mozilla

Hi FOSDEM!

mozilla

Dear Daniel,

I had emailed you a couple months ago

mozilla

curl

```
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Since you weren't aware that your name was attached to Instagram related hacking code

Since you weren't aware that your name was attached to Instagram related hacking code, I thought you might want to know, in case you weren't already aware, that

Since you weren't aware that your name was attached to Instagram related hacking code, I thought you might want to know, in case you weren't already aware, that your name is also included in Spotify terms and conditions.

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libcurl

http://curl.haxx.se/

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libjpeg

- http://www.ijg.org/

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these are big companies that you likely don't want to have a trail of evidence that you are a part of

an Instagram and Spotify hacking ring

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Let me tell you about the hacking ring

This is a story about an open source project

curl://

cURL is

An open source project that makes a command line tool and a library for transferring data using Internet protocols

Let the story begin

First there was nothing

INDEPENDENCE DAY

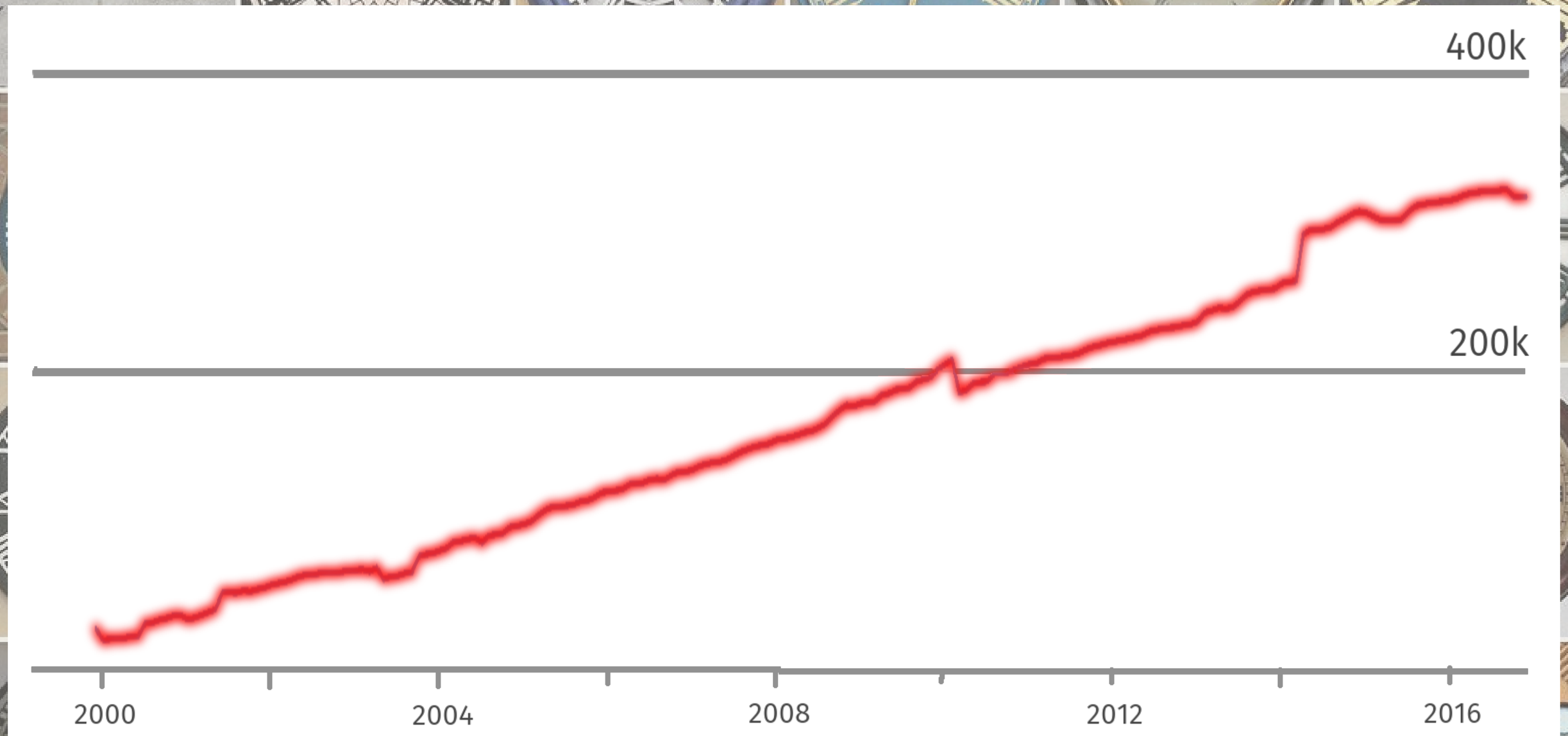
… became curl 1998

HTTP

Gopher

FTP

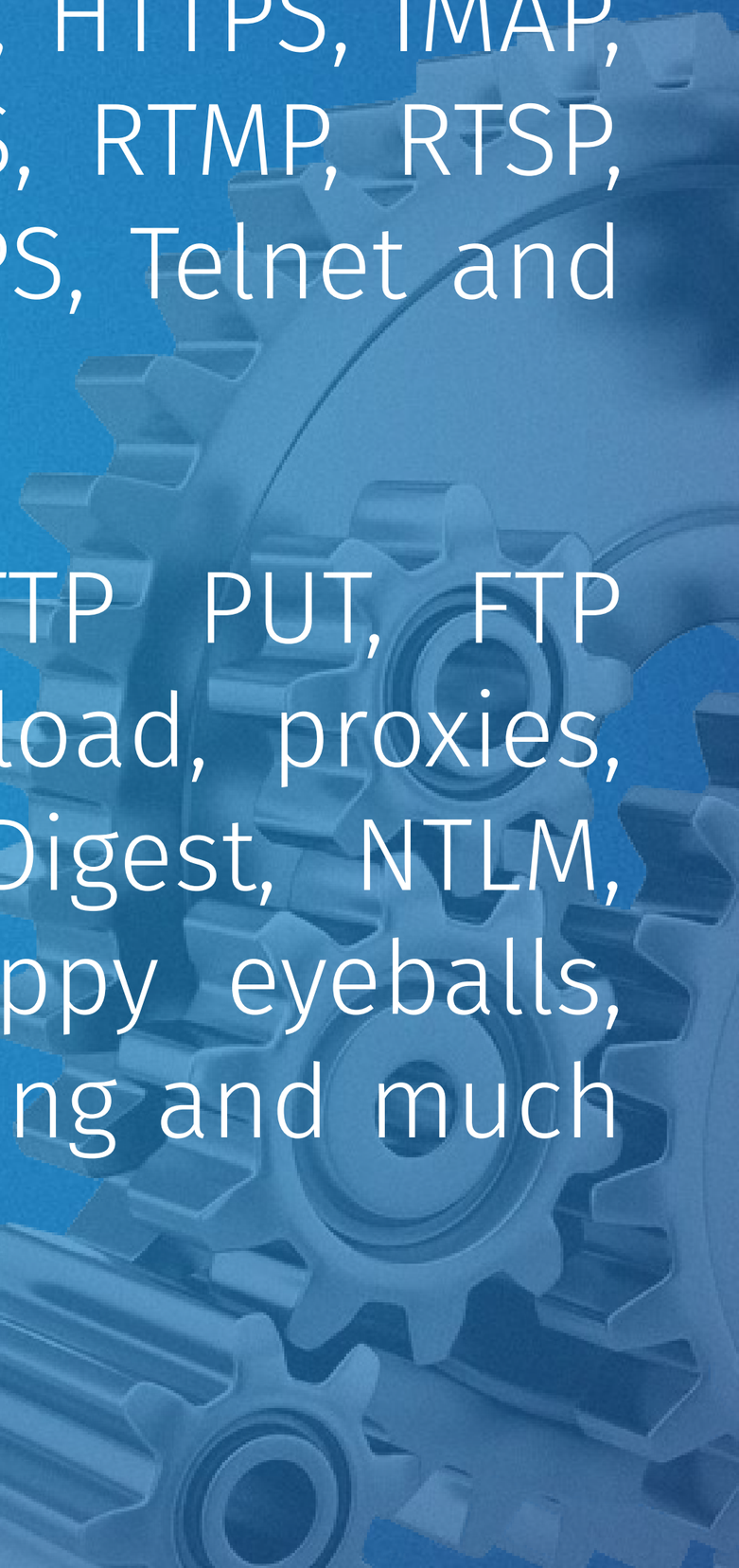
