# IEEE 802.1 Interim Meeting Santa Cruz, CA, USA

# 802.1 Meeting Minutes, - September 2012

# **Attendees**

First Name David Michael	Middle Name	Affiliation
David	Name	
Michael		Ericsson AB
		Siemens AG
		Deggendorf University of Applied Sciences, Hirschmann
Christian		Automation and Control
Brad		Dell
Nigel		ciena
Xin		Huawei Technologies Co. Ltd
Rodney		National Instruments Corporation
Donald		Huawei R&D USA
Janos		Ericsson
Norman		Cisco Systems, Inc.
ANDRE		Extreme Networks
Anoop		Dell
Mark		Hewlett-Packard Development Company, L.P.
Robert		RMG Standards Consulting, MOST Co-Operation
HWERS		Huawei Technologies Co. Ltd
Craig		Harman International
Susan		Huawei Technologies Co. Ltd
Anthony		HP, Broadcom
Michael		Broadcom Corporation
Girault		Apple, Inc.
Daya		IBM
Yongbum		Broadcom Corporation
Philippe		Broadcom Corporation
Jeff		IBM
Thomas		Huawei Technologies Co. Ltd
James		Vitesse Semiconductor Corporation
John		ADVA Optical Networking Ltd.
Razvan		Robert Bosch GmbH
•		Rockwell Automation
•		MOST Cooperation
		Marvell Semiconductor, Inc.
		Ericsson AB
Shankara		Extreme Networks
	Christian Brad Nigel Xin Rodney Donald Janos Norman ANDRE Anoop Mark Robert HWERS Craig Susan Anthony Michael Girault Daya Yongbum Philippe Jeff Thomas James John	Christian Brad Nigel Xin Rodney Donald Janos Norman ANDRE Anoop Mark Robert HWERS Craig Susan Anthony Michael Girault Daya Yongbum Philippe Jeff Thomas James John Razvan Anatoly Henry Donald Glenn

Randall Karen NSA/IAD

Rouyer Jessy ALCATEL-LUCENT
Saltsidis Panagiotis Ericsson AB
Seaman Michael Individual

Sexton Daniel General Electric Company (GE)
Steiner Wilfried TTTech Computertechnik AG

Stokes Olen Extreme Networks
Thaler Patricia Broadcom Corporation

Tretter Albert Siemens AG

Weis Brian Cisco Systems, Inc.

Winkel Ludwig Siemens AG

# **Task Group Minutes**

#### Interworking minutes

#### **Monday 10 September**

Meeting called to order at 9:00am.

Stephen Haddock presented the preliminary agenda for the week.

Stephen Haddock presented patent policy slides. No response to the call for patents.

Stephen Haddock introduced two liaisons received since the last meeting. Time permitting, these will be discussed later in the week.

 $\frac{\text{http://ieee}802.org/1/files/public/docs2012/liaison-bbf2012-1068-01-liaison-to-ieee-ietf-and-itu-regardingwt-304-status-0912.doc}{\text{http://www.ieee}802.org/1/files/public/docs2012/liaison-mef-l00156-000-liaison-on-linktrace-trigger-ranganathan-0812.doc}$ 

**802.1Qbp ECMP:** Ben Mack-Crane conducted comment resolution on the task group ballot for 802.1Qbp-d1.1 SPBM Equal Cost MultiPath.

http://ieee802.org/1/files/private/bp-drafts/d1/802-1bp-d1-1-pdis.pdf

Break at 12:15 pm for lunch.

Interworking Task Group called to order at 1:15pm.

