ICN Research Challenges
draft-kutscher-icnrg-challenges-02

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Document Purpose

- **WHY**
  - Problems and pain points in today's networks

- **HOW** can ICN help
  - Fundamental ICN concepts

- **WHAT** to do in ICNRG
  - Research challenges, important topics

- Possible **RESULTS**
  - Impact on IETF work

Structure

1. Introduction
   - Example pain point, example ICN solution, brief concept overview
2. Problems with information distribution today
   - Inefficiencies, security issues
3. ICN Terminology and Concepts
   - Receiver-driven communication model based on named data objects (NDOs) as a first-order network service
4. Research Challenges
   - naming, security, routing, name resolution, transport, caching, interconnection, management, mobility management
5. Impact on IETF work
   - Anticipated changes to Internet architecture and protocols, relation to existing work (e.g., CDNI)

Changes -- Overview

Summary of Changes

- new text on Delivering data objects from replicas and other changes in security section
- new text on Staleness Detection of Cached NDOs (for caching, sec. 4.7.4)
- security considerations point to security section in text
- many editorial fixes

TODO

- Section pending on **Link to and Impact on IETF Technologies**
  - Intended to document possible impact to IETF technologies
  - Candidates: HTTP(bis), CDNI, P2PSP, ALTO, ...
  - Probably better to make this a dedicated document
- Next steps
  - Remove impact section -- work on this later as a standalone document
  - Re-publish as draft-icnrg-challenges
  - Go for open and independent RG review prior to IETF 90