… and time passed…



2016

DICT, FILE, FTP, FTPS, Gopher, HTTP, HTTPS, IMAP, IMAPS, LDAP, LDAPS, POP3, POP3S, RTMP, RTSP, SCP, SFTP, SMB, SMBS, SMTP, SMTPS, Telnet and TFTP

TLS certificates, HTTP POST, HTTP PUT, FTP uploading, HTTP form based upload, proxies, cookies, authentication (Basic, Digest, NTLM, Negotiate, Kerberos), HTTP/2, happy eyeballs, file transfer resume, proxy tunneling and much more



16 Software, 1C Company, ACCESS, Actuate, Adara Networks, AddLive, Adobe, Aditiva, Adknowledge, alaTEST, Altera, Altova, Ananse Productions, AOL, Apple, Archivas, ATX, AT&T, Autodesk, Avaya, BBC, Bietfuchs, Biicode, Bitcartel, Blackberry, Blizzard, Bloglines.com, Blue Digits, Blue Security, BMW, Bosch, Broadcom, bwin, Candela Technologies, Canonical, Carestream Health, Cascade Data Systems, CatchFIRE Systems, CERN, CheckPoint, Chevrolet, Chronos, Cisco, Citrix, CLAAS Tractor SAS, Comcast, Contactor, CounterPath, Cybernetica, Datasphere, Datordax, Denon, DesignQuotes, Device Scape, Digium, EdelWeb, EFS Technology, Eiffel Software, Electronic Arts, Emsoft, Enigma Software, Euroling, Ergon Informatik, ESRI, etikett.de, www.expandtalk.se, Eye-Fi, E2E Technologies Ltd, F-Secure, Facebook, FalconView, Feitian Technologies, FriendFeed, FMWebschool, GeekDrop, GRIN, Groopex, Grooveshark, focuseek, Games Workshop, Garmin, GipsyMedia, Google, Haxx, HPC, Heynow Software, Hitachi, Honeywell, HP, Huawei, HTC, inSORS, IBM, ideelabor.ee, Idruna