

Symposium Report (Overview of the presentation on the ECHONET 2.0 Vision)

The ECHONET Consortium released “ECHONET 2.0”, activities to help realize an “IoT society/Society 5.0” through: (1) organizing system reliability concepts; (2) studies on inter-server technology; and (3) penetration to service providers, while defining healthcare as the second core service in addition to energy management.

Having marked its 20th anniversary last year, the ECHONET Consortium has been promoting the formulation of ECHONET Lite specifications and the development/spread of its certification system, while focusing on energy management as its main target. We have also actively promoted “liaison alliance” activities as a part of collaborative industrial-government-academic activities with domestic and international industry associations and standardization organizations, such as the Smart House and Building Standards Project Promotion Study Group and the Energy Resource Aggregation Business Study Group. Consequently, implementation of ECHONET Lite specifications to various devices, including the eight key devices, was vigorously promoted and the project qualified under ZEH and other subsidies.

Based on our experiences, we will further promote ECHONET 2.0 to help realize the “IoT society/Society 5.0”¹, with the goals of “spreading the world’s No. 1 IoT houses and IoT offices” and “promoting and deploying Japan’s leading international standard interface to help drive economic growth and resolve social challenges”. Specifically, we will expand the scope of our studies on systems, including internet-based services, while promoting “organizing system reliability concepts using ECHONET Lite devices”, “studies on inter-server technologies for linking a wide variety of services”, and “driving the spread of standards to service providers”, in addition to “improving development environments for new players in ECHONET-related businesses”.

Note 1*: Society 5.0: “A human-centered society that balances economic advancement with the resolution of social problems using a system of highly-integrated cyberspace and physical space”, as proposed under the Fifth Science and Technology Basic Plan as the future society that Japan should aspire to.

(Source: Government Public Relations

https://www8.cao.go.jp/cstp/society5_0/index.html)

Basic policy and goals of ECHONET 2.0

(1) Further expansion of target devices and organizing system reliability concepts, including

the internet

So far, more than 5,370 devices that comply with the ECHONET Lite standard [ISO/IEC 14543-4-3] (developed by a Japanese team to realize IoT for home appliances and business equipment such as air conditioners, fuel cells, electric vehicle chargers, and smart electric meters) have been released. The goals defined under ECHONET 2.0 include spreading 100 million ECHONET Lite devices by 2020 to help realize the “IoT society/Society 5.0”, and securing 200 models of devices that define control commands by 2025 to realize new services.

To clearly demonstrate that ECHONET Lite devices can contribute to IoT society, we have included the whole system, including various cloud-based services, under the scope of the studies. This helps to organize the concept of “protecting critical information by controllers and servers to connect to reliable services”.

(2) Study on inter-server technology to realize various services

The products that comply with ECHONET Lite specifications have a given value that realizes various services by making the products network-connected. We will study the specifications of the server-based technologies to help a wide range of service providers develop various services and applications for ECHONET Lite devices. Note that the first edition of the specifications to realize basic functions such as control and status reading has already been made available to the public, and an experimental server that complies with these specification (first edition) is scheduled to be released to Consortium members this winter.

(3) Facilitating more use of ECHONET Lite among service providers

We will prepare the required documents for new services, including healthcare services, and promote the study of Web API to make service development easier, with the aim of spreading ECHONET Lite devices and services using ECHONET Lite devices. Meanwhile, to ensure that everyone receives the benefits of Society 5.0, we will make an effort to spread reliable controllers to all households in Japan by 2030.

(4) Strengthening collaboration with domestic and international standardization groups and improving the development environment for new players in ECHONET-related businesses

To date, we have been working to spread ECHONET Lite and ECHONET Lite AIF devices through the Smart House and Building Standards Project Promotion Study Group and the Energy Resource Aggregation Business Study Group, in collaboration with industrial-government-academic groups including the Japan Electrical Manufacturers’ Association (JEMA), the Japan Federation of Housing Organizations (JUDANREN), Keio University, and

the Kanagawa Institute of Technology.

To create and expand healthcare and other services, we will follow the methods that we created in the energy management market and promote collaboration with industrial-government-academic groups and standardization groups, as well as international standardization. We also will look at enhancing our test center and disclosing our development environments, as well as improving environments and facilities for new players in ECHONET-related businesses.