IEEE P802.22
Wireless RANs

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| Minutes of the teleconference on June 6, 2011 on regional area smart grid and critical infrastructure monitoring |
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Abstract

This document presents the minutes of the teleconference on June 6, 2011 on regional area smart grid and critical infrastructure monitoring.

**WG teleconference meeting minutes**

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**June 6, 9-10:30 PM ET**

**Attendees:**

Apurva Mody (BAE Systems), Gerald Chouinard (CRC), Ivan Reede (AmeriSys), Winston Caldwell (Fox), Anthony Franklin (ETRI), Shigenobu Sasaki (Niigata University), Chang Woo Pyo (NICT), Zhang Xin (NICT), M. Azizur Rahman (NICT)

**Minutes:**

1. Meeting call to order by Apurva Mody
2. Chang Woo Pyo presented the document 802.22-11-66r1 titled “Review of 802.15.4 & Comparison with 802.22 Smart Grid and Critical Infrastructure Monitoring”
3. Apurva asked if details of 15.4g standard such as BW, modulations are known. Aziz replied that 15.4g uses simple technology such as FSK and is narrow band. Details can be provided if needed.
4. Apurva commented that the suggested use cases in slide 8 are in-line, especially the b) Emergency Temporary Broadband Infrastructure and d) Remote Medical Service. However, it’s not clear how could we support the other two: a) Regional Area Smart Grid/Metering and c) Critical Infrastructure/Hazard Monitoring especially by ensuring distinction with existing activities in other WGs
5. Ivan suggested swapping the positions of b) and c) and then first two will be of one category and the last two will form another category.
6. Aziz commented that after study we may come up with very different requirements to fulfill the use cases for smart grid and critical infrastructure monitoring
7. Ivan suggested using low duty cycle to appeal low energy usage
8. Gerald asked why 15.4g didn’t consider 5 GHz band. Pyo said it might be due to range. Ivan said it might be due to power consumption of oscillators
9. Gerald commented that the distinction feature listed in 15 SG4TV is not perfect while seen from 802.22 side. Apurva said they used some smart ideas.
10. Gerald asked about the difference between peer to peer and point to point communication. Ivan replied that point to point communication is usually between two DEVs at all times, whereas, peer to peer communication is many instances of point to point communication where the DEVs change in the course of time
11. Gerald informed that presently 9 bit assigned for station ID can support 512 stations. However, there are 3 more bits for flow ID that can be used to increase the supported number of CPEs.
12. Pyo asked all how many CPEs should be supported for the new use cases? Gerald replied that we need to consider how many end points we need to support and how much data the backhaul can support etc.
13. Winston commented that the presentation from Pyo was from application point of view. We need to consider cases where we have the broadband service as well as we support smart grid services and end point meter reading etc (low data rate, scalable)
14. Aziz commented that the proposed use case a) in slide 8 may fulfill cases as mentioned by Winston
15. Apurva commented we may not consider low energy
16. Ivan stressed that we should consider the market demands. We need cheap devices. Having broadband service shouldn’t make the devices expensive.
17. Winston agrees that we shouldn’t make too complex devices. There are many government subsidies as well
18. Apurva doesn’t agree with Ivan on broadband service issue. We are broadband first and then we should give smart grid service. This way we can keep the distinction from all other standard projects
19. Ivan mentioned some Canadian experience where the power company stopped promoting communication over fiber
20. Ivan stressed that we can give service nonstop at any time. This is an advantage as compared to 15.4.
21. Apurva mentioned there are few tutorials on smart grid applications such as in Silver spring webpage. We should also review tutorials.
22. Apurva said the distinction with 15.4 includes a) 15.4 is for end users at last mile. They need back haul b) may be for urban, but it would be difficult for rural areas c) 22 would give robust connection d) 22 would give real time connection e) no other wireless can give such range/coverage
23. Gerald mentioned that 802.22 is robust against multipath fading that 15.4 would lack
24. Ivan suggested that we be careful with EC about 15SG4TV that we clearly show the difference we have
25. Apurva mentioned that we already talked with Bob and Paul about it. We should fill up the gap 15.4 would have and work together.
26. Meeting adjourned by Apurva Mody