Software Inc, Id Software, Infomedia Business Systems Division, Informatica, Information Handling Services, Insignia, Instagram, Intel, Internet Security Systems, Intra2net AG, isee systems, Jajja Communications, Jawbone, JET, JLynx Software, Kajala Group Ltd., Kaleidescape, Karelia, Kaseya, kencast inc, Kerio Technologies, Kongsberg Spacetec, LassoSoft, lastpass, LG, LifeSize Software, Linden Lab, Machina Networks, Macromates, Macromedia, Magic TV, Matrix Science, Mandiant, MandrakeSoft, Marantz, Mazda, McAfee, MediaAnalys, Mellanox, Mercedes-Benz, Metaio, Micromuse Inc., Miniclip, Modio, MokaFive, Inc, Momento, Moodstocks, Motorola, Mozilla, Music FX Live, Nagarsoft, Neptune Labs, Nest, Netflix, Netgear, Netiq, Network Mail, Neuros, Nintendo, NoDesign, Nortel, Office2office Plc, OKTET Labs Ltd, One Laptop Per Child, Onkyo, On Technology, OpenLogic, opsmate, Optimsys, Oracle, Outrider, Palm, Panasonic, Pandigital, Parrot, Passiv Systems, Pelco, Philips, Pioneer, Plogue, Pocket Gems, Polaroid Corporation, Polycom, Pure Storage, Quest, QVD, QNX, RBS, Research in Motion, Retarus Network Services GmbH, Riverbed, ROBLOX, Rockstar Games, Rolltech, Inc, RSA Security Inc, RSSS, Samsung, SanDisk, SAP, SAS Institute, SEB, Sharp, Siemens, Silicon Landmark, Sjphone, Slingbox, SmithMicro, Sony, Sophos, Source Remoting, Splunk, Spotify, Steambird, Sun, SurfEasy Inc, Swisscom, Symantec, System