draft-zhang-icnrg-icniot-requirements-01.txt

- Requirements and Challenges for IoT over ICN

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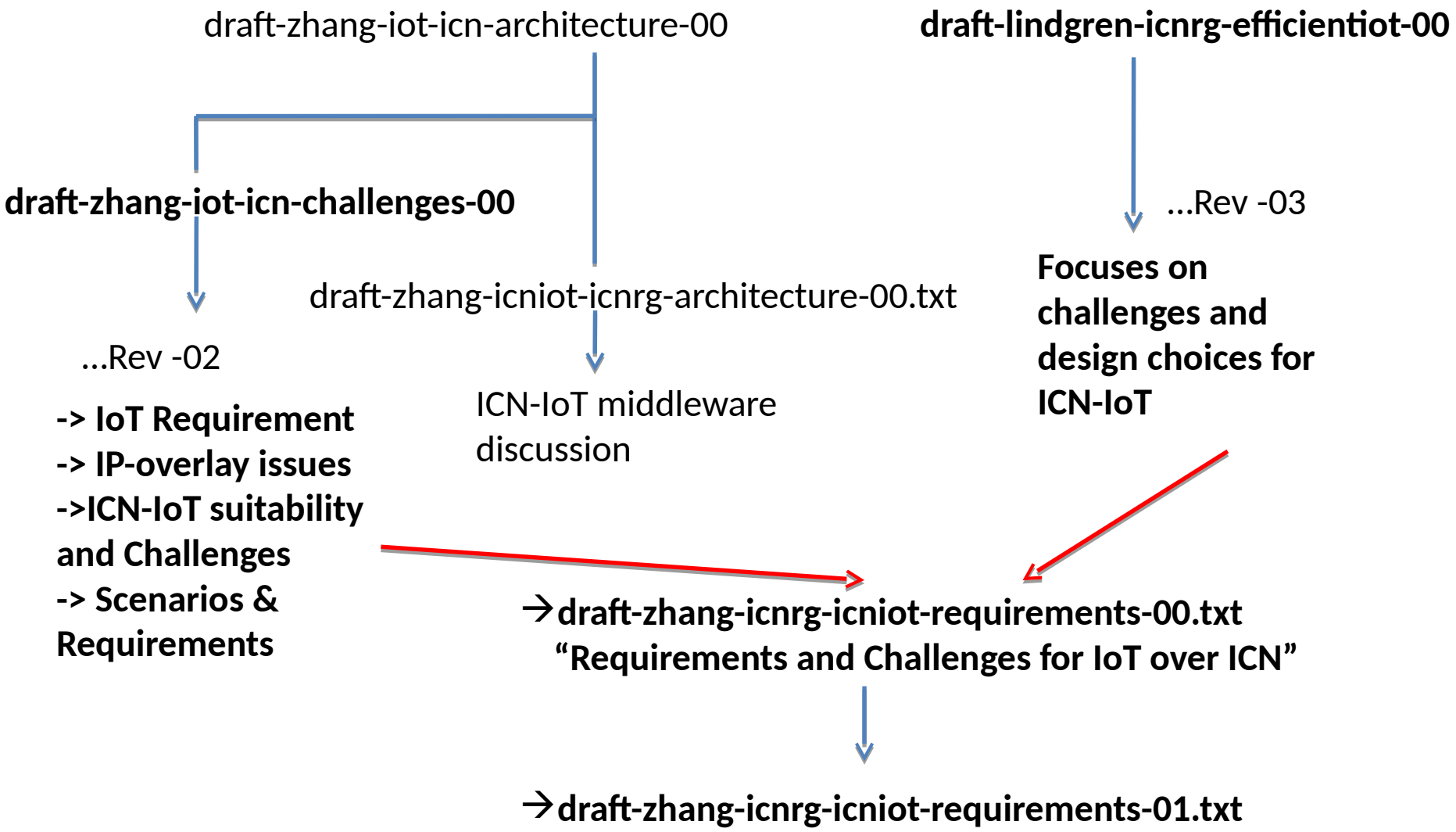
Draft History

- **These drafts have evolved since first presented at IETF-90**



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 requirements from the underlying platform.

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Changes Based on Mailing List Feedback

- **Comment #1 on Self-Configuration and In-Network Computing with new contribution.**
- Section 2.10 on Self-Organization was modified using the contribution from the mailing list
  - Decoupling the Sensing infrastructure from the applications.
  - Easy reconfigurability of the applications without updating the IoT firmware
- Section 5.6 on In-Network Computing
  - New contribution on using Named Function Networking to process IoT data.
  - Identifies challenges function naming, input parameters, and the output result, protocol requirements, routing, and synchronization requirements.

Changes Based on Mailing List Feedback

- **Comment #2 on CORE , ROLL WGs**
- Comment was to correct the objectives of CORE WG
  - Section 3.2 : Overlay Based Unified IoT Solutions
  - Added a paragraph on CORE WG objective and some details on COAP, HTTP as candidate protocols for M2M communication.
- Comment on Communication Reliability requirement
  - In Section 2.9, recognizes the work from ROLL WG, and added a requirement to investigate new routing structures to improve reliability

Changes Based on Mailing List Feedback

- **Comment #3:**
- Comments on using including delay and jitter as resource constraints considering satellite or space based device.
- Comments on adding a new challenge on IoT Platform Management
  - Modified Section 2.3 and 2.13 accordingly.

Changes Based on Mailing List Feedback

- **Comment # 4**
- Comment on restructuring the section on contextual communication for more clarity
  - Section 2.5 was rewritten to make it more clear.
- Comment on Section 6.4 on transportation scenario section on limiting sensors only for in-vehicle functions.
  - Section 6.4 has been modified to include V2V/V2I/V2R scenarios as well.

Post Publication of this v1.0

- **Comment #5**
  - One more editorial comments received
  - Will address them in the next iteration..

Next Steps

- Changes as a result for call for comments from the chairs towards adoption as a IRTF WG document.
- Hope for the adoption, for more iteration of this document.