driver is not so happy. It's been a passenger is just happy. It would definitely, it would definitely be better to be a passenger. I often think that. But then, then now, so we are, we are thinking, uh, we, we also need to consider driver itself, uh, should become.

Happy then. Yeah. Then for that, so if, uh, you have a chance to have, how can I say, user experience [00:20:00] movie on YouTube. Hmm. So we, we are now also developing air navigation right Then. Oh wow. That air navigation system is also how can running. Running together with Unreal Engine 5. Then, we can put several gaming essence into AR navigation as a prototype today.

Wow. It's, you know, probably I think you might know, in, how can I say, in gaming world, there is Pokemon. Pokemon in English is a kind of AR gaming. Yeah, you know, Hakusei player needed to walk around in the real world, then a player just can find a Pokemon or other, I'm not so sure, enemy or other object. Uh, smartphone, then, uh, once you change, uh, how can I say, entertainment mode of our navigation [00:21:00] system, then you can find the many dinosaur or object in that, then driver ready to go there.



Then driver capture such kind of things, then our air and navigation system can remind what kind of, how can I say, object or dinosaur were captured. So that is also kind of a gaming essence. I think I know what's my next car. You don't go and play on the console anymore, down the PlayStation, you get in the car and drive it around.

It's more fun by the sounds of it. The car becomes an object, the car becomes an object. In an augmented reality game. It's really cool. Quite fascinating. And if we could just bridge into ADAS then and, and, uh, autonomous driving and the innovations you've made there. I understand you've leveraged Gen AI within ADAS for the car.

Maybe you could just tell us a little bit about the steps you've taken and the innovations you've taken in autonomous driving. Yeah, [00:22:00] so far at this moment, uh, we don't think using generative AI for autonomous drive itself. Then, of course, we are thinking to utilize today's AI system as much as possible to AD and ADAS systems though.

But generative AI is slightly different. Then, we are now also thinking to use generative AI to communicate with, communication between car and Driver or passengers. Right, yeah. So the car would have a completely natural language interface. Exactly. And not only natural language interface, but also kind of a conversation from a car.

Yeah. Brilliant. Amazing. You can have an argument with your car. I quite like that. When we've covered Connected Car on episodes of the show before, we've often talked about an American TV show called Knight Rider, where I don't know whether you've seen it, but [00:23:00] It's, it stars David Hasselhoff and he has a talking car called Kit and one of the things that we do to test whether cars are innovating fast enough is to say, you know, can it, can you talk to it yet?

Like kits? I think what you're confirming is yes, the AFEELA, you will be able to talk to it like Knight Rider. Yeah, yeah, yeah. We have been Exactly. We have been talking about Knight Riders. Actually. But on the other hand, seems like I think for under 40 ages So it's a little bit difficult, uh, difficult for them to imagine what is Knight Rider.

Right. That's true. True. True. That is true. It is, it is a retro reference. Admittedly, you need to be of a certain age to appreciate the brilliance of that reference. Yeah, exactly. Exactly. Yeah. Yeah. So when we decided to make AIBO, then, uh, we tried it to refer, uh, Japanese animation. It's been a, do you know [00:24:00] Doraemon?

Uh, no, I don't know. Kind of a body, a body robot. Yeah, we, we just, uh, before that, uh, to, to realize I feel, I feel a conversation system. I think we have to refer Knight Rider. Yeah. That's absolutely excellent. A Knight Rider mode. You just enter a code in and kit appears. Yeah. Sometimes, you know, I feel like I make, uh, I don't need to driver.

It seems like we have today's first rated. So that must be our, uh, how can I say, goals. Now I, I think that's absolutely perfect. Now our other touch point in movies and such like when it comes to cars and our expectation of what a future car might look like is Blade Runner. and the spinners and the flying cars in Blade Runner.

So what's your thoughts on, you know, just very [00:25:00] briefly, what's your thoughts on the sort of the future of where that might go? Yeah, good point. So I, to be honest with you, I love driving car itself. Then, then, uh, I always strongly want to drive my car on the road, but on the other hand, just before joining this Sony Honda Mobility, again, so I'm responsible for head of software for drone system, quadcopter.

