IEEE P802.11  
Wireless LANs

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| ARC SC Meeting Minutes January 2018 | | | | |
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Abstract

This document contains the minutes of the IEEE 802.11 ARC SC meeting sessions held on 16 January 2018 at 10:30 PST, 16 January 2018 at 16:00 PST and 17 January 2018 at 08:00 PST in Irvine, California, USA.

Note: Highlighted text are action items.

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# Tuesday, 16 January 2018, at 10:30 PST

**Administration:**

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

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

**Meeting call to order in ARC meeting room by Chair 10:31 PST,**

Agenda slide deck:[11-17/1863r3](https://mentor.ieee.org/802.11/dcn/17/11-17-1863-03-0arc-arc-sc-agenda-january-2018.pptx), proposed agenda copied here for reference:

**Tuesday, January 16, 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**
  + **If needed: MIB attributes Design Pattern -** [11-18/0052r1](https://mentor.ieee.org/802.11/dcn/18/11-18-0052-01-0arc-mib-truthvalue-usage-patterns-presentation.pptx)**,** [11-15/0355r13](https://mentor.ieee.org/802.11/dcn/15/11-15-0355-13-0arc-mib-truthvalue-usage-patterns.docx)**,** [11-17/0475r9](https://mentor.ieee.org/802.11/dcn/17/11-17-0475-09-0arc-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)
  + **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)
  + **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, January 16, PM2**

* + **Continue the above**
* **Wednesday, January 17, AM1** 
  + **Continue the above**
  + **Future sessions / SC activities**

**Administration:**

The Chair reviewed the Administrative information in slides 5-10 in Agenda document,

**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:** <https://mentor.ieee.org/802.11/dcn/17/11-17-1753-00-0arc-arc-sc-meeting-minutes-november-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 – Rev 6.0 is available – but no new information. The inputs we gave them has been incorporated – but I haven’t read the whole draft yet.

Chair asked if anything is found in the draft to be discussed, or if a joint session should be requested to let him know.

**802 (and 802.1) activities**

Chair – the rolling in process seems to be going fine – the new MAC service sections are done – I have reviewed them and have no issues.

**IETF/802 coordination**

Nothing new here, Dorothy Stanley (the IETF Laison) had no inputs.

Use of multicast – IPV6 has many multicast additions, 1736 touches using multicast/broadcast, so improving multicast for 802.11 – especially QoS.

Chair called for additional inputs – none were provided.

**If needed: MIB attributes Design Pattern -** [11-18/0052r1](https://mentor.ieee.org/802.11/dcn/18/11-18-0052-01-0arc-mib-truthvalue-usage-patterns-presentation.pptx)**,** [11-15/0355r13](https://mentor.ieee.org/802.11/dcn/15/11-15-0355-13-0arc-mib-truthvalue-usage-patterns.docx)**,** [11-17/0475r9](https://mentor.ieee.org/802.11/dcn/17/11-17-0475-09-0arc-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)

This work was in response to a request from the WG Chair – we have produced a document 11-15/0355r13. We defined the MIB variables which are TRUTH Values. We recommend a set of names and patterns for the various types of TRUTH Values. The Editor were generally supportive of the definitions provided. There was discussion about why do we have a MIB. The answer is the EC tells us we need to and it becomes an easy “handle” to define logic and protocol throughout the document. Most of the discussion – was spent of doing more work. The Chair has a slide deck which he will be presenting at the WG plenary - Review presentation for WG mid-week plenary [11-18/0052r1](https://mentor.ieee.org/802.11/dcn/18/11-18-0052-01-0arc-mib-truthvalue-usage-patterns-presentation.pptx).

Question: As we begin the YANG work do we still need the MIB?

Chair – the answer is not clear – but cleaning up the MIB will help with the YANG model development.

Statement: Requiring both the YANG and MIB is twice the overhead work.

Chair – we should discuss this.

The Chair then noted 11-18/0052r1 – an overview of the MIB document and activity.

Question: If we got rid of the MIB and put the MIB information elsewhere – how much work would that be?

Chair – there is information in the MIB and we need that information to be in the specification. So, the options seem to be keep the MIB or move the MIB information to somewhere in the specification: e.g. YANG models or some other solution.

The Chair then provided a presentation of 11-18/0052r1

Question: Is this meant to be an ongoing process or calling for a historical correction?

Chair – what confusion/damage does rewriting history cause a problem. My intent is to discuss this in TGmd – and then the issue is who will do the work. Also, there is references into our MIB by other standards, which may be an issue and these MIB changes may break the reference chain. This needs to be discussed.

Chair – reviewed 11-15/0355r13 – as he plans on doing at the WG plenary.

Question: If there was a reference to the MIB spreadsheet that was generated.

Chair – the spread sheet is not complete and may not be correct – hence it may be a good place for TGmd to start, but it is not definitive.

Chair – the editors were looking for guidance as to what MIB parameters should be created for TGax. There were also questions: what about non-truth value MIB variables, what about YANG. Should we provide a guideline for how many variables should be provided in an amendment.

Statement: We may provide or want to provide advice for this. Should we?

Chair – well we may want to provide some guidance – but it is really a TG decision/editor decision. But we should get these definitional patterns in place. Proposing that new amendments being rolled in to REVmd should follow these guidelines and all amendments moving forward.

