IEEE P802.11
Wireless LANs

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| Minutes of JTC1 standing committeein Hawaii (UHT Q&A session)in May 2013 |
| Date: 20130520 |
| Author(s): |
| Name | Affiliation | email |
| Andrew Myles | Cisco | amyles@cisco.com |

Abstract

Minutes of IEEE 802 JTC1 Standing Commitee UHT Q&A session held on Thursday, 16 May 2013 at the IEEE 802.11 Working Group meeting in Hawaii in May 2013

# Minutes of JTC1 Ad Hoc Meeting Thu-PM1

### Introduction

* During the Wednesday IEEE 802.11 WG plenary session, Lei Jun (jun.lei@nufront.com) from Nufront gave a presentation to the WG, “Introduction of EUHT. Document” ([595r0](https://mentor.ieee.org/802.11/dcn/13/11-13-0595-00-0000-introduction-of-euht.pptx)) with no Q&A afterwards
* During the Thurday PM1 session of the IEEE 802 JTC1 SC, Lei Jun from Nufront gave an updated presentation to the SC, “Introduction of EUHT. Document” ([595r1](https://mentor.ieee.org/802.11/dcn/13/11-13-0595-01-0000-introduction-of-euht.pptx))
	+ The presentation reviewed some background, technical overview, status update, and co-existence with other systems.
	+ EUHT was announced as Chinese industrial standard in Feb, 2012 and the draft is free to download from MIIT website.
	+ It will be a Chinese national standard for middle-short range wireless communication system.
* Following the presentation a discussion was held
* The following record is not necessarily in chronological order, but is rather a summary of all the questions (Q), answers (A) and comments (C), grouped to make understanding the overall discussion easier
* The answers (A) are all provided by Lei Jun, while the comments (C) and questions (Q) were provided by various audience members
* Note that answers (A) by Lei Jun are for information only. They represent the opnion of Lei Jun as an individual and may or may not represent the views of Nufront.

### Q&A (process)

* Q: How should we move forward and progress this work? Will Lei Jun or other colleagues be able to attend future IEEE 802 meetings to be able to engage?
	+ A: Nufront reps are happy to attend IEEE meetings, as long as they are invited
	+ C: Maybe we could document expected attendance of the Nufront reps so that 802.11 can plan time during the sessions to discuss EUHT related issues
	+ A: Definitely will be able to attend Nanjing and Lei Jun will investigate possibility for Geneva and Dallas
* Q: What is the eventual goal of this engagement? Could be liaison, collaboration, or definition of mechanisms that enable coexistence? How do you see this work ending up?
	+ A: First step is to ensure that each other understand the other’s system.
	+ A: Then hear about 802.16h
	+ A: Then form a study group, possibly to revise 802.16h
	+ A: Utimately it is a standard
* Q: What process should be used to undertake the work
	+ A: Would like a joint team to study the problem
	+ A: Not sure of the form for this joint team

### Q&A (standardisation)

* Q: Will the overall description of standard of EUHT available in English?
	+ A: Not sure
	+ C: The extract that was provided was helpful; but it would be useful to get some (if not all) of the document translated into English for review.
* Q: Is the CCSA version copyrighted in China; if so, how would IEEE 802 get permission to create a translated version?
	+ A: Investigation required
* Q: What is the difference between an industrial standard and a national standards
	+ A: Industrial standard is approved by CCSA
	+ A: National standards is approved by government
	+ A: In case of EUHT, it is intended the standards should be “recommended” rather then “mandatory”

### Q&A (Spectrum)

* Q: On Wednesday you stated that 5470-5725 was reserved for independent IPR. Today you backed off from that position, saying that you hoped some of it could be reserved for EUHT. What is the current position?
	+ A: I do not know the details. Someone else is negotiating with the government.
	+ A: This band is still under discussion. Will be a government decision for when and how to allocate spectrum.
	+ A: EUHT is designed to work in different bands. It is the users of EUHT who decide the working band to deploy EUHT.
* C: Note that this band has a large number of radar in the band so systems may need to have radar detection built in.

### Q&A (IPR)

* Q: One of the requirements for operation in 5470-5725MHz was “independent IPR”. What is that?
	+ A: Motivation is to have technology driven and owned by Chinese company.
	+ C: “independent” means “indigenous”
* Q: Is there any independent IPR in EUHT?
	+ A: Over 30 patent applications have been submitted
* Q: There is a system in the IEEE for listing the sources of IPR and describing what the IPR is included. Is there a record of the patents for EUHT?
	+ A: A list of patents is available

### Q&A (EUHT coexistence)

* Q: How many EUHT systems deployed at the moment in the 5GHz band?
	+ A: None, noting 5GHz spectrum only recently opened in China.
* Q: Is there is any practical experience of co-existence of the two systems (EUHT and IEEE 802.11 wireless)?
	+ A: No
	+ A: Coexistence between 802.16 and 802.11 may be similar to coexistence between EUHT and 802.11
	+ A: Perhaps some of the results of the earlier 802. 16h activity may be useful guidance on the co-existence question
	+ C: IEEE 802 could to provide the findings on the 802.16h to Nufront reps at a later meeting
	+ C: 802.16h has not been deployed and may not work very well
* Q: Is there any plan to address coexistence between EUHT sustems operating in the same channel
	+ A: There is an R&D project this year
	+ A: It is assumed that EUHT systems will not need to coexist in same channel because in the main application space (industrial) the channels can be planned so that there is no overlap
	+ C: Of course, this method will not work if there is a non cooperating neighbour or a system using another technology
	+ A: Many factories are sufficiently separated that manual channel planning is a feasible solution
* Q: HIPERLAN-II had a high level coordination system for coexistance between neighbouring systems. This mechanism required synchronisation. Is there any plan for such a system in EUHT?
	+ A: There is an R&D project this year
	+ C: HIPERLAN-II was never deployed and so it is unclear this mechanism would work in practice in unlicensed spectrum
* Q: Does EUHT have a flexible frame structure, ie variying length frames
	+ A: Yes
* C: We would need to document the depoyement models for EUHT and 802.11 to determine if there is a significant use case and the size of any issue The models would need to cover EUHT vs EUHT and EUHT vs 802.11
* C: It is possible that some of the issues may be minimized by the EUHT deployment environment (e.g., licensed spectrum)
* Q: Do you have any predictions on the size of the coexistence problem
	+ A: No
	+ A: The coexistence question is relatively new and immature and is a major research area.
* C: Based on 802.16 vs 802.11 and HIPERLAN-II vs 802.11, both 802.11 and EUHT systems are likely to be adversely affected if they operate in the same channel without coexistence mechanisms. HIPERLAN-II collapsed when it conflicted with 802.11

### Q&A (Other)

* Q: Does EUHT have any security mechanism?
	+ A: No
* Q: Are there plans to operate EUHT outside China?
	+ A: In future, maybe, but will need to solve the co-existence problems.
* Q: EUHT seems very similar to 802.16. Why not use that?
	+ A: the Chinese government wants to encourage use of Chinese technologies
* Q: Has EUHT been deployed?
	+ A: No. only in lab prototypes