

# Decentralized Internet Infrastructure Research Group

Workshop on Centralization in the Internet  
2021-06-03

<https://datatracker.ietf.org/meeting/interim-2021-dinrg-01/session/dinrg>

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# Hints

- Meeting material: <https://datatracker.ietf.org/meeting/interim-2021-dinrg-01/session/dinrg>
- Notes & Bluesheet: <https://codimd.ietf.org/irtf-dinrg-interim-2021-06-03>
- Note taker?

# Note Well – Intellectual Property



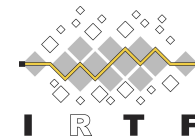
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# Goals of the IRTF



- The Internet Research Task Force (IRTF) focuses on longer term research issues related to the Internet while the parallel organisation, the IETF, focuses on shorter term issues of engineering and standards making
- **The IRTF conducts research; it is not a standards development organisation**
- While the IRTF can publish informational or experimental documents in the RFC series, its primary goal is to promote development of research collaboration and teamwork in exploring research issues related to Internet protocols, applications, architecture, and technology
- See “An IRTF Primer for IETF Participants” – [RFC 7418](#)

# Agenda

1	Welcome and Introduction	Chairs	15 min
2	Panel #1: WHY: Is Big Really Bad?		60 min
3	Break		15 min
3	Panel #2: HOW: How Did We Get Here?		60 min
4	Open Discussion: Feedback, Thoughts	Chairs, All	30 min

# Motivation

- General observation of increasing Internet consolidation and centralization
  - Factor for enabling many services
  - Also considered a problem: power concentration, surveillance industry
- Many proposals from outside and inside the IETF community at different maturity levels
- Suggesting to take a step back and understand centralization better



# We are tackling a big challenge

- Slow start
- First step: gain deeper understanding
  - Instead of jumping into solution development right away
- Be mentally prepared: tackling big challenge will take *big* effort over *long* time
- We view this workshop as starting the first step
  - Reaching a shared understanding will take time and effort

# This Workshop

- Why centralization is bad?
  - How bad is it (also compared to other sectors)
- How we got where we are today?
  - What factors enable it?
  - Have we failed or just been too successful?

# Workshop Submissions

- [Measuring Web Centralization, Trinh Viet Doan](#)
- [Centralization is about Control, not Protocols, Henning Schulzrinne](#)
- [Protocol and Engineering Effects of Consolidation, Dominique Lazanski](#)
- [Centrality in the Internet, Geoff Huston](#)
- [We are probably doomed to Internet consolidation, but we should still try do something., Christian Huitema](#)
- [How We Got from There to Here: Searching for the Root Cause, Lixia Zhang](#)
- [Mitigation Options against Centralization in DNS Resolvers, Jari Arkko](#)
- [Decentralization != Equality?, Trinh Viet Doan](#)
- [Decentralized Data Infrastructures for the New Digital Economy, Thomas Hardjono](#)
- [Autonomy is the real goal, Phillip Hallam-Baker](#)
- [Focus on Standards Adoption, Charles Eckels](#)

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# Panel Structure and Participation

- . 20 min for intro talks
- . 30 minutes panel
  - . Starting with quick panelists intro
  - . Attendees: please share your questions in the chat in the meantime
- . 10 min for addressing questions from the chat channel
  - . Please save more general thoughts, feedback for the discussion slot at the end

# Panel #1: WHY: Is Centralization Really Bad?

- **Economic, societal, regulation perspective**
- **Centralization in the Internet and Elsewhere**
- Moderator: Dirk Kutscher
- Introductory Talk: Geoff Huston
- Panelists
  - Henning Schulzrinne
  - Dominique Lazanski
  - Geoff Huston

# Panel #2: HOW: How Did We Get Here?

- **Architectural & technical discussion**
- **Factors enabling centralization?**
- Moderator: Lixia Zhang
- Introductory Talk: Christian Huitema
- Panelists
  - Thomas Hardjono
  - Jari Arkko
  - Trinh Viet Doan
  - Christian Huitema