**802.1AX-Rev DRNI:** Norm Finn reviewed changes in the new draft of 802.1AX-REV-d0.3 Link Aggregation with Distributed Resilient Network Interconnect, and gave a presentation on a proposed mechanism for managing link and gateway selection. Nigel Bragg review the presentation he gave during last week's conference call regarding split brain detection. Janos Farkas gave a presentation regarding a proposal for controlling split brain scenarios. <a href="http://ieee802.org/1/files/private/ax-rev-drafts/d0/802-1AX-REV-d0-3.pdf">http://ieee802.org/1/files/private/ax-rev-drafts/d0/802-1AX-REV-d0-3.pdf</a> <a href="http://ieee802.org/1/files/private/ax-rev-drafts/d0/802-1AX-REV-d0-3-cb.pdf">http://ieee802.org/1/files/private/ax-rev-drafts/d0/802-1AX-REV-d0-3-cb.pdf</a> <a href="http://www.ieee802.org/1/files/public/docs2012/ax-rev-nfinn-port-selection-0912-v01.pdf">http://ieee802.org/1/files/private/ax-rev-drafts/d0/802-1AX-REV-d0-3-cb.pdf</a>

http://ieee802.org/1/files/public/docs2012/axrev-farkas-split-brain-handling-0912-v01.pdf

**New Work:** Bob Grow presented a draft PAR for an amendment to 802.1AC to add a section for using MOST as a media supporting the ISS on a bridge. These links are to modified draft PAR and five criteria:

http://www.ieee802.org/1/files/public/docs2012/new-PAR-Grow-PARdetail-0912-v02.pdf http://www.ieee802.org/1/files/public/docs2012/new-PAR-Grow-MOSTPARContent-0912-v02.pdf http://www.ieee802.org/1/files/public/docs2012/new-PAR-Grow-FiveCriteria-0912-v02.pdf

Adjourn at 5:15pm.

#### **Tuesday 11 September**

Joint meeting of Interworking and AVB task groups called to order at 9:00am.

Michael Teener made an announcement regarding the social this evening.

Stephen Haddock gave the call for patents. There was no response to the call for patents.

**802.1/802.11 Bridging**: Norm Finn gave a presentation on possible models of an 802.11 LAN as seen by a bridged network, and advocated modeling the wireless LAN as a set of point to point links. Phillipe gave a presentation advocating modeling the wireless LAN as a distributed bridge. <a href="http://www.ieee802.org/1/files/public/docs2012/new-nfinn-11-medium-choice-0812-v03.pdf">http://www.ieee802.org/1/files/public/docs2012/new-nfinn-11-medium-choice-0812-v03.pdf</a> <a href="http://www.ieee802.org/1/files/public/docs2012/new-phkl-11-bbs-bridging-0812-v4.pdf">http://www.ieee802.org/1/files/public/docs2012/new-phkl-11-bbs-bridging-0812-v4.pdf</a>

Break at 12:00 pm.

Resume at 1:00pm

**802.1/802.11 Bridging**: Norm Finn presented proposed PARs and 5 criteria for a wired-wireless Bridging project to amend 802.1Q and 802.11. http://ieee802.org/1/private/contrib/new-nfinn-wired-wireless-par5c-0512-v03.pdf

**AVB:** Presentations were given by Michael Bahr on routing industrial control data traffic, and by Wilfried Steiner on fault hypothesis in AVB and redundancy management. Janos Farkas presented proposed PAR and 5 criteria for a project on SPB Path Control and Reservation: <a href="http://ieee802.org/1/files/public/docs2012/new-avb-bahr-goetz-L2-routing-control-data-traffic-industry.pdf">http://ieee802.org/1/files/public/docs2012/new-avb-bahr-goetz-L2-routing-control-data-traffic-industry.pdf</a> <a href="http://ieee802.org/1/files/public/docs2012/new-avb-wsteiner-fault-hypothesis-and-redundancy-management-0912-v01.pdf">http://ieee802.org/1/files/public/docs2012/new-avb-wsteiner-fault-hypothesis-and-redundancy-management-0912-v01.pdf</a> <a href="http://ieee802.org/1/files/public/docs2012/new-farkas-spbpcr-draft-par5c-0912-v01.pdf">http://ieee802.org/1/files/public/docs2012/new-farkas-spbpcr-draft-par5c-0912-v01.pdf</a>

Adjourn at 5:00pm.

### Wednesday 12 September

Meeting called to order at 9:00am.

Stephen Haddock presented patent policy slides. No response to the call for patents.

**802.1Qbp ECMP:** Ben Mack-Crane continued comment resolution on the task group ballot for 802.1Qbp-d1.1 SPBM Equal Cost MultiPath.

Break at 12:15 pm.

