IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Wireless Next Generation (WNG) Standing Committee Meeting Minutes for September 2013 Interim Meeting Nanjing, China | | | | |
| Date: 19-September-2013 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| David Hunter | WireFi Networks | 3938 Foothill Road, Santa Barbara, California | +1 805 687 2887 | hunterATtimefactor.com |

Abstract

Minutes for the WNG SC interim meeting held in Nanjing, China in September 2013.

**Tuesday, September 19, 2013, 10:30 AM to 12:30 PM**

Chair: Clint Chaplin

Recording Secretary: David Hunter

**Call to order and agenda**

Meeting called to order on Thursday, September 19, 2013 by Clint Chaplin at 10:30 AM (China Time).

The chair then reviewed the following topics from the agenda:

* The agenda for this meeting is document number 11-13-1221r0.
* 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.
* The chair reminded attendees to record attendance.
* No changes were made to the agenda, and it was approved by unanimous consent.
* Apprximately 110 people were in attendance.

**Approval of previous meeting minutes**

* July 2013 meeting minutes (11-13-0868r0)
  + The chair asked for corrections; none were required.
  + The chair requested approval by unanimous consent.
  + There was no objection from the standing committee, so the minutes are approved.

**Presentation:** Dynamic Sensitivity Control Improvement to Area Throughput – Graham Smith

**Link:** <https://mentor.ieee.org/802.11/dcn/13/11-13-1012-01-0wng-dynamic-sensitivity-control.pptx>

* Questions/comments
  + This seems to be a good way to do it. Need to be scaleable and fair and look at all the scenarios to see if that is maintained in all the places. This looks like a good technology. Have you found some areas where you see some problems?
    - The thing I look at the most is the fairness. You can see scenarios where you can give yourself an advantage over others – but in truth you can do that now with EDCA. But we still do need to go through more use cases.
  + You’re looking at high density and accepting a lot more interference.
    - You might argue that setting it at 20 is too low – or 25. The point is that you can have some operating way higher than the -82. Even though you are -50 dB you still might be stopped from transmitting by someone far away. I didn’t mention that this does improve rejection of adjacent channel interference. It improves that as well.
  + Slide 11: I think there is a problem with legacy STAs. What is the fairness here?
    - That heading might be overstated – “no problem” means just in these example cases. In general that is overstated – instead it should say that in these cases legacy is unaffected.
  + Good concept. If I raise my CCA level I might not hear my colleague and so might conflict more than normal.
    - It matters how you draw the circles (slide 13). The guy who has more interference with others has more chance of being kept quiet – it has that fairness built in. You are right that if you just drew circles without thinking about it, you could end up being quieted more often. But I’m saying that in the real world this is rare.
  + Are you considering interference from other channels? If AP or STA located close by, can get interference from other channels.
    - That’s where the margin idea comes in. Margin of 20 is an attempt to make it fair enough. You are right that it does depend on reasonable channel selection. But if you do it with channel selection, if use the channels that 11aa does specify, you should be able to get the extra throughputs in a cluster type scenario (slide 9).
  + Have you looked at impact on legacy as far as channel access is concerned?
    - If (slide 13) the device is inside the circle, it is fair.
  + Wasn’t clear enough. The current legacy contention period will get wiped out by your allowing others to transmit and overwrite that contention period.
    - Contention periods only start after you have a clash. So I don’t think this improves that. It is possible you’ve created a hidden node – but then have to figure out what is the probability of a hidden node. Have to set up a specific use case for that and see how often it will happen. It is clear that a legacy node outside the area circle might be at a disadvantage.
  + On slide 7 of STA1 is allowed to transmit on top of STA2, then STA3 is affected.
    - It will only be CCA on STA3.
  + Yes, whenever that STA stops transmitting, there would be a contention period and STA3 would lose out. You’re allowing STA1 to transmit earlier.
    - Yes, it would see a shorter contention period.
  + At the expense of some STAs increasing the unfairness in the network – in order for throughput to increase, the others will lose out.
    - Yes, that is the benefit of this scheme – you increase throughput inside at the expense of the outside. If the outsider finds that he is being held up more, it should associate with a different network. Slide 9, that guy should get himself associated with a different number 7 BSS.
  + This seems to disallow the weak guy from associating.
    - Yes, this is trying to create a situation in which the guy with a weak connection will associate with a better BSS for him.
  + Slide 3: did you look at the case where the STA receives a stronger power ack?
    - Yes, say there is a 30 dB difference.
  + My question is that AP1 could be high enough power that it is stronger at STAB than AP2 is.
    - I think he’s still fine with his own AP because doesn’t get interference from STAA. Also, is CCA designed to work with a bigger circle or is it better to get more micro-cells. This is totally applicable to n, g, a and perhaps also ac.
* Author: strawpoll: Do you think that DSC merits further consideration?
  + Chair: willing just to have a show of hands?
  + Author: sure.
  + Chair: I count many more “Yes” hands.
    - That is a pretty definitive answer – they are asking you to do some more work.

**Plans for November 2013**

There will be a call for presentations for Dallas, Texas, U.S.A after the September 2013 meeting.

**Adjournment**

The meeting adjourned, without objection, at 11:30AM (China Time).