IEEE P802.11
Wireless LANs

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| ARC SC teleconferences minutes 28 October 2021 |
| Date: 2021-10-28 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Joseph LEVY | InterDigital Communication, Inc. | 111 W 33rd StreetNew York, NY 10120 | +1.631.622.4139 | jslevy@ieee.org  |
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Abstract

This document contains the minutes of the IEEE 802.11 ARC SC teleconference held on 28 October 2021 at 19:00-21:00 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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# Thursday 28 October 2021, 19:00-21:00 h ET

## Administration:

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

**Vice Chair: Joseph Levy, InterDigital**

**Secretary: Joseph Levy, InterDigital**

**Meeting called to order by the Chair 19:06 ET**

Agenda slide deck: [11-21/1741r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1741-00-0arc-arc-sc-agenda-oct-28-2021.pptx)

**Agenda Slides 4-14:**

**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:**

* Attendance, noises/recording, meeting protocol reminders
* Policies, duty to inform, participation rules
* Any architectural work remaining in TGaz (Figure 11-16)?
* Annex G way forward contribution/discussion:
	+ Current plan:
		- Replace any references in main body text (to Annex G or “frame exchange sequence” in various spellings) with normative text in-place, add definition(s), etc.
		- Create a new and more useable Annex G with a friendly notation/style and cross-references to main body text for technical details – make it more of an introduction/overview of 802.11 frame exchanges
	+ Any further comments on main body text “clean up”, changes?
		- Frame Exchange Sequence clean-up: [11-21/1606r4](https://mentor.ieee.org/802.11/dcn/21/11-21-1606-04-0arc-tgme-resolutions-to-cids-on-annex-g.docx) – Graham Smith
		- “Multiple Frame Transmissions”: [11-21/1616r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1616-00-0arc-multiple-frame-transmissions.docx) – Graham Smith
		- Next step? Prepare the above for ARC motion on Nov 8, for contribution to REVme
	+ Replace Annex G with some other notation/style – [11-21/0414r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0414-02-0arc-draft-examples-of-a-proposed-notation-for-frame-exchange-sequence-sequences-in-annex-g-of-802-11-2020.docx) – Harry Bims

The Chair reviewed the agenda and called for comments or amendments to the agenda.

No amendments were provided.

The proposed agenda was accepted without objection.

The Chair reviewed the slide 16 – noting the “other” architecture items are.

## Annex G way forward contribution/discussion:

**Current plan:**

* + Replace any references in main body text (to Annex G or “frame exchange sequence” in various spellings) with normative text in-place, add definition(s), etc.
	+ Create a new and more useable Annex G with a friendly notation/style and cross-references to main body text for technical details – make it more of an introduction/overview of 802.11 frame exchanges

**Any further comments on main body text “clean up”, changes?**

* + Frame Exchange Sequence clean-up: [11-21/1606r4](https://mentor.ieee.org/802.11/dcn/21/11-21-1606-04-0arc-tgme-resolutions-to-cids-on-annex-g.docx) – Graham Smith
	+ “Multiple Frame Transmissions”: [11-21/1616r0](https://mentor.ieee.org/802.11/dcn/21/11-21-1616-00-0arc-multiple-frame-transmissions.docx) – Graham Smith
	+ Next step? Prepare the above for ARC motion on Nov 8, for contribution to REVme

**Replace Annex G with some other notation/style –** **[11-21/0414r2](https://mentor.ieee.org/802.11/dcn/21/11-21-0414-02-0arc-draft-examples-of-a-proposed-notation-for-frame-exchange-sequence-sequences-in-annex-g-of-802-11-2020.docx) – Harry Bims**

**Discussion on how to proceed:**

Chair - Is there clean up to be done in the above documents? Probably – will be worked offline.

C – A recommendation should be provided as to what to do with Annex G given the removal of it from normative text in the has been accomplished.

C - Does TGme know we are trying to do this?

