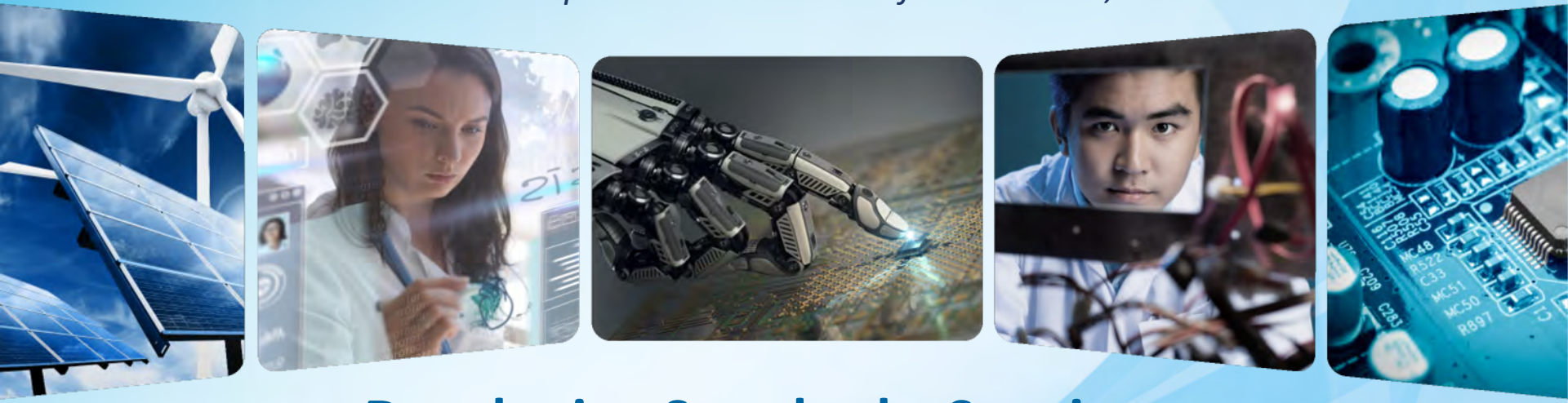
Workshop at the Graz BCI Conference 2019, Austria



Developing Standards: Starting a Project and How to Participate

Carole C. Carey, IEEE EMB Standards Committee Chair
EMB Liaison, IEEE-SA Standards Board

EMB
Engineering in Medicine and Biology

IEEE STANDARDS ASSOCIATION

Workshop 3: Standards for Neurotechnologies and Brain-Machine Interfacing (Sept 16, 2019)

IEEE
Advancing Technology for Humanity

Outline / Points

- Brief intro IEEE Standards Association (SA)
  - Standards term and categories
  - Overview of the standards development lifecycle
  - Governance
- Pre-standards development activities
- The standardization process – how & where do we start?
- Project Authorization Request (PAR) approval process & the PAR form
- How to participate in Working Groups
- Quick summary of the standards development process

IEEE Standards Association

globally recognized standards development organization (SDO)

IEEE Standards Association (IEEE-SA) is the standards development arm of IEEE that oversees the standards process.

- Over 1,250 active standards and 700+ under development.
- Over 20,000 standard developers worldwide in 160 countries.

- Technology and innovation are drivers for **global participation** to develop **consensus** standards -- fosters competition.
- Developing standards are in response to meet **safety**, technical, regulatory, society or market needs.
- International standards generally developed through a **voluntary** consensus process in a **open** platform.

EMB

IEEE Standards

Standards are building blocks for product development, innovation, competition

Standards – containing mandatory requirements.
"shall"

Recommended Practices – outlining preferred procedures.
"should"

Guides – offering suggestions for working with a technology.
"may"

