We Are Vodafone - Episode 10

Transcript

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Tim Samuels 00:07
This is We Are Vodafone, a podcast about technology and its power to change our world. From AI and the metaverse to flying cars and fruit picking robots. In this series we'll lift the lid on the exciting innovations that are changing how we live and work both now and in the future.

Imagine life without your mobile, it's almost impossible. In a decade or two, they've become attached to our bodies and entwined with our lives and that's just for starters. Mobile communication is about to go stratospheric. In this episode of We Are Vodafone the wild wondrous future of mobile; a world of hologram calls, always having reception and ordering things you never knew about.

I'm Tim Samuels, bringing you this series about the power of tech to drive change around the world. And to give us an exclusive peek into the revolution coming our way, I'm joined by Phil Patel, Global Products and Services Director at Vodafone and Tom Griffiths, Head of Innovation and Future Business Models.

Phil, Tom, thanks for joining us.

Let's just take stock with mobile communications. What was your first phone, Tom? And what could it do?

Tom Griffiths 01:24
Oh, gosh, you're taking me back now Tim. So my first phone, like many of my vintage, was the Nokia 3310. Bulletproof, had the most fantastic gaming experience in the form of snake and introduced us into the wonderful world of monophonic ringtones, which we used to spend a fortune on with our pocket money.

Tim Samuels 01:45
I am the same vintage, for people who are perhaps a slightly younger vintage, you had to sort of tap each number to get a letter.

Tom Griffiths 01:51
The text messaging was unreal via we will have very strong thumbs, we would always limited to the Tweet size message because if you went one character over, you'd get double billed.

Phil Patel 02:01
I can't believe how young you two are. My first one was one of those Motorola StarTAC things, was the size of a briefcase, had to be carried around and literally did one thing, make calls and not to very many people because not many people were carrying suitcase size phones around with them.

Tim Samuels 02:16
Where you a yuppie then Phil? Were you walking around, going into bars, leaving your phone on the counter to kind of say, "Hey, look at me, I've got a phone"?

Phil Patel 02:24
I was a student at that stage. I couldn't afford the subscription for the first couple of months. So I carried around and it didn't even work. A bit embarrassing, but it was super useful, especially when you're a travelling salesperson.

Tim Samuels 02:35
And when those phones came in, it's interesting to see how much just kind of having a basic phone on you changed your life. What did it do for you, Tom?

Tom Griffiths 02:43
It gave us sort of sense of freedom, we were disconnected. So you know, as a teenager, it meant all of a sudden, having to hog the landline to speak to the relevant girlfriend of the era went away. And you have that sense of freedom to be able to communicate in the moment make your own plans get out and about, it was very liberating.

Tim Samuels 03:04
I didn't have a mobile at university and social arrangements involved sort of notes on people's doors, or just trying to find them in the right pub. It's kind of inconceivable now that you could leave the house and know that you weren't necessarily going to find the person you wanted to meet up with that night. Phil, what's the impact it had when you character runs your brick without a plan?

Phil Patel 03:23
Once it got connected, it was quite impactful. I was running my first startup, we were organising teachers, for students. If you can imagine the amount of calls, you're getting continuously to organise teachers turning up to students, it just meant that I could actually engage in the business all day long. Whereas before, I would have to wait until I got home before I got the messages and made calls. And of course those calls are normally in a time where people didn't want to receive calls. My whole day was actually useful instead of just a couple of hours on either end of the day. So it really just sped up everything. It was amazing.

Tim Samuels 03:59

I mean, this is going back sort of 20ish years, maybe a little longer for the for the Motorola. And then we kind of think what's happened since and smartphone I think especially has ushered in so much change. And I guess it feels like we are on the cusp of going through another iteration. Does it feel like we're about to take another giant leap into the tech future?

Phil Patel 04:23

Absolutely. I mean, the next version of the internet, we're going to be introducing the experience and immersive experience of actually being there. So bringing the concepts of presence to the internet. And so if you think about it, in terms of creating new communication experiences, you're going to have the ability to actually be wherever your friends are, so you can see what they're seeing, hear what they're hearing, and be able to interact with them almost in real time. It's going to be much more emotionally powerful. In order to realise this though, obviously the way in which we consume and use the internet is going to change quite massively.

Tim Samuels 05:00

We'll dive into the detail Phil, of where we're going, but, I guess it's interesting to think about what's coming down the line, perhaps sooner. And one of the things I've been reading about is space based broadband, Tom.

