

July 2008

15-08-0544-00-003c

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**IEEE P802.15**  
**Wireless Personal Area Networks**

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Project	IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)		
Title	<b>IEEE802.15 TG3c meeting minutes, Denver</b>		
Date Submitted	July, 2008		
Source	[Chin-Sean Sum] [Tuncer Baykas] [Reed Fisher]	Voice: Fax: E-mail:	  [sum@nict.go.jp]
Re:	802.15.3c Plenary Meeting Denver		
Abstract	IEEE 802.15 Task Group TG3c Minutes		
Purpose	Official minutes of the TG3c Session		
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**Monday, July 14, 1<sup>st</sup> slot**

7.30pm. VHT/TG3c Joint Meeting.

**Tuesday, July 15, 2<sup>nd</sup> slot, AM1**

Meeting called to order

8.00am. Meeting called to order by R. Fisher.

Announcement and Introduction

08/0247. Opening introduction was presented. The summary is as below:

- PAR TG3c (<http://standards.ieee.org/board/nes/projects/802-15-3c.pdf>)
- Online attendance registration (<http://murphy.events.ieee.org/imat/index.htm>)
- Disclosure of affiliation
- Highlights of the IEEE standard boards bylaws on patents in standards
- The leadership of TG3c
- Meeting objectives, timeline.

Approval of the Jacksonville Meeting Minutes

08/0389. Motion to approve Jacksonville meeting minutes proposed by T. Baykas and seconded by H. Harada..

08/389. Motion was passed by acclamation and the Jacksonville meeting minutes were approved.

Approval of Agenda

08/0398r0. Agenda opened for discussion.

08/0398r1. Modified agenda approved by acclamation.

Baseline Document Review 1

08/432r2. All editorial comments were grouped and would be handled by the TG3c technical editor, J. Gilb.

08/432r2. Motion to approve resolution to comment #175, #176. Motion approved by acclamation.

Motion to resolve duplicated comments simultaneously. Comments #203 to #210 by Y.Zhan are similar to comments # 211 to #218 by L. Huang and comments #219 to #226 by M. Sim.

08/432r2. Motion to resolve duplicated comments simultaneously. Comments #257 to #277 by P. Paganì are similar to comments # 236 to #256, by J. Schwoerer.

08/432r2. Motion to approve resolution to comment #1. Motion approved by acclamation.

08/432r2. Motion to approve resolution to comment #2. Motion approved by acclamation.

08/432r2. Motion to approve resolution to comment #3. Motion approved by acclamation.

08/432r2. Motion to approve resolution to comment #7. Motion approved by acclamation.

08/432r2. Motion to approve resolution to comment #12. Motion approved by acclamation.  
08/432r2. Motion to approve resolution to comment #13. Motion approved by acclamation.  
08/432r2. Motion to approve resolution to comment #14. Motion approved by acclamation.  
08/432r2. Motion to approve resolution to comment #31. Motion approved by acclamation.  
08/432r2. Motion to approve resolution to comment #52. Motion approved by acclamation.  
08/432r2. Motion to approve resolution to comment #60, #61. Motion approved by acclamation.

**Tuesday, July 15, 3<sup>rd</sup> slot, AM2**

Call to order

10.30am. Meeting called to order by R. Fisher.

Comment Resolution 2

08/432r2. Editorial comment #62 to #66 resolved.  
08/432r2. Motion to approve resolution to comment #67. Motion approved by acclamation.  
08/432r2. Motion to approve resolution to comment #72. Motion approved by acclamation.  
08/432r2. Motion to approve resolution to comment #73. Motion approved by acclamation.  
08/432r2. Motion to approve resolution to comment #77. Motion approved by acclamation.  
08/432r2. Motion to approve resolution to comment #128. Motion approved by acclamation.  
08/432r2. Motion to approve resolution to comment #130, #131, #132. Motion approved by acclamation.  
08/432r2. Motion to approve resolution to comment #134. Motion approved by acclamation.  
08/432r2. Editorial comment #136 resolved.  
08/432r2. Motion to approve resolution to comment #137. Motion approved by acclamation.  
08/432r2. Motion to approve resolution to comment #139 to #140. Motion approved by acclamation.  
08/432r2. Motion to approve resolution to comment #144. Motion approved by acclamation.  
08/432r2. Motion to approve resolution to comment #146. Motion approved by acclamation.  
08/432r2. Editorial comment #157, #158 resolved.

