

New Standard Project: IEEE P1708 (Revised)
 Working Group: Wearable Cuffless Blood Pressure Monitors (EMB/Std Com/WC-BPM)
 Working Group Chair: Yuan-Ting Zhang
 Sponsoring Society: IEEE Engineering in Medicine and Biology Society
 Sponsoring Committee: IEEE EMB Standards Committee
 Sponsor Chair: Carole C. Carey

IEEE P1708 Working Group in-Person Kick-off Meeting and Web Conferencing

Summary of Meeting Minutes

Working Group Secretary: Xiaorong Ding

13 July 2017

International Conventional Center (ICC), Jeju Island, Korea

5:30 p.m. – 7:00 p.m. (KST)

Attendees:

	Name	Institution
Present members	Makoto Yoshizawa	Tohoku University, Japan
	Soo Kim	IEEE Standard Association
	Youngsoo Kim	Samsung Electronics
	Changmok Choi	Samsung Electronics
	Alberto Avolio	Macquarie University
	Fernando Silveira	Universidad de la República
	Taiyang Wu	Monash University
	Ricard Delgado-Gonzalo	CSEM
	Bill Ash	IEEE Standard Association
	Y. T. Zhang	Key Laboratory for Health Informatics of the Chinese Academy of Sciences (HICAS)
	Carole Carey	IEEE EMB Standards Committee
	Brett BuSha	The College New Jersey
	Haruki Kawanaka	Aichi Prefectural University
	Koji Oguri	Aichi Prefectural University
	Hamid Gholamhosseini	Auckland University of Technology
	Toshiyo Tamura	Waseda University
	Xiao-Rong Ding	The Chinese University of Hong Kong
	Kiran Dellimore	Philips Research
	Yeongjoon Gil	Huinno Inc
	Ghalib Janjua	Ulster University, Belfast UK
	Sri Krishnan	Ryerson University, Canada
	Esteban Pino	Universidad de Concepción
	Bruce Hecht	Analog Devices
Call-in members	Andrew Lowe	
	Charles Ho	US FDA
	Dietrich Ruehlmann	
	Josep Solà	CSEM

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	Shawn Forrest	FDA
	Marios	
	Shilun Feng	
	Antoni Grzanka	
	Adhurim Hajzeraj	

1 Call to Order

Chair Y. T. called the meeting to order at 5:32 p.m. and welcomed all attendees. The Chair briefly stated the purpose and process of revising the 1708 standard.

There was a round of introductions by all present and call-in participants. Diverse attendees were from academia and industries. There were no representatives from the clinical/medical community in attendance. The Chair encouraged call for participants with medical background through professional or personal contacts.

2 Approval of [Agenda](#)

The Chair presented the motion and all the presented members seconded the approval motion. There was a motion to approve the agenda. The motion was unanimously approved.

3 IEEE Patent Policy

WG Chair requested IEEE-SA staff to post the IEEE standing patent policy slides to be shown on the screen and read to all participants.

If anyone is personally aware of the holder of any patent claim that are potentially essential to implementation of the propose standard(s) under consideration and accepted letter of assurance.

[Patent Slide Set](#)

It will also be posted on the working group public website (<http://sites.ieee.org/sagroups-1708/>) and/or IEEE iMeet Central. (IEEE staff to set-up) iMeet requires log-in and password for members.

No declarations at the meeting. However, if applicable, declaration can be made after. Please contact WG Chair, yuan-tingzhang@ieee.org.

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4 EMB SC Main Working Group Policies and Procedure (P&P)

The Sponsor-approved WG Policies and Procedures that governs standards development work was presented and highlighted Section 4.0 (Working Group Membership). See 8.1 notes below.

Members must read the WG P&P. This will be posted in WG website & iMeet Central.inf

5 Establishment of Officers

5.1 Appointment of Vice Chair

WG Chair introduced and appointed Carole Carey – EMB standards committee chair. Former FDA scientific reviewer.

5.2 Appointment of Secretary

WG Chair introduced and appointed Xiao-Rong Ding – Postdoc researcher at Chinese University of Hong Kong.

6 New PAR, IEEE 1708 Status (Revision Work)

6.1 Technical Presentation by the Chair

The Chair reviewed the established 1708 standard in terms of the distribution model of the difference between cuffless BP and reference BP, sample size selection, performance evaluation metrics.

6.2 Open discussions based on the comments from FDA and others:

6.2.1 Key points from FDA:

- 1) Sample size: why at least 45 subjects are required?
- 2) Measurement posture: why seated still instead of other postures?
- 3) Motion artifacts: can it measure BP while walking or running? To be addressed in the future standard development.

6.2.2 Open comments on how to revise the standard:

Soo Kim suggested that interested participants may access a copy of the published standard 1708-2014 Standard for Wearable Cuffless Blood Pressure Measuring Devices. A copy of the IEEE-copyrighted standard will be stored in iMeet password protected for use by members of the standards development group. The current PAR P1708 can be accessed at the IEEE-SA website, <https://standards.ieee.org/findstds/standard/1708-2014.html>

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- 1) The issue of the dynamic range of induced BP changes
- 2) The reference device: the concern of synchronization between test and reference device when dynamic changes are induced (look into new reference, e.g. automated device and invasive method)
- 3) Calibration interval (the manufacturer is allowed to specify it)
- 4) Call for further study on these issues

7 Technical Presentation, new ISO 81060-3 (in development) - Josep Solà

7.1 Presentation

- 1) Review of current standards
- 2) Key issues:
 - Safety, usability
 - Calibration procedure
 - Short-term/long-term/trending accuracy
 - Communication

7.2 Discussion

Joined forces between the ISO and IEEE-SA

- Is it time to join forces?
- How to do this?
- Via a formal category liaison between IEEE and ISO
- The pros and cons of joining forces?
- Would this lead to a joint standard?
- Quick action!

It was suggested and agreed to make a joint effort on the development of continuous BP standard with ISO WG.

IEEE will help to establish a formal liaison agreement with ISO.

8 Future Meeting (see discussion in 8.2)

8.1 Membership

Participants do not need to be IEEE-SA member; while to ballot the documents, it is required to have IEEE-SA membership.

To be active/voting member, the participants have to attend every meeting as possible. The participants would lose voting membership, if they miss two consecutive meetings. To gain the voting membership back, the participants should attend at least two consecutive meeting.

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8.2 Meeting Period

Face to face meeting: twice each year, with one at annual EMBC event and one at the other conference.

Teleconference: every other month, web meeting may be available via WEBEX global call-in.

Meeting notice: 30 days prior to the meeting days for face-to-face meeting, and 15 days prior to the online meeting.

8.3 Other Comments

Relevant standard documents available on the server (iMeet Central).

9 Adjournment

The meeting was adjourned at 6:49 p.m., and a group photo was taken afterwards.