

# T2TRG: Thing-to-Thing Research Group

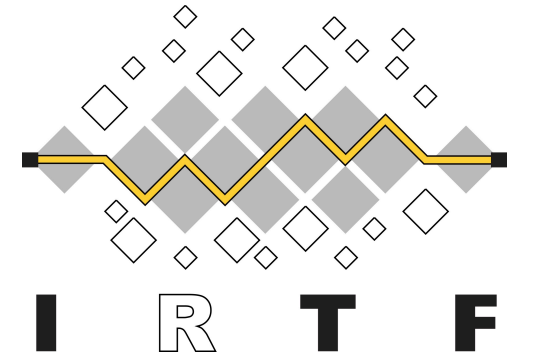
IETF 107+, April 14, 2020

Chairs: Carsten Bormann & Ari Keränen

# Note Well

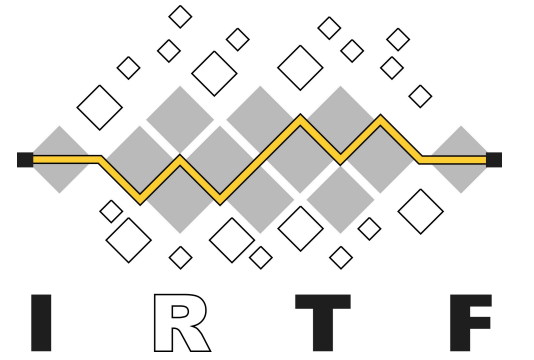
- You may be recorded
- Be nice
- The IPR guidelines of the IETF apply:  
see <http://irtf.org/ipr> for details.

# Note Well – Intellectual Property



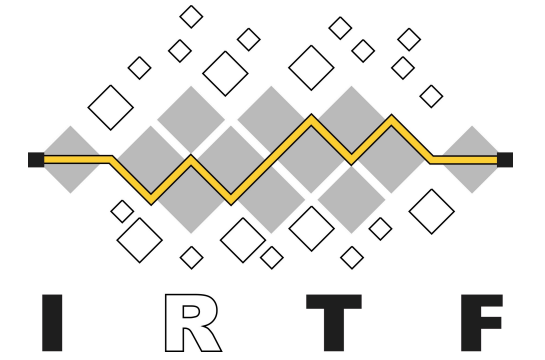
- **The IRTF follows the IETF Intellectual Property Rights (IPR) disclosure rules**
- By participating in the IRTF, you agree to follow IRTF processes and policies:
  - If you are aware that any IRTF contribution is covered by patents or patent applications that are owned or controlled by you or your 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 sheet (sign your name in the Etherpad)
- Note-takers
- Off-site (Jabber, Hangout?)
  - **<xmpp:t2trg@jabber.ietf.org?join>**
- Mailing List: **[t2trg@irtf.org](mailto:t2trg@irtf.org)** – subscribe at:  
**<https://www.ietf.org/mailman/listinfo/t2trg>**
- Repo: **<https://github.com/t2trg/2020-ietf107>**

# Agenda

Time (UTC)	Who	Subject	Docs
13:00	Chairs	Intro, RG status, upcoming meetings and activities	<a href="#">draft-irtf-t2trg-rest-iot</a>
13:05	Chairs, various	Reports from <a href="#">WISHI</a> , <a href="#">Pre-IETF OneDM workshop</a> , <a href="#">WISHI-hackathon</a> , W3C WoT	
13:20	Carsten Bormann	OneDM update and tutorial	
13:45	Lars Eggert	Towards Securing the Internet of Things with QUIC	<a href="#">NDSS paper</a>
14:15	Mohit Sethi	Bootstrapping terminology	<a href="#">draft-sarikaya-t2trg-sbootstrapping</a>
14:30	Tiru Reddy	MUD (D)TLS profiles for IoT devices	<a href="#">draft-reddy-opsawg-mud-tls</a>
14:40	Xavier de Foy	IoT Edge Challenges and Functions	<a href="#">draft-hong-t2trg-iot-edge-computing</a>
14:55	Chairs	Wrap-up	
15:00		end of meeting	

