working on projects geared toward a more clearly arranged online world. The Theses project, for example, which is being funded by the German Ministry of Economics, seeks to develop and test the basic technologies and technical standards required for obtaining information in a targeted manner from sources such as "...a media consulting agency. "For example, the share of MySpace profiles accounted for by 12- to 17-year-olds is falling sharply because the 35- to 55-year age group is now the largest." Web 2.0 also makes possible customized services such as Pandora internet radio, which offers music precisely tailored to its members' age group is now the largest.”

Jarkko Sairanen, 43, is responsible for Nokia’s business strategy and technology planning. Before joining the cell phone giant, Sairanen worked at Boston Consulting. He has an MBA from INSEAD and an M.Sc. from the Helsinki University of Technology.

Usability is the Challenge

Imagine that it’s ten years from now and you’re contacting a friend. What does your mobile phone look like?

Sairanen: I believe that there will be a proliferation of mobile devices with different capabilities. For example, we will have phones in the form of watches and items that are more or less works of art, finely crafted and set in a high-end. There might also be an evolution of the new Nokia N95, which can run any applications like a computer, with full internet access. It will be a phone that you use today’s phones, but it will be as powerful as the most powerful laptops are today. You will be able to talk with a friend, even as voice data, and different images are transferred at a high data rate. And we will see bigger displays. One of the essential things will be the visual experience.

Which mobile bandwidth will be available?

Sairanen: More than 100 megabits per second.

This would be about ten times the rate of HSDPA today. Who is setting the trends here? The network operators who provide higher data rates, more content, and more software applications, or the suppliers of the devices, who put more high-tech features into their mobile phones?

Sairanen: Both. Besides the之上, there’s a lot of innovation going on at software and Internet companies such as Google and Yahoo. And start-ups can innovate fast in the open Internet.

What role does Nokia Siemens Networks play as an infrastructure supplier?

Sairanen: We work closely with Nokia Siemens Networks in a number of ways. One area is the push to spread the benefits of mobility to new growth markets. In Europe, for example, our companies were at the EU-Africa Business Forum in Accra, Ghana, showing ways to increase communications access for urban and rural areas. For day-to-day business, Nokia Siemens Networks can leverage Nokia’s strong position in the mobile device market and tap into our deep understanding of consumers when they design solutions addressing the challenges of operators and service providers.

Will you produce a phone that can handle every existing radio standard?

Sairanen: You can already call your phones multimedia products. We support GSM, Edge, UMTS, Bluetooth, FM radio, DVB-H (digital TV), Near Field Communication (NFC), and GPS. What’s more, WiMAX is coming next year. As a result, we see challenges in areas like energy management and antenna design.

Does a company that sells only mobile devices have a future?

Sairanen: This is a very important question for us. Our strategy is to offer people more than just a mobile device. Consumers want simple, intuitive usability and comprehensive experiences. We have therefore launched a new Web portal called “On.” It features Nokia Maps. Our customers can download maps from our website to Nokia phones and get instructions on how to get to a place, where the nearest restaurants or gas stations are, etc. We also have several devices that have full email and e-mail capability. We were also the first to bring full Internet on mobile devices with the Web Browser for S60. The S60 smartphone software is an open platform. Owners can add new applications and services to it to make them richer and more personal.

What do you think will be the biggest challenges in the next two to five years?

Sairanen: If I can highlight only one challenge, I would say it’s usability. Technology is evolving very fast. The challenge is how to integrate all this technology so that it creates a compelling experience for users, which in turn opens the door to mass adoption. A mobile phone must be so simple to use that you can use it intuitively without reading the manual. If we manage to do that well, we will have a huge impact on the lives of billions of people.