Chair called for addition comments on the presentation, document or the process in general – none were provided.

**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)

Chair - This in general is a new topic – the TGba chair – is saying they are not yet ready for architecture discussions. See slides 18-21. Called for inputs / comments –

None were forthcoming.

**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)

Chair called for inputs, none were forthcoming – it was noted that this will be discussed in March probably with some YANG models being proposed – There has been a suggestion to start small and do one feature to get started. Check with operators, to see if they see a need or have a want of these models being created.

**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)**

Chair – this seems to be fairly stable at this point. The chair called for inputs/questions – none were forthcoming. A portal is defined for all connections beyond .11, but 802.11ak defines direct connections to bridges, any thoughts on this. This may be an TGmd discussion when 802.11ak is rolled in.

**“What is an ESS?”**

Chair – this seems to be the only topic we could make progress this week. Steven McCann will be joining us at the next session – where we will discuss this.

**Recessed 11:52 PST.**

# Tuesday, 16 January 2018, at 16:00 PST

**Call to order 16:00 PST.**

**Agenda document: 11-17/1863r4**

**Administration:**

The Chair reviewed the Administrative information in slides 5-10 in Agenda document,

**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

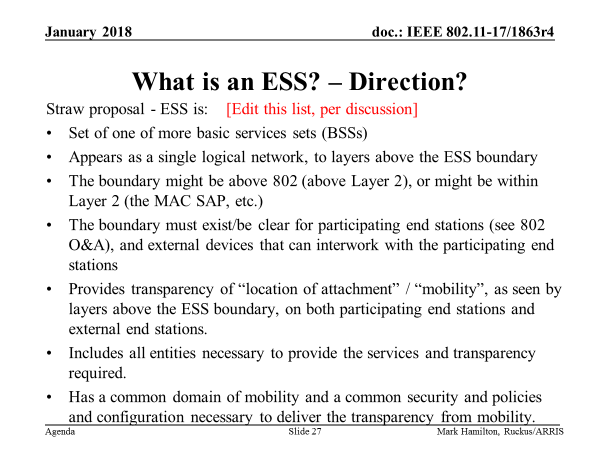
The proposed agenda was approved by unanimous consent.

**“What is an ESS?” – slide 28 11-17/1863r4**

All specification references in this session refer to 802.11 Specification TGmd v0.1

Discussion on MSGCF – some discussion on is this useful – This is being proposed to be reviewed in TGmd and possible removal.

HotSpot2 has tweaked the HESSID definition – so WFA is using the tweaked versions HESSID. – so this use needs to factored into this discussion.

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ESS Link – extended service set (ESS) link –

ESSLinkIdentifier – defines a network.

So, what do we want to develop here – the WFA specification has implementations and we are not aware of any other implementations that use any of these concepts.

Recommended to review WFA: Wi-Fi CERTIFIED Passpoint™ (Release 2) Deployment Guidelines

Rev 1.1. (<https://www.wi-fi.org/file/passpoint-release-2-deployment-guidelines>):

Particularly – section 3.6.1 – HESSID Information Element – contains a definition of the HESSID: “a globally unique identifier”.

MSGCF – does not seemed to be used anywhere – and there seems to be no use of this concept or any understanding of what it is or what its use is.

ESSIdenfier – which is a remnant of an 802.21, which may no longer have any use – should probably be removed from the specification.

A STA associated with a BSS with a particular HESSED may reassociate with any BSS that has the same HESSED.

Reference for behavior of the Master and Clients (Slaves): KDB 905462 D03 client without DFS new rules v01r02 August 22 2016.

(https://apps.fcc.gov/kdb/GetAttachment.html?id=20Ds1LgIamPUMD4%2Fzxwxpw%3D%3D&desc=905462 D03 UNII Clients Without Radar Detection New Rules v01r02&tracking\_number=27155)

As the band we share have rules that are more complicated we will likely have more of these types of restrictions.

Homogenous extended service set (ESS) is only used to define HESSED

# Wednesday, 17 January 2018, at 8:00 PST

**Call to order 8:08 PST.**

**Agenda document: 11-17/1863r4**

**Administration:**

The Chair reviewed the Administrative information in slides 5-10 in Agenda document,

**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.

**“What is an ESS?” – slide 28 11-17/1863r4 – Continued from the previous session**

The Chair reviewed yesterday’s discussion oh HESSED, and reminded everyone that we thought we should start “clean” working to agree what an ESS and HESS are.

Long discussion on ESS, HESS, SSID, and HESSID and related topics. See slide 30 of 11-17/1863r5 – for a list of questions about to HESSID and SSID concepts that need to be clarified.

No conclusions were agreed.

**Future sessions / SC activities**

No planned teleconferences.

Teleconferences: Schedule with 10 days’ notice.

Planning for March:

Plan for three individual meeting slots:

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

**Adjourned: 10:05 PST**

Note: final agenda slide deck is: [11-17/1863r5](https://mentor.ieee.org/802.11/dcn/17/11-17-1863-05-0arc-arc-sc-agenda-january-2018.pptx) and closing report is: [11-18/0264r1](https://mentor.ieee.org/802.11/dcn/18/11-18-0264-01-0arc-arc-closing-report-january-2018.pptx)