P1752 Working Group Meeting

Sponsored by IEEE Engineering in Medicine & Biology (EMB) Standards Committee

Please mark your attendance at:
https://tinyurl.com/yc3oxg6q
(see chat window)

10 March 2020
Teleconference
This document shows attendance from previous calls https://tinyurl.com/yc3oxg6q (link in the chat window of join.me). If you attended the call, please verify that your name is listed
- If not, email simona@openmhealth.org

Put your name and affiliation in the chat window for attendance today.
- If your name is not listed, or if you are joining only via phone, please email simona@openmhealth.org with “P1752 WG call” as subject

Attendance is important for determining voting rights, so please remember to “check in”

Voting rights are granted according to the P&P after attending two consecutive calls and by explicit request to the Secretary (Simona)
IEEE Patent Policy
Participants have a duty to inform the IEEE

- Participants **shall** inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents.

- Participants **should** inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims.

Early identification of holders of potential Essential Patent Claims is encouraged.
Ways to inform IEEE

• Cause an LOA to be submitted to the IEEE-SA (patcom@ieee.org); or

• Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or

• Speak up now and respond to this Call for Potentially Essential Patents

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair
Other guidelines for IEEE WG meetings

- All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
  - Don’t discuss the interpretation, validity, or essentiality of patents/patent claims.
  - Don’t discuss specific license rates, terms, or conditions.
    - Relative costs of different technical approaches that include relative costs of patent licensing terms may be discussed in standards development meetings.
      - Technical considerations remain the primary focus
  - Don’t discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
  - Don’t discuss the status or substance of ongoing or threatened litigation.
  - Don’t be silent if inappropriate topics are discussed ... do formally object.

Patent-related information

The patent policy and the procedures used to execute that policy are documented in the:

- **IEEE-SA Standards Board Bylaws**
  (http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6)
- **IEEE-SA Standards Board Operations Manual**
  (http://standards.ieee.org/develop/policies/opman/sect6.html#6.3)

Material about the patent policy is available at
http://standards.ieee.org/about/sasb/patcom/materials.html

If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at patcom@ieee.org

Slide #4
Determination of Quorum

https://tinyurl.com/yc3oxg6q
Approval of Agenda

1. Attendance
2. Call for Patents
3. Approval of agenda and of prior minutes (if quorum present)
4. Subgroup updates
5. Discussion: generic survey schemas
6. Other business
Approval of Prior Minutes

(none)
Progress Towards Balloting
Workstreams

SUBGROUPS

- **Sleep**
  - Main WG Review
  - 1st Batch Quantitative
  - 2nd Batch Quantitative
  - validate schemas

- **PA&M**
  - Main WG Review
  - Survey schemas

- **Metadata**
  - Main WG Review (Mar 31)

MAIN WG

- **Standards Document**
  - Initial draft
  - v2 draft
  - v3 draft

- **IEEE GitLab**
  - Sign and submit CLAs
  - Site design completed
  - P1752 GitLab

- **Schemas**
  - Utility schemas
  - pending input from main WG
Update: Sleep Subgroup
Sleep Schema Subgroup Update

Status and Next Steps

Quantitative sleep measure task group:
---Completed addressing the 1st set of schemas based on WG review comments
---Modifying 2nd set of schemas based on WG review comments (in progress)

Qualitative sleep measure task group:
---Received some WG comments
---Review and address the comments (TODO)

Sleep schema subgroup meeting slides/minutes:
http://sites.ieee.org/sagroups-1752/sleep-subgroup-meeting-materials/

Next subgroup meeting: April 7, 2020 11:30am to 12:30 pm

Info on the sleep group: email charlotte.chen@Philips.com or Simona.Carini@UCSF.EDU
Propose that we use the word "generic" only for the generic surveys and we use "sample" for the sample surveys showing how to use the generic surveys.

Simplify some things where possible and also to show how the survey can be used to ask questions close in time to the event:
(1) To clearly distinguish our sample questionnaires from validated ones;
(2) To show the potential to deliver a digital survey;

Ensure consistency of notation.

Suggest to include sample data to show:
- a survey score
- incomplete or missed surveys
Update:
Draft Standard Document
Version 3 (distributed in January)

• This will be the candidate for ballot, once two people’s comments are incorporated
• If you have not yet accessed iMeet and you cannot find an email invitation, email simona@openmhealth.org
“Utility” Schemas

• No comments received
• Candidates for ballot:
  • Unit Value Schemas available at https://ieee-sa.imeetcentral.com/omh/folder/WzlwLDEyNDgxNTY3XQ/
  • Value Set Schemas available https://ieee-sa.imeetcentral.com/omh/folder/WzlwLDEyNDgxNjEzXQ/
  • Time-related Schemas available https://ieee-sa.imeetcentral.com/omh/folder/WzlwLDEyNDgxNjExXQ/
Report from:
Metadata Subgroup
Metadata Subgroup Update

• Draft of minimum metadata schemas almost completed
• Sample data being drafted
• Slides available on subgroup webpage: http://sites.ieee.org/sagroups-1752/metadata-subgroup/
• Next call, March 17 at 9 am Pacific
• Let Simona (simona@openmhealth.org) know if you are interested in participating
P1752 Metadata Subgroup

Subgroup chair: Ida Sim, Open mHealth / UCSF
Subgroup secretary: Anand Nandugudi, U Memphis

Members

Pradeep Balachandran
Jakob Bardram
Daniela Brunner
Christina Caraballo
Simona Carini
Paul Harris
Shivayogi Hiremath
Sean McConnell
Leonard Njeru Njiru
Henry Ogoe
Paul Petronelli
Udi Rubin
Anna T
Datapoint ID
Datapoint versus Datapoint series

