IEEE P802.11
Wireless LANs

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| ARC SC Mixed Mode Minutes November 2023 – Plenary |
| Date: 2023-11-16 |
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Abstract

This document contains the minutes of the IEEE 802.11 ARC SC mixed mode meeting held on 13 November 2023 at 18:15-20:15 HST and 16 November 2023 at 10:30-12:30 h HST.

Note: Highlighted text are action items. A- precedes comments from the document’s author, C- precedes comments, R- precedes responses to comments.

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# Monday 13 November 2023 at 18:15-20:15 h HST

## Administration:

**Chair: Mark Hamilton, Ruckus/CommScope**

**Vice Chair: Joseph Levy, InterDigital**

**Secretary: Joseph Levy, InterDigital**

**Meeting called to order by the Chair at 18:20 HST**

Agenda slide deck: [11-23/1720r0](https://mentor.ieee.org/802.11/dcn/23/11-23-1720-00-0arc-arc-sc-agenda-nov-2023.pptx)

**Agenda Slides 4-15:**

**Registration Reminder**

**Reminders to Attendees**

**Call for Patents:**

The Chair reviewed the Patent policy and called for potentially essential patents – there was no response to the call.

**IEEE SA Copyright Policy:**

The chair reviewed the Copyright policy.

**Participation:**

The chair reviewed the participation policy.

**Approval of the Agenda (Slides 16)**

* **Two meeting slots this week, Monday 18:15 and Thurs 10:30**
* **Attendance, noises/recording, meeting protocol reminders**
* **Policies, duty to inform, participation rules**
* **Approve meeting minutes (slide 18)**
* **Contribution/discussion topics:**
	+ **IEEE Std 802 project, - Monday review draft/comment, Thursday de-brief**
	+ **Annex G way forward (slide 22) - Thursday**
	+ **WBA liaison on QoS:** [**11-23/0838r1**](https://mentor.ieee.org/802.11/dcn/23/11-23-0838-01-0000-wba-liaison-re-qos.docx) **,** [**11-23/1206r0**](https://mentor.ieee.org/802.11/dcn/23/11-23-1206-00-0000-wba-e2e-qos-qos-over-wi-fi-links.pptx) **(Venkatesan)**
* **Next steps (slide 23)**

The Chair reviewed the agenda and called for comments and additions.

No discussion. Approved by unanimous consent.

**Approval meeting minutes**

Motion to approve the minutes of:

**September 2023 interim:** [**11-23/1537r0**](https://mentor.ieee.org/802.11/dcn/23/11-23-1537-00-0arc-arc-sc-mixed-mode-minutes-september-2023-interim.docx)

Moved Joseph Levy

Second Stuart Kerry

Discussion none.

Result: UC

## IEEE Std 802 project, - Monday review draft/comment

A discussion was had regarding proposed comments/issues on 802REVc (the number reference is in the from of page.line):

On bridgeable is added – maybe this needs to be defined. Check the CID. Also – 32.30 – it would be best to eliminate “bridgeable” or add definition of bridgeable. Mark proposing to delete both of them. (42.13, 47.3, 47.7 (consider stating that an 802 network that does not support the MAC ISS is not bridgeable.

47.9 – this sentence is hard parse – and is difficult to understand. Consider not defining. Fix the sentence. “Some networks not specified in IEEE 802 standards meet these requirements.” – see 50.30.

4.1 - The limit of not being limited to PHY and DLL has no value. But should let it go.

40.1 – EPD and LPD seems to be ambitious – it is not clear what the difference is.

Possible – comments – EPD – “made available to the LLC layer” what does this mean. Is it a parameter, we should say that. What does it mean.

Depending on the above answer – if we provide the either type in a SNAP then we have no idea if we are LPD or EPD.

Is the specified address 8802-2 – the LLC address? If so, just say so. Also 8802-2 talks about more than one type of addresses. So, the reference is vague.

This text is opaque for us – so we want to better understand what is being said here.

We are not clear on this content.

9.4 defines LSAP encoding – this seems to be a poor name and may cause confusion.

## Recessed 20:07 h HST

# Thursday 16 November 2023 at 10:30-12:30 h HST

## Administration:

**Chair: Mark Hamilton, Ruckus/CommScope**

**Vice Chair: Joseph Levy, InterDigital**

**Secretary: Joseph Levy, InterDigital**

**Meeting called to order by the Chair 10:39 EDT**

Agenda slide deck: [11-23/1720r0](https://mentor.ieee.org/802.11/dcn/23/11-23-1720-00-0arc-arc-sc-agenda-nov-2023.pptx)

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	+ Annex G way forward (slide 22) - Thursday
	+ WBA liaison on QoS: [11-23/0838r1](https://mentor.ieee.org/802.11/dcn/23/11-23-0838-01-0000-wba-liaison-re-qos.docx) , [11-23/2118r0](https://mentor.ieee.org/802.11/dcn/23/11-23-2118-00-0arc-e2e-qos-enablement-and-related-topics-for-consideration-in-ieee802-11-mac-layer.pptx) (Venkatesan)
* **Next steps** (slide 23)

The Chair reviewed the agenda and called for comments and additions.

