Potential Areas for IETF/IEEE802 Coordination

0. Revision History
0.0 Initial Revision - 9/4/2012
0.1 revised for the period between 9/5 and 10/29
0.2 revised according to input received on 01, still reflects the
9/5-10/29 time interval
0.3 revised after the 10/29/12 meeting
0.4 revised for the period between 10/29 and 12/12
0.5 revised after the 12/17/12 meeting
0.6 revised for the period between 12/17/12 and 2/5/13
0.7 revised for the period between 2/5/13 and 4/30/13
0.8 revised after the 5/2/13 meeting
0.9 revised for the period between 5/2/13 and 9/22/13
0.10 revised after the 9/30 meeting
0.11 revised for the period between 9/30/13 and 1/22/14
0.12 revised after the 1/27/14 meeting
0.13 revised after the 6/18/14 meeting
0.14 revised with updates before the 9/29/14 f2f meeting

1. IETF TRILL Fine-grained labeling and IEEE 802.1 tags
1.1 Description - CLOSED

-

2. IETF BFD and IEEE 802.1AX
2.1 Description - CLOSED
(Note: draft-ietf-bfd-on-lags was approved by the IESG on 12/19/2013 and
published as RFC 7130)

-

3. IETF NVO3 and IEEE 802.1 DCB
3.1. Description
IEEE 802.1Qbg VDP might be used as the basis for the communication that
NVO may need between an end system and an external box (e.g. bridge or
router) doing the NVO encapsulation. Coordination will help determine if
VDP is a suitable candidate and possibly to make any amendment needed in
VDP for NVO usage.

Status 1/14/14 (Adrian): NVO3 progresses steadily with notifications of
progress being sent to this list from time to time

Status 1/28/14 (Pat): status of this item unchanged, the item will remain open as the drafts continue to develop.

Status 6/14/14 (Adrian):
- The NVO3 framework documenthttp://datatracker.ietf.org/doc/draft-ietf-nvo3-framework/, has completed IETF last call and IESG evaluation. It has some small security issues to be explained in detail, but will likely be approved for publication as an RFC relatively soon.
- The specification of VXLAN has been documented by authors from a number of companies to provide a basis for interoperable implementation. http://datatracker.ietf.org/doc/draft-mahalingam-dutt-dcops-vxlan/ The document was shown to the IETF via a last call, but is being published on the Independent Stream (that is, not as an output of the IETF). The IESG has agreed that this document does not conflict with work being done in the IETF, and the publication process now sits with the independent Stream Editor.

3.2. Relevant Documents
https://datatracker.ietf.org/liaison/1219/
http://datatracker.ietf.org/doc/draft-ietf-nvo3-overlay-problem-statement - in RFC Queue
http://datatracker.ietf.org/doc/draft-ietf-nvo3-framework - in IESG review
http://datatracker.ietf.org/doc/draft-ietf-nvo3-use-case
http://datatracker.ietf.org/doc/draft draft-ietf-nvo3-dataplane-requirements
http://datatracker.ietf.org/doc/draft-ietf-nvo3-gap-analysis
http://datatracker.ietf.org/doc/draft-mahalingam-dutt-dcops-vxlan/

3.3. Owners - Adrian Farrel, Pat Thaler

3.4. Action Items
- follow-up and send documents for review as they are adopted as WG items, WGLC and IETF LC.

----

4. IETF awareness of IEEE 802.1Q-2011
4.1. Description - CLOSED

----

5 .Enabling use of Local Addresses for virtualization and IoT (was: Effect of virtualization on IEEE 802 architecture)

5.1. Description

At the 7/25/12 f2f meeting Glenn Parsons presented a brief overview of the IEEE Registration Authority Committee (RAC) mission, highlighting the current RAC policy on virtualization and asking what virtualization policy would reduce the consumption of EUI-48 addresses. Norman Finn suggested this could be an area of collaboration between the IETF and the IEEE 802.

Status 4/30/13 - Glenn Parsons submitted an I-D and gave presentations at IETF-86 in the Technical Plenary, OPS and INT area meetings. The IEEE RAC will finalize and approve the proposal by June.

