



# CAN INTERNET PROTOCOLS AFFECT HUMAN RIGHTS?

IRTF RG  
Human Rights Protocol Considerations  
(hrpc)

IETF 96  
Wednesday July 20 2016  
15:50 – 17:20

Co-Chairs:  
Niels ten Oever - Article19  
Avri Doria (not here) - APC

# Administrivia

## Mailinglist

- <https://www.irtf.org/mailman/listinfo/hrpc>

## Github

- <https://github.com/nllz/IRTF-HRPC>

- Meetecho

<http://www.meetecho.com/ietf96/hrpc/>

- Minutes

<http://etherpad.tools.ietf.org:9000/p/notes-ietf-96-hrpc>

- Intro website

<https://hrpc.io>

# Agenda

Human Rights Protocols Considerations (hrpc) research group sessions at #IETF96 [time] UTC +2, July # 2016

- Beginning (5 min)
  - Jabber scribe, note takers
  - Agenda Bashing
  - Notewell
- Introduction
- Status of research group & documents (2 min)
- Context of research (5 mins)
- Presentation + Q&A - Laura DeNardis on Protocol Politics (15 mins)
- Presentation + Q&A - UN Special Rapporteur Human Rights David Kaye on report 'Freedom of expression and the private sector in the digital age' (15 mins)
- Presentation + Q&A - Alissa Cooper on lessons learned from RFC6973 (15 mins)
- Discussion of draft-tenoever-hrpc-research (15 mins)
  - <https://tools.ietf.org/html/draft-tenoever-hrpc-research>
    - recent changes + reviews
    - experiences in using it while evaluating other drafts
      - Shane Kerr
      - Giovane C. M. Moura
    - next steps
- Open discussion other drafts, papers, ideas (15 min)
- Next steps (5 min)
- AOB

# Note Well

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# Document Review Request

- Document quality relies on reviews, please review documents in your working group and at least one other document from another working group.
- If you'd like documents you care about reviewed, put the effort in to review other documents.

# Status of proposed research group

- October, 27, 2014 - Publication of [Proposal for research on human rights protocol consideration](#)
- IETF91 - November, 13, 2014: Presentation during [saag session](#)
- March 9, 2015 - Publication of [Proposal for research on human rights protocol considerations - 01](#)
- January 2015 - Proposed research group in the IRTF
- IETF92 - March 22 to 27, 2015 – Session & Interviews with members from the community
- June 2015 - Interim Meeting
- July 2015 - Publication of [Methodology](#) and [Glossary](#) drafts
- IETF93 - July 2015 – Session
- IETF94 November 2015 – Screening of film Net of Rights, updates of [Glossary](#), [Methodology](#), [Report](#) drafts, [Users draft](#), [paper](#), session
- December 2015 – Research Group chartered
- IETF95 April 2016 – Session, new [Research draft](#), updated [Report](#) and [Censorship](#) draft, & 3 talks
- IETF96 July 2016 – Session new Research Draft – road tests, reviews, text & 3 talks

# Context and objective of the RG

- To expose the relation between protocols and human rights, with a focus on the rights to freedom of expression and freedom of assembly.
- To propose guidelines to protect the Internet as a human-rights-enabling environment in future protocol development, in a manner similar to the work done for Privacy Considerations in RFC 6973.
- To increase the awareness in both the human rights community and the technical community on the importance of the technical workings of the Internet and its impact on human rights.

# Context of research (ii)

Alvestrand	Best Current Practice	[Page 3]
RFC 3935	IETF Mission Statement	October 2004

(Another step is to choose leaders that we trust to exercise their good judgement and do the right thing. But we're already trying to do that.)

## 4. Issues with Scoping the IETF's Mission

### 4.1. The Scope of the Internet

A very difficult issue in discussing the IETF's mission has been the scope of the term "for the Internet". The Internet is used for many things, many of which the IETF community has neither interest nor competence in making standards for.