Resume at 1:15pm

**802.1AX-Rev DRNI:** Stephen Haddock gave presentations on a proposed structure for the Intra-Portal Protocol and on issues related to MEP placement and link selection criteria: <a href="http://ieee802.org/1/files/public/docs2012/axrev-haddock-rough-intra-portal-protocol-0912-v03.ppt">http://ieee802.org/1/files/public/docs2012/axrev-haddock-rough-intra-portal-protocol-0912-v03.ppt</a> <a href="http://ieee802.org/1/files/public/docs2012/axrev-haddock-link-selection-and-OAM-0712-v01.ppt">http://ieee802.org/1/files/public/docs2012/axrev-haddock-link-selection-and-OAM-0712-v01.ppt</a>

Adjourn at 4:20pm.

#### **Thursday 13 September**

Meeting called to order at 9:00am.

Stephen Haddock presented patent policy slides. No response to the call for patents.

**AVB:** Janos Farkas reviewed and edited the proposed PAR and 5 criteria for a project on SPB Path Control and Reservation.

http://ieee802.org/1/files/public/docs2012/new-p802-1qca-draft-par-5c-0912-v02.pdf

**802.1/802.11 Bridging**: Norm Finn summarized edits to the proposed PARs and 5 criteria for a wired-wireless Bridging project to amend 802.1Q and 802.11. http://ieee802.org/1/files/public/docs2012/new-nfinn-wired-wireless-par5c-0512-v05.pdf

**Miscellaneous:** Tissa Senevirathne gave an update on the discussions regarding leveraging 802.1ag for OAM on TRILL. Note that this is not an official liaison, but it is a report on discussions that have included both IETF and IEEE participants. http://ieee802.org/1/files/public/docs2012/liaison-tissa-oam-ieee-trill-0912-v02.pptx

**Liaison:** There was discussion of the liaison received from the MEF regarding a MIB trigger for transmitting Link Trace Messages. There is general agreement that the MIB text is vague in how LTMs are triggered. There are several potential ways to resolve this, one of which is to affirm that the triggering event is a write to the flags parameter (which Is the original intent and the interpretation that the MEF liaison assumed). The plan is to decide whether this will be the response to the liaison, or whether some alternative trigger should be considered, at the November plenary in San Antonio.

**802.1Qbp ECMP:** Ben Mack-Crane continued comment resolution on the task group ballot for 802.1Qbp-d1.1 SPBM Equal Cost MultiPath.

Break at 12:15 pm.

Resume at 1:00pm

**802.1Qbp ECMP:** Ben Mack-Crane concluded comment resolution on the task group ballot for 802.1Qbp-d1.1 SPBM Equal Cost MultiPath.

http://ieee802.org/1/files/public/docs2012/bp-mackcrane-editor-report-0912.pdf http://ieee802.org/1/files/private/bp-drafts/d1/802-1bp-d1-1-dis.pdf

**802.1AX-Rev DRNI:** Stephen Haddock showed a slide summarizing the conclusion from yesterday's presentation. This slide is included in an updated version of the presentation: <a href="http://ieee802.org/1/files/public/docs2012/axrev-haddock-link-selection-and-OAM-0712-v02.ppt">http://ieee802.org/1/files/public/docs2012/axrev-haddock-link-selection-and-OAM-0712-v02.ppt</a>

**Miscellaneous:** Stephen Haddock led a brief discussion regarding how an 802.1Q implementation of a Rooted Multipoint service and CFM compares to the MEF SOAM-FM model for an E-TREE service.

**New Work:** Bob Grow reviewed some minor editorial changes in the draft PAR for adding a section on Ethernet over MOST to 802.1AC: http://ieee802.org/1/files/public/docs2012/new-PAR-Grow-FiveCriteria-0912-v03.pdf

Adjourn at 2:40pm.

#### **AVB Minutes**

In the following meeting notes, these abbreviations are used:

- MJT Michael Johas-Teener
- Adva Adva Optical Networking
- GG Geoff Garner
- FG Franz-Josef Geotz
- DP Don Pannell
- RC Rodney Cummings
- CB Christian Boiger
- MB Michael Bahr, J. Gotz
- NF Norm Finn
- PK Philipe Klein
- AF Andre Fredette

#### **Monday 10 September**

Michael opened the meeting at 9:10am with the patent slides.