Motion to modify the agenda by H. Harada, seconded by J. Gilb.

Move the discussion on TG3c/VHT to slot 2, 11.30- 12.30pm.

Move technical contribution by X. An to 6<sup>th</sup> slot AM1.

08/398r3. Agenda modification approved by acclamation.

08/494. R. Fisher summarized the interactions between TG3c and 802.11 VHT.

The summaries of the 2 conference calls were reported.

08/478. The motion moved by R. Fisher in the opening plenary, "That the 802 EC not forward the VHT PAR to NesCom for approval on fact that it is not sufficiently unique" was also reported. Ballot outcome: Yes: 43. No: 18. Abstain: 16.

08/396r1. S. Kato summarized seven suggestions on VHT PAR to be sent to VHT SG.

08/724r2. The updated answers from VHT to TG3c's questions were presented by S. Kato.

08/495r. TG3c's concerns on the VHT PAR is presented by S. Kato.

TG3c requires that, for better coexistence, the following should be fulfilled:

1. Same channelization
2. Common mode to be implemented
3. Some rules to open a new channel for new devices to establish communication links
4. Applicability of the TG3c PHY to be investigated with the highest priority

**Tuesday, July 15, 4<sup>th</sup> slot, PM1**

Call to order

1.30pm. Meeting called to order by R. Fisher.

08/500. S. Kato proposed to form a joint task force consisting of TG3c and VHT SG members.

08/500. Motion to approve the creation of a VHT/TG3c Task Force proposed by S. Kato, seconded by I. Lakkis.

C. Hansen inquired the official role of the Task Force.

J. Trachewsky stated preference in an informal discussion group between VHT SG and TG3c rather than an official.

The motion was withdrawn by S. Kato.

TG3c member were asked to compose questions intended for the VHT SG.

3.30pm. Recess called by R. Fisher.

**Tuesday, July 15, 5<sup>th</sup> slot, PM2**

Call to order

4.00pm Meeting called to order by R. Fisher.

08/498r0. Seven suggestions were listed to be sent to 802 working group.

Motion by J. Gilb to adopt 08/498r3 as the TG3c suggestion VHT PAR to the proposing working group and EC, seconded by H. Harada.

J. Trachewsky objects point 7 on the difference in data rate and range

R. Fisher called a straw poll to drop point 7 (on data rate and range) from 08/498r0.

Yes: 16. No: 39.

Point 7 shall stay in 08/498r1.

J. Trachewsky commented that the document is technically insufficient and should be sent to the working group.

H. Shao called the question.

J. Trachewsky object due to incompleteness of the 08/498

Yes: 50. No: 9. Abstain: 0.

Further discussions were terminated.

Yes: 49. No: 14. Abstain: 1.

Motion passed and the document will be formally forwarded to VHT SG.

5.00pm. Recess called by R. Fisher.

### **Wednesday, July 16, 6<sup>th</sup> slot, AM1**

#### Call to order

8.00am Meeting called to order by R. Fisher.

08/398r4. R. Fisher showed the modified agenda.

Agenda approved by acclamation

11-08/800. Discussion on response from the 802 working group, by R. Fisher.

#### Technical Contribution

08/449. Performance of Standard Aggregation Method with Block-ACK Policy, by X. An.

#### Baseline Document Review 4

08/432r3. Comment resolution by J. Gilb.

08/432r3. Motion to approve resolution to comment #159. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #161. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #195. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #203. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #207. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #210. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #230. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #231, #232, #233. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #269. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #280. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #284 to #292. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #294, #295. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #298, #299. Motion approved by acclamation.

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10.00am. Recess called by R. Fisher.

**Wednesday, July 16, 7<sup>th</sup> slot, PM1**

Call to order

1.30pm Meeting called to order by R. Fisher.

Baseline Document Review 5

08/432r3. Motion to approve resolution to comment #303. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #307 to #309. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #311. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #317. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #321. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #326 to 329. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #345. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #355. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #358. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #372. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #374. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #382 proposed by J. Gilb, seconded by C.S. Sum.

Yes: 29. No: 1. Abstain: 6.

Motion passed. Comments #131, #132, #144 were resolved with the same motion.

3.30pm. Recess called by R. Fisher.

