IEEE P802.11  
Wireless LANs

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| ARC SC Meeting Minutes November 2014 | | | | | |
| Date: 2014-09-19 | | | | | |
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Abstract

Minutes of the IEEE 802.11 ARC Standing Committee meeting held on 4th, 5th November 2014, in San Antonio, TX, USA. Note: minutes for the joint meeting with TGak and 802.1 minutes are not provided in this document.

**Tuesday 4 November 2014, AM2, 10:30 (CST) ARC SC Meeting**

**Chair: Mark Hamilton, Spectralink, 802.1AC**

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

**Meeting call to order by Mark Hamilton 10:32, 4 November 2014**

**Agenda – 11-14/1318r0, updated during the meeting to r1** (<https://mentor.ieee.org/802.11/dcn/14/11-14-1032-01-0arc-arc-sc-agenda-sep-2014.ppt>):

* **Administrative: Minutes**
* **Updates, no action expected:**
  + IEEE 1588 mapping to IEEE 802.11
  + IETF/802 coordination (RFC 4441, PAWS, CAPWAP)
  + **802.1AC revision**
    - Review/Discussion of 802.1AC draft
    - Review comments and resolutions
  + **AP/DS/Portal architecture and 802 concepts**
    - AP’s “Distribution System Access” function concept
    - Make DS\_SAP normative, Annex R updates

**Administration:**

The Chair reviewed the Administrative information in slides 5-10 in the Agenda document (11-14/1318r0)

**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 proposed Agenda slide 11 of the Agenda document (11-14/1318r1) - partially copied above and below was approved.

**Approved Agenda:**

**Tuesday, Nov 4, AM2**

* **Administrative: Minutes**
* **Updates, no action expected:**
  + IEEE 1588 mapping to IEEE 802.11
  + IETF/802 coordination (RFC 4441, PAWS, CAPWAP)
  + **802.1AC revision**
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    - AP’s “Distribution System Access” function concept
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**Wednesday, Nov 5, AM1**

* + **Prepare for Joint TGak session (on Thursday)**
  + **MIB attributes Design Pattern**
  + **AP/DS/Portal architecture and 802 concepts, continued**
  + **Future sessions / SC activities**

**Joint session with TGak/802.1, Thursday, Nov 6, AM1** (note this section is not included in these minutes)

* + **Architectural view of 11ak Bridged LAN**

Administrative: Approval of Minutes

* **September Minutes:** [**https://mentor.ieee.org/802.11/dcn/14/11-14-1371-00-0arc-arc-sc-meeting-minutes-september-2014.docx**](https://mentor.ieee.org/802.11/dcn/14/11-14-1371-00-0arc-arc-sc-meeting-minutes-september-2014.docx) **- approved by unanimous consent**
* **Teleconference Minutes:** [**https://mentor.ieee.org/802.11/dcn/14/11-14-1415-00-0arc-arc-sc-teleconference-meeting-minutes-7-october-2014.docx**](https://mentor.ieee.org/802.11/dcn/14/11-14-1415-00-0arc-arc-sc-teleconference-meeting-minutes-7-october-2014.docx) **- approved by unanimous consent**

IEEE 1588 mapping to IEEE 802.11

No new information, no activity at this time.

IETF/802 coordination (RFC 4441, PAWS, CAPWAP)

No new information, no activity at this time.

802.1AC revision

Update on 802.1AC D1.0 WG Ballot that closed on July 18, 2014,

* + Results: 58 Voters – of which 27 have responded (47%)
    - 6 Approve 46%
    - 7 Disapprove 54%
    - 25 Abstain 52%
  + Comments and Resolution sheet: <http://www.ieee802.org/1/files/private/ac-rev-drafts/d1/802-1ac-rev-d1-0-dis-v2.pdf>

Chair conducted a review of:

[11-14-0497-03-0arc-802-11-portal-and-802-1ac-convergence-function](https://mentor.ieee.org/802.11/dcn/14/11-14-0497-03-0arc-802-11-portal-and-802-1ac-convergence-function.pptx)

[11-14-1218-01-0arc-normative-ds-sap.pptx](https://mentor.ieee.org/802.11/dcn/14/11-14-1218-01-0arc-normative-ds-sap.pptx) – SAP discussion

There was a discussion on the timing of when to put forward comments to rev-mc, and the current plan is to wait for sponsor ballot.

**AP/DS/Portal architecture and 802 concepts**

Reviewed [11-14-1213-00-0arc-ap-arch-concepts-and-distribution-system-access](https://mentor.ieee.org/802.11/dcn/14/11-14-1213-00-0arc-ap-arch-concepts-and-distribution-system-access.pptx) updating it to r1.