9/9/13: draft-ieee-rac-oui-restructuring-01.txt submitted

Status 1/14/14 (Bob Grow): Right now that would just be a RAC document, but the RAC is open to considering an RFC or IEEE Recommended Practice as appropriate. General consensus from the RAC has been to proceed with the RAC document before progressing to either of the standard documents.

Status 6/10/14 (Bob Grow): The RAC has completed its work on Company IDs (CID). The Guidelines Use: Organizationally Unique Identifier (OUI) and Company ID (CID) indicate that an address formed with a CID in its first 24 bits is a local MAC address but the document doesnt give guidance on using such addresses.

7/14/14 - Pat Thaler and Don Pannell gave presentations on regarding concerns about potential global address consumption by IoT devices and feasibil8ity of using local MAC addresses for such devices. Virtual machines usually have a hypervisor with a physical port with a global address to use to acquire a local MAC address for the VM and an orchestration system to provide the address. In contrast, a protocol for IoT devices should work without a global address for the physical port and should allow for operation with or without an address server. http://www.ieee802.org/1/files/public/docs2014/New-pannell-MAC-Address-Usage-0714-v1.pdf
http://www.ieee802.org/1/files/public/docs2014/new-addresses-thaler-local-address-acquisition-0714-v2.pdf

9/13/14 IEEE 802.1 drafted a PAR for an Amendment to IEEE 802 Overview and Architecture, P802c Local Media Access Control (MAC) Addressing. If the PAR is approved, the amendment will describe using a portion of the address space for protocols assigning local addresses out of a CID block associated with the protocol. A portion of the local address space will continue to be used for assignment by local administrators. Forwarding the PAR will be considered at the November IEEE 802 meeting.

IEEE 802.1 is also considering a project to define a protocol for local address claiming (i.e. without an address server) and local address distribution using blocks from the CID space. The protocol would be usable by IoT devices that do not have a global address assignment.

5.2. Relevant Documents
http://www.iab.org/2012/12/13/proposed-ieee-registration-authority-committee-oui-tier-restructuring/
http://www.ietf.org/proceedings/86/slides/slides-86-iab-techplenary-5.pdf
https://datatracker.ietf.org/doc/draft-ieee-rac-oui-restructuring/
http://standards.ieee.org/develop/regauth/tut/eui.pdf
http://www.ieee802.org/1/files/public/docs2014/new-addresses-thaler-local-address-par-v01.pdf

5.3. Owners - Bob Grow, Glenn Parsons, Pat Thaler

5.4. Action Items
- Liaison to IETF when the P802c draft is available - Glenn Parsons

----
-

6. IETF EMU and IEEE 802.1X, 802.11 and 802.16 security based on EAP
6.1. Description - CLOSED

-

7. IETF Ethernet MIB, ADSL MIB and IEEE 802.3
7.1. Description
In the transition process between the IETF and the IEEE the following documents were taken over by IEEE 802.3:
RFC 2108 - Ethernet Repeater Devices
RFC 3621 - Power Ethernet MIB
RFC 3635 - Ethernet-like Interface Types
RFC 3637 - Ethernet WAN Interface Sublayer
RFC 4836 - Ethernet Medium Attachment Units (MAUs)
RFC 4837 - Ethernet Passive Optical Networks (EPON)
RFC 4878 - Operations, Administration, and Maintenance (OAM) Functions on Ethernet-Like Interfaces
RFC 5066 - Ethernet in the First Mile Copper (EFMCu) Interfaces MIB
The IF-CAP-STACK-MIB in RFC 5066 is generic and the IETF proposed to continue to be maintained by the IETF in a separate new document

The IEEE 802.3 proposed to create an RFC that documents the issues related to the transition of the Ethernet MIB work to IEEE 802.3 similar to RFC 4663 which documents the transition of the Bridge MIB work to IEEE 802.1
- The OPSAWG was rechartered in October 2012 to include the two relevant documents
- Status 6/18/14 Benoit Claise): draft-ietf-opsawg-rfc5066bis has been published as RFC 7124 but that the initial transition document has not been completed. They have identified a new editor (Tom Taylor) for the proposed
document. The current draft of the transition document has been posted as draft-taylor-opsawg-mibs-to-ieee80231.
- Status 9/23/14 (Dan): https://datatracker.ietf.org/doc/draft-ietf-opsawg-mibs-to-ieee80231/ was sent to WGLC, and the announcement was forwarded to the ietf-ieee coordination mail list