The Internet isn't value-neutral, and neither is the IETF. We want the Internet to be useful for communities that share our commitment to openness and fairness. We embrace technical concepts such as decentralized control, edge-user empowerment and sharing of resources, because those concepts resonate with the core values of the IETF community. These concepts have little to do with the technology that's possible, and much to do with the technology that we choose to create.

# Laura DeNardis

- Internet Governance Scholar
- Professor in the School of Communication at American University in Washington, D.C
- Senior Fellow of the Centre for International Governance Innovation (CIGI)
- Director of Research for the Global Commission on Internet Governance

A dark blue background featuring a stylized globe with glowing white network nodes and connecting lines, symbolizing global connectivity and data flow.

IETF 96, Berlin  
July 20, 2016

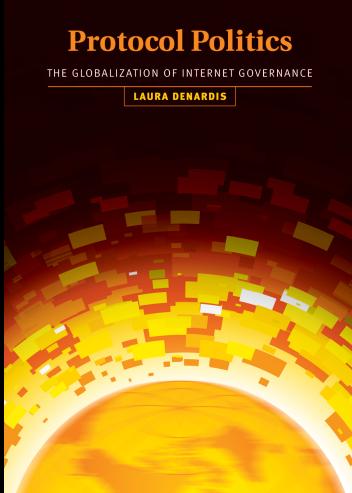
# Emerging Issues in Protocols and Human Rights

Dr. Laura DeNardis, Professor, American University in Washington, DC

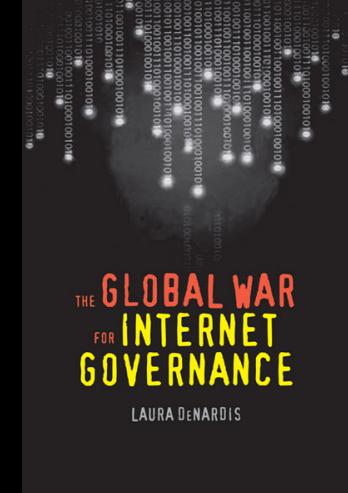




# “Protocols are Politics by Other Means”



- Accessibility standards for the disabled
- Peer-to-peer file sharing protocols
- Standards for anonymizing technologies
- Encryption protocols and key length
- Standards-embedded patents & the right to innovate
- Proprietary standards in emerging technologies
- Interoperability and access to knowledge





# ISOC “Internet Invariants” – Enduring Technical Principles



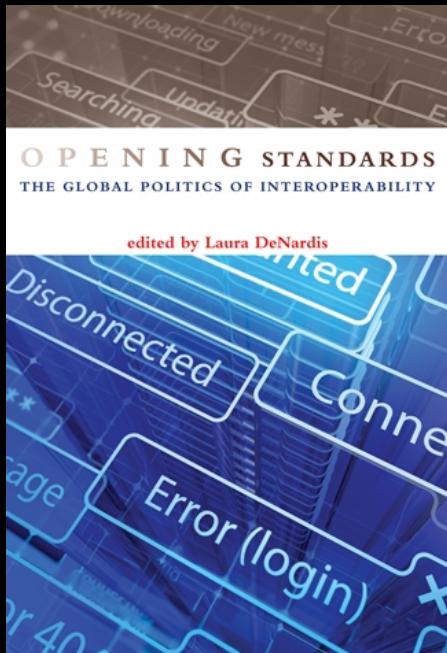
- Global Reach
- General Purpose
- Permissionless Innovation
- Accessibility
- Interoperability
- Mutual Agreement



*“A network that does not have these characteristics is a lesser thing than the Internet as it has been experienced to date.”* -- Leslie Daigle



# Standards Setting and the Public Interest



What are the procedural characteristics necessary for public accountability?

