

P802.16p to Sponsor Ballot: Conditional Approval Request

11 November 2011

Rules: OM (2010-07-16) Clause 14

motions requesting conditional approval to forward when the prior ballot has closed shall be accompanied by:

- Date the ballot closed
- Vote tally including Approve, Disapprove and Abstain votes
- Comments that support the remaining disapprove votes and Working Group responses.
- Schedule for recirculation ballot and resolution meeting.

Date the ballot closed

Stage	Open	Close
WG Letter Ballot #33	7 Oct	6 Nov 2011

Vote tally including Approve, Disapprove and Abstain votes

86 Approve (97%)

- 3 Disapprove with comment
- 0 Disapprove without comment
- 4 Abstain
- Return ratio requirement met (60%)

Comment Resolution

- Working Group Letter Ballot #33
 - 109 comments
 - 45 Disapprove comments (10 Disapprove voters)
- Comment resolution at IEEE 802.16 Session #76 (2011-11-07 through 2011-11-10)
 - In IEEE 802.16-11/0040r2
- Following comment resolution:
 - 3 Disapprove voters
 - 7 Disapprove comments

Comments that support the remaining disapprove votes and Working Group responses

- See following:

Comment by: Eunjong Lee

Membership Status: Member

Date: ?

Comment # 062

Document under Review: IEEE 802.16p/D1

Ballot ID: 33

Comment Type Technical Part of Dis Satisfied Page 12 Line 27 Fig/Table# Subclause 6.3.22.8.1

In the last meeting, we defined that the domain of the network entity that assigns MGID is identified by M2M DEVICE GROUP ZONE ID transmitted in the DCD message. According to the current texts, if an M2M device moves to another M2M device group zone, the current MGID should be updated. So, this contribution proposes to trigger location update when an M2M device detects that the selected preferred BS does not support its currently assigned MGID. The M2M device can detect the change of M2M GROUP ZONE by monitoring the M2M DEVICE GROUP ZONE ID in the DCD message which is transmitted by the preferred BS.

Suggested Remedy

Adopt the proposed text in IEEE C80216p-11_0313.doc or its latest revision.

GroupResolution

Decision of Group: Rejected

Reason for Group's Decision/Resolution

Incomplete remedy provided. Incomplete remedies were also provided in other comments. An ad hoc committee will be initiated to resolve and harmonize these comments and aid in deriving a complete solution for input to the Sponsor Ballot process. The commenter is invited to participate.

Group's Notes

Editor's Notes

Editor's Actions

Comment by:

Ron Murias

Membership Status: MemberDate: 2011-11-04Comment # 057Document under Review: P802.16p/D1Ballot ID: 33Comment Type Technical Part of Dis Satisfied Page 12 Line 2 Fig/Table# Subclause 6.3.10.3

6.3.10.3.1 in the baseline document describes "Contention-based initial ranging and automatic adjustments".

While "Adjustment of local parameters (e.g. Tx power) in an SS as a result of the receipt (or non-receipt) of a RNG-RSP is considered to be implementation-dependent", the normal behaviour for an SS not receiving a RNG-RSP is to ramp power and try again using a random backoff.

Many contributions submitted to this group show that collisions are expected and there is a high likelihood that devices will need to try more than once, purely because a collision has occurred. In this case, the default behaviour of each device increasing its transmit power will result in unnecessary power consumption and an increase in interference.

There is currently no way for a device to know the difference between a failed RNG-REQ caused by too low a power setting and a failed RNG-REQ caused by a collision.

Suggested Remedy

Clarify the ranging "power ramping" mechanism so that, in the event of a collision, subscribers do not unnecessarily ramp power before re-trying.

GroupResolutionDecision of Group: RejectedReason for Group's Decision/Resolution

It is recommended the commenter brings a contribution with specific remedy into the Sponsor Ballot process.

