IEEE P802.15

**Wireless Personal Area Networks**

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| Project | Task Group 15.6ma |
| Title | **TG15.6ma Meeting Minutes for May 2025**  |
| Date Submitted | May 15th , 2025 |
| Source | [Ryuji Kohno1,2 Marco Hernandez1 Takumi Kobayashi1,3 Minsoo Kim1, Daisuke Anzai3 [1; YRP-IAI (YRP International Alliance Institute), Japan, 2; YNU (Yokohama National University), Japan, 3; OMU(Osaka Metropolitan University)] | Voice: +81 90 5408 0611E-mail: kohno@ynu.ac.jp marco.hernandez@ieee.org kobayashi-takumi@yrp-iai.jp minsoo@minsookim.com d.anzai@omu.ac.jp |
| Re: | Meeting Minutes |
| Abstract | Since PAR and CSD of SG15.6ma as amendment of existing IEEE802.15.6-2012 for WBAN with enhanced dependability was approved by NesCom in July 2023, Task Group TG15.6ma has been drafting technical requirement in cases of WBAN for medical use case for human body(HBAN) and for automotive use case for vehicle body(VBAN) with their connected use cases. In July meeting, to summarize technical requirement TG15.6ma has reviewed focused uses cases necessary for enhanced dependability in which channel propagation and environment of HBAN and VBAN with their mixed use can be categorized and modeled. Particularly to perform enhanced dependability in dense environment coexisting multiple overlaid BANs and different UWB and narrow band WPAN, WSN, WLAN etc. necessary technical requirement has been summarized in PHY and MAC layers. Possible solutions to ensure enhanced dependability in PHY and MAC have been presented and discussed. Latest status of ETSI Smart BAN standard has been presented to find a way to make interoperability with IEEE802.15.6 and 6ma. To harmonize activities of TG15.6ma, 15.4ab using UWB PHY, TRD and technical guidance document(TGD) have been reviewed in the sessions.  |
| Purpose | Minutes of Dependability Electronic Plenary Session on Webex, May 2025. |
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**TG15.6ma 1st Session**

**Monday, May 12th, 2025, 1:30 PM- 3:30 PM Local Warsaw Time**

**Room# Wawel & Syrena, Warsaw Presidential Hotel, Warsaw, Poland,**

**with Webex Virtual Room #4**

* 1. Meeting called to order 1:30 PM

By Chair Ryuji Kohno (YNU / YRP-IAI)

* 1. Roll Call *Ryuji Kohno*

Announcement to attendance by using IEEE Attendance Tool (IEEE IMAT).

Registration information.

By Chair *Ryuji Kohno*

* 1. Opening Report *Ryuji Kohno (YNU / YRP-IAI)* doc.# 802.15- 25-193-00-06a

Chair showed IEEE Patent policy.

Chair issued Call for Potentially Essential Patents.

Þ No essential intellectual property in the scope of TG6a was declared.

Chair presented agenda of this meeting doc.# 802.15-25-0192-01-06a

Þ Approved.

* 1. Approval of previous meeting minutes, *Takumi Kobayashi (YNU / YRP-IAI)*

Þ Upon no comments on the January meeting minutes, doc. #15-25-0152-00-06a was approved.

**[Review]**

* 1. Overview of IG-DEP, SG6a, TG6a and TG15.6ma for Revision of IEEE 802.15.6-2012 Wireless BAN with Enhanced Dependability*,* doc.#15-25-0033-02-006a, *Ryuji Kohno*
	2. Review of Recirculation LB217*,* doc.#15-25-0225-00 &Tally of LB210 & 212, *Ryuji Kohno*

**[Comment Resolution]**

* 1. Consolidated comments & resolutions LB217*,* doc.#15-25-0225-00, *Marco Hernandez*
		+ Started from CID r2-01 and confirmed until r2-71.
	2. ~~Proposed resolution draft for BAN communication - LB212 CID129, 133, doc.#15-25-0187-00,~~ *~~Seong-Soon Joo~~*
		+ Skipped
	3. ~~Proposed resolution draft for GBAN maintenance, doc.#15-25-0188-00,~~ *~~Seong-Soon Joo~~*
		+ Skipped
	4. ~~Proposed resolution draft for GBAN frame, doc.#15-25-0189-00,~~ *~~Seong-Soon Joo~~*
		+ Skipped
	5. ~~Review an~~~~d Revision of Draft D05, doc.#15-P802.15.6ma\_D05,~~ *~~Ryuji Kohno, Marco Hernandez, Seong-Soon Joo, Takumi Kobayashi, Daisuke Anzai, Kento Takabayashi~~*
		+ Skipped
	6. Recessed by chair, *Ryuji Kohno*

