IEEE P802.11
Wireless LANs

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| ARC SC Meeting Minutes November 2017  |
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Abstract

This document contains the minutes of the IEEE 802.11 ARC SC meeting sessions held on 7 November 2017 at 10:30 EST, 7 November 2017 at 16:00 EST, and 8 September at 8:00 EST in Orlando, Florida, USA.

Note: Highlighted text are action items.

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# Tuesday, 7 November 2017, at 10:30 EST

**Administration:**

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

**Vice Chair/Secretary Joseph Levy, InterDigital**

**Meeting call to order in ARC meeting room by Chair 10:36 EST, 7 November 2017**

Agenda slide deck: [11-17/1562r1](https://mentor.ieee.org/802.11/dcn/17/11-17-1562-01-0arc-arc-sc-agenda-november-2017.pptx) , proposed agenda copied here for reference:

**Tuesday, November 7, AM2**

* **Administrative: Minutes**
* **IEEE 1588 mapping to IEEE 802.11/802.1ASrev use of FTM update -** [11-17/1086r4](https://mentor.ieee.org/802.11/dcn/17/11-17-1086-04-0arc-ieee-802-1as-d5-0-review-comments.pptx)
* **802 (and 802.1) activities**
* **IETF/802 coordination**
* **Investigation of WUR architecture topics; may lead into “split” PHYs (LC, 28 GHz (Phazr)):** [11-17/1025r0](https://mentor.ieee.org/802.11/dcn/17/11-17-1025-00-0arc-11ba-arch-discussion.pptx)
* **MIB attributes Design Pattern -** [11-15/0355r8](https://mentor.ieee.org/802.11/dcn/15/11-15-0355-08-0arc-mib-truthvalue-usage-patterns.docx), [11-17/0475r8](https://mentor.ieee.org/802.11/dcn/17/11-17-0475-08-0arc-mib-pattern-analysis.xlsx), [11-14/1281r4](https://mentor.ieee.org/802.11/dcn/14/11-14-1281-04-0arc-mib-attributes-analysis.docx), [11-09/0533r1](https://mentor.ieee.org/802.11/dcn/09/11-09-0533-01-0arc-recomendation-re-mib-types-and-usage.ppt)
* **YANG/NETCONF modeling discussions –** [11-16/1436r1](https://mentor.ieee.org/802.11/dcn/16/11-16-1436-01-0arc-yang-modelling-and-netconf-protocol-discussion.pptx)
* **AP/DS/Portal architecture and 802 and GLK concepts -** [11-17/0136r2](https://mentor.ieee.org/802.11/dcn/17/11-17-0136-02-0arc-bridging-architecture-considerations.docx), [11-16/1512r0](https://mentor.ieee.org/802.11/dcn/16/11-16-1512-00-0arc-glk-802-1q-bridge.pptx), [11-16/0720r0](https://mentor.ieee.org/802.11/dcn/16/11-16-0720-00-0arc-stacked-architecture-discussion.pptx)**,** [11-15/0454r0](https://mentor.ieee.org/802.11/dcn/15/11-15-0454-00-0arc-some-more-ds-architecture-concepts.pptx)**,** [11-14/1213r1](https://mentor.ieee.org/802.11/dcn/14/11-14-1213-01-0arc-ap-arch-concepts-and-distribution-system-access.pptx) **(slides 9-11)**
* **“What is an ESS?”**

**Tuesday, November 7, PM2**

* **Continue the above**

**Wednesday, November 8, AM1**

* **Continue the above**
* **Future sessions / SC activities**

**Administration:**

The Chair reviewed the Administrative information in slides 5-10 in Agenda document, [11-17/1562r1](https://mentor.ieee.org/802.11/dcn/17/11-17-1562-01-0arc-arc-sc-agenda-november-2017.pptx)

**Call for Patents:**

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

**Approval of the Agenda:**

The Chair called for comments or amendments to the agenda – there was no response to the call

The proposed agenda was approved by unanimous consent.

**ARC Minutes:**

* **September face-to-face minutes:** [11-17/1483r0](https://mentor.ieee.org/802.11/dcn/17/11-17-1483-00-0arc-arc-sc-meeting-minutes-september-2017.docx)

Minutes approved by unanimous consent.

* **August 1 teleconference minutes:** [11-17/1752r0](https://mentor.ieee.org/802.11/dcn/17/11-17-1752-00-0arc-arc-sc-teleconference-minutes-1-august-2017.docx)

Minutes approved by unanimous consent.

