

Magic of software

In spite of the fact that software industry comparing to others is very young it contributed significantly to the human development already. Being software engineer by profession and working for 15 years in Microsoft I really believe in magic of software. A lot of was achieved in our industry, but I am even more optimistic about future. Let me share why.

The first reason is really the hardware advances that are putting much more of everything in our hands: more computer processing power, and more computer processing in smaller and smaller devices that not only fit in a package this size, but very small and much bigger.

The second reason is the expansion in the amount of storage or information that PCs and other computing devices can store, including the very massive datacenters around the world, which literally will store in the next revolution almost all of the world's current and past information.

A third key reason is the availability of wireless broadband networks everywhere, because that really will allow us all to tap into all of this information and all of this processing power wherever we go in the world.

The question can be how the World will look like in 7-10 years thanks to the technology? I think the best way to understand the changes is to think of them in three areas: personal empowerment, social interaction and global issues.

I want to start with personal empowerment.

Today, we use computing in more and more places all the time; in the home, in the office, of course, but also increasingly in cars, stores, restaurants, and public spaces. But sometimes it is hard to synchronize all of the devices and information: your calendar, your contacts, your music, your documents, the reports that you want to read from people at work; and you want to connect those to your work and home computers, maybe you have a summer house, you want to connect that computer, your mobile phone, your portable media device.

In the future you'll be able to call up any document, photo, media file you've created or saved instantly on whatever device you have at hand. Software and services will be instantly available, too. Your calendar, your e-mail, your applications that you need for work, any games, entertainment you use, will all be there.

Communication will also move to be seamless between voice, text and video from device to device. Imagine at work a scenario where you start an e-mail exchange with a colleague, then you want to switch to voice on your mobile phone as you walk to a meeting, and you don't want to lose any of the context. When you arrive, you want that conversation to merge automatically into a videoconference that's already underway. This will be possible in the next generation.

Quite soon, software will be able to learn your habits, understand your preferences, predict your needs. It'll know what time of day you prefer to fly and what hotels you usually stay in. It'll know who you're going to meet and what topics you are proposing to discuss.

When you sit down at your computer to start the day, what you need should be waiting for you. Your computer will know what kind of entertainment you enjoy, and it will scan the Internet for movies, music, music, books, lectures that you should be interested in.

Preserving and sharing memories of our experiences is another aspect of social interaction that will be transformed. As storage and bandwidth expands, we'll preserve more of our day-to-day experiences in digital forms. We literally have a scientist who walks around with a camera on his neck, recording every minute of his day. It's not my idea of fun, but it reminds us that anything you want from your entire life experience you're going to be able to record, file, and access, from images of your child's birthday party to the complete video and audio record, plus slides, of a business meeting you had the prior day, or years ago.

The revolution in social interaction is about more than staying in touch with friends, or sharing your excitement for your favorite sports teams with other fans. Online community is transforming the way we shape the societies we live in.

As parents, the trends driving the future will enable us to form tight communities with teachers, administrators, other parents and also with our children, so we can really work together to provide our children with great educations. As citizens, it'll give us new ways to share ideas and participate in the political process. We're already seeing this I would say today, for example, in the U.S. presidential campaign, where online communities are really an essential part of how people support their candidates, push their agendas, raise money, et cetera.

And as businesspeople, these trends -- processing power, storage, et cetera -- will provide new opportunities to learn about our customers and match our products and messages to our customers' needs and desires.

But the future is about more than personal empowerment and social interaction; we literally will get the tools to help us better understand and address global issues that affect billions of people, including education, healthcare, science, and environmental change.

In education, the combination of these technology trends will play a vital role. Today, nearly 400 million children can't attend school. Hundreds of millions who do aren't getting an education that really prepares them for adulthood. Addressing that shortfall is critical. But there are huge challenges: overcrowded schools, outdated teaching methods, and a global shortage of qualified teachers.

At the heart of these issues is the problem of scale. Today, there are classrooms around the world where brilliant teachers deliver great lectures, and yet the challenge is to extend that kind of quality education from a handful of students in a single classroom to hundreds of millions of students around the globe.

Technology can help us tackle the challenge of scale. The technologies that we're talking about let us put high-quality educational resources really in the hands of any teacher or student who has basic access to digital technology.

These same technology trends and the same revolution should also help us address issues in healthcare. In countries where access to doctors is limited, a physician's assistant will really be able

to use a mobile phone linked to a cheap display to consult doctors in hospitals hundreds or thousands of miles away. Using video and voice, and transmitting information about things like blood pressure and temperature, they'll be able to provide a clear picture of a patient's condition and history and get world-class treatment information.

In addition, technology will improve things like electronic healthcare records, which we all recognize and know are still primitive compared to the flow of information and the availability of information in almost any other field. Better access to healthcare information will enable patients and doctors to focus more on treatment and prevention, instead of information access.

Finally, the combination of these technology trends will help us tackle climate change. There's no question that we all need to work together to reduce greenhouse gases and use natural resources more efficiently. Software can play a vital role in innovations that help us achieve new levels of energy efficiency in every aspect of our lives.

Software will make our homes and buildings more intelligent, so we use only the energy we need for lighting, heating and cooling. It'll enable businesses to redesign products and processes to use less energy and fewer natural resources.

I was always fascinated by human brain the best computer in the world. This was the reason I decided almost 30 years ago to pick up software as my passion. Software is the product of human brains and as such I do believe it has almost unlimited potential . The funny thing is more the technology we will have in the world the human brains will be more and more important. This is the reason why I strongly believe in human brain and in magic of software ☺.