Noted: [11-13-0115-15-0arc-considerations-on-ap-architectural-models](https://mentor.ieee.org/802.11/dcn/13/11-13-0115-15-0arc-considerations-on-ap-architectural-models.doc)

The question was raised: does the portal SAP (DS SAP) need to be general enough to support all 802 technologies (.16, .15. .1, .3)

Comments suggesting including both the Portal drawings in any normative text – generic portal and .1AC/802.1Q bridge portal. This was followed by a long discussion on 11-13/0115r13 figures 5-2a, b, c, d. Proposals were made:

* that the arrows should be uni-directional.
* for 2a there is 1 filter dot, for 2b there need to be 2 filter dots (one for the same flow as in 2a, and one for the DS input)
* for 2c – there needs to be 1 filter and a processing box
* for 2d there are 2 filer dots and all downward flows must go through the processing box

The Chair agreed to update diagrams. There was additional discussion about DS filtering being part of the defragmentation. If so then there is no need for filtering in a STA, but there is filtering for an AP.

**Recessed at 12:30.**

**Wednesday, Nov 5, AM1**

**Meeting call to order by Mark Hamilton 8:08, 5 November 2014**

**Agenda – 11-14/1318r1**

**Administration:**

The Chair reviewed the Administrative information in slides 5-10 in the Agenda document (11-14/1318r1)

**Call for Patents:**

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

**Prepare for Joint TGak session (on Thursday) – Donald Eastlake (TGak Chair) and ARC Chair**

11-14/0562r3 will be reviewed

11-14/1213r1 will also be reviewed.

How to calculate the link cost, this needs to be discussed. There is cost for latency and rate. There needs to be an agreed hysteresis for the cost function. There is a proposal in 11-14/1482r0.

Power save and multicasts – are still open issues – serial unicast – powered all the time – cellphones might want to also support .11ak therefore levels of Power save may be important. A bound for power save delay should be discussed as there may be a threshold where bridging protocols are affected.

Call for other topics – none provided

The above topics will be sent to .1

**MIB Review**

The WG11 Chair has requested that the ARC SC investigate and create a Design Pattern for MIB attributes of the form “\*Implemented” and “\*Activated”, discussion continued on the teleconferences and will continue here.

Reviewed the discussion

* [**https://mentor.ieee.org/802.11/dcn/14/11-14-1068-00-0arc-mib-attributes-design-pattern-background.docx**](https://mentor.ieee.org/802.11/dcn/14/11-14-1068-00-0arc-mib-attributes-design-pattern-background.docx)
  + Note on slide 12 and following: the MIB attributes ~ 400 items.

[**https://mentor.ieee.org/802.11/dcn/14/11-14-1281-01-0arc-mib-attributes-analysis.docx**](https://mentor.ieee.org/802.11/dcn/14/11-14-1281-01-0arc-mib-attributes-analysis.docx)

Discussion: Note on page 12 the discussion of patterns of use begins. There are three categories: one-way, dual one-way, and two-way, these are three different things, hence should have different patterns. Is there a difference of capable and implemented: proposal of ones that are fixed at manufacture and which are fixed at initiation (controlled by entity outside the scope of .11)? Truly static – implemented and capability, nothing in the standard cares or tries to change these types of attributes. Once the device is on they are fixed. Therefore there is no useful difference between static and quasi static. The boundary needs to be defined, is initialization the boundary? “MAX\_ACCESS” in MIB: what does this mean? Access given to what entity (an entity other than “owner”)? Do the SNAP RFCs give any guidance?

(Some details of the discussion: A\_Slot\_Time – A stands for attribute, check 11-09/533r1 – we made a decision: dot11XxxActivated {capability that is enabled}. Status is written by the entity itself, not an external entity. However, Most {all?} examples are written by the SME or other external entity. Did we change our minds on this name? Should we?) To summarise: we have many questions – 1) Capabilities/Implemented, Enabled, Activated – do we want to have these three types or is it simply Enabled and Activated or is it simply Activated (or Enabled)?

**ARC Future Activities and Sessions:**

The following list was reviewed and additions/comments were requested, none were received:

* ARC SC meets when a specific focused task is requested of the SC for which there is sufficient volunteer interest.
* Continue work on architectural models
* Comment on 802.1AC revision project changes/proposals
* Design Pattern for “\*Implemented” and “\*Activated” MIB attributes
* Will also follow 802.1/802.11 activities on links, bridging, and MAC Service definition
* Monitor/report on IETF/802 activities, as needed
* Monitor/report on IEEE 1588 activities, as needed

Plan for January 2015:

One or two ARC meeting slots, plus one slot joint with 802.11ak.

Plan for one teleconference.

**Adjourned 10:00, 5 November 2014**

**Note there was also a joint meeting with TGak and 802.1 on Thursday, November 6, AM1, please see the TGak minutes:** [11-14-1538-00-00ak-802-11ak-november-2014-minutes.doc](https://mentor.ieee.org/802.11/dcn/14/11-14-1538-00-00ak-802-11ak-november-2014-minutes.doc)

**Note: ARC Closing Report in** [11-14-1524-01-0arc-arc-closing-report-nov-2014.pptx](https://mentor.ieee.org/802.11/dcn/14/11-14-1524-01-0arc-arc-closing-report-nov-2014.pptx)