Keep Everyone In Sync

Effective Approaches Borrowed from Open Source Communities

Wang Kang
Alibaba Group

Researcher = Sniper + Observer

- As a cybersecurity researcher, one needs to stay focused on some specified area, while keeping a wide observation of the whole industry.
  - However, we cannot afford the whole day observing.
- A friendly, productive and helpful cybersecurity community could be one's observer, watching one's back.

Image courtesy of the movie 'Operation Red Sea'

Core Value of a Community

“Productive and Helpful”

— *Roger Dingledine <arma@mit.edu> at Thu, 28 Dec 2017 23:40:50*

¼ Problems

Internet of bankrupTcy

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- Bankruptcy of Email

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Email bankruptcy is deleting or ignoring all emails older than a certain date, due to an overwhelming volume of messages. The term is usually attributed to author Lawrence Lessig in 2004, though it can also be attributed to Dr. Sherry Turkle in 2002. An insurmountable volume or backlog of legitimate messages (e.g. on return from an extended absence) usually leads to bankruptcy.

During the act of declaring email bankruptcy, a message is usually sent to all senders explaining the problem, that their message has been deleted, and that if their message still requires a response they should resend their message.

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- Bankruptcy of Instant-Message

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- Bankruptcy of Read It ~~Later~~ Never™
- Bankruptcy of News
- Bankruptcy of RSS
- Bankruptcy of Focus

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Internet of bankrupTcy

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- Bankruptcy of RSS
- Bankruptcy of Focus
- **Intelligence Oversupply**

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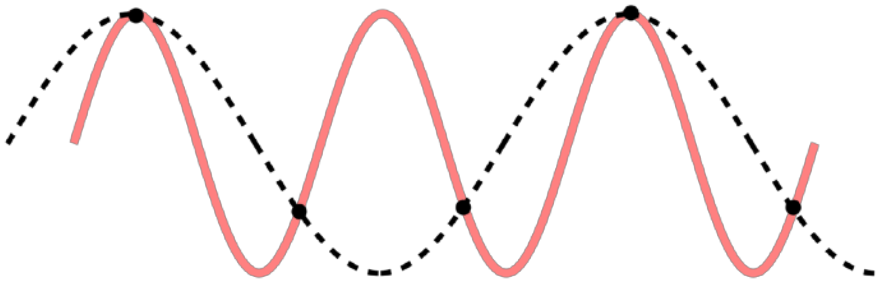
Why Instant Message Failed and Will Fail Again

- Forever-online needed.
  - Do we really need to be forever online?
- Distraction.
  - Push notification
- Lots of clients with proprietary protocols.
- Flooding, stickers, flatterers, no serious/helpful discussion.
- Centralized.
- No threading.
- No archive.

Low resolution of information sampling

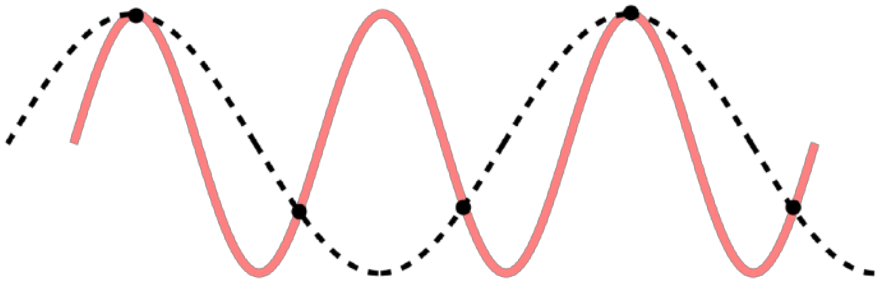
- Nyquist Theorem



The samples of two sine waves can be identical when at least one of them is at a frequency above half the sample rate.

- Wikipedia

Why cannot trust AI categorizer



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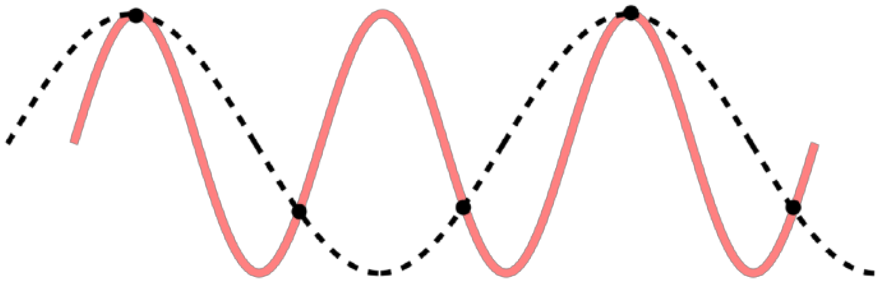

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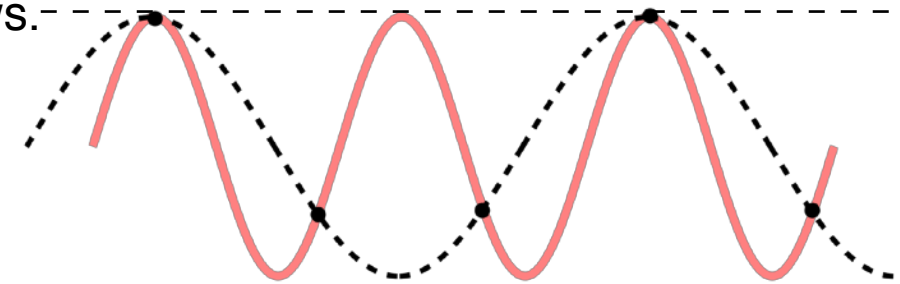
‘Good’ news.



I’m all right. Keep on.

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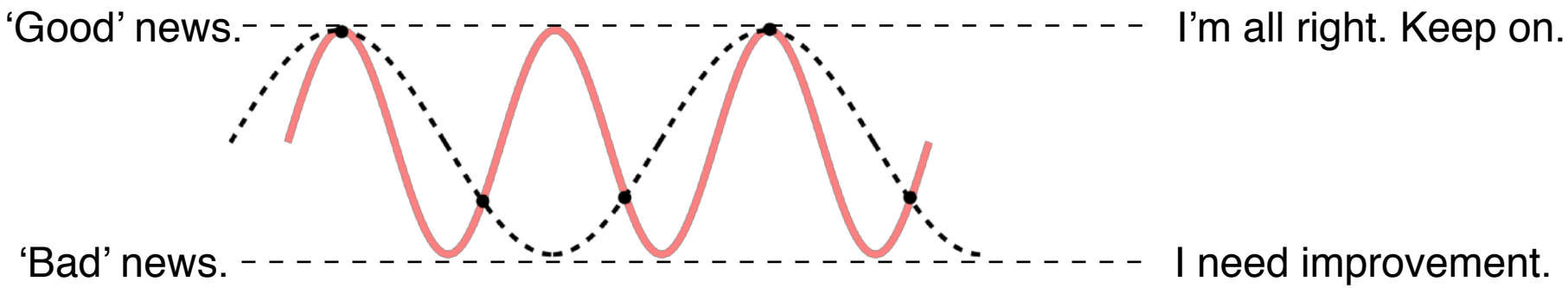

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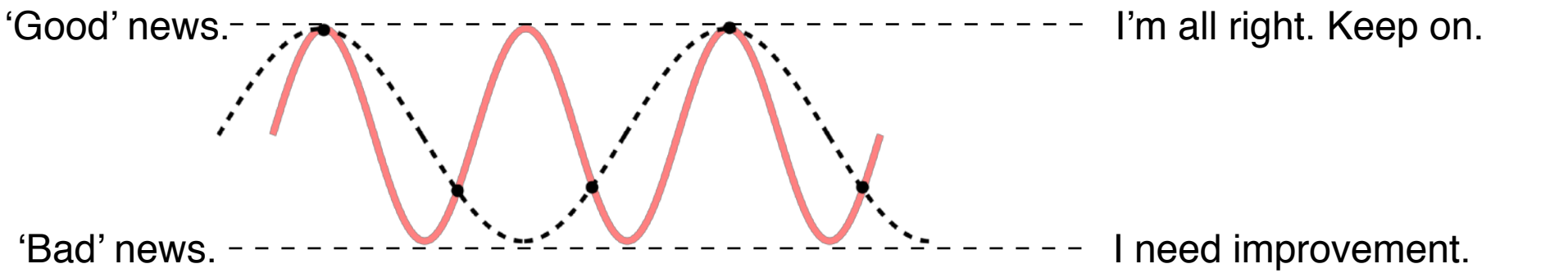

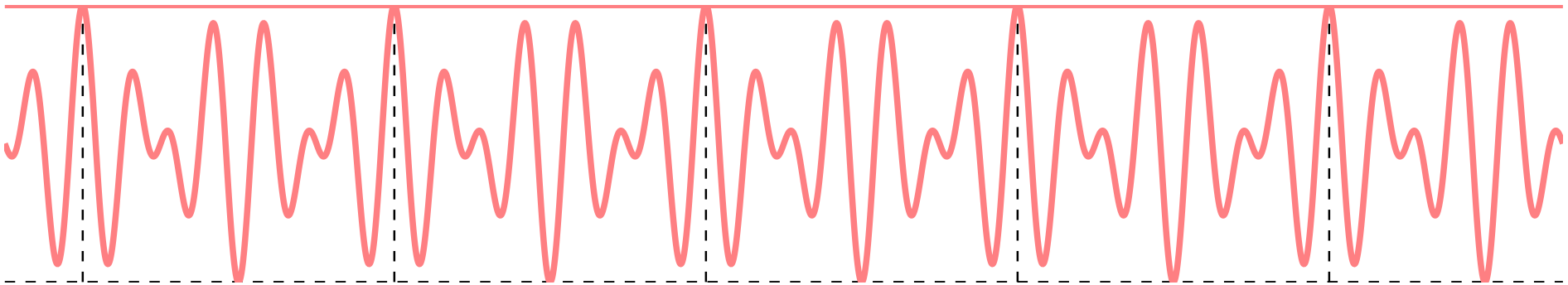

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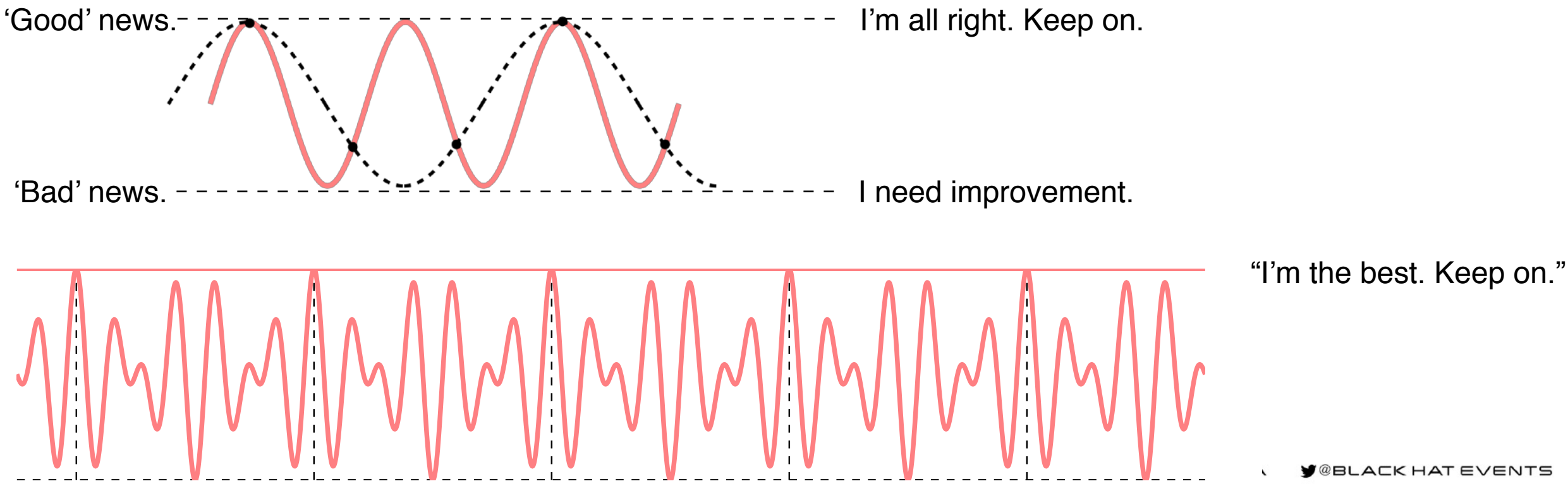
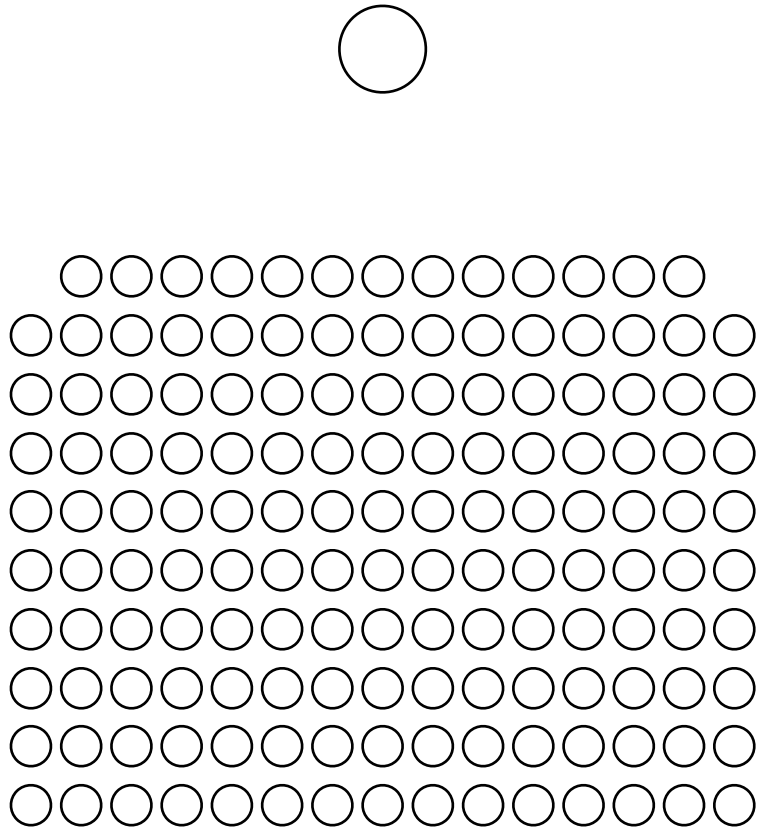


Dunbar's Number

- 148
  - $148^{4.55} \cong 7.5$ billion (Global population)
- Report (Digest) by level.
- Con:
  - Information distortion.
  - Information asymmetry.
  - Information imbalances.



* for inspiration purpose, further scientific description needed.

Distraction Everywhere

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- Ultimate focus war between users and ‘Product Managers’

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  - We lose keyboard (est. 1874). They give us touch screen.

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    - And we have to be online forever.

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  - Goldfish: 9 secs I Internet-connected Human: 8 secs.

Human Waits for Machine

- Andy and Bill's Law
  - ~~*Why we still couldn't have a smooth Office Word.*~~
- Pro users' experience not improved for the past decades.

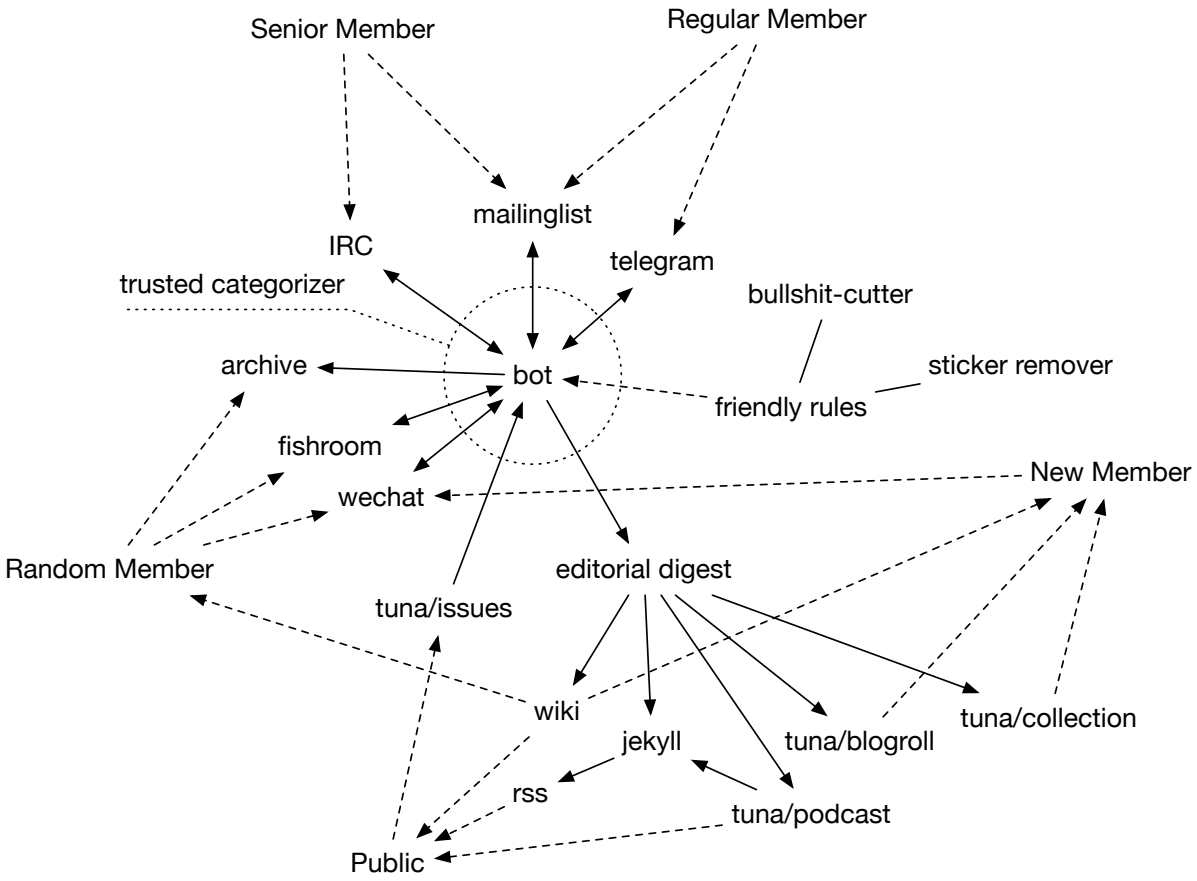
computer	latency (ms)	year	clock	# T
apple 2e	30	1983	1 MHz	3.5k
ti 99/4a	40	1981	3 MHz	8k
custom haswell–e 165Hz	50	2014	3.5 GHz	2G
commodore pet 4016	60	1977	1 MHz	3.5k
sgi indy	60	1993	.1 GHz	1.2M
custom haswell–e 120Hz	60	2014	3.5 GHz	2G
thinkpad 13 **chromeos**	70	2017	2.3 GHz	1G
imac g4 **os 9**	70	2002	.8 GHz	11M
custom haswell–e 60Hz	80	2014	3.5 GHz	2G
mac color classic	90	1993	16 MHz	273k
powerspec g405 **linux** 60Hz	90	2017	4.2 GHz	2G
macbook pro 2014	100	2014	2.6 GHz	700M
thinkpad 13 **linux chroot**	100	2017	2.3 GHz	1G
lenovo x1 carbon 4g **linux**	110	2016	2.6 GHz	1G
imac g4 **os x**	120	2002	.8 GHz	11M
custom haswell–e 24Hz	140	2014	3.5 GHz	2G
lenovo x1 carbon 4g **win**	150	2016	2.6 GHz	1G
next cube	150	1988	25 MHz	1.2M
powerspec g405 **linux**	170	2017	4.2 GHz	2G
packet around the world	190			
powerspec g405 **win**	200	2017	4.2 GHz	2G
symbolics 3620	300	1986	5 MHz	390k

Source: Computer latency: 1977-2017

Summary of Challenges

- Key Communication Challenges in Cybersecurity Communities:
  - Fragmentation of communication tools.
  - The large scale of messages.
    - The capacity of messaging handling for end-user needed to be improved.
  - Instant messages are much more valuable but are more time-consuming for individual researchers to follow.
  - Lack of openly accessible message archives.
  - Lack of digested-output service.
  - New members vs. Senior members:
    - FAQ, Topic, Kernel-newbies

Conclusions First



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- **Leave no one behind.**
  - Bridge everything. All `user-agents` respected.
  - All members considered. Newbie friendly. Senior members won't get bored. Remote members connected.
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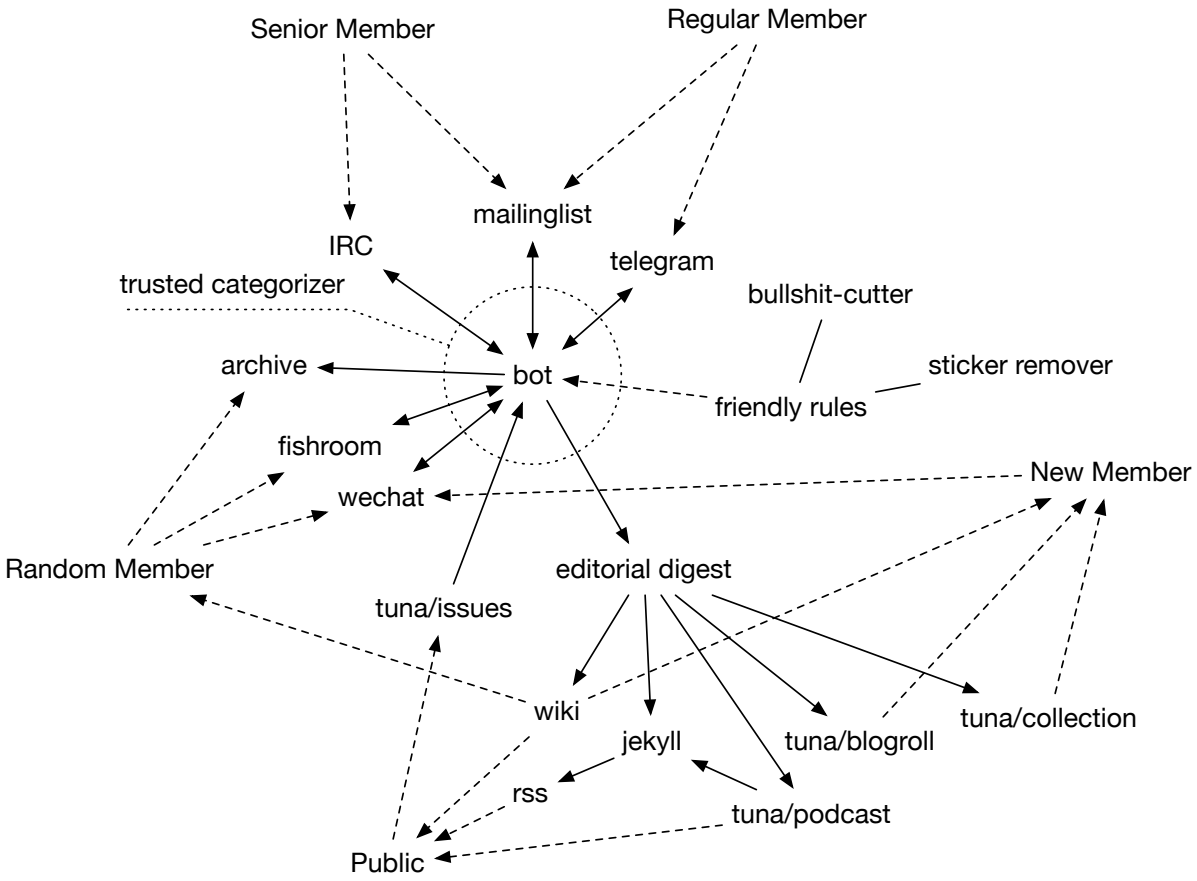
  - Meetup Events: Speaker ↔ {Local, Remote, Async} Audiences. Don't have to show up at each event.



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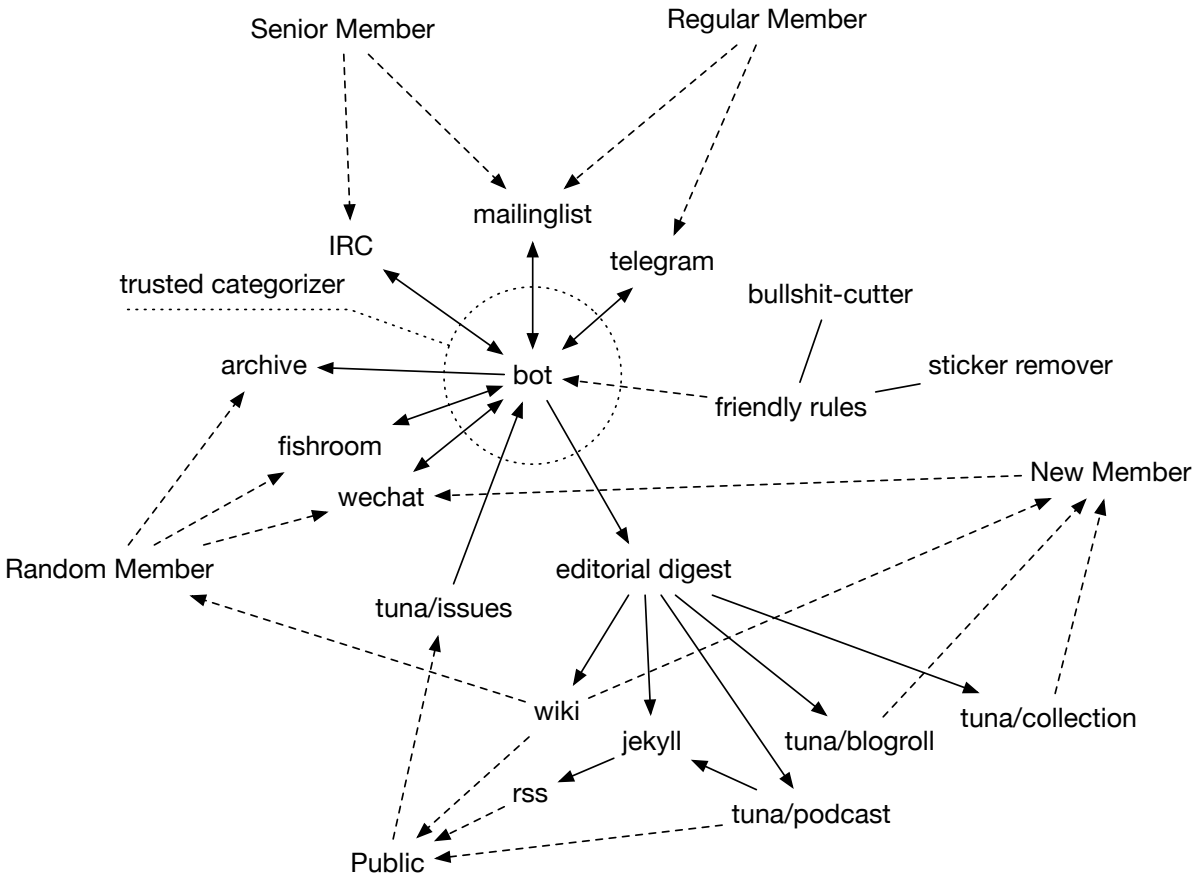
- **Everyone reads everything.**
  - Accessible Archive: Always wait for you.
  - HiFo: High Throughput Info Handling
    - Low Latency: Speed up! Let machines wait for human.
    - Large Volume: No information asymmetry. Avoid report by level.
  - Trusted Categorizer.
    - Categorizer from the originator. Never trust commercial categorizer.
    - More channels/topics, even for the same group of people.
  - Editorial Digest.



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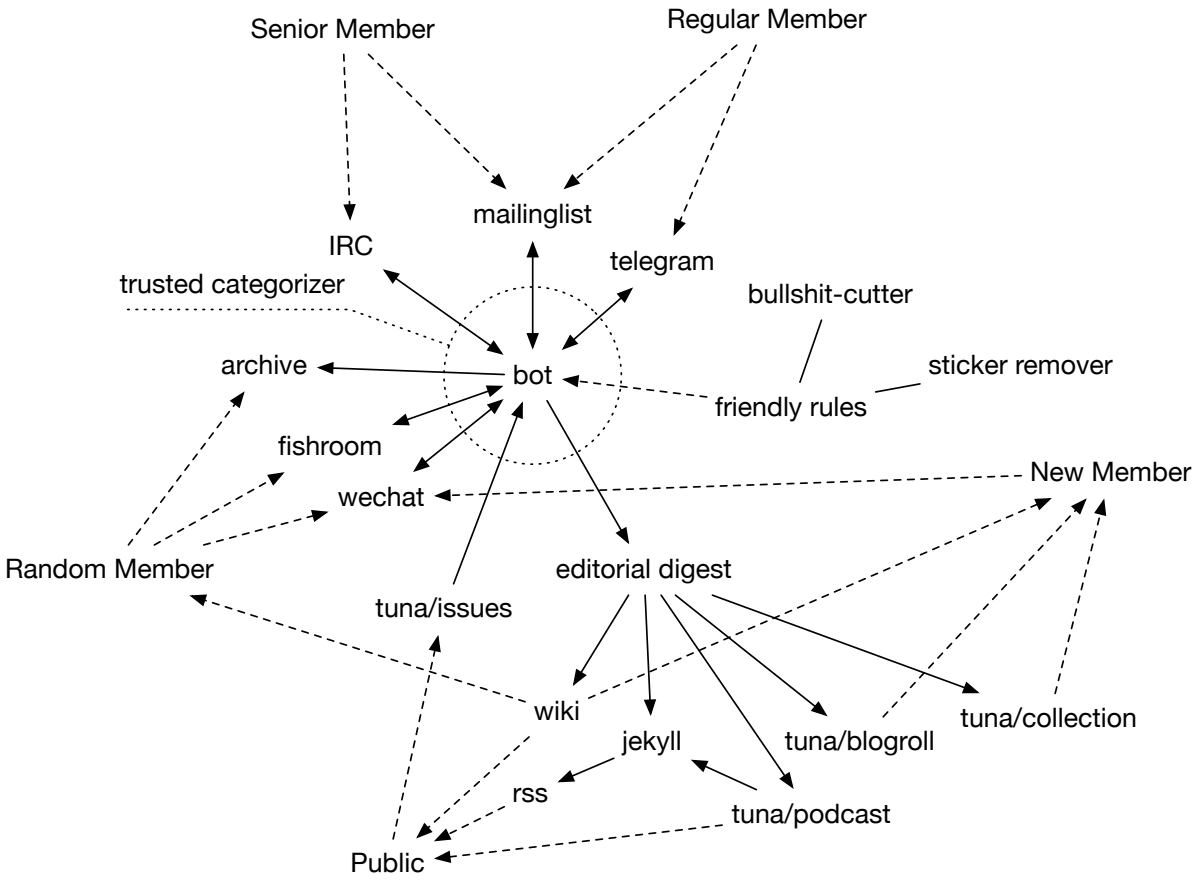
    - More channels/topics, even for the same group of people.
  - Editorial Digest.
- **Helpful & Productive**
  - Rule out toxic behaviors with bot.
  - No Blackhole: Everyone should be a 'filter', avoid pure 'sink'. Provide as many feedback paths as possible.
  - Human Routing: Broadcast your skills & needs. Help finds you.



¾ Learn from Big Names

… who face the same but bigger problems,
and their solutions.

Linus Torvalds

> “I am the least organised person you’ll ever meet. My desk is a complete mess.I don’t organise my emails – everything is in one big email folder,” says Linus.

Only wimps use tape backup: real men just upload their important stuff on ftp, and let the rest of the world mirror it ;)

- Torvalds, Linus (1996-07-20).

```
$ grep "User-Agent: " results-f-Torvalds.mbox |sort | uniq -c

  413 User-Agent: Alpine 1.00 (LFD 882 2007-12-20)
 1075 User-Agent: Alpine 1.10 (LFD 962 2008-03-14)
 2031 User-Agent: Alpine 2.00 (LFD 1167 2008-08-23)
  786 User-Agent: Alpine 2.01 (LFD 1184 2008-12-16)
   24 User-Agent: Alpine 2.02 (LFD 1266 2009-07-14)
    4 User-Agent: Alpine 2.03 (LFD 1266 2009-07-14)
    1 User-Agent: Alpine 2.10 (LFD 1266 2009-07-14)
    2 User-Agent: Alpine 2.11 (LFD 23 2013-08-11)
    7 User-Agent: Alpine 2.20 (LFD 67 2015-01-07)
    2 User-Agent: Alpine 2.21.999 (LFD 260 2018-02-26)
    2 User-Agent: Alpine 2.21 (LFD 202 2017-01-01)
    8 User-Agent: K-9 Mail for Android
   15 User-Agent: KNode/0.7.2
    1 User-Agent: Mutt/1.5.21 (2010-09-15)
    1 User-Agent: Thunderbird 2.0.0.0 (Windows/20070326)
```

13042 out of 23956 emails in LKML sent by Linus Torvalds are written with PINE/Alpine.