# T2TRG scope & goals

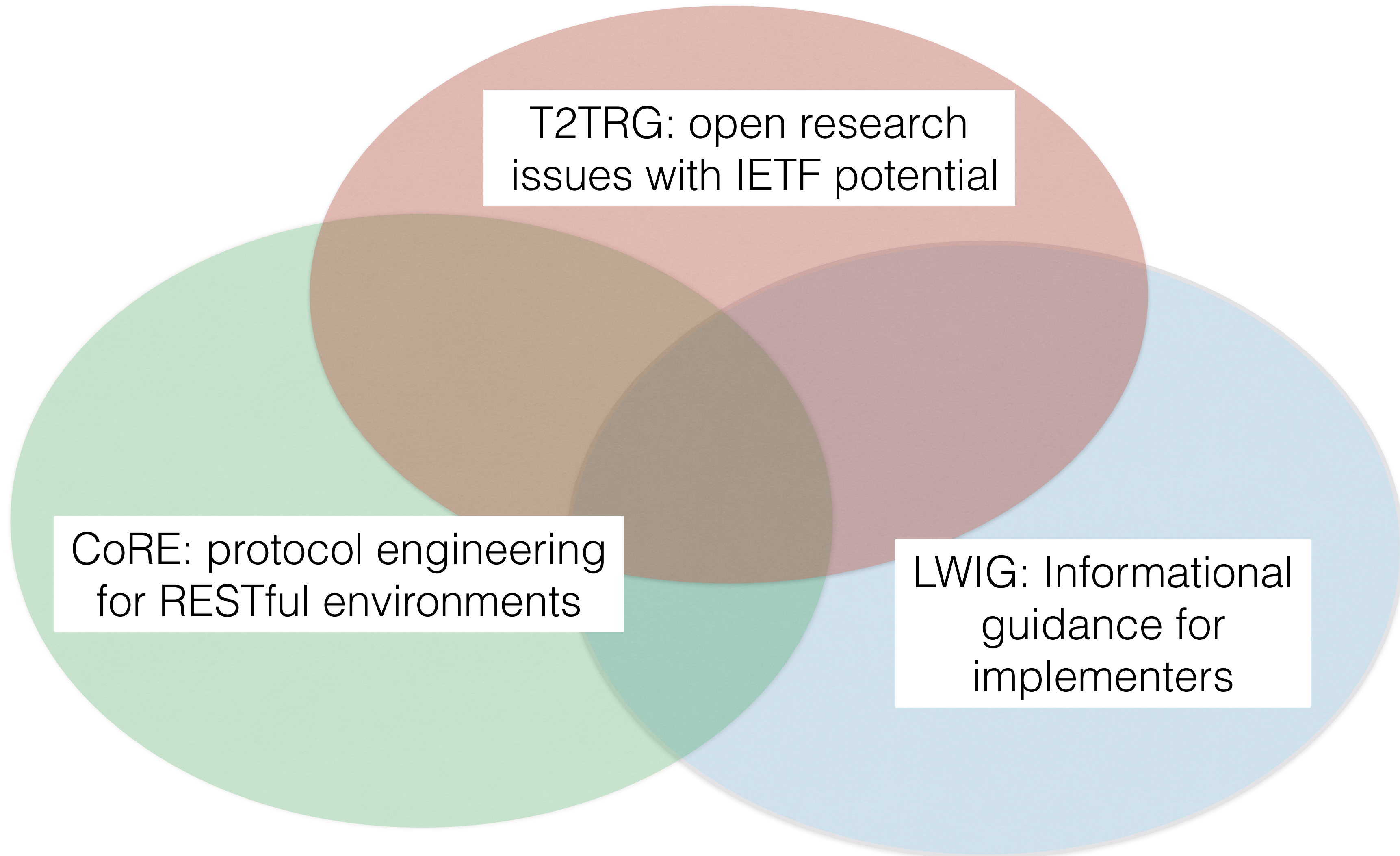
- Open research issues in turning a true "Internet of Things" into reality
  - Internet where low-resource nodes ("things", "constrained nodes") can communicate among themselves and with the wider Internet
- Focus on issues with opportunities for IETF standardization
  - Start at the IP adaptation layer
  - End at the application layer with architectures and APIs for communicating and making data and management functions, including security



# IRTF and IETF

IRTF  
(Research)

IETF  
(Engineering)



# Next meetings

- Regular WISHI calls (~ monthly)
- Online meetings with OCF / OMA SpecWorks (LwM2M&IPSO)/W3C WoT?
- W3C WoT (@ ICWE) "Helsinki meeting" online, June
- Topic-based meetings on selected OneDM-related issues (May), TBD
- IETF 108 (TBD, decision in May)
- Really co-locating with academic conferences again from 2021?