Six Stages IEEE Standards Development Lifecycle

1. Project Initiation
Project Authorization Request (PAR) / Sponsor
NesCom/SASB Approval

2. Working Group Formation
Regular Meetings
Remote/In-Person

3. Standard Draft Development
Stable Draft Document

4. SA (Sponsor) Ballot Initiation
Ballot Group, Public Review
RevCom/SASB Approval

5. Final Approval (IEEE-SASB)
& Standard Publication

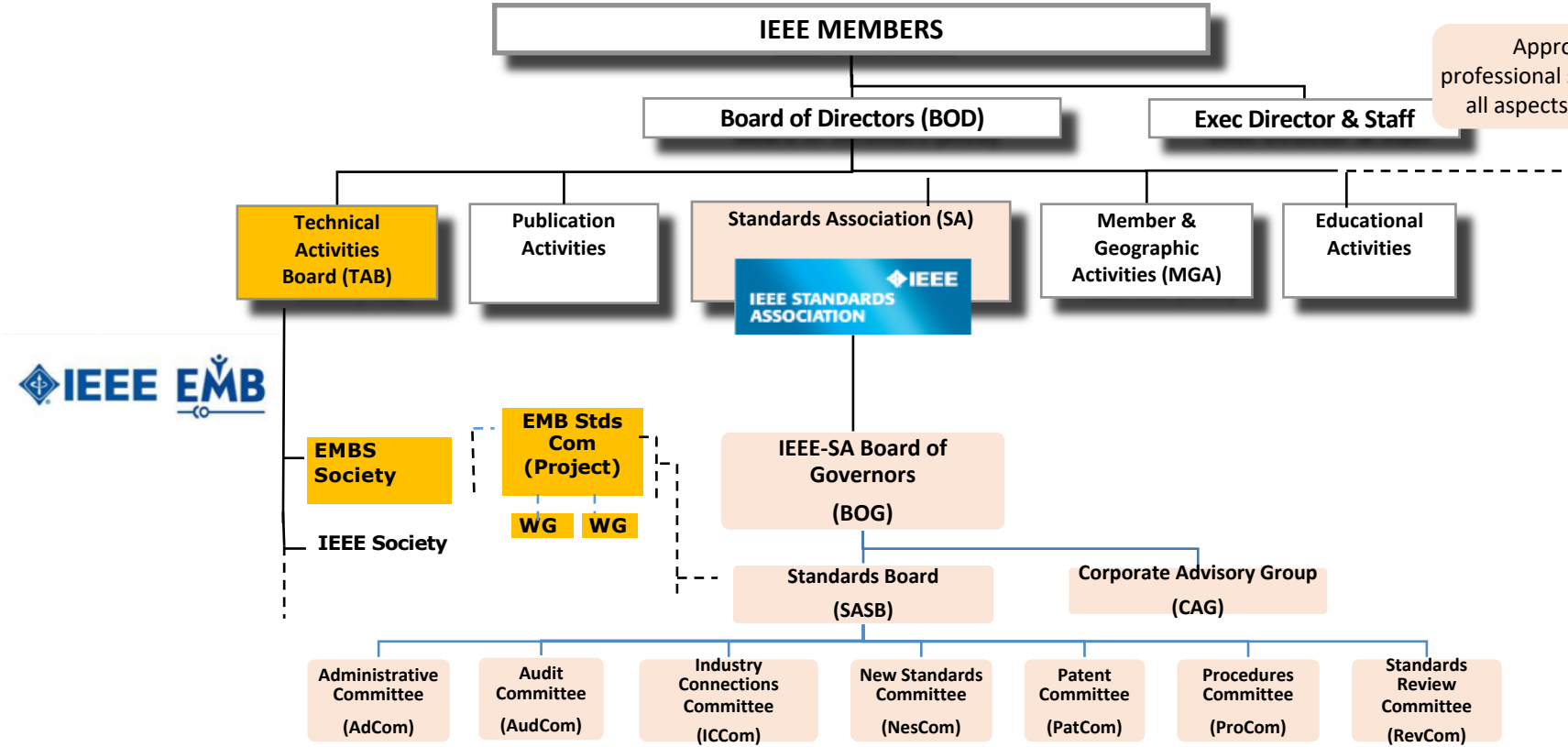
6. Maintenance Mode
Revisions at any time (new PAR) or Withdrawn (archived)

Participation is Open

- Industry
- Government agencies
- Academia
- Consumers
- Standard Development Organizations
- Civil Society organizations
- Research Organizations
- Consultants
- …and many more!

- *Open membership, participation, and governance*
- *No restrictions*
- *Any individual or organization*
- *Any industry or size of company*

IEEE-SA Governance



Considerations for starting a standards project

a person or a group of people with similar interest identifies a topic

- Broad market potential.
- Technical feasibility.
- Readiness for standardization.
- Distinct identity or substantial technical merit.
- Adequate participation.

Pre-standards activities

Collaborative teams or potential Standards WGs start forming.

- Study Groups
  - members of a potential working group gather to work on a PAR and to gain the support of their potential Standards Committee.
- Industry Connections Program
  - helps incubate new standards and related products and services by facilitating collaboration among organizations and individuals.

IEEE

How Do We Start the Standardization Process?

PAR (Project Authorization Request)

- An idea for a standard is proposed to an IEEE Standards Committee ("Sponsor") assumes responsibility for the scope and content of the proposed standard.
- Idea → **PAR** --- a small, structured, highly detailed document that essentially states the reason why the project exists, what it intends to do, who is sponsoring/working on the project.
- A Working Group/Project requires a Standards Committee (SC). IEEE SC, typically a an IEEE Society and provides technical oversight throughout the whole process.
- An IEEE-SA staff liaison (project manager) is assigned. Provides operational support (eTools such as, a *listserv, Join.me web conferencing, iMeet Central, public WG website*).
- The IEEE-SA Standards Board's responsibility is oversight of the IEEE standards development process.

