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)

- 27 November 2018
- Teleconference
Attendance

- This document shows attendance from previous calls [https://tinyurl.com/yc3oxg6q](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
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:


Material about the patent policy is available at [http://standards.ieee.org/about/sasb/patcom/materials.html](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
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. Updates from subgroups
5. Discussion: upcoming activities
6. Other business
Approval of Prior Minutes
(9/18, 10/23, 11/13)
Update:
Physical Activity and Mobility (PA&M) Schema Subgroup
Physical Activity & Mobility (PAM) Sub-group

1. We are making progress on the following tasks
   - Task 3: Defining use cases and Relation to Schemas
     - Completed brainstorming of use cases
     - Discussed how use cases may be utilized in a clinical or research environment
     - Discussed how to map use cases to OmH schema data elements
     - Discussed how to use Metadata Schemas and PAM Schemas

2. Next Meeting: Thursday Nov 29, 2018 (11am to 11:45am Eastern Time)
Update:
Sleep Schema Subgroup
Preparation of drafting schemas

- Quantitative sleep measure schemas:
  1. Reviewing the updated list of mapping between sleep schema name vs. sleep attributes to make sure the proposed schemas are meaningful to end users;

- Qualitative sleep measure schemas:
  1. Reviewing/Consolidating qualitative sleep measures;
  2. Reviewing the existing Open mHealth framework for subjective measures;
Next Step

Quantitative sleep measure task group:
---Complete the review of the updated list;
---Draft the schemas;

Qualitative sleep measure task group:
---Complete reviewing/consolidating the references to the qualitative sleep measures and creating use cases according;
---Complete the review of the existing framework for the subjective measures from Open mHealth;
---Draft/Discuss qualitative sleep measure schema (start with one);
Discussion: Minimum Metadata (continued)
Minimum Metadata Categories

• Datapoint ID and Schema ID
• Source Provenance – from what did this datapoint come from (Static provenance)
• Acquisition Provenance – how was this datapoint acquired (Dynamic provenance)
• Defer for later
  • Processing provenance – how was this datapoint computed
  • Data sharing permissions and record
  • Context (some elements may end up in above categories)
# Datapoint: What Do We Need to Know?

<table>
<thead>
<tr>
<th>Metadata Category</th>
<th>Needs</th>
<th>Metadata Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Datapoint</td>
<td>Which datapoint is this?</td>
<td>datapointID</td>
</tr>
<tr>
<td></td>
<td>Whose datapoint is this?</td>
<td>userID</td>
</tr>
<tr>
<td></td>
<td>When was this datapoint created?</td>
<td>creation_date_time</td>
</tr>
<tr>
<td></td>
<td>What does this value represent?</td>
<td>Schema ID and schema metadata</td>
</tr>
<tr>
<td></td>
<td>When is the effective time of this data?</td>
<td>[in the datapoint itself] because...</td>
</tr>
</tbody>
</table>
## Schema: What Do We Need to Know?

<table>
<thead>
<tr>
<th>Metadata Category</th>
<th>Needs</th>
<th>Metadata Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schema</td>
<td>Which schema does this datapoint follow?</td>
<td>schema namespace and name</td>
</tr>
<tr>
<td></td>
<td>What is this schema about?</td>
<td>annotation to controlled term</td>
</tr>
<tr>
<td></td>
<td>Which version of the schema?</td>
<td>schema version</td>
</tr>
<tr>
<td></td>
<td>Where can I find this schema?</td>
<td>url</td>
</tr>
<tr>
<td></td>
<td>What <em>can</em> be said with this schema?</td>
<td>[in the schema itself]</td>
</tr>
<tr>
<td></td>
<td>What <em>must</em> be said?</td>
<td>[in the schema itself]</td>
</tr>
<tr>
<td></td>
<td>In what units?</td>
<td>[in the schema itself]</td>
</tr>
<tr>
<td></td>
<td>How is effective time handled?</td>
<td>[in the schema itself]</td>
</tr>
</tbody>
</table>
Survey – Define and enumerate properties

• Describe your own use case
  • Is it regulatory, clinical, and/or research?
• What do you need to know about a specific digital biomarker result to make full use of it?
  • categorize your need
    • Datapoint ID
    • Schema ID
    • Source provenance (from what did this datapoint come from?)
    • Acquisition provenance (how was this datapoint acquired?)
    • Other (including processing provenance (how computed), context)
Survey Results: Properties to Include

• Location [Context metadata]
  • Is this geolocation or named location (e.g., home, work)?

• Source data modification [Acquisition]
  • Assumptions about immutability of data? Any experience with this?

• Sampling rate, measure of missing samples and reason [Acquisition]
  • Is sampling periodic (e.g., daily) or irregular (e.g., ad hoc)?
  • If regular and periodic, then missing samples are known to be missing
  • Reason for missingness can be very complex
Implications for Schema Design

• Acquisition provenance often applies to a data stream not a data point (e.g., sampling rate)

• Schema can be used for instances of arrays of observations (i.e., a stream) not only a single datapoint

• But metadata must be identical for every data point in the data stream. What if the location changes over the data stream?
Future Work
Next Steps: Metadata

• We will draft up full set of proposed minimal metadata properties
  • Datapoint/stream, schema, source, and acquisition
  • Present at next WG meeting (Dec 11)

• We will conduct one-on-one conversations with WG members to more deeply understand your use cases

Do you have hands-on experience with using mHealth data?
Do you have hands-on experience handling metadata to summarize/visualize it?

• Contact us! Plan to schedule 30 minute calls over December and January
  • ida@openmhealth.org or simona@openmhealth.org
Next Steps: Balloting

• Learning more about the official processes
• Will share with subgroups over December
Summary of Action Items
Future Meetings
Upcoming Meetings

• Main WG
  • December 11: 8 AM (Pacific)

• Sleep subgroup
  • December 4, 2018 8:00am to 9:00 am (Pacific) ← please note the one-time time difference

• PA&M subgroup
  • November 29, 2018 11 to 11:45 am (Eastern)
Adjournment