

**Report on the recently held
2nd Workshop for Connected Vehicles using LTE/5G**

This report provides a brief overview of the 2nd Workshop for Connected Vehicles using LTE/5G, which was held on March 30th. This workshop was jointly organized by the ARIB's Advanced Wireless Communications Study Committee's Mobile Partnership Subcommittee's LTE-V2X Ad Hoc Group, the 5GMF's 5G Connected Vehicle Ad Hoc Committee, and the ITS Info-communications Forum's Advanced ITS Info Communication Systems Committee's Cellular System Application Task Group.

This workshop was held the aim of providing participants a better understanding of the newest trends on connected vehicles using LTE/5G, as well as the state of activities related to LTE/5G V2X both in Japan and globally. This aim was realized through presentations by experts on the progress towards the agreement of standards for LTE/5G V2X communications, the newest trends in China, Europe, and the United States, and the state of activities at the ITS Info-communications Forum.

1. **Workshop name:** Second Workshop for Connected Vehicles using LTE/5G
2. **Date and Time:** March 30 (Friday) 2 pm to 5 pm
3. **Location:** ARIB (Tokyo, Japan)
4. **Organizers:**
Jointly organized by
 - LTE V2X Support AdHoc, Mobile Partnership Subcommittee, Advanced Wireless Communications Study Committee, ARIB
 - 5G Connected-Vehicle AdHoc Committee, 5GMF'
 - Cellular System Applications Task Group, Advanced ITS Info-communication Systems Committee, ITS Info-communications Forum
5. **Participants:** About 120
6. **Event Overview:**

Prof. Sadao Obana (The University of Electro-Communications), Chairman, ITS Info-communications Forum's Advanced ITS Info-communication Systems Committee gave the opening remarks. Mr. Takehito Nakamura, Leader of the Cellular Systems Applications Task Group of the ITS Info-communications Forum's Advanced ITS Info-communication Systems Committee and Leader of the 5GMF Connected Vehicle

AdHoc Committee, provided an overview of the workshop itself, followed by presentations which are summarized below.

6.1. Latest Trends in LTE-V2X standards discussions at the 3GPP

Mr. Satoshi Nagata, Leader of ARIB's Mobile Partnership Subcommittee LTE V2X AdHoc, introduced the current state of discussions on 5G standards and V2X (Vehicle to Everything) standards, including as an overview of the Cellular V2X usage of communication technologies like LTE and 5G, at the 3GPP.



Prof. Sadao Obana



Mr. Takehito Nakamura (center)



Mr. Satoshi Nagata (right)

6.2. Current International Trends of the utilization of LTE/5G in V2X

Mr. Zhu Houdao from Huawei Japan, was able to include the latest trends in China in his presentation, in which he discussed the policies and strategies of the Chinese government towards cellular V2X, trends in the telecommunications industry, including chip set R&D, cellular V2X trials, and marketization projects.

Next Mr. Yoshio Honda of Ericsson Japan included V2X trends in Europe while discussing collaborative activities between the automobile and telecommunications industries, activities related to 5G, and various research projects on the utilization of LTE-V2X in automobiles.

Finally, Qualcomm Japan's Mr. Masakazu Shirota introduced current and future plans for trials related to C-V2X in the United States, ITS bandwidth allocation and activities by the SAE(US based Society of Automotive Engineers).

6.3. Activities by the ITS Info-communications Forum's Advanced ITS Info-communication Systems Committee Radio System Technology Task Group

Mr. Masaharu Hamaguchi, Chairman of the Radio System Technology Task Group of the ITS Info-communications Forum's Advanced ITS Info-communication Systems

Committee introduced how the work of the Radio System Technology Task Group was progressing, including studies on effective radio systems technologies in automobile systems which are based upon use cases provided by the Japan Automobile Manufacturers Association. These studies have been carried out with the participation of automobile makers, telecommunication makers, and telecommunication carriers. He also introduced future research activities, including LTE-V2X application studies.



(from left side)

Mr. Zhu Houdao

Mr. Yoshio Honda

Mr. Masakazu Shirota

Mr. Masaharu Hamaguchi

About 120 people participated in the workshop, which exceeded the number planned. These participants asked numerous questions at the question and answer sessions that followed each presentation. Participants showed a strong interest and held high expectations in the future progress of connected vehicles.



Workshop Participants Listening to a Presentation