Project Authorization Request (PAR)

myProject™

To initiate the process, submission is done through myProject system

- Anyone can submit a PAR.
- A project number is assigned, e.g., P2731, P2794, P2735.1
- Standards Committee accepts the PAR. SC Chair assigns a WG Chair.
- NesCom reviews and makes recommendation to the Standards Board for approval.
- A standards project does not officially exist until a PAR is approved.
- Valid for 4 years.

P9XXX

Submitter Email: [ ]
Type of Project: New IEEE Standard
PAR Request Date: 24-MAY-2018
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, PAR for a New IEEE Standard

1.1 Project Number: P9XXX
1.2 Type of Document: [ ] (*Select Standard, Recommended Practice, or Guide*)
1.3 Life Cycle: [ ] (*Select Full Use or Trial Use*)

2.1 Title: Standard for [ ]

3.1 Working Group: (*auto-filled*)

3.2 Sponsoring Society and Committee: (*auto-filled*)

(*Example*) IEEE Engineering in Medicine and Biology Society/Standards Committee (EMB/Stds Com)

Contact Information for Sponsor Chair

Name:

Email Address:

Phone:

Contact Information for Standards Representative

3.3 Joint Sponsor: (*Choose from drop down menu. Leave blank if not adding a joint sponsor to this project*)

4.1 Type of Ballot: [ ] (*Choose Individual or Entity*)

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: [/] (*Month /Year, use best guess estimate*)

4.3 Projected Completion Date for Submittal to RevCom

Note: Usual minimum time between initial sponsor ballot and submission to RevCom is 6 months.: [/] (*Month /Year, best guess*)

5.1 Approximate number of entities expected to be actively involved in the development of this project: [_____] (*Approximate number*)

5.2 Scope: [_____...] (*Scope should appear as it will be in the draft standard, as it is intended to appear in the published standard.)*

5.3 Is the completion of this standard dependent upon the completion of another standard: [_____] (*Yes or No*)

5.4 Purpose: [_____...] (*Yes or No. If Yes, enter the Purpose. It is not mandatory but is encourage.*

5.5 Need for the Project: [_____...] (*Should be brief. Details the specific problem that the standard will address and the benefit it will gain by publication of the standard.*)

5.6 Stakeholders for the Standard: [_____...] (*Parties that have an interest in or may be impacted by the development of the standard.*)

Intellectual Property

6.1.a. Is the Sponsor aware of any copyright permissions needed for this project? [ ] (*Yes/No. If Yes, explain.*)

6.1.b. Is the Sponsor aware of possible registration activity related to this project? *(Yes/No. If Yes, explain.)*

7.1 Are there other standards or projects with a similar scope? [ ] (*Yes/No. If Yes, identify any standard(s) or project(s) of similar scope(s), both within or outside of the IEEE, and explain the need for an additional standard in this area.)*

7.2 Joint Development

Is it the intent to develop this document jointly with another organization? *(Yes/No. If Yes, complete information.)*

Organization:
Technical Committee Name:
Technical Committee Number:
Contact Name:
Phone:
Email:

8.1 Additional Explanatory Notes

Recap - Approval Process →new PAR

How do we start the standardization process?

- Any individual or company with a technical idea may come up with the idea for a new standard

Determine need for standard

Find a technical group within IEEE to "sponsor" the project

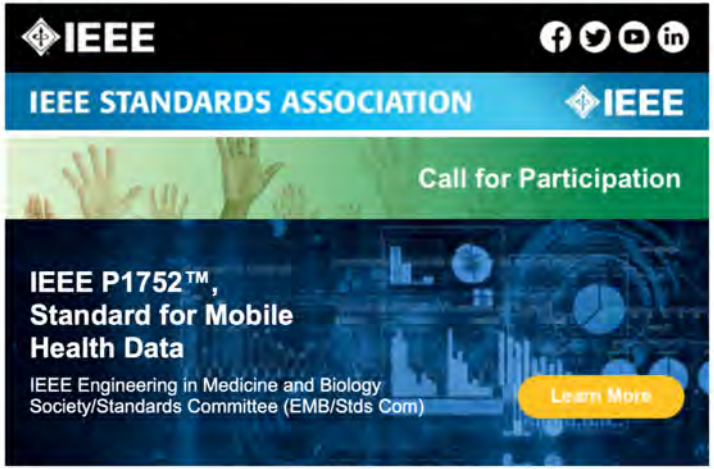
- Sponsor is also referred to as a Standard Committee
- Provides guidance and support from a technical standpoint

- Develop scope and purpose of the project

Submit a Project Authorization Request (PAR) form for approval by New Standards Committee (NesCom)

IEEE

A Call for Participation



IEEE Standards Association (IEEE-SA) invites your participation in the IEEE P1752™, Standard for Mobile Health Data Working Group.