PINE: 7510, 1998-07-10 ~ 2007-04-16
Alpine: 5532, 2007-04-18 ~ 2018-07-11

Ref: [1] [2]

Hacker Ethics

- Access to computers - and anything which might teach you something about the way the world really works - should be unlimited and total. Always yield to the Hands-On Imperative!
- All information should be free.
- Mistrust authority - promote **decentralization**.
- Hackers should be judged by their acting, not bogus criteria such as degrees, age, race, or position.
- You can create art and beauty on a computer.
- Computers can change your life for the better.
- Don't litter other people's data.
- **Make public data available**, protect private data.

— https://www.ccc.de/en/hackerethics

ALPINE 2.21.9999 MESSAGE TEXT Message 2 of 32 ALL FWD

Date: 25 Aug 91 20:57:08 GMT
From: Linus Benedict Torvalds <torvalds@klaava.Helsinki.FI>
Newsgroups: comp.os.minix
Subject: What would you like to see most in minix?

Hello everybody out there using minix -

I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones. This has been brewing since april, and is starting to get ready. I'd like any feedback on things people like/dislike in minix, as my OS resembles it somewhat (same physical layout of the file-system (due to practical reasons) among other things).

I've currently ported bash(1.08) and gcc(1.40), and things seem to work. This implies that I'll get something practical within a few months, and I'd like to know what features most people would want. Any suggestions are welcome, but I won't promise I'll implement them :-)

Linus (torvalds@kruuna.helsinki.fi)

PS. Yes - it's free of any minix code, and it has a multi-threaded fs. It is NOT protable (uses 386 task switching etc), and it probably never will support anything other than AT-harddisks, as that's all I have :-(.

[ALL of message]

? Help < MsgIndex P PrevMsg - PrevPage D Delete R Reply
O OTHER CMDS > ViewAttch N NextMsg Spc NextPage U Undelete F Forward

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ALPINE 2.21.9999 MESSAGE TEXT Message 18 of 32 ALL

Date: Thu, 5 Jul 2007 18:01:38 -0700 (PDT)
From: Linus Torvalds <torvalds@linux-foundation.org>
To: Jesper Juhl <jesper.juhl@gmail.com>
Cc: Dmitry Torokhov <dtor@insightbb.com>,
Andrew Morton <akpm@linux-foundation.org>,
LKML <linux-kernel@vger.kernel.org>
Subject: Re: [git pull][resend] Input updates for 2.6.22-rc7

On Fri, 6 Jul 2007, Jesper Juhl wrote:
>
> > I'm constantly surprised by just how _many_ ways MUA's find to screw up.
>
> 'pine' actually seems to work pretty damn well once you disable the
> flowed-text "feature".

Yes. And 'alpine', it's modern version, does even better, but you also need to make sure to disable "downgrade-multipart-to-text".

I've been using alpine for a while now, and it's nice to see it be utf-8 capable and able to handle other charsets well.

So as a former pine user, I can recommend upgrading.

Linus

[ALL of message]

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(Categorizer Failure)

[Gmail Spam Filter Changes Bite Linus Torvalds]

Posted by timothy on Tuesday July 21, 2015 @11:21AM from the managing-by-remote dept.

An anonymous reader points out The Register's story that recent changes to the spam filters that Google uses to pare down junk in gmail evidently are a bit overzealous. Linus Torvalds, who famously likes to manage by email, and whose email flow includes a lot of mailing lists, isn't happy with it. Ironically perhaps, it was only last week that the Gmail team blogged that its spam filter's rate of false positives is down to less than 0.05 per cent. In his post, Torvalds said his own experience belies that claim, and that around 30 per cent of the mail in his spam box turned out not to be spam. "It's actually at the point where I'm noticing missing messages in the email conversations I see, because Gmail has been marking emails in the middle of the conversation as spam. Things that people replied to and that contained patches and problem descriptions," Torvalds wrote.

– Slashdot: https://it.slashdot.org/story/15/07/21/1453248/gmail-spam-filter-changes-bite-linus-torvalds

Linus Torvalds
Public
Jul 18, 2015

Dear Google Mail Team,

I've said very nice things about your spam filter in the past, but I'm afraid I am going to have to take it all back. I'm currently going through the spam for the last week, and have gone through about a third of it.

Something you did recently has been an unmitigated disaster. Of the roughly 1000 spam threads I've gone through so far, right now 228 threads were incorrectly marked as spam.

That's not the 0.1% false positive rate you tried to make such a big deal about last week. No. That's over 20% of my spambox being real emails with patches and pull requests. Almost a quarter!

I don't know how to even describe the level of brokenness in those kinds of spam numbers. There were a few pages of email (I've got it set up so it shows me 50 threads per page) where more than half of the "spam" wasn't.

Quite frankly, that sucks. It's not acceptable. Whatever you started doing a few days ago is completely and utterly broken.

It's actually at the point where I'm noticing missing messages in the email conversations I see, because gmail has been marking emails in the middle of the conversation as spam. Things that people replied to and that contained patches and problem descriptions.

They didn't try to sell me a bigger penis or tell me about how somebody is cheating on me. Really.

You dun goofed. Badly. Get your shit together, because a 20% error rate for spam detection is making your spam filter useless.

[Edit: looks like it started four days ago. As of July 13, it looks like a big swath of lkml has been marked as spam for me.]

[Edit 2: final numbers: out of around 3000 spam threads, I had to mark 1190 threads as "not spam". So the numbers actually got worse: about 30% of my spam-box wasn't actually spam. It started around 1pm on Monday, July 13th. The problem really is that clear, that I can tell pretty much when it started]

[Edit 3: it wasn't just patches, and it's not just lkml. There were things like Junio's recent git v2.5.0-rc2 announcement etc. The new gmail spam filter hates any mailing list emails, apparently. In the time I wrote the last note, I got seven more emails marked as spam, two of which weren't.]

Marissa Mayer

March 8, 2006

Marissa Mayer prefers Pine to Gmail

Marissa Mayer, VP, Search Products and User Experience at Google confesses to CNN Money that she doesn't use Gmail for her business mail.

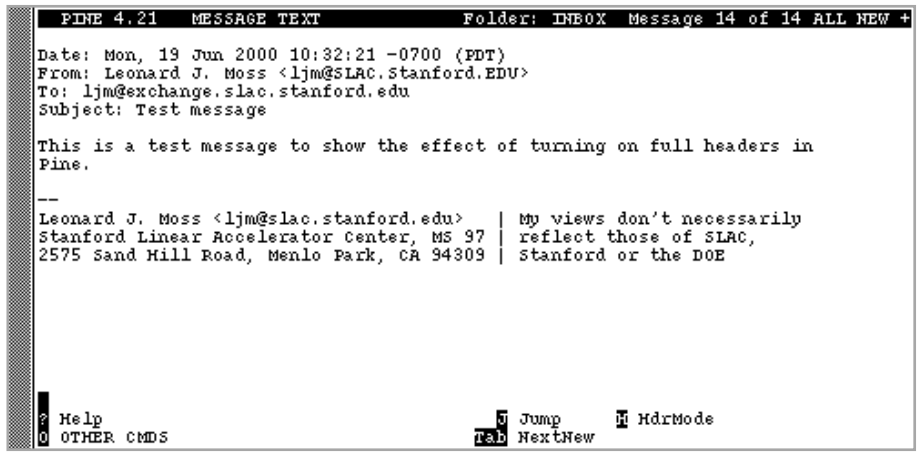
"I don't feel overwhelmed with information. I really like it. I use Gmail for my personal e-mail – 15 to 20 e-mails a day – but on my work e-mail I get as many as 700 to 800 a day, so I need something really fast. I use an e-mail application called Pine, a Linux-based utility I started using in college. It's a very simple text-based mailer in a crunchy little terminal window with Courier fonts. I do marathon e-mail catch-up sessions, sometimes on a Saturday or Sunday. I'll just sit down and do e-mail for ten to 14 hours straight."

Pine is a mail program developed at the University of Washington. It has a lot of keyboard shortcuts and countless ways to sort, shuffle, and sift through your email.

Ref: [1] [2] [3]

PHOTO: ROBYN TWOMEY

PINE, Alpine


PINE 4.21 MESSAGE TEXT Folder: INBOX Message 14 of 14 ALL NEW +
Date: Mon, 19 Jun 2000 10:32:21 -0700 (PDT)
From: Leonard J. Moss <ljm@SLAC.Stanford.EDU>
To: ljm@exchange.slac.stanford.edu
Subject: Test message
This is a test message to show the effect of turning on full headers in Pine.
--
Leonard J. Moss <ljm@slac.stanford.edu> | My views don't necessarily
Stanford Linear Accelerator Center, MS 97 | reflect those of SLAC,
2575 Sand Hill Road, Menlo Park, CA 94309 | Stanford or the DOE
? Help
O OTHER CMDS
J Jump
Tab NextNew
H HdrMode

Alpine

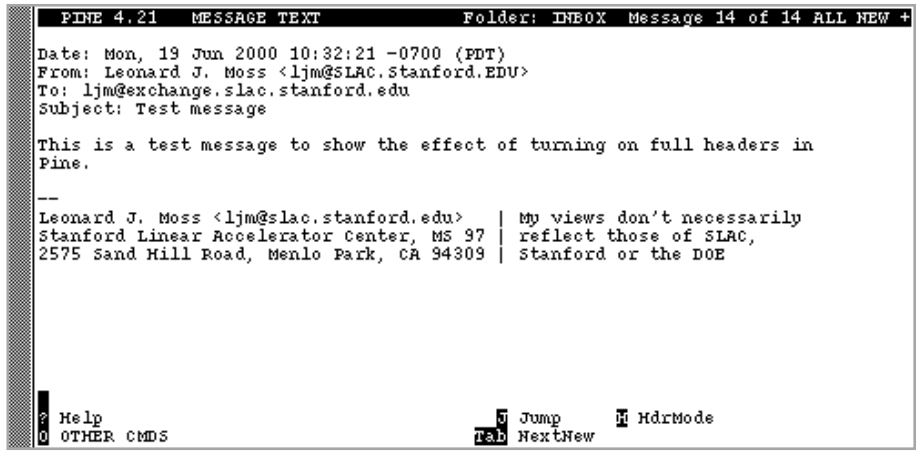
PINE, Alpine

Pine was the defacto email client for so many universities (including mine);

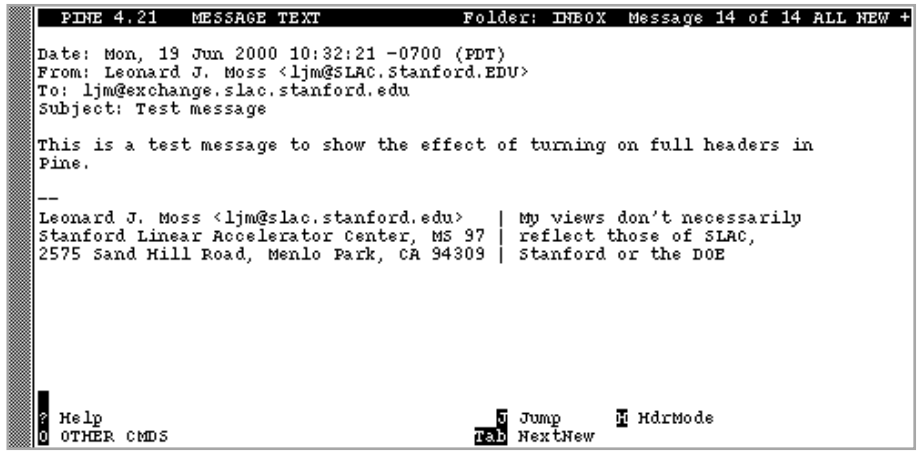
these kids today don't know what they were missing!

It was a rare window of human Time On Earth where every single person at my massive nearly 100K-size college used Control-X to send every email.

– [Source]



PINE, Alpine



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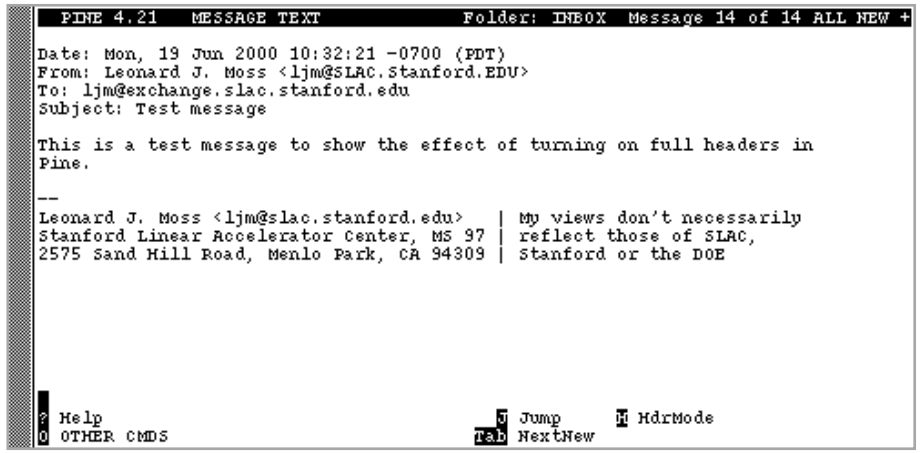

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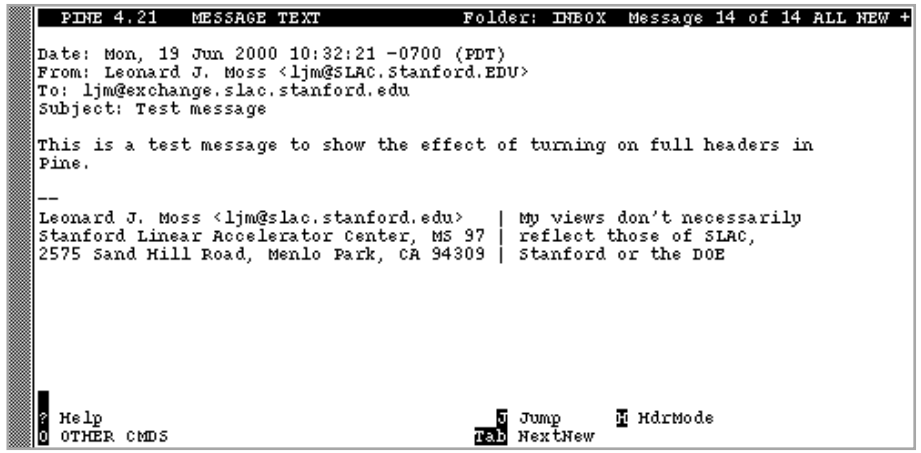
- Wikipedia: Elm

PINE, Alpine

- *Program for Internet News and E-mail*
- The living old-school Internet.
- Pico -> Nano



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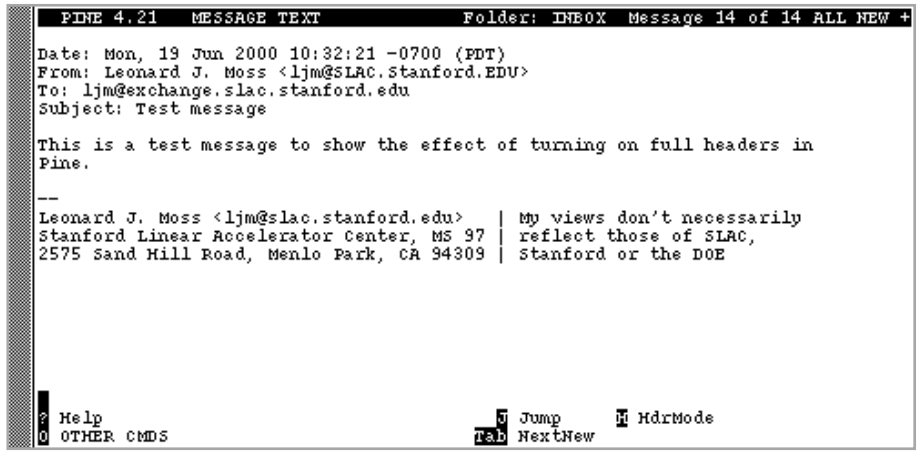

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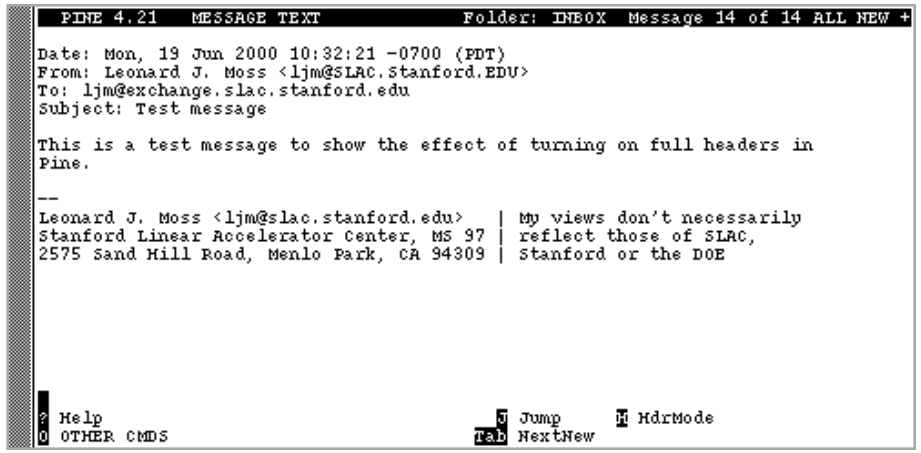

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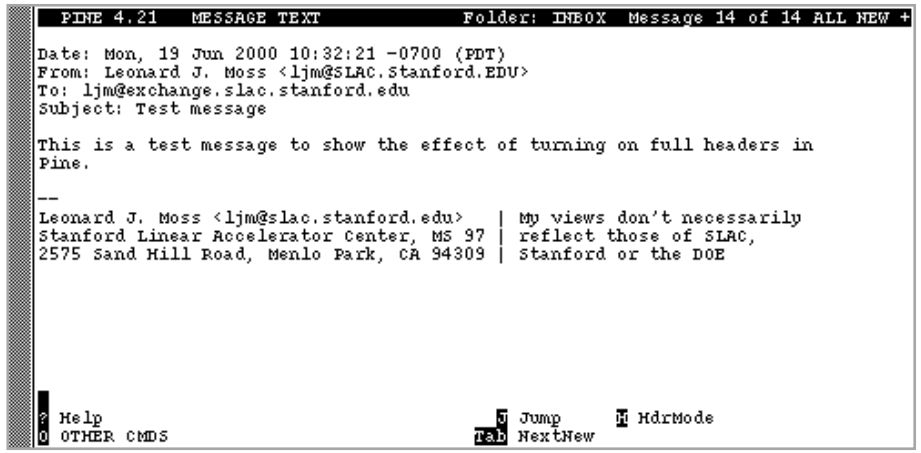

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Stanford SLAC CERN MIT

Greg Kroah-Hartman

What role do you play in the community and/or what subsystem do you work on?

I currently manage the stable kernel releases for the kernel and am the subsystem maintainer of USB, driver core, staging drivers, serial, tty, char, and a few other minor ones.

What are your favorite productivity tools for software development? What do you run on your desktop?

I live in my email client (mutt), and my editor (vim), and couldn't survive without them. Other tools I use on a daily basis are git and quilt for kernel development, Chrome and Firefox for web browsing, and irssi for irc communication. I usually run GNOME 3 on my desktop, but sometimes get frustrated with it and revert back to OpenBox or i3m. I also test KDE every once in a while just to ensure that I'm not missing anything.

What mailing list or IRC channel will people find you hanging out at? What conference(s)?

I'm on the linux-usb and linux-kernel mailing lists, along with a number of other Linux kernel related lists, and **have been trying to swear off of IRC as I find it a great distraction.** You can always find me at almost any Linux Foundation conference, as well as a number of other conferences throughout the year (CUSEC, Linux Plumbers, etc.)

https://www.linux.com/news/30-linux-kernel-developers-30-weeks-greg-kroah-hartman

Richard Matthew Stallman

Cellular Phones
I see that cellular phones are very convenient. I would have got one, if not for certain reprehensible things about them.

Cell phones are tracking and surveillance devices. They all enable the phone system to record where the user goes, and many (perhaps all) can be remotely converted into listening devices.

In addition, most of them are computers with nonfree software installed. Even if they don't allow the user to replace the software, someone else can replace it remotely. Since the software can be changed, we cannot regard it as equivalent to a circuit. A machine that allows installation of software is a computer, and computers should run free software.

Nearly every cell phone has a universal back door that allows remote conversion into a listening device. (See Murder in Samarkand, by Craig Murray, for an example.) This is as nasty as a device can get.

From the book Alone Together, by Sherry Turkle, I learned that portable phones make many people's lives oppressive, because they feel compelled to spend all day receiving and responding to text messages which interrupt everything else. Perhaps my decision to reject this convenience for its deep injustice has turned out best in terms of convenience as well.

When I need to call someone, I ask someone nearby to let me make a call. If I use someone else's cell phone, that doesn't give Big Brother any information about me.

---

https://stallman.org/rms-lifestyle.html
https://stallman.org/stallman-computing.html

I am careful in how I use the Internet.

I generally do not connect to web sites from my own machine, aside from a few sites I have some special relationship with. I usually fetch web pages from other sites by sending mail to a program (see https://git.savannah.gnu.org/git/womb/hacks.git) that fetches them, much like wget, and then mails them back to me. Then I look at them using a web browser, unless it is easy to see the text in the HTML page directly. I usually try lynx first, then a graphical browser if the page needs it (using konqueror, which won't fetch from other sites in such a situation).

---

https://git.savannah.gnu.org/git/womb/hacks.git/
GNU Womb : Hacks

The sub-project of the GNU Womb package contanins a few random hacks that have been found on the GNU machines.

- grab-url-from-mail: Fetch web pages using email.

- webxfer: Execute commands on a remote host using HTTP (see README.webxfer for details).

Lamby, Debian Leader

```
 ALPINE 2.21.9999   MESSAGE TEXT                        Message 2 of 8 75%

Regards,

- - --
      ,''`.
     : :'  :     Chris Lamb
     `. `'`      lamby@debian.org  chris-lamb.co.uk
       `-


? Help        < MsgIndex   P PrevMsg       - PrevPage D D
O OTHER CMDS > ViewAttch   N NextMsg     Spc NextPage U U
```

Fork me on GitHub

CHRIS LAMB

TICKLE ME EMAIL

BLOG · PROJECTS · ABOUT

VIEW ALL MY PROJECTS »

Toolbox for implementing GTD-like behaviours in your IMAP inbox.

Examples:

- "Tickler" file email rotation from `DELAYED.07` to `DELAYED.06` etc. Mail from `DELAYED.01` is moved to your main inbox. Use this to "put off" emails until a day they are important. To be run daily from `cron(8)`:

```
$ tickle-me-email rotate Inbox.Mail.DELAYED.%02d 1 7 INBOX
```

- Single-folder version of the above to move email for "after" work into your main inbox. Use this when you receive a non-work email during the day. To be run at, say, 6:15pm from `cron(8)`:

```
$ tickle-me-email move Inbox.Mail.DELAYED.18h15 INBOX
```

- Send draft emails queued in the `LATER.Evening`, moving them to `Sent Items` if successful. Use this to avoid getting replies "too" quickly. To be run at, say, 6:15pm from `cron(8)`:

```
$ tickle-me-email send-later INBOX.Mail.LATER.Evening "INBOX.Sent Items"
```

- List all email inboxes. Use this to find out the "internal" names of your IMAP inbox:

```
$ tickle-me-email list
```

- Send a "TODO" email to yourself:

```
$ tickle-me-email todo "Empty recycle bin"
```

You can browse the source tree, create or file bugs or download the code from Git:

```
$ git clone https://github.com/lamby/tickle-me-email
```

Tickle Me Email is released under the GNU General Public license version 3 or later.

VIEW ALL MY PROJECTS »

Guido van Rossum

You can send email for me to guido (at) python.org. I read everything sent there, but if you ask me a question about using Python, it's likely that I won't have time to answer it, and will instead refer you to help (at) python.org, comp.lang.python or StackOverflow. If you need to talk to me on the phone or send me something by snail mail, send me an email and I'll gladly email you instructions on how to reach me.

- https://gvanrossum.github.io/

Donald Knuth

I have been a happy man ever since January 1, 1990, when I no longer had an email address. I'd used email since about 1975, and it seems to me that 15 years of email is plenty for one lifetime.
Email is a wonderful thing for people whose role in life is to be on top of things. But not for me; my role is to be on the bottom of things. What I do takes long hours of studying and uninterruptible concentration. I try to learn certain areas of computer science exhaustively; then I try to digest that knowledge into a form that is accessible to people who don't have time for such study.

[…]

I have a wonderful secretary who looks at the incoming postal mail and separates out anything that she knows I've been looking forward to seeing urgently. Everything else goes into a buffer storage area, which I empty periodically.

My secretary also prints out all nonspam email messages addressed to `taocp@cs.stanford.edu` or `knuth-bug@cs.stanford.edu`, so that I can reply with written comments when I have a chance.

[…]

I mean, if the message asks a question instead of reporting an error --- I try not to get angry. I used to just throw all such sheets in the wastebasket. But now I save them for scratch paper, so that I can print test material for The Art of Computer Programming on the blank sides.

[…]

I don't even have an e-mail address. I have reached an age where my main purpose is not to receive messages.' --- Umberto Eco, quoted in the New Yorker

LaTeX

https://www-cs-faculty.stanford.edu/~knuth/email.html

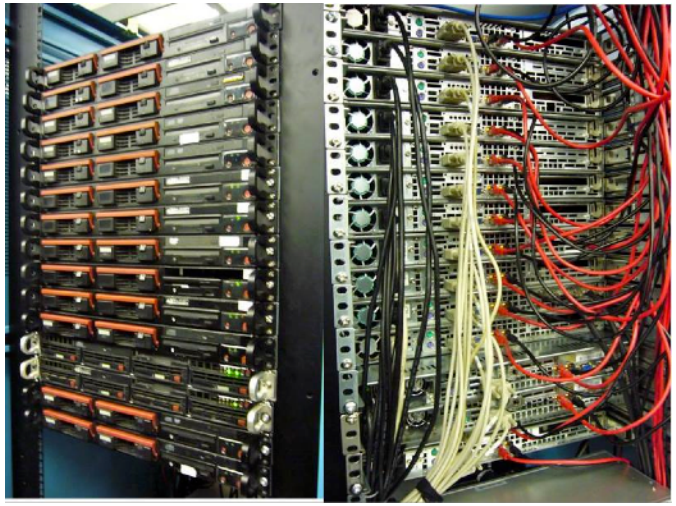
Live Demo

A brief tour of the good old days.

sdf.org

- NetBSD, since 1987
- Live demo:
  - ssh.sdf.org
  - alpine

- See Also: elevator.txt



[SDF Public Access UNIX System .. Est. 1987]

join welcome faq status members projects store tour gopher abuse dialup dsl minecraft social tilde nihongo europa webmail gallery usermap irc tutorials software telnet ssh

Create a Free UNIX Shell Account

Your E-Mail:
Preferred Login:

Alternative methods

MacOS X users, click here: ssh://new@sdf.org
Web Browser users may use our HTML5 SSH client: https://ssh.sdf.org
Linux/UNIX users can type 'ssh new@sdf.org' at their shell prompts.
For Microsoft Windows we highly recommend the free SSH client putty.exe.

If you have any questions or cannot figure out how to use **SSH**, live help is available on IRC via **irc.sdf.org** in the **#helpdesk** channel.

Please be sure fill in the description
with your login and membership option.
©1987–2065 SDF Public Access UNIX System, Inc. 501(c)(7)

