IEEE 1914 NGFI

P1914.1 TF Bi-weekly Meeting

Chair: Bomin Li, Comcores ApS

Editor: Jouni Korhonen, Broadcom

October 19, 2016

Ground rules

- No audio recording, No video recording, and No photography

- No job recruiting

- No product pitches

- No corporate pitches

- No prices

- No restrictive notices

- Attendance of the press should be announced

Participants, Patents, and Duty to Inform

All participants in this meeting have certain obligations under the IEEE-SA Patent Policy.

- Participants [Note: Quoted text excerpted from IEEE-SA Standards Board Bylaws subclause 6.2]:
  - "Shall inform the IEEE (or cause the IEEE to be informed)" of the identity of each "holder of any potential Essential Patent Claims of which they are personally aware" if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
  - "Should inform the IEEE (or cause the IEEE to be informed)" of the identity of "any other holders of potential Essential Patent Claims" (that is, third parties that are not affiliated with the participant, with the participant's employer, or with anyone else that the participant is from or otherwise represents)
- The above does not apply if the patent claim is already the subject of an Accepted Letter of Assurance that applies to the proposed standard(s) under consideration by this group
- Early identification of holders of potential Essential Patent Claims is strongly encouraged
- No duty to perform a patent search

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Patent Related Links

All participants should be familiar with their obligations under the IEEE-SA Policies & Procedures for standards development.

Patent Policy is stated in these sources:

IEEE-SA Standards Boards Bylaws

http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6

IEEE-SA Standards Board Operations Manual

http://standards.ieee.org/develop/policies/opman/sect6.html#6.3

Material about the patent policy is available at

http://standards.ieee.org/about/sasb/patcom/materials.html

If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at patcom@ieee.org or visit
http://standards.ieee.org/about/sasb/patcom/index.html

This slide set is available at
https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.ppt

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Call for Potentially Essential Patents

- If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance:

  - Either speak up now or
  - Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible or
  - Cause an LOA to be submitted

Other Guidelines for IEEE WG Meetings

- **All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.**

    - **Don't discuss the interpretation, validity, or essentiality of patents/patent claims.**

    - **Don't discuss specific license rates, terms, or conditions.**

        - Relative costs, including licensing costs of essential patent claims, of different technical approaches may be discussed in standards development meetings.

            - Technical considerations remain primary focus

    - **Don't discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.**

    - **Don't discuss the status or substance of ongoing or threatened litigation.**

    - **Don't be silent if inappropriate topics are discussed … do formally object.**

See *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and "Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy" for more details.

Agenda

❑ Summary of WWRF 37 workshop

❑ Discussion on functional split: explicit splits vs split groups

❑ Overview of October f2f meeting submissions

❑ Review of AIs

Summary of WWRF workshop

Wireless World Research Forum Meeting 37
5-7 October, 2016 at the University of Kassel, Germany

❑ Date: Oct. 6, 2016

❑ Place: Kassel, Germany

❑ Session: **Next generation Ethernet-based fronthaul/xhaul**

Summary of WWRF workshop (cont'd)

❑ Presentations:

  ➢ The future of transport networks towards 5G - Dr. Philippe Sehier, Dr. Rudolf Winkelmann (Nokia Bell Labs)

  ➢ Fronthaul Standardisation in IEEE P1914.1 TF and the current Comcores vision - Bomin Li (Comcores/Chair IEEE P1914.1 TF)

  ➢ Key technical considerations for the path forward for C-RAN and vRAN - Dr. Philippe Chanclou (Orange)

  ➢ The high-speed fiber future mobile fronthaul - Dr. Klaus Grobe (ADVA)

  ➢ OAM and SON considerations for the future fronthaul/xhaul - Dr. Howard Thomas (Viavi)

❑ Discussions: mmWave as fronthaul media, energy efficiency

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Discussion on functional split

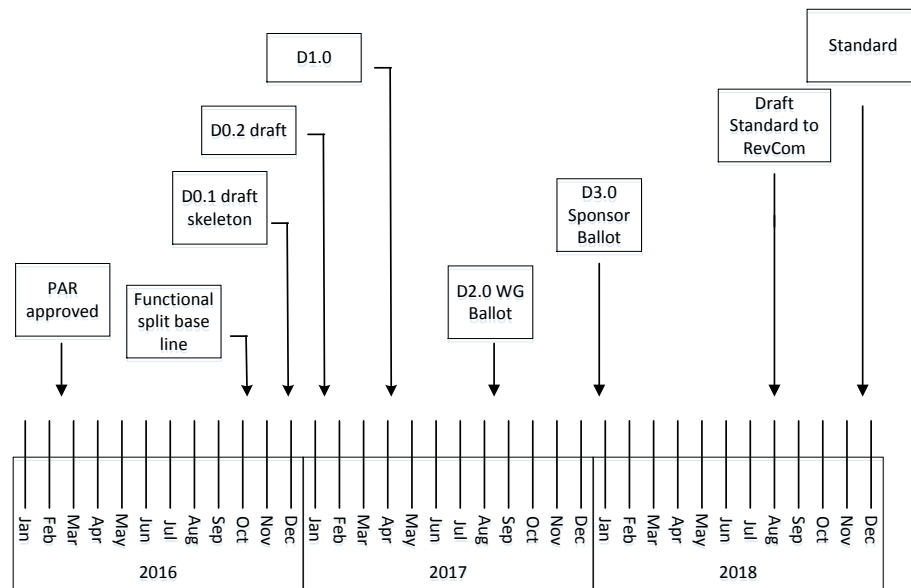❑ Refer to "Some thoughts on way forward regarding function split analysis" (Jinri Huang)

Overview of October f2f meeting submissions

❑ So far 11 submissions

- ➢ Priority considerations for fronthaul traffic - Raghu M. Rao(Xilinx)
- ➢ IEEE P1914.1/D0.0 table of contents - Jouni Korhonen(Broadcom)
- ➢ Converged backhaul and fronthaul considerations - Jouni Korhonen(Broadcom)
- ➢ NG Fronthaul Control plane Requirements and Architectures - Jin Seek Choi(Hanyang University)
- ➢ 5G Fronthaul Transport Classes for 3GPP Splits. Discussion for the need of MAC – MAC split - Aleksandra Checko(MTI)
- ➢ NGFI/RoE Proof-of-Concept - Brian Torley(Xilinx)
- ➢ Performance overview for Intra-PHY splits – Bomin Li(Comcores)
- ➢ RAN Split Grouping for Transport - Vishwanath Ramamurthi(Verizon Wireless)
- ➢ Functional split and deployment scenarios for NGFI – Jing Lu(AT&T)
- ➢ Holistic View of the Network Requirements and Architecture beyond Functional Split – Tony Tam(Fujisu)
- ➢ To be added – Scott Wakelin(Microsemi)

Overview of October f2f meeting submissions (cont'd)

❑ Deadline for complete submission: 7 days in advance

❑ Postdealine submission: will be carried out only if time allows

❑ Timeline:
  ➢ need to reach consensus in October meeting regarding functional split baseline

❑ Encouragement on potential submission on thoughts of moving forward regarding functinal split
  ➢ Focusing on transport networks
  ➢ Taking the timeline into consideration

Open AIs

❑ List requirements/technologies/other features – Bomin Li

❑ Skeleton/terminology of standard draft – Jouni Korhonen by October f2f meeting

❑ Provide details/differences of split options 3-1 and 3-2 as in tf1_160907_Huang_3GPP summary.pptx – Jinri Huang - closed

❑ Distribute ECOC workshop presentation slides – Bomin Li

❑ Distribute WWRF workshop presentation slides – Bomin Li

Q&A