7.2. Relevant Documents
- IEEE 802.3.1-2013
- http://datatracker.ietf.org/wg/opsawg/charter/
- https://datatracker.ietf.org/doc/draft-ietf-opsawg-rfc5066bis/
- http://datatracker.ietf.org/doc/draft-ietf-opsawg-mibs-to-ieee80231/

7.3. Owners - Benoit Claise

7.4. Action Items

-

8. IETF 6LOWPAN and IEEE 802.15
8.1. Description - CLOSED

-

9. IETF PAWS WG and 802.11, 802.19, 802.22
9.1 Description

- coordination between IETF PAWS and IEEE 802.11af, 802.19 and 802.22

Status 1/20/14 (Dorothy, Gabor): Version 8 of the paws protocol document was uploaded - no significant changes are expected, good time to send to IEEE 802.11 for review
Status 6/18/14 (Pete): the protocol document (draft-ietf-paws-protocol) has been stuck, but expect an IETF Last Call soon. They haven't

completed the bootstrapping part of the protocol, and are waiting on whether that is necessary. Pete mentioned that he will forward the Last Call to the list so it can be disseminated from there.
Status 9/23/14 (Pete): - draft-ietf-paws-protocol *should* be approved by the time we arrive in Newark.
- After that, the WG should wrap-up. It does not look like the bootstrap protocol has garnered enough interest to get done.

9.2 Relevant Documents
- http://datatracker.ietf.org/wg/paws/charter/
- http://www.rfc-editor.org/rfc/rfc6953.txt
- https://datatracker.ietf.org/doc/draft-ietf-paws-protocol/
- http://www.ietf.org/mail-archive/web/paws/current/msg01535.html

9.3 Owners: Pete Resnick

9.4 Action Items

-

10. IETF IPPM and LMAP, and IEEE 802.16 Metrology Study Group- CLOSED, will reopen if/when it becomes clear that interaction is needed

----
-

11. IETF Mobile IP and EC OmniRAN Study Group

11. IETF and IEEE 802.1 OmniRAN TG
11.1. Description
The 802.1 OmniRAN TG was authorized in March 2014 to create a recommended practice on Network Reference Model and Functional Description of IEEE 802 Access Network. The project specifies an access network reference model, including entities and reference points along with behavioral and functional descriptions of communications among those entities to provide a generic model of IEEE 802 access network for connecting terminals to their access routers over a link based on the family of IEEE 802 Standards. The specification describes the use of IEEE 802 technologies to build heterogeneous access networks, which may include multiple network interfaces, multiple network access technologies, and multiple network subscriptions, aimed to unify the support of different interface technologies, enabling shared network

control and use of software defined network (SDN) principles.

11.2. Relevant Documents
PAR: https://development.standards.ieee.org/get-file/P802.1CF.pdf?
t=81644900003
Project status: http://www.ieee802.org/1/pages/802.1cf.html
OmniRAN TG Wiki: https://mentor.ieee.org/omniran/bp/StartPage

11.3. Owners - Max Riegel

11.4. Action Items

-

12. IETF HOKEY and IEEE 802.21
12.1. Description CLOSED

-

13. IETF MIF and IEEE 802.21 - CLOSED, a new shared work item on naming
in layer 2 networks will be open. Ted and Juan Carlos Zuniga to draft a
description for the new shared work item.

