

## Our Efforts to Develop a New Business and a Global R&D in the Furukawa Electric Group



*Kazuaki Nishikata\**

Our company group has been focusing on the infrastructure business and the automotive business as the two pillars of our important business fields. The progress in science and technologies becomes faster and faster. We are focusing on the following two main technological trends in each of the business fields.

In the infrastructure (information & telecommunication) field, our attention is focusing on the possible expansion of data centers in the future and the increase of the volume of the traffic connecting them. Cisco predicted that the data traffic would continue to increase by 20 % per year or more and in 2020 would be as large as threefold of that in 2015<sup>1)</sup>. Today, production volume of optical fiber has already reached 400 million km per year, which is so large that it can circle the earth 10,000 times. From now on, further evolution is required both in the telecommunication technology such as digital coherent technology and in the technology of semiconductor optical devices which will enable the former one.

In the automotive field, our attention is focusing on the development of the autonomous drive technology and its penetration in the market. In the world largest consumer electric exposition “CES” held in January of 2017, we found out that the technologies related to the autonomous drive started flourishing all together. We have been developing “technology for functional safety of power source” and “surrounding monitor technology”, which have been already adopted by our customers.

To respond to the global scale evolution of technologies, we have been carrying out the following R&D activities;

The first one is to reinforce our R&D capability through fusing our internal core technologies.

We established the Laboratories for Fusion of Core Technologies two years ago to fuse our own core technologies, “Metal”, “Polymer”, “Photonics” also to fuse “High frequency” technology all together and have been developing new businesses and new technologies.

The second one is to promote the globalization aiming at strengthening the competitive capability through diversity. In 2013, we appointed a foreigner to be an executive officer and we have four foreign officers at present. One of our executive officers in Europe works as a head of the laboratory in Hungary (FETI). Furthermore, he takes a lead with his opinions reflecting the features of culture and management peculiar to his location in not only R&D but also in all over management problems of our company group.

The third one is the effort for an “Open Innovation” activity in which the technical information is positively disclosed to other companies. It is a key to respond to diversified global needs to achieve the fusion of technologies with our partners. We focused on a scheme for the Open Innovation and established “Fun Lab” in our Yokohama Works in August of 2016, which was an exhibition facility for technologies not yet launched into a market. We aim at creating ideas and concepts of future products and systems based on unreserved various discussions among those who come from R&D organizations of companies, universities and governments.

Please contact us if you have any interests in the technologies of our group after reading this technical review. Hope to see you at the Fun Lab to have a discussion on technologies. Thank you very much for holding this review in your hands.

\* General Manager, Planning Department, R&D Division

1) Quoted from HP of Cisco,

<http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/vni-hyperconnectivity-wp.html>