IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Wireless Next Generation (WNG) Standing Committee Meeting Minutes for May 2016 Meeting Waikoloa, USA | | | | |
| Date: 07-26-2016 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Lei Wang | Marvell | 5488 Marvell Lane Santa Clara, CA, 95054 | +1-858-205-7286 | leileiw@marvell.com |
| Jim Lansford | Qualcomm | 100 Stirrup Circle  Florissant, CO 80816 | +1-719-286-8660 | jim.lansford@ieee.org |

Abstract

Meeing Minutes for the WNG SC meeting held in San Diego, CA, USA - July, 2016.

**Tuesday, July 26, 2016, 8:00 AM to 10:00 AM PT**

Chair: Jim Lansford (Qualcomm)

Vice Chair: Lei Wang (Marvell)

**Meeting Agenda:**

The meeting agenda is shown below, and also published in the agenda document:

<https://mentor.ieee.org/802.11/dcn/16/11-16-0797-02-0wng-agenda-for-wng-2016-07.ppt>

* **Call Meeting to Order**
* **Agenda approval**
* **Attendance reminder**
* **Documentation reminder**
* **Approval of Previous meeting minutes**
  + <https://mentor.ieee.org/802.11/dcn/16/11-16-0706-00-0wng-wng-meeting-minutes-of-2016-may-waikoloa.docx>
* **Announcements**
* **Presentations**
* **Plans for September 2016**
* **Adjournment**

**Meeting Minutes:**

* Meeting called to order at 08:00AM PT on Tuesday, July 26, 2016 by Chair, Jim Lansford.
* Agenda approval: <https://mentor.ieee.org/802.11/dcn/16/11-16-0797-02-0wng-agenda-for-wng-2016-07.ppt>
* The agenda was approved by unanimous consent
* The chair also noted the affiliation FAQ, anti-trust FAQ, ethics code, IEEE 802.11 policies and procedures, and IEEE 802 policies and procedures
* The chair covered the voting rules for WNG SC, being a standing committee
* Approximately 131 people were in attendance.
* Approval of previous meeting minutes
* The minutes for May-2016 Waikoloa meeting:

<https://mentor.ieee.org/802.11/dcn/16/11-16-0706-00-0wng-wng-meeting-minutes-of-2016-may-waikoloa.docx>

* + The minutes was approved by unanimous consent.
* Presentations:

1. “P802.1CM Time-Sensitive Networking for Fronthaul” - János Farkas (Ericsson)

<https://mentor.ieee.org/802.11/dcn/16/11-16-1003-00-0wng-p802-1cm-time-sensitive-networking-for-fronthaul.pptx>

* + Q: how sensitive to time for pkt delivery? What the typeical BW? Who does it mean by synchronization?
  + A: CPRI spec specifies the differences; Major traffic will be controlled; the synchronization mans time synchronization.
  + Q: what’s the call for action for dot11?
  + A: this is FYI, not request anything; let you all to figure out if this is useful.

1. “History and Implementation of the IEEE 802 Security Architecture”, Meareg Abreha (Addis Ababa University – IEEE 802 student paper award winner)

<https://mentor.ieee.org/802.11/dcn/16/11-16-0940-01-0wng-history-and-implementation-of-the-ieee-802-security-architecture.pptx>

* + Q: last slide, security vs. power comsuption
  + A: As mentioned, the clouding will change things.
  + Q: good summary. At early stage, dot11 did not use any number based, what do you mean by number theory?
  + A: not advanced number –based implementation, but sill simple number based, prove of concept. Prove how to security data.
  + Comment: so, it was not real number theory, just prime number.
  + Q: what are lessons learnt?
  + A: progress is positive, very nice progress in theory development, implementation needs to catch up ,
  + Q: is the paper available on sever?
  + A: already submitted, will be published soon.

1. Introduction to SOMA, Junghoon Suh (Huawei)

<https://mentor.ieee.org/802.11/dcn/16/11-16-0943-00-0wng-introduction-to-soma.pptx>

* + Q: on slide 4, 20% of power, wonder how the power is defined?
  + A: proposal here, set to the equal power, just to revmove the complexity of NOMA
  + Q: the key is to use reliability to do the split. If use this, performance comparison?
  + A: have some internal simulation results, find a similar gain to LTE.
  + Q: The comparison is to very non-optimized OFDMA, is it a fair comparison?
  + A: need to see system simulations, here just showing some simplied results.
  + Q: simulation on fading channels?
  + A: yes.
  + Q: followed up actions
  + A: will bring more simulation results.

1. Measurements of 802.11 behavior in different environments, Jim Lansford (Qualcomm)

<https://mentor.ieee.org/802.11/dcn/16/11-16-0977-00-0wng-measurements-of-802-11-behavior-in-different-environments.ppt>

* + Q: did you capture the data about retransmissions?
  + A: no.  did not ask the students to capture retries
  + Comment: in dense environment, actually lots of retires.
  + Comment: The ratio of Probe Request vs. Prove Response seems aligned with the contributions made in early 11ai days by KDDI.
  + Q: are there any data collected about time-occupancy distribution among different type of frames, in addition to number of packets?
  + Q: no, not at this time, Good addition to future work.
  + Comment: few years ago, did a measurement study on concer music festival, very dense environment, 9 people/square meter; beacon and prob. Req/rsp are dominant traffic. About 1mbps rate for Beacon frames, a simple way is to diable 11b data rate, starts with 11g.
  + Q: slide 11 and 12, interesting data, prob req/prob rsp ratio, why change so much?
  + A: did not have the actual location info, really depends on location.
  + Comment: suggest having students to do the same location.
  + Response: agree. Also plus have group discussion.
  + Q: why most of traffic is still 11g?
  + A: computers have 11n, but probably set as 11g.
  + Q: would be nice to move to 11ac, any time frame?
  + A: the campus has a plan to install 11ac, at least in some common area
  + Q: slide 12, air occupancy time close 8%, is this captured with mobile devices?
  + A: in Engineering Building, traffic load varies with time during a day, 7am vs. 10pm, probably big difference.
  + Comment: Direct Probe Request cause lots of traffic, probably ask student to study direct Probe Request vs. un-direct Probe Reques
  + Comment: it would be useful to have distributions about time and number of bytes, in addition to number of of packets; another project, same site, for different time of a day.
  + Q: if consider something to improve, what would that be?
  + A: 11ax, improve efficiency; WFA, recommended practice to improve network. This is student work, just FYI, not here to make recommendations.
  + Comment: measure taken as Friday after 3pm, probably why lots of beacons; another oberservation, AP locations; would be helpful to have different time for measurements
  + Response: has the dates of the measure, could sort them out.
* Plans for September meeting:
  + Call for contributions: the WNG chair will issue a call for contributions before the 2016-September meeting.
* Adjournment
  + The meeting adjourned, without objection, at 9:48am PT.