(this page was generated using ksh, sed and awk)

```
NetBSD 8.0_BETA (GENERIC) #5: Wed Apr 11 17:56:49 EDT 2018

SDF is a NetBSD development site.  We are the largest NetBSD installation in
the world.  Because of this the SDF cluster serves as a testbed for future
NetBSD releases.  We are currently testing the new NetBSD-8 release and are
working through a short list of bugs.  If the SDF cluster is unavailable,
check http://www.sdf.org for NetBSD developer status.  Debugging takes time
but is much faster with a live system.

Thank you for supporting NetBSD, a free alternative to Linux and Windows Server.

you have 1 pending notification
type 'notes -r' to retrieve it
[20-Feb-19 22:56:54    kagevf              kagevf                        vega$]
% I love this place!
 -=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
[25-Feb-19 02:37:00 rondnelly               Rond                       Brazil]
% This place is amazing, thanks you all!
 -=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
[02-Mar-19 03:41:21   rametep             rametep                         AUS]
% The longer one is alone, the easier it is to hear the song of the earth.
 -=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
[08-Mar-19 08:21:22    fukwad              hal9000                       earth]
% Give me more Qbits Now!!!
 -=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
[10-Mar-19 14:45:41    railey              railey                    Firmanent]
% And it is easier to hear your own thoughts.
 -=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
[12-Mar-19 19:03:35 yeetmaster64        Yeetmaster64               Yeetland earth]
% I like to yeet in the yeet with some nice yeet.
 -=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
[14-Mar-19 17:45:46      macu                                        Bern ch]
% I love this place!
6833 guestbook entries.

Welcome to the SDF Public Access UNIX system. (est. 1987)

For quick help, type 'help'
For detailed questions and answers, type 'faq'
For user discussion boards and software requests, type 'bboard'
For interactive discussions, type 'com'
To setup your homepage, type 'mkhomepg'
to create your URL http://example.freeshell.org, type 'mkhomepg -a'

Explore and Enjoy!

$ alpine
```

```
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```
  ALPINE 2.20   MESSAGE INDEX        <news.sdf.org> sdf.help        Msg 3 of 6 NEW

  N   1 Wednesday Anthony Giacalone    (1K) Re: give & get help here?
  N   2 Sunday    David Chmelik       (998) give & get help here?
  N   3 Feb 14    Kévin                (1K) Re: This is sdf.help
  N   4 Feb 12    To: sdf.help         (1K) Re: This is sdf.help
  N   5 Jan 26    Kevin               (553) This is sdf.help
  N   6 Jan  9    Memnon Anon         (872) This is sdf.help


? Help        < FldrList    P PrevMsg      - PrevPage  D Delete      R Reply
O OTHER CMDS  > [ViewMsg]   N NextMsg    Spc NextPage  U Undelete    F Forward
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To setup your homepage, type 'mkhomepg'
to create your URL http://example.freeshell.org, type 'mkhomepg -a'

Explore and Enjoy!

$ alpine
```

```
  ALPINE 2.20   MESSAGE INDEX        <news.sdf.org> sdf.help        Msg 3 of 6 NEW

  N   1 Wednesday Anthony Giacalone    (1K) Re: give & get help here?
  N   2 Sunday    David Chmelik       (998) give & get help here?
  N   3 Feb 14    Kévin                (1K) Re: This is sdf.help
  N   4 Feb 12    To: sdf.help         (1K) Re: This is sdf.help
  N   5 Jan 26    Kevin               (553) This is sdf.help
  N   6 Jan  9    Memnon Anon         (872) This is sdf.help




? Help        < FldrList    P PrevMsg       - PrevPage  D Delete      R Reply
O OTHER CMDS  > [ViewMsg]   N NextMsg     Spc NextPage  U Undelete    F Forward
```

```
  ALPINE 2.20   MESSAGE TEXT       <news.sdf.org> sdf.help       Msg 5 of 6 ALL NEW

Date: Sat, 26 Jan 2019 15:31:42 -0500
From: Kevin <kevin@mmn.cx>
Newsgroups: sdf.help
Subject: This is sdf.help

-> .... and now it has a posting.

And now there is a second posting, may there be a third shortly.

? Help        < MsgIndex    P PrevMsg       - PrevPage  D Delete      R Reply
O OTHER CMDS  > ViewAttch   N NextMsg     Spc NextPage  U Undelete    F Forward
```

```
NetBSD 8.0_BETA (GENERIC) #5: Wed Apr 11 17:56:49 EDT 2018

SDF is a NetBSD development site.  We are the largest NetBSD installation in
the world.  Because of this the SDF cluster serves as a testbed for future
NetBSD releases.  We are currently testing the new NetBSD-8 release and are
working through a short list of bugs.  If the SDF cluster is unavailable,
check http://www.sdf.org for NetBSD developer status.  Debugging takes time
but is much faster with a live system.

Thank you for supporting NetBSD, a free alternative to Linux and Windows Server.

you have 1 pending notification
type 'notes -r' to retrieve it
[20-Feb-19 22:56:54    kagevf              kagevf                          vega$]
% I love this place!
 -=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
[25-Feb-19 02:37:00 rondnelly               Rond                        Brazil]
% This place is amazing, thanks you all!
 -=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
[02-Mar-19 03:41:21   rametep             rametep                          AUS]
% The longer one is alone, the easier it is to hear the song of the earth.
 -=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
[08-Mar-19 08:21:22    fukwad              hal9000                         earth]
% Give me more Qbits Now!!!
 -=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
[10-Mar-19 14:45:41    railey              railey                     Firmanent]
% And it is easier to hear your own thoughts.
 -=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
[12-Mar-19 19:03:35 yeetmaster64        Yeetmaster64                Yeetland earth]
% I like to yeet in the yeet with some nice yeet.
 -=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
[14-Mar-19 17:45:46      macu                                          Bern ch]
% I love this place!
6833 guestbook entries.

Welcome to the SDF Public Access UNIX system. (est. 1987)

For quick help, type 'help'
For detailed questions and answers, type 'faq'
For user discussion boards and software requests, type 'bboard'
For interactive discussions, type 'com'
To setup your homepage, type 'mkhomepg'
to create your URL http://example.freeshell.org, type 'mkhomepg -a'

Explore and Enjoy!

$ alpine
```

```
  ALPINE 2.20   MESSAGE INDEX        <news.sdf.org> sdf.help        Msg 3 of 6 NEW

  N   1 Wednesday Anthony Giacalone    (1K) Re: give & get help here?
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? Help        < FldrList    P PrevMsg       - PrevPage  D Delete      R Reply
O OTHER CMDS  > [ViewMsg]   N NextMsg     Spc NextPage  U Undelete    F Forward
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  ALPINE 2.20   MESSAGE TEXT      <news.sdf.org> sdf.help       Msg 5 of 6 ALL NEW

Date: Sat, 26 Jan 2019 15:31:42 -0500
From: Kevin <kevin@mmn.cx>
Newsgroups: sdf.help
Subject: This is sdf.help

-> .... and now it has a posting.

And now there is a second posting, may there be a third shortly.

? Help        < MsgIndex    P PrevMsg       - PrevPage  D Delete      R Reply
O OTHER CMDS  > ViewAttch   N NextMsg     Spc NextPage  U Undelete    F Forward
```

```
  ALPINE 2.20   MESSAGE TEXT      <news.sdf.org> sdf.help       Msg 3 of 6 ALL

Date: Thu, 14 Feb 2019 05:11:44 +0100
From: Kévin <kevin@mmn.on.ca>
Newsgroups: sdf.help
Subject: Re: This is sdf.help

Le 12/02/2019 à 18:11, scateu a écrit :
>
> ...and the third

If only somebody was so kind to make a fourth....

? Help        < MsgIndex    P PrevMsg       - PrevPage  D Delete      R Reply
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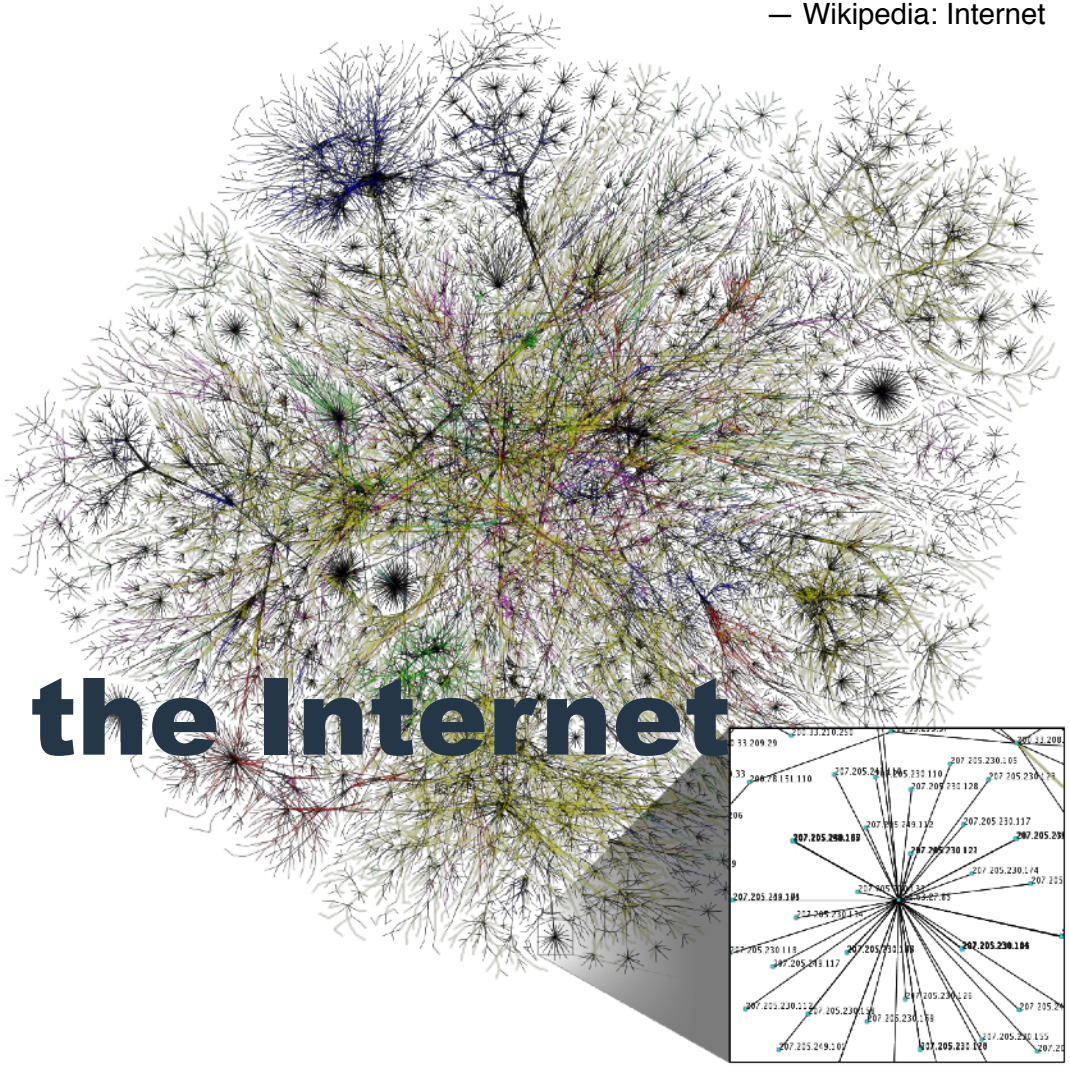
```

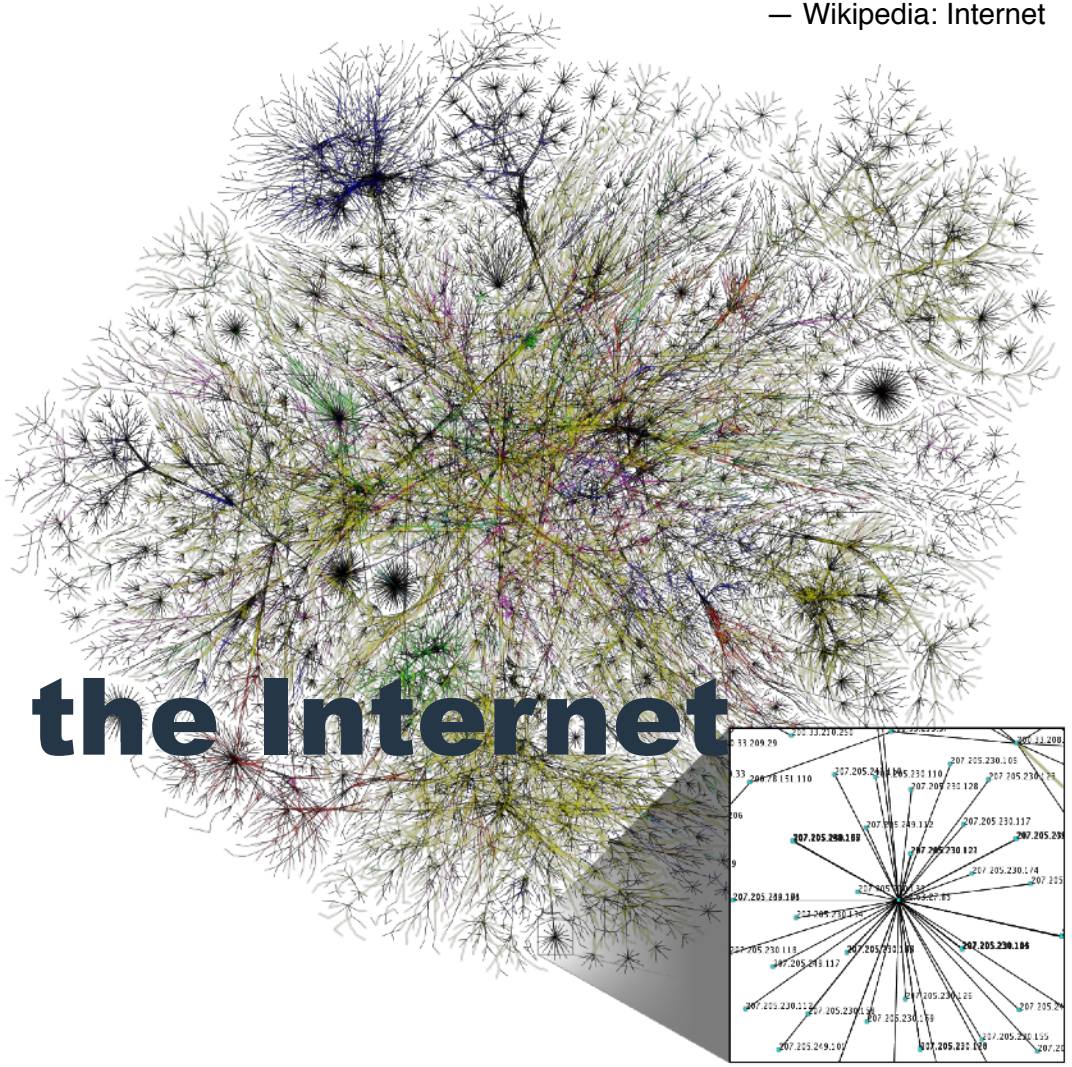
— Wikipedia: Internet



¾ Learn from designs of the Internet

— Wikipedia: Internet

Our best success was not computing,
but hooking people together.
— David D. Clark



¾ Learn from designs of the Internet

Quotes from Vint Cerf, inventor of the Internet

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"The internet is a reflection of our society and that mirror is going to be reflecting what we see. If we do not like what we see in that mirror the problem is not to fix the mirror, we have to fix society. "

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"The more we can organize, find and manage information, the more effectively we can function in our modern world. "

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"The more we can organize, find and manage information, the more effectively we can function in our modern world. "

"Information flow is what the Internet is about. Information sharing is power. If you don't share your ideas, smart people can't do anything about them, and you'll remain **anonymous** and **powerless**. "

Internet Principles

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Decentralization and tolerance are the life and breath of Internet.

— Tim Berners-Lee

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Decentralization and tolerance are the life and breath of Internet.

— Tim Berners-Lee

We reject: kings, presidents and voting

We believe in: rough consensus and running code.

— David Clark, 1992, *“A Cloudy Crystal Ball”,* IAB

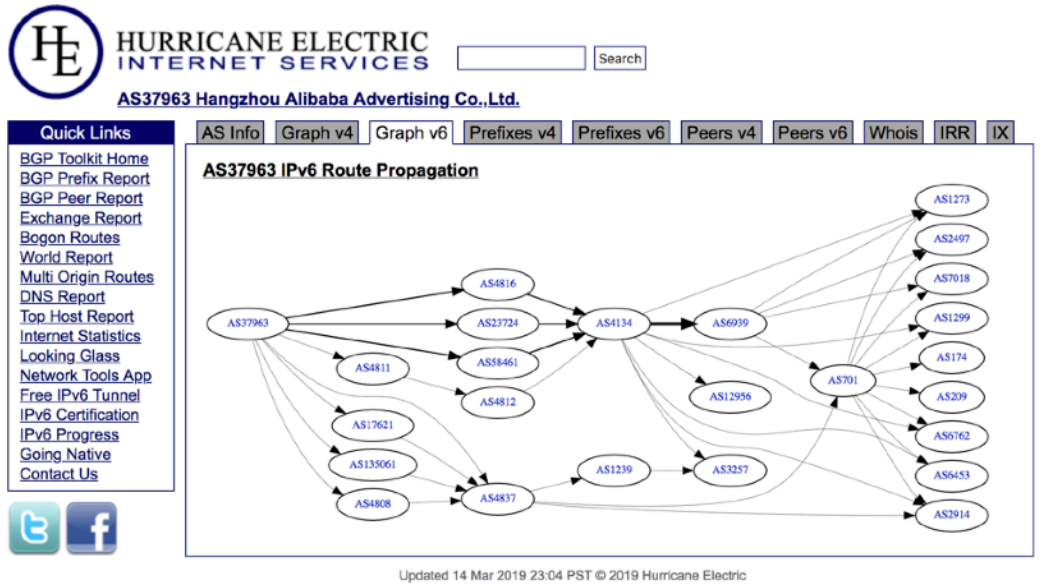
BGP

BGP

- Internet: addressing and routing.

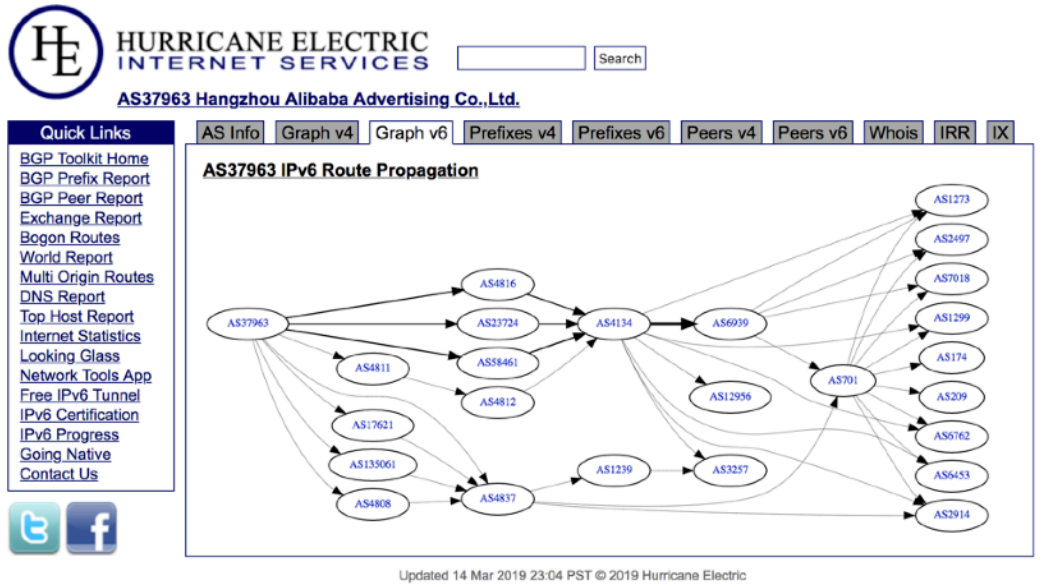
BGP

- Internet: addressing and routing.



BGP

- Internet: addressing and routing.
- BGP overview
  - BGP advertises network reach-ability within an autonomous system
  - BGP forms neighbor relationships
  - BGP uses metrics to rank router reach-ability



BGP

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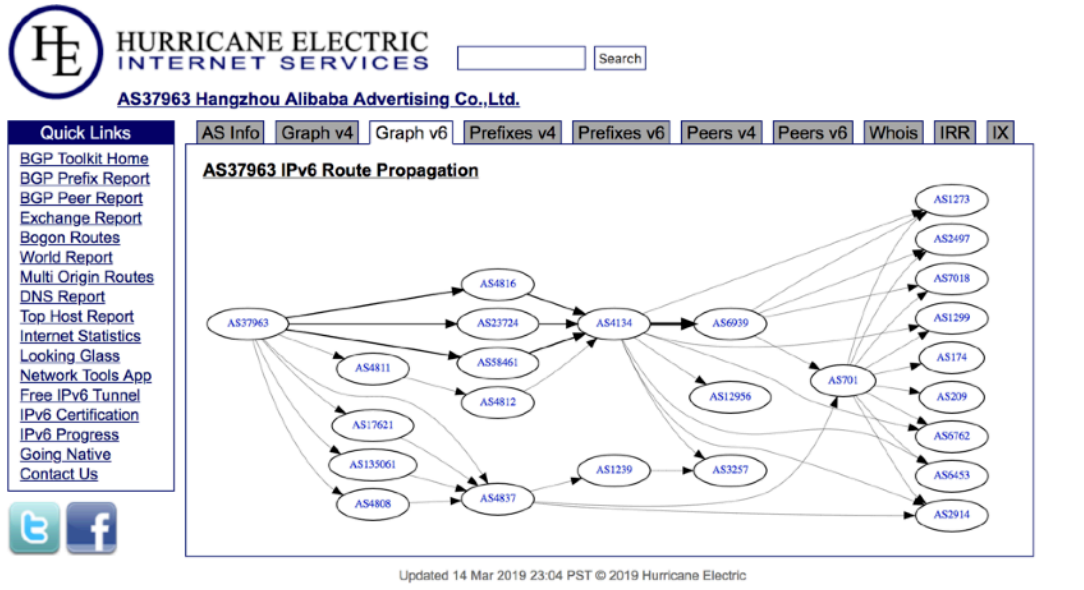
- Broadcast your skills and your needs.
  - Questions will be passed on to you.
  - Answers will be passed on to you.
  - Inspirations will be passed on to you.
  - Listen and Serve.
  - “We call it our Who Knows What database.” — Wolfram
  - Human Routing.
    - metric?
    - Library of Congress Classification (LCC) ?



Broadcast Your Skills and Needs

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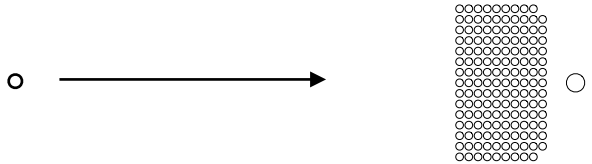

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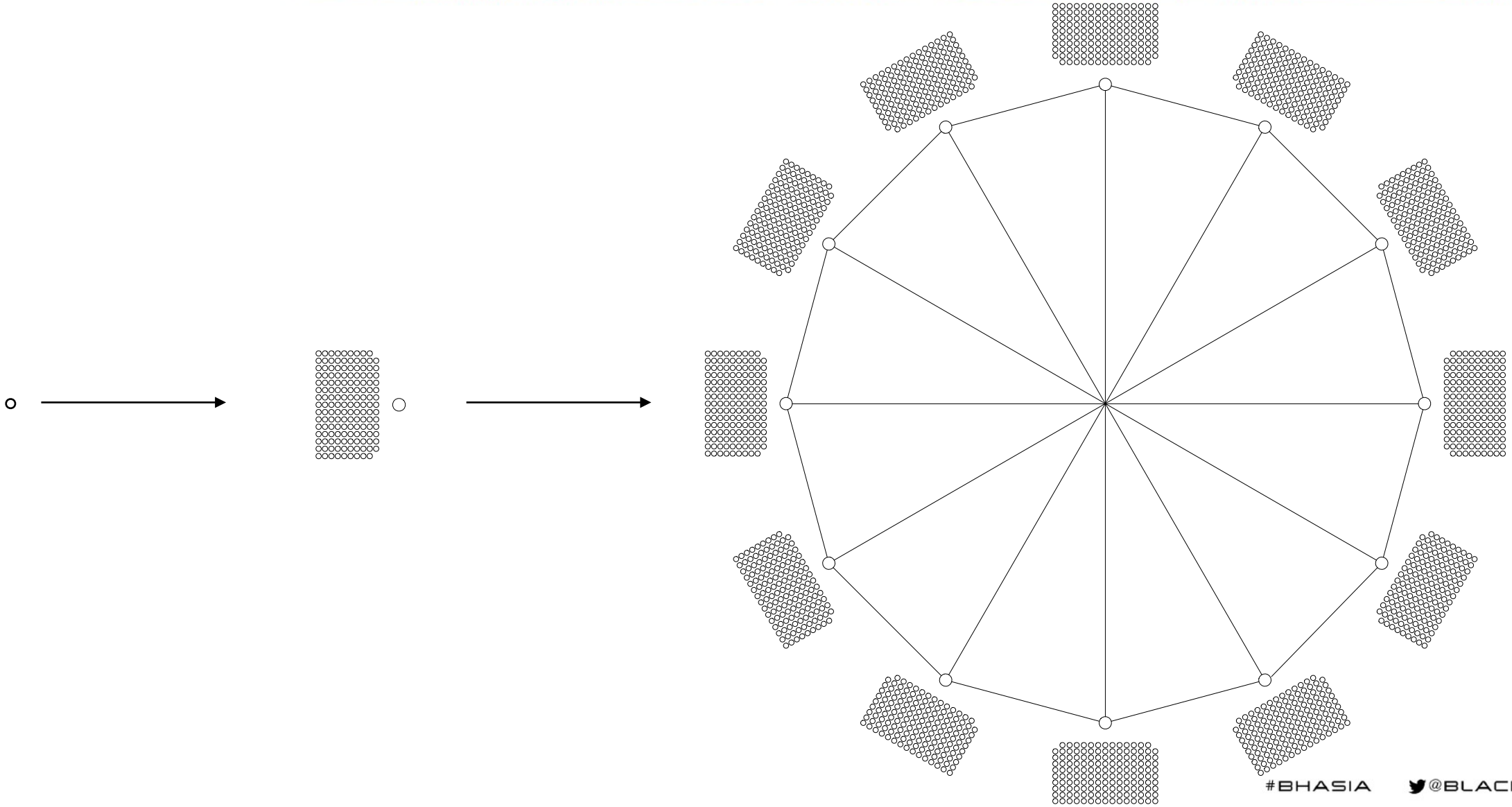

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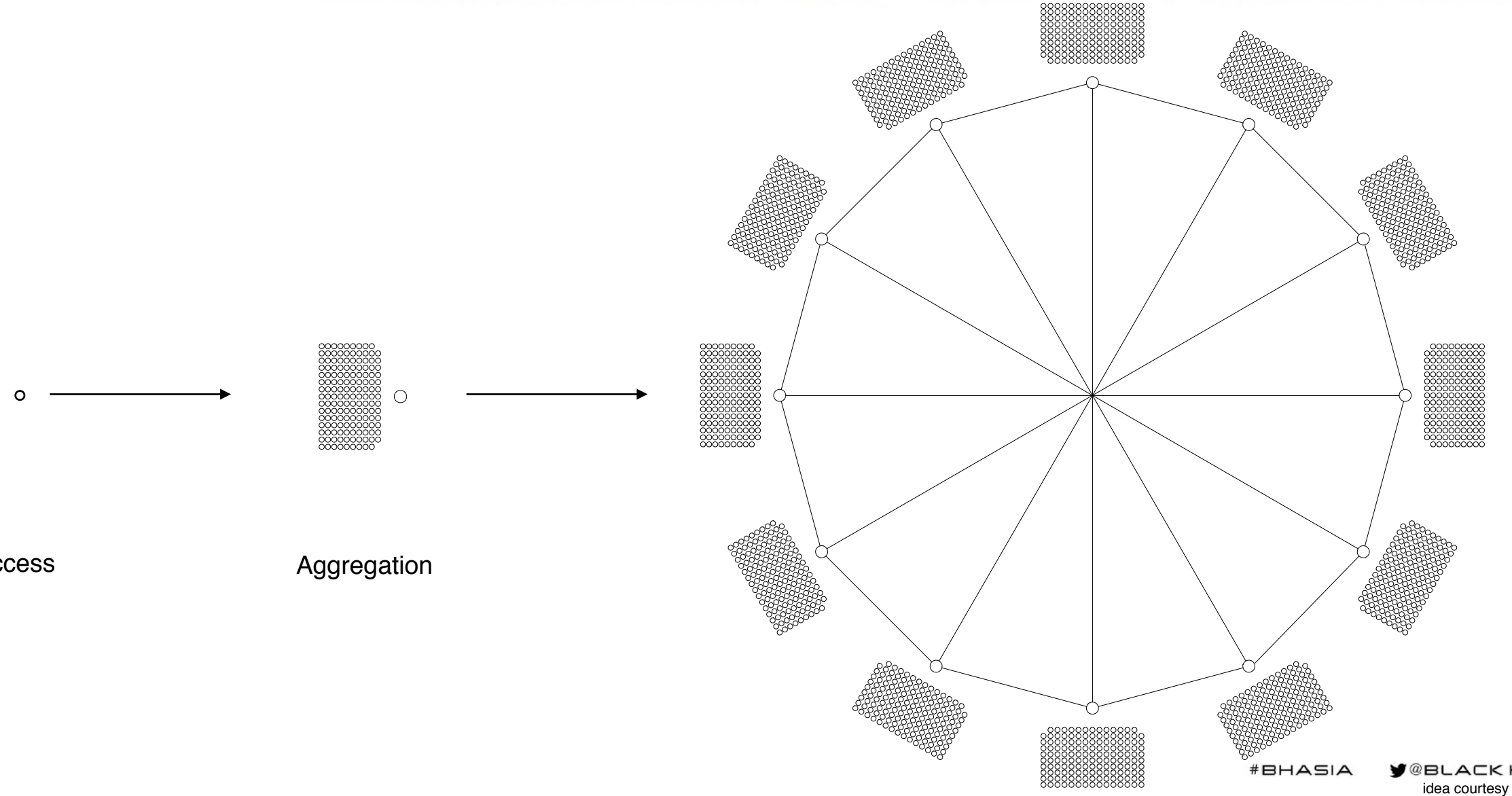

idea courtesy of @ThomasKing2014

Information Handling Model

Information Handling Model

- Speak I Retell I Listen

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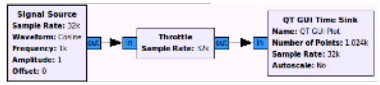

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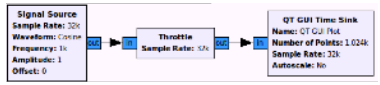

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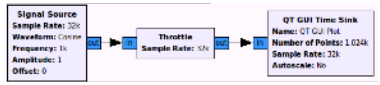

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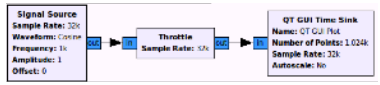

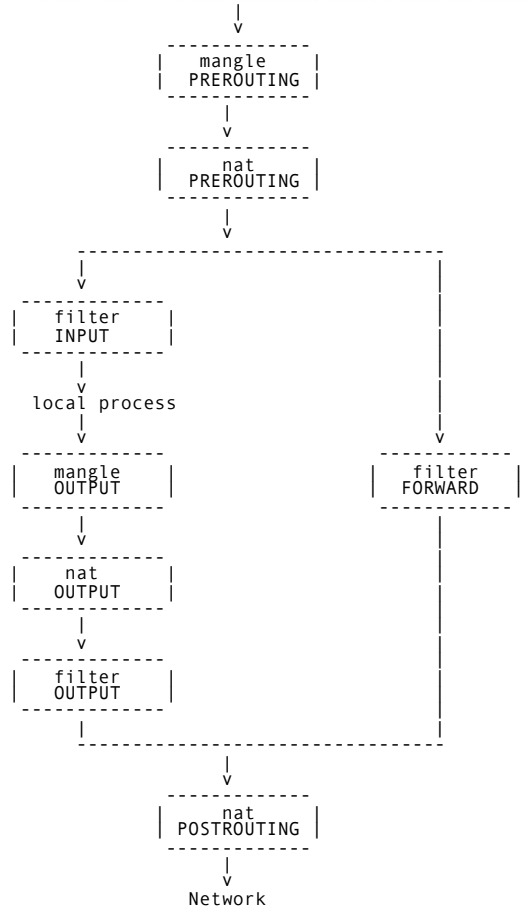

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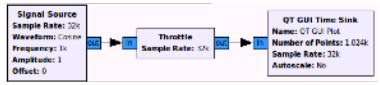

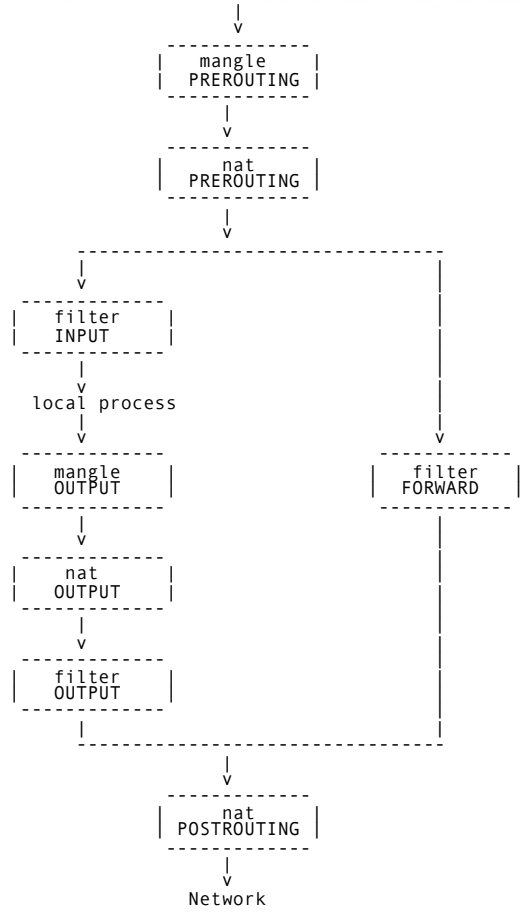

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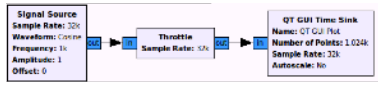

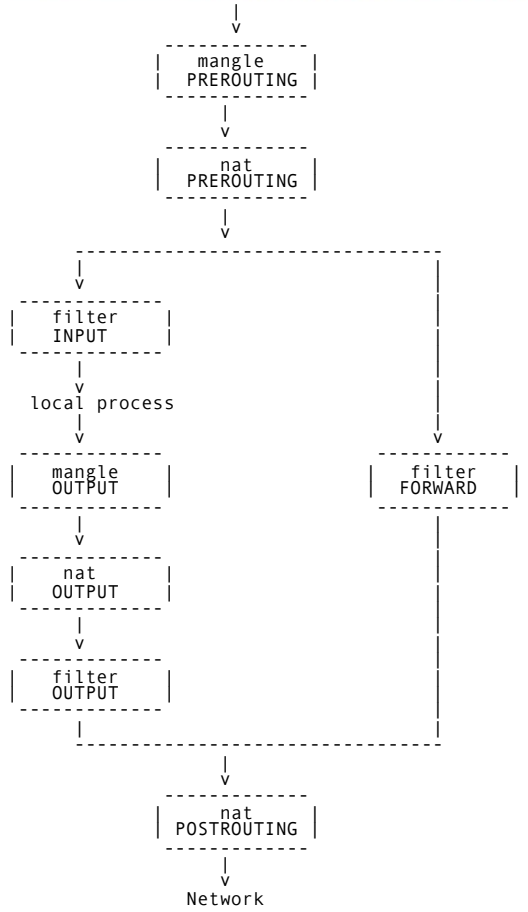

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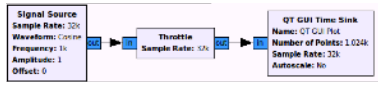

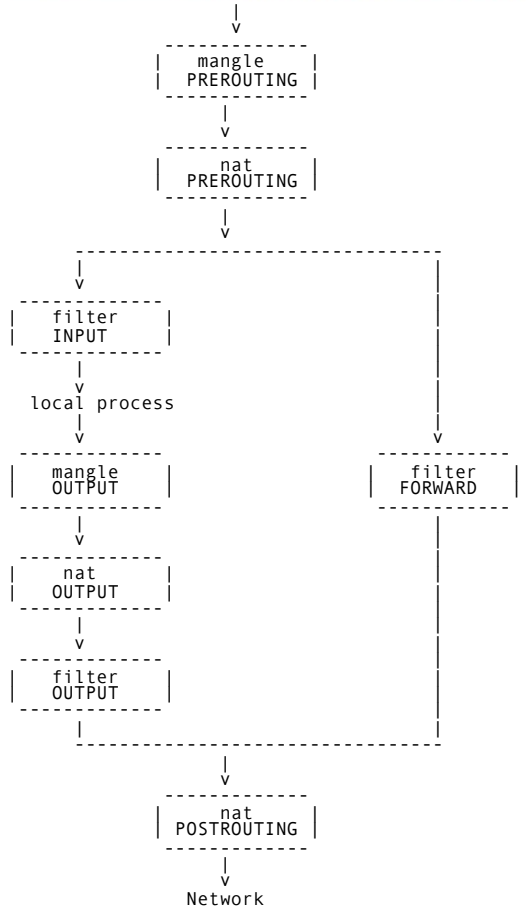

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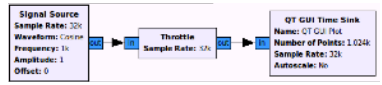