**Attendees list**

Attendees 14

***Name Affiliation***

* Daisuke Anzai Osaka Metropolitan University
* Hiroaki Yoshitake DENSO TEN
* Huan-Bang Li NICT
* Kamran Sayrafian NIST
* Kento Takabayashi Toyo University
* Marco Hernandez YRP-IAI
* Masayuki Hirata Osaka University
* Ryuji Kohno YNU/YRP-IAI
* Seong-Soon Joo NANOHITECH (NHT)
* Takafumi Suzuki NICT
* Takumi Kobayashi Osaka Metropolitan University/YRP-IAI
* Tero Kivinen Self
* Tetsuya Nomura DENSO TEN
* Yasuharu Amezawa Mobile Techno

**TG15.6ma 2nd Session**

**Tuesday, May 13th, 2025, 1:30 PM- 3:30 PM Local Warsaw Time**

**Room# Wawel & Syrena, Warsaw Presidential Hotel, Warsaw, Poland,**

**with Webex Virtual Room #4**

* 1. Meeting called to order 1:30 PM

By Chair Ryuji Kohno (YNU / YRP-IAI)

* 1. Roll Call *Ryuji Kohno*Announcement to attendance by using IEEE Attendance Tool (IEEE IMAT).
	Registration Information, By Chair *Ryuji Kohno*
	2. 802 Mtg. Non-Registration Consequences, by Chair *Ryuji Kohno*
	3. Confirmation of Agenda, doc.# 15-25-0192-03-06ma, *Ryuji Kohno*

**[Comment Resolution]**

* 1. Consolidated comments & resolutions LB217*,* doc.#15-25-0225-01, *Marco Hernandez*
		+ Started from CID r2-72 and confirmed until the end.

**[Presentations]**

* 1. ~~15.6ma MAC Group BAN Communication, doc.#15-25-0186-01,~~ *~~Seong-Soon Joo~~*
		+ Skipped
	2. 802.19 Letter Ballot Comment Submission IEEE P802.15.6ma CAD(Coexistence Assessment Document)15-24-0348-04-06ma, doc.#19-25-0030-00, *Ryuji Kohno*
		+ All the comments have been resolved.
	3. Revised CAD Corresponding 802.19 Letter Ballot Comment Submission IEEE P802.15.6ma, doc.#15-24-0348-05, *Ryuji Kohno*

**[Presentation of Feasible Implementation and Performance Analysis of Feasibility]**

* 1. Hybrid ARQ Scheme for High QoS Packets in High Class of Coexistence of IEEE 802.15.6ma, doc.#15-23-0576-09, *Kento Takabayashi, Daisuke Anzai, Ryuji Kohno*
	2. Evaluation of IEEE 802.15.6ma Ultra-wideband Physical Layer Utilizing Super Orthogonal Convolutional Code, doc.#15-22-00562-15, *Kento Takabayashi, Ryuji Kohno, Daisuke, Marco, Takumi*
	3. ~~MAC Performance Evaluation of Multiple BAN Coexistence Under TG6ma Channel Model, doc.#15-24-0246-06,~~ *~~Daisuke Anzai, Kosei Nagai, Takumi Kobayashi, Marco Hernandez, Ryuji Kohno~~*
		+ Skipped

* 1. Recessed by chair *Prof. Ryuji Kohno*

Attendees 14

***Name Affiliation***

* Hiroaki Yoshitake DENSO TEN
* Huan-Bang Li NICT
* Kento Takabayashi Toyo University
* Libra Xiao NRT
* Marco Hernandez YRP-IAI
* Run Chen NRT
* Ryuji Kohno YNU/YRP-IAI
* Seong-Soon Joo NANOHITECH (NHT)
* Takafumi Suzuki NICT
* Takumi Kobayashi Osaka Metropolitan University/YRP-IAI
* Tero Kivinen Self
* Tetsuya Nomura DENSO TEN
* Weidong Tang NRT
* Yasuharu Amezawa Mobile Techno

**TG15.6ma 3rd Session**

**Wednesday, May 14th, 2025, 1:30 PM- 3:30 PM Local Warsaw Time**

**Room# Wawel & Syrena, Warsaw Presidential Hotel, Warsaw, Poland,**

**with Webex Virtual Room #4**

* 1. Meeting called to order 1:30 PM

By Chair Ryuji Kohno (YNU / YRP-IAI)