Rodney Cummings presented 802.1Qbv: Performance / Complexity Tradeoffs <a href="http://www.ieee802.org/1/files/public/docs2012/Qbv-cummings-performance-tradeoffs-0912-v2.pdf">http://www.ieee802.org/1/files/public/docs2012/Qbv-cummings-performance-tradeoffs-0912-v2.pdf</a>

Rodney Cummings presented 802.1Qbv: Feedback on Draft 0.0 <a href="http://www.ieee802.org/1/files/public/docs2012/Qbv-cummings-feedback-draft00-0912-v1.pdf">http://www.ieee802.org/1/files/public/docs2012/Qbv-cummings-feedback-draft00-0912-v1.pdf</a>

Christian Boiger presented Time Aware Shaper

http://www.ieee802.org/1/files/public/docs2012/bv-boiger-time-aware-shaper-0912-v02.pdf

Albert Tretter presented Aspects for Pre-emption resp. Time Aware Blocking Shaper (TABS)

http://www.ieee802.org/1/files/public/docs2012/avb-tretter-AspecPreemptTabs-0910.ppt

Yong Kim lead a discussion on strategies ideas for CFI for Distinguished Minimum Latency Traffic in a Converged Tragic Environment

#### **Tuesday 11 September**

Joint session with the Interworking group. The IEEE patent slides were shown/read.

Norm Finn presented Picking a model for 802.11/802.1 bridging <a href="http://www.ieee802.org/1/files/public/docs2012/new-nfinn-11-medium-choice-0812-v03.pdf">http://www.ieee802.org/1/files/public/docs2012/new-nfinn-11-medium-choice-0812-v03.pdf</a>

Philippe presented CSN & 802.11 BSS Bridging http://www.ieee802.org/1/files/public/docs2012/new-phkl-11-bbs-bridging-0812-v4.pdf

Norm Finn presented a proposed PAR for Wired-Wireless Bridging <a href="http://www.ieee802.org/1/files/public/docs2012/new-nfinn-wired-wireless-par5c-0512-v03.pdf">http://www.ieee802.org/1/files/public/docs2012/new-nfinn-wired-wireless-par5c-0512-v03.pdf</a>

The discussion of the group then covered multi path & redundancy issues: Michael Bahr presented L2 Routing for Control Data Traffic @ Industry <a href="http://www.ieee802.org/1/files/public/docs2012/new-avb-bahr-goetz-L2-routing-control-data-traffic-industry.pdf">http://www.ieee802.org/1/files/public/docs2012/new-avb-bahr-goetz-L2-routing-control-data-traffic-industry.pdf</a>

Wilfried Steiner presented Fault-Hypothesis of IEEE 802.1 Q AVB and Redundancy Management

http://www.ieee802.org/1/files/public/docs2012/new-avb-wsteiner-fault-hypothesis-and-redundancy-management-0912-v01.pdf

Janos Farkas presented SPB Path Control and Reservation (SPB-PCR) draft PAR and 5C http://www.ieee802.org/1/files/public/docs2012/new-farkas-spbpcr-draft-par5c-0912-v01.pdf

## Wednesday 12 September

Rodney Cummings presented Request for Contribution for Refining the Seamless Redundancy Concept Presented in San Diego

http://www.ieee802.org/1/files/public/docs2012/new-avb-kleineberg-jochim-seamless-redundancy-0912v2.pdf

Jeff Garner (via phone) presented Brief Overview of Work in ITU-T Q13/15 on Transport of Time via PTP

http://www.ieee802.org/1/files/public/docs2012/as-garner-overview-q13-work-time-transport-ptp.pdf

Don Pannell presented P802.1Qbv Small Frame Handling <a href="http://www.ieee802.org/1/files/public/docs2012/Qbv-pannell-small-frame-handling-0912-v1.pdf">http://www.ieee802.org/1/files/public/docs2012/Qbv-pannell-small-frame-handling-0912-v1.pdf</a>