Open in  
Development

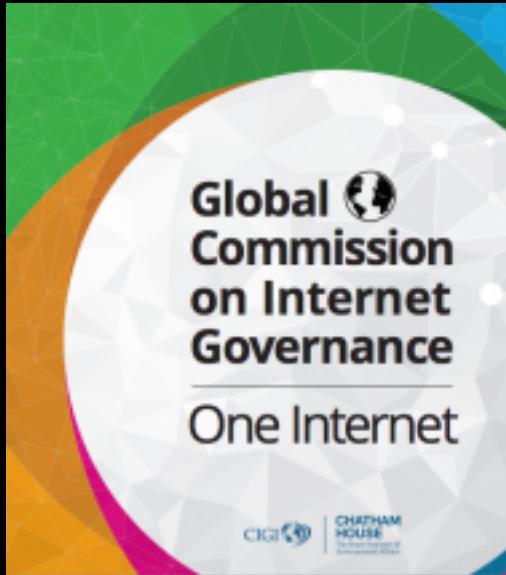
Open in  
Implementation

Open  
in Use

The IETF has a high degree of procedural openness but not all standards-setting organizations do.

# The Broader Context

Protocols are only one component. Many other contextual factors shape human rights implications of Internet infrastructure.



- Market Forces
- National Laws and Policies
- International Agreements
- Private Industry Policies
- Culture and Language
- Implementation Approaches
- Technology Adoption Policies
- User Choices

## THE TURN TO INFRASTRUCTURE IN INTERNET GOVERNANCE

Governments are increasingly co-opting systems of Internet infrastructure and governance for purposes completely outside of their original technical and policy functions.

- Data localization laws
- Encryption backdoors
- Access and interconnection blocking
- Local DNS redirection for censorship
- Search engine rankings and intellectual property rights enforcement

To what extent does this turn to infrastructure potentially extend to Internet protocols and how could this affect human rights?

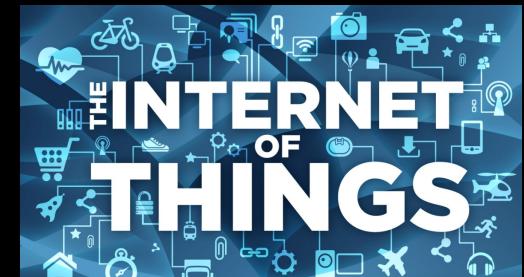


# Emerging Topic

From Content to Objects. As the Internet shifts from a communication network centered on content to a control network reaching more directly into the material world, what are the prospects for human rights in this context and what standards decisions today can anticipate rights challenges tomorrow?



- Digital Currencies
- Augmented Reality and Gaming
- Cyber Conflict
- Digital Archiving of Virtual and Material Objects
- Internet of Things/Internet of Self





