IEEE P802.11  
Wireless LANs

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| Minutes 2025-03-10 AUTO TIG Meeting, Atlanta | | | | |
| Date: 2025-03-19 | | | | |
| Author(s): | | | | |
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Abstract

This document contains the meeting minutes from the IEEE 802.11 Automotive Topic Interest Group (AUTO TIG) meeting in Atlanta, USA March 10, 2025.

Abbreviations:

Q: Question

A: Answer

C: Comment

Revision history:

R0: initial version

Automotive Topic Interest Group (AUTO TIG)   
Chair: Jim Lansford (FaraFir Consulting)

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

Tuncer Baykas (Self) volunteered to be secretary.

**Meeting Agenda:**

The meeting agenda for AUTO 2025 March meeting is here:  [https://mentor.ieee.org/802.11/dcn/25/11-25-0213-00-auto-agenda-for-automotive-tig-2025-march.pptx](%20https:/mentor.ieee.org/802.11/dcn/25/11-25-0213-00-auto-agenda-for-automotive-tig-2025-march.pptx)

**Meeting Minutes:**

1. Chair called the meeting to order at 14:02 local time and reviewed slides 1 through 11 of the agenda document.
2. Approval of the agenda
   1. Chair reviewed the draft agenda, no further edits were requested.
   2. **Motion: Approve the AUTO TIG agenda in document 11-25-0213r0.**
   3. **Moved: Azin Neishaboori, Seconded: Tuncer Baykas**
   4. **Result: Unanimous Consent**
3. Approval of the January 2025 AUTO TIG meeting minutes in. <https://mentor.ieee.org/802.11/dcn/25/11-25-0159-00-auto-january-2025-kobe-auto-tig-meeting-minutes.docx>
   1. **Motion: Approve the AUTO TIG 2025 January minutes in document 11-24-159r0**
   2. **Moved: Tuncer Baykas, Seconded: Jing Ma**
   3. **Result: Unanimous Consent**
4. Presentation by Hitoshi Morioka (SRC Software), [https://mentor.ieee.org/802.11/dcn/25/11-25-0226-00-auto-ieee-802-11ai-and-ieee-802-11bc-for-automotive-use.pptx](https://mentor.ieee.org/802.11/dcn/25/11-25-0226-00-auto-ieee-802-11ai-and-ieee-802-11bc-for-automotive-use.pptx%20)
   1. Q: In Slide 8 Are all the APs in the same channel?
   2. A: The APs are in different channels. STAs in the vehicle scans for APs. When one STA communicate with one AP, the other STA scans for a new AP. Each STA communicates independently.
   3. Q: Are the APs part of the same ESS?
   4. A: Yes they are.
   5. C: Thank you for the presention. Having field tests are beneficial to understand real life problems..
   6. Q: Which PHY layer is used in the experiments?
   7. C: 802.11b
   8. Q: Did you join the TGbn group? They are developing roaming as well.
   9. A: Yes, but presented solution works with previous phy layers as well.
   10. C: Seamless romaning may not be available in a city.
   11. C: Data offloading is very taxing to 5G systems.
   12. C: With the needs and use cases indicated in this group, infrastructure could be changed.
   13. C: It is an oppotunity to create wifi networks which enable vehicular networks
   14. C: Group should provide a list of all the WiFi features that can help with vehicular scenarios
5. Presentation by Federico Lovison (Cisco) <https://mentor.ieee.org/802.11/dcn/25/11-25-0308-00-auto-hybrid-mld-for-automotive.pptx>
   1. Q: How will the car know which virtual AP to access?
   2. A: Out-of-band connection will provide information. A DNS discovery could be used. A Cloud service may provide information, when the car provided its locaiton. Car may decide how to start discovery process.
   3. Q:With the virtual AP do you have handover between APs?
   4. A:You may have one virtual AP in a given area. The virtual AP will provide the information.
   5. C: Out of band connections may help vehicular communications
   6. Q: Can 802.11ah have a role in this area? 802.11 ah devices have kilometer range.
   7. A: Definetely, 802.11ah will be a great advantage.
   8. A:Regulatory wise it needs to be in the same bands in major markets
   9. C:As a hybrid solution it could be costly..
   10. C: 802.11ah would be good for the control plane.
   11. C: 802.11ah is tried in rural ares and can provide coverage.
   12. Q:Are you plannıing to use IP tunneling?
   13. A: It could be a possibility. Some tunneling technology could be used.
   14. Q: Which parts of the standarda are plannig to change?
   15. A: It is open for discussion.
   16. Q: Is the out of band connection be another WiFi?
   17. A: It could be. But in the presentation we assume all APs are in the same ESS.
6. Presentation by Azin Neishaboori (General Motors) <https://mentor.ieee.org/802.11/dcn/25/11-25-0293-00-auto-automotive-tig-thoughts-on-phy-improvements.potx>
   1. Q: Are you assuming an intra-ESS context for both control and data paths?
   2. A:It’s a possibility.
   3. C: The infrastructure is needed for such applications. It is expensive to put radios both to cars and infrstructure.

1. Presentation by Jing Ma (Toyota) <https://mentor.ieee.org/802.11/dcn/25/11-25-0323-00-auto-proposed-ieee802-11-automotive-tig-technical-report-text-on-regional-hd-map-updates-use-case.doc>.
   1. . New scenario details are provided.
   2. C: We need to determine which features related to higher layers. We need to determine necessary changes in lower layers which may help deployment of higher layer functions.
   3. Q: What prioritization capabilities should be considered?
   4. A: Data related to critical services should be uploaded first. For example software updates could wait.
   5. C: Various uses cases and gaps will streamlined.
2. One AUTO TIG meeting is planned for the May 2025 Plenary session. The Chair will send out a call for contributions.
3. Timeline review
   1. Our current target is to complete the AUTO TIG report by July 2025. We might need to ask for more time.
4. Any other business: None.
5. Meeting adjourned at.15:55
6. Attendance: 90 attendees in the room, 150 attendees on Webex.

**References:**

Agenda: https://mentor.ieee.org/802.11/dcn/25/11-25-0213-00-auto-agenda-for-automotive-tig-2025-march.pptx

2025 January meeting minutes: https://mentor.ieee.org/802.11/dcn/25/11-25-0159-00-auto-january-2025-kobe-auto-tig-meeting-minutes.docx

Presentations:

“IEEE 802.11ai and IEEE 802.11bc for Automotive Use”, Hitoshi Morioka (SRC Software) <https://mentor.ieee.org/802.11/dcn/25/11-25-0226-00-auto-ieee-802-11ai-and-ieee-802-11bc-for-automotive-use.pptx>

“Hybrid MLD for Automotive”, Federico Lovison (Cisco) <https://mentor.ieee.org/802.11/dcn/25/11-25-0308-00-auto-hybrid-mld-for-automotive.pptx>

“Automotive-TIG-Thoughts on PHY improvements”, Azin Neishaboori (General Motors) <https://mentor.ieee.org/802.11/dcn/25/11-25-0293-00-auto-automotive-tig-thoughts-on-phy-improvements.potx>

“Proposed IEEE802.11 Automotive TIG Technical Report Text on Regional HD Map Updates use case,” Jing Ma (Toyota) <https://mentor.ieee.org/802.11/dcn/25/11-25-0323-00-auto-proposed-ieee802-11-automotive-tig-technical-report-text-on-regional-hd-map-updates-use-case.doc>