IEEE P802.15
Wireless Personal Area Networks

Project	IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)		
Title	**PDX to Berlin conference call minutes**		
Date Submitted	[24 August, 2004]		
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Re:	[802.15.3-2003.pdf]		
Abstract	[This minutes of the 802.15.3b conference calls from Portland (July 2004) to Berlin (September 2004).]		
Purpose	[]		
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1. August 10, 2004, 8 am PDT

TG3b call minutes

Attendees: John Barr, Bill Shvodian (WMS), Jay Bain, James Gilb (JPKG), Dave Thompson, Peter Johansson (PJ), Mark Schrader

Meeting called to order at 8:05 am PDT.

Agenda (from email)
- Roll call
- Status of work items
- Text ready for review (see below)
- Dly-ACK presentation (15-04-299-00-3b-modified-delayed-ack-ieee-802-15-3)
- Adjourn

Status of work items: JPKG has assigned people to write text, document to be posted.

Next call will be 8/17/2004, WMS will present token passing vs. polling. JPKG to schedule discussion of 4 unresolved comments.

Berlin agenda
- Due date for text submissions for current comments is September 8, 2004, high tide in San Diego.
- First session Monday 1:30, set agenda, approve minutes from Portland and conference calls.
- Drafting/draft review – status of drafting.
- Other drafting review on Monday afternoon
- MLME review on Tuesday
- Wednesday – additional drafting discussion/review
- Thursday – morning joint with TG5, afternoon prepare for letter ballot.

Text ready for review:

1. Comment #2: 802.15.3 encryption changes for frame retransmissions

Suggested changes..

10.2.4 Nonce value
(end of first paragraph)
....as long as a DEV does not send more than 65536 frames to a
particular DestID within that superframe. (delete last sentence and add) To allow a frame to be retransmitted within the same superframe using the same nonce certain bits are masked to zero in all frames for the integrity code calculation. In all frames, the Retry

bit and the More data bit shall be masked to zero in the Frame Control field for the integrity code calculation. Frames retransmitted in a subsequent superframe shall use a new nonce. (replaces) If a frame is retransmitted and a single.... to end of paragraph.

WMS wondered if we need this because of the method used for the 802.15.3 nonce. This was previously considered in an earlier draft and rejected.

JPKG will add this to the draft with some more tweaking.

2. RX status feedback

7.2.4 Fragmentation Control
Add text after figure 10.
The three octets that comprise the Fragmentation Control field may be used for reporting PHY specific receive status information to the transmitting DEV in Imm-ACK and Dly-ACK frames.

New clause
7.2.? Receive Status
When used for reporting receive status, the octets that comprise the Fragmentation Control field should be formatted as illustrated in Figure ??.

New table: Receive status field format
b0-b2 Status type
b3-b23 PHY specific receive status value

PJ suggest b0-b23 as PHY specific data, 0x000000 is reserved and indicates that no information is present, all agreed to change.

JPKG: May need to change Figure 6 to address both fields.

7.2.?.1 Status Type
The Status Type field identifies the type of PHY specific receive status. A status type value of zero indicates that no status information is present. In this case, all other bits in the receive status field shall be set to zero by the transmitting DEV.

(don't use above because of change to single field).

7.3.2.1 Immediate ACK Frame
Add to table 44
Fragmentation control
Setting on transmission: 0x000000 or Receive Status value in table ??
Interpretation on reception: 0x000000 may be ignored - any other value decode Receive Status

Interpretation on reception: May be ignored

7.3.2.2 Delayed ACK Frame
Apply same change to table 45.

JPKG: To add definition for clause 11 of the field. Use RSSI and LQI. Possibly add to 11.7

New business

WMS requests presentation time for Dly-ACK improvements.

John Barr will send note to Sanjeev Sharma that the group will review the proposal next week, but is leaning toward rejecting it.

JPKG to post list of tasks.

Meeting adjourned at 8:50 am PDT.

2. August 17, 2004, 8 am PDT

The agenda is:

- Roll call
- Unfinished CIDs
  - 42/45: Allow CTA IEs in the extended beacons?
  - 69: Provide method for PNC to delete SPS sets
  - 70: Allow PNC to only terminate a neighbor CTA without disassociating the DEV.
- New proposals:
  - Dly-AcK: 15-04-299-00-3b-modified-delayed-ack-ieee-802-15-3
  - Polling vs. token passing to release time in a CTA, WMS to submit document.
- Adjourn

Attendees: James Gilb (JPKG, Chair), John Sarallo, Mike Rudnick, Bill Shvodian (WMS), Mark Schrader, Julian Hall, Sanjeev Sharma (SS), Jay Bain (JB), Joe Acisdors

Meeting called to order at 8:20 am.

