Proposed Human Rights Protocol Considerations Research Group

IRTF

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March 27 2015 - IETF92 Dallas

Agenda

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- Notewell
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Status of proposed research group

October, 27, 2014

Publication of Proposal for research on human rights protocol considerations - 00

ID 00 - www.ietf.org/id/draft-doria-hrpc-proposal-00.txt

IETF91

November, 13, 2014: Presentation during saag session

https://datatracker.ietf.org/meeting/91/agenda/saag/

March 9, 2015

Publication of Proposal for research on human rights protocol considerations - 01

http://www.ietf.org/id/draft-doria-hrpc-proposal-01.txt

January 2015

Proposed research group in the IRTF

IETF92 March 22 to 27, 2015

Interviews with members from the community

Context of the Research

- Internet as tool for freedom of expression and freedom of association

    - By intention or by coincidence?

        – The Internet aims to be the global network of networks that provides unfettered connectivity to all users at all times and for any content. (RFC1958)

- But as the scale and the industrialization of the Internet has grown greatly, the influence of such world-views started to compete with other values.

- The belief of the authors is that as the Internet continues to grow, the linkage of Internet protocols to human rights needs to become explicit, structured, and intentional.

    - Similar considerations to privacy? (RFC6973)

Context of the Research (2)

- Working on this problem in the IETF, because this is where the protocols and standards that have shaped and are shaping the Internet are being developed

- Work has been done on privacy consideration guidelines that should be considered when creating an Internet protocol [RFC 6973].

- This research group suggests that similar considerations may apply for other human rights such as freedom of expression or freedom of association.
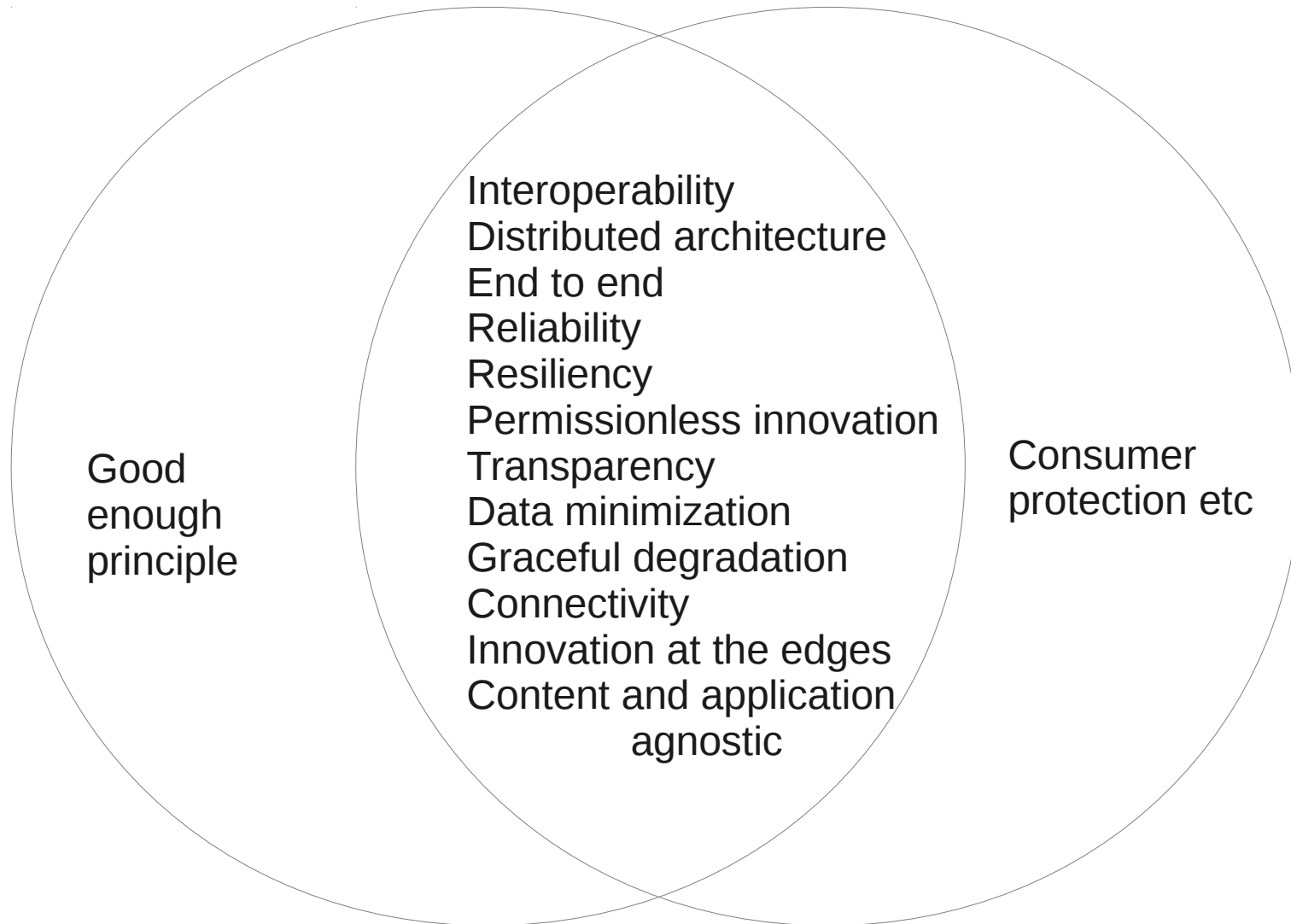
Problem statement

Decisive and human rights enabling characteristics of the Internet might be degraded if they're not properly defined, described and protected.

Not doing this could result in (partial) loss of functionality and connectivity.

