

Summary Translation of Question & Answer Session at FY2010 R&D Strategy Briefing

Date: March 31, 2010
Location: Okada Memorial Hall, Fujitsu Laboratories Ltd.
Presenters: Kazuo Murano, Ph.D., President, Fujitsu Laboratories Ltd.
Ichiro Iida, President, Human Centric Computing Laboratory, Fujitsu
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Questioner A

Q1: Do you have any specific targets for what you want to accomplish, and by when, in your human-centric computing activities?

A1 (Iida): The field of human-centric computing is very broad, and we are moving ahead with a variety of research projects for which we have established targets. Our most immediate target is to fully apply the principles of human-centric computing to mobile terminals, and we hope to accomplish the first step in this process within one year. In addressing how best to link mobile terminals to services, our next target is to link mobile terminals to cloud-computing based services. In doing so, we will be able to deliver services to fields where IT penetration is still underdeveloped, and we expect it will take approximately three years to roll out specific services.

Questioner B

Q1: You mentioned that you are implementing a new framework in fiscal 2010 that is divided into three areas. Please tell us how you will allocate your budget of 35 billion yen among these areas.

A1 (Murano): We would like to allocate about 40% on core company-wide technologies, 40% on specific business-unit strategic initiatives, and 20% for seed research on emerging technologies. Right now, however, we have a higher allocation for specific business-unit strategic initiatives, so we plan to gradually shift our funding more toward core company-wide technologies.

Q2: Does that mean that you will increase R&D on medium- to long-term projects?

A2 (Murano): Looking out on a 3- to 5-year time horizon on Fujitsu's business activities, we decide the directions in which we will move based on internal company-wide discussions, and what I would like us to do is think about what Fujitsu Laboratories needs to do to help Fujitsu drive ahead in those directions.

The new framework is a departure from the previous thinking. Up until now, we really left it up to each researcher to determine the focus of his or her research activities, but in light of how volatile the changes in today's business environment are, we think it is necessary to follow the approach represented by our new framework.

Questioner C

Q1: In the US, applications such as Twitter and other social networking services are being delivered via the cloud-computing, and, by comparison, "human-centric computing" strikes

me as being technologically somewhat outdated, but do you have specific applications designed to meet user needs?

A1 (Murano): With human-centric computing, even if the user receiving services does not consciously transmit information, systems are able to pick up locational information on where the user is as well as situational information on the user's surrounding environment, and based on that information make assumptions about the user's needs, so we are able to deliver sophisticated services in anticipation of user needs. In our ability to deliver these services, we want to create new value. We want to create a business model that is one step more advanced than social networking services, including as how to monetize services.

Q2: Does that mean that services will automatically be delivered regardless of whether individuals want to receive them? How do you plan to deal with issues such as privacy?

A2 (Murano): We are fully aware of the importance of privacy and respecting the will of individuals, and will proceed accordingly. We want to add value to a variety of data by developing cloud-based technologies, such as adaptive learning technologies as well as technologies to generate knowledge from large volumes of unstructured data. In the field of health care, for example, if we collect information on blood pressure at the same time every day and extract patterns based on data mining, we could provide a service in which we issue recommendations that would instruct the user to take a rest break, for example, or to see a doctor. No matter what, our focus is going to be human-centric, creating services that emphasize respect for individual users.

Q3: My understanding is that, for services that require large-scale sampling of particular populations, you would be required to have an opt-out feature for anyone who is especially concerned about privacy issues, but are there any methods to resolve these issues, including the legal issues?

A3 (Murano): It is a very difficult issue. Personal information is being collected in a variety of ways, and we are moving toward a world in which, if you want to collect information, you are able to do so. Attitudes towards the collection of personal data vary by country, with the US relatively open with respect to personal data, Europe relatively conservative, and Japan falling somewhere in between. As you point out, however, it is a very important issue, whether it is resolved through a legal framework or through the content and structure of the services being delivered.

Questioner D

Q1: Please tell us how many researchers you have for each project area and how you decide when to exit R&D in particular areas.

A1 (Murano): The number of staff varies widely depending on the project area. The core company-wide technologies area is a very important area for us to support, and we have four research themes we are pursuing in this area, each with about 100 researchers. For specific business-unit strategic initiatives, the number of researchers depends on the scale of the subject service or product areas. For seed research on emerging technologies, these are areas with enormous potential but significant corresponding risk, so we might start with anywhere from a few to ten researchers for a given project. Once the commercial potential of a project

begins to become clear, we may assign a team of about 100 researchers to it as a core company-wide technology project or a specific business-unit strategic initiative.

The criteria we use to decide whether to exit a particular area also vary depending on the nature of the project. For seed research on emerging technologies, every year we review the potential for each project accordingly to strict standards and decide whether it should be continued. In terms of the criteria we use, one important metric is whether it is likely to become a core company-wide technology project or specific business-unit strategic initiative within 3 to 5 years.

Q2: For seed research on emerging technologies, what is the attrition rate?

A2 (Murano): If we have exited a particular business area, the attrition rate becomes quite high, but typically it would be about 20-30% per year.

Q3: How many domestic and international patent applications do you make each year?

A3 (Masahiro Kamei, Senior Vice President, IP Planning Office): Each year Fujitsu makes about 4,000 patent applications domestic and another 4,000 outside of Japan. About half of those are from Fujitsu Laboratories.

Q4: What kind of incentive system do you have for employees in the area of patents?

A4 (Kamei): For patent applications, we pay a bonus for each application. If the patent is issued, we pay an additional bonus. In addition, there is a company-wide process each year for selecting the best patents, and their inventors are also given awards.

Q5: Under that system, what percentage of awards for the best patents are given to researchers at Fujitsu Laboratories?

A5 (Kamei): Only about 10% of all patents are selected for awards, and there is not much difference in the number of awards received by Fujitsu Laboratories versus the number received by the business units.