**IEEE 1588 mapping to IEEE 802.11/802.1ASrev use of FTM update -** [11-17/1086r4](https://mentor.ieee.org/802.11/dcn/17/11-17-1086-04-0arc-ieee-802-1as-d5-0-review-comments.pptx)

Chair asked Ganesh Venkatesan for a status report:

Ganesh Venkatesan – they do have some comments and 802.11 members interested in FTM are meeting with 802.1ASrev Thursday AM2.

Chair called for additional comments – none were provided.

The Chair reviewed the documents available on this agenda item and called for any questions or comments – none were forthcoming.

**802 (and 802.1) activities**

The Chair reviewed slide 14, no other discussion.

**IETF/802 coordination**

IETF – Detnet - has determined that 802.11 is not deterministic – hence it is not included in the IETF’s use cases.

But, 802.11ax is moving towards deterministic hence we should probably propose an update to these cases so that 802.11 can be included as a deterministic network.

Chair – does anyone have plans to do this.

Ganesh Venkatesan – I am planning on working on this, I will bring a contribution for the IETF Detnet use case document.

Chair – there was a discussion in WNG on time sensitive networking – does this relate.

Ganesh Venkatesan – Well Detnet is layer 3 while time sensitive networking is layer 2.

Chair – well if 802.11 introduces time sensitive networking, it would improve 802.11 deterministic capabilities.

**Investigation of WUR architecture topics; may lead into “split” PHYs (LC, 28 GHz (Phazr)):** [11-17/1025r0](https://mentor.ieee.org/802.11/dcn/17/11-17-1025-00-0arc-11ba-arch-discussion.pptx)

The Chair reported on TGba architecture – TGba is progressing but will probably not be ready for architecture discussions until the January meeting.

**MIB attributes Design Pattern -** [11-15/0355r8](https://mentor.ieee.org/802.11/dcn/15/11-15-0355-08-0arc-mib-truthvalue-usage-patterns.docx), [11-17/0475r8](https://mentor.ieee.org/802.11/dcn/17/11-17-0475-08-0arc-mib-pattern-analysis.xlsx), [11-14/1281r4](https://mentor.ieee.org/802.11/dcn/14/11-14-1281-04-0arc-mib-attributes-analysis.docx), [11-09/0533r1](https://mentor.ieee.org/802.11/dcn/09/11-09-0533-01-0arc-recomendation-re-mib-types-and-usage.ppt)

The Chair provided an overview of this issue and why we are working this, basically at the request of the 802.11 Chair. The 802.11 Chair is looking to provide consistency and clarity in the MIB variables. ARC has generated the above documents. ARC believes we are done with the review of existing attributes (in 11-17/0475) and have updated 11-15/355r8.

The chair reviewed 11-15/0355r8.

Some edits were made and the edits are captured in 11-15/0355r9.

Open question on GDD: does the GDD fit under pattern C – there were no concerns raised – plan going forward is to clarify/check the text to make sure GDD fits under pattern C.

A note was added to pattern C.

Patterns labels need to be removed.

For pattern E – some minor edits were made cleaning up the text and a note was added.

Some concern was stated that the example is not very cleanly defined in the specification, and should probably be cleaned up by REVmd.

Text for patter D – was cleaned up and notes were removed.

Sections 4 Recommendations was added – it needs to be wordsmithed.

R9 will be posted.

**Recessed 12:30 EST**

# Tuesday, 7 November 2017, at 16:00 EST

**Administration:**

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

**Vice Chair/Secretary Joseph Levy, InterDigital**

**Meeting call to order by Chair 16:06 EST, 7 November 2017**

The Chair reviewed the Administrative information in slides 5-10 in Agenda document: [11-17/1562r1](https://mentor.ieee.org/802.11/dcn/17/11-17-1562-01-0arc-arc-sc-agenda-november-2017.pptx).

