



CAN
INTERNET
PROTOCOLS
AFFECT
HUMAN
RIGHTS?

IRTF RG
Human Rights Protocol Considerations
(hrpc)

IETF 99
Friday July 21 2017
9:30 – 11:30

Co-Chairs:		
Niels ten Oever	–	Article19
Avri Doria	–	APC

Administrivia

Mailinglist

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

Github

- <https://github.com/nllz/IRTF-HRPC>
- Meetecho (remote participation)
<http://www.meetecho.com/ietf99/hrpc/>
- Minutes
<http://etherpad.tools.ietf.org:9000/p/notes-ietf-99-hrpc>
- Intro website
<https://hrpc.io>

Agenda

- Beginning
 - Jabber scribe, note takers
 - Agenda Bashing
 - Notewell
 - Introduction
- Context of research
- Presentation + Q&A - Milton Mueller - Requiem for a Dream (50 mins)
- Discussion of draft-tenoevery-hrhc-anonymity-00
- Discussion of draft-tenoevery-hrhc-association-01
- Discussion of draft-tenoevery-hrhc-political-00/1
- Report back on Hackathon on HTTP status code 451 + HR considerations
- Update on status draft-irtf-hrhc-research
- Open discussion other drafts, papers, ideas
- Next steps
- AOB

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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 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
- IETF97 November 2016 - Session, new Research Draft - reviews, talk
- February 2017 - Research Group Consensus on draft-irtf-hrhc-research-11
- IETF98 March 2017 - Session, two news drafts, four talks, plenary talk
- IETF99 July 2017 - Session, four new drafts, one talk, running code, draft passed IRSG poll

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.

Presentation + Q&A: Milton Mueller on:

Requiem for a Dream: on
advancing human rights through
internet architecture

Requiem for a Dream

On Advancing Human Rights via Internet Architecture

Farzaneh Badii and Milton Mueller



Summary

- Critical assessment of the belief that we can promote or protect HR through protocol standards and “architecture”
- This tendency oversimplifies the complex relationship between technology and society
- Human rights are primarily a political and institutional accomplishment, not a matter of technical design
- There are contradictions, limitations and potentially negative effects of trying to make policy or protect/enable rights by “design”

What they assert

- Human rights can be protected “by design” or “through Internet protocols”
- Technologists have a moral and legal responsibility to do so (Cath & Floridi, 2017)
- Universal Declaration of Human Rights (UDHR) can be enabled through Internet protocols (Cath and Floridi, 2017) or “baked into the architecture at design time” (Brown et al, 2010).
- Internet connectivity is “an enabler of human rights,” and “its architectural design converges with the human rights framework.” (IRTF HRPC, 2017)
- The “human-rights-enabling characteristics of the Internet might be degraded if they are not properly defined, described and sufficiently taken into account in protocol development.” (IRTF HRPC, 2017)

Two distinct positions

- A stronger “code is law” claim
- A weaker claim that Internet architecture/infrastructure “mediate” human rights

Differences in the two perspectives

Code is law

- Focuses on *ex ante* initial design
- Linear and deterministic:
 - Whoever makes the design makes the rules

Architecture mediates rights

- Focuses on *ex post* attempts to leverage infrastructure to regulate
- More of a two-way relationship:
 - Infrastructure as site of struggle

Critique

Requiem for a dream

Problem 1: The Internet is already “designed”

- New IETF protocols and standards work make marginal adjustments and modifications to the general architecture of the internet
- If new standards are needed to protect human rights, it means that its architecture does not necessarily protect human rights

Problem 2: The UDHR is too complex and too laden with baggage

- Not all rights are relevant to ICTs or connectivity
- Even the most relevant rights contain internal conflicts
 - Free expression vs privacy
 - Free expression vs. intellectual property
 - Due process for accused vs. swift justice for victims
 - The HPRC recognizes this, but its response is lame:
 - “the different affected rights need to be balanced. “
 - “decisions on design and deployment need to take [rights conflicts] into account.”