Thank You

denardis@american.edu @LauraDeNardis  
ourinternet.org



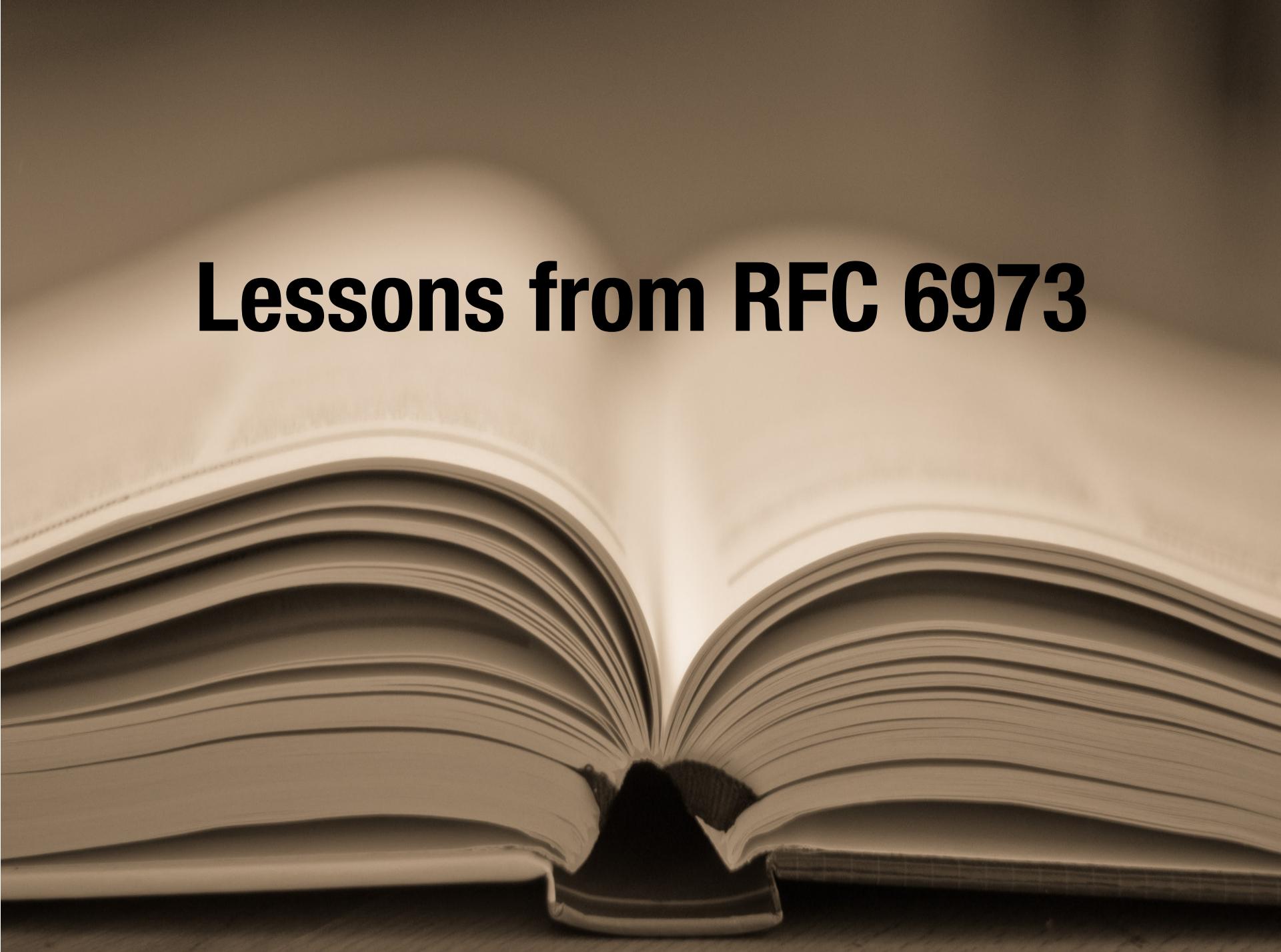
# David Kaye

- UN Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression
- Clinical professor of law at the University of California, Irvine, School of Law

# Alissa Cooper

- Distinguished Engineer at Cisco Systems
- Applications and Real-Time (ART) area director
- RFC6462, 6280, 5594, 7721, 6973, etc

# **Lessons from RFC 6973**



# Why did we write RFC 6973?

- Security as an IETF design consideration (RFC 1543, 2223, 3552, 3365, ...)
  - Realistically cannot design and standardize a new protocol without confidentiality, authentication, integrity, etc. protections or strong story for why not.
- Recognition within IAB and IETF of privacy as a design consideration.

