# Next steps for draft-zhang-icnrg-icniot-02.txt

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# History and Draft Objectives

- Draft first proposed in IETF-89
  - draft-zhang-iot-icn-architecture
  - We split this into two in IETF-90 to increase participation
  - Separated Challenges from Architecture
- Later combined with another challenges drafts
  - draft-Lindgren-icnrg-efficientiot

#### **Draft Objectives**

- Identify research challenges on realizing heterogeneous IoT services over ICN.
  - We call it a unified ICN-IoT platform.
- Understand IoT requirements to achieve a unified ICN-IoT infrastructure
- Discuss suitability of ICN for IoT
  - This is considering that, today these are looked in specific application context.
- ICN challenges to meet the IoT requirements.
- Provide discussion on IoT scenarios, challenges and challenges within the specific scenarios.

# Recent Call for Adoption and Mailing List Comments

- Going from 00 to 01 version of the draft, several comments were addressed, when call for comments was made by the Chairs.
- More comments since call for Adoption
- Lixia Zhang
  - Security is not well discussed, should be promoted in Section 2
  - In Section 4 on ICN advantages, Security has no mention
  - Too general at this point, need more specific examples
- Marie-Jose
  - More Security Discussion
  - Why ICN-IoT is more useful than IP-IoT?, we have many IoT systems today
  - Use case scenarios

# Mailing List Comments

- Hassana Moustafa
  - Handling delay sensitive applications
  - How ICN can be a better solution for IoT ?
- Dirk Kutcher
  - Discuss more on technical solutions, considering the recent works
  - Lessons learnt, challenges etc.
- Borje Ohlman
  - Section 2.1 on Clarifying the usage of Names, time dependency, relationship to contexts
  - Advantages over host based naming as in IP
  - IoT device classification (Type 1/2/3)
  - Clarifying Sect 5.3 on Caching
  - Section 5.4 on Mobility Separate Static versus Dynamic Binding, clarify the use of SDN for Mobility
  - Section 5.7 on Security and Privacy Refrain from specific examples
  - Section 5.10 on Energy Efficiency needs more concrete discussion.

### **More Comments**

#### Dave Oran

- Propose to re-title the document as "design considerations in applying ICN approaches to the Internet of Things"
- Material too general at this point
- Section 2.9 clarifying the need for rich communication patterns like mesh routing compared to tree based routing that ROLL proposes.
- Section 2.11 Infrastructure versus Ad-hoc classification
- Section 4 provide discussion related to DTN
- Revisit Section 3.2.1 on Overlay deployment Weakness
- Section 5.3 on caching/storage needs more examples
- Section 5.7 on security and privacy, threat related discussion
- Revisit Section 5.9 on realiability more concrete discussions
- Section 6 requires review by experts in those scenarios.

# Proposed Revisions to the Document

Retitle "design considerations in applying ICN approaches to the Internet of Things"?

#### **Proposed New Section**

• Discussion on concrete use case scenarios which brings out ICN unique value

#### Re-ordering/Clarifying/ More details to current Sections

- Promote Security and Privacy discussions in Section 2/4/5
- Section 4 on benefits of ICN cite recent works with more discussions
- Make Section 2 shorter and address comments in:
  - Section 2.9 (Communication Reliability)
  - Section 2.11 (Support for Infrastructure and Adhoc)
  - Section 2.12 on OpenAPIs
- Section 3, clarify discussion in:
  - 3.2.1 on overlay efficiency as currently discussed in the document
- Section 5, address comments in:
  - 5.3 on Caching and Storage
  - 5.4 on Mobility
  - 5.7 on Security and Privacy
  - 5.9 on Communication Reliability
  - 5.10 on Energy efficiency
- Section 6, review:
  - Scenario discussions needs expert review