Problem 3: Code is not law

- Where does code come from?
- Code and architecture can be, and often are, overridden by laws and regulations

Case study: The IETF and CALEA

- 1994: Communications Assistance for Law Enforcement Act (CALEA) passed
 - Forced U.S. telephone companies to redesign network architectures to facilitate wiretapping of telephone calls by law enforcement
- 1999: IETF Raven group
 - Standards work on Voice over IP technologies asked to make Internet CALEA compliant
 - IETF refuses (RFC 2804, “IETF Policy on Wiretapping”)
- 2004-5: US Federal Communications Commission
 - Dept of Justice, FBI, and Drug Enforcement Administration file joint petition to expand CALEA to broadband providers, Voice over IP telephony, and instant messaging
- Post-2005: FBI, NSA continues to fear “going dark”

Lessons from the CALEA case

- “Bad guys” (anti-HR forces) can use the standards process too
- Code was code and law was law
 - IETF refusal to make surveillance-enabling architecture modifications did not settle the matter
 - After FCC intervention, law dictates code
 - Norms, code, law and markets all elements in a political struggle over policy

Problem 4: Politicizing standards

- If standards developers are in the business of translating, protecting, and ‘balancing’ rights they are de facto policy makers
- If so, others besides HR advocates will become interested in standards and protocol development
- Standards and protocol developers open themselves up to the charge that they lack the legitimacy to define, “enable,” enforce or balance rights

Problem 5: An ahistorical STS

- The “mediation” argument better captures the reciprocal influence between technology and society
- But it is true of every technology, not just the internet
- Regulation and control always depend on the specific technical features of the communications medium
 - The case of the printing press
 - The case of radio broadcasting
- Internet, press and radio were “technologies of freedom” not because of their technical architecture, but because they were new technologies and the state did not yet know how to control them

Problem 6: Design is *ex ante*; knowledge of rights violations is *ex post*

- Assessment of human rights impact can only occur *ex post* (after the fact)
- Standards or protocols that seem to be secure or protective at the moment of design may have unintended consequences...
- ...or creative people may think of ways to subvert them

Problem 7: Rights-based discourse at IETF does not have an effect on our HR

- Changing the language used to describe technologies, protocols or standards to one that is closer to human rights language will not have a significant impact on our human rights on the Internet

Why Wake up?

- It is a nice dream to advance human rights through Internet architecture and Internet protocol design
- But the actual status of rights on the Internet depends on political, economic, legal and cultural factors as well as technical standards
- Waking up from the dream can be painful but it's necessary.

Discussion



draft-tenoever-hrpc-anonymity-00?

draft-tenoever-hrpc-association-01

Freedom of Association and Internet Infrastructure

draft-tenoever-hrpc-association-01

Gisela Pérez de Acha – Derechos Digitales

Niels ten Oever – Article 19

Objective: to document forms of association and assembly (including protest) that do not have a negative impact on the Internet infrastructure.

Central question:

How does the Internet architecture enable and/or inhibit freedom of association and assembly?

Assembly & Association

1. Assembly: an intentional and **temporary gathering** of a collective in a private or public.
2. Association: individuals or entities **formally brought together** to collectively act, express, promote, pursue or defend something.

Freedom: both rights protect the possibility to join or leave a group of choice.

Is the Internet itself an association...?

IETF is an assembly, even an association
[RFC3233]

RFCs would not be possible without freedom of association and assemble, online and offline.

The word "protocol" found its way into the language of computer networking → need for collective agreement among network users.

Cases and examples

A. Free association

- Peer to peer [P2P]
- Mailing lists

B. Forced association

- DDoS
- ISPs

Which model is better for freedom of assembly and association?

- Centralized
- Decentralized

Why?

Preliminary Conclusions

- Internet has impact for on the ability for people to exercise their right to freedom of association and assembly.
- The Internet itself might be a form of association and assembly, and should be protected as such.
- To get access to the Internet one could argue one is caught in a forced assembly with the access network.

Comments?