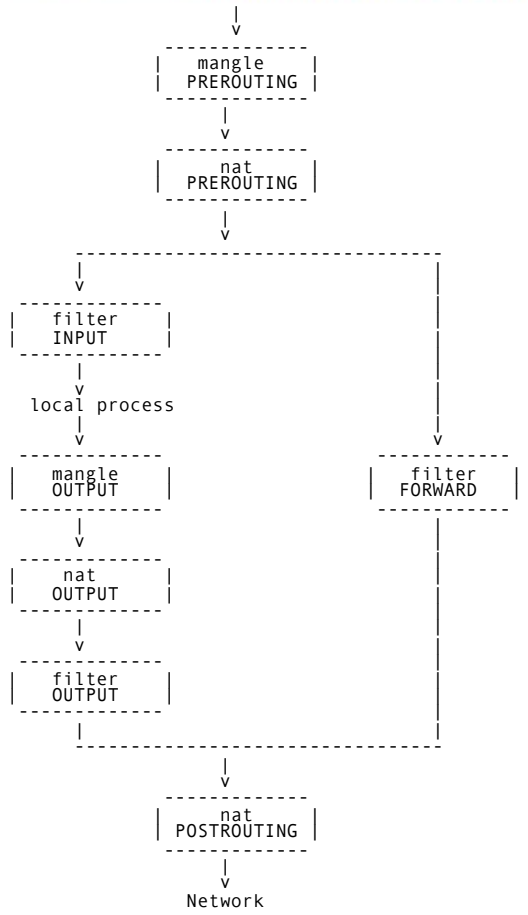

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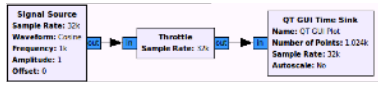

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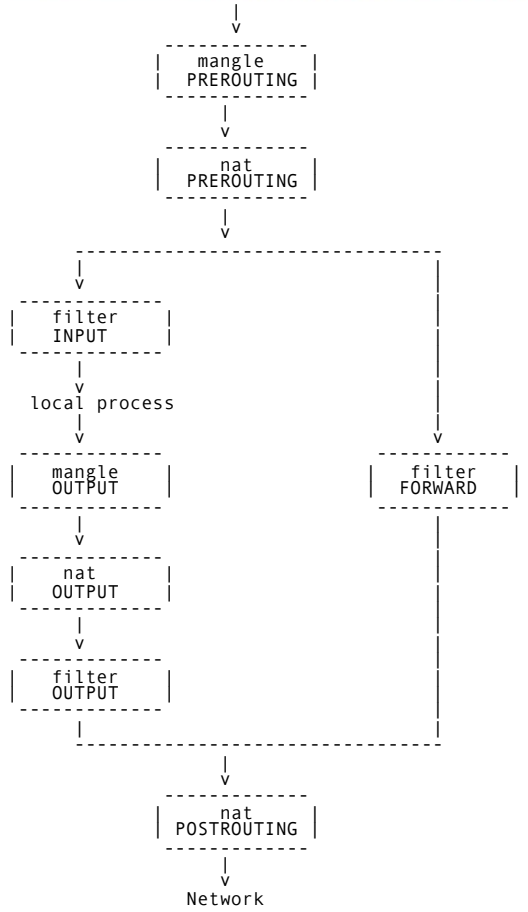

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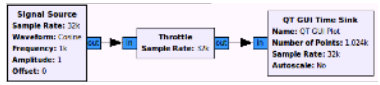

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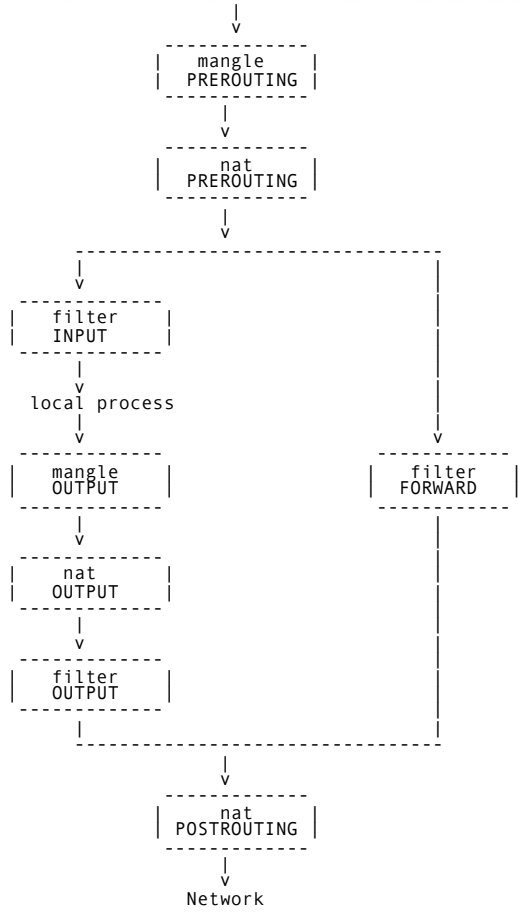

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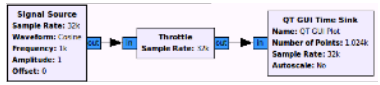

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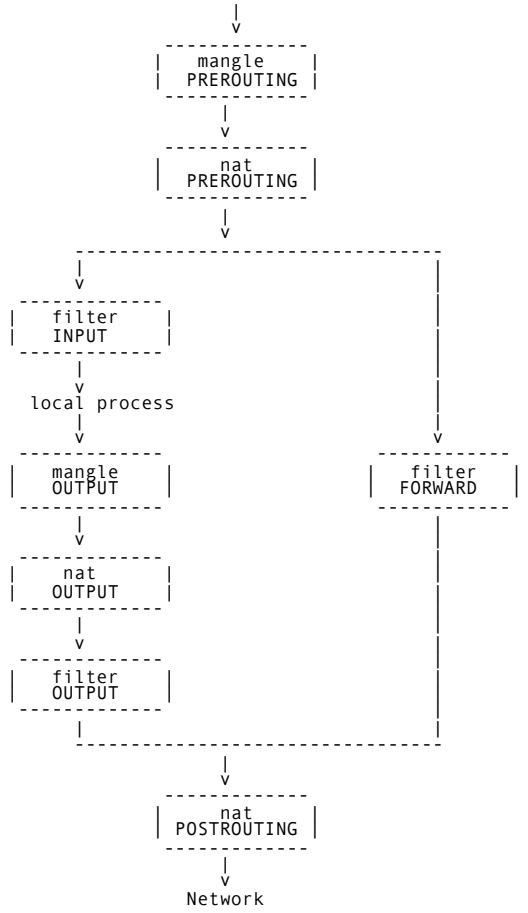
  - Instead of private-accessible tech notes, public notes / independent blogs / searchable discussions should be used.



Code from 1988

alpine/imap/src/c-client/rfc822.h

```
/*
========================================================================
 * Copyright 1988-2006 University of Washington
 *
 * Licensed under the Apache License, Version 2.0 (the "License");
 * you may not use this file except in compliance with the License.
 * You may obtain a copy of the License at
 *
 *     http://www.apache.org/licenses/LICENSE-2.0

========================================================================
 */

/*
 * Program: RFC 2822 and MIME routines
 *
 * Author:  Mark Crispin
 *          Networks and Distributed Computing
 *          Computing & Communications
 *          University of Washington
 *          Administration Building, AG-44
 *          Seattle, WA  98195
 *          Internet: MRC@CAC.Washington.EDU
 *
 * Date:    27 July 1988
 * Last Edited:   30 August 2006
 *
 * This original version of this file is
 * Copyright 1988 Stanford University
 * and was developed in the Symbolic Systems Resources Group of the
Knowledge
 * Systems Laboratory at Stanford University in 1987-88, and was
funded by the
 * Biomedical Research Technology Program of the NationalInstitutes of
Health
 * under grant number RR-00785.
 */
```

```
#define MAXGROUPDEPTH 50        /* RFC [2]822 doesn't allow any group
nesting */
#define MAXMIMEDEPTH 50         /* more than any sane MIMEgram */

/* Output buffering for RFC [2]822 */

typedef long (*soutr_t) (void *stream,char *string);
typedef long (*rfc822out_t) (char *tmp,ENVELOPE *env,BODY
*body,soutr_t f,
                             void *s,long ok8bit);

typedef struct rfc822buffer {
  soutr_t f;                    /* I/O flush routine */
  void *s;                 /* stream for I/O routine */
  char *beg;                    /* start of buffer */
  char *cur;                    /* current buffer pointer */
  char *end;                    /* end of buffer */
} RFC822BUFFER;

typedef long (*rfc822outfull_t) (RFC822BUFFER *buf,ENVELOPE *env,BODY
*body,
                                 long ok8bit);


/* Function prototypes */

char *rfc822_default_subtype (unsigned short type);
void rfc822_parse_msg_full (ENVELOPE **en,BODY **bdy,char *s,unsigned
long i,
                            STRING *bs,char *host,unsigned long depth,
                            unsigned long flags);
```

Code from 1988

alpine/imap/src/c-client/rfc822.h

```
/*
========================================================================
 * Copyright 1988-2006 University of Washington
 *
 * Licensed under the Apache License, Version 2.0 (the "License");
 * you may not use this file except in compliance with the License.
 * You may obtain a copy of the License at
 *
 *     http://www.apache.org/licenses/LICENSE-2.0

========================================================================
 */

/*
 * Program: RFC 2822 and MIME routines
 *
 * Author:  Mark Crispin
 *          Networks and Distributed Computing
 *          Computing & Communications
 *          University of Washington
 *          Administration Building, AG-44
 *          Seattle, WA  98195
 *          Internet: MRC@CAC.Washington.EDU
 *
 * Date:    27 July 1988
 * Last Edited:   30 August 2006
 *
 * This original version of this file is
 * Copyright 1988 Stanford University
 * and was developed in the Symbolic Systems Resources Group of the
Knowledge
 * Systems Laboratory at Stanford University in 1987-88, and was
funded by the
 * Biomedical Research Technology Program of the NationalInstitutes of
Health
 * under grant number RR-00785.
 */
```

```
#define MAXGROUPDEPTH 50        /* RFC [2]822 doesn't allow any group
nesting */
#define MAXMIMEDEPTH 50         /* more than any sane MIMEgram */

/* Output buffering for RFC [2]822 */

typedef long (*soutr_t) (void *stream,char *string);
typedef long (*rfc822out_t) (char *tmp,ENVELOPE *env,BODY
*body,soutr_t f,
                             void *s,long ok8bit);

typedef struct rfc822buffer {
  soutr_t f;                    /* I/O flush routine */
  void *s;                 /* stream for I/O routine */
  char *beg;                    /* start of buffer */
  char *cur;                    /* current buffer pointer */
  char *end;                    /* end of buffer */
} RFC822BUFFER;

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long i,
                            STRING *bs,char *host,unsigned long depth,
                            unsigned long flags);
```

Internet = Email ? — Mark R. Crispin, Author of IMAP

Email

Photo courtesy of @AndiMann

Email

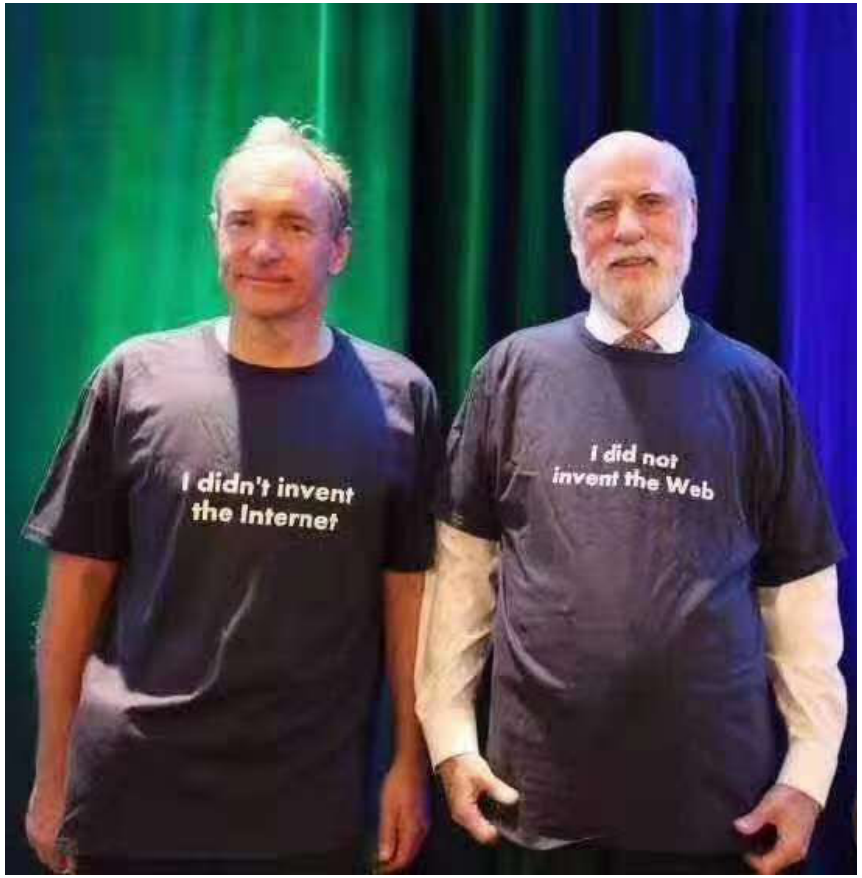

Photo courtesy of @AndiMann

Email

Who invented email?

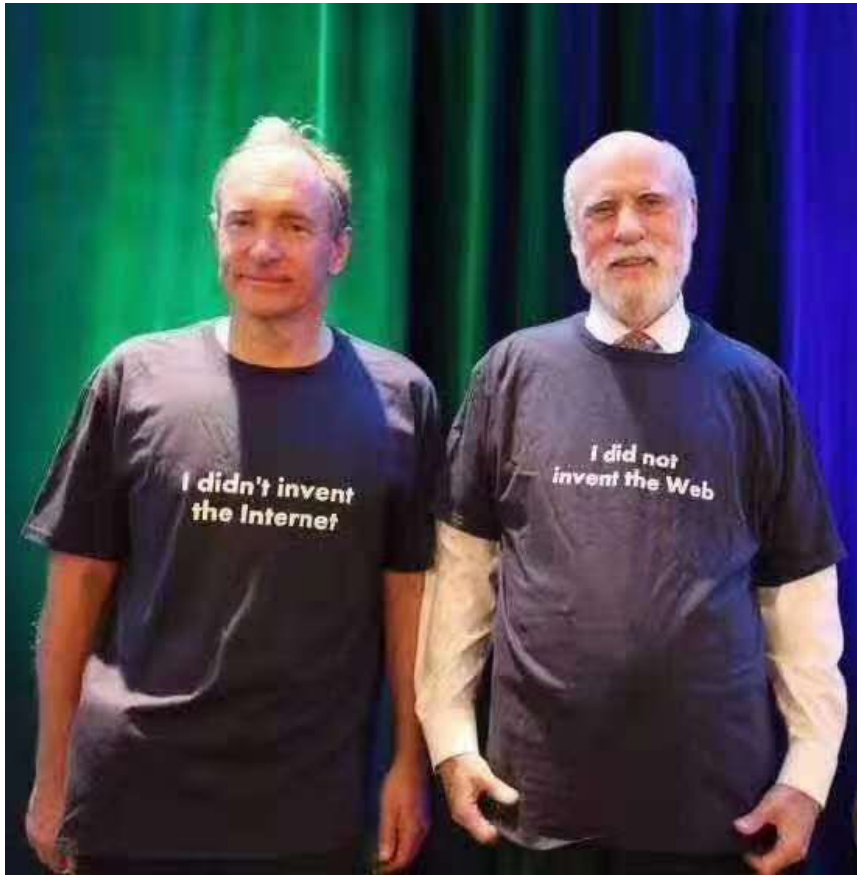

Photo courtesy of @AndiMann

Email

- *Email is much older than ARPANet or the Internet. It was never invented; it evolved from very simple beginnings.*

Who invented email?

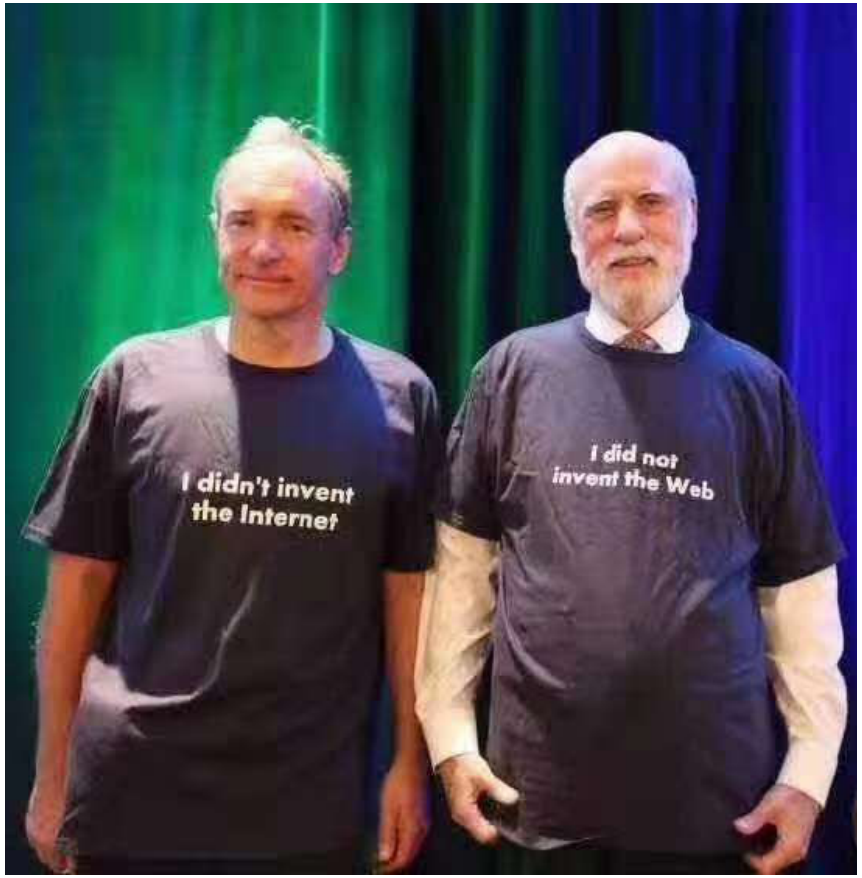

Photo courtesy of @AndiMann

Email

Who invented email?

- *Email is much older than ARPANet or the Internet. It was never invented; it evolved from very simple beginnings.*
- *This concept of communicating via email from organisation to organisation was the impetus for the advent of the internet itself.*

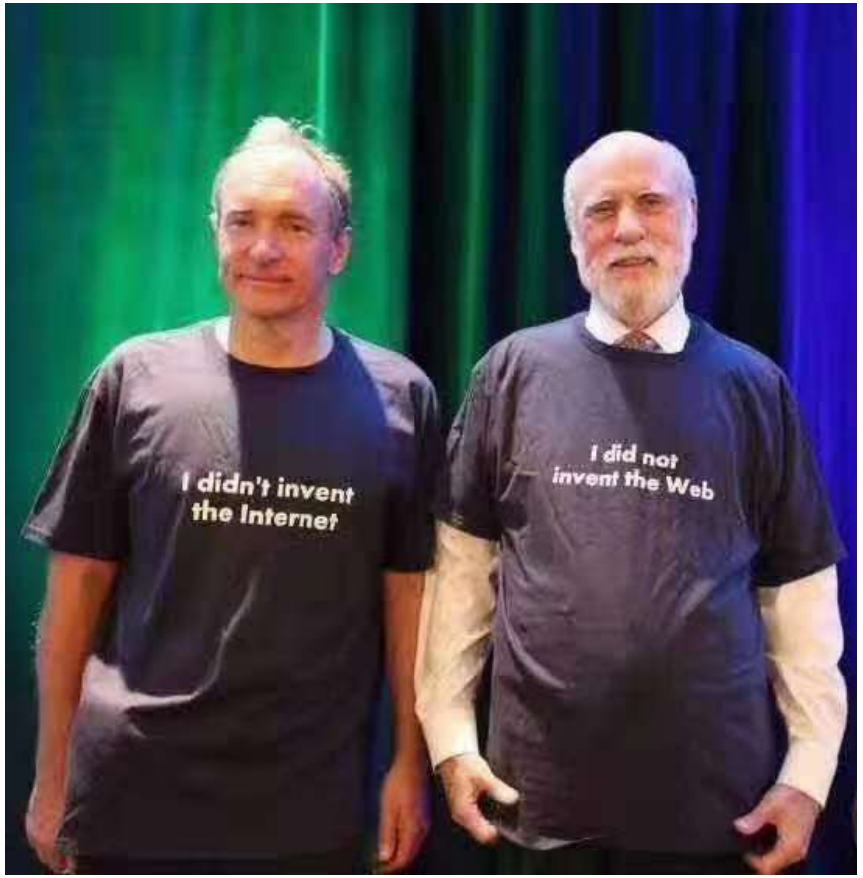

Photo courtesy of @AndiMann

Email

- *Email is much older than ARPANet or the Internet. It was never invented; it evolved from very simple beginnings.*
- *This concept of communicating via email from organisation to organisation was the impetus for the advent of the internet itself.*
- *E-mail has often been called the killer application of the Internet.*

Who invented email?

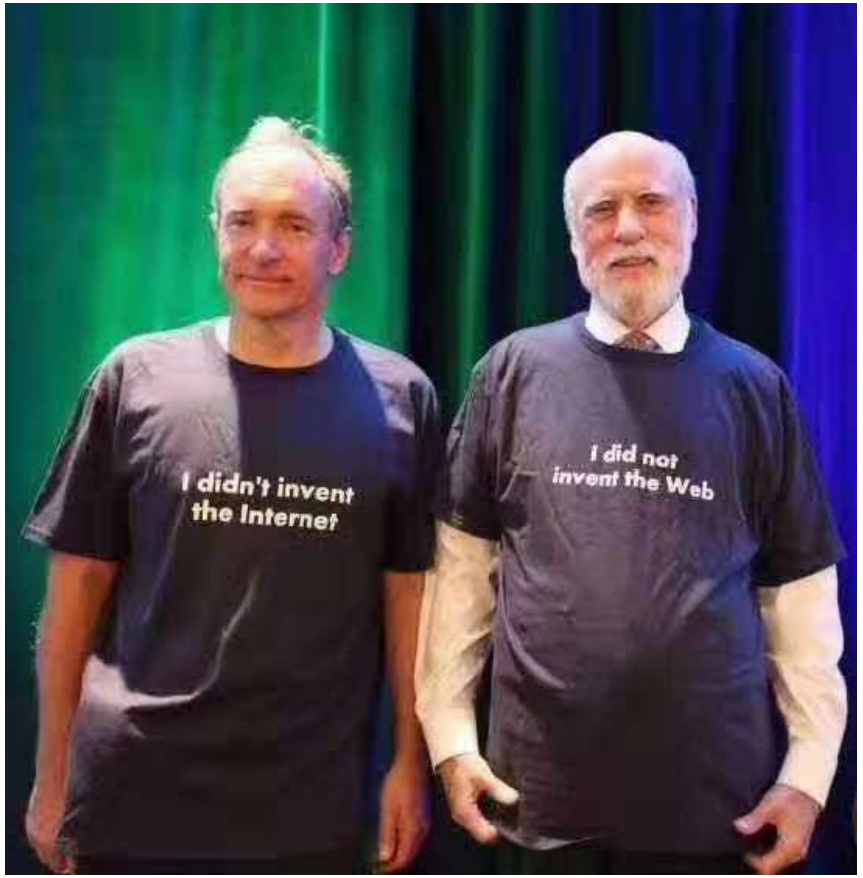

Photo courtesy of @AndiMann

Date: 6 Aug 91 14:56:20 GMT
From: Tim Berners-Lee <timbl@info.cern.ch>
Newsgroups: alt.hypertext
Subject: Re: Qualifiers on Hypertext links...

In article <1991Aug2.115241@ardor.enet.dec.com> kannan@ardor.enet.dec.com (Nari Kannan) writes:

> Is anyone reading this newsgroup aware of research or development efforts in the following areas:
>
> 1. Hypertext links enabling retrieval from multiple heterogeneous sources of information?

The WorldWideWeb (WWW) project aims to allow links to be made to any information anywhere. The address format includes an access method (=namespace), and for most name spaces a hostname and some sort of path.

We have a prototype hypertext editor for the NeXT, and a browser for line mode terminals which runs on almost anything. These can access files either locally, NFS mounted, or via anonymous FTP. They can also go out using a simple protocol (HTTP) to a server which interprets some other data and returns equivalent hypertext files. For example, we have a server running on our mainframe (http://cernvm.cern.ch/FIND in WWW syntax) which makes all the CERN computer center documentation available. The HTTP protocol allows for a keyword search on an index, which generates a list of matching documents as annother virtual hypertext document.

If you're interested in using the code, mail me. It's very prototype, but available by anonymous FTP from info.cern.ch. It's copyright CERN but free distribution and use is not normally a problem.

The NeXTstep editor can also browse news. If you are using it to read this,

[START of message]

The NeXTstep editor can also browse news. If you are using it to read this, then click on this: <http://info.cern.ch/hypertext/WWW/TheProject.html> to find out more about the project. We haven't put the news access into the line mode browser yet.

We also have code for a hypertext server. You can use this to make files available (like anonymous FTP but faster because it only uses one connection). You can also hack it to take a hypertext address and generate a virtual hypertext document from any other data you have - database, live data etc. It's just a question of generating plain text or SGML (ugh! but standard) mark-up on the fly. The browsers then parse it on the fly.

The WWW project was started to allow high energy physicists to share data, news, and documentation. We are very interested in spreading the web to other areas, and having gateway servers for other data. Collaborators welcome! I'll post a short summary as a separate article.

Tim Berners-Lee timbl@info.cern.ch
World Wide Web project Tel: +41(22)767 3755
CERN Fax: +41(22)767 7155
1211 Geneva 23, Switzerland (usual disclaimer)

[END of message]

Why do people love Email?

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- Basically all of the open source communities choose email to collaborate.
  - Debian I Linux Kernel

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- According to https://www.livinginternet.com/e/ep.htm:
  - *Email waits for you.*
    - Without fear, no pressure, won't disappear. Can be caught up finally.
    - 'GTD' compatible. eg: tickle-me-email by Lamby, Leader of Debian project.
  - *Email is a push technology.*
    - *Email is delivered to the recipient so they don't have to work to get it -- they just open their Inbox and there it is.*
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    - *Email has the power of one-to-many.*
- Successful model:
    - Subject | From | To | Cc | Fcc | Headers | Contents
        - Subject is the Abstract, from the originator. Likewise in scientific papers.
    - Store-and-forward: Accept | Forward | Deliver | Store Messages.
    - Thread.

- imap.ietf.org — public accessible archive of IETF emails.

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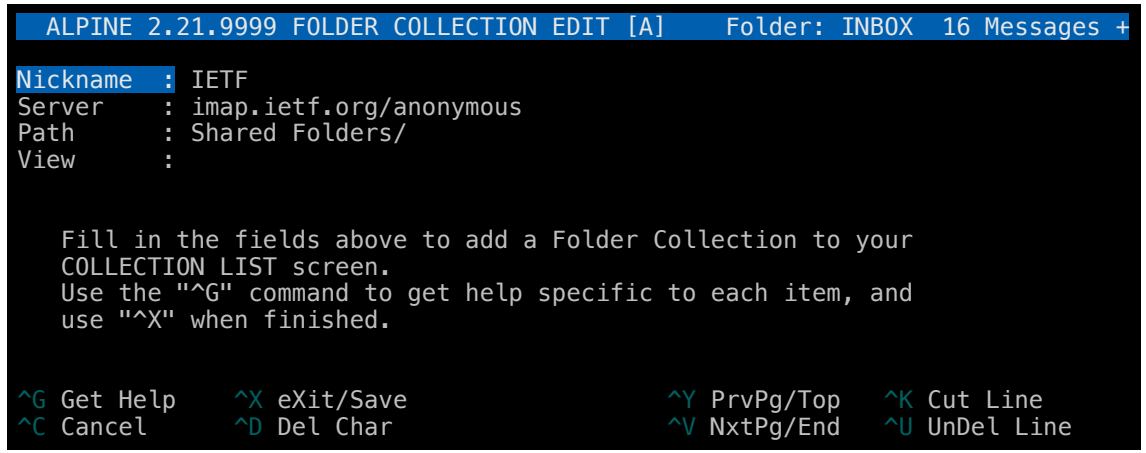

- imap.ietf.org — public accessible archive of IETF emails.

```
  ALPINE 2.21.9999 FOLDER COLLECTION EDIT [A]    Folder: INBOX  16 Messages +

Nickname  : IETF
Server    : imap.ietf.org/anonymous
Path      : Shared Folders/
View      :


   Fill in the fields above to add a Folder Collection to your
   COLLECTION LIST screen.
   Use the "^G" command to get help specific to each item, and
   use "^X" when finished.


^G Get Help    ^X eXit/Save                ^Y PrvPg/Top   ^K Cut Line
^C Cancel      ^D Del Char                 ^V NxtPg/End   ^U UnDel Line
```

```
  ALPINE 2.21.9999   MAIN MENU [A]    Folder: INBOX                 16 Messages +


            ?     HELP              -  Get help using Alpine

            C     COMPOSE MESSAGE   -  Compose and send/post a message

            I     MESSAGE INDEX     -  View messages in current folder

            L     FOLDER LIST       -  Select a folder OR news group to view

            A     ADDRESS BOOK      -  Update address book

            S     SETUP             -  Configure Alpine Options

            Q     QUIT              -  Leave the Alpine program


                        For Copyright information press "?"
GOTO folder in <IETF> : behave
^G Help        ^T ToFldrs    ^P Prev Collection  ^W INBOX      ^X ListMatches
^C Cancel      Ret Accept    ^N Next Collection TAB Complete
```

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```

```
  ALPINE 2.21.9999   MESSAGE INDEX [A]         <IETF> behave         Msg 10,002 of 11,501     +

  N  9999 22/Oct/11 Brian E C Re: [BEHAVE] I-D Action: draft-wing-behave-dhcpv6-reconfigure-00.
  N 10000 23/Oct/11 Ray Belli [BEHAVE] FW: New Version Notification for draft-bellis-behave-nat
  N 10001 24/Oct/11 Ray Belli [BEHAVE] FW: New Version Notification for draft-bellis-behave-nat
    10002 24/Oct/11 Xing Li   Re: [BEHAVE] presentations at IETF82
  N 10003 24/Oct/11 Simon Per Re: [BEHAVE] FW: New Version Notification for draft-bellis-behave
  N 10004 24/Oct/11 Ray Belli Re: [BEHAVE] FW: New Version Notification for draft-bellis-behave
  N 10005 24/Oct/11 Simon Per Re: [BEHAVE] FW: New Version Notification for draft-bellis-behave
  N 10006 24/Oct/11 Ray Belli Re: [BEHAVE] New Version Notification for draft-bellis-behave-nat
  N 10007 24/Oct/11 Simon Per Re: [BEHAVE] New Version Notification for draft-bellis-behave-nat
  N 10008 24/Oct/11 Ray Belli Re: [BEHAVE] New Version Notification for draft-bellis-behave-nat
  N 10009 24/Oct/11 internet- [BEHAVE] I-D Action: draft-ietf-behave-lsn-requirements-04.txt

? Help          < FldrList      P PrevMsg          - PrevPage    D Delete        R Reply
O OTHER CMDS    > [ViewMsg]     N NextMsg        Spc NextPage    U Undelete      F Forward
```

```
  ALPINE 2.21.9999   MAIN MENU [A]     Folder: INBOX                  16 Messages +


              ?     HELP                 -  Get help using Alpine

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```
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View      :


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```
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  N 10000 23/Oct/11 Ray Belli [BEHAVE] FW: New Version Notification for draft-bellis-behave-nat
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```
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^G Help        ^T ToFldrs    ^P Prev Collection  ^W INBOX      ^X ListMatches
^C Cancel      Ret Accept    ^N Next Collection TAB Complete
```

```
  ALPINE 2.21.9999   MESSAGE TEXT [A] <IETF>   behave Msg 11,193 of 11,501 72%  +

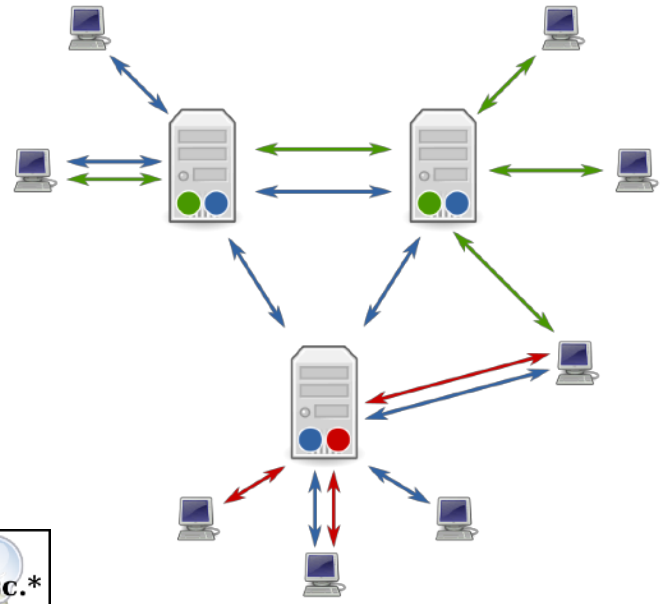
Date: Sun, 20 Oct 2013 20:56:10
From: Xing Li <xing@cernet.edu.cn>
To: Simon Perreault <simon.perreault@viagenie.ca>
Cc: behave@ietf.org
Subject: Re: [BEHAVE] WG Action: Conclusion of Behavior Engineering for
    Hindrance Avoidance (behave)

Simon Perreault 写道:
> Le 2013-10-17 20:37, ietfdbh a écrit :
> > I would like to personally thank Dave and Dan for their efforts chairing
> > this WG.
> > I found them excellent to work with.
>
> +1!
>
> Simon
+1!


? Help        < MsgIndex    P PrevMsg        - PrevPage  D Delete      R Reply
O OTHER CMDS  > ViewAttch   N NextMsg      Spc NextPage  U Undelete    F Forward
```

NNTP/USENET

- in.coming
- out.going
- Async
- satellite sites
  - decentralized to some extent
  - leafnode, cache
- BBS



— Wikipedia

utzoo-wiseman-usenet-archive

Well, the thank-you's have been rather ebullient all day long today and I feel
somewhat embarrassed by the attention. Especially given how long it took us to
get the archive on line and visible! It has to be close to 10 years now. Sigh.
The story is more a story of fits and starts than of resolve. And our
contribution accounts for some (most?) of the first 10 years of the Google archive.