**Call for Patents:**

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

**Agenda:**

**MIB attributes Design Pattern -** [11-15/0355r8](https://mentor.ieee.org/802.11/dcn/15/11-15-0355-08-0arc-mib-truthvalue-usage-patterns.docx), [11-17/0475r8](https://mentor.ieee.org/802.11/dcn/17/11-17-0475-08-0arc-mib-pattern-analysis.xlsx), [11-14/1281r4](https://mentor.ieee.org/802.11/dcn/14/11-14-1281-04-0arc-mib-attributes-analysis.docx), [11-09/0533r1](https://mentor.ieee.org/802.11/dcn/09/11-09-0533-01-0arc-recomendation-re-mib-types-and-usage.ppt)

**(Continued)**

**YANG/NETCONF modeling discussions –** [11-16/1436r1](https://mentor.ieee.org/802.11/dcn/16/11-16-1436-01-0arc-yang-modelling-and-netconf-protocol-discussion.pptx)

**AP/DS/Portal architecture and 802 and GLK concepts -** [11-17/0136r2](https://mentor.ieee.org/802.11/dcn/17/11-17-0136-02-0arc-bridging-architecture-considerations.docx), [11-16/1512r0](https://mentor.ieee.org/802.11/dcn/16/11-16-1512-00-0arc-glk-802-1q-bridge.pptx), [11-16/0720r0](https://mentor.ieee.org/802.11/dcn/16/11-16-0720-00-0arc-stacked-architecture-discussion.pptx)**,** [11-15/0454r0](https://mentor.ieee.org/802.11/dcn/15/11-15-0454-00-0arc-some-more-ds-architecture-concepts.pptx)**,** [11-14/1213r1](https://mentor.ieee.org/802.11/dcn/14/11-14-1213-01-0arc-ap-arch-concepts-and-distribution-system-access.pptx) **(slides 9-11)**

**“What is an ESS?”’**

**Approval of the Agenda:**

The Chair called for comments or amendments to the agenda – there was no response to the call

The proposed agenda was approved by unanimous consent.

**MIB attributes Design Pattern -** [11-15/0355r8](https://mentor.ieee.org/802.11/dcn/15/11-15-0355-08-0arc-mib-truthvalue-usage-patterns.docx), [11-17/0475r8](https://mentor.ieee.org/802.11/dcn/17/11-17-0475-08-0arc-mib-pattern-analysis.xlsx), [11-14/1281r4](https://mentor.ieee.org/802.11/dcn/14/11-14-1281-04-0arc-mib-attributes-analysis.docx), [11-09/0533r1](https://mentor.ieee.org/802.11/dcn/09/11-09-0533-01-0arc-recomendation-re-mib-types-and-usage.ppt)

**(Continued)**

The Chair briefly reviewed the MIB attributes Design Pattern work.

The Chair then reviewed the [11-15/0355r9](https://mentor.ieee.org/802.11/dcn/15/11-15-0355-09-0arc-mib-truthvalue-usage-patterns.docx) (the document update from the previous session).

Open issues

* + Question: can dot11ExtendedChannelSwitchActiviated be externally queried. It was agreed that the answer is yes and that there are no outstanding issues for this example.
	+ New text added to 3.4.1 – text was added to include the requirement that the text explain how the variable is changed.
	+ Reviewed the new section 4 Recommendations
	+ Discussed MLME-START as it seems to be the wrong term, MLME-RESET is proposed as the correct term. MLME-START request nor MME-JOIN do not start a new instantiation. But, there is an issue as the specification requires APs to use MLME-RESET, but a non-AP STA does not currently use the MLME-RESET and MLME-JOIN does not indicate a new instantiation. Agreed to remove the paragraph that starts with MLME-START and MLME-JOIN in item 9. Then added text to item 9: “the next MLME-START or MLME-JOIN” should perhaps be “the next MLME-RESET (assuming we fix MLE-REST to apply to all STA types) these should be scrubbed.
	+ This required the 4 Recommendations to be updated with:
	Look at “changes take effect” language, especially “changes take effect at the next MLME-START or MLME-JOIN”, this language is suspect. Given our (new) understanding of the lifetime of an instantiation, this likely should be next MLME-RESET or perhaps it does change dynamically, in which case START or JOIN are unlikely to be the critical points in time, and this is likely just cut-and-paste without careful consideration.
	+ Note in 3.3 pattern questioning GDD – looked through GDD MIBS and made some corrections to the MIB spread sheet (in 17/0475r10) – it looks like there are no open GDD issues.
	+ Addressing the request to Wordsmith the recommendations (section 4) – updated wording in [11-15/0355r10](https://mentor.ieee.org/802.11/dcn/15/11-15-0355-10-0arc-mib-truthvalue-usage-patterns.docx), “final” clean version will be in [11-15/0355r11](https://mentor.ieee.org/802.11/dcn/15/11-15-0355-11-0arc-mib-truthvalue-usage-patterns.docx)