Are we missing
something?

draft-tenoever-hrpc-political-00/1

On the Politics of Standards

Niels ten Oever¹ Andrew Sullivan²

¹ARTICLE 19

²Oracle
(But not speaking for them)

HRPC RG IRTF 99 Prague 2017

Today

- 1 Why do this?
- 2 Current described positions
- 3 Other issues already identified
- 4 Questions and discussion

Appeared to be a Basic Issue for RG

- “Protocols are political” was an important claim in draft-irtf-hrpc-research
- Not a claim everyone can agree with

Goal 1: lay out the possible positions

Goal 2: distinguish as much as reasonable among positions

Goal 3: answer the question of whether protocols are inherently political (maybe)

Technology Is Value Neutral

- Values are all in the uses
- The political considerations live with the human users, not the technology as such

Some Protocols, Sometimes

- Under some circumstances, protocols are inherently political
- Can only decide case by case
 - current words need fixing

Network Has Independent Values

- This view regards the network itself as having independent needs from its creators
- Similar to the logic of traffic or mass media development
- Either requires a redefinition of “political” or else acceptance that the story is more complicated
- This section very weak in -00
- May be some views are categorized wrong

Protocols Are Inherently Political

- Protocols have, as their very nature, a political element built in
- That political element reflects political decisions in their creation
- There may be parts of this text that could be interpreted to reflect some of the views in the previous section

'Politics' and 'Political' Not Defined

- It is going to be tough to complete this discussion without saying what this means
- It could be that the discussion shows there's no disagreement except about a term
 - Politics (from Greek: Politiká: Politika, definition "affairs of the commons") is the process of making decisions applying to all members of a group. More narrowly, it refers to **achieving and exercising positions of governance or organized control over a community**. Furthermore, politics is the study or practice of the **distribution of power and resources within a given community** as well as the interrelationship(s) between communities.

Additional Example(s) Should Be Considered

- Raven process and RFC 2804
- More discussion of RFC 6973?
- Other cases that need consideration?

Are there protocol police?

- Document says the IETF is not the protocol police
- True in that IETF can't force anyone to do anything
- No method for forcing parties is not the same as no power
- Is effective control over a protocol a political position?
- Where there is no such protocol (e.g. single vendor end to end), does that change the politics?
- What to do in ambiguous cases?

So?

- Is this at all useful?
- Would anyone else review it if updated?
- Anyone think this is actively harmful?
- What (else) have we missed?

Hackathon HTTP status code 451 + HR considerations

HTTP Status Code 451 for Legally
Withheld Content:
Hackathon Overview and Human
Rights Considerations



Outline



- Last weekend's hackathon overview
 - Awarded **Best New Work**
- Introduction to HTTP 451 status code
- Hackathon implementations
- Implementation Report Draft
- HRC RFC7725 Draft
- Future Plans
- Discussion

Hackathon overview

Team

Sunil Abraham

Maria Paz Canales

Daniel Kahn Gillmor

Joseph Lorenzo Hall

Will Howard

Olga Khrustaleva

Maite González

Daniel Ramsey

Christine Runnegar

Shivan Kaul Sahib

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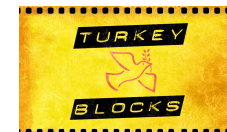
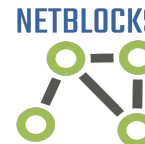
Alp Toker

Codarren Velvindron

Loganaden Velvindron

Tara Tarakiyee

Ulrike U



Brief introduction to HTTP 451

HTTP 451



- Access to resource denied because of legal demand
- Blocking server might not be origin server
- Response should include details of legal demand

Purpose



- Making Internet censorship more transparent
- Reporting and tracking censorship easier
- Previously used status code 403 was not applicable



Уважаемые пользователи!

Мы приносим свои извинения, но доступ к запрашиваемому ресурсу ограничен по решению органов государственной власти.

Возможные причины ограничения доступа:

Доступ ограничен по решению суда или по иным основаниям, установленным законодательством Российской Федерации.

