IEEE P802.11  
Wireless LANs

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| Automotive (AUTO) TIG Meeting Minutes for November 11th, 2024 Meeting | | | | |
| Date: November 11, 2024 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Jing Ma | Toyota Motor Corporation | 1-6-1 Otemachi, Chiyoda-ku, Tokyo, 100-0004, Japan |  | jing\_ma@toyota-tokyo.tech |

Abstract

Meeting Minutes for the AUTO TIG meeting held in Vancouver, on November 11th, 2024.

Abbreviations:

Q: Question

A: Answer

C: Comment

Revision history:

R0: initial version

Chair: Jim Lansford (FaraFir Consulting)

Vice Chair: Azin Neishaboori (General Motors), Jing Ma (Toyota)

**Meeting Agenda:**

The meeting agenda for AUTO 2024 November meeting:

<https://mentor.ieee.org/802.11/dcn/24/11-24-1372-02-auto-agenda-for-automotive-tig-2024-september.pptx>

* Chair went through slides 1 through 11 of the agenda.
* Discussion on agenda
  + Any objection to the agenda? None
* Officer elections
  + Chair proposed Carol Ansley (Cox Communications) as editor.
  + Any objection? None
* Presentation by Necati Canpolat (Intel), 24/1858r0 “Passpoint & OpenRoaming for Automotive Connectivity”
  + Q: Do you believe that the process such as ANQP in roaming scenarios would add the latency for moving vehicle. Do you see that as a gap?
  + A: Passpoint enables international connectivity, but identification is key for authentication. Open roaming aids association, but credentials need secure identification for validation
  + C: Open roaming could unify operators for a consistent experience, but automotive Wi-Fi isn’t entirely dependent on its success. Mutual agreements among major operators may suffice
  + A: it's important that we can discuss geographies. it's something we could consider if everything aligns
  + Q: regarding scalability—not just for agreements, but for scenarios with multiple vehicles connecting to a single AP. Moving vehicles face latency challenges during handovers, which could be a gap in current solutions. Do you see this as an area needing improvement?
  + A: Stationary connections are simpler, but vehicles moving up to 60 km/h need seamless handovers across APs. Open roaming helps, but context transfer, direction, and location data are key for real-time connections, with tools available in Europe to aid coordination
  + C: The AIML use case on intelligent roaming and proactive context transfer is indeed a step in the right direction, aligning well with WBA's focus
  + C: Roaming aids security but falls short for high-intensity automotive needs. Unique challenges like vector roaming and speed demand solutions beyond standard Wi-Fi
  + A: Agreed. Roaming and FT need integration, but app-based location support is still lacking
  + Q: how many open roaming enabled APs at the moment
  + A: this is related to the website. Not sure how many numbers that turned into
  + Q: Has anyone studied authentication times? It’d be interesting to know connection durations—any recent measurements?
  + A: The Wi-Fi Alliance had relevant test which was 0.4 to 1.5 seconds for 'time to first byte'
* Presentation by John Kenney (Toyota Motor North America), 11-24/1845r2 “Consideration on existing systems and standards for ITS using IEEE802.11 technologies”
  + C: Focus is on vehicles connecting to static APs, not V2V, at speeds under 40 km/h. Aim: offload connectivity from cellular to Wi-Fi. MAC layer insights may help
  + Q: From an engineering perspective, could telemetry be combined with LiDAR to reduce heat, power, and costs in vehicle autonomy? Are there ways to optimize by integrating both approaches?
  + A: Onboard sensing and V2X are complementary; V2X extends range beyond line-of-sight and adds data accuracy, acting as a 360-degree ‘sensor’ alongside onboard systems
  + Q: Do you think V2X could offset some onboard visual AI costs, despite its infrastructure needs?
  + A: Most use cases are V2V, but V2X also supports infrastructure-to-vehicle, providing intersection data (signal status, timing) to aid event prediction—offering valuable, non-AI-driven info
  + Q: Would adding an OCB stack and 1609 certificates in Wi-Fi face barriers?
  + A: Vehicle communication over Wi-Fi, like in chargers, is tested but not fully deployed. V2X can route to the cloud, and 1609 advertises IP configs from RSUs to vehicles
* Call for submissions - January 2025
  + 1 session is planned for January 2025
* Timeline review
  + Complete report by July 2025:
    - Submission
* References of the background documents
* Any other business: none
* Meeting adjourned
* Attendance: 60 attendees in room, 130 attendees on Webex