-

14. IETF IPFIX Information Elements for Data Link monitoring CLOSED,
see RFC 7133

-

15. IETF RADIUS attributes for IEEE 802 networks CLOSED, see RFC 7268

-

16. IEEE802.1Q SRP (and Gen2 updates) and RSVP/SIP - CLOSED

-

17. IEEE 802.1AS/1588 and NTP - CLOSED

-

18. 802.1AS/1588, 802.1Q time aware shaper(s) and RTP - CLOSED

-

19. Common OAM proposal
19.1. Description - proposal made by Tissa Senevirathne and a group of
TRILL contributors at the IEEE 802.1 meetings in July and September to
reuse the IEEE 802.1ag frame format for TRILL OAM. Needs coordination
and architectural consistency with the IEEE 802.1 architecture and OAM
practice.
- 8/20/13: The TRILL WG re-chartered, new charter includes OAM.
Rechartering was communicated on the mail list.
- 9/25/13: Liaison Statement sent by the TRILL chairs to the IEEE 802
informing on the status of the work.
- 12/9/13: draft-ietf-trill-oam-framework approved by the IESG
- 1/22/14: new liaison statement sent by TRILL to IEEE 802.1
- Status 1/27/14 (Norman Finn, Donald): liaison from TRILL asking for
code points from the Connectivity Fault Management protocol, Ethernet
OAM, as was done with ITU a few years back. It allocates the blocks of
code points to the IETF with the understanding that they will be
assigned by IANA based on IETF Standards Actions and TRILL will be an
early user of some values. Expected to pass.
- Status 9/15/14 (Dan Romascanu): New Non-WG Mailing List: Lime -- Layer
Independent OAM Management in Multi-Layer Environment (LIME) discussion
list - https://www.ietf.org/mailman/listinfo/lime. Working on a
charter, may request a BOF at IETF-91

19.2. Relevant Documents

https://datatracker.ietf.org/doc/draft-ietf-trill-oam-req
http://www.ieee802.org/1/files/public/docs2012/liaison-tissa-oam-ieee-
trill-0912-v02.pptx
https://datatracker.ietf.org/doc/draft-ietf-trill-oam-framework/
https://datatracker.ietf.org/doc/draft-tissa-trill-oam-fm/
http://datatracker.ietf.org/wg/trill/charter/
http://ieee802.org/1/files/public/docs2014/new-senevirathne-trill-oam-
liaison-0114-v01.pptx
https://datatracker.ietf.org/liaison/1302/

19.3. Owners - Ted Lemon, Norm Finn, Ben Mack-Crane

19.4. Action Items
Follow the TRILL OAM documents progress in the WG and send them for
review to IEEE 802.1 when they reach milestones (WGLC, IETF LC)
This work item will remain open to monitor the status, as well as other
more OAM-related I-Ds in the TRILL Working Group that should be reviewed
by IEEE 802.1.

-

20. Area Name - use of TRILL as an alternative path selection protocol
for use in 802.11 mesh networks

20.1. Description - CLOSED

-

21. 6tsch

21.1. Description:
Enable communication and cross-review between the 6tisch WG and IEEE 802
 - In IEEE 802.15: (Bob): Go to the 802.15 website and look for L2R
under public docs. The group formed in March with a goal to spend 6
months to end up at a project point.
- Status 9/22 - 6tisch charter in external review, on IESG agenda for
9/26, external review message distributed
- Status 9/30/13 (Ted): WG was chartered
- Presentation by Pascal Hubert at the IEEE 802 plenary - https://
mentor.ieee.org/802.15/dcn/13/15-13-0685-00-wng0-6tisch-802-1-for-a-new-
ipv6-multilink-subnet.pptx
- Status 6/18/14: Bob Heile updated that they have set up a group in
802.15 that would be the companion to the IETF 6TSCH. There has been a
lot of cross-participation. Pat Kinney mentioned that they were
participating with the weekly calls and a number of are planning to
attend IETF 90.
- Status 9/14 (Bob Heile): IEEE 802.15.4 has formed an Interest group
for 6TiSCH, the 6t IG. The group met at the IEEE with good feedback on
the IETF WG work.

