IEEE P802.11  
Wireless LANs

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| ARC SC Mixed Mode Minutes March 2023 - Plenary | | | | |
| Date: 2023-03-17 | | | | |
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Abstract

This document contains the minutes of the IEEE 802.11 ARC SC teleconferences held on 14 March 2023 at 10:30-12:30 h ET and 16 March 2023 at 13:30-15:30 h ET.

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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# Tuesday 14 March 2023 at 10:30-12:30 h ET

## Administration:

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

**Vice Chair: Joseph Levy, InterDigital**

**Secretary: Joseph Levy, InterDigital**

**Meeting called to order by the Chair 10:34 ET**

Agenda slide deck: [11-23/0179r2](https://mentor.ieee.org/802.11/dcn/22/11-23-0179-02-0arc-arc-sc-agenda-mar-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, Tues 10:30 and Thurs 13:30**
* **Attendance, noises/recording, meeting protocol reminders**
* **Policies, duty to inform, participation rules**
* **Approve meeting minutes (slide 18)**
* **Note: MADINAS document:** [**https://datatracker.ietf.org/doc/html/draft-ietf-madinas-mac-address-randomization-06**](https://datatracker.ietf.org/doc/html/draft-ietf-madinas-mac-address-randomization-06)
* **Contribution/discussion topics:**
  + **Annex G way forward (Tuesday)**
  + **IEEE Std 802 project (Thursday)**
* **Next steps**

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

No comments or additions were made, approved by unanimous consent.

**Approval meeting minutes:**

**January interim:** [**11-23/0051r0**](https://mentor.ieee.org/802.11/dcn/23/11-23-0051-00-0arc-arc-sc-mixed-mode-minutes-january-2023-interim.docx)

**February 6, February 27 telecons:** [**11-23/0216r1**](https://mentor.ieee.org/802.11/dcn/23/11-23-0216-01-0arc-arc-sc-february-2023-teleconference-minutes.docx)

* Moved: Graham Smith (SRT)
* Seconded: Marc Emmelmann (self)
* Result: UC

## Annex G way forward

**The Chair reviewed the status of the “Annex G way forward”**

* Consider scope/purpose for (new) Annex G – informative or normative, etc.
* Straw Poll in Jan: “Do you support deleting Annex G?” 2/6/5.

[**11-23/0419r0**](https://mentor.ieee.org/802.11/dcn/23/11-23-0419-00-0arc-proposal-for-annex-g-frame-exchange-sequence-examples.docx) **(Harry Bims)**

**Proposal for what to do in Annex G: a new Annex G**

**Harry reviewed his proposal, looking for direction from the group.**

**Not looking to change the normative text, looking to provide guidance not normative behavior.**

C – What do you mean by examples?

R – Would not recreate figures – would provide more text describing things.

C – Annex G – was concerned with what packet follows which packet. It wasn’t about what goes on in a TXOP. Is the intention to say which packets follow which.

R – The world has gotten very complex – annex G cannot simply be packet order, when things are now complicated. It should be a unified place to deal with understanding the current complexity. Not normative behavior, just what is currently in there.

C – the old annex G did two things: list out the ordering of frames to be exchanged. It was unfortunate that it duplicated normative text, when it provided the sequence. The other part was to define a set of frames (a glob of stuff) that cannot be interrupted (timing windows, and limits on behavior restrictions). We are not going to provide an ordering but will focus on where the starts and stops are and how they relate to the features. Without defining anything, by pulling the references together so one knows where to look for the normative behavior is – to help the reader.

R – Agree with that view. The interesting thing is when things multiply. e.g., variation of bit rate. Also, non-P2P transmissions. When is the start and stop of each of the entities for the frame exchange sequence.

C – Concern about how to reference normative text but duplicate it.

R – I was starting with the basic – DCF which is as basic as it gets.

C – The timing of the NAV is critical – worried about d) and e) - how to the deal with the multi-STA stuff. Any clarification needed would be in the main text. The Annex should not try to do too much work.

C = Would the current submission text be included in the Annex?

R – Yes this is a first draft of the text.

C – What is the sequence of things that happen. The NAV has to cover the whole sequence.

R – The annex should start at beginning and then move through to the current complexity.

C – As things get more complicated – this is very difficult to do. This should define what the atomic block of stuff is and how it is used. It is interesting that when a STA can transmit again is being considered. It would be a different view on when a STA may make a PS state change. The time a STA can transmit again, is not necessarily the same time that other STAs can transmit again. This could be used for novice and none-novices.