# How did we write RFC 6973?

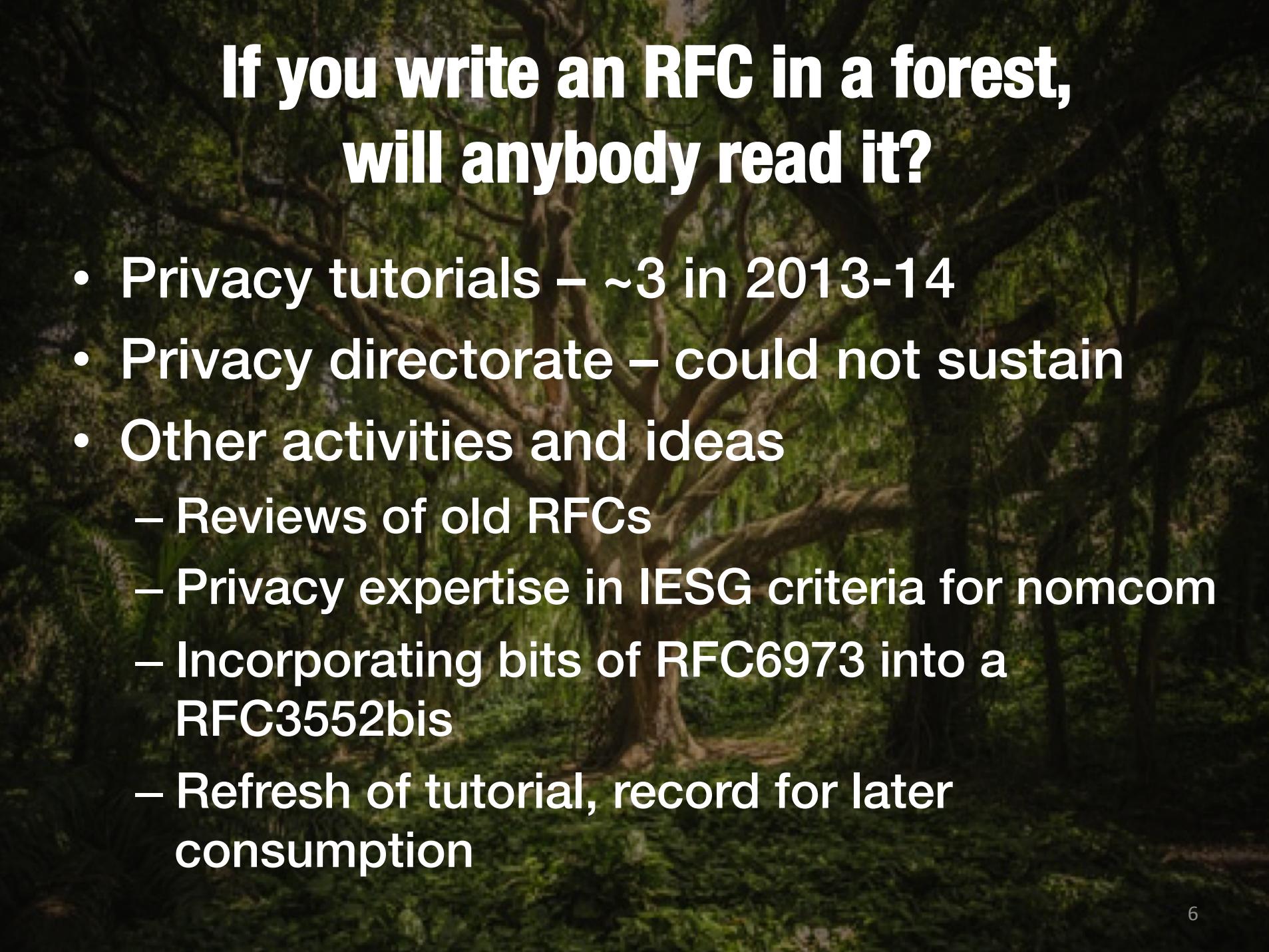
- Individual informational draft first published in 2010.
- IAB Privacy (now Privsec) program took it up 1 year later.
- Published in IAB stream July 2013.
- Retained significant content from individual draft and structure from RFC 3552.

# **(Hard-fought) decisions (1/2)**

- Limited ambition, general applicability
  - No definition of “privacy.”
  - No explicit prohibitions or requirements.
  - No required privacy considerations section.
  - No specific legal framework.
- Acknowledged scope limitations
  - What can be addressed in protocol design vs. deployment and operation.
  - What can be addressed at each network layer.

## (Hard-fought) decisions (2/2)

- Made distinction between (negative) defending against exploits and (positive) building privacy tools.
- Provided specific examples.



# If you write an RFC in a forest, will anybody read it?

- Privacy tutorials – ~3 in 2013-14
- Privacy directorate – could not sustain
- Other activities and ideas
  - Reviews of old RFCs
  - Privacy expertise in IESG criteria for nomcom
  - Incorporating bits of RFC6973 into a RFC3552bis
  - Refresh of tutorial, record for later consumption

# Results



# Results

- Privacy awareness has increased among protocol designers.
  - Demonstrated in many docs arriving for IESG review (and published).
- Specific checklist only occasionally used (extreme example: RFC 7594).
- Attention to privacy still highly dependent on authors, last call/secdir reviewers, ADs who happen to be there at the time.
- Deployment of more privacy-friendly features/protocols also clearly on the rise.