Сетевой адрес, позволяющий идентифицировать сайт в сети «Интернет», включен в Единый Реестр доменных имен, указателей страниц сайтов в сети «Интернет» и сетевых адресов, позволяющих идентифицировать сайты в сети «Интернет», содержащие информацию, распространение которой в Российской Федерации запрещено.

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Проверить наличие сетевого адреса в Реестре можно в разделе «Просмотр реестра» на сайте <http://eais.rkn.gov.ru>

Федеральный список экстремистских материалов <http://minjust.ru/extremist-materials>

- Failed to load resource: the server responded with a status of 404 (Not Found) /favicon.ico
- Failed to load resource: the server responded with a status of 451 (Unavailable For Legal Reasons) 217.107.194.17/

> |

Highlights from Chrome 59 update

CSS and JS code coverage

Find unused CSS and JS with the new Coverage drawer.

Full-page screenshots

Take a screenshot of the entire page, from the top of the viewport to the bottom.

URL	Type	Total Bytes	Unused Bytes
/script_foot_closure	JS	385 963	255 341 (66.2 %)
/query_ui_bundle	JS	241 682	217 071 (89.8 %)
ht.../script_foot.js	JS	231 291	156 748 (67.8 %)
https://develop...	CS...	185 663	122 783 (66.1 %)
/devsite-google-b	CSS	129 754	104 360 (80.4 %)
/js-AQZYTYmYEC	JS	138 015	88 170 (71.1 %)
/c0-gap/loaded_C	JS	122 055	81 356 (66.7 %)

Hackathon implementations

Implementations



- **Block Crawler**
 - Node-based asynchronous recursing web crawler
 - Recognizes 451 status and metadata, reports to collector
- **WordPress Plugin**
 - Plugin for WordPress CMS
 - Allows a site operator to block content using 451 for specific countries & context
- **Block Collector**
 - Reporting endpoint
 - Accepts 451 status reports from crawlers, browser plugin, and wp-plugin
- **Browser Extension**
 - Chrome extension (portable)
 - Recognizes 451 status, displays info, report to collector
- **Alternative Crawler**
 - Python desktop app
 - Records status, 451 or otherwise

Screenshot: Block Crawler

451

```
$ node index.js --mode reddit http://redditlist.com/nsfw
```

```
{"date":"2017-07-16T11:45:41.273Z","creator":"block-crawler","version":"0.1","url":"http://reddit.com/r/twinks","status":451,"statusText":"Unavailable For Legal Reasons","blockedBy":{"rel":"blocked-by","url":"https://reddit.com"}}
```

```
{"date":"2017-07-16T11:45:56.535Z","creator":"block-crawler","version":"0.1","url":"http://reddit.com/r/gaypornhunters","status":451,"statusText":"Unavailable For Legal Reasons","blockedBy":{"rel":"blocked-by","url":"https://reddit.com"}}
```

```
{"date":"2017-07-16T11:46:25.706Z","creator":"block-crawler","version":"0.1","url":"http://reddit.com/r/gayporn","status":451,"statusText":"Unavailable For Legal Reasons","blockedBy":{"rel":"blocked-by","url":"https://reddit.com"}}
```

Screenshot: WordPress plugin

451

Configure blocking / Error 451

☒ If you have to enable blocking of this content, please check the box.

Add comma-separated list of country codes where this page shall be blocked. When left empty, the content shall be blocked from all locations.

AU,DE,FR,CZ,US

Please specify the URL of the authority has requested the block.

http://example.com

You may optionally specify a description so that visitors know why the page is blocked.

This is blocked because we are the gov

Settings Error Code 451

Reporting Settings

If you wish to report censorship instances to a public collector please add the URL here.