Group's NotesEditor's NotesEditor's Actions

2011/11/11

IEEE 802.16-11/0040r2

Comment by:

Ron Murias

Membership Status: Member

Date: 2011-11-04

Comment # 108

Document under Review: P802.16p/D1

Ballot ID: 33

Comment

Type Technical

Part of Dis



Satisfied



Page 32

Line 44

Fig/Table#

Subclause

It is not clear what functionality is required to create an "M2M device". The baseline document includes Clause 12 - System profiles for this purpose.

Suggested Remedy

Create/update system profiles to clearly define what features are used in an M2M device.

GroupResolution

Decision of Group: Rejected

Reason for Group's Decision/Resolution

It is recommended the commenter brings a contribution with specific remedy into the Sponsor Ballot process.

Group's Notes

Editor's Notes

Editor's Actions

Comment by:

Lei Wang

Membership Status: MemberDate: 2011/11/04Comment # 063Document under Review: IEEE P802.16p/D1Ballot ID: 33

<u>Comment</u>	<u>Type</u> Technical	<u>Part of Dis</u> <input checked="" type="checkbox"/>	<u>Satisfied</u> <input type="checkbox"/>	<u>Page</u> 12	<u>Line</u> 30	<u>Fig/Table#</u>	<u>Subclause</u> 6.3.22.11
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This is a resubmission of of a Session #75 comment about M2M device -specific idle mode timer. The original comment (#032 in 16p-11/0023r2) was rejected by the reason "Many parts of the AWD is based on the assumption that the BS knows when the SS is an M2M device. And for the idle mode, the BS does not have to care of the idle mode because the idle mode is handled between a device and a paging controller, and the idle mode timer is managed by the device and the paging controller. For the second question, we need a separate idle mode timer to support longer paging cycle."

Again, strongly disagree with the above given reason. Here's why:

-- the fact that May parts of the AWD assumption the BS know the SS is a M2M device does not mean the BS really knows or our spec really takes care of making such an assumption true.

-- In addition, if BS does not need to care of idle mode, then when BS should include such a M2M specific idle mode timer, including in every DREG-CMD message??? Should not be!!!

-- Finally, how long do you need for M2M specific device idle mode timer? Please note the current regular idle mode timer can give you up to 18.2 hours for a 2-byte field. Now the proposed M2M specific idle mode timer is 3 bytes, then give you 4660.3 hours. Do you really something more than 18 hours long? note that the current long paging cycle is for fixed devices, where it will use the localized idle mode not requiring location update.

Ok, here's the original comment:

The introduction / use of "M2M device-specific idle mode timer" really has some serious issues, e.g.,

1. do the BS and a subscriber have the same determination regarding whether or not a subscriber is an M2M device? or in other words, do both sides know which idle mode timer should be used for the subscriber, normal idle mode timer or M2M device-specific timer?

2. why do we need a separate idle mode time for M2M devices? For fixed M2M devices, no, should not be, as the localized idle mode will address that issue.

Suggested Remedy

Make the following changes:

1. delete the text in line 32 to line 42 on page 12;
2. delete the text in line 2 to line 6 on page 9;
3. delete the Row in line 54 to line 58 on page 28.

GroupResolutionDecision of Group: Rejected

Reason for Group's Decision/Resolution

To answer question 1, it's a network entity, not a BS, that knows the type of the device and determines the required timer.

To address question 2, the idle mode timer for HTC device is a global value. However, M2M device specific idle mode timer is dependent on M2M device specific service type (e.g, paging cycle and etc) and this is an individual value. Thus, M2M device specific idle mode timer shall be included in idle mode initiation message (i.e, AAI-DREG-RSP message).