If I recall correctly, the issue of Henry Spencer's (actually, the University
of Toronto, Department of Zoology's) NetNews archive was raised at a Usenix
conference in the early 90's. The question: can we get at them? Bruce Jones
was especially interested in this. Henry's answer was that it really wasn't
going to be easy because he had neither the disk space nor the tape drive to
pull them all down to make them available.

I, it turned out, did. So one bright winter day I drove from London
(Ontario Canada) to Toronto (Ontario Canada) -- a two hour drive in my
shiny new pickup truck and picked up 141 magtapes from the Zoology
department at UofT and brought them back to the Department of Computer
Science at the University of Western Ontario. (A not unimpressive
bandwidth, by the way, of some 18Mb/sec :-) never underestimate the
bandwidth of a pickup truck on the highway!)

Then with the help of several people (some of whom have not yet been credited)
we started to pull the data off of the tapes and onto disks in both the
Computer Science department and the Robarts Research Institute. Lance Bailey,
then with the Robarts Research Institute, did the pulling there and I with
assistance from Bob Webber did it at Computer Science. Bruce Jones from
UCSD took some vacation time and came up here to help pull data down for a
week or so as well.

But we quickly ran out of space and time: Lance left Robarts for UBC, Bruce's
vacation ended, and Bob and I got busy doing other things (like our jobs).
As a result, the archive project made very little progress over the next few years.

Then Brewster Kahle started pushing on us (thanks Brewster!) to get it done.
He even bought us a large disk to hold the archive when we truly ran out of
space. With the help of Sue Thielen, who was out of work and bored, we got
all of the rest of the tapes read down onto that disk. Unfortunately, that
disk was not "close enough" to either a tape drive or the ftp server to
make the data available to anyone. And it wasn't organized in anyway usefully.

Brewster pushed very gently for a very long time but the new archive project
was far from the top of the list of projects I was supposed to be working
on and I just never got it going again.

Late this summer Michael Schmitt from Google started pushing as well.
And as luck would have it, I was able to hire a student to do the final
sorting of the archive as well. And, that luck still holding, I managed
to "steal" enough space on the ftp server for the entire archive! But
it still took months to get that figured out and the archive transferred
to a machine from which they pull the archive. It was the middle of October
before we were able make the collection available to Google. And it is
actually available, although totally unsorted, to anyone who wants it and can
deal with pulling some 160 files ranging in size from 1.4Mb to 65Mb. Just drop
 me a line to say please and we'll arrange to make it visible to you.

I'd still like to impose a bit more order on the raw archives than we have
but the time just hasn't allowed for that...

David Wiseman, Dec 11, 2001

https://archive.org/download/utzoo-wiseman-usenet-archive
https://macgui.com/blogs/?e=343

gmane.org

- Bridges NNTP, RSS, and Mailing List

```
  ALPINE 2.21.9999   FOLDER LIST [H] <lo> el.vger.linux-kernel  1,999 Msgs

                    News groups on news.gmane.org/nntp
-------------------------------------------------------------------------------

announce                                linux.kernel.announce
comp.ai.machine-learning                linux.kernel.arm
comp.encryption.general                 linux.kernel.kernelnewbies
comp.encryption.openssl.announce        linux.network
comp.mobile.osmocom.announce            linux.openwall.devel
comp.mobile.osmocom.baseband.devel      linux.openwall.user
comp.mobile.osmocom.sdr                 mail.alpine.info
comp.mobile.osmocom.simtrace            mail.mailman.announce
comp.mozilla.devel.privacy              mail.mailman.devel
comp.security.forensics                 mail.mailman.user
comp.security.openwall.announce         mail.pine.announce
comp.security.openwall.crypto           mail.public-inbox.general
comp.security.phishings                 mail.rss2email
comp.video.x265.devel                   network.tor.announce
discuss                                 network.tor.user
emacs.devel                             org.eff.openwireless
ietf.acme                               org.fsf.announce

? Help       < ClctnList   P PrevFldr    - PrevPage A Add       R Rename
O OTHER CMDS > [View Fldr] N NextFldr  Spc NextPage D Delete    W WhereIs
```

gmane.org

- Bridges NNTP, RSS, and Mailing List

```
  ALPINE 2.21.9999   FOLDER LIST [H] <lo> el.vger.linux-kernel  1,999 Msgs

                    News groups on news.gmane.org/nntp
-------------------------------------------------------------------------------

announce                              linux.kernel.announce
comp.ai.machine-learning              linux.kernel.arm
comp.encryption.general               linux.kernel.kernelnewbies
comp.encryption.openssl.announce      linux.network
comp.mobile.osmocom.announce          linux.openwall.devel
comp.mobile.osmocom.baseband.devel    linux.openwall.user
comp.mobile.osmocom.sdr               mail.alpine.info
comp.mobile.osmocom.simtrace          mail.mailman.announce
comp.mozilla.devel.privacy            mail.mailman.devel
comp.security.forensics               mail.mailman.user
comp.security.openwall.announce       mail.pine.announce
comp.security.openwall.crypto         mail.public-inbox.general
comp.security.phishings               mail.rss2email
comp.video.x265.devel                 network.tor.announce
discuss                               network.tor.user
emacs.devel                           org.eff.openwireless
ietf.acme                             org.fsf.announce

? Help       < ClctnList   P PrevFldr    - PrevPage A Add       R Rename
O OTHER CMDS > [View Fldr] N NextFldr  Spc NextPage D Delete    W WhereIs
```

```
  ALPINE 2.21.9999   MESSAGE TEXT                      Message 1 of 5 96%
Date: Thu, 14 Feb 2019 00:50:22 -0200
From: Renato Fabbri <renato.fabbri@gmail.com>
To: gmane-discuss@hawk.netfonds.no, gmane-discuss@quimby.gnus.org
Newsgroups: gmane.discuss
Subject: status of GMANE
---------------------------------------

Dear GMANErs,
last blog post is from Sep/2016:
http://home.gmane.org/

links in the "Reading" page are not working:
http://dir.gmane.org/ [dir.gmane.org]

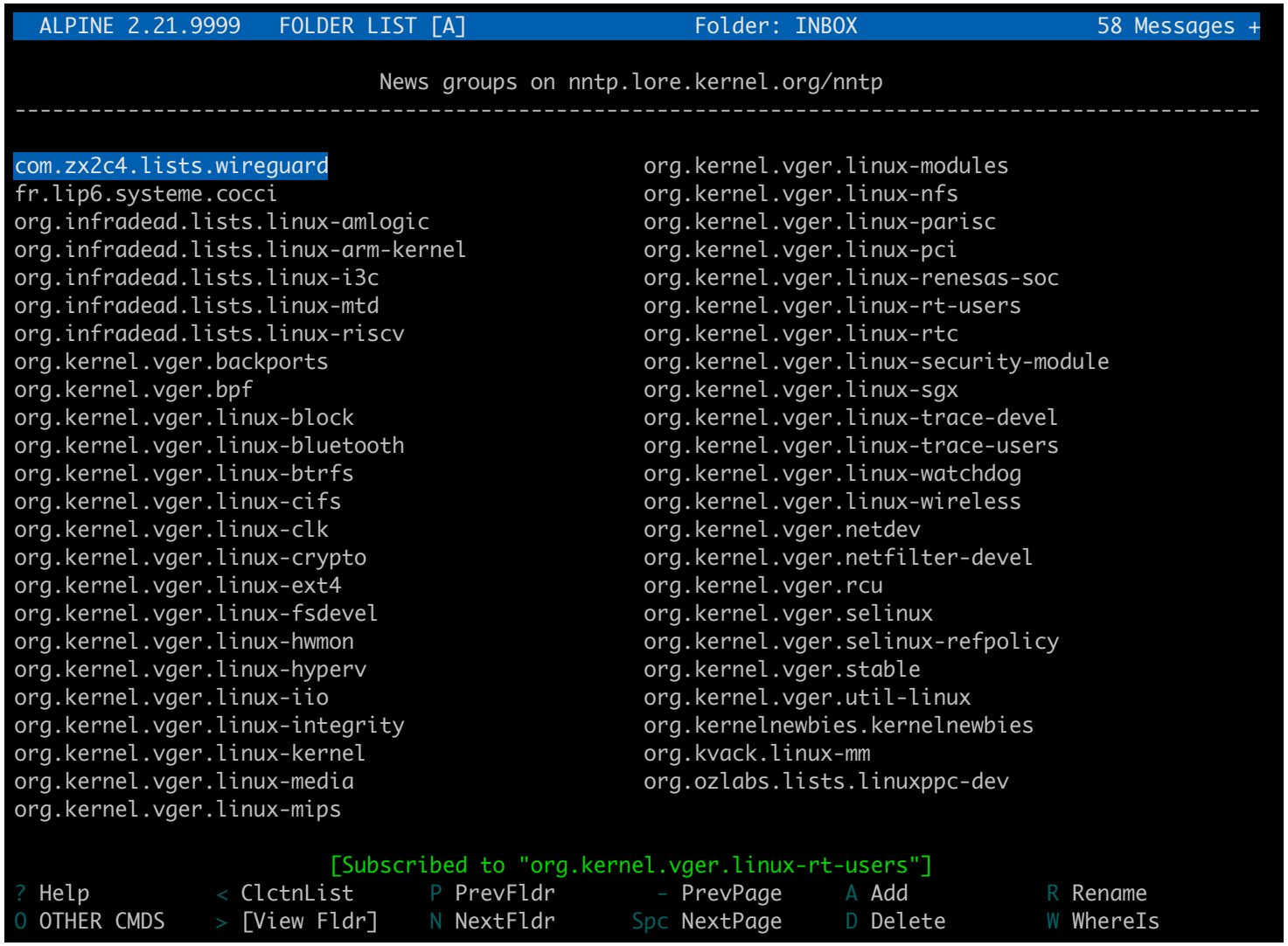
does any of you have a clear status of the API?

PS. I am mainly interested in downloading thousands
of email messages to mine them and verify complex networks
hypotheses. I did that in 2015 and before via RSS.

Best regards,
Renato
? Help       < MsgIndex   P PrevMsg     - PrevPage D Delete     R Reply
O OTHER CMDS > ViewAttch  N NextMsg   Spc NextPage U Undelete   F Forward
```

lore.kernel.org | public-inbox.org

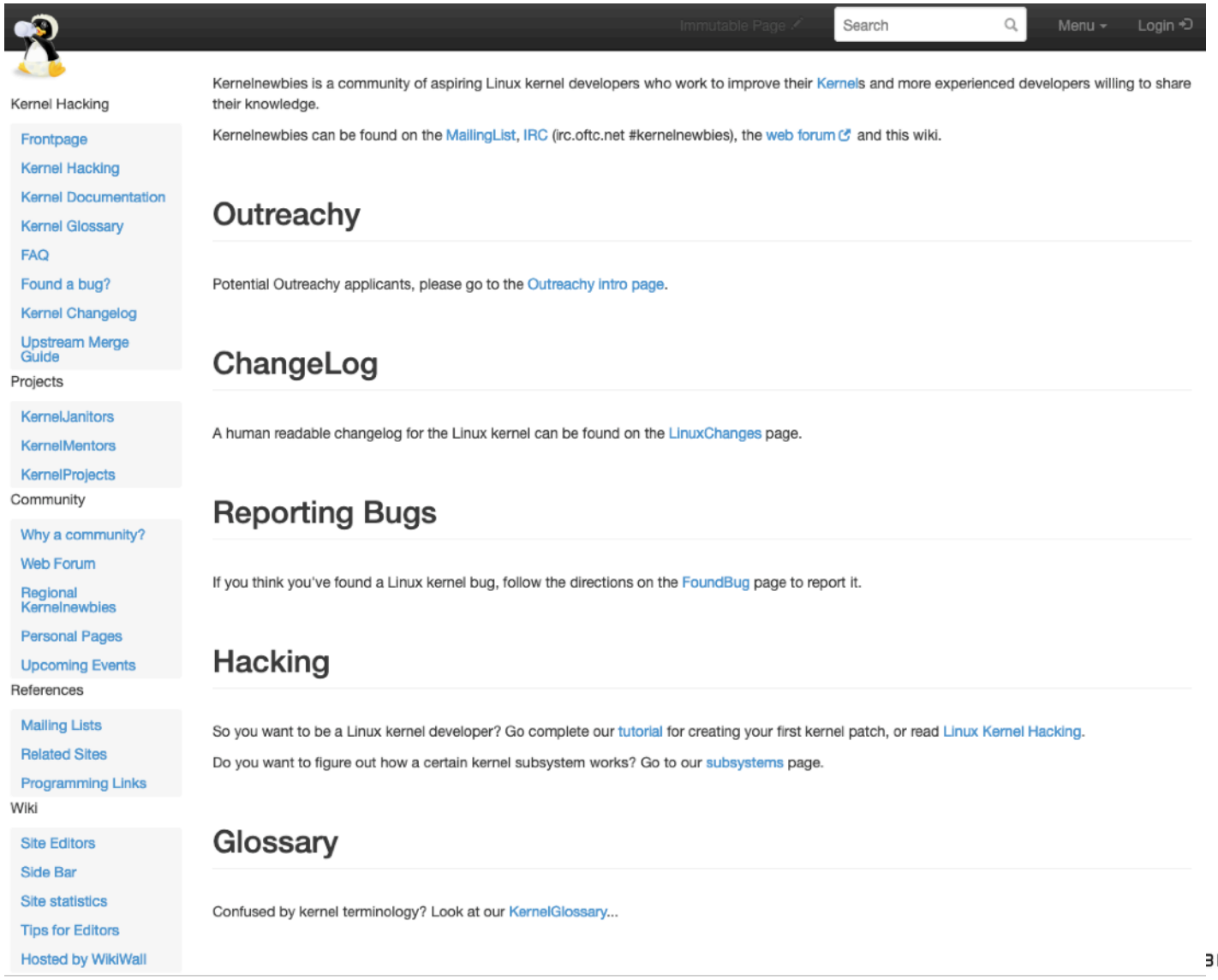
- Everything is email, including patch.
  - git-send-email
- Every Email is a git commit.
- Serving NNTP.
- Push Model vs Pull Model
- https://lwn.net/Articles/748184



```
 ALPINE 2.21.9999   MESSAGE INDEX [H]              <lore> org.kernel.vger.linux-kernel              Msg 1,976 of 1,999 NEW

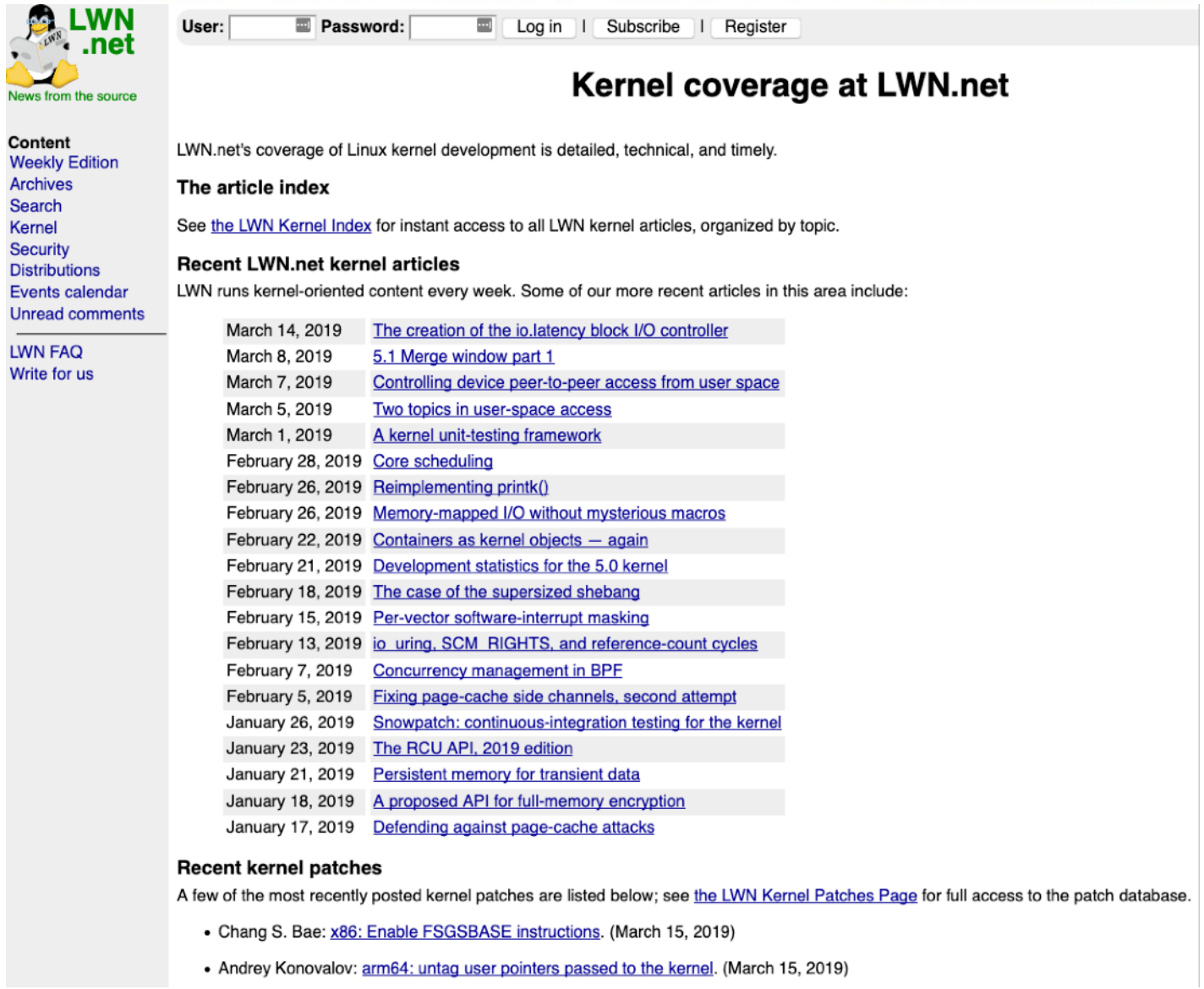
  N 1961 Thu 11:40 Alec Ari        Compiling error if CONFIG_CPU_SUP_INTEL is disabled
  N 1962 Thu 13:05 NeilBrown     . [PATCH 0/3] Three rhashtable improvements
  N 1963 Thu 13:05 NeilBrown       |-[PATCH 1/3] rhashtable: use cmpxchg() in nested_table_alloc()
  N 1964 Thu 13:05 NeilBrown       |-[PATCH 2/3] rhashtable: don't hold lock on first table throughout insertion.
  N 1965 Thu 13:05 NeilBrown       \-[PATCH 3/3] rhashtable: rename rht_for_each*continue as *from.
  N 1966 Thu 13:07 Gwendal Grign   Re: [PATCH] loop: drop caches if offset or block_size are changed
  N 1967 Thu 13:24 Kangjie Lu      [PATCH v3] hid: logitech: check the return value of create_singlethread_workqueue
  N 1968 Thu 13:37 Kangjie Lu      [PATCH] infiniband: i40iw: fix potential NULL pointer dereferences
  N 1969 Thu 13:46 Kangjie Lu      [PATCH] hyperv: a potential NULL pointer dereference
  N 1970 Thu 13:47 Yue Haibing   . [PATCH v2] appletalk: Fix potential NULL pointer dereference in unregister_snap_client
  N 1971 Thu 05:03 David Miller  . \->
  N 1972 Thu 11:18 YueHaibing        \->
  N 1973 Thu 13:53 Kangjie Lu      [PATCH] pci: pci-tegra: fix a potential NULL pointer dereference
  N 1974 Thu 13:56 Kangjie Lu      [PATCH] pci: pcie-rcar: fix a potential NULL pointer dereference
  N 1975 Thu 13:58 Kangjie Lu      [PATCH] pci: pcie-xilinx: fix a missing-check bug for __get_free_pages
  N 1976 Thu 14:02 Kangjie Lu      [PATCH] power: charger-manager: fix a potential NULL pointer dereference
  N 1977 Thu 14:10 Kangjie Lu      [PATCH] rapidio: fix a NULL pointer derefenrece when create_workqueue fails
  N 1978 Thu 14:15 Sergey Senozh   [PATCH] tcp: don't use __constant_cpu_to_be32
  N 1979 Thu 14:17 Sergey Senozh . [PATCH 1/2] cifs: remove unused status severity defines
  N 1980 Thu 14:17 Sergey Senozh   |-[PATCH 2/2] cifs: don't use __constant_cpu_to_le32()
  N 1981 Thu 14:54 Steve French    \->
  N 1982 Thu 14:27 Naoya Horiguc   Re: [Qestion] Hit a WARN_ON_ONCE in try_to_unmap_one when runing syzkaller
  N 1983 Thu 14:30 Kangjie Lu      [PATCH] scsi: qla4xxx: fix a potential NULL pointer dereference
  N 1984 Thu 14:36 Sergey Senozh . [PATCH 1/2] scsi: qla4xxx: do not use __constant_cpu_to_leXX
  N 1985 Thu 14:36 Sergey Senozh   \-[PATCH 2/2] scsi: qla2xxx: do not use __constant_cpu_to_leXX
  N 1986 Thu 14:37 Kangjie Lu      [PATCH] scsi: ufs: fix a missing check of devm_reset_control_get
                                     [Sorting "org.kernel.vger.linux-kernel" |   100%   |]
 ? Help              < FldrList          P PrevMsg             - PrevPage          D Delete            R Reply
 O OTHER CMDS        > [ViewMsg]         N NextMsg           Spc NextPage          U Undelete          F Forward
```

kernelnewbies.org



Editorial Digest

- Wiki
- FAQs
- LLVM Weekly
- IETF Daily Dose
- [LWN.org](LWN.org)



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Kernel coverage at LWN.net

LWN.net's coverage of Linux kernel development is detailed, technical, and timely.

The article index

See the LWN Kernel Index for instant access to all LWN kernel articles, organized by topic.

Recent LWN.net kernel articles

LWN runs kernel-oriented content every week. Some of our more recent articles in this area include:

March 14, 2019	The creation of the io.latency block I/O controller
March 8, 2019	5.1 Merge window part 1
March 7, 2019	Controlling device peer-to-peer access from user space
March 5, 2019	Two topics in user-space access
March 1, 2019	A kernel unit-testing framework
February 28, 2019	Core scheduling
February 26, 2019	Reimplementing printk()
February 26, 2019	Memory-mapped I/O without mysterious macros
February 22, 2019	Containers as kernel objects — again
February 21, 2019	Development statistics for the 5.0 kernel
February 18, 2019	The case of the supersized shebang
February 15, 2019	Per-vector software-interrupt masking
February 13, 2019	io_uring, SCM_RIGHTS, and reference-count cycles
February 7, 2019	Concurrency management in BPF
February 5, 2019	Fixing page-cache side channels, second attempt
January 26, 2019	Snowpatch: continuous-integration testing for the kernel
January 23, 2019	The RCU API, 2019 edition
January 21, 2019	Persistent memory for transient data
January 18, 2019	A proposed API for full-memory encryption
January 17, 2019	Defending against page-cache attacks

Recent kernel patches

A few of the most recently posted kernel patches are listed below; see the LWN Kernel Patches Page for full access to the patch database.

- Chang S. Bae: x86: Enable FSGSBASE instructions. (March 15, 2019)
- Andrey Konovalov: arm64: untag user pointers passed to the kernel. (March 15, 2019)

IETF Daily Dose

IETF TOOLS
IETF Home
About Tools
Tools: diffs spell xml2rfc idnits tracker src
News
Get Passwd
IETF-104: Rooms Agenda Calendar
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NomCom
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6man
6tisch
Ace
Acme
Alto
Anima
Avtcore
Babel

The Daily Dose of IETF

"Be conservative in what you send and liberal in what you accept"

« Prev | Issue 3310 — 2019-03-04 | Next »

IETF-Announce List

- Last Call: <draft-ietf-regext-bundling-registration-09.txt> (Extensible Provisioning Protocol (EPP) Domain Name Mapping Extension for Strict Bundling Registration) to Informational RFC
- IETF 104 Final Agenda

more messages »

New RFCs

- RFC 8506 on Diameter Credit-Control Application

more recent RFCs »

New and Revived Drafts

- Digital Product Life Cycle Model (draft-algermissen-digital-product-life-cycle-model)
- BGP Security Tracking (draft-beck-bgp-security-tracking)
- Segment routing for SD-WAN paths over hybrid networks (draft-dunbar-sr-sdwan-over-hybrid-networks)
- Extended Tokens and Stateless Clients in the Constrained Application Protocol (CoAP) (draft-ietf-core-stateless)
- Minimal TCP Convergence-Layer Protocol (draft-ietf-dtn-mtcpcl)
- OSPF Extension for Prefix Originator (draft-ietf-lsr-ospf-prefix-originator)
- TLS 1.3 Extension for Certificate-based Authentication with an External Pre-Shared Key (draft-ietf-tls-tls13-cert-with-extern-psk)

Drafts Sent to IESG

- Resource Indicators for OAuth 2.0 (draft-ietf-oauth-resource-indicators): Active » Publication Requested
- Traversal Using Relays around NAT (TURN): Relay Extensions to Session Traversal Utilities for NAT (STUN) (draft-ietf-tram-turnbis): Active » Publication Requested

IESG Progress

- BGP-LS extensions for Segment Routing BGP Egress Peer Engineering (draft-ietf-idr-bgpls-segment-routing-epe): AD Evaluation » ::Revised I-D Needed
- IS-IS Extensions for Segment Routing (draft-ietf-isis-segment-routing-extensions): Publication Requested » AD Evaluation
- JSON Meta Application Protocol (draft-ietf-jmap-core): IESG Evaluation::Revised I-D Needed » ::AD Followup
- JMAP for Mail (draft-ietf-jmap-mail): IESG Evaluation::Revised I-D Needed » ::AD Followup
- YANG Module Tags (draft-ietf-netmod-module-tags): In Last Call » Waiting for Writeup
- Extensible Provisioning Protocol (EPP) Domain Name Mapping Extension for Strict Bundling Registration (draft-ietf-regext-bundling-registration): Publication Requested » In Last Call
- DNS Long-Lived Queries (draft-sekar-dns-llq)
- TLS Resumption across Server Name Indications for TLS 1.3 (draft-sy-tls-resumption-group)

Updated Drafts

- Limited Domains and Internet Protocols (draft-carpenter-limited-domains)
- YANG Geo Location (draft-chopps-netmod-geo-location)
- The 'payto' URI scheme for payments (draft-dold-payto)
- Subnet ID Deprecation for IPv6 (draft-dykim-6man-sid6)
- Measures against cache poisoning attacks using IP fragmentation in DNS (draft-fujiwara-dnsop-fragment-attack)
- Updates to Requirements for IPv6 Options (draft-herbert-ipv6-update-opts)
- BIER BFD (draft-hu-bier-bfd)
- An Architecture for IPv6 over the TSCH mode of IEEE 802.15.4 (draft-ietf-6tisch-architecture)
- BGP Control Plane for NSH SFC (draft-ietf-bess-nsh-bgp-control-plane)
- Deterministic Networking (DetNet) Security Considerations (draft-ietf-detnet-security)
- Distributed-Denial-of-Service Open Threat Signaling (DOTS) Architecture (draft-ietf-dots-architecture)
- Distributed Denial of Service (DDoS) Open Threat Signaling Requirements (draft-ietf-dots-requirements)
- Delay-Tolerant Networking TCP Convergence Layer Protocol Version 4 (draft-ietf-dtn-tcpclv4)
- Structure of the IETF Administrative Support Activity, Version 2.0 (draft-ietf-iasa2-rfc4071bis)
- JSON Meta Application Protocol (draft-ietf-jmap-core)
- JMAP for Mail (draft-ietf-jmap-mail)
- MPLS Transport Encapsulation For The SFC NSH (draft-ietf-mpls-sfc-encapsulation)

Drafts Sent to RFC Editor

Other Status Changes

- Extended Tokens and Stateless Clients in the Constrained Application Protocol (CoAP) (draft-hartke-core-stateless): Active » Replaced by draft-ietf-core-stateless

RFC Editor Status Changes

- DNS Scoped Data Through "Underscore" Naming of Attribute Leaves (draft-ietf-dnsop-attrleaf): » AUTH48
- DNS Attrleaf Changes: Fixing Specifications with Underscored Node Name Use (draft-ietf-dnsop-attrleaf-fix): » AUTH48

IPR Disclosures

more IPR disclosures »

IESG/IAB/IAOC/Trust Minutes

more minutes: IESG » IAB » IAOC » Trust »

Liaison Statements

more liaison statements »

Classified Ads

LLVM Weekly - #214, Feb 5th 2018

Welcome to the two hundred and fourteenth issue of LLVM Weekly, a weekly newsletter (published every Monday) covering developments in LLVM, Clang, and related projects. LLVM Weekly is brought to you by Alex Bradbury. Subscribe to future issues at http://llvmweekly.org and pass it on to anyone else you think may be interested. Please send any tips or feedback to asb@asbradbury.org, or @llvmweekly or @asbradbury on Twitter.

News and articles from around the web

Reminder: the deadline for paper submissions for EuroLLVM 2018 is this Friday, February 9th. Adrien Guinet has released DragonFFI, a C Foreign Function Interface (FFI) library based on Clang/LLVM. It aims to provide broader ABI support than libffi and to work around the limitations of Python's cffi C parser through the use of Clang.

On the mailing lists

- Fāng-ruì Sòng started a discussion on moving the LLVM developer-facing utility scripts to Python 3.
- Tanya Lattner is looking for help in fleshing out the LLVM GSoC'18 proposed projects list.
- Paul Robinson gave a helpful summary of recent work on improving 'debuggability' of optimized code.
- George Karpenkov wrote up short investigation of exploration strategies and paths for Clang analyzer.
- Sean Perry has been looking at implementing support for -fexec-charset and -finput-charset, and is seeking feedback.

LLVM commits

- LLVM's policies on library layering and header isolation have been documented in the coding standards doc. r324004.
- The sigil for machine IR physical registers is now $ rather than %. r323922.
- Support has been added to dsymutil for generating Apple accelerator tables.r323655.
- update_test_checks.py and update_llc_test_checks.py have been refactored to share common code. r323718.
- A scheduling model has been added for the Exynos M3. r323773.
- A new extension is now supported, linker options can be passed from the frontend to the linker through the linker_options section. r323783.
- The X86 retpoline think insertion pass is now a machine function pass rather than a module pass. r323915.
- InstCombine will now canonicalise to i8/i16/i32 operations even if the resulting type isn't legal according to the datalayout. See the llvm-dev thread for more justification. r324174.

Clang commits

- Debug information is now generated for C99 VLA (variable-length array) types. r323952.
- Partial support for CUDA-9.1 has been added to Clang. r323713.
- clangd has been refactored to pass its Context object implicitly using thread local storage. r323872.