# RG Doc Status

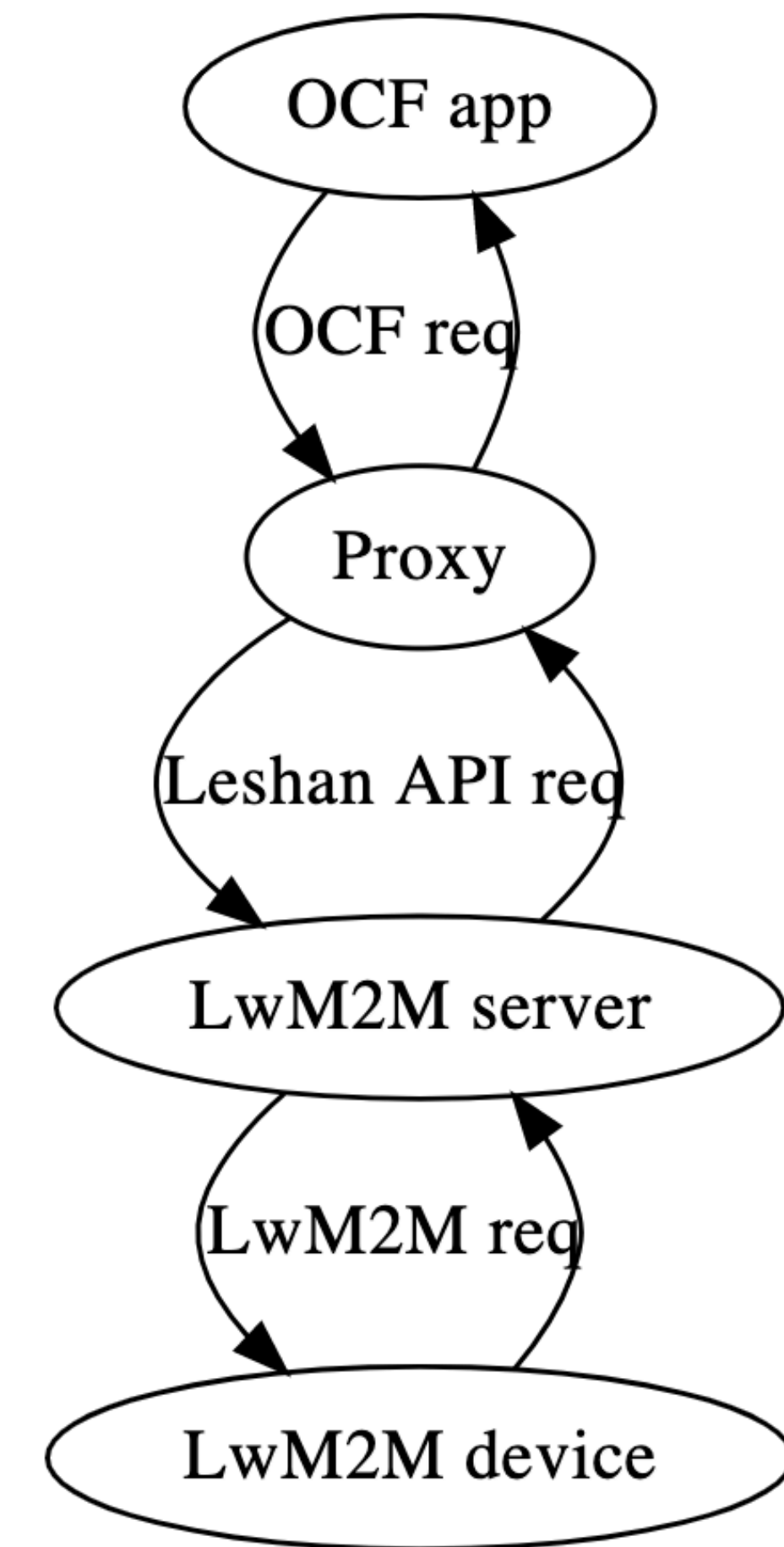
- “RESTful Design for IoT” (TBD: affordances & discovery)
- Edge & IoT (short update today, ready for RG adoption? Find reviewers!)
- Secure Bootstrapping for IoT (short update today)
- Not today:
  - YOUPI (describing binary data in legacy formats)
  - CoRE apps, collections part from CoRE interfaces
  - Layer 3 considerations?
- Ramping up: WISHI notes (see [WISHI wiki](#), e.g. terminology rosetta stone)

# Work on IoT Semantic/Hypermedia Interoperability (WISHI)

- Two online meetings with recurring topics
  - One Data Model
    - OneDM & WoT/iotschema
    - Protocol bindings
    - Semantic proxy & APIs
  - Data model design considerations (versioning & number spaces)

# WISHI OneDM Hackathon

- 4-hour Webex session
- "Show and tell" session of existing implementations
- "PoC challenge": **semantic proxy** that can read a temperature value of LwM2M device from OCF application, all based on the SDF model only
- Refined prototype plan



# Pre-IETF OneDM meeting

- Versioning / evolution of data models / data model language
  - Versions vs. features, model/language versions/revisions, etc.
- OneDM technical issues
  - Versioning of OneDM models (WIP)
  - Events/Actions/(Properties)/Data definitions
- Potential OneDM SDF IETF standardization
- Detailed notes: [https://hackmd.io/R9n8naQcTMeX0n1miV5\\_Yw?view](https://hackmd.io/R9n8naQcTMeX0n1miV5_Yw?view)

# W3C WoT update

Ege Korkan

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