Group's Notes

Editor's Notes

Editor's Actions

Comment by: Lei Wang

Membership Status: Member

Date: 2011/11/04

Comment # 061

Document under Review: IEEE P802.16p/D1

Ballot ID: 33

Comment Type Technical Part of Dis Satisfied Page 12 Line 18 Fig/Table# Subclause 6.3.22.6

This is a resubmission of of a Session #75 comment. The original comment (#061 in 16p-11/0023r2) was rejected by the reason "This may be applied for smaller paging cycle values. "

Really cannot agree with this given reason. Note that, if a smaller paging cycle value is used, e.g., the UL report cycle/polling cycle is multiple times of paging cycle, then the M2M report code is used to tell when the M2M device get polled.

Ok, the following is the original comment:

Don't think the use of "Max number of paging cycle" is the right way to shape / delay the periodic UL non-realtime data transmission for M2M devices in case of network congestion. Note that the paging cycle can be up to 64k frames (not consider the new proposals to make it even longer).

Suggested Remedy

Make the following changes

1. Change the paragraph in line 18 on page 12 as follows:

MOB_PAG-ADV with M2M report code may be used to poll fixed M2M devices for periodic uplink non-realtime data transmission. ~~if an M2M device receives the DREG-RSP message with the Transmission Type set to 1 and Max number of paging cycle TLV during idle mode entry, the M2M device shall wait for the MOB_PAG-ADV with M2M report code as long as Max number of paging cycle * paging cycle before sending uplink data. If the M2M device does not receive at least one MOB_PAG-ADV with M2M report code within Max number of paging cycle * paging cycle, it may not send the uplink.~~

2. delete line 17 to 21 on page 9;

3. delete row in line 4 to 8 on page 29.

GroupResolution

Decision of Group: Rejected

Reason for Group's Decision/Resolution

When the M2M device miss the paging message, it monitors the paging message at the next paging cycle. It is common problem. If the long paging cycle can be a problem, ABS can set the Max number of paging cycle to 1. Moreover, M2M device with longer paging cycle additionally monitors the paging message in 2nd paging offset.

Group's Notes

Editor's Notes

Editor's Actions

Comment by: Lei WangMembership Status: MemberDate: 2011/11/04Comment # 085Document under Review: IEEE P802.16p/D1Ballot ID: 33

<u>Comment</u>	<u>Type</u> Technical	<u>Part of Dis</u> <input checked="" type="checkbox"/>	<u>Satisfied</u> <input type="checkbox"/>	<u>Page</u> 15	<u>Line</u> 1	<u>Fig/Table#</u>	<u>Subclause</u> 6.3.35
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This is a resubmission of a Session #75 comment. The original comment (#097 in 16p-11/0023r2) was rejected by the reason "Abnormal Power Down should be treated differently from other abnormal situations, since in other situations the devices are not time constrained in the same manner as for power down. Other cases should be treated separately. "

I really cannot agree with the above given reason of rejection. Here's why:

1. Some other system critical exceptions are even more time urgent than the power outage, e.g., gas pipeline leaking. Note that one of the main 16p M2M device types is meters/sensors, whose main function is "monitoring". When doing "monitoring", the exceptions are certainly needed to be considered.
2. when an exception occurs, the device shall report it to the application server and it is up to the applications to handle it. Well, come to layer 2 or 1, it is helpful to have some supporting mechanisms to timely delivery the exception report.
3. there are two different cases of exception reporting: individual exception and widely-spread exception. Note that the current 16e/16m design shall be able to handle the individual exception cases. In other words, 16p should focus on the widely-spread exception cases as 16p needs to support a large number of devices.
4. In the widely-spread exception cases, there are also two different cases in terms of potential ranging channel congestion, i.e.
 - 4a: exception reporting at the time that a critical exception occurs, i.e., a large number of devices are trying to enter the network to report the exception;
 - 4b: operation recovering after the critical exception has been fixed, if the exception caused a large number of devices were disconnected from the system.
 For 4a, there is another question, i.e., do we really need all the impacted devices to report the same exception?

In summary, I don't think the current section 6.3.35 has properly addressed the layer 2 supports to ranging channel congestion avoidance/handling due to a large number of devices in 16p, although the cumulative distribution function thing may help by desynchronizing the ranging channel access demand. I would strongly recommend changing section 6.3.35 to properly cover the handling of wide-spread system critical exceptions.