Tom Griffiths 05:13

You know, we're in the midst of a new space race, and there are high profile stories and some best kept secrets around what's going on. For us, though, there are two things that are happening. One is that some device manufacturers are starting to include specialist chipsets in their phone. So we've seen that with obviously the new iPhone, which has a special chip in it, which means you can communicate through an emergency signal which you know, you're up a mountain as an example, or you need emergency assistance. And that's going to become more prevalent. We saw a lot from Mobile World Congress on that in the last few weeks. What's really exciting us though, is this very, very clever technology, which allows any existing 4G or 5G device to communicate with the satellite without any additional hardware; that we just think is game changing.

Tim Samuels 06:02

On a very practical level, for anyone who's got 4 or 5G, what is that going to mean?

Tom Griffiths 06:06

It will mean that not spots don't exist anymore. The days of driving down the motorway and lost signal, it just won't exist anymore.

Phil Patel 06:13

This sort of pervasive coverage is really exciting. I mean, for many years, we've been talking about digital inclusion and connecting the next billion in a lot of these developing markets. This is the answer. The impact on developing nations, the boost for education, for just simple things like safety and security, this could close that gap. Mobile communications, as you would have it today would be available anywhere, depending on satellite coverage and availability. It won't take that many satellites to give you this contiguous coverage that we really need. Once you have coverage, and it's affordable, then people will rationalise, getting mobile devices or take second hand devices to give themselves coverage. Off the back of that you get a second phase of innovation, which occurs where you get applications and services for these areas that didn't have coverage, exploding.

Tim Samuels 07:05
Well, when do you think this will become a feature of our lives?

Phil Patel 07:08
Well I think you can see it already occurring today. I mean, a lot of the new technology is now in test. You've seen with SpaceX satellites already going into the upper atmosphere, I would expect some commercial availability in 2024. And, you know, really for this to become a little bit more pervasive in the years following that 25 and 26.

Tom Griffiths 07:29
The digital inclusion piece is super important and why we're so passionate about this technology. So how can we support our customers and getting access to new experiences and things that they didn't even know existed without having to necessarily buy more stuff? And this is a really good example of that. So you don't need to have the latest and greatest phone with some complex chip, or some new piece of technology. It's the satellite technology that's inherently designed to deal with all devices, it just becomes immediately accessible to the whole base.

Tim Samuels 07:58
This is present, near, future, the sense of actually you can get reception anywhere in the world. Looking to the whole nature of the phone experience changing, and this is, I think, where it gets really interesting and exciting is holographic calling, which I believe some of your colleagues in Germany are piloting.

Phil Patel 08:17
It's really about taking our existing video calls and enhancing these with 3D images. So, you know, when you're doing that video, call that Team's call, or that WhatsApp call, instead of seeing a flat two dimensional image, you're actually seeing a hyper realistic image, a 3D image of that person. And again, this is about bringing the feeling of presence to digital communications. So, you can actually imagine that you're actually sitting there with that person and actually experiencing a real conversation. It's going to be a lot better for virtual drinks than what we experienced during COVID. That's for sure. But if you think about presence, and how it can grow confidence and assurance in some of these communications, like teaching kids and actually having a teacher that feels real, or doctors with remote patients, or even something I'm really passionate, about elderly care; the number of elderly people that have limited or no contact with humans every day. This is a way of delivering that realistic experience through digital communications.

One of the biggest barriers to this has been in the past is required a lot of really technical equipment and you had multiple cameras swivelling around your body, multiple angles, and then the images we were creating were massive, the impact on your smartphone and on the network was too big. And what's happened just recently is the a lot of these new start-ups are using AI technology to get around that, so you can use your existing smartphone to make a holographic call to another existing smartphone. They're actually using AI to almost artificially generate the holograms. So you can use your existing camera and what the AI does, is effectively create a fake image or an artificial image, of you as a hologram that transmits it in 2D and renders it on a device. And so, you can get away from the specialist equipment. The first use cases will likely be smartphone to smartphone. And then for some of the specialist applications, you'll be able to buy screens which you can do a specialist holographic image on as well. But, I would expect that the real mainstream opportunity which could

occur in the next year or two will be a regular WhatsApp Video Call having the ability to convert that into a 3D communication experience.

Tim Samuels 10:33
Will that be 3D for people's faces, or if you sort of say, hey, look where I am, I'm halfway through the Grand Canyon, and you sort of turn your phone round the canyon comes to life as well.

Phil Patel 10:41
Well, I mean, that really depends on the AI tech. But this is really just a very clever version of the same AI that's generating fake images today. And if you look at how fast that's advancing, I see no reason for it, to not be advanced beyond face and body to actually external objects as well. You can see that already occurring with technology like Google's Dally.