21.2. Relevant Documents
- Mail list https://www.ietf.org/mailman/listinfo/6tsch
- https://datatracker.ietf.org/wg/6tisch/charter/
- https://datatracker.ietf.org/doc/draft-ietf-6tisch-architecture/
- https://datatracker.ietf.org/doc/draft-ietf-6tisch-minimal/

- https://datatracker.ietf.org/doc/draft-ietf-6tisch-terminology/
- https://datatracker.ietf.org/doc/draft-ietf-6tisch-tsch/

21.3. Owners: Ted Lemon, Bob Heile

21.4. Action Items
- follow the activities in the IETF and IEEE 802.15, share information
informally until activities are chartered
- Follow the activities; send relevant documents from the 6tisch WG as
they reach Last Call stages.

-

22. CAPWAP extensions in OPSAWG

22.1. Description:
Extensions to the CAPWAP protocol are being defined in the IETF OPSAWG.
The OPSAWG will send the documents that relate to IEEE 802.11 technology
to the IEEE 802.11 WG for expert review.

Status 1/27/14 (Benoit Claise) - there are two relevant drafts in
Working Group Last Call. He sent out via email an updated description
of this item, to be added to the next iteration of the shared work items
list. Dan Romascanu will edit the shared work items list accordingly.

Status 9/23/14 (Dorothy Stanley): Liaison requests have been made from
the opsawg ?to IEEE 802.11 for review and comment on each of these
documents. The IEEE 802.11 responded with the liaisons below. There are
no open liaison requests from opsawg to IEEE 802.11 at this time.

22.2. Relevant Documents
- http://datatracker.ietf.org/doc/draft-ietf-opsawg-capwap-extension/
- http://datatracker.ietf.org/doc/draft-ietf-opsawg-capwap-hybridmac
- http://datatracker.ietf.org/doc/draft-ietf-opsawg-capwap-alt-tunnel/
- https://datatracker.ietf.org/liaison/1312/
- https://mentor.ieee.org/802.11/dcn/14/11-14-0913-01-0000-liaison-
response-opsawg-capwap-extension.docx
- https://mentor.ieee.org/802.11/dcn/14/11-14-0684-01-0000-capwap-
hybridmac-liaison-response.docx
- Tunnel encapsulation response: slide 5 in https://mentor.ieee.org/
802.11/dcn/14/11-14-0500-00-0000-may-2014-liaison-to-ietf-report.pptx

22.3. Owners: Benoit Claise and Dorothy Stanley

22.4. Action Items
- Benoit to fill in the DESCRIPTION
- Benoit to ensure that OPSAWG chairs send documents at Last Call to IEEE 802.11
- Dorothy Stanley to channel requests for reviews and responses between the OPSAWG and IEEE 802.11

-

23. Area Name - naming in layer 2 networks

23.1. Description
To be provided by Juan Carlos Zuniga and Ted Lemon

23.2. Relevant Documents

23.3. Owners: Juan Carlos Zuniga and Ted Lemon

23.4. Action Items

-

24. Area Name - coordination between the IETF and IEEE 802 on Pervasive Monitoring
24.1. Description
The IETF has reached consensus in RFC7258 that pervasive monitoring ought be treated as with other threats in the development of IETF protocols. The IEEE 802 started an IEEE 802 Executive Committee (EC) Privacy Recommendation SG which will study privacy issues related to IEEE 802 technologies and consider the need for a recommended practice applicable to IEEE 802 protocols. Given that IETF protocols often run over IEEE protocols, their privacy properties are intertwined. It would therefore be useful if both organizations consider the privacy issues related to usages of combinations of their protocols. For example, consideration of how MAC addresses may impinge on the privacy properties of higher layer protocols seems like an obvious area to examine. This work item could identify how IEEE and IETF protocols together can make privacy better or worse and feed into the normal development processes of both organizations.

24.2. Relevant Documents

24.3. Owners: Stephen Farrell, Juan Carlos Zuniga

24.4. Action Items

-

25. Area Name
25.1. Description
IEEE 8021 (and the TSN task group in particular) would like to explore
the possibility of using a PCE-like function to assist in creating TE-
like bridged paths.

25.2. Relevant Documents

25.3. Owners: Adrian Farrel, Glenn Parsons

25.4. Action Items

26. Area Name
26.1. Description
26.2. Relevant Documents
26.3. Owners
26.4. Action Items