Why get involved:

Mobile apps and sensors are an increasingly valuable source of health-related data. Standardization of mobile health data and metadata will make data aggregation across multiple mobile health sources easier and more accurate, and will reduce the costs of using mobile health data to make biomedical discoveries and to improve health and manage disease.

This standard will define specifications for a mobile health data application programming interface (API) and standardized representations for mobile health data and metadata. Mobile health data encompasses personal health data collected from sensors and mobile applications.

Who should participate:

Who should participate:

- Wearable device makers
- Medical device makers
- Health data aggregators
- Health information technology systems managers
- Health information infrastructure providers
- Mobile health app developers
- Biomedical researchers
- Clinicians
- Data scientists
- Government

How to Participate:

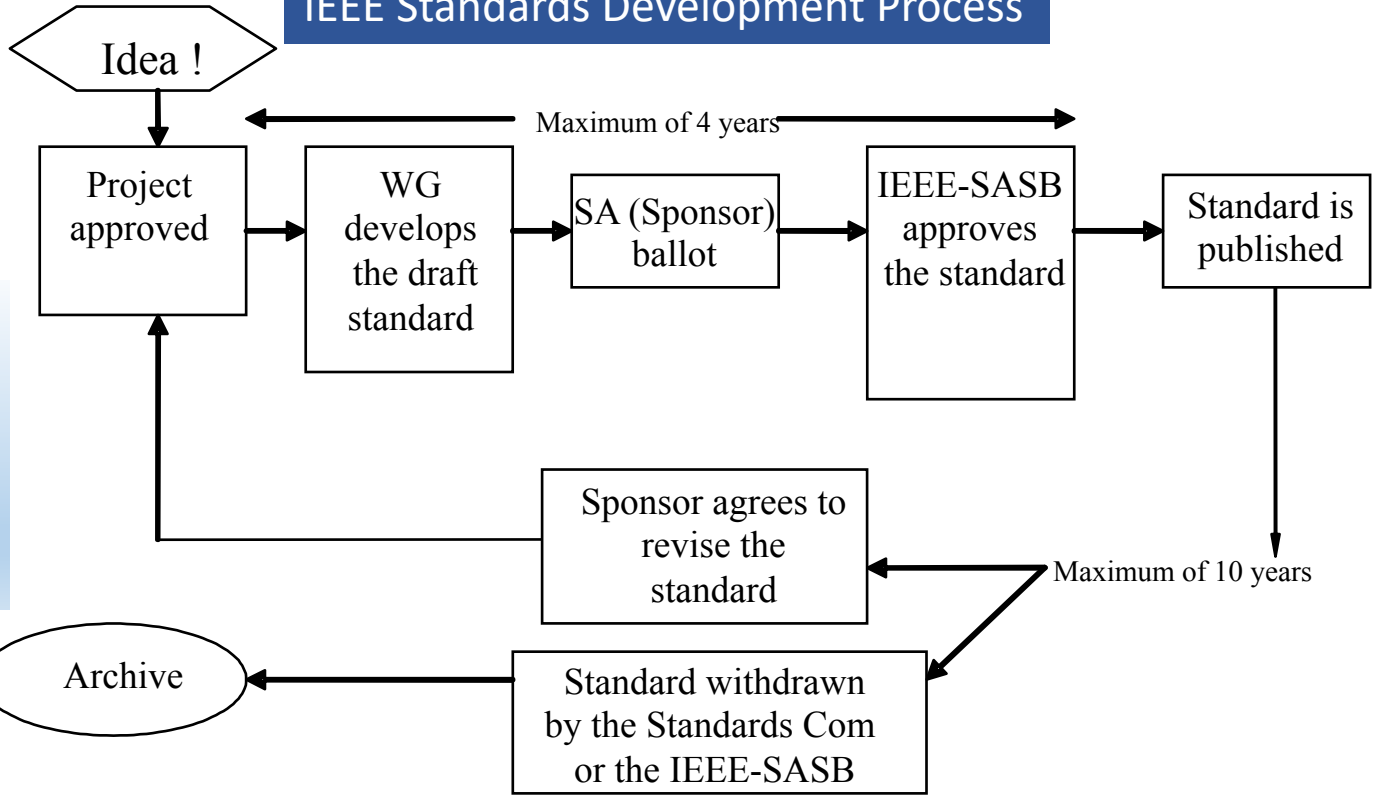
If you wish to participate in the IEEE P1752™ Working Group, please go to the website address shown below and scroll to the bottom of the page for instructions.

http://sites.ieee.org/sagroups-1752/

IEEE

IEEE Standards Development Process

The idea for a standard is developed by a group of people (WG), and the responsibility for the idea is assumed by the Standards Committee (Sponsor)



Questions?

Thank you!

c.carey@ieee.org

IEEE