Example: <https://registry.wirecdn.com/report>

Enabling this will send the following information to the collector:

- Site Home URL
- Date and time
- Blocked URL
- Description of blocking (If provided)
- URL of Authority requesting the blocking (If provided)
- List of Countries where Content is Blocked

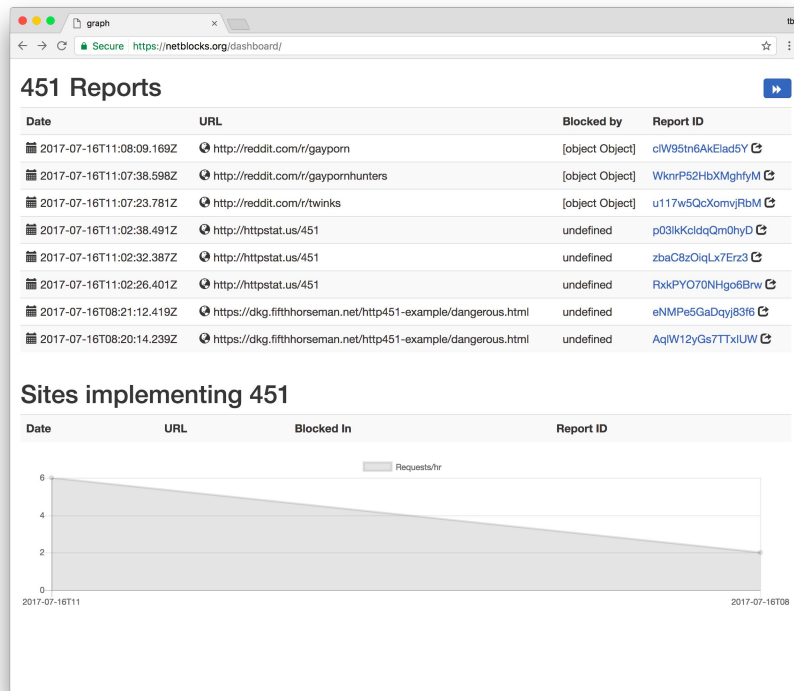
Reporting URL

<https://registry.wirecdn.com/report>

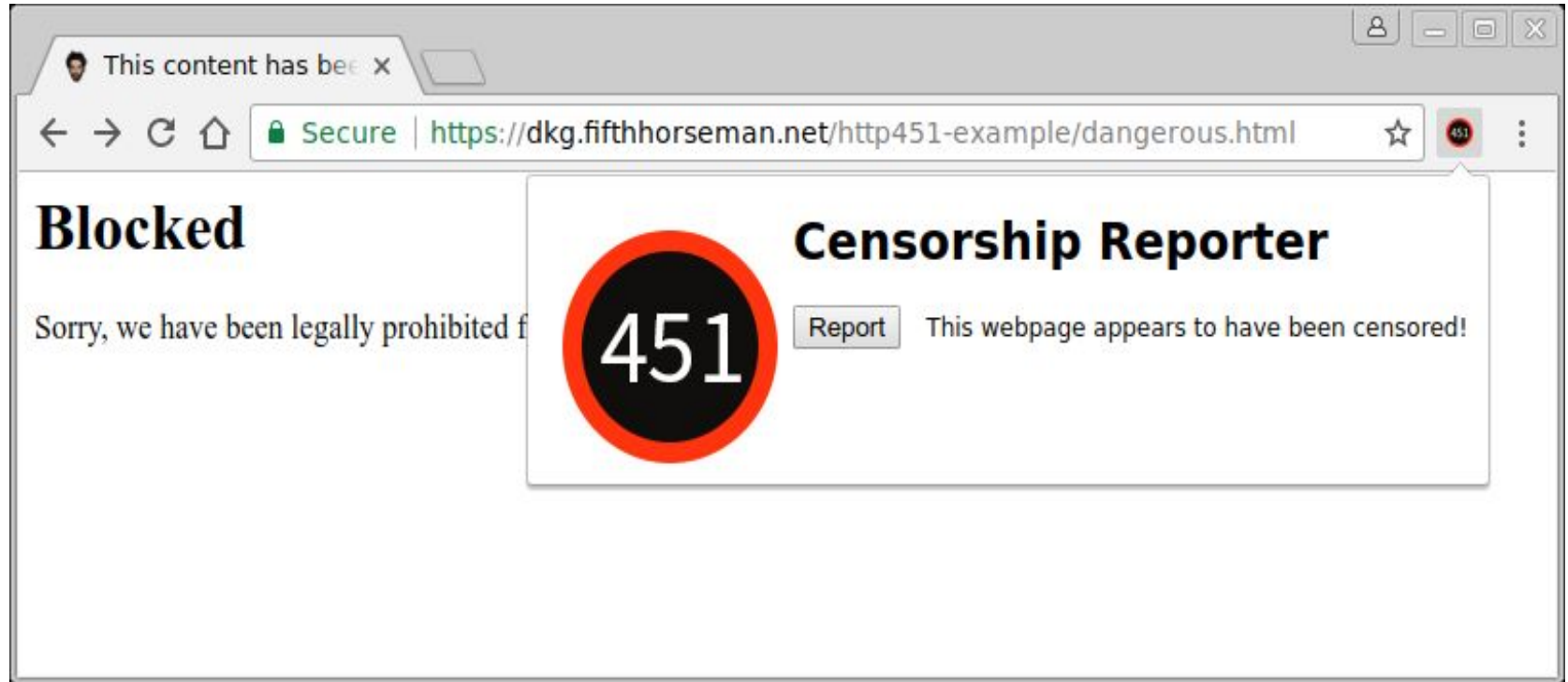
Enable client side verification.
(Allow users to self-report over-censorship.) ☒ yes