- Schema can be used for instances of arrays of observations (i.e. a series) not only a single datapoint
- Metadata must be identical for every data point in the series.
- Unique ID assigned to the datapoint or datapoint series, not to each observation in a series

JSON arrays are ordered
UUID

• Every P1752 instance will have a UUID (Universally Unique Identifier) generated per RFC 4122

• UUID (16 bytes; 32-char string)
  • The RFC 4122 version information is contained in the 128 bit message itself (unless otherwise specified)
  • Encryption is strongly recommended; newer encryption protocols will evolve and should be used
  • As well, users may decide to implement their own solutions to ensure that they are protected from possible violations of CCPA and GDPR
Minimum Metadata: Proposal
Metadata Landscape

Cloud or Edge: Runtime acquisition and privacy metadata

Data stream(s) ➔ Firmware/algorithm

SMART-on-FHIR environment

Electronic Health Record

Clinical Trial Management System

IoT Smart Thermometer
IoT Motion Sensor
Wrist sensor
Ingestible Sensor

Personal Datasheet
Hardware Datasheet
Software Datasheet

隐私政策

Study Protocol

Data Sharing Policy

Smartphone
Sensor Patch
UDI

IoT Hardware Datasheet
Hardware Privacy Policy

Product Datasheet

Software Details

Landscape

Dataset & ML Details

Header/min metadata
Body: datapoint

Open mHealth data and metadata standards
**Metadata Elements: Datapoint**

<table>
<thead>
<tr>
<th>Needs</th>
<th>Property (bold = required)</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which datapoint is this?</td>
<td>UUID (datapoint/d datapoint series)</td>
<td>Generate using RFC 4122</td>
</tr>
<tr>
<td>What does this value represent?</td>
<td>schema ID and schema metadata</td>
<td>Pointer to the stress datapoint schema</td>
</tr>
<tr>
<td>When is the effective time of this data?</td>
<td>[in the datapoint itself]</td>
<td></td>
</tr>
</tbody>
</table>
## Metadata Elements: Acquisition

<table>
<thead>
<tr>
<th>Needs</th>
<th>Properties (bold = required)</th>
<th>Example</th>
</tr>
</thead>
</table>
| When was this datapoint (or the datapoint series) created at the original source? If the datapoint is aggregated later, the date does not change. If the datapoint is recalculated later (e.g., using a different algorithm), a new datapoint is created with a different id and creation date. | source_creation_datetime  
date-time schema represents a point in time (ISO8601). Timezone is UTC unless otherwise specified | 2019-08-01T07:01:00Z          |
| Was the datapoint sensed or self-reported?                            | modality                                                                                   | sensed                       |
| If data was acquired with a periodic rate, what was the rate?         | acquisition_rate                                                                          | Value : 100 Unit : Hz  
OR  
number_of_times: 2  
time_window: value: 1 unit: d |
# Metadata Elements: Source

<table>
<thead>
<tr>
<th>Needs</th>
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</tr>
</thead>
</table>
| What firmware/algorithm? What hardware? What app/product? Which person? Which study? | Pointer(s) to *Software Datasheet, Hardware Datasheet (UDI), Product Datasheet, Personal Datasheet (User ID), Study Datasheet (Study ID)* | Datasheet type {software, hardware, product, personal, study}  
Pointer: IRI |
Future Work
### Metadata

**Next Steps**

- Finalize metadata schema and generate sample data
- Subgroup discussion
- Main WG review and discussion

<table>
<thead>
<tr>
<th>Date</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar 2</td>
<td>Super Tuesday (region)</td>
</tr>
<tr>
<td>Mar 8</td>
<td>Daylight Saving Time</td>
</tr>
<tr>
<td>Mar 9</td>
<td>Subgroup discussion</td>
</tr>
<tr>
<td>Mar 10</td>
<td>Main WG distribution</td>
</tr>
<tr>
<td>Mar 17</td>
<td>St. Patrick’s Day Subgroup discussion</td>
</tr>
<tr>
<td>Mar 18</td>
<td>Main WG distribution</td>
</tr>
<tr>
<td>Mar 24</td>
<td>Main WG discussion</td>
</tr>
<tr>
<td>Mar 31</td>
<td>Main WG discussion</td>
</tr>
</tbody>
</table>
Workstreams – send comments by March 27

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Sleep
- validate schemas
- Main WG Review

PA&M
- Survey schemas
- Finalized
- Main WG Review

Metadata
- Final draft
- Main WG Review

1st Batch Quantitative
- ✓

2nd Batch Quantitative
- ✓?

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Timeline Proposal for Draft Review

• March 10 WG call
  • DISCUSSION: 2nd batch of quantitative sleep schemas + generic survey schema
  • INTRO: Metadata schemas
    • Schemas and sample data to be distributed March 19, comments due March 27

• March 31 WG call
  • DISCUSSION: Metadata schemas
  • PRESENTATION/DISCUSSION: rest of draft ballot, processes for review, GitLab readiness, etc.
    • Whether GitLab site is public from outset or not
    • Voting rolls and procedures

• Presentation of full draft ballot and voting, after IEEE editorial review and approval to move to ballot
P1752 WG Steps

• Access documents and submit comments to iMeet Central
  • Contact simona@openmhealth.org if you need assistance getting onto iMeet
• Sign CLAs and provide them to IEEE
• Let Simona know you have obtained CLA number (do not share the #)
• For entity CLAs, let me know the name of the people covered by it
• P1752 OS site deployment in progress
Summary of Action Items
Future Meetings
Upcoming Meetings

• Main WG
  • March 31, 2020: 8 AM (Pacific)

• Sleep subgroup
  • April 7, 2020 8:30 am to 9:30 am (Pacific)

• Metadata subgroup
  • March 17, 2020 9:00 am to 10:00 am (Pacific)
Adjournment