

FRANÇOIS BARRAULT

Founder and Chairman of FDB Partners, Chairman of IDATE DigiWorld

Patrick Nicolet, Founder and Managing Partner of Linebreak Ltd., former Group Chief Technology Officer of Capgemini

François, you were involved at the start of this, earlier in your career. What is your take?

François Barrault

Thank you, Patrick. I remember coming to Dubai in 1995-1996, and building the first Internet network as well as the first public access to wi-fi. When the Burj Al Arab was built, we installed the first modem because the room was so big, the value proposition was to be able to go from one room to another with your PC. I am very pleased to see the huge development in the Emirates, and Dubai and Abu Dhabi.

We have talked a lot about space but to understand what is going on better, it is important to understand what is going on down on Earth, so I will spend a bit of time explaining that. In fact, we have the correlation of two events that are totally uncorrelated that are changing the face of the world. First technology, and second all the events, the war, climate and the pandemic. I will not spend too much time on that because there are so many brilliant discussions on that. Technology is actually three things: hardware, and Geoffrey talked a bit about that, then communication and then software. For those who like me have grey hair, we grew up with Moore's law – where the power of computers doubled every 18 months – when you look at the chips, IoT, Edge computing in cars and space – and you were talking about the weight, Patrick – or smartphones, we are now talking about multiplying by 10 to 1 million within the next eight years, which is a total revolution. When you look at communications, the evolution was 5G, which you have heard about, the revolution will be the next generation of 5G where you will not only have speed but also latency. Latency is the response time, which will be divided by 100. You know when there is a false start in the 100 meters at the Olympics, if the runner starts before 10 milliseconds, we regard that as a false start because it is the time for the body to process the information. As a reminder, when you listen to me, the sound goes to your ear at a speed of 340 meters per second and when you look at me it is about 300 kilometers per second. Therefore, we are equal to a machine, we receive the information at the same speed. When the information goes into your ear, the speed is 100 meters per second and when I touch this pen, I have sensors here with electricity going to my nerves at 60 meters per second and there, we are not equal to a machine.

The third piece is algorithms, and you have trillions of pieces of data, and the question is how you make them relevant. There is an absolutely predicted revolution and trend of technology. At the same time, we had the pandemic and the war and those were totally unpredicted events. The mix of those predicted and unpredicted trends have totally changed the way we



live, how the different systems are organized and are dramatically changing the state of the world. Personally, I have been in this business since 1977, I started to program very young, and I was very lucky to see the evolution of the technology. When I look at what Thierry de Montbrial wrote, '15 years of a reasonably open world', my personal mission in life is to get everybody connected because I consider that when you connect everybody 7/24 ubiquitously, then the equal access to connectivity is very important. I speak about digital energy like food, gas, electricity, all the things that bring life. Then you have a topology issue, do you continue to feed the overweight, as we do in some countries in the world, or do you give food to everybody? Do you keep wasting water in a lot of countries or distribute the water? It is exactly the same with access to networks. For me, it is very important and as I said, my mission in life, which I am repeating because it gives me energy from morning to night, is to help and contribute to distributing the signals to everybody.

Patrick asked me to give a few examples. 15 years ago, I was invited to a lunch at Davos with the government of Pakistan and they wanted us to invest in technology. I said, Mr. Prime Minister, you have a great country, but your only link is a submarine cable, and one of these days a fisherman will cut it. He said, no, no, it is secure, etc. I left my card as a good sales guy and I put five big trucks, about USD 2 million a truck with big antennas just on the border of Pakistan to wait. Three months later I got a call from the cabinet who said "Mr. Barrault, you were right, can you help?" Of course, and my five trucks drove to the nodes in Pakistan and in less than 24 hours they restored connectivity thanks to satellite, because today, connectivity is life. Of course, at the time it was extremely expensive but now there is a kind of popularization of satellites because of constellations like Starlink. Now you also have satellites on car roofs and companies like Eutelsat are going to launch a device at USD 300 or USD 400, while Starlink is about USD 1,500.

Another example is when you have a crisis, such as a tsunami, war or pandemic, how do you send signals? I really liked what Professor Suzuki said about versions 1.0, 2.0 and 3.0, so I will add 4.0, there is a bid on the evolution. When you have a crisis, you have to bring signals either through fiber or 4G/5G but if you are in the middle of nowhere the only solution for downward access is satellite. For example, if you want a mobile hospital in a catastrophe, you can provide low-weight satellite or cars to restore connectivity and a surgeon can then operate on sick people with a latency that is much better than a human being's reflex. When I was CEO of British Telecom, I created a huge rescue team with planes and it could operate anywhere in the world within 24 hours, helping to connect the world, hospitals, back offices or logistics.

To conclude, I think satellites present fantastic opportunities because we have moved from defense and survey, to now giving everybody access. The solution will be a kind of hybrid between fiber, 4G and 5G and access to satellite and maybe, I will achieve my dream of having everybody in the world connected like water, food and electricity.

Patrick Nicolet

Thank you, François. Absolutely, with climate change, natural disaster management will probably be on the agenda in the foreseeable future, and it is a very critical capacity not only to manage crises but also to anticipate them and then monitor the recovery. It is an application on Earth. I have just been told that there will be no Q&A, so I hope you had a good overview



of the issues at stake regarding space. I thank you for your participation and please give the panel a round of applause for all the expertise they provided today.