

Fujitsu Laboratories Ltd.  
Fujitsu Ten Limited  
Socionext Inc.  
April 7, 2015

## **Fujitsu Awarded Prizes for Science and Technology** ***Recognized in 2015 Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology***

**Kawasaki, Kobe, and Yokohama, Japan, April 7, 2015** – Fujitsu Laboratories Ltd., Fujitsu Ten Limited, and Socionext Inc. have announced that in the Fiscal 2015 Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology they have received a Prize for Science and Technology in the Development Category for their “Development of a System Giving Wraparound, 3D View of Vehicles.” Fujitsu Laboratories was also honored in the Research Category for its “Research in Electronic Ceramic Materials and Processes for Microelectronics Packaging Technology.”

The Ministry of Education, Culture, Sports, Science and Technology (MEXT) commends individuals for their important achievements in science and technology R&D and their promotion of science and technology understanding. The awards are aimed at motivating researchers and helping to raise the level of Japan's science and technology.

### **Award Recipient and Technology Being Recognized**

#### **Prizes for Science and Technology, Development Category**

This category recognizes people who have made extraordinary R&D achievements or inventions that have real-world applications and that improve Japan's society, economy, and the lives of its citizens.

#### **Recipients:**

Seiya Shimizu (Strategic Sales Division, Socionext)

Masami Mizutani (Innovation Manager, Automotive Innovation Laboratories, Applied Innovation Research Center, Fujitsu Laboratories)

Jun Kawai (Research Manager, Media Processing Laboratory, Fujitsu Laboratories)

Tohru Tsuruta (Project Director, Media Processing Laboratory, Fujitsu Laboratories)

Hiroshi Yamada (Project General Manager, Product Planning Group, Fujitsu Ten)

#### **Project:**

#### **Development of a System Giving Wraparound, 3D View of Vehicles**

Existing synthetic-image technologies to visualize a vehicle's surroundings have been limited to a range of view of 2 to 3 meters, making a broader field of view without blind spots highly desirable. This development, which differs from the technologies in existing products, created and brought into practical implementation wraparound-view monitor technology that takes the novel approach of using 3D graphic-processing technology. Using images from four vehicle-mounted cameras, it synthesizes a 3D-like 360° image of the vehicle's surroundings, covering a wide range, including distant views in addition to the vehicle's immediate surroundings, and can freely and flexibly change the perspective to any view the driver wants to see. This technology improves recognition of surrounding objects and generates a broad field of view in a way that existing products cannot match, and makes it possible to display the relationship between surrounding objects and the vehicle from a perspective that ensures easier comprehension. These achievements promise to markedly improve driving safety for passenger cars and large buses, contributing to safer and more secure motor-vehicle transportation.

### **Prizes for Science and Technology, Research Category**

This category recognizes people who have had highly creative research achievements or inventions with the potential to advance science and technology in Japan.

#### **Recipient:**

Yoshihiko Imanaka (Research Manager, Device & Materials Laboratories, Fujitsu Laboratories)

#### **Project:**

### **Research in Electronic Ceramic Materials and Processes for Microelectronics Packaging Technology**

To improve the functionality of wearable electronic devices, producing thin-film passive elements on flexible and thin polymer sheets is demanded. However, since ceramics conventionally used for passive elements require high-temperature processing in manufacturing and are brittle in nature, integrating ceramic film that functions as a passive element to polymer sheets was difficult. In this research, the methodology for forming electronic ceramic crystalline film with high crystallinity under the endurance temperature of polymer and the melting point of metal was discovered by applying nano-particles having high surface cohesive energy as an intermediate material. And the deposition mechanism was also clarified. Moreover, because fine-hole forming technology by dry etching and chemical etching, and multi-layer processing can be adopted for the new ceramic film, a multi-layered ceramic structure with internal copper wiring, which had been difficult to achieve using conventional methods, can be produced at low temperatures. Furthermore, by controlling the nano-composite structure in the film, high reliability at the interfaces between polymer, ceramic, and metal was achieved. This achievement paves the way for thin, high-performance wearable electronics, and is also expected to lower microelectronics packaging costs and to reduce the environmental burden.

#### **Related Links**

Fujitsu Laboratories Develops Video-Processing Technology Enabling World's First Wraparound View of Vehicles in Real Time

<http://www.fujitsu.com/global/about/resources/news/press-releases/2008/1117-01.html>

Multi-Angle Vision™ Full-Perimeter Monitoring System

<http://www.fujitsu-ten.com/business/safety/multiangle/>

#### **Press Contacts**

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[Inquiry Form](#)

**About Fujitsu**

Fujitsu is the leading Japanese information and communication technology (ICT) company offering a full range of technology products, solutions and services. Approximately 162,000 Fujitsu people support customers in more than 100 countries. We use our experience and the power of ICT to shape the future of society with our customers. Fujitsu Limited (TSE: 6702) reported consolidated revenues of 4.8 trillion yen (US\$46 billion) for the fiscal year ended March 31, 2014. For more information, please see <http://www.fujitsu.com>.

**About Fujitsu Laboratories**

Founded in 1968 as a wholly owned subsidiary of Fujitsu Limited, Fujitsu Laboratories Ltd. is one of the premier research centers in the world. With a global network of laboratories in Japan, China, the United States and Europe, the organization conducts a wide range of basic and applied research in the areas of Next-generation Services, Computer Servers, Networks, Electronic Devices and Advanced Materials. For more information, please see: <http://jp.fujitsu.com/labs/en>.

**About Fujitsu Ten**

FUJITSU TEN LIMITED, established in 1972 with investment from FUJITSU LIMITED and with additional investment from Toyota Motor Corporation and DENSO Corporation in 1973, is a leading manufacturer of automotive electronics Industry. It is a globally-recognized manufacturer of car navigation and audio systems, ECU for engine and airbag control, millimeter wave radar, mobile communication equipment etc. It is expanding its business globally by fulfilling orders for genuine products for Toyota and other automobile manufactures.

<http://www.fujitsu-ten.com/>

**About Socionext Inc.**

Socionext is a new, innovative enterprise that designs, develops and delivers System-on-Chip products to customers worldwide. The company is focused on imaging, networking and other dynamic technologies that drive today's leading-edge applications. Socionext combines world-class expertise, experience, and an extensive IP portfolio to provide exceptional solutions and ensure a better quality of experience for customers. Founded in 2015, Socionext Inc. is headquartered in Yokohama, and has offices in Japan, Asia, United States and Europe to lead its product development and sales activities.

For more information, visit [socionext.com](http://socionext.com).

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