* 1. Roll Call *Ryuji Kohno*Announcement to attendance by using IEEE Attendance Tool (IEEE IMAT).
	Registration Information, By Chair *Ryuji Kohno*
	2. 802 Mtg. Non-Registration Consequences, by Chair *Ryuji Kohno*
	3. Procedure for SA ballot, doc.#15-25-0062-006a, *Ryuji Kohno*
		+ We complete revision within one week. (*Ryuji Kohno*)
	4. Confirmation of Agenda, doc.#25-0112-07-006a, *Ryuji Kohno*
	5. Confirmation of process to SA ballot, *Ryuji Kohno*
	6. General Discussion, *All attendees*
	7. Recessed

Attendees 10

***Name Affiliation***

* Hiroaki Yoshitake DENSO TEN
* Kento Takabayashi Toyo University
* Marco Hernandez YRP-IAI
* Ryuji Kohno YNU/YRP-IAI
* Seong-Soon Joo NANOHITECH (NHT)
* Takafumi Suzuki NICT
* Takafumi Suzuki NICT
* Takumi Kobayashi Osaka Metropolitan University/YRP-IAI
* Tetsuya Nomura DENSO TEN
* Yasuharu Amezawa Mobile Techno

**TG15.6ma 4th Session**

**Friday, May 15th, 2025, 1:30 PM- 3:30 PM Local Warsaw Time**

**Room# Wawel & Syrena, Warsaw Presidential Hotel, Warsaw, Poland,**

**with Webex Virtual Room #4**

* 1. Meeting called to order 1:30 AM
	2. Roll Call *Ryuji Kohno*
	Announcement to attendance by using IEEE Attendance Tool (IEEE IMAT).
	Registration Information, By Chair *Ryuji Kohno*
	3. 802 Mtg. Non-Registration Consequences, by Chair *Ryuji Kohno*
	4. Confirmation of Agenda, doc.#15-25-0192-05-006a, *Ryuji Kohno*
		+ Anonymously approved.
	5. Review of results of LB217, doc.#15-25-0193-03, *Ryuji Kohno*
	6. Consolidated comments & resolutions LB212, doc.#15-25-0225-02, *Ryuji Kohno*
		+ All the comments and resolutions have been confirmed.
	7. TG6ma Coexistence Assessment Document, doc.#15-24-0348-06 "Ryuji Kohno, Marco Hernandez, Daisuke Anzai, Minsoo Kim, Seong-Soon Joo, akumi Kobayashi, Kento Takabayashi
	8. Project Task List of 802.15.6ma, doc.#15-25-0062-02, *Ryuji Kohno*
	9. TG Motion: Approval of comment resolutions, doc.#15-25-0161-01, *Ryuji Kohno*
		+ Moved by Ryuji Kohno, Seconded by Seong-Soon Joo
		+ Unanimously approved.
	10. TG Motion: Draft needs edits before recirc, doc.#15-25-0161-01, *Ryuji Kohno*
		+ Moved by Ryuji Kohno, Seconded by Seong-Soon Joo
		+ Unanimously approved.
	11. TG Motion to Approve the Formation of CRG for Recirculation, doc.#15-25-0161-01, *Ryuji Kohno*
		+ Moved by Ryuji Kohno, Seconded by Seong-Soon Joo
		+ Unanimously approved.
	12. MAC Performance Evaluation of Multiple BAN Coexistence Under TG6ma Channel Model, doc.#15-24-0246-06, *Daisuke Anzai, Kosei Nagai, Takumi Kobayashi, Marco Hernandez, Ryuji Kohno*
	13. Performance Evaluation of Channel Coding with Interleaver Based on TG6ma Channel Model for Some Classes of Coexistence, doc.#15-24-0247-04, *Daisuke Anzai, Sho Asano, Kento Takabayashi, Takumi Kobayashi, Marco Hernadez, Ryuji Kohno*
	14. TG6ma Timeline(Rescheduling Timeline) , doc.#15-23-0361-10, *Marco Hernandez*
	15. Any other business?
		+ No.
	16. Adjourn

Attendees 8

***Name Affiliation***

* Hiroaki Yoshitake DENSO TEN
* Huan-Bang Li NICT
* Masayuki Hirata Osaka University
* Ryuji Kohno YNU/YRP-IAI
* Seong-Soon Joo NANOHITECH (NHT)
* Takafumi Suzuki NICT
* Takumi Kobayashi Osaka Metropolitan University/YRP-IAI
* Tetsuya Nomura DENSO TEN
* Yasuharu Amezawa Mobile Techno