Save Changes

Screenshot: Block Collector

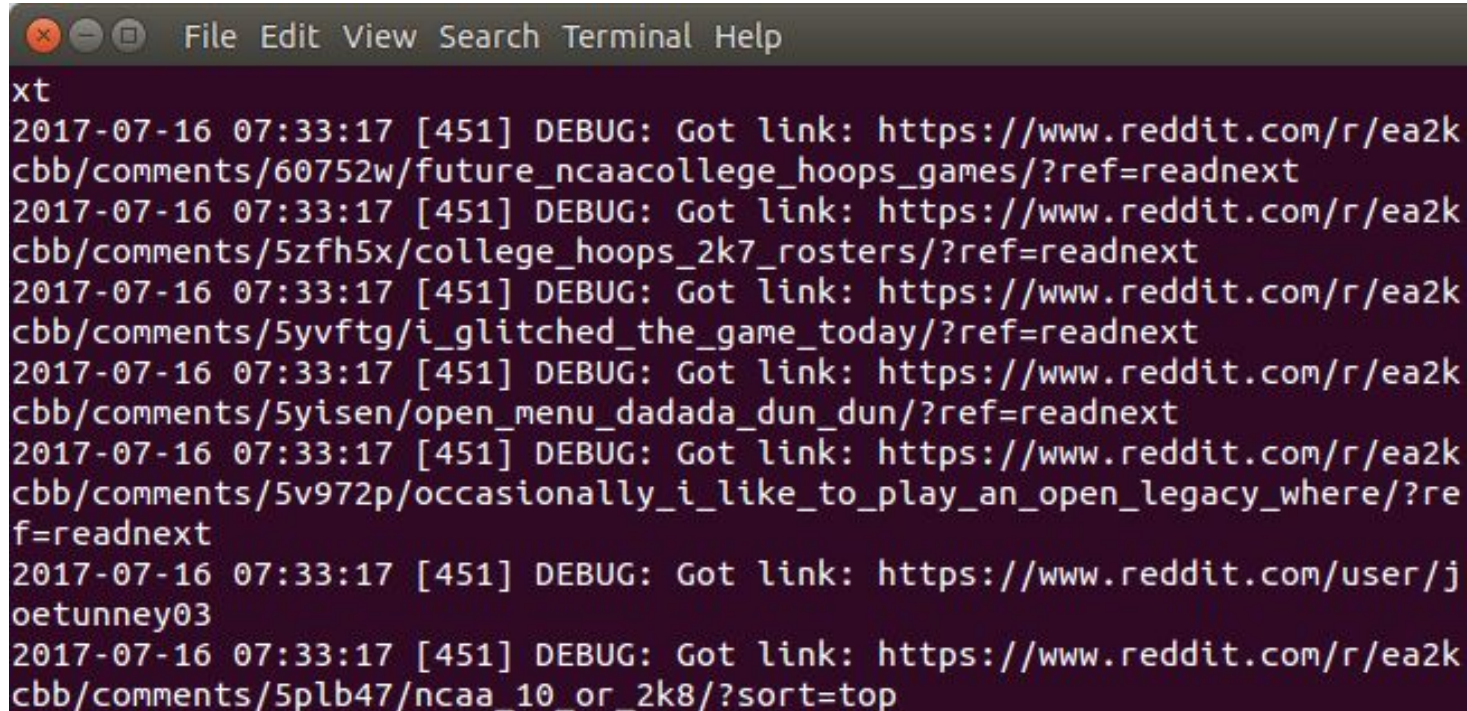


Screenshot: Browser Plugin



Screenshot: Alternative Crawler

451



A screenshot of a terminal window with a dark background and light-colored text. The window has a title bar with standard macOS window controls (red, yellow, green buttons) and a menu bar with the following items: File, Edit, View, Search, Terminal, and Help. The terminal content shows a series of debug messages from a crawler, each starting with a timestamp '2017-07-16 07:33:17' and the identifier '[451]'. The messages indicate that the crawler has successfully retrieved links from a specific subreddit. The links are as follows:

```
xt
2017-07-16 07:33:17 [451] DEBUG: Got link: https://www.reddit.com/r/ea2kcbb/comments/60752w/future_ncaacollege_hoops_games/?ref=readnext
2017-07-16 07:33:17 [451] DEBUG: Got link: https://www.reddit.com/r/ea2kcbb/comments/5zfh5x/college_hoops_2k7_rosters/?ref=readnext
2017-07-16 07:33:17 [451] DEBUG: Got link: https://www.reddit.com/r/ea2kcbb/comments/5yvftg/i_glitched_the_game_today/?ref=readnext
2017-07-16 07:33:17 [451] DEBUG: Got link: https://www.reddit.com/r/ea2kcbb/comments/5yisen/open_menu_dadada_dun_dun/?ref=readnext
2017-07-16 07:33:17 [451] DEBUG: Got link: https://www.reddit.com/r/ea2kcbb/comments/5v972p/occasionally_i_like_to_play_an_open_legacy_where/?ref=readnext
2017-07-16 07:33:17 [451] DEBUG: Got link: https://www.reddit.com/user/joetunney03