**Recessed 18:03 EST, 7 November 2017**

# Wednesday, 8 November 2017, at 8:00 EST

**Call to order 8:09**

**The Agenda** [11-17/1562r2](https://mentor.ieee.org/802.11/dcn/17/11-17-1562-02-0arc-arc-sc-agenda-november-2017.pptx)**. Will be** [11-17/1562r3](https://mentor.ieee.org/802.11/dcn/17/11-17-1562-03-0arc-arc-sc-agenda-november-2017.pptx) **at the end of the session.**

**Administration:**

The Chair reviewed the Administrative information in slides 5-10 in Agenda document, [11-17/1562r2](https://mentor.ieee.org/802.11/dcn/17/11-17-1562-02-0arc-arc-sc-agenda-november-2017.pptx)**.**

**Call for Patents:**

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

**Agenda:**

* MIB attributes Design Pattern - [11-15/0355r11](https://mentor.ieee.org/802.11/dcn/15/11-15-0355-11-0arc-mib-truthvalue-usage-patterns.docx), [11-17/0475r8](https://mentor.ieee.org/802.11/dcn/17/11-17-0475-08-0arc-mib-pattern-analysis.xlsx), [11-14/1281r4](https://mentor.ieee.org/802.11/dcn/14/11-14-1281-04-0arc-mib-attributes-analysis.docx), [11-09/0533r1](https://mentor.ieee.org/802.11/dcn/09/11-09-0533-01-0arc-recomendation-re-mib-types-and-usage.ppt)
* Future sessions / SC activities

Agenda agreed by unanimous consent.

**MIB attributes Design Pattern -** [11-15/0355r11](https://mentor.ieee.org/802.11/dcn/15/11-15-0355-11-0arc-mib-truthvalue-usage-patterns.docx), [11-17/0475r8](https://mentor.ieee.org/802.11/dcn/17/11-17-0475-08-0arc-mib-pattern-analysis.xlsx), [11-14/1281r4](https://mentor.ieee.org/802.11/dcn/14/11-14-1281-04-0arc-mib-attributes-analysis.docx), [11-09/0533r1](https://mentor.ieee.org/802.11/dcn/09/11-09-0533-01-0arc-recomendation-re-mib-types-and-usage.ppt)

**Review of -** [11-15/0355r11](https://mentor.ieee.org/802.11/dcn/15/11-15-0355-11-0arc-mib-truthvalue-usage-patterns.docx)

Minor edit to change REVmd – to be reworded so that the change is made to IEEE STD 801.11-2016.

Discussion on removing the “Pattern <x>” type designations from the document. It was noted that this will break the link to the spreadsheet ([11-17/0475r9](https://mentor.ieee.org/802.11/dcn/17/11-17-0475-09-0arc-mib-pattern-analysis.xlsx)), which uses the A, B, … designations. But, we are done with that working document, so it is not an issue.

A discussion on if normative requirements should ever appear only in the MIB.

The consensus was while there is no restriction on doing so, it is not something that should be done, and the requirements in the MIB should not contradict normative requirements elsewhere in the draft. Therefore, there was consensus that best practice is not to put requirements in the MIB.

Additional wordsmithing of section 4 Recommendations.

Chair called for objection to presenting [11-15/0355r12](https://mentor.ieee.org/802.11/dcn/15/11-15-0355-12-0arc-mib-truthvalue-usage-patterns.docx) to the WG. There were none.

A poll was conducted to affirm presenting [11-15/0355r12](https://mentor.ieee.org/802.11/dcn/15/11-15-0355-12-0arc-mib-truthvalue-usage-patterns.docx) to the 802.11 WG

Yes: 13 No: 0 Abstain:0 – unanimous.

**Consider YANG/NETCONF**

The chair call for contributions on YANG/NETCONF and noted that there may be some expert input at the upcoming January meeting.

**Future sessions / SC activities**

No planned teleconferences.

Planning for January:

Plan for three individual meeting slots:

* + Usual slot on Wed AM1
	+ Another 2 slots for standalone ARC work (Monday/Tuesday?)
	+ Plus, a joint session: TGba?

Individuals interested in ARC work are encouraged to also attend AANI SC sessions

Teleconferences:

Schedule with 10 days notice.

**Adjourned: 8:50 EDT**

Note final agenda slide deck is: [11-17/1562r3](https://mentor.ieee.org/802.11/dcn/17/11-17-1562-03-0arc-arc-sc-agenda-november-2017.pptx) and closing report is: [11-17/1777r0](https://mentor.ieee.org/802.11/dcn/17/11-17-1777-00-0arc-arc-closing-report-november-2017.pptx) .