ICN Research Group

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Vancouver Meeting @ IETF-84

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Administrativa

- Web site, with charter
  - http://irtf.org/icnrg
- Wiki
  - http://trac.tools.ietf.org/group/irtf/trac/wiki/icnrg
- Mailing list
  - icnrg@irtf.org

Information-Centric Networking

- Accessing named data objectives as a first-order network service

- Leveraging network storage

- As a native service or overlay
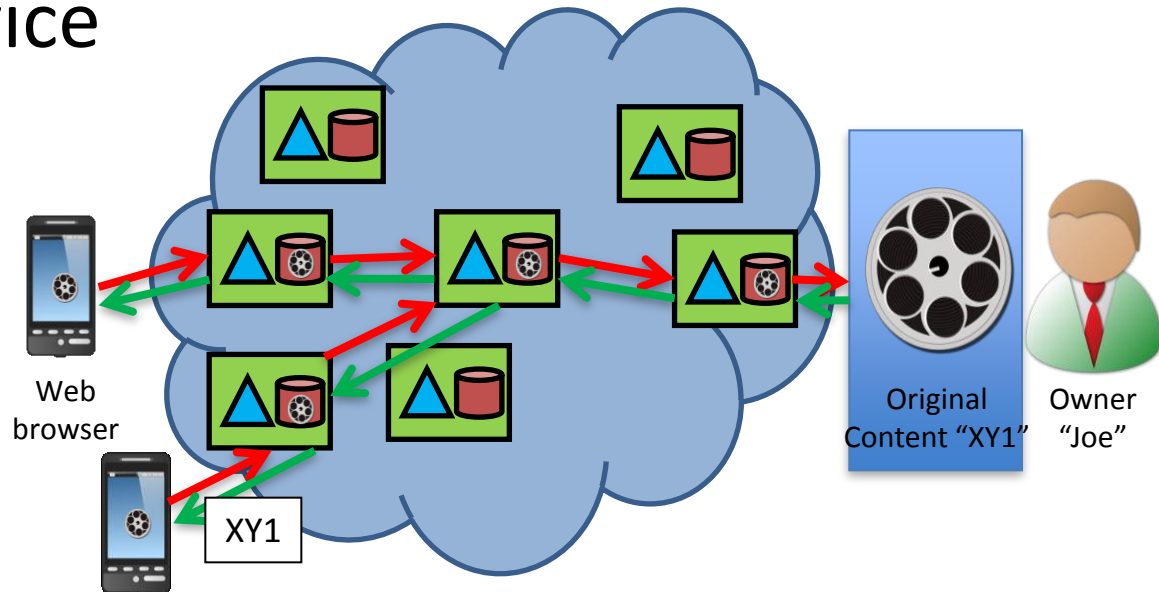
ICNRG Objectives

- Couple ongoing ICN research with solutions that are relevant for **evolving the Internet at large**

- Produce a document that provides **guidelines for experimental activities**
  - so that different, alternative solutions can be compared consistently, and information sharing accomplished for experimental deployments

- Initiate discussions about the desirable **ICN interfaces/APIs**
  - e.g. from the perspective the application layer and from network management.

Short-Term Goals

- Produce a document that provides a **survey of different approaches and techniques**

- Produce a document that describes the **ICN problem statement**, the main concepts and research challenges in depth

- Define reference **baseline scenarios to enable performance comparisons** between different approaches

Topics Today

- Received many contributions – thanks!
  - Different topics, different types of inputs
- This meeting
  - Tried to accommodate a broad range
  - Gave preference to presentations on submitted drafts
    - Or papers not presented at SIGCOMM in two weeks
- Have proposal for focused work in the future

Agenda

- **09:00 -- 09:10 Welcome**
  - Chairs' Welcome / Agenda bashing / ICNRG Goals Recap [10 min]
- **09:10 -- 09:30 Naming**
  - Names with crypto in ICN [Stephen Farrell] [15 min]
  - Discussion on Next Steps [5 min]
- **09:30 -- 10:10 Name Resolution & Routing**
  - Routing Protocol Formats [Ashok Narayanan] [15 min]
  - Threats in Content-Centric Routing [Matthias Waehlisch] [15 min]
  - ICN Scalability and Deployability [Akbar Rahman][5 min]
  - Potential Based Routing for ICN [Suyong Eum] [5 min]
- **10:10 -- 10:40 Resource Management**
  - REBOOK: a Network Resource Booking Algorithm [Pier Luca Montessoro] [15 min]
  - Congestion control and in-network caching [Damien Saucez, Inria] [15 min]
- **10:40 -- 10:55 Deployments and Apps**
  - Information-Centric Network in an ISP [Lichun Li] [15 min]
- **10:55 -- 11:30 Buffer, Wrap-up, Next Steps**
  - Announcements: ITU-T SG 13 heads-up [Suyong Eum]
  - Chairs' presentation on possible next steps [15 min]
  - Discussion

Next Steps

- Want to kick-off continuous work on our goals
- Goal for next meeting: have work items and milestones
- Want to structure future work a bit – proposal on next slide

Proposed ICNRG Work Taxonomy

Technical Area	Near-term: Apply ICN ideas to existing IETF protocols	Longer Term: New protocols, techniques, architectures
Naming	e.g. Farrell work	
Routing	e.g. Narayanan BGP work	
Congestion Control		
Caching		
Instrumentation & Measurement		
Security: e.g. Authorization, Confidentiality, Privacy, DoS Resistance		

Proposal for Work to Start Soon

- Problem Statement
  - Motivation for ICN
  - Fundamental concepts
  - Relation to current Internet technologies

- Survey document
  - Document existing approaches in structured way
  - Can possible leverage existing work
    - Recent IEEE COMMAG special issue on ICN
    - RFC 6392

Misc.

- Next meeting: probably at or around IETF-85