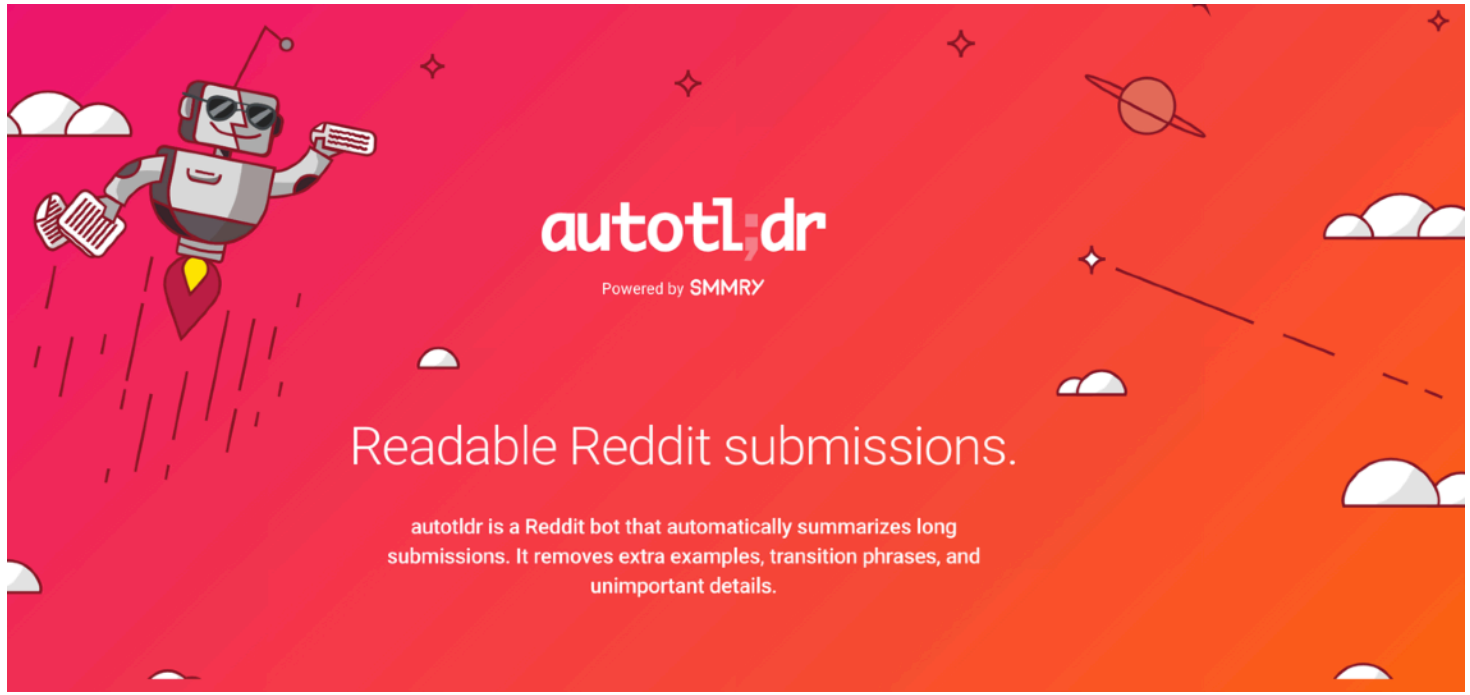
Other project commits

- As previously announced, a number of experimental APIs that have been superseded by versions adopted by the C++ standard have been removed. experimental/optional, experimental/any, experimental/numeric and experimental::sample. r323971, r323972, r323975, r323979.
- The libcxxabi demangler gained improved support for variadic templates and seen a large refactoring. r323906, r324111.
- New python utilities were added to make it easier to write LLDB tests for when LLDB is acting as a client of a gdb-remote connection. r323636.
- LLDB tests are now compiled out-of-tree. r323803.

SUBSCRIBE AT LLVMWEEKLY.ORG.

AutoTLDR

- http://autotldr.io/



¾ Our Practices

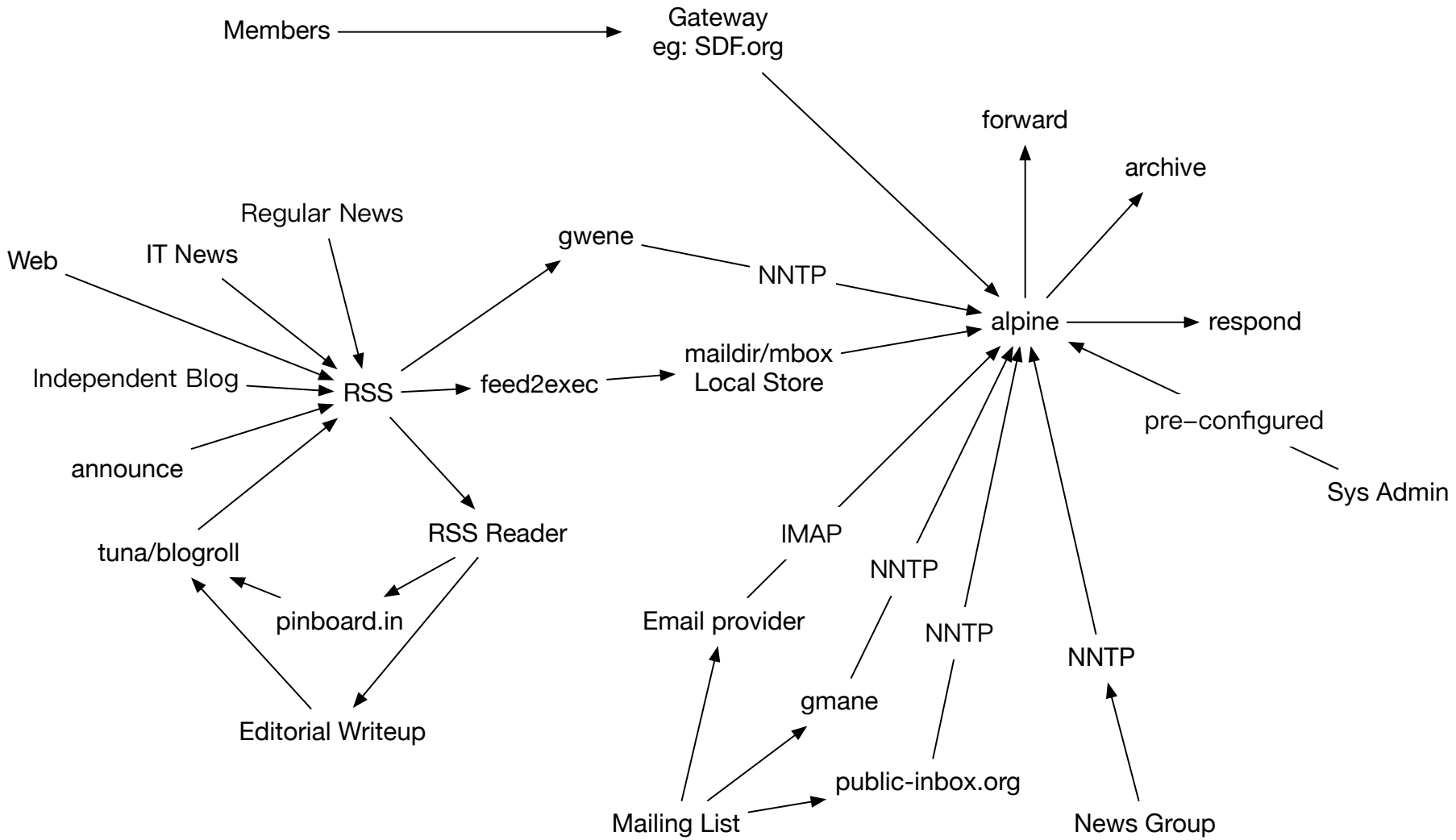
"HiFo": High Throughput Information Handling

- Everyone reads everything.
- Async + full-coverage
- Decrease latency of each operation.
  - Keep machine waiting for human beings, instead of human waiting for machines.
    - Maildrop; Message-Drop
- Database-leak-style News Reading
  - Read all the news. (subjects, at least)
  - Get the whole, non-biased picture.

computer	latency (ms)	year	clock	# T
apple 2e	30	1983	1 MHz	3.5k
ti 99/4a	40	1981	3 MHz	8k
custom haswell-e 165Hz	50	2014	3.5 GHz	2G
commodore pet 4016	60	1977	1 MHz	3.5k
sgi indy	60	1993	.1 GHz	1.2M
custom haswell-e 120Hz	60	2014	3.5 GHz	2G
thinkpad 13 **chromeos**	70	2017	2.3 GHz	1G
imac g4 **os 9**	70	2002	.8 GHz	11M
custom haswell-e 60Hz	80	2014	3.5 GHz	2G
mac color classic	90	1993	16 MHz	273k
powerspec g405 **linux** 60Hz	90	2017	4.2 GHz	2G
macbook pro 2014	100	2014	2.6 GHz	700M
thinkpad 13 **linux chroot**	100	2017	2.3 GHz	1G
lenovo x1 carbon 4g **linux**	110	2016	2.6 GHz	1G
imac g4 **os x**	120	2002	.8 GHz	11M
custom haswell-e 24Hz	140	2014	3.5 GHz	2G
lenovo x1 carbon 4g **win**	150	2016	2.6 GHz	1G
next cube	150	1988	25 MHz	1.2M
powerspec g405 **linux**	170	2017	4.2 GHz	2G
packet around the world	190			
powerspec g405 **win**	200	2017	4.2 GHz	2G
symbolics 3620	300	1986	5 MHz	390k

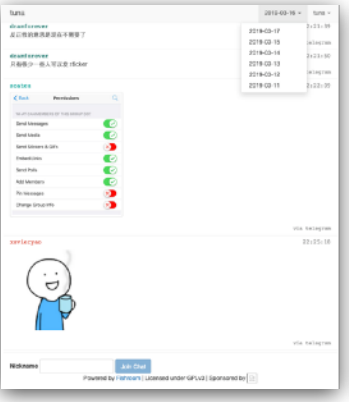
Computer latency: 1977-2017

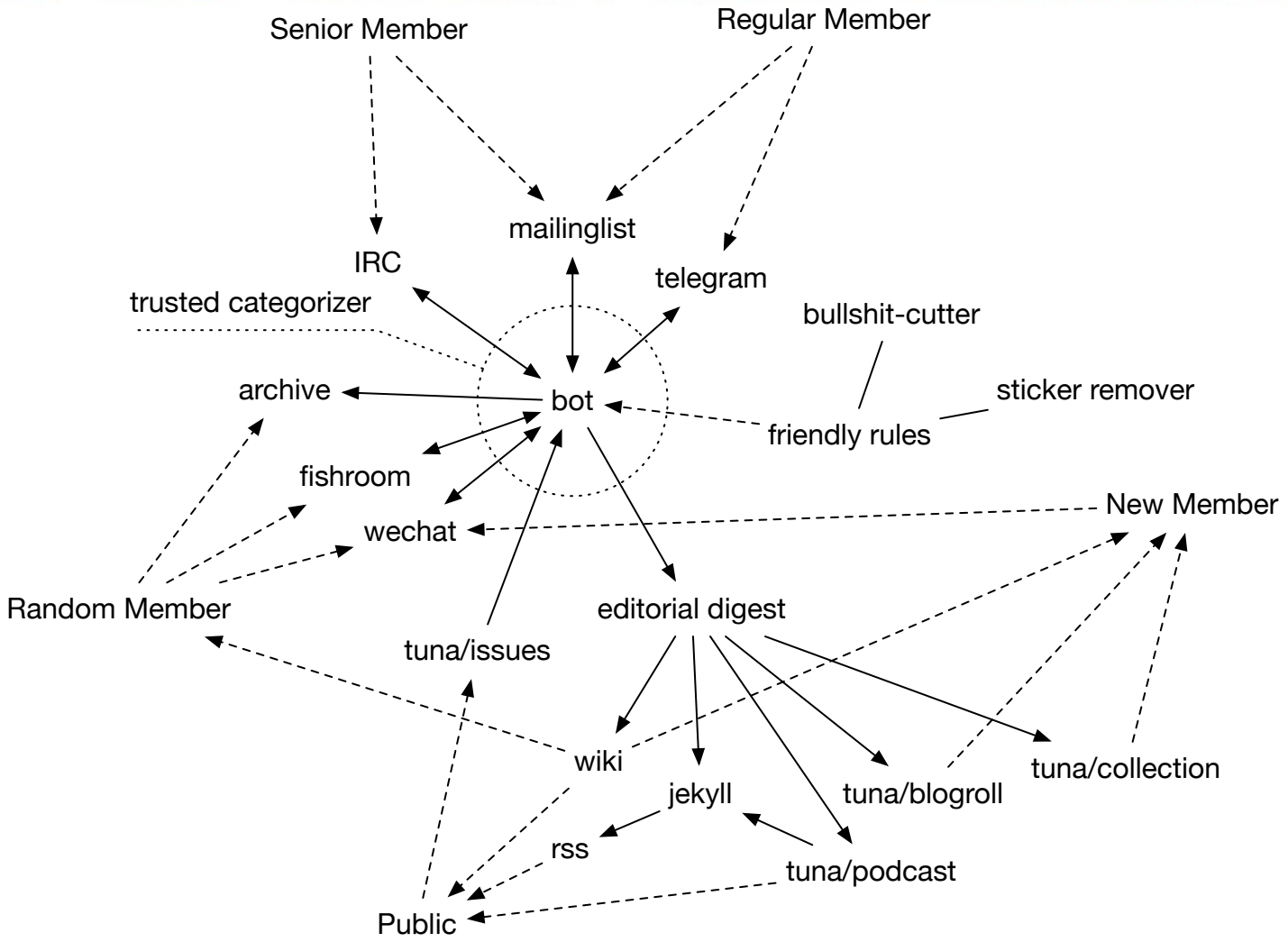
High Throughput Information Handling



Leave no one behind. Bridge Everything

- Bridge Everything:
  - All User-Agents welcome!
  - Matterbridge | Fishroom
- Trusted Categorizer
  - Different Channel, Topic: Random | Serious | Newbies | Topic-specific
- Editorial Digest
  - blogroll | podcast
- Public, {Random, New, Regular, Senior} Member
- Friendly Rules





Friendly Rules: Sticker Remover / Auto Folding

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- Stickers are toxic for a serious community.
  - Proof of no work. Infectious.
  - Not good for ‘productive'. Not good for ‘helpful’.
  - Flooding the screen.
    - At least, emoji is character-size. Stickers are way large.

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- *We make sure human speaks human language.*

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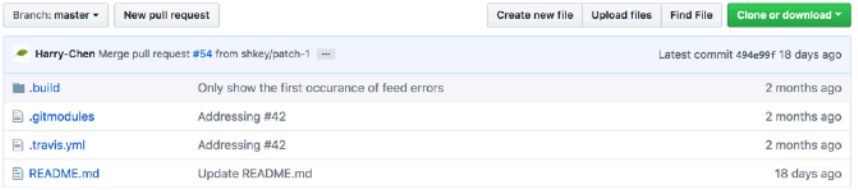
- *We make sure human speaks human language.*
- In real world, if one cannot push the product manager to implement a functionality
  - be like a hacker — file a patent, push again.Patent Filed: 201730467649.9

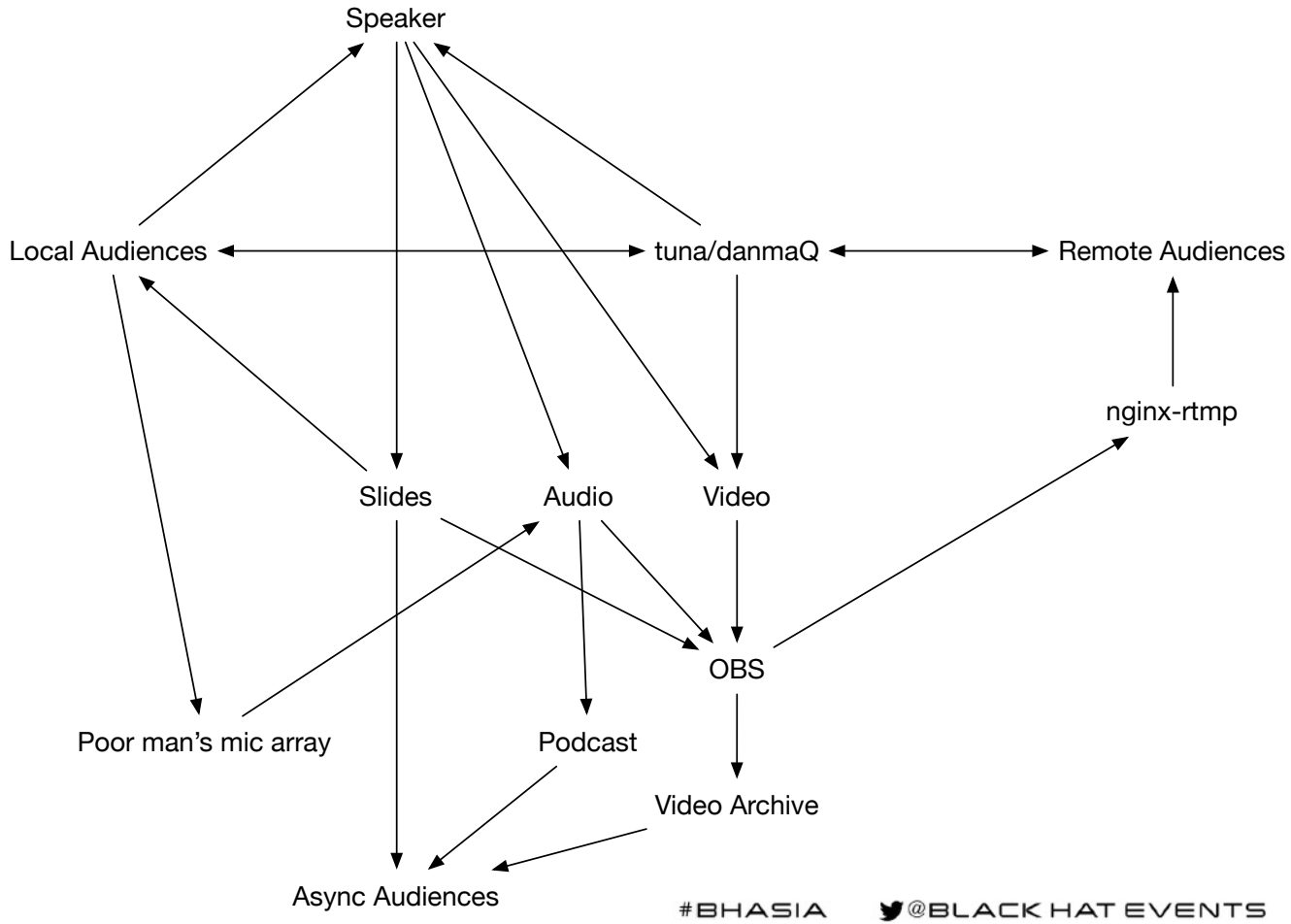
Blogroll

- List of independent blogs of community members.
- A simple markdown file hosted at GitHub.
- Submission by pull-requests.
- Complied into OPML.
- Surprisingly works.



Weekly Meet-up Events

- Live feedback from local and remote audiences.
- Local I Remote I Async Audiences
- Podcast is awesome.



- See also: C3VOC

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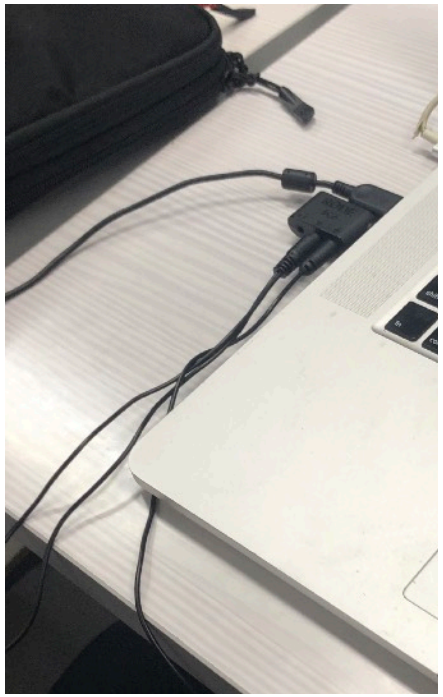

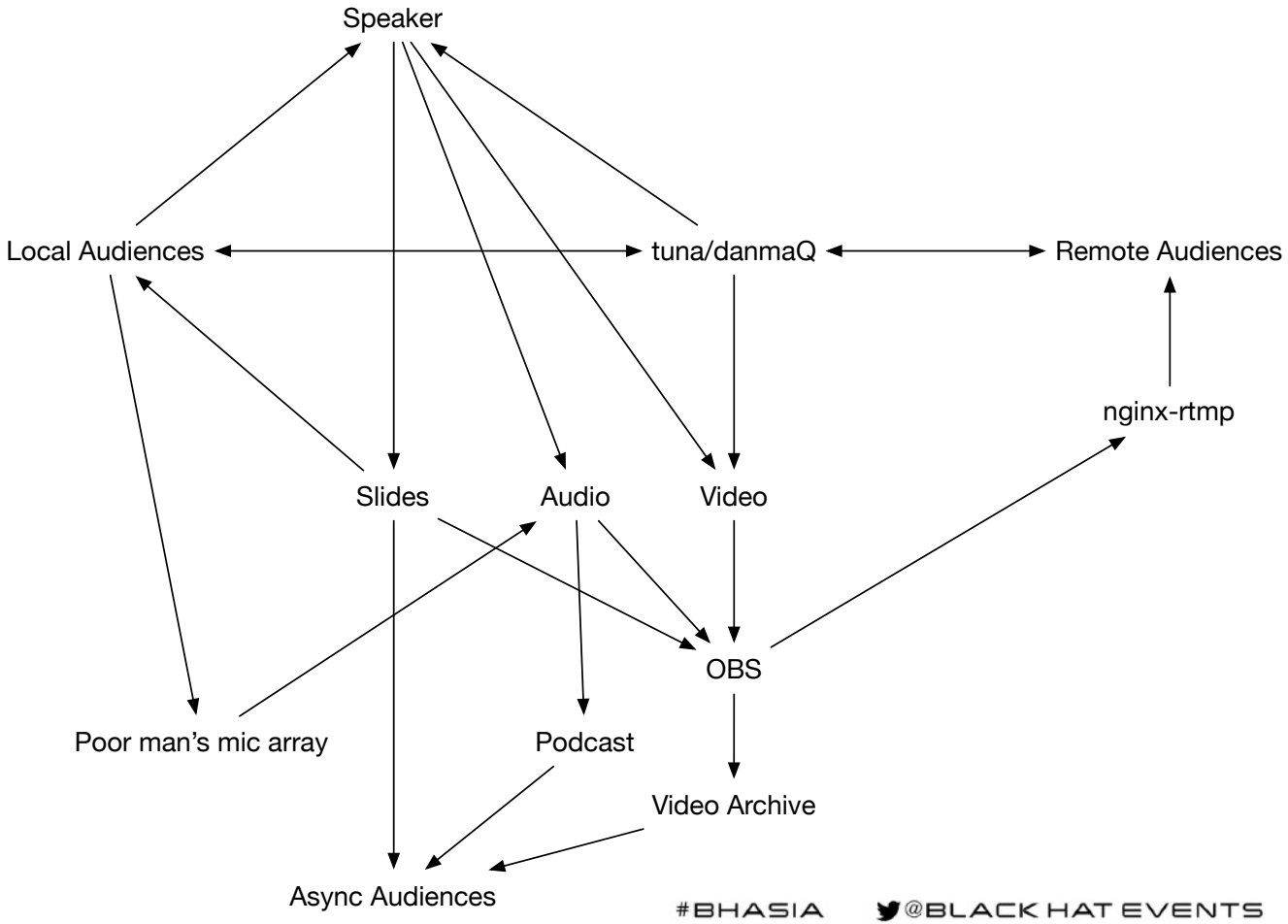

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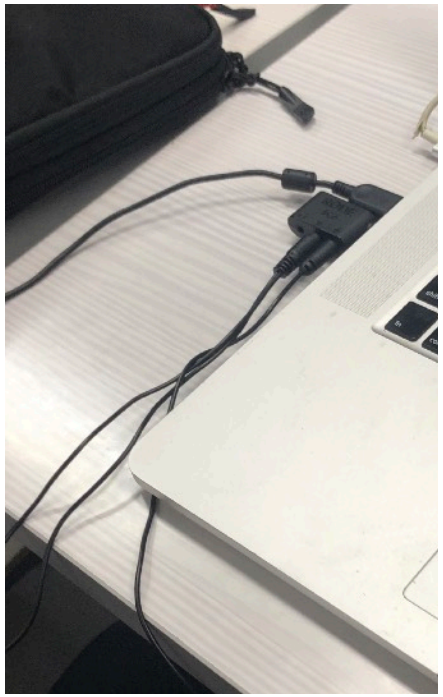
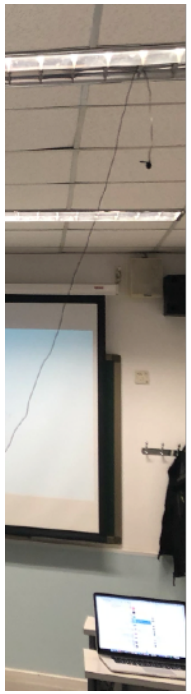
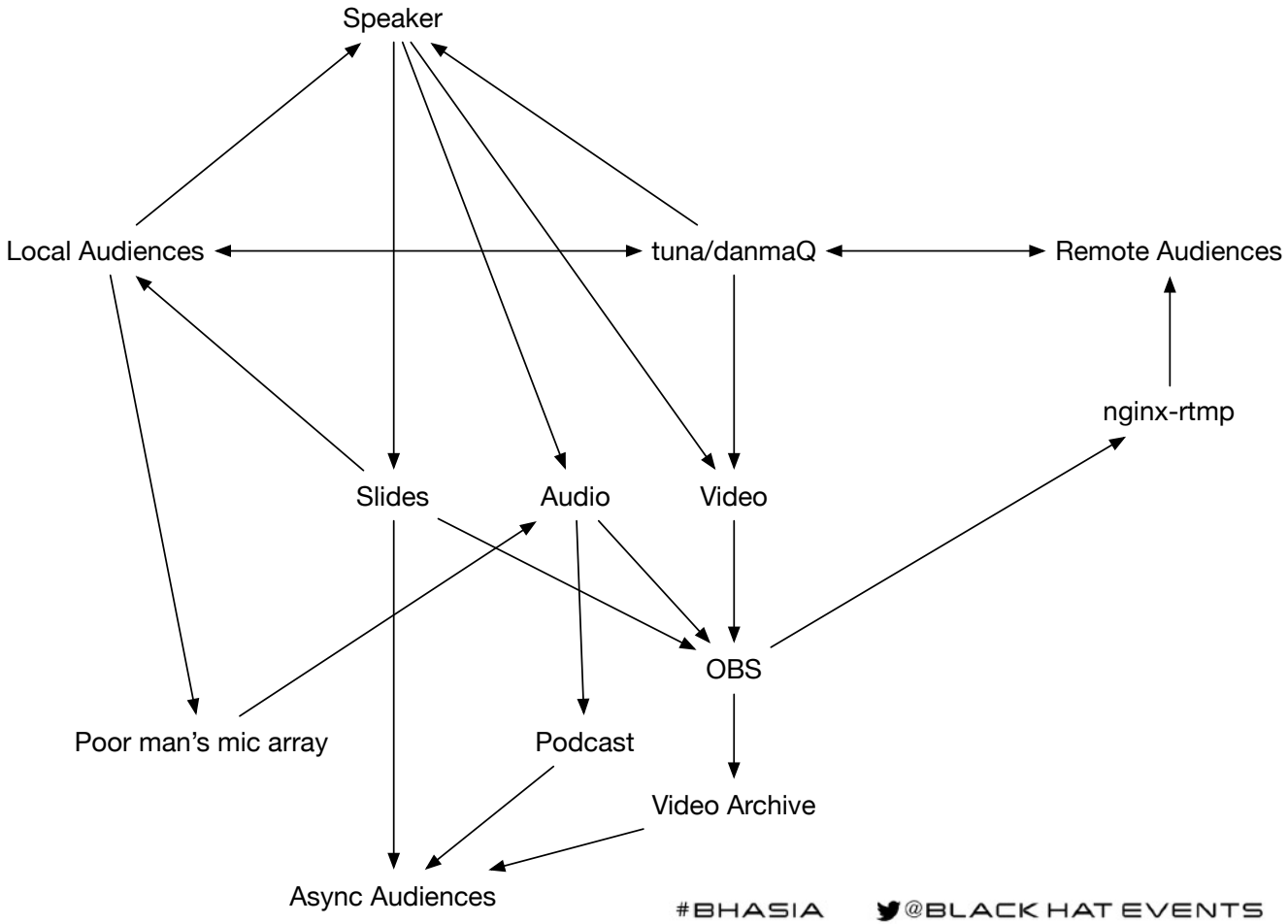


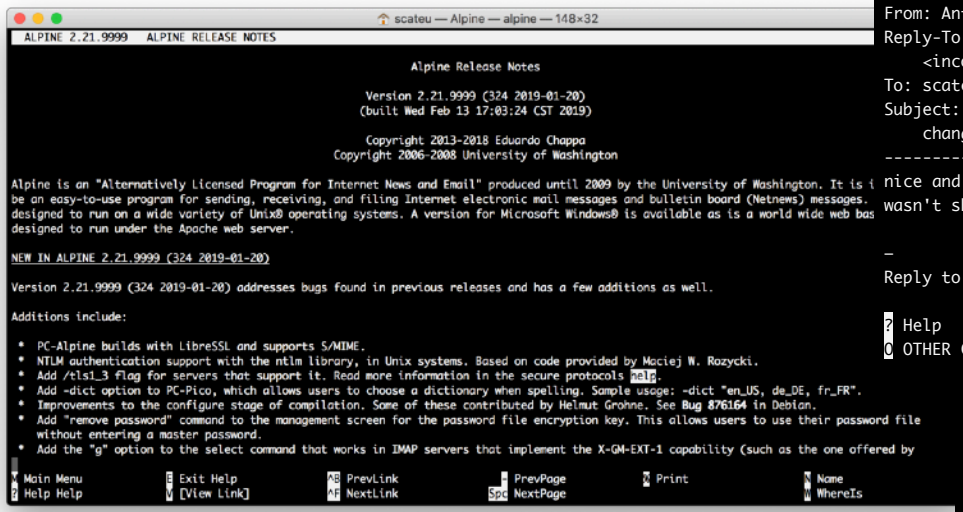


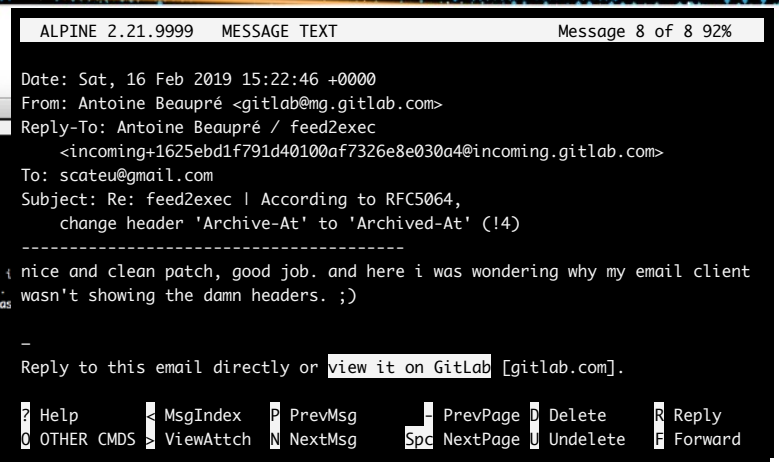


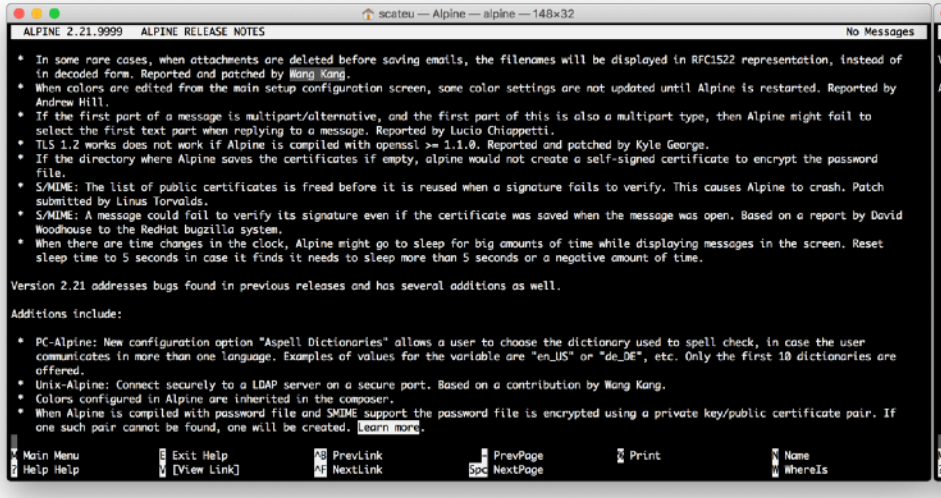
- See also: C3VOC

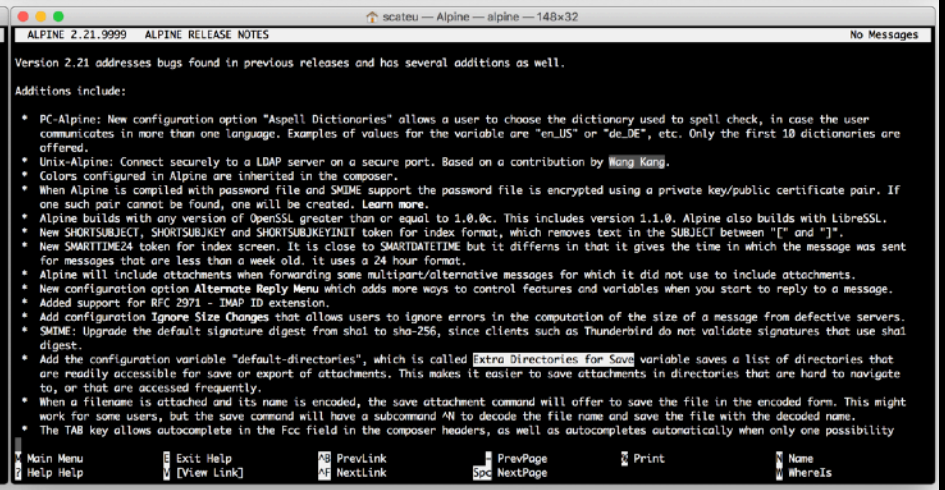
Some of My Contributions

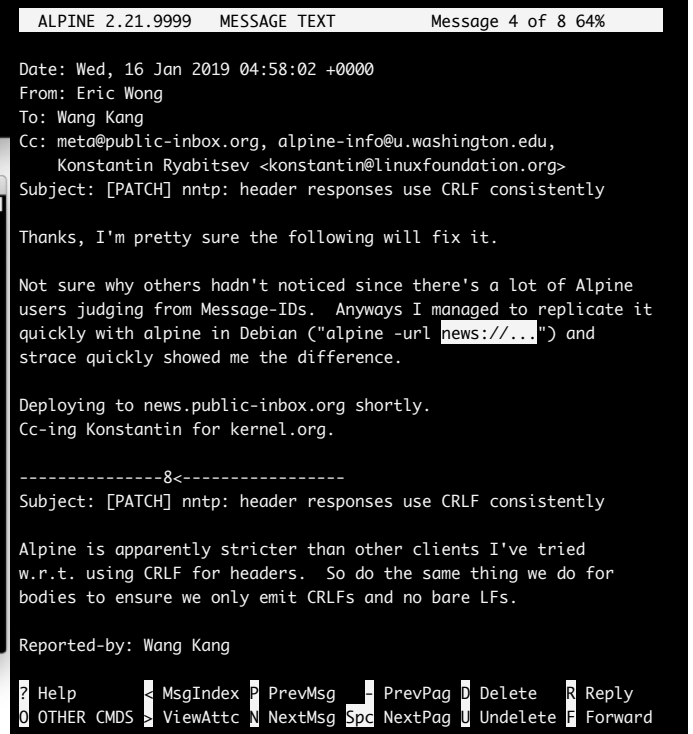
* Unix-Alpine: Connect securely to a LDAP server on a secure port. Based on a contribution by Wang Kang.
* Fix an error where the string "ldap " instead of "ldap" was being used to form a URL. Reported and fixed by Wang Kang.
* Kerberos was included twice in OSX due to a double definition of gss coming from the configure script and imap/Makefile. Remove the double definition from imap/Makefile. Reported and patched by Wang Kang.
* In some rare cases, when attachments are deleted before saving emails, the filenames will be displayed in RFC1522 representation, instead of in decoded form. Reported and patched by Wang Kang.