Chair – TGme is aware at the high level, but will this simply be accepted? Probably not.

TGme has assigned the comments Annex G comments (3 CIDs) to Graham Smith.

C – These CID should be resolved in TGme – Agenda time in TGme should requested.

C – Concern was raised that these Annex G comments need to be dealt with before TGme can create D1.0 and go out on letter ballot, so the proposed changes may not be able to be agreed in time to be included in D1.0.

C – Well it can’t be normative as it has errors, and is not complete.

Chair – but Annex G is currently normative and would need to be changed to be informative.

C – Should the proposed resolution include text saying that Annex G may have errors.

C - Annex G may need to go through the depreciation process. The proposed replacement might be much faster than removal.

C – Annex G should be downgraded to informative.

Some discussion on [**11-21/0414r2**](https://mentor.ieee.org/802.11/dcn/21/11-21-0414-02-0arc-draft-examples-of-a-proposed-notation-for-frame-exchange-sequence-sequences-in-annex-g-of-802-11-2020.docx)– that includes both FES and exchanges of frames.

C – The proposal is not to deprecate Annex G, as the features/requirement have been moved to other places in the spec.

C – Agree – this is not deprecating.

C – IF the proposed changes are made then Annex G is redundant. FES are the result of defined behavior – and if the behavior is not in the spec, it has been deprecated.

C – Delayed block ack – has been removed and it should be deleted from Annex G, as it has been removed from the main body of the spec.

Chair – the intent of the changes is to move the content of annex G into the main body of the spec. Hence there is no depreciation going on. What do we do with Annex G – we should mark it informative and note that it is historical.

C – Agree that words deprecated or obsolete should be avoided. Regarding the delayed block has been removed. This is delayed cleanup which should have happened previously.

General agreement that CID 565 should be dealt with in TGme and not through ARC and the proposed changes are supported.

C – Suggest that Annex G become a separate document, but there may be issues with maintenance if that is done.

Chair – There are 3 options:

Leave it as it is and mark it informative / historical

Remove it now

Wait for the replacement and do it all at once

C – Option 1 would seem to be the least radical.

C – Agreed option 1 would be responsive to the CIDs, additional steps could be taking later.

Chair – any objection in moving in this direction.

Agreement that the proposal should make Annex G informative.

Chair - Graham Smith will prepare an updated document – Mark Hamilton and Joseph Levy will support offline review prior to the first ARC meeting in the 802.11 Plenary session – Monday 8 November 13:30 -15:30 h ET.

The IEEE Std 802 updates are being addressed in 802.1 probably Nendica.

**AoB**

C – Clause 6 seems to be unnecessary. Why are 4 things necessary to send a frame. Does clause 6 contain interaction frames?

C – Clause 6 does not contain frames at all, it describes the interactions between the MLME and the MAC.

Chair - Will add Clause 6 to the agenda for discussion. Is it useful?

C – Also have the parameters been kept up to date?

C – There is no claim that the SAP interface information includes all the information in the MAC frame – that is purpose of clause 6. When Clause 6 was created there was interesting stuff in clause 6 and 9 – but 802.11 has put much of the content in clause 11 and other clauses.

## Next Steps:

Upcoming Teleconferences:

* Nov plenary
	+ Monday, Nov 8, 13:30-15:30 ET
	+ Wednesday, Nov 10, 11:15-13:15 ET

Topics?

## Adjourned: 20:18 h ET

**Attendance:**

| **Name** | **Affiliation** |
| --- | --- |
| Hamilton, Mark | Ruckus/CommScope |
| Levy, Joseph | InterDigital, Inc. |
| Petrick, Albert | Jones-Petrick and Associates, LLC. |
| Rolfe, Benjamin\* | Blind Creek Associates |
| Rosdahl, Jon | Qualcomm Technologies, Inc. |
| Smith, Graham | SR Technologies |
| Torab Jahromi, Payam | Facebook |
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\* Added based on Webex participants list.