C - In MUMIMO each STA may know when it is done, be aware of what other STAs are doing, and what the NAV state is – so this needs to be monitored.

C – Are you proposing examples of various behaviors – with references to the normative clauses. These examples could illustrate the normative behavior, but not be normative.

R – will start with a basic P2P exchange. Then move on for some multi STA exchanges. TXSOPs, NAV, etc.

C - “Control of the WM” is a difficult topic to address as there really is not any control just polite behavior based on STAs being aware of the NAV and detecting other transmissions.

C – Suggest picking a more complex example so it can be evaluated how helpful/useful this can be. Examples will clarify what is being proposed.

C – The NAV is across BSSs

Long discussion – on rules for TXOP are all over the standard – the TXOP is not easy. The retries are covered somewhere. How does this all work was discussed.

Chair – when we get into the examples, we are going to have to provide references to the normative text. When do you want to bring this back – in a Telcon or during the May meeting?

R – May

## Recessed: 12:30 h ET

# Thursday 16 March 2023 at 13:30-15:30 h ET

## Administration:

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

**Vice Chair: Joseph Levy, InterDigital**

**Secretary: Joseph Levy, InterDigital**

**Meeting called to order by the Chair 13:32 ET**

Agenda slide deck: [11-23/0179r5](https://mentor.ieee.org/802.11/dcn/22/11-23-0179-05-0arc-arc-sc-agenda-mar-2023.pptx)

**Agenda Slides 4-15:**

**Registration Reminder**

**Reminders to Attendees**

**Call for Patents:**

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**Agenda:**

* **Attendance, noises/recording, meeting protocol reminders**
* **Policies, duty to inform, participation rules**
* **Contribution/discussion topics:**
  + IEEE Std 802 project (Thursday)
* **Next steps**
* The Chair reviewed the agenda and called for comments and additions.
* No comments or additions were made, approved by unanimous consent.

## IEEE Std 802 project

Slide 20 in the agenda deck was reviewed by the Chair. [ec-23/0057r4](https://mentor.ieee.org/802-ec/dcn/23/ec-23-0057-04-00EC-802-revc-comments-wg-lb1.ods)

The 802REVc Editor was present for this discussion and took notes on the suggested changes to the draft during the discussion.

Note: The highlighted action items related to Std 802REVc were discussed and consensus on how to proceed was not reached or further discussion was warranted – so these items are “open” for additional discussion. If consensus can be reached in ARC, the agreed position should be provided to the 802REVc comment resolution group and/or the document editor.

Discussion on Comments on D1.0, the leading number is the number of the CID in the comment:

37 - Discussion around how to address the replacement .17 – James is working on it – to be reviewed when available.

42 – change “the portal” to “a portal”

43 – add the “might” back in.

66 – change to the specification of this quadrant for SLAP address assignment is reserved for future use …

87 – no issue with repeater – as there are no issues the repeater definitions.

90 – discussion on routers – generally ok with the current proposed text.

97, 99, 108 - Discussion on “family” of standards – but no concern on 802.11 view.

TSN features evolve … standardization efforts. – proposed to remove. - Send to editor

L2/L3 have not been used before – are these layer 2/layer 3. Should we talk about data centers network bridging.

Need definitions. This may need work - send any suggested changes to the 802REVc Editor.

Discussed possible changes to Figure 8 in D1.0 – ways to update the figure and text.

## Next steps

* Contributions requested/expected:
  + Annex G
  + Anything on 802REV before May?
* May session planning
  + 1 or 2 slots? 2
  + Topics? Annex G, 802REVc
* Next Teleconference(s):
  + March to May teleconference plan… Any/How many telecons? 1
    - Conflicts to avoid: TGbe, REVme, TGbh, 802REVc
    - Continue with Monday 1PM ET
    - Dates to avoid?? May 1
  + Will be coordinated with other TG chairs, and announced later

## Action Items:

1. Call for contributions to the March 802 Plenary on the way forward with Annex G.

## Adjourned: 15:28 h ET

Final Agenda: [11-23/0179r5](https://mentor.ieee.org/802.11/dcn/22/11-23-0179-05-0arc-arc-sc-agenda-mar-2023.pptx)

Closing Report: [11-23/0489r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0489-00-0arc-arc-closing-report-mar-2023.pptx)