Architectural principles / characteristics   Enabling features for user rights

Interoperability
Distributed architecture
End to end
Reliability
Resiliency
Permissionless innovation
Good   Transparency   Consumer
enough   Data minimization   protection etc
principle   Graceful degradation
Connectivity
Innovation at the edges
Content and application
agnostic

Research questions

- Are there relations between protocols and human rights, especially freedom of expression and assembly? What would these be?

- Do limitation to freedom of expression online lead to a degradation of Internet functionalities? If so, how?

- How can the rights enabling environment be safeguarded in (future) protocol development?

- How can (nontransparent) user rights violations be minimized in (future) protocol development?

Methodology

- Step 1.0 - Mapping protocols and standards potentially related to FoE and FoA

Action: Mapping of protocols and standards that potentially enable the internet as a tool for freedom of expression

Outcome: list of RFCs that describe standards and protocols that are potentially more closely related to FoE and FoA.

Step 1.0 Partial Outcome - Initial list of RFCs potentially related to FoE and FoA:

Architecture

RFC1287 Towards the Future Internet Architecture

RFC1958 Architectural Principles of the Internet

RFC3426 General Architectural and Policy Considerations

RFC3492 General Architectural and Policy Considerations

RFC3724 The Rise of the Middle and the Future of End-to-End: Reflections on the Evolution of the Internet Architecture

RFC4838 Delay-Tolerant Networking Architecture

Transparency

RFC4924 Reflection on Internet Transparency

Mailing lists

2919 List-Id: A Structured Field and Namespace for the Identification of Mailing Lists

6783 Mailing Lists and Non-ASCII Addresses

HTTP

7230 Hypertext Transfer Protocol (HTTP/1.1): Message Syntax and Routing

7231 Hypertext Transfer Protocol (HTTP/1.1): Semantics and Content

7232 Hypertext Transfer Protocol (HTTP/1.1): Conditional Requests

7234 Hypertext Transfer Protocol (HTTP/1.1): Caching

7235 Hypertext Transfer Protocol (HTTP/1.1): Authentication

7236 Initial Hypertext Transfer Protocol (HTTP) Authentication Scheme Registrations

7237 Initial Hypertext Transfer Protocol (HTTP) Method Registrations

Real time communications

6447   Filtering Location Notifications in the Session Initiation Protocol (SIP)

IDNs

5890 Internationalized Domain Names for Applications (IDNA): Definitions and Document Framework

5891 Internationalized Domain Names in Applications (IDNA): Protocol

5892 The Unicode Code Points and Internationalized Domain Names for Applications (IDNA)

5893 Right-to-Left Scripts for Internationalized Domain Names for Applications (IDNA)

5894 Internationalized Domain Names for Applications (IDNA): Background, Explanation, and Rationale

5992 Internationalized Domain Names Registration and Administration Guidelines for European Languages Using Cyrillic

Privacy and Security

1984 IAB and IESG Statement on Cryptographic Technology and the Internet

2409 The Internet Key Exchange (IKE)

2460 'Internet Protocol, Version 6 (IPv6) Specification

3365 Strong Security Requirements for Internet Engineering Task Force Standard Protocols

3426 General Architectural and Policy Considerations

4880 OpenPGP Message Format

6973 Privacy Considerations for Internet Protocols

7258 Pervasive Monitoring Is an Attack

Full list can be found here: https://www.ethercalc.org/tdeh4wx2zo

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Methodology

- Step 1.1 - Extracting concepts from mapped RFCs

Action: Read the selected RFCs to highlight central design and technical concepts which impact human rights.

Outcome: a list of technical terms that combined create the enabling environment for human rights, such a freedom of expression and freedom of association. Translating human rights to technical terms.

Step 1.1 Partial outcome

Extracting concepts from mapped RFCs and interviews with members of the community

- Connectivity
- Distributed
- Inter-operable
- Reliable
- Scalable
- Prefer stateless over statefull
- Content agnostic
- Transparent
- Debugging
- Robust
- End user-centric

- Graceful failures
- Graceful degradation
- Partial healing
- Delay tolerance
- Data minimization & compression

These concepts, working assumptions, will function as considerations for the analysis of other RFCs and will be further described vis a vis their impact on human rights.

$$freedom\,of\,expression = \begin{pmatrix} content\ agnosticism \\ connectivity \\ privacy \end{pmatrix}$$

Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.
- Article19 from the Universal Declaration of Human Rights

$$freedom\ of\ association = \begin{pmatrix} freedom\ of\ expression = \begin{pmatrix} content\ agnosticism \\ connectivity \\ privacy \end{pmatrix} \\ interoperable\ protocols \\ distributed\ architecture \\ decentralized\ protocols \\ robustness \\ resilience \end{pmatrix}$$

Everyone has the right to freedom of peaceful assembly and association.
Article 20 : 1 Universal Declaration of Human Rights

Methodology

- Step 2 - Mapping cases of protocols being exploited

Action: Map cases in which users rights have been exploited or violated, analyze which protocols or vulnerabilities in protocols have been used to achieve this.

Outcome: list of protocols that have been exploited to expose users to rights violation.

Possible guidelines for mapping cases:

- (Not legally sanctioned, or out of jurisdiction) blocking and filtering

- Privacy violations (in context of FoE and FoA)

Example: Inter-protocol exploitation

Methodology

Step 3 – Making relationships explicit

Action: Observe how these concepts, exploits and/or vulnerabilities impact:

a) other protocols and/or b) other layers

and how they could lead to impact on Internet functionality and possibly subsequently have an impact on users rights.

Next steps

- Continue research and RFC mapping (steps 1.0 and 1.1)
- Continue interviews (steps 1 and 2)
- Editing interviews recorded at IETF92
- New ID before IETF93 in Prague
- Screening of film at IETF93 in Prague
- Continue collaboration on the list

https://lists.ghserv.net/mailman/listinfo/hrpc