

# **ICNRG Meeting @ IETF97 Seoul**

**IRTF**

**Information-Centric Networking Research Group  
Friday, November 18, 2016**

Chairs' Slides

Dirk Kutscher  
Börje Ohlman  
Dave Oran

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# ICNRG Administrativa

- IRTF RG on Information-Centric Networking
- Mailing list: [icnrg@irtf.org](mailto:icnrg@irtf.org)
- Web: <http://irtf.org/icnrg>
- Wiki: <http://trac.tools.ietf.org/group/irtf/trac/wiki/icnrg>
- Chairs
  - Dirk Kutscher (Huawei)
  - Börje Ohlman (Ericsson Research)
  - Dave Oran (Cisco Systems)
- This meeting
  - **Note taker:** Bastiaan Wissingh THANKS!!!
  - <http://etherpad.tools.ietf.org:9000/p/notes-ietf-97-icnrg>

# ICNRG Friday Agenda

- **Welcome, Agenda Bashing, Minutes taker, Bluesheets, Status** - Chairs (15 min)  
Report from ICNRG interim meetings (Kyoto & Sunday)
- **CCN/NDN harmonization report** - Marc Mosko/Alex Afanasyev (15 min)
- **Contrace: Traceroute Facility for Content-Centric Network** - Hitoshi Asaeda (20 min)
  
- **RG documents status** (5 min)
  - CCNx Messages in TLV Format
  - CCNx Semantics
  
- **Individual drafts**
  - Enabling Network Identifier (NI) in Information Centric Networks to Support Optimized Forwarding -- Ravi Ravindran (15 min)
  - CCNx Content Object Chunking - Marc Mosko (5 min)
  - The CCNx URI Scheme - Marc Mosko (5 min)
  - CCNx Key Exchange Protocol Version 1.0 - Marc Mosko (5 min)
  - ICN-IoT requirements - Ravi Ravindran (10 min)
  - Terminology draft - Bastiaan Wissingh (10 min)

# Past Interim Meetings

- September 2016, Kyoto
  - Security & Privacy
  - New tools and mechanisms: ping, traceroute, flow labels, pro-active caching
  - Harmonization
- November 2017, Seoul (Sunday)
  - Joint meeting with T2TRG
  - New experiments: IPoCCN
  - Seamless mobility, NRS update

<https://trac.ietf.org/trac/irtf/wiki/icnrg/pastmeetings>

# Joint Meeting with T2TRG

## Presentations at the meeting:

- Research and Development of the Hyper-connected IoE Network Technology - Taewan You
- Device and Network naming structures and ICN for IoT applications -Lopez Jairo
- A RESTful, Distributed and Enhanced ICN System for IoT - GQ Wang
- I3: some thoughts towards an Industrial Information-Centric Internet of Things - Thomas

## Discussion

- Naming: Data, Functions, Entities
- Semantic Interoperability
- **Internet** of Things
- T2TRG' Issues with CoAP

*T2TRG Summary  
slide of joint  
meeting*

# Cooperating between ICNRG and T2TRG

- ICNRG has been working on IoT topics from an ICN perspective ("IoT over ICN") for a while
- T2TRG has been discovering issues in IP based IoT protocols (e.g., on naming of endpoints and security where ICN mechanisms or thinking could be useful
- Workshop: several ICN IoT projects were presented and concepts of endpoints, naming, semantics, security and IP Internet interworking were discussed
- Joint activity seemed useful and collaboration between the two groups will continue e.g., with cross review of documents

# Harmonization Effort



# **Contrace: Traceroute Facility for Content-Centric Network - Hitoshi Asaeda**

# Good News

- RFC 7933  
Adaptive Video Streaming over  
Information-Centric Networking (ICN)
- RFC 7945  
Information-Centric Networking: Evaluation  
and Security Considerations

## **RG documents status (5 min)**

- CCNx Messages in TLV Format
- CCNx Semantics

## **Individual drafts**

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# IoT Requirements

- <https://tools.ietf.org/html/draft-zhang-icnrg-icniot-requirements-01>
- Had a discussion of RG adoption
  - Got mixed feedback
  - Chairs' proposal: proceed as individual RFC candidate, extend technical discussion in draft

# Wrap up

## Future interim meetings

- Possibly in January 2017, details TBD
  - Co-location proposals?
  - Host offers welcome!

## Next regular meeting:

- IETF98 Chicago, 26-31 March 2017
  - Interim?