IEEE P802.19
Wireless Coexistence

[Meeting Minutes for TVWS Coexistence]				
Date: 07-07-2009				
Author(s):				
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Abstract

In this meeting, Hyunduk Kang presents his contribution Uncoordinated Coexistence Mechanisms in 802.16h, which is specified in contribution 19-09-0041-00-tvws-uncoordinated-coexistence-mechanisms-in-802-16h.ppt. After the presentation, the group also discuss the agenda of the coming plenary meeting.

ATTENDANCE

Attendees	
Name	**Affiliation**
Steve Shellhammer (Chair)	Qualcomm, Inc.
Haiguang Wang (Secretary)	Huawei Technologies Co., Ltd.
Gerald Chouinard	CRC
Herschel Stiles	Voyant International
Hou-Shin Chen	Thomson
Hyunduk Kang	ETRI
Ivan Reede	AmeriSys Inc
Joe Kwak	InterDigital
Julan Hsu	Samsung
Mark Cummings	enVia Technology Partners, Inc
Matthew Sherman	BAE Systems
Peter Loc	IWT Inc
Reddy, Ranga	CIV USA USAMC
Richard Paine	Self
Thomas Kolze	Broadcom
Victor Hou	Broadcom

1.00	**Meeting called to order**	**Chair**	**0**	**7:03 pm**

The meeting was called to order by the Chair, Steve Shellhammar.

2.00	**Attendance**	**Chair**	**1**	**7:03 pm**

Attendees are required to send their name and organization in through email to the Chair and Secretary.

3.00	**Review IEEE Patent Policy**	**Chair**	**0**	**7:04 pm**

The patent policy slides were brought up. There is no specific requirement for them to be read word by word.

4.00	**Approval of Previous Meeting Minutes**	**Chair**	**1**	**7:04 pm**

The chair required to approve the meeting minutes of previous meeting on June 30, 2009. There is no objection and the chair declares that the minutes are approved. The file name of the approved minutes is:
- 19-09/0037r1

5.00	**Hyunduk Kang presents his contribution: Uncoordinated Coexistence Mechanisms in 802.16h**	**Chair**	**52**	**7:08 pm**

Agenda of the meeting:

Agenda
- Attendance

- The IEEE patent policy is available at the following location
  - http://standards.ieee.org/board/pat/pat-slideset.pdf
- Approve minutes from previous conference call (doc. 19-09/37r1)
- Uncoordinated coexistence mechanisms in 802.16h (Hyunduk Kang)
- New Business

1. Before the presentation started, Mark Cummings suggests to chair to discuss agenda of the coming plenary meeting.

2. Hyunduk Kang presents his contribution with the name of uncoordinated coexistence mechanisms in 802.16h. He started the presentation from slides 3. There is no question asked during the presentation. The presentation mainly discussed uncoordinated coexistence mechanisms proposed in the 802.16h. The contribution covers topics such as Dynamic Channel Selection (DCS), channel time sharing among different systems and the dynamic media acquisition (DMA) mechanisms.

3. After the presentation, the group discusses the coexistence techniques contained in the contribution.

4. **Gerald:** in slides 9, there are some boxes for downlink and uplink. Then what is value for RTG.

5. **Hyunduk:** I cannot remember the value clearly.

6. **Joe Kwak:** slides 15 gives the answer. The value is 50 us.

7. **Gerlad:** if a 802.11 AP is far away from the 802.16h base station, will this cause problem?

8. **Hyunduk:** Yes, propagation delay will be critical problem for both .16 BS and .11 AP since carrier sensing could be interfered withe large propagation delay. In case of 11y systems, they use long slot time in random back-off to settle this problem. I think similar mechanism is also needed for 16h systems. Unfortunately, draft does not mention to this matter.

9. **Joe Kwak:** has this (frame allocation mechanism) been implemented in this stage in sharing the spectrum 3650 – 3700 MHz?

10. **Hyunduk:** I has no information on this. 16h working group are still working on the standard. Coexistence evaluation is still going on.

11. **Steve:** 802.19 working group has done some simulation work.

12. **Somebody:** is this simulation document available?

13. **Tom:** it is available one year ago. Will it be possible to post it as a new document?

14. **Mark:** the author should add a couple of scenarios. One of them is one base station and one AP. (Another scenario I did not hear very clearly).

15. **Wendong:** how many networks can be accommodated within one TV channel

16. **Hyunduk:** three networks.

17. **Wendong:** what about there is only one network?

18. **Hyunduk:** the network can use all four frames. The first and second frames are master frame. The third and fourth frames are slave frames.

19. **Wendong:** if the fourth network comes, there is no more space for it. This is some kind of limitation.

20. **Wendong:** how could the second network talk to the first network and get back its master frame?

21. **Hyunduk:** there are some control messages. We also have location information.

22. **Wendong:** who provide the information? service provider or they exchange the information.

23. **Wendong:** how could a large number of networks coverge in shring the channel without a centralized controller? How could it ensure the fairness?

24. **Hyunduk:** this frame allocation can support up to three systems. Only three systems can share co-channelly.

25. **Wendong:** There is some limitation of this scheme.

26. Gerald: for 802.16h, three friendly networks can share the spectrum. In 802.22, we have supper frame and the sharing networks can up to 16.

27. **Gerald:** refer to the FRS(frame reservation signal), how does the non-802.16 network such as 802.11 recongize the signal?

28. **Hyunduk:** to send the signal, the channel should be free. Slide 17 explains this. Only when the channel is free, the base station sends the FRS signal.

29. **Gerald:** 802.11y AP will shut up when receive this signal, is this implemented?

30. **Hyunduk:** I am not sure. 802.11y has CCA to detect channel.

31. **Joe Kwak:** 802.11y has implement CCA.

32. **Joe Kwak:** The reservation for frame start waste resources. In the TDM, if the FRS > 10%, then it is equavalient to the FDM guard band. When different networks coexist within the same channel, the 802.16 BS serves as the manager of resources.

33. **Gerald:** what is the maximum length of 802.11 burst, 5ms or greater than 5ms?

34. **Hyunduk:** limited to 4 ms.

| 6.00 | **Discuss the session arrangement issues for plenary meeting** | Chair | 10 | 7:50 pm |

35. The chair talks about the agenda of the coming plenary meeting. He mentioned that people from 802.11 will give a presentation.

36. **Ivan:** will the meeting slot conflict with tutorial?

37. **Chair:** they have put all the tutorials on Monday night.

38. **Mark:** will you plost the revise agenda.

39. **Chair:** yes.

40. **Mark:** what is the document number?

41. **Chair:** 39.

7.00   **Meeting closed**   **Chair**   **0**   **8:00 pm**