Suggested Remedy

Make the following changes

1. throughout the 16p/D1 document, change "abnormal power down" to "widely-spread critical exception"
2. Insert the following text in line 52 page 15:

6.3.35.3 Operation Restoring after a Recovered Widely-Spread Critical Exception

If a widely-spread critical exception has caused that a large number of devices were disconnected from the system, then after the critical exception has been fixed, the procedures described in this subsection shall be used by the devices to enter the network to restore their normal operation.

The network entry procedures include TBD.

GroupResolution

Decision of Group: Rejected

Reason for Group's Decision/Resolution

The group considers the proposed remedy to be incomplete and inconsistent with other comments. A reviewer of this comment has observed that "The suggested remedy begs the question: How does the device determine that the critical exception is widely spread. I do not entirely disagree with the commenter, in particular that network entry after recovery needs to be addressed. A complete remedy is missing, however."

Group's Notes

Editor's Notes

Editor's Actions

Comment by:

Lei Wang

Membership Status: Member**Date:** 2011/11/04**Comment #** 083**Document under Review:** IEEE P802.16p/D1**Ballot ID:** 33**Comment** **Type** Technical **Part of Dis** **Satisfied** **Page** 14 **Line** 52 **Fig/Table#** **Subclause** 6.3.34.1

I think I understand the purpose of introducing the Multicast Traffic reception timer, i.e., protect the device from waiting too long for the multicast data transmission after the anticipated transmission time. However, my question are:

1. Why does this happen? or in other words, what're the possible reasons to cause such error? BS does not actually do the transmission or the device cannot receive the multicast data?
2. if this happens, should the device inform the BS when it enters the network later for other reasons, e.g., UL traffic? If so, should the device keep track of the number of times missing multicast data?

Let's first find out if we really need the (mandatory) Multicast traffic reception timer mechanism, and then worry about the error report thing.

Suggested Remedy

Either delete the paragraph in line 52 on page 14 or clarify the need of the Multicast traffic reception timer and also change the last sentence of the paragraph as follows:

If the M2M Multicast Traffic Reception timer expires, the M2M device shall enter the paging unavailable interval as specified in 6.3.22.4, and the M2M device shall report the the BS such a failed M2M Multicast Traffic Reception error when it connects to the BS next time for some reasons, e.g., UL data transmission or location update. The format of the failed M2M Multicast Traffic Reception error report is TBD.

GroupResolution**Decision of Group:** Rejected**Reason for Group's Decision/Resolution**

The group considers the proposed remedy to be incomplete. A reviewer of this comment has observed that "Although M2M device reports the error of multicast data receptions after longer time to BS, BS cannot recover the error because BS flushes the multicast TX buffer after sending the multicast data."

Group's Notes**Editor's Notes****Editor's Actions**

Schedule for recirculation ballot and resolution meeting

- PAR update approval: 2011-12-06
 - Ballot Group formation complete: ~2012-01-06
- 30 day Recirculation (approximately 2011-12-05 to 2012-01-05)
- if conditions met:
 - 30-day Sponsor Ballot (approximately 2012-01-10 to 2012-02-10)
- else
 - Comment resolution meeting: 2012-01-16 through 2012-01-19, followed by confirmation recirc

802.16 WG Motion

802.16 Closing Plenary: 2011-11-10

Motion: To request the WG to forward IEEE P802.16p to the IEEE 802 LMSC Executive Committee, requesting conditional approval for IEEE-SA Sponsor Ballot.

- Proposed: Erik Colban
- Seconded: Brian Kiernan
- Approved 32-0-0

LMSC Motion

- To grant conditional approval, per Clause 14 of the IEEE 802 Operations Manual, to forward P802.16p for Sponsor Ballot
- Moved:
- Seconded:
- Approve:
- Disapprove:
- Abstain: