

FRANÇOIS BARRAULT

Chairman of IDATE DigiWorld, Chairman and Founder of FDB Partners

Jim HOAGLAND

I want to first introduce François Barrault who is one of the leading business consultants, runs his own firm, and does a terrific job at that. François has been with us before, and will lead us now in a discussion.

François BARRAULT

Despite my very young age, I have been in technology since 1977 when I had my first computer. Not only have I been a witness of the evolution, but I have been an actor as well. What I want to talk about is to look at of course the main technological revolutions, but also what does it mean for us? How do you compare a machine to a human?

When you look at the evolution of the technology, you have two businesses. The first one is what we call B2B, business to business, and it is quite easy because everything has been designed by the man for the machine to serve the man. Therefore, it is quite easy because you know exactly what the machine will do. B2C is not as easy, because you give technology to people, and you never know what they will do with it, and that is how it is difficult to manage. It is like with kids, you give them toys to play with in the sun, and they might fight themselves with the tools or do something else.

When you look at the evolution of the technology, one of the first milestones has been the arrival of the PC. I am not talking about all the goodies, but the PC, has given the person access to a gigantic world which is now called the cloud, but computing.

Then the smartphone came, and the smartphone was a kind of remote control with the cloud. Then came the very smartphone, which had GPS location, and also access to anything else. The power was so huge that you could do quite anything with it. Therefore, that is where it starts, and when it hurts.

I always compare the evolution of computing with the body and the brain. We have a big advantage over the machine. Look at this iPhone. I can see it, I can smell it, I can taste it, not great by the way. I can also use it, talk to it, whatever. We have five senses. We have five senses to communicate. The machine has two senses. The machine can see with a camera. The machine can listen, 'Hello Siri' and whatever. By the way, switch off your personal assistant at home because everything is stored. Therefore, at least we have five to two.

Now, you are listening to me right now. What does this mean? Those loudspeakers transmit the sound at 300 metres per second to a membrane here that vibrates, and transmits this information to your brain. You are looking at me. The speed of light is 300 000 kilometres by second. Then it arrives in the optical nerves here, and some of you know me, some of you do not know me, but the combination of my voice, of the fact that you see me, will go in the brain and create in the brain a kind of memory so that in the afternoon, if you see me, maybe you will recognise my voice, or see me.

Now, I have a question. I reminded you that with digital fibre, the data goes at 300 000 kilometres per second. When the information comes into my brain, either you see me, you listen to me, or you touch me. What is the speed of the data, because it is data, that goes to your brain? I will give you two data. When I touch this phone, I do not break it. I hold it not too tight so it does not fall, okay? When I touch it, I have senses. It goes into my brain at 60 metres per second. When it is my brain, it is 100 metres per second. Therefore, you know where I am going? We have a benchmark now between a machine that will capture the data immediately, that goes into the cloud immediately, and we have a human being where we are very slow. The advantage is we have five senses, but the machine has two, but the speed of data is really fast.

Therefore, what does it mean for the machine? I will give you an example that you will all understand. We talked about this last year, smart cars. When you have an autonomous car on the road, and there is a donkey on the road, the car will look at the donkey. It takes us three durations to recognise the donkey, the machine, 400. The machine will never have enough information to recognise it is a donkey, because the edge computing today available is not big enough. Therefore, we will capture an autonomic picture. It will go into the cloud, with 5G. Then there will be a bunch of people, like in this room there will be a lawyer, there will be a cop, there will be anthropologists, there will be whatever you have, and they will decide whether or not the case already exists, or there will be a new case and say, 'Oh, the donkey is cool. There is no car here. Just cool down', and whatever happens when the donkey passes his way, you just accelerate.

Therefore, when you look at this process, you capture the information with cameras. The best cars now have 16 cameras. It goes into the cloud, 5G, next generation, at 300 kilometres per second. You have as many resources as you want, real time. They will decide, sign, give an order and say, 'Just brake', okay? What does it mean for us? It is very easy. You see it is a donkey. You will say, 'Oh, the situation is easy', you just brake. That is what we call the reflex.

