# IEEE 802 Network Enhancements for the Next Decade
# Industry Connections Activity

Glenn Parsons - Ericsson

glenn.parsons@ericsson.com
+1 613 963 8141

November 2017

Mentor DCN:  1-17-0005-01-ICne      11/6/2017

- Announcement
  - IEEE-SA sent eBlast to multiple societies and sponsors

# Guidelines for IEEE-SA 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.**

------------------------------------------------------------

**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**

**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.**

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

# Agenda for November meeting

- Introductions
- Role of the IC activity
  - Background (the origins of this IC Activity)
  - Project Objectives/Scope/Deliverables
- Contributions
  - Plan - Automotive, Industry Automation, etc.
  - Proposals
- Communications Plan
  - (information sharing, meetings, schedule, etc.)
- Actions/Next Steps

# Introductions

- Name
- Affiliation

6

# Role of the Industry Connections Activity

IC17-001-01

# Background – IEEE 5G SC Action A: Candidate Approach – "IEEE 5G"

- specify an 802 access network
  - could be based on P802.1CF
    - "network reference model defines a generic foundation for the description of IEEE 802 access networks, which may include multiple network interfaces, multiple network access technologies, and multiple network subscriptions, aimed at unifying the support of different interface technologies, enabling shared network control and use of software-defined networking (SDN) principles"
  - provides an external view into general 802 access network
  - could support many 802 MACs and PHYs
  - could plug into incumbent mobile operator networks
    - for example, expand the notion of LWA so that the cellular network supports 802 rather than 802.11
    - gives 802 a strong supporting role in cellular 5G networks
  - could support integration into other operator networks
    - e.g. cable TV or fixed telecom
    - gives 802 a central role in non-cellular 5G networks
  - feasible for 802 access network to support both
  - need not promote it as an "IEEE 5G" network

From 802 5G SC report

Mentor DCN: 1-17-0005-01-ICne    11/6/2017

# IEEE-SA Industry Connections activity

- Aimed for technical group discussions (far) ahead of starting PAR discussions.
  - http://standards.ieee.org/develop/indconn/
  - ICAID (Industry Connections Activity Initiation Document) request form for approval
    - http://standards.ieee.org/develop/indconn/icaid_form.doc

- Use of Industry Connections in IEEE 802
    - https://mentor.ieee.org/omniran/dcn/16/omniran-16-0083-00-5gaa-use-of-industry-connections-in-ieee-802.pptx

- Further resources:
  - http://standards.ieee.org/about/sasb/iccom/resources.html

# 802 NEND Objective

- The goal of this activity is to assess, outside of the IMT activity, emerging requirements for IEEE 802 wireless and higher-layer communication infrastructures, identify commonalities, gaps, and trends not currently addressed by IEEE 802 standards and projects, and facilitate building industry consensus towards proposals to initiate new standards development efforts.

- Encouraged topics include enhancements of IEEE 802 communication networks and vertical networks as well as enhanced cooperative functionality among existing IEEE standards in support of network integration. Findings related to existing IEEE 802 standards and projects are forwarded to the responsible working groups for further considerations.

# Operating practice

- Voting
  - While operating as a subgroup under IEEE 802.1, any person attending a meeting may vote on all motions (including recommending approval of the deliverables). A vote is carried by 75% of those present and voting Approve or Disapprove.
- Reciprocal attendance rights for 802 WGs
  - policy is per home WG
- Approval
  - Until March 2019
- Document storage – 802.1 website & mentor
  - http://1.ieee802.org/802-nend/
  - https://mentor.ieee.org/802.1/documents?is_group=ICne
- Mailing List
  - http://listserv.ieee.org/cgi-bin/wa?SUBED1=STDS-802-NEND&A=1
  - STDS-802-NEND@LISTSERV.IEEE.ORG

# Potential Markets

- IEEE 802 technologies are deployed in a huge number of market applications, which are exhibiting a growing diversity in terms of the features needed. Solutions spanning these different application spaces and feature requirements will be best 3 addressed by leveraging common technology approaches. This activity will enable industry consensus building on the market/application requirements and identify gaps and trends not currently addressed by IEEE 802 standardization of new solutions, which will help to foster industry engagements in new study groups and standardization topics.

# Deliverable

- There will be two deliverables:
  - Records of the meetings, including minutes and supporting presentations.
  - A report documenting the findings of the IC activity, with recommendations regarding new standardization topics, documentation of use cases and user needs for those topics, and proposed organizational approaches to ensure effective participation from user communities. It is expected that the first draft of the report documenting the findings of the IC will be available in March 2018.
- Related work
  - The proposed activity addresses topics distinct from the IEEE 802.3 'New Ethernet Applications' Industry Connections activity. It will cooperate when findings may benefit both activities.

Mentor DCN: 1-17-0005-01-ICne     11/6/2017

# Contributions

# Potential contribution topic areas

- Industrial automation networks
- Automotive networks
- IoT networks
- Non-traditional operator networks
- …

# Contributions

- Industrial Networking
  - Satoko Itaya (NICT)
- Future Data Centre Networks
  - Customer perspective on DCN requirements (Baidu)
  - Chip vendor perspective (Marvell)
  - Proposed whitepaper on the lossless datacenter network - Paul Congdon (Huawei)
- Others?

Mentor DCN:  1-17-0005-01-ICne        11/6/2017

# Next meeting

# Future meetings

- 802 plenaries
  - Tuesday evening
- Conference Calls
  - Monthly
- IEEE Conference side event
  - ICC, Globecom, …?
- Other Conference side event
  - MEF, BBWF, …?

# Actions

# Actions

- Solicit more contributions
- Reach out to more customers
- Find evangelists

- Contact me to help!