CID 42/45:
This has been researched and the opinion is that there will be little to no impact on the hardware to allow these in the subsequent Announce command frames. Change text to allow CTA IEs in the extended beacon.

CID 69:
For DEVs that are sleeping, the PS Status IE will be missing the set and so the DEVs should send a PS Set Information Request command. For DEVs that are awake, when they request a change in PM mode, they will be refused by the PNC via the PM Mode

Change Response command. Ed. Note: make sure we have an appropriate error message.

CID 70:
Allow PNC to terminate stream without disassociating the Neighbor DEV. JPKG to submit text.

Dly-ACK: 15-04-299-00-3b-modified-delayed-ack-ieee-802-15-3
WMS: Did we have a bit map earlier in Dly-ACK?
JPKG: Probably.
JB: What is the real probability of someone using a large number of frames before requesting a Dly-ACK.
SS: They are still gathering data for this
JPKG: This still adds complexity. Both the transmitter and receiver have to compute the bitmap and the number of octets in the bitmap for each MPDU number.
SS: Yes it adds complexity.
JPKG: The improvement needs to be calculated for the throughput, not the overhead of the shortest frame in the exchange.
SS: They will re-calculate the improvement including all timing.

Resolution: Need more information.

Dly-ACK: 15-04-0435-00-003b-simplified-delayed-ack-response.ppt
WMS: Covers presentation. Think this required a hardware implementation

Discussion on next regularly scheduled call (which is 2 weeks).

Not presented, WMS to schedule and sponsor conference call on polling vs. token passing for next week.

Token passing vs. polling:
Reference:
15-04-0436-00-003b-polling-vs-token-passing-bi-directional-ctas.ppt
15-04-0437-00-003b-polling-vs-token-passing-bi-directional-ctas.xls

Meeing adjourned at 9:07 am PDT.

3. August 24, 2004, 8 am PDT

The agenda is:

- Roll call
  - Dly-AcK: 15-04-0435-00-003b-Simplified-Delayed-ACK-Response.ppt
  - Polling vs. token passing to release time in a CTA:
    15-04-0436-01-003b-Polling-vs-Token-passing-for-bi-directional-CTAs.ppt
    15-04-0436-01-003b-Polling-vs-Token-passing-for-bi-directional-CTAs.xls
- Adjourn

Attendees: James Gilb (JPKG), Bill Shvodian (WMS), Julian Hall, Jay Bain, Dave Thompson, Sanjeev Sharma, Jim Allen, Joel Apisdorf (JA), Mark Schrader.

Meeting called to order at 8:06 am PDT.

Dly-AcK: 15-04-0435-00-003b-Simplified-Delayed-ACK-Response.ppt

WMS: This can save some time.

JPKG asked WMS if he knew of any patents that applied to his proposal. WMS: He doesn't know if there is. WMS will not answer if he personally knew of any patents.

No resolution.

Polling vs. token passing to release time in a CTA:
15-04-0436-01-003b-Polling-vs-Token-passing-for-bi-directional-CTAs.ppt
15-04-0437-01-003b-Polling-vs-Token-passing-for-bi-directional-CTAs.xls

WMS: This requires adding a PollID to the header.
JPKG: This would horribly break existing implementations.

MS: What if you don't get a response?
JA: You send the next data frame.

JH: What about MIFS for no-ACK?
WMS: This only applies to the same DEV transmitting. If you set the Poll field in the header, then you would wait a SIFS.

JPKG: Is this exactly the same as 802.11e or different?

JPKG: Are you aware of any IP in this?
WMS: He is not aware of any IP on this.

MS: What are the most likely scenarios?
JA: Scenarios 4 and 6 for TCP traffic.

WMS: There could be one TCP ACK frame for every TCP frame sent.
JPKG: This will adversely affect the throughput because of all of the traffic in the reverse direction.
WMS: The impact will be less with polling.

Discussion on implied ACK vs. polling vs. token.

JA: Thinks Implied ACK will be the most efficient.

Meeting adjourned at 9:07 am PDT.