Therefore, what is going on now with the fact that the technology is booming, the new Moore's law is arriving. That means new speed of communication to go in the cloud. New senses, new quantum computing, and new algorithm that will be able to gather all the knowledge on a subject real time, and decide. There will be competition with our reflex. The reflex is about 20 milliseconds, you know, at the 100 metres when the gun starts, if the sprinter goes before, under 10 milliseconds, it is below the reflex, so it is a false start.

Therefore, we have competition with the machine which deals, end to end, in a very fast and shorter and shorter, and our reflex. We can talk about augmented intelligence. I hate this word 'artificial' intelligence, because it sounds fake, you know, fake news, fake everything. When the process of the data of the machine is faster than your reflex, then you can talk about intelligence.

Therefore, there is a competition right now between how the big advantage is we can correlate our senses and the machine. If I say hello to somebody in the morning, if he is tired or sick, I will see it. His voice will be cracking. I will listen to it, and then if when I shake his hand it is wet or hot, the correlation of the three signals captured by my sense will say, 'Oh, you are bloody sick'. The machine does not have all those tools, but will always go faster and faster.

Therefore, we are going to see, in the next three years, an incredible revolution that my friend has written in his book, *The TransHuman Code*, Carlos Moreira, because of three technological revolutions. First of all, the new Moore's law in computing. Everything will be by a million faster, and cheaper, and smaller. The second, 5G, where you will have access everywhere where you have the spectrum, in real time, and then all those algorithms that will create real time software.

Then those revolutions will mostly change not our lives, because we are close to saturation I would say with these kinds of things, but on the B2B side. There is a new circle law where technology changes usage. Usage changes the business models, and business models change the investment in technology. Just one example and then I will be done. We talked about this many times, but it is the best way to explain that. Knowledge, during 20 centuries, has been an asset to discriminate people. The people who know are the people at the elite. We have seen this in Greece, with the Romans, with the bourgeoisie, aristocracy, when Guttenberg wanted to socialise knowledge, you know, it was in bad shape, and one day the Internet came. Remember, many years ago, the boss is the one who knows. He says, 'Oh, I have this information. I cannot tell you'. Therefore, it made a difference. 'By the way, I have a big office with five windows, you do not'. Therefore, there are lots of criteria.

One day, the Internet came, and the Internet allows, with blogs, Wikipedia, to communitise knowledge. That means whatever you need to know, you just go on the Net, type some semantic software and you have access to all of that. What does it mean when you share something, the young generation. You share you pictures. 'Look, it is 8.49. Instead of being in my bed, I am onstage, talking to early birds', and thank you for that. Therefore, you share your experience.



You also share your trips; you share your good experience in life. That means the usage changes. That means tomorrow, it is okay to share your car. It is okay to share your apartment. It is okay to share your bike and whatever. Therefore, the sharing economy has started because people mentally have changed the way they deal with things. Therefore, technology changes the usage.

However, what does this mean for the business model? During hundreds of years, the car was a social achievement. The car was a tool where you wanted some sign of your richness, or your power, you want to impress your neighbours or whatever. One day, companies like BlaBlaCar, you share your cars. Therefore, what does it mean? The car is not an achievement. The car is something you share.

It is the same with apartments. You used to go to a hotel. You share your apartment now. Therefore, what does it mean when you build cars? Are you building cars, or are you transporting people? Are you hosting people, or are you sharing your apartment? Therefore, technology changes usage, business model and after, investment in technology.

It will also imply a new set of democracies because before, we were controlling the people. Now, people can express themselves. I could talk for hours, but you would not be happy with me. Thank you. The good news is the best is ahead of us. The machine will never take control of our life as long as we are reasonable, and I count on you, and I can count on my kids and their friends. Thank you very much.

Jim HOAGLAND

Thank you François.