T2TRG: Thing-to-Thing Research Group

pre-IETF 112 “Fall” Summary Meeting, October 26, 2021
Chairs: Carsten Bormann & Ari Keränen
Note Well

- You may be recorded
- Be nice
- The IPR guidelines of the IETF apply: see http://irtf.org/ipr for details.
Note Well – Intellectual Property

- The IRTF follows the IETF Intellectual Property Rights (IPR) disclosure rules
- By participating in the IRTF, you agree to follow IRTF processes and policies:
  - If you are aware that any IRTF contribution is covered by patents or patent applications that are owned or controlled by you or your sponsor, you must disclose that fact, or not participate in the discussion
  - The IRTF expects that you file such IPR disclosures in a timely manner – in a period measured in days or weeks, not months
  - The IRTF prefers that the most liberal licensing terms possible are made available for IRTF Stream documents – see RFC 5743
  - Definitive information is in RFC 5378 (Copyright) and RFC 8179 (Patents, Participation), substituting IRTF for IETF, and at https://irtf.org/policies/ipr
Note Well – Privacy & Code of Conduct

• As a participant in, or attendee to, any IRTF activity you acknowledge that written, audio, video, and photographic records of meetings may be made public.

• Personal information that you provide to IRTF will be handled in accordance with the Privacy Policy at https://www.ietf.org/privacy-policy/.

• As a participant or attendee, you agree to work respectfully with other participants; please contact the ombudsteam (https://www.ietf.org/contact/ombudsteam/) if you have questions or concerns about this.

• See RFC 7154 (Code of Conduct) and RFC 7776 (Anti-Harassment Procedures), which also apply to IRTF.
Goals of the IRTF

• The Internet Research Task Force (IRTF) focuses on longer term research issues related to the Internet while the parallel organisation, the IETF, focuses on shorter term issues of engineering and standards making.

• The IRTF conducts research; it is not a standards development organisation.

• While the IRTF can publish informational or experimental documents in the RFC series, its primary goal is to promote development of research collaboration and teamwork in exploring research issues related to Internet protocols, applications, architecture, and technology.

• See “An IRTF Primer for IETF Participants” – RFC 7418.
Administrivia (I)

- (Blue sheets maintained by meetecho)
- Note-takers: https://notes.ietf.org/notes-ietf-interim-2021-t2trg-02-t2trg
- Jabber (= Meetecho chat)
  - xmpp:t2trg@jabber.ietf.org?join
- Mailing List: t2trg@irtf.org — subscribe at: https://www.ietf.org/mailman/listinfo/t2trg
- Repo: https://github.com/t2trg/2021-10-summary
<table>
<thead>
<tr>
<th>Time (UTC)</th>
<th>Who</th>
<th>Subject</th>
<th>Docs</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:00</td>
<td>Chairs</td>
<td>Intro, RG status, upcoming meetings and activities</td>
<td>t2trg-rest-iot, t2trg-iot-edge, t2trg-secure-bootstrapping</td>
</tr>
<tr>
<td>15:15</td>
<td>Cenk Gündogan</td>
<td>A Data-centric CoAP Transport (CoRE and ICN research talk)</td>
<td></td>
</tr>
<tr>
<td>15:45</td>
<td>Steve Hanna</td>
<td>Matter Security &amp; Privacy for Security &amp; Privacy Experts (CSA/&quot;CHIP&quot;)</td>
<td></td>
</tr>
<tr>
<td>16:15</td>
<td>Chairs</td>
<td>Reports from WISHI and other activities</td>
<td></td>
</tr>
<tr>
<td>16:25</td>
<td>Michael McCool</td>
<td>W3C WoT update</td>
<td></td>
</tr>
<tr>
<td>16:35</td>
<td>Michael Koster</td>
<td>OneDM update, iotschema.org</td>
<td></td>
</tr>
<tr>
<td>16:45</td>
<td></td>
<td>flex-time</td>
<td></td>
</tr>
<tr>
<td>16:55</td>
<td>Chairs</td>
<td>Wrap-up</td>
<td></td>
</tr>
<tr>
<td>17:00</td>
<td>Chairs</td>
<td>end of meeting</td>
<td></td>
</tr>
</tbody>
</table>
Next meetings

• Regular WISHI calls (~ monthly, next right before Thanksgiving?)
• (No T2TRG meeting at IETF 112, but:)
  • Some WISHI-related activities at Hackathon week Nov 1–5
• Online meetings with OCF / OMA SpecWorks (LwM2M&IPSO) / W3C WoT?
• “Online co-locating” with academic conferences:
  • DAI-SNAC21.hotcrp.com, Dec. 7
  • do this more!
• Physical meeting in 2022?
RG Doc Status

• “RESTful Design for IoT” (improved terminology and discussed affordances) 2021ish

• Edge & IoT (discuss today, getting ready for RG last-call) 2021ish?

• Secure Bootstrapping for IoT (discuss today) 2022ish

• Ramping up: IoT Information-Model Standards Description and related work on Semantic Landscape/Nutrition Labels in WISHI

• Also: WISHI notes (see WISHI wiki, e.g. terminology rosetta stone)
“IoT Edge Challenges and Functions”
(draft-irtf-t2trg-iot-edge-03)

• New revision -03 published in August
  • Reflected feedback received from oneM2M community members: referred new use cases in 2.4, mentioned oneM2M service layer in section 4.1, added text related to some functions in section 4.

• Last week, Roberto Morabito provided a detailed review of the draft.
  • To the authors’ knowledge, those are the only outstanding comments. We plan to address them shortly after the interim meeting.
  • Should we proceed to last call (pending resolution of the comments)
"Terminology and processes for initial security setup of IoT devices"
(draft-irtf-t2trg-secure-bootstrapping-01)

- Major revision (-01) submitted recently
- New title and structure (secure bootstrapping → initial security setup)
- Description of initial security setup in Bluetooth mesh complete
- Terminology used by each standard protocol identified and listed
- Next version to identify initial assumptions and knowledge imparted to devices after setup
- Authors looking for feedback. In particular: is your favorite protocol/standard missing?
A Data-centric CoAP Transport
(CoRE and ICN research talk)
Matter Security & Privacy for Security & Privacy Experts
(CSA/“CHIP" standards report)
Recent Work on IoT Semantic/Hypermedia Interoperability (WISHI)

- SDF relationship & instance information
- Follow-up on Azure Digital Twins Definition Language (DTDL) and IETF SDF
  - SDF & DTDL enhancements for improved expressiveness and interwork
  - Using external ontologies with SDF & DTDL
  - Further alignment on use of units
  - SDF↔DTDL conversion implementations
- Sharing, converting, and publishing models
- Hacking plan: connecting SDF-described (e.g., IPSO) devices to Azure Digital Twins system using conversion to DTDL models
W3C Update
OneDM Update