Tim Samuels 11:04
Tom, let's pretend you're not Head of Innovation, but are in fact a consultant in the National Health Service, what would an appointment with you look like over hologram and how could that medically be different?

Tom Griffiths 11:15
The you know, comes as no shock to all of us that the NHS is, is not finding anything straightforward right now. So, it's looking at more and more original ways of doing things and ensuring proximity to patients and giving them the sense of support and care, but ultimately trying to do more with less. And I think what's really, really interesting with holographic and immersive experience, mixed reality experiences all these capabilities, is it means that myself with my son, instead of having to go through that quite complex, now, arrangement of triaging to actually get him in front physically in front of the doctor. We'd actually be able to shortcut a lot of that and have a virtual appointment where it's like the doctor is in the room with us. The other kind of extreme as well, to Phil's point around eldercare is, how do we support what was in essence an ageing population in many markets across Europe so that we can again, do more with less? Ensure that people can keep that independence but feel safe, and also feel consulted. You know, my grandfather was a doctor in west Wales and he used to tremble around in his Land Rover seeing all his patients face to face, we're just not in that world anymore. We have to find new capabilities to be able to give those patients, those same kinds of experiences and allow those relationships to continue.

This is ultimately about inclusion, right? The risk is the way we interpret virtual reality headsets today cool, so insular, enclosed, in a dark room with this oppressive thing on your face. But actually, it's more about augmenting the physical with the virtual.

Tim Samuels 12:47
The terms that get thrown around now, I guess our virtual reality, augmented reality, mixed reality. And then this sort of notion of the Metaverse and the next iteration of the web, and I think a lot of people find it very hard to delineate between those terms and what that experience is going to be. So, if you could take us by the hand and lead us into this virtual world.

Tom Griffiths 13:08
Starting from what we're all very used to today, we have virtual reality, which doesn't really take into account the world around you when you're in a closed, immersed environment, right? That's the first stage.

Tim Samuels 13:18
So, it's a bit like being in a stepping into a computer game almost.

Phil Patel 13:21
It's an artificial world, you're creating a virtual world, or a virtual meeting room or a virtual space, where you can come together and you know, have fun, collaborate, work. Versus augmented reality, which is really about changing, adding to your existing environment. So, you know, for example, for a lot of people that use Snapchat or TikTok today, when you take those images or videos of yourself and you're augment your lips, you put a crown on your head or whatever it may be. That is in essence and augmented reality, you're augmenting and enhancing your everyday life, for fun, for work, for whatever your use.

Tom Griffiths 13:59
And then the next stage is then mixed reality, which is like augmented reality, but takes into account the context of what's around you. Then that's where, for me, the Metaverse if that is your term of choice is really going to start to gain momentum. That starts to then bring in another hypothesis around passive technologies. You know, today I'm talking to you on a video screen or talking to you on a laptop, in a world where actually you don't necessarily need that because all the intelligence sits in your glasses, all of a sudden, you don't need all of this active technology. Actually, the big screens, the out of home adverts, it could all be passive, because in essence, the intelligence sits within the glasses.

Tim Samuels 14:40
Phil, does that mean that you might not end up carrying a mobile phone around? The data is in the cloud it's in, it's in your glasses, you couldn't be in a chip that's implanted in you?

Phil Patel 14:50
Absolutely. And what will occur is as your glasses start to improve in terms of their capabilities, you'll need your phone less. The phone as we know it today, because you'll be able to see what's on the screen through your glasses, you'll be able to give it commands like you do today, instead of pressing on the screen, you'd be able to speak to it. And you'll be able to use your hands to gesture on a screen just like you would on your smartphone today. So effectively over time, the role of your smartphone will become different. And you will move towards having these accessory base computing devices rather than having to carry a smartphone around.

Tim Samuels 15:26
So, you might end up getting a phone plan for your glasses.

Phil Patel 15:30
Absolutely. But it's going to be the exact same phone plan as you have today, with some additional services to enable you to manage your identity, manage how you do payments, those types of activities.

Tim Samuels 15:41
And when you walk down the street, I guess if you're not tapping onto your phone, if you want to send a message to someone, you might sort of make a hand gesture, then a virtual keyboard would appear and you will see people just tapping into the air with you?

Phil Patel 15:53

Why don't you just say it instead, and it'll type for you? You wouldn't have to tap, you would just simply dictate.

Tom Griffiths 15:59
Some of the language models we're starting to see becoming quite popular Chat GTP and others, are going to be the building blocks for these future experiences. Because it's these larger language models that will actually be able to interpret the context and potentially take neural inputs that will then define how you use the device. So, you're not necessarily using your hands but more directing the device through your thoughts or through a next best action. So, guessing what you're wanting to do, as a result of the context you're seeing or where you are.