2017-07-16 07:33:17 [451] DEBUG: Got link: https://www.reddit.com/r/ea2kcbb/comments/5plb47/ncaa_10_or_2k8/?sort=top
```

Implementation Report Draft

Implementation Report



- Stakeholders concerned with HTTP status code 451
- Current usage
- Potential impact
- Useful features of a reporting mechanism
- Current features of 451 and suggestions
- Case studies of blocking frameworks in different countries
 - Russia, Chile, India, Iran, USA

HRC RFC 7725 Draft

Human rights considerations for protocols

451

Connectivity

Visibility in a browser

Privacy

Content Agnosticism

Security

Internationalization

Censorship Resistance

Open Standards

Heterogeneity Support

Anonymity

Accessibility

Localization

Reliability

Confidentiality

Integrity

Authenticity

Adaptability

Outcome transparency

Biggest HRC concerns



- Privacy?
- Anonymity?
- Censorship resistance?
- Security?
- Reliability?

Future Plans

Future Plans



- Submit implementation report draft
- Findings
- RFC7725bis
 - HRC component

Links



- Implementation Report draft
 - <https://www.ietf.org/archive/id/draft-451-imp-report-00.txt>
- HRC RFC 7725 draft
 - <https://www.ietf.org/archive/id/draft-manyfolks-hrcrfc7725-00.txt>
- GitHub repository for hackathon
 - <https://github.com/451hackathon/>
- Live demonstration and dashboard
 - <https://netblocks.org/dashboard/>

Discussion

Update on the status of draft-irtf-hrpc-research

Open discussion other drafts, papers, ideas

Next steps

AOB // Open Mic

```
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
```