IEEE P802.11  
Wireless LANs

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| ARC SC Mixed Mode Minutes January 2023 - Interim | | | | |
| Date: 2023-01-17 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Joseph LEVY | InterDigital Communication, Inc. | 111 W 33rd Street New York, NY 10120 | +1.631.622.4139 | [jslevy@ieee.org](mailto:jslevy@ieee.org) |
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Abstract

This document contains the minutes of the IEEE 802.11 ARC SC teleconferences held on 17 January 2023 at 10:30-12:30 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 17 January 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 10:30 ET**

Agenda slide deck: [11-22/2129r1](https://mentor.ieee.org/802.11/dcn/22/11-22-2129-01-0arc-arc-sc-agenda-jan-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)**

* **Reminder: This is the only meeting slot this week**
* **Attendance, noises/recording, meeting protocol reminders**
* **Policies, duty to inform, participation rules**
* **Approve meeting minutes (slide 18)**
* **Contribution/discussion topics:**
  + Annex G way forward
  + Unicast Beacons (etc.)
  + IEEE Std 802 project
* **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 minute**

Motion to approve the minutes of:

September interim:

* Moved: Joseph Levy
* Seconded: Harry Bims
* Result: UC

## Annex G way forward

11-21/1587r1 – Graham Smith

Quick overview provided – asking/discussing how to move forward – Asking for a motion to delete Annex G.

Discussion on the other options and previous straw polls:

***Straw Poll*** *November 802.11 Plenary:  
Which option do you prefer for Annex G:*

1. *Retain with opening sentence?*
2. *Keep G2 and G3 only?*
3. *Delete?*
4. *New Annex?*

*Results: A:1, B:2, C:1, D:4, did not answer 5*

***Straw Poll*** *results provided in 11-21/1587r1:  
Do you support option C: Yes 6, No 0, Abs 0*

C – If we do nothing it provides flexibility going forward, I do think the standard is so large that it overwhelms new readers – so there should be something that summarizes how frames are used and what frame exchange sequences are and how they are used. So, it is important to provide this tutorial information. Support for option D.

C – Additional support for not deleting it.

C – Support for either option A or D.

A – Calling for a SP:

Do you support deleting Annex G?

Yes 2, No 6, Abs 5, NA 4

Chair – Called for contributions to the March meeting to better define the options for Annex G and how to progress the work.

## UniCast Beacons (etc.)

[11-22/2044r2](https://mentor.ieee.org/802.11/dcn/22/11-22-2044-02-000m-resolution-for-cid-3165.docx) – presented by Lili Herview (CableLabs)

C – How does this improve privacy?

A - The beacon is unicast – it gives a little bit of privacy

C – The standard supports temporary BSS now – what do unicast beacons add?

C – Why are S1G STAs, excluded?

A – Did not see a need to extend this to S1G STAs

C – There is no need exclude S1G STAs, what is the advantage of excluding them.

A – we were considering using PassPoint – we were also considering this for medical devices.

C - Several processes in the home were discussed – I don’t think this is fundamentally broken.

C – Is there an ACK for the unicast beacons?

A – Yes

C – Is there a built-in assumption for ACK and retries?

C – The idea of a separate BSS is understandable – but what happens if there is more than one client in the unicast BSS? There are implementations that support “follow me” in large deployment scenarios. If all that is being requested is “follow me” support, it can be done now – with proprietary techniques.

C – Questions regarding low level implementations, retries, fragmentation, privacy. I don’t see any gains. The ability to change MSC is of interest.

C – There is no privacy advantage, unless you change the active scanning requirements this will not work. There are techniques being discussed in TGbi that may be more useful for promoting privacy. Concern about beacon frames for broadcast and the need for ACK, no ACK frame would be preferred. Having retries makes this complex. It would be better to go in a different direction.

A – TGbi isn’t dealing with this use case

C – This will change the basic way beacons work and will have unintended consequences. Specifying a new type of frames might be a better way to deal with the goal. This proposal is too complex and too much change for the gains.

A – The authors thought this would not break anything and would be useful in the home wi-fi setting.

C – Do not agree, this will break the spec.

C – The MCS can be changed based on the channel conditions. The Beacon is an early exchange – how can you adjust the MCS when there has been little or no frame exchange, how do you know the channel?

A – It is assumed to be a trusted AP/SSID – it will adjust the MCS, starting with a low MCS

C - Regarding privacy and security – assuming the bad guy doesn’t use sniffing, is not realistic. So, there will be no advantage for using unicast.

C – There are other mechanisms – prob requests, management frames, etc. – which could be used.

C – The authors may not have seen anything broken, but some things will break for unicast beacons. It may impact other STAs – causing errors and frames to be discarded. For this specific use case – something like this may be useful – but it is outside the scope of TGme and may be a new PAR.

A – Don’t know if this is client to client communications.

C – The beacons are broadcast by one process and the unicast frames by another, so it will be difficult to have this work. All beacon frames should be broadcast – if they are not, it is a concern.

C – In the measurement preformed where any retries observed?

A – Don’t know but will find out.

## IEEE Std 802 project

Joseph Levy provided a verbal status of the IEEE Std 802 Rev C project. 802.1 is getting ready to have their first WG letter ballot on D1.0 – A 40-45 day ballot is anticipated, with a goal to complete the ballot before the March 802 meeting. A report will be provided at the 802.11 WG Closing Plenary ([11-23/0139r0](https://mentor.ieee.org/802.11/dcn/23/11-23-0139-00-0000-802c-status.ppt))

Teleconference time requested to discuss 802 Rev C D1.0 and to generate/discuss 802.11 comments.

## Next steps

* **Contributions requested/expected:**
  + IEEE Std 802 projects update
  + Annex G contributions - March
  + Unicast Beacons?
* **March plenary planning**
  + 2 slots
  + Topics TBD – 802 revision, Annex G, Unicast Beacons
* **Next Teleconference(s):**
  + Schedule 2 – can add if necessary, with 10 day notice
  + Monday 1pm ET, Feb 6 and Feb 27, 2 hours Avoid: TGbe, REVme, TGbh

## Action Items:

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

## Adjourned: 12:28 h ET

Final Agenda: [11-22/2129r1](https://mentor.ieee.org/802.11/dcn/22/11-22-2129-01-0arc-arc-sc-agenda-jan-2023.pptx)

Closing Report: [11-23/0143r1](https://mentor.ieee.org/802.11/dcn/23/11-23-0143-01-0arc-arc-closing-report-jan-2023.pptx)