Then, you know, to realize quadcopter, again, so there is no road in the sky. It is quite easy for us to enjoy many aspects of landscapes. Then sooner or later, I think our car will be flying



in the sky. You know, it's exactly the right tangent because, you know, the spinners in Blade Runner are effectively drones, right?

I mean, it's using [00:26:00] drone like technology just built into a car. shape and chassis. So, yeah, hopefully, but I think we might need to wait 10 or 20 years from now. Yeah, I think you're probably right. I think you're probably right. I also wanted to talk a little bit about the work you've done with Microsoft on this and how you've leveraged the Azure platform and the Gen AI tool set.

So perhaps you could say a little bit about Um, how you've used the cloud in the background and cloud scale computing as well as the tool set to support the car. Good point. Good point. Of course, you know, uh, we have to have a Microsoft more deeply though. It's very difficult only for us to use cloud system to make a conversation features to realize that, you know, we needed to have a always connected network.

But unfortunately, in case of a car, it is impossible for us to make, [00:27:00] to keep, uh, how can I say, always connected to the cloud. Then probably I think, uh, we might need to have, how can I say, a little bit optimized one on the edge at first. Then together with a crowd, I think we can make a conversation features by using Microsoft Azure OpenAI.

So probably I think we have to discuss with Microsoft more deeply about how to realize such kind of use case. Right, I see. Where does the control data from the car go to? Does it go Azure cloud or have you got like a private cloud somewhere that's got, you know, all of the data that's coming up from the car?

So at this moment, uh, we are now so under discussion though, but we have to keep a secure security and privacy as much as possible. I, I trust Microsoft as Azure system itself. It means they have already, uh, they have already had, how can I say, safety and secure cloud itself. But before going to that, you know, we might need to, how can I [00:28:00] say, filter to send the data from our car or our cloud system to Microsoft Azure system.

Then probably I think such kind of, how can I say, report, uh, Topology will be considered much deeply rather than today. Uh, we, we have not to violate anything. I see. And maybe just to bring our conversation to a bit of a close, what's the release strategy from here? So you're obviously unveiling it at CES 2024.

When can people buy it? When is it rolling out? So this is totally open information. We are now saying, uh, to start, uh, mass production on, on 2035. Then from 2026, we will start deliver our car to our customers. So at this moment, again, uh, we are still under development. Then, uh, we, we strongly would like to understand our customers demand [00:29:00] or brave for today's.

Car, not, not only existing car, but also today's our prototype, it must be okay. Then we strongly would like to understand the customer demand correctly. Then by using our software technology or farmer experience through Sony or Honda, Honda company, then I, I strongly would like to leverage our engineer to realize such kind of demand or brain.

So by using cutting edge technologies together with many of our talented partners, so that is my dream. And that is what I strongly want to show.

Fantastic. Thank you for [00:30:00] sharing that with us, Tak, today. And thank you very much for taking the time during a very busy schedule to come and tell us about the Ophela. Uh, yeah, you are welcome. That must be my hub fish. Yeah. Well, we end every episode of our podcast by asking our guests what they're excited about doing next.

Um, it could be you're looking forward to, uh, going home from Las Vegas, or it could be



something in your professional life. So Tak, what are you excited about doing next? Uh, probably, I think, uh, my, how can I say, next happy things must be, uh, reading podcasts about our serious I feel as activities. Of course, we can help you with that.

Thank you very much. And I think it is not only happy battles are happier things though, but we have to understand the customer brain or demand again, for free. Very good. Thanks again, Tak. So a huge thanks to our guest this week, [00:31:00] Tak. Thank you so much for being on the show.

Thanks to our augmented producer Marcel, our sound and editing wizards, Ben and Louis, and of course, to all of our listeners. We're on LinkedIn and X, Dave Chapman, Rob Kernahan, and Sjoukje Zaal. Feel free to follow or connect with us and please get in touch if you have any comments or ideas for the show. And of course, if you haven't already done that, rate and subscribe to our podcast.

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