Discussion on the order of the agenda items, agreed to maintain the proposed order. No additions were made. Approved by unanimous consent.

## IEEE Std 802 project – 802REVc

Update of 802REVc status from 802.11 representative (Joseph Levy) 11-23/2111r0

## Annex G way forward

Harry Bims (Bims Laboratories) not present, so no discussion of [11-23/1599r0](https://mentor.ieee.org/802.11/dcn/23/11-23-1599-00-0arc-discussion-of-normative-text-understanding-of-frame-exchange-sequences.docx).

The Chair requested participates to please look at [11-23/1599r0](https://mentor.ieee.org/802.11/dcn/23/11-23-1599-00-0arc-discussion-of-normative-text-understanding-of-frame-exchange-sequences.docx).

## WBA liaison statement on E2E QoS

Ganesh Venkatesan (Intel Corporation) [11-23/2118r0](https://mentor.ieee.org/802.11/dcn/23/11-23-2118-00-0arc-e2e-qos-enablement-and-related-topics-for-consideration-in-ieee802-11-mac-layer.pptx)

Follow up to discussion from July Plenary. The .1 mechanisms are targeted at .3 but could be used by .11 or need to be support in some way to maintain latency requirements.

C – Where are these ques located, are they above/below the 802.11 MAC SAP?

A – it is implementation dependent – so it is not clear – where and what the requirements for performance are.

C – There are multiple approaches – they could be in the 802.11 stack – 1 L4S and 1 non-L4S – this would impose requirements on que depth, and latency performance. (L4S – **L**ow **L**atency **L**ow **L**oss **S**calable throughput)

A - Looking into how we can make .1Q clause 30 work better on 802.11.

There was support for making .1Q clause 30 work better with 802.11.

The Author committed to bring more information on what is required to support clause 30, and issues that stop .11 from working with clause 30. There are not spare bits for priority setting – there are only 2 bits. We may want to consider other mechanisms beyond .1Q – maybe RAW.

Chair – Should we limit our scope to how .1Q fits with .11 and what we should do to make it fit?

C – Concern was expressed regarding:

1. Other people use these bits for other things – are there interoperability issues?
2. Will this change the way things work?

Chair – Is this a .11 discussion or is it a .1 discussion? Is this about how .1Q uses the higher layer functionality?

C – There may be different ways of having different queues – this approach may require .11 queues.

Chair – Some of this work may be done inside .11 – if there are changes to be made to the .11 Proposing that ARC SC unpack this, so the scope/action is clear as to what .11 needs to do, and where the work needs to be done, is TBD after unpacking.

A – Not all links are weak links – the Wi-Fi link is a potential weak link – not all nodes in the path need to support this to get the benefits.

Chair- to your knowledge not every node may not participate. This is a different problem than a .1 issue.

There was support for .11 assessing the impact of this and not just leaving the definition/specification of this to .1.

Chair – is that something that is understood in .1Q – is this an L4S requirement that is not understood?

A – A potential issue is that the queues in .1 which mitigate the flows are lost in .11. I will provide more information on how/if .1Q requires support in .11 to manage the queues.

The way forward with this work will address Wi-Fi links as they are weak links and L4S benefit weak links best. WBA may be able to support the need for this work. The WBA team is working this. However, the timing on this work and its availability is unknow. The BLOG on L4S was also noted as being of potential interest – there is a trade-off between latency for throughput.

The Author will join virtually in January and provide a review of 802.1Q clause 30 and what is met and not met by 802.11.

**Next steps**

Chair reviewed the topics slide 19, called for other topics.

**Contributions requested/expected:**

**Annex G (reflector discussion)**

**Anything on 802REV before January? See below**

**QoS topic**

**January session planning**

**1 or 2 slots? 2 – Monday (during day), Thus like this session**

**Topics? Possibly: Annex G, 802REVc, WBA QoS liaison follow-up**

**Next Teleconference(s):**

**November to January teleconference plan… Any/How many telecons? Dec 18, Jan 8**

**Conflicts to avoid: TGbe, REVme, TGbh, 802REVc**

**Continue with Monday 1PM ET (2 hours) or 2PM ET (1 hour)?**

**Dates to avoid??**

**NOTE: 802REVc planning on telecons to discuss “the EPD/LPD issue” on Dec 12 and 19, 11:00 EST (TBC)**

**Will be coordinated with other TG chairs, and announced later**

## Adjourned: 10:59 h HST

Final Agenda: [11-23/1720r1](https://mentor.ieee.org/802.11/dcn/23/11-23-1720-01-0arc-arc-sc-agenda-nov-2023.pptx)

Closing Report: [11-23/2123r0](https://mentor.ieee.org/802.11/dcn/23/11-23-2123-00-0arc-arc-closing-report-november-2023.pptx)