Tim Samuels 16:28
I guess if we think about a day in the future, where you've got AI, intuitively doing things for us as well, maybe ordering and paying bills, and perhaps the whole world looking like. Let's sort of live through that day.

Tom Griffiths 16:42
So, I think we're already starting to see some of this right? So, the reality is right now it comes through in your phone screen. So, we already have some basic experiences. So, when you wake up in the morning, you look at your iPhone or your Android device, based on machine learning and saying, right, you know, I've seen that you always drive to the same place Monday to Friday, the traffic is currently this, the weather is currently this, you might want to leave slightly earlier. It's taking context from the world, and then informing your view. And I think that's what you'll start to feel.

Phil Patel 17:15
Augmented reality is really about enhancing everyday life, I can't think of anything that can't be enhanced. So, you know, you get out of bed, and you're thinking about what to have for breakfast, I mean, having the ability for, you know, for AI to understand what's in your refrigerator, and what's in your cupboard to make some recommendations for stuff that you could make. On your way to work, not sure if you'd use the Google Maps API, but actually a map that can recognise where you are and actually give you real instructions about where to go. Effectively, you're giving people superpowers, you know, you have the ability to listen to some people speaking in Chinese and know what they're saying. You know, when your son asks you a maths question, you'll have the answer on your screen in front of you. At the same time, you have lenses that will automatically adjust to your seeing capability to ensure that you can actually perceive and so there's literally nothing that can't be enhanced with this type of tech. I mean, it's really exciting.

Tim Samuels 18:08
And when you're sat in meetings, you could be sat in the park. But in fact, it feels like you're sitting next to a colleague at the desk.

Phil Patel 18:15
You could be seeing me sitting in your office in the virtual meeting room. But I could be walking the dog in the park. So I have the choice of being wherever I want to be, whilst still participating as a working person.

Tim Samuels 18:29

And could AI make you look smarter than you are? If I'm, you know, sat there with a T-Shirt that I've just spilled a cup of coffee down? Could AI put me in a pinstripe suit? Make me look as though I know what I'm doing?

Phil Patel 18:40
It certainly could, it could even make you look slightly different to what you look today. And I guess this is where it starts to get a little bit tricky as well.

Tim Samuels 18:47
Do you think it will kill off email? He says hopefully.

Phil Patel 18:50
I had a situation the other day with my son says to me, "you use email?". Yes, it could kill off email. But today, you know, voice messages, video messages. It's largely killing off email outside of the official communication needs.

Tim Samuels 19:06
And then you leave your virtual meeting and you walk back from the park, your phone, your glasses, your chip, what will it be doing in the background? Will it be paying your bills we'll be checking that you've run low in your fridge and ordering things. I guess it's interesting what AI is doing as a kind of almost a concierge for you in the background.

Phil Patel 19:23
I think this is the exciting thing about this new generation of AI. It's generative. What it does is it learns from that context and then based on your responses or your needs, it learns and develops new routines to suit your lifestyle. After you drive to work a few times, it will start to know when you want to drive to work and how you want to drive the work. It'll really start to understand what music you want to listen to depending on the mood that you're feeling that morning. That has the possibility of being a bit creepy, but at the end of the day, it's either enhancing or it's not and you have the ability to sort of say stop or no I want this or whatever. You're actually training the AI to be even more effective at understanding your needs and enhancing your everyday.

Tim Samuels 20:08
I guess with technology we focus on the ore and the wonder of what it can do for us and we tend to forget that every technological leap also brings real challenges to society and unleashes forces we might not have expected. I guess, what social media has done is it's helped, some might say, to put democracy on the backfoot in a number of countries.

How do you avoid some of the pitfalls that could come from this leap? Where, as well as benevolent holograms, you might find propaganda is literally in your face, and unavoidable, and very, very powerful.

Phil Patel 20:52
Oh, you're asking a massive question there something that many of the content creators and social media providers are grappling with today. The role of you know, a telecommunications operator could be to assist with the dignity implication. Could be to assist with ensuring that details about individuals as they move from one environment to the other, regardless of which digital company has been provided, are still kept at the same level of authentication and credentials. And I think the operators play a role. But ultimately, it comes back to the content creators, and the principles and

policies that they're utilising to keep up with people who is trying to use the internet, regardless of whichever form it is, for bad purposes.

Tim Samuels 21:36
And I guess as well, there's a, there's a sort of weird dichotomy. On the one hand, this technology has an amazing capacity to bring people together. But if we're all even more on our screens, and if our screens are literally, right in front of our faces, it could also be quite isolating, as well and give us a sense of sort of faux community at the expense of real community.