# **Thoughts about human rights considerations in protocol design**

- Focus on one area at a time
  - Censorship resistance? Decentralization?
- Focus on areas lacking in guidance
  - Security, privacy, internationalization, extensibility all well-trod already
- Provide specific examples of application
  - If an existing protocol design had considered X, how would it have changed?
- Be specific about scope limitations
  - Protocol vs. implementation vs. deployment
  - Upper layers vs. lower layers

# Discussion of draft-tenoever-hrpc-research

<https://tools.ietf.org/html/draft-tenoever-hrpc-research>

Corinne Cath

# Discussion of RG ID draft-tenoever-hrpc-research

Updates since IETF 95

# Recap

CAN  
INTERNET  
PROTOCOLS  
AFFECT  
HUMAN  
RIGHTS?

# Updates to RG ID

## draft-tenoever-hrpc-research

- 4 Categories:
  1. Typos, formatting, citation
  2. Research methodology + test?
  3. Mapping of protocols that impact human rights
  4. Guidelines, questionnaire

Over **150** email threads, comments from more than **30** individual participants on draft, 7 hrpc sessions, over **15** offline screenings of the Net of Rights movie, and over **17.000** online hits on hrpc.io, over

# 1. Typos, formatting, citations, dutchisms



## 2. Research methodology and test

- Clarified the research methodology
- Clarified how human rights impact was defined
- Discussed creating test to measure impact
- Still working on improving the method by which to define the impact of protocols on human rights

# Example

- 1. Introduction language not precise enough
  - Nuanced by changing language on how Internet designed with FOE in mind, to how the openness of communication on the Internet enables FOE.
  - Added additional academic references.
- 2. Method to establish HR impact of protocols unclear
  - Is it a black box ?
  - Do we need a test?
  - How can we improve the method by

### 3. Mapping of protocols that impact HR



# Mapping of protocols that impact HR

- Improved language
- Brought in perspectives of four reviewers and testers (Thank you @James Gannon, Harry Halpin, Shane Kerr and Giovane Moura)
- Reduced language on DDoS & Middleboxes

# Examples

- 1. Network Address Translation (NATs) section did not include a section on how they can cause VPNs or other privacy enhancing connections to malfunction, undermining the rights to privacy.
- 2. We missed several instances of technology undermining the end-to-end principle, vital for ensuring the right to EOF

# 4. Guidelines and Questionnaire



## 5.2.2.1. Map cases of protocols that adversely impact human rights or are enablers thereof

- Positive feedback from reviewers who tested against active IDs (it actually impacted their IDs)
- Further explained rationale of impact on particular rights
- Reduced repetition in the text

# Example

- 1. The text on open standards and availability was similar, and thus we merged them.
- 2. Improved text on adaptability

# Next Steps

- Since IETF95 we've had
  - 3 extensive reviews before adoption as RG ID
  - 4 extensive reviews and road tests after adoption as RG ID
  - Issues seem resolved
- Schedule proposal: one more month of review, comments, suggestions and time to rework comments made at IETF96 before last call ?

# Let's hear from the testers

- Shane Kerr
- Giovane C. M. Moura

# Trial Run of Guidelines

## `draft-song-dns-wireformat-http`

- Draft: DNS protocol over HTTP protocol
- General observations:
  - Basically useful
  - Was (and maybe still is) a bit too long, unprioritized
- Should refer to <[privacy@ietf.org](mailto:privacy@ietf.org)>for advice
- Confused me with heterogeneity & adaptability
- Possible duplicates:
  - Internationalization / Localization
  - Acceptability / Accessibility
  - Availability / Open Standards

- Open discussion other drafts, papers, ideas (15 min)
- Next steps (5 min)
- AOB

```
if write code(protocols):
    consider human rights implications
elif run internet infrastructure:
    respect human rights
elif engage in internet governance:
    build in human rights protections
else
    carry on and use FLOSS
```