

## Opening Ceremony of NTT Research, Inc.

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### Abstract

NTT and NTT Research, Inc. held a ceremony to open NTT Research, Inc. in the suburbs of Palo Alto, California, USA, on July 8, 2019. This article describes what took place at the ceremony.

*Keywords: global, security, quantum*

### 1. Introduction

The opening ceremony of NTT Research, Inc. was attended by about 280 people, including customers of NTT Group companies, analysts, people from academia worldwide, business partner enterprises, and representatives of the press and the U.S. government. The event offered an overview of the future activities of NTT Research, Inc., which was founded on April 1, 2019, and the three laboratories newly established within it (**Photos 1 and 2**).

### 2. Address by NTT president and chief executive officer (CEO)

NTT President and CEO Jun Sawada started his address by explaining the intention behind the founding of NTT Research, Inc. (**Photo 3**). The NTT Group has the vision of being *Your Value Partner* and aims to resolve global social issues through collaboration with various partners. For this purpose, it considers human resources as central to its activities and has selected *connect*, *trust*, and *integrity* as shared



Photo 1. The event took place at Rosewood Sand Hill in Menlo Park.



Photo 2. Inside the venue.



Photo 3. Jun Sawada, President and CEO, NTT.



Photo 4. Kazuhiro Gomi, President and CEO, NTT Research, Inc.

values for its employees. To achieve *One NTT*, the group is pressing ahead with its four initiatives: full stack/advisory, integrated solutions IT (information technology) as a service, disruptive innovation, and next-generation innovation. As part of its initiative in disruption innovation, it founded NTT Research, Inc., through which it will promote research and development (R&D) that will transform the world and strengthen basic research at global sites. Starting with the establishment of NTT Research, Inc. in Silicon Valley, the NTT Group intends to expand its R&D base to other areas, including Munich and Boston.

President Sawada said that the NTT Group is striving to achieve a *natural world* in which anyone can benefit from technology without conscious effort and that to achieve such a world, the group embraces a next-generation vision, called Innovative Optical and Wireless Network (IOWN). The vision consists of three elements: *an all-photonic network*, which features low power consumption, high quality/high capacity, and low latency; *digital twin computing*, which creates new value by synthesizing the digital twins of humans and objects; and *cognitive foundation*, which optimally combines requirements from a variety of ICT (information and communication technology) resources and centrally manages their configurations. His address ended to resounding applause.

### 3. Address by NTT Research, Inc. president and CEO

The address by NTT Research, Inc. President and CEO Kazuhiro Gomi began with a presentation of the vision of NTT Research, Inc. (Photo 4).

To rapidly expand its global business in collaboration with its global partner enterprises and global human resources, NTT needs to support this expansion from the R&D side. The starting point is here in Silicon Valley. NTT Research, Inc. has already recruited top researchers in the U.S. It also has access to research results from Japan obtained by NTT R&D. It additionally works with global partners. The output of NTT Research, Inc. will be produced by integrating all of these and is intended to help create a better world together with its valued partners.

President Gomi then described the three research areas that will be the focus of NTT Research, Inc. He used *digital twin computing*, introduced by President Sawada, as an example. When *bio digital twin computing*, which is an extension of the former concept, becomes a reality, it may become possible to simulate what will soon happen to one's cyberspace avatar, thereby predicting that one will suffer an illness within, say, the next three weeks. He added that NTT Research, Inc. focuses on three technologies that are needed to bring about such innovation: quantum computing, secure computing, and medical informatics. This is the reason three laboratories have been established within it. He then introduced Director Yoshihisa Yamamoto of the Physics & Informatics Laboratories, Director Tatsuaki Okamoto of the Cryptography & Information Security Laboratories, and Director Hitonobu Tomoike of the Medical & Health Informatics Laboratories.

Besides NTT Research, Inc., which focuses on basic research, the NTT Group's innovation portfolio includes two more organizations newly established abroad. NTT Disruption concentrates on showcasing



Photo 5. Some NTT R&D results were exhibited.

the digital transformations likely to reach the market in the near future. NTT Venture Capital looks for investment partners for startups. He concluded his address by saying that together with those in the audience, “The world will be as one,” citing the lyrics of John Lennon’s ‘Imagine.’

#### **4. Presentations by guest speakers and a concert**

There were guest lectures by Professor Kathryn Moler from Stanford University and Dr. Rupak Biz-

was from NASA’s Ames Research Center. Lectures were also given by Professor Robert L. Byer from Stanford University, who is also a researcher at NTT Research, Inc., and Dr. Brent Waters, who has moved to NTT Research, Inc. from a professorship at the University of Texas.

After the lectures, violinist Ryu Goto gave a special performance to enliven the ceremony. In addition, NTT’s optical Ising machine, LASOLV™, and a fabric that when worn as a shirt—known as hitoe™—can collect biosignals from the body, were exhibited, and the activities of the Cryptography & Information Security Laboratories and the Medical & Health Informatics Laboratories were introduced on display panels at the venue (**Photo 5**). The ceremony was followed by free time for social interaction by attendees and guests.

#### **5. Conclusion**

A large number of senior members of enterprises and academia attended the ceremony, indicating their high expectations of the NTT Group in the coming years. NTT Research, Inc. will accelerate its R&D from Silicon Valley, to respond to valuable opinions and requests given by the guests, support global business and global partners, and contribute to creating a better world in collaboration with them.