Alpine on Android Termux: https://github.com/termux/termux-packages/issues/140

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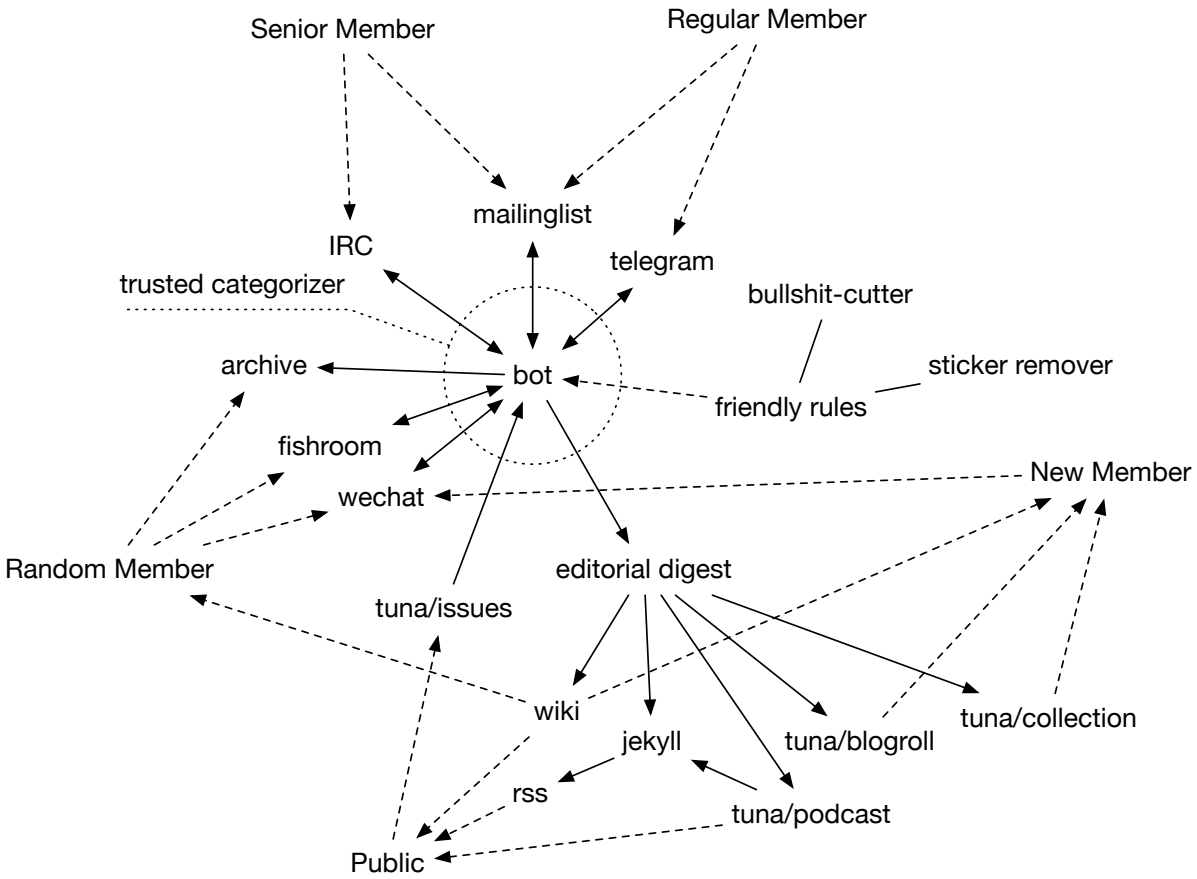

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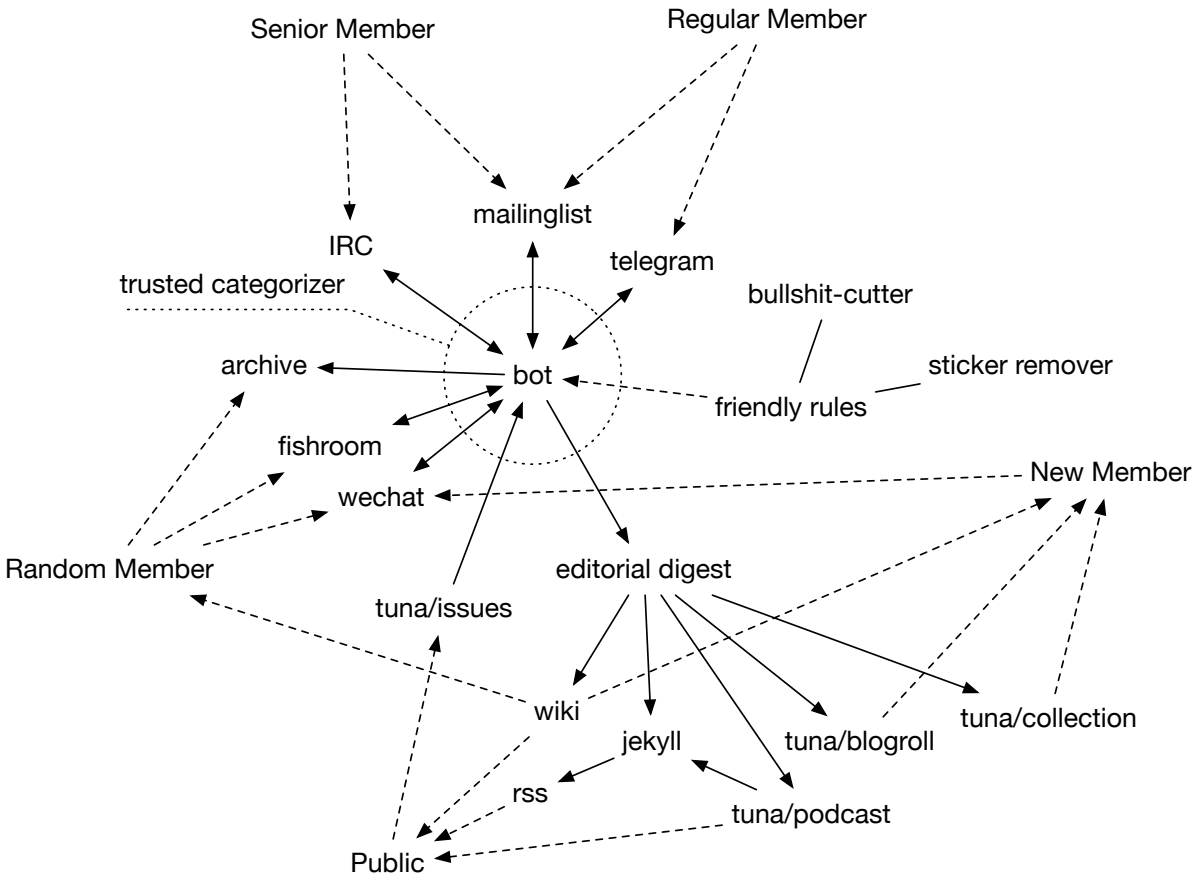

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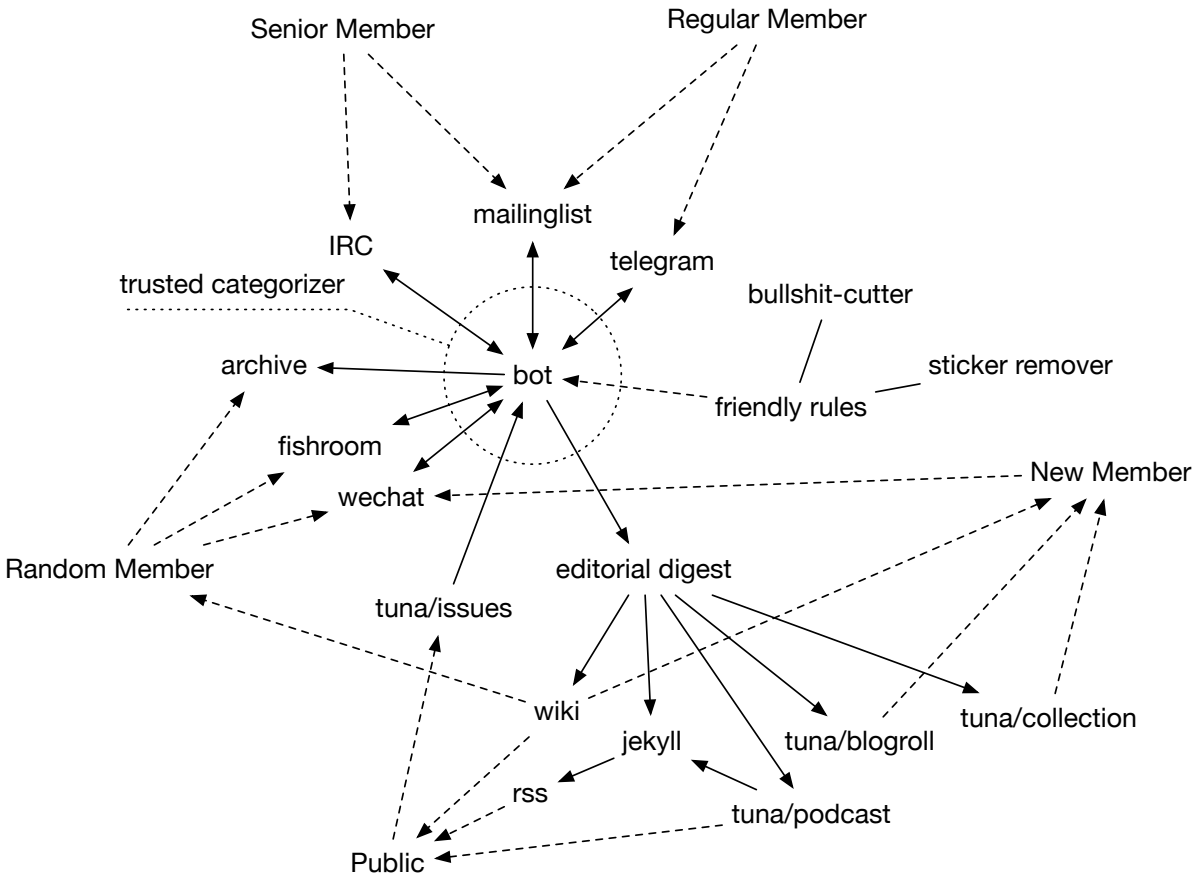

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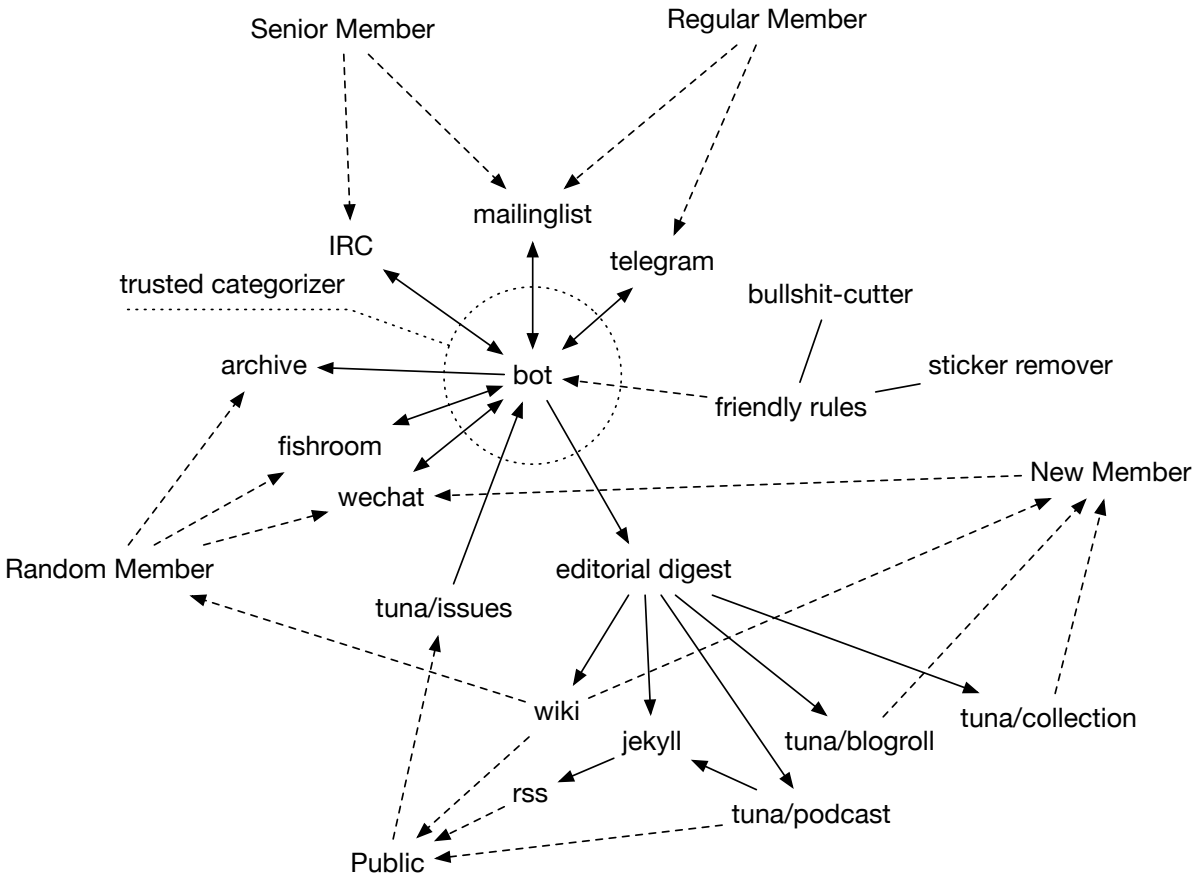

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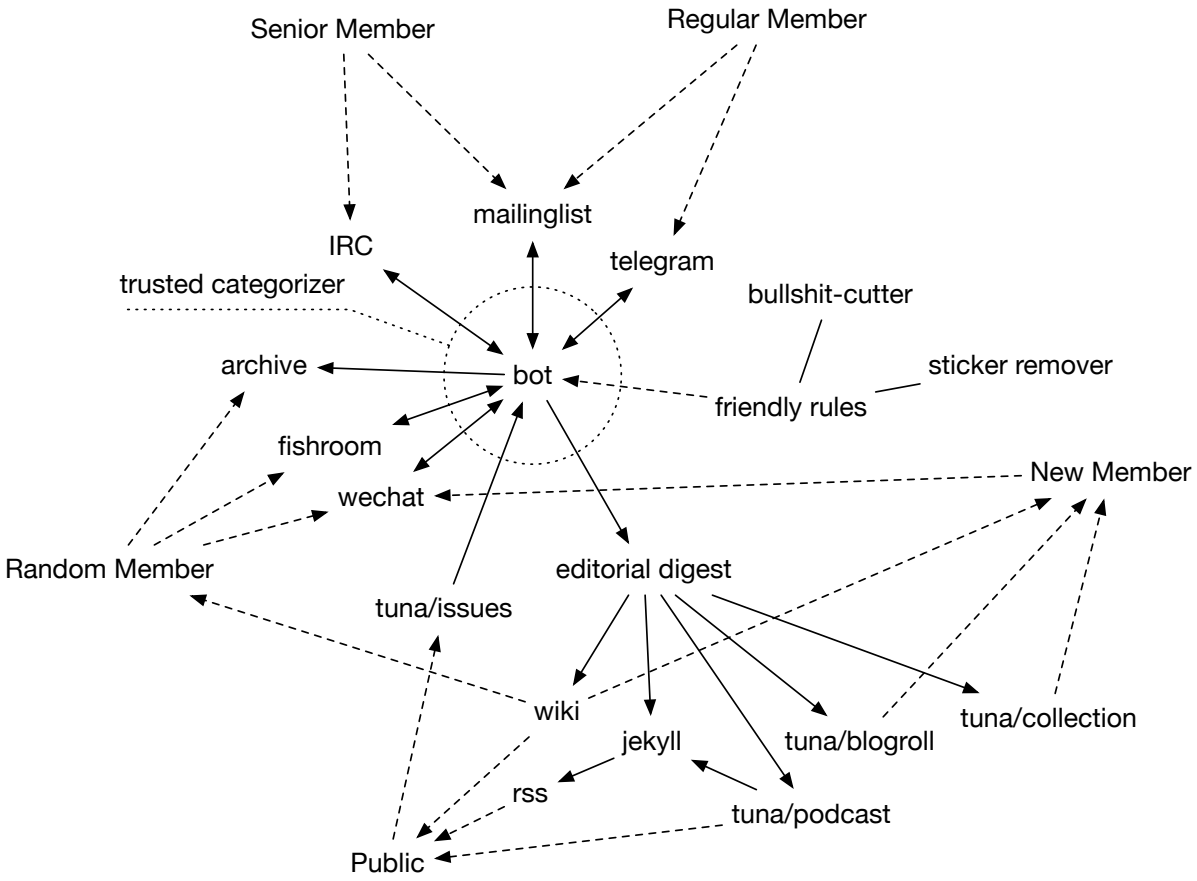

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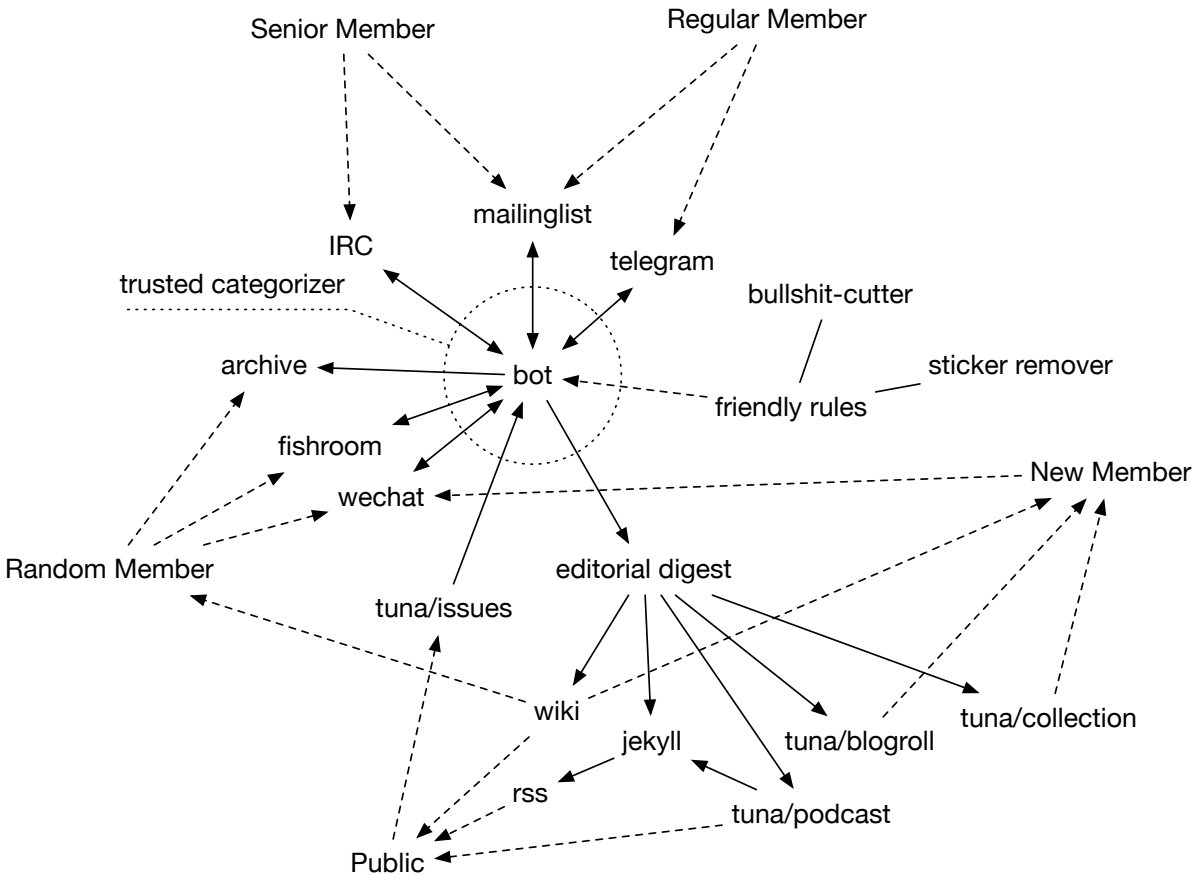

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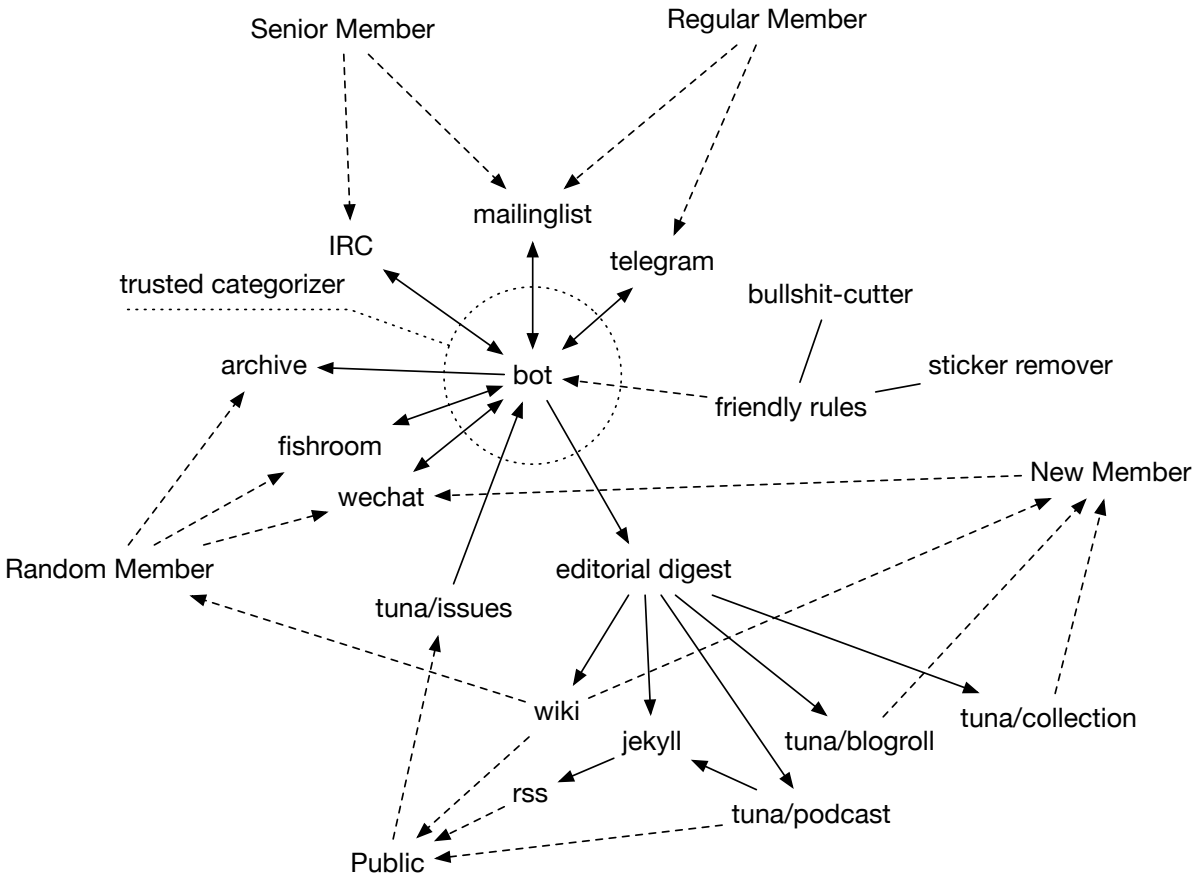

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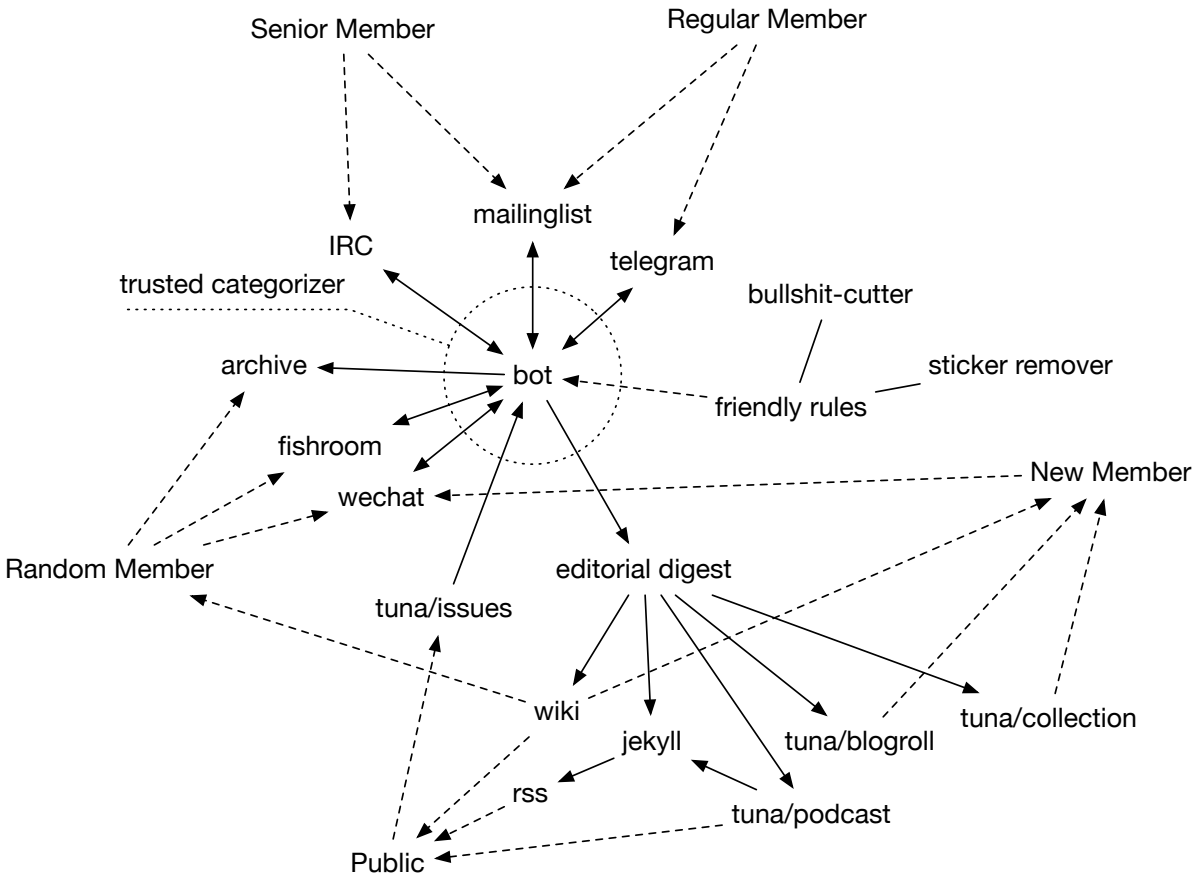

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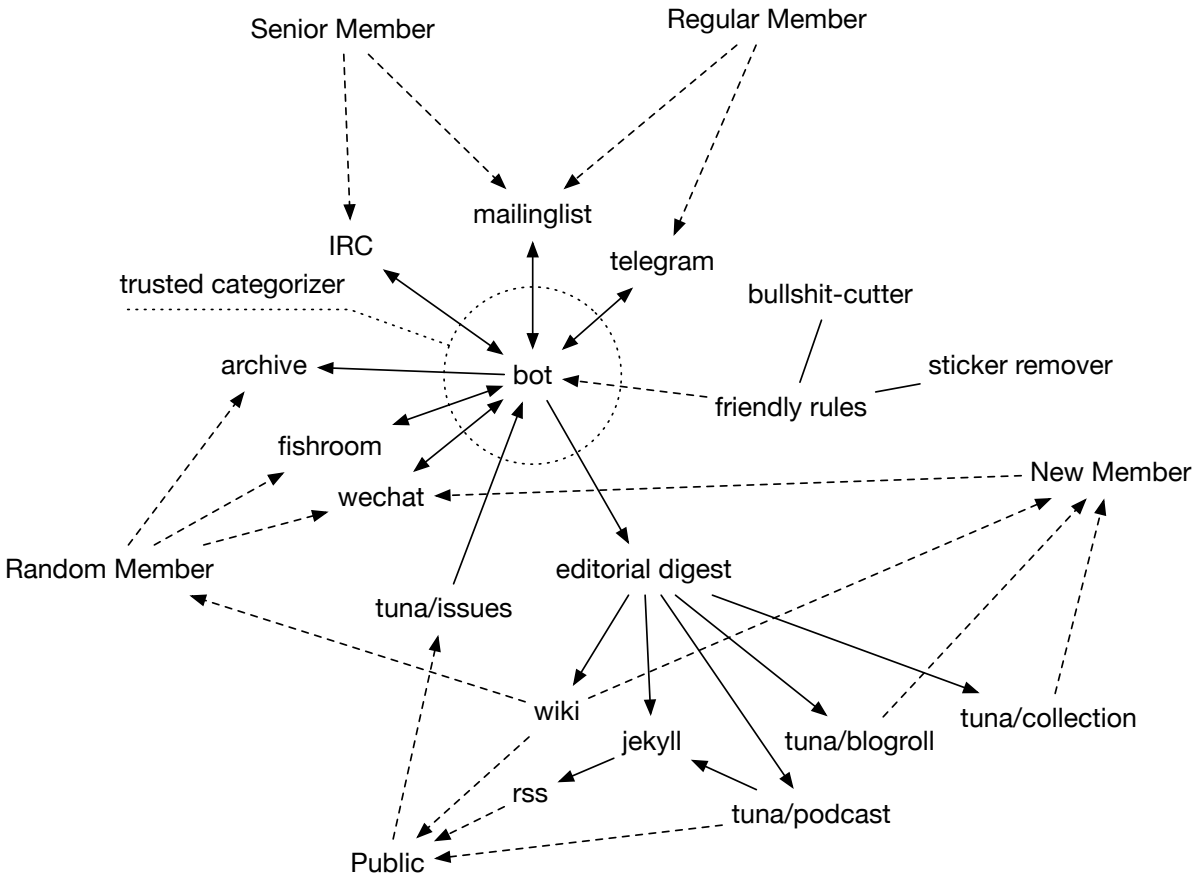