Phil Patel 21:59
Absolutely. But I'm not sure about you, but I'm a bit older, so I dislike carrying a phone around all the time and needing to look at it. So having something that's a little bit less pervasive, be it smart glasses, or whatever interface, I think is appealing. I think ultimately, this comes back to, does it really enhance your everyday life or not? And how you utilise the technology. I don't think that changes, per se, with the new type of technology, I just think that the capabilities advanced even further. So, for the individuals where it's a challenge today, it could potentially advance and become more of an issue, you know, depending on the person that's using it.

Tim Samuels 22:40
Tom looking to the long term, the kind of future that is almost too hard to imagine. Are there any crazy ideas or kind of blue sky thinking that you've come across that you just think that is going to be absolutely mind blowing, if that can be pulled off.

Tom Griffiths 22:55
One of the things that's kind of a bit blue sky but is starting to gain momentum is this concept of decentralisation. Many people know this in the form of blockchain and cryptocurrency but actually it could go slightly deeper. So, we think about the evolution of the internet. The internet was when it was first founded fairly decentralised. So those of us that are old enough to remember used to send an email the email will be downloaded to your computer and then that would be it today, everything is centralised, so it sits on your Gmail account or your iCloud account. It's centralised. Most of us have grown over the internet only know and internet that is centralised around four or five significant scale providers. There is real momentum growing around a new sense of decentralisation of the internet to the point, the conversation we're having about ensuring the internet and the Metaverse and these news experiences are, are safe and not controlled by one or two or a number of entities, whether that's corporate or government.

Decentralisation puts the power back into the people. In essence, instead of having one app developer that holds all the technology centrally within a data center, it acts as a distributed ecosystem. So, if you're playing a game, actually, you're one of the nodes on the network that enables the network to function, which opens up all kinds of new commercial models, economies, all these concepts that it is only really possible to achieve what the purists say, is the vision of the Metaverse through this concept of decentralization. Will it happen? I don't know. Will there be experiences that are interesting enough that get the masses behind them? You know, what could the next Fortnight or Roblox look like? Would it be built on decentralised technology? Is anyone going to put the funding in place to make that ultimately happen? And will there be enough pull from customers at large to want to take power?

Tim Samuels 24:45

Phil, what of all the ideas that you've come across some of the kind of wilder ones will most excites you?

Phil Patel 24:51
I think when it comes to the space of virtual reality, augmented reality, it's definitely the impact on education. Today when we get educated the traditional education is you know, you sit in a classroom and the teacher instructs you. And through the use of smart glasses and generative AI, you're effectively going to be educated every day of your life; you're going to be told what something means told how to do something, etc, etc. And so, you're going to get to a situation where we're going to be experiencing education. That's 10, 15 times what our predecessors occurred. And so the impact on humanity is potentially massive, because I think education is at the core of progress. For us as a society.

Tim Samuels 25:36
The changes that you guys have talked about, I think you're going to make what's happened in the last 20 years, seem incredibly pedestrian. It's going to change the world around us how we interact with people and communicate, and learn, and healthcare, and entertainment, and education. Do you think at any point, people just say I really just had enough of these glasses that I'm wearing, and there's going to be a sort of retro demands for Nokia's and Motorola's. And just going back to, to the good old days of tapping out each letter painfully at a time?

Phil Patel 26:07
It is entertaining, I watch my son, they, when they go out these days, they have a little habit called stacking. So, you stack your mobile phones in the middle of the table, and whoever touches the phone has to pay the next round of drinks. There are new sort of habits forming, to ensure that people value physical presence, and they value being there without being distracted by their device. And it's those types of habits, which keep that balance between being present being real with people around you versus using that tech. And I just think that that will start to occur more.

I look forward to seeing things like digital detox holidays a little bit more, to completely disconnect us and especially when we're with people that we love,

Tom Griffiths 26:48
It's going to be very interesting to see how intrusive these technologies are. Having the ability to pull that kind of safety cord and actually disconnect today, it's a case of just locking your phone in a drawer or just not touching it, right? Which can be quite difficult. But in a world where there maybe we're going to have neural implants, and maybe a sudden it's almost semi-permanent, you know, how do you disconnect from that? It's part of you. And that's, I think, something over the coming kind of 30, 60 years, it's going to be super, super interesting to see how consumers react to that. What the behaviour is going to be? Will it be deemed acceptable? Who knows? We shall see.

Tim Samuels 27:33
Thanks again to Phil Patel and Tom Griffiths coming soon to a hologram near you.

Join me for the next episode of We are Vodafone for more techie insider tips. Until next time