**Wednesday, July 16, 8<sup>th</sup> slot, PM2**

Call to order

4.00pm Meeting called to order by R. Fisher.

Baseline Document Review 6

08/432r3. Motion to approve resolution to comment #384. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #389, #390, #391. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #395, #396, #399. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #403 to #405. Motion approved by acclamation.

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08/432r3. Motion to approve resolution to comment #406 proposed by J. Gilb, seconded by B. Bosco.

Yes: 31. No: 3. Abstain: 3.

Motion passed.

08/432r3. Motion to approve resolution to comment #408. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #414. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #419. Motion approved by acclamation.

08/432r3. Motion to approve resolution to comment #423, #424. Motion approved by acclamation.

08/398r4. Motion to approve modified agenda. Approved by acclamation.

6.00pm. Recess called by R. Fisher.

### **Thursday, July 17, 9<sup>th</sup> slot, AM1**

#### Call to order

8.00am Meeting called to order by R. Fisher.

08/527. Response to official comments 11-08/880r1 by S. Kato.

S. Kato reported that VHT PAR was approved with 89 yes, 18 no and 16 abstain.

The concerns and suggestion to VHT 60 PAR was discussed.

08/527. Motion to approve the position statement in 15-08-0527-00-003c as the task group's opinion on the 802.11 VHT PAR and requests that the WG approve this opinion and forward it to the 802 Executive Committee, by J. Gilb, seconded by H. Harada.

Yes: 42. No: 3. Abstain: 4.

#### Baseline Document Review 7

08/432r4. Motion to approve resolution to comment #425, proposed by J. Gilb, seconded by S.K Yong.

Yes: 34. No: 2. Abstain: 5.

Motion was passed.

08/432r4. Motion to approve resolution to comment #429. Motion approved by acclamation.

08/432r4. Motion to approve resolution to comment #430. Motion approved by acclamation.

08/432r4. Motion to approve resolution to comment #437. Motion approved by acclamation.

08/432r4. Motion to approve resolution to comment #439. Motion approved by acclamation.

08/432r4. Motion to approve resolution to comment #442. Motion approved by acclamation.

08/432r4. Motion to approve resolution to comment #444. Motion approved by acclamation.

08/432r4. Motion to approve resolution to comment #456,457. Motion approved by acclamation.

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08/432r4. Motion to approve resolution to comment #459. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #475. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #485. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #486. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #489. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #491. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #494 to #497. Motion approved by acclamation.

10.00am. Recess called by R. Fisher.

**Thursday, July 17, 10<sup>th</sup> slot, AM2**

Call to order

10.30am Meeting called to order by R. Fisher.

08/432r4. Motion to approve resolution to comment #498 to #500. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #503 to #507. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #509 to #510. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #513 to #517. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #530 to #531. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #546. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #552. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #546. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #557. Motion approved by acclamation.

**Thursday, July 17, 11<sup>th</sup> slot, PM2**

Call to order

1.30pm Meeting called to order by R. Fisher.

08/432r4. Motion to approve resolution to comment #580. Motion approved by acclamation.

Straw poll to keep SC-PHY data rate to be less than approximately 3Gbps.

Yes: 28. No: 0. Abstain: 8.

3.30pm. Recess called by R. Fisher.



**Thursday, July 17, 12<sup>th</sup> slot, PM2**

Call to order

4.00pm Meeting called to order by R. Fisher.

08/432r4. Motion to approve resolution to comment #561. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #562. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #585. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #591. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #597. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #598. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #602. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #605. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #611. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #612. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #618. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #627. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #632. Motion approved by acclamation.

08/432r4. Motion to approve resolution to comment # 635, by J. Gilb, seconded by C.S. Sum  
Yes: 26. No: 3. Abstain: 2.

08/432r4. Motion to approve resolution to comment #638. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #644. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #645. Motion approved by acclamation.  
08/432r4. Motion to approve resolution to comment #646. Motion approved by acclamation.

08/540. Presentation on UEP resolution by C.W. Pyo.

08/542. Motion to hold weekly teleconferences for comment resolution by J. Gilb, seconded by  
T. Baykas.

Motion passed by acclamation.

Closing Report

08/529r0. Closing report by T. Baykas.

08/529r0. Motion to approve closing report proposed by T. Baykas, seconded by H. Harada.  
Motion approved by acclamation.

5.30pm. Meeting adjourned by R. Fisher.