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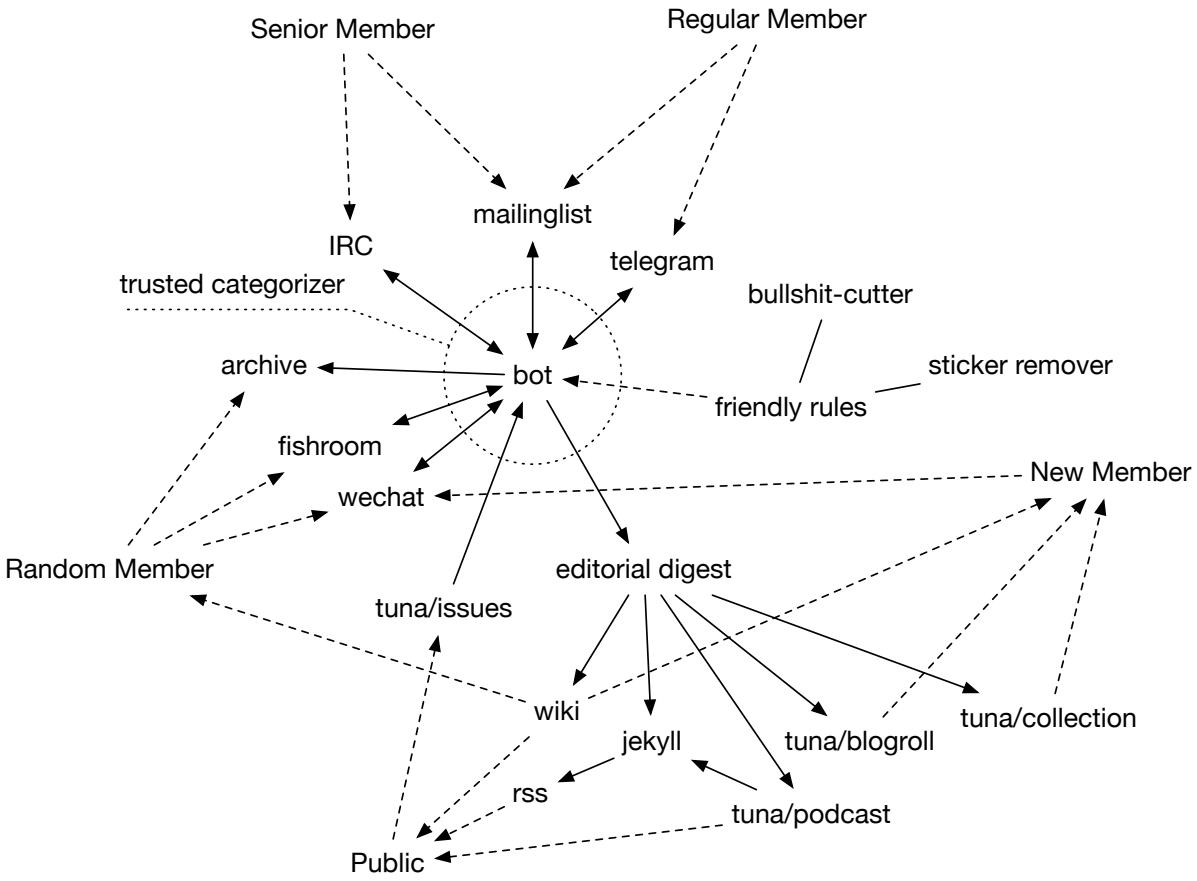

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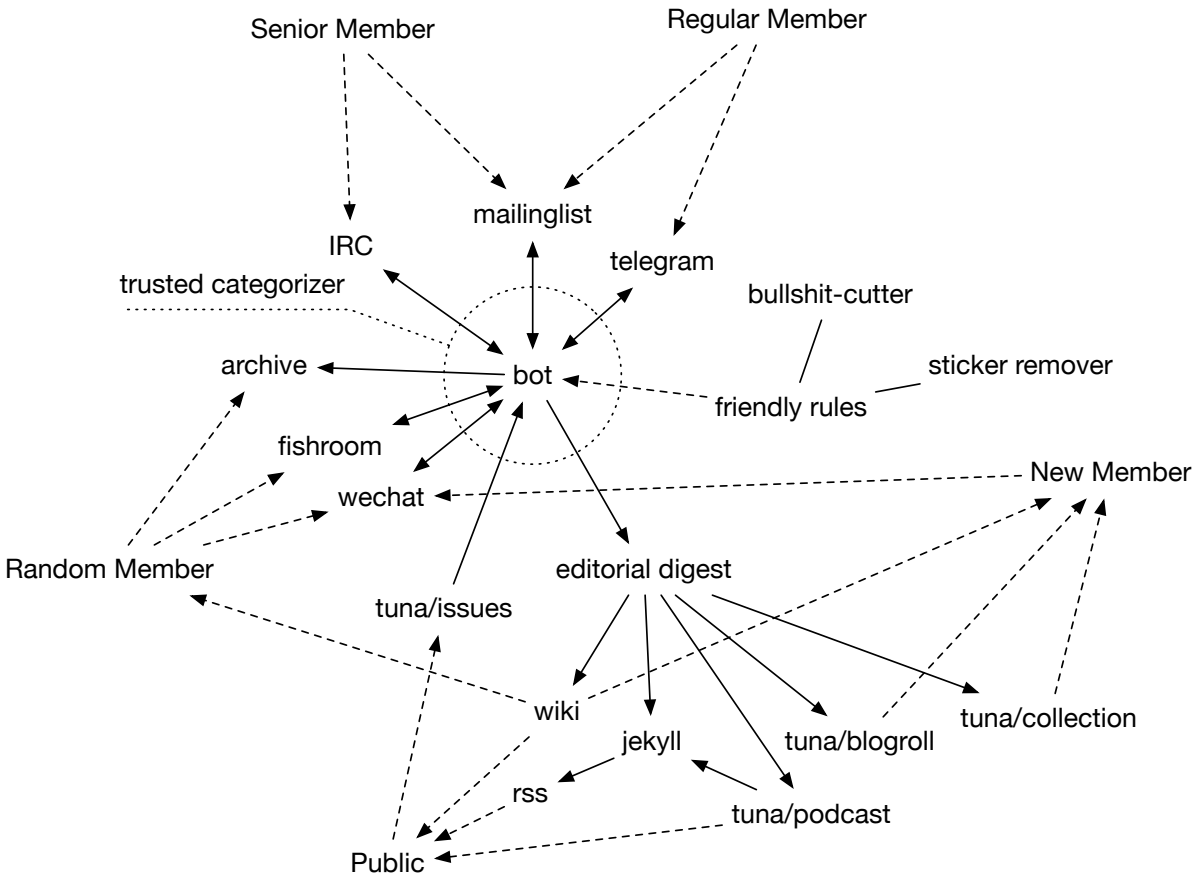

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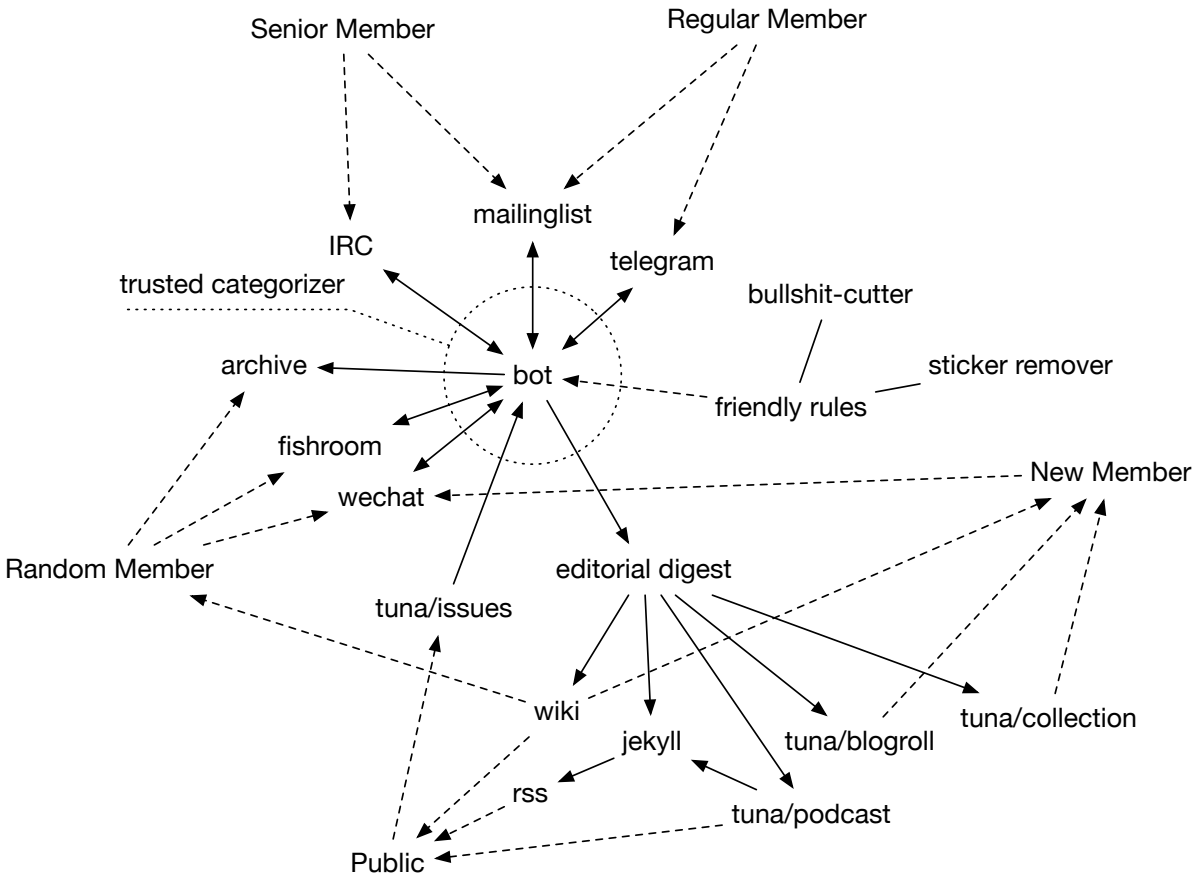

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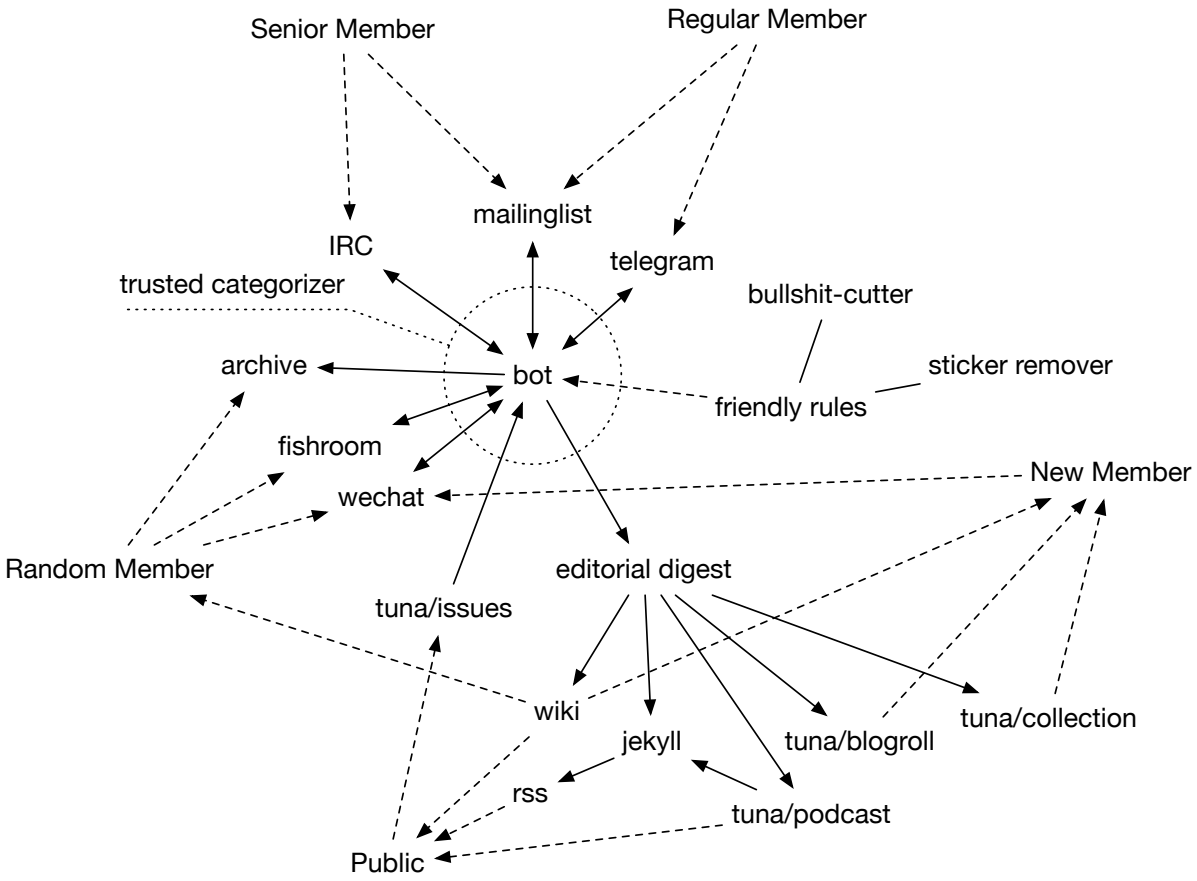

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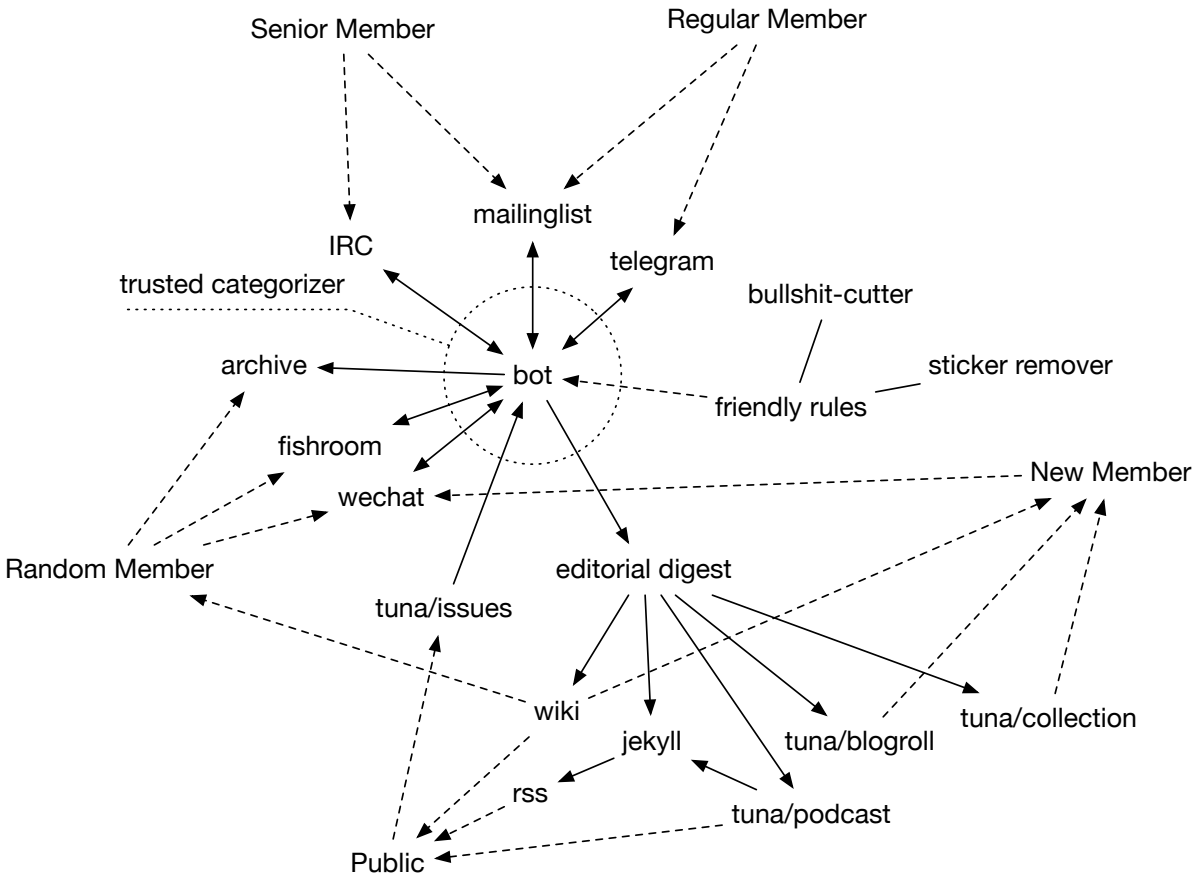

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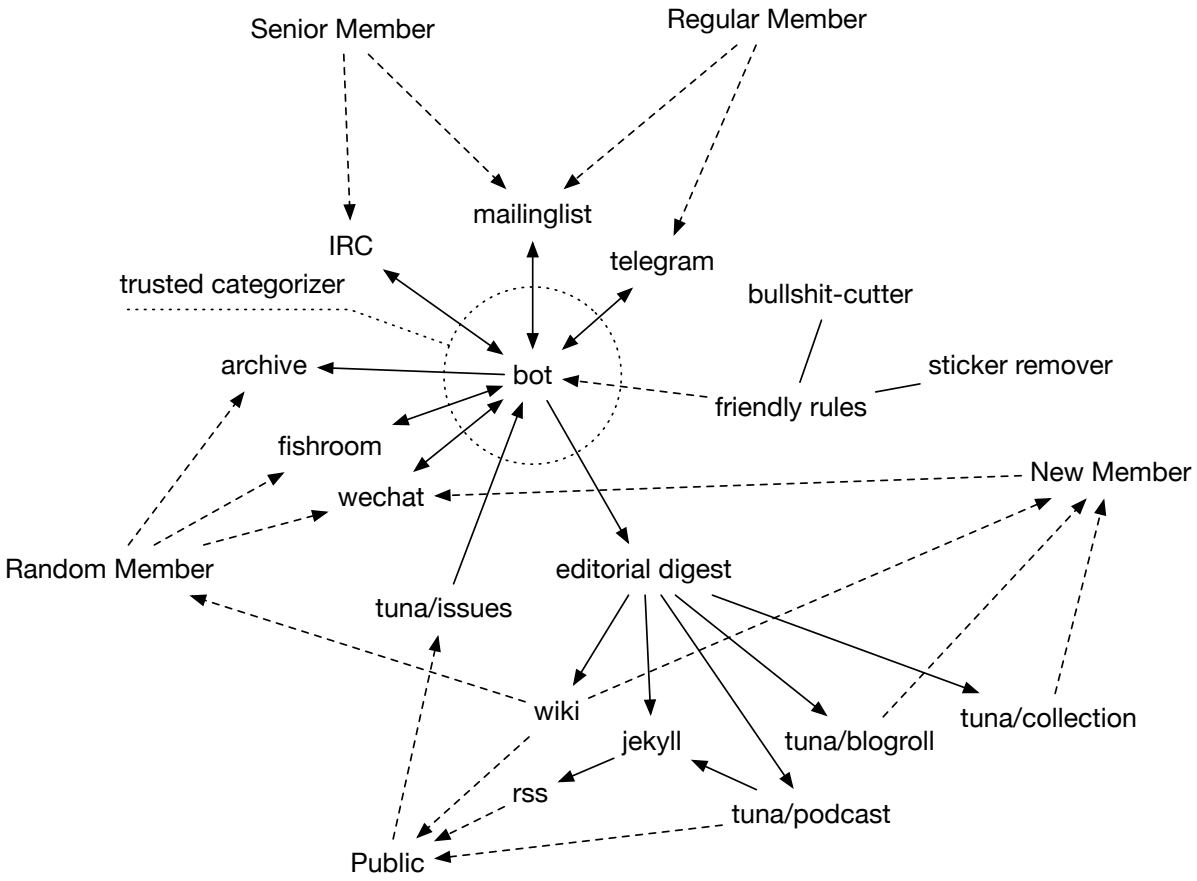

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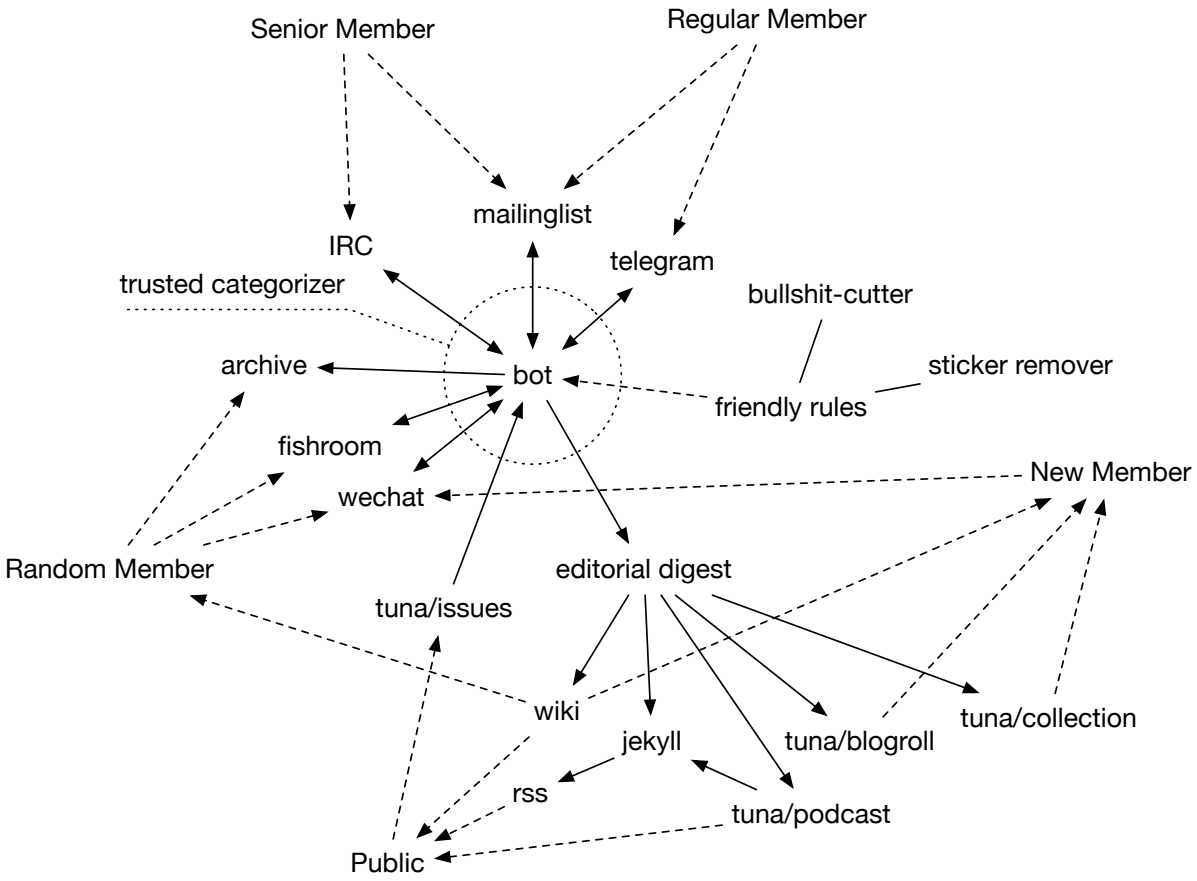

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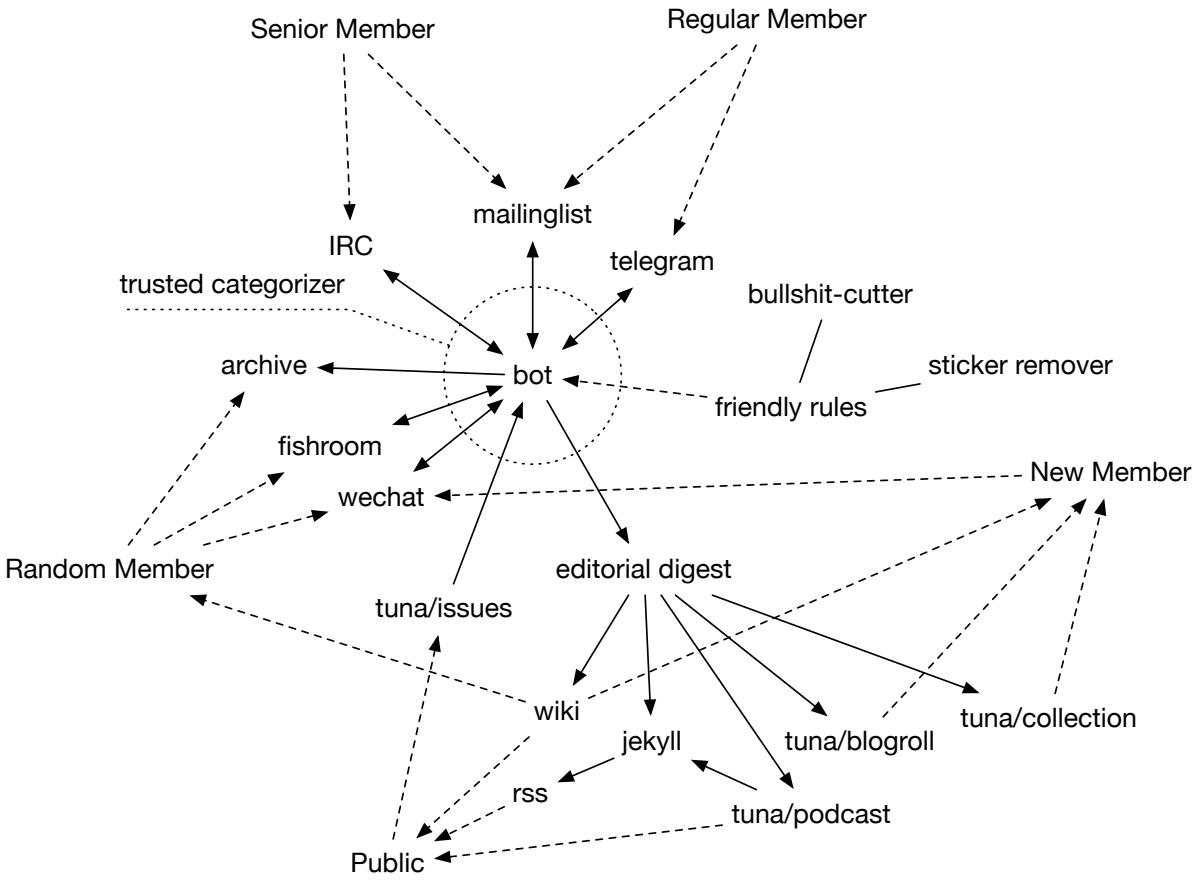

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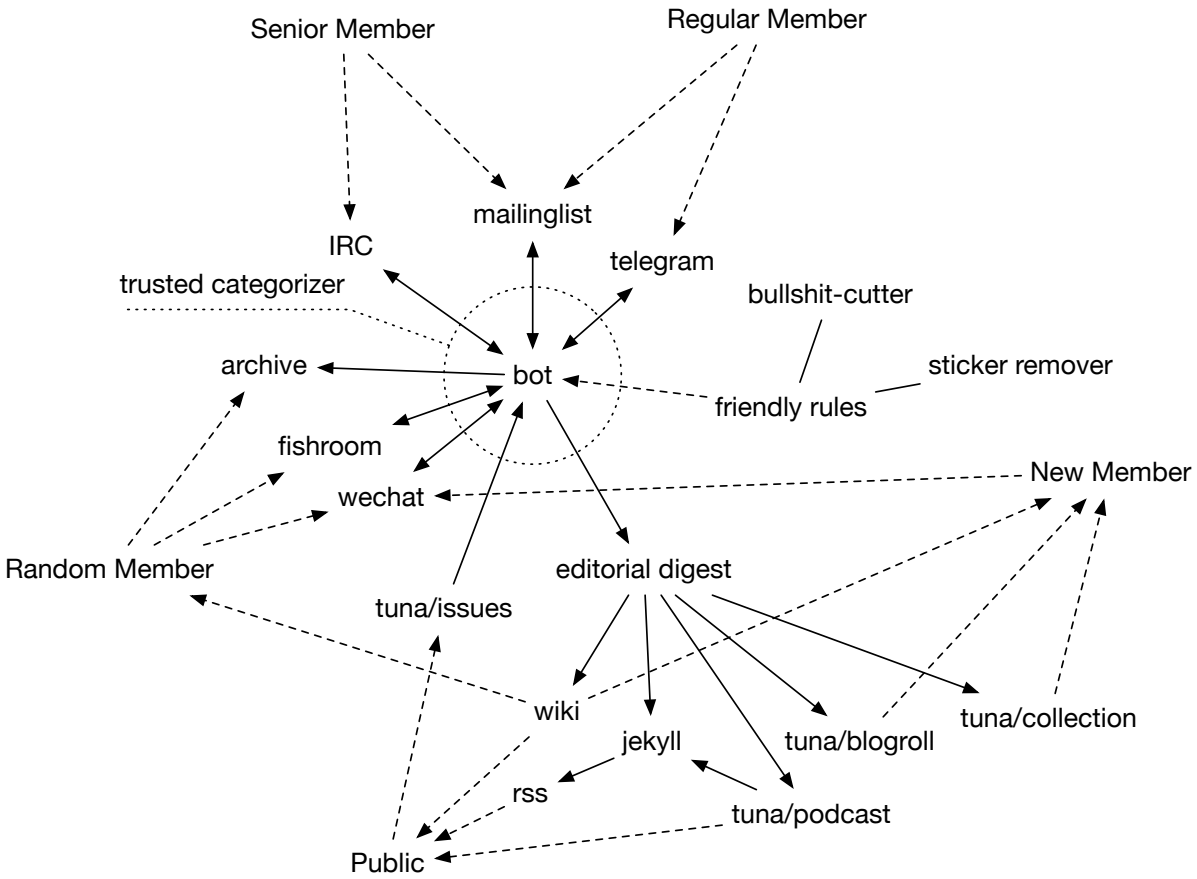

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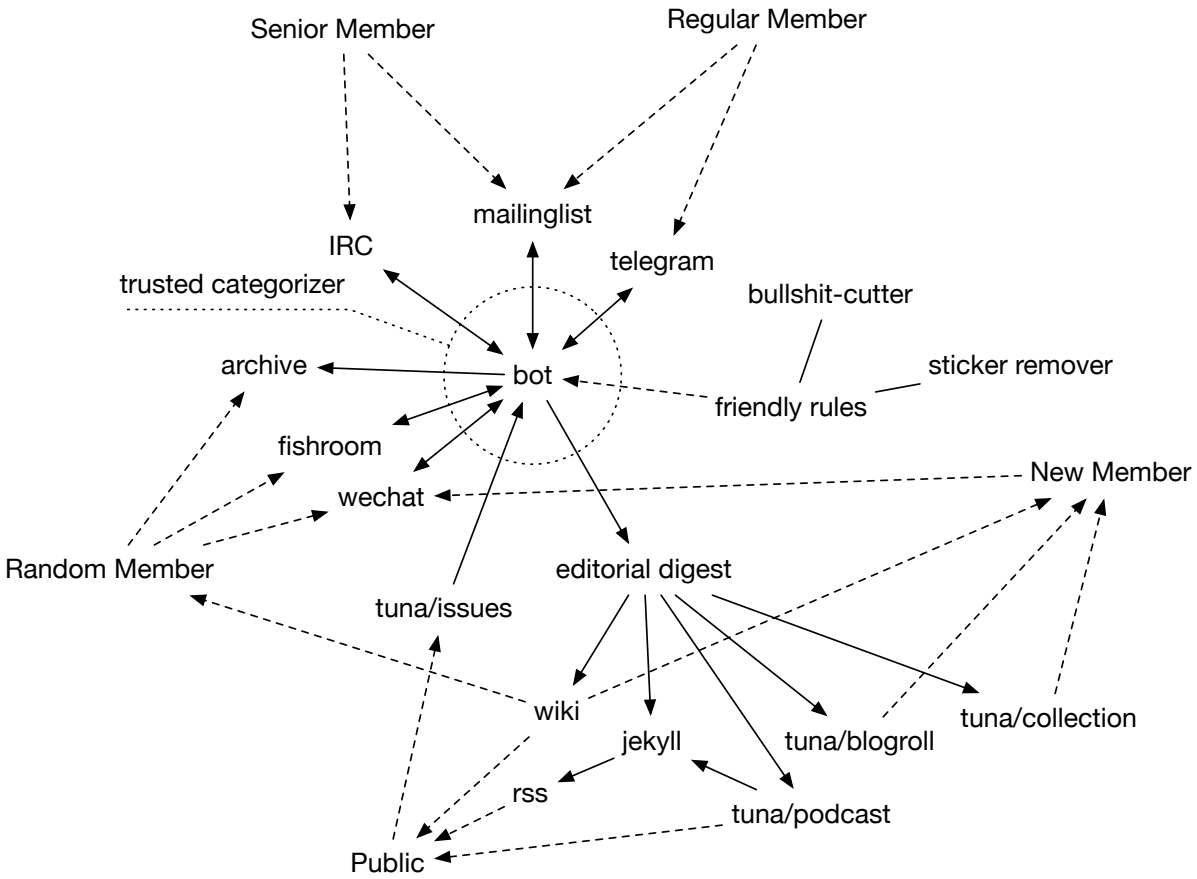

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