IEEE P802.11
Wireless LANs

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| PDED ad hoc minutes in San Antonio |
| Date: 2016-11-10 |
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Abstract

This document contains the minutes of the IEEE 802.11 PDED sessions in San Antonio in Nov 2016.

Session on 8 November 2016 in San Antonio (AM2)

Notes taken by Graham Smith

Bureaucratic stuff was done.

16/1307r3

1. Agenda:  Any other presentations?  No .  Accepted without objections.
2. Why formed, Slide 10 of 16/1307
3. Slide 14 potential issues.
4. Slide 15 Straw Poll – many supported the ad hoc.
5. Slide 16 EN 301 893 -72dBm, exception for 11a/n/ac for -62dBm, maybe no exception for 11ax
	1. Maybe good idea to discuss -72 dBm
	Any Questions? - NO
6. Slide 18, 19, 20, 21, 22 Teleconferences summaries.
	1. Brainstorming on PD at 3rd Telecon.
	2. PD is “preamble detection”, LAA does not use Wi-Fi PD
	3. 5th telecom Thomas proposed response reiterating that LAA adopt 802.11 PD
7. Slide 23

Yiuchi Morioka, Sony 16/1461r0 “Simulation Analysis of ED Threshold”, looks at experiments if -72 dBm ED is used.

* Based on SS3 (Indoor Small BSS as per 11ax).  Half 11a (-72), half legacy(-62), APs all 11ax
* Slide 5 :Result is 11ax (with -72dBm) STAs halve throughput if ED changed from -62 to -72
* Graham “IS this also using PD?”  Ans: Both PD and ED in use and the packet collisions cause the ED to be used, and hence the difference.
* Slide 6: 11ax significantly degraded in air time.
* Slide 7: Conclusion “Reject proposal”, not realistic to change legacy behavior, could only change 11ax.  Possible adjusted ED threshold according to transmission power, as defined in 3GPP LAA.
* Q “What if all at -72dBm” Ans: Did not look at that.
* Q “ Any plan to look at option 3?  Ans: Yes intent to simulate if group requests”.
* Chair “ Probably room for more investigation”
* Any other comments/questions?  NO

Slide 25 16/1307r3 Next Steps, 4 approaches

Slide 26 Thomas response 16/1493r0; Ron Porat presented.

* Q “primarily on PD” discussion based on the Sony results, but consensus is that the statement is true.
* Q “PD detects collisions?”, PD detects collisions but ED kicks in when the preamble is missed.  Guido argues that PD, collision and ED is different and PD does not detect collisions.  Standard is silent about below -82dBm behavior.
* “legacy” can we replace with “existing “ or “deployed” 802.11 devices.  (agreed)
* Q the argument that not matching the -72dBm, , is not good, because of the PD. But LAA chose not to implement PD. Also not infer more than Wi-Fi interferes with itself.  LAA chose -72dBm  ED on place of PD.
* Suggestion to use consistency on IEEE and 11ax to 802.11ax.  Agreed to change 11ax to 802.11ax.

Chair “Do we approve today and go to Mid-Week plenary or wait to next meeting and go to Closing plenary?”  Guido suggests some editorial license required.

Any substantive comments on text?

* Make clear PD is 802.11 Pre amble detect.  Write “802.11 preamble (PD)” first time (done).
* Refer and quote the request?  Agreed to add the original request.
* “noted that many current 802.11 devices detect and defer …..at even lower thresholds “  Edit to say “is an option” (done)
* “PD provides additional benefits … detect and respond to collisions”.  Delete? Or along the lines “to prevent collisions  by specifying deferral periods “  done
* Ran through document making editorials.
* Raised to 16/1493r1

Motion: Text as per 1307r4 Slide 27 (adoption of 1493-01)

* Moved: Stuart
* Second Hiro
* Yes 13, No 0, Abstain 4
* Motion Passes

Recessed

Session on 10 November 2016 in San Antonio (PM1)

Session based on continuing use of 11-16-1307-06 as agenda

* Slide 28
	+ Noted that the LS to 3GPP RAN1 was approved as mid-session plenary
* Slides 29-31
	+ Agreed to continue IEEE 802.11 PDED ad hoc in short term to:
		- Address any reply from 3GPP RAN1
		- Develop further data (based on simulation and testing?) for future LS’s
		- Address the question of ED threshold in EN 301 893 that applies to 802.11ax
* Slide 32
	+ Use e-mail reflector for discussions and to encourage work
		- It is hoped that members will contribute more simulations
	+ Hold one or more teleconferences as required
		- Will be called with 10 days’ notice
		- Christmas might limit opportunities
	+ Hold two sessions in Atlanta
* Slide 34
	+ Agreed to respond to LS (16-11-1343) from 3GPP RAN1 by asking the 802.11 WG Chair to respond informally to 3GPP RAN1 Chair, noting:
		- The LS was received
		- The issues are important and so timely resolution is also important
		- The WG looks forward to 3GPP RAN1’s response
* Adjourned

**Attendees:**

Dick Roy (SRA)

Kosuke Aio (Sony)

Laurent Cariou (Intel)

Mark Hamilton (Ruckus)

Patrick

Paul Nikolich

Peter Ecclesine (self)

Reza Hedayat (Newracom)

Ron Porat

Andrew Myles (Cisco)

Thomas Derham (Broadcom)

Amal Ekbal

Carlos Cordeiro (Intel)

Guido Hiertz (Ericsson)

Jinjing Jiang (Marvell)

Ryuichi Hirata

Sai

Stuart Kerry (Ruckus)

Tom Pare

Vinko Erceg (Broadcom)

Sean Coffey (Realtek)