Garden, Tango, tasvideos, Tellabs, Telstra, Telvue, Thumbtack, Tilgin, Tomtom, ToolAware, Toshiba, Trend Micro, Tribalmedia, Trion Worlds, Tiempo de Espera, Unisys, UniPlot, Unity3d, ustream, Valve, VETport, Vivisimo, Vmware, Voddler, Volition Inc, Vuo, Wump Research, Xilinx, XonaSoftware, Yahoo, Yamaha, Yubico, Zimbra, Zixcorp, Zonar Systems, Zyxel, Z2,

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Adobe, Altera, AOL, Apple, AT&T, BBC, Blackberry, BMW, Bosch, Broadcom, Chevrolet, Cisco, Comcast, Facebook, Google, Hitachi, Honeywell, HP, Huawei, HTC, IBM, Intel, LG, Mazda, Mercedes-Benz, Motorola, Netflix, Nintendo, Oracle, Panasonic, Philips, Pioneer, RBS, Samsung, SanDisk, SAP, SAS Institute, SEB, Sharp, Siemens, Sony, Spotify, Sun, Swisscom, Tomtom, Toshiba, Vmware, Xilinx, Yahoo, Yamaha

In all the things!

- Mac OS X
- TVs
- Iphones and Ipads
- Other phones
- Linux
- Games
- Version control systems
- Cars

- PHP sites
- Set-top boxes
- Audio equipment
- Bluray players
- Printers
- Firefox crash reporter
- Sites: Facebook, Yahoo, ...
- Your next device

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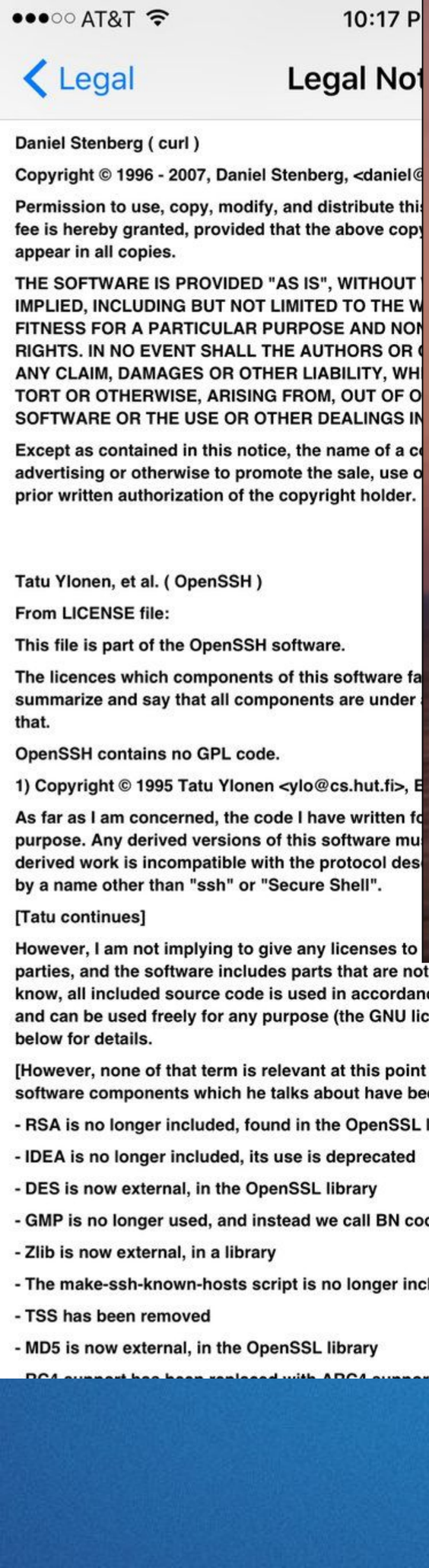
Just curl it!

Billions of users

a bunch of users

Every human in the connected world
uses something running curl
- every day


AT&T
10:17 P
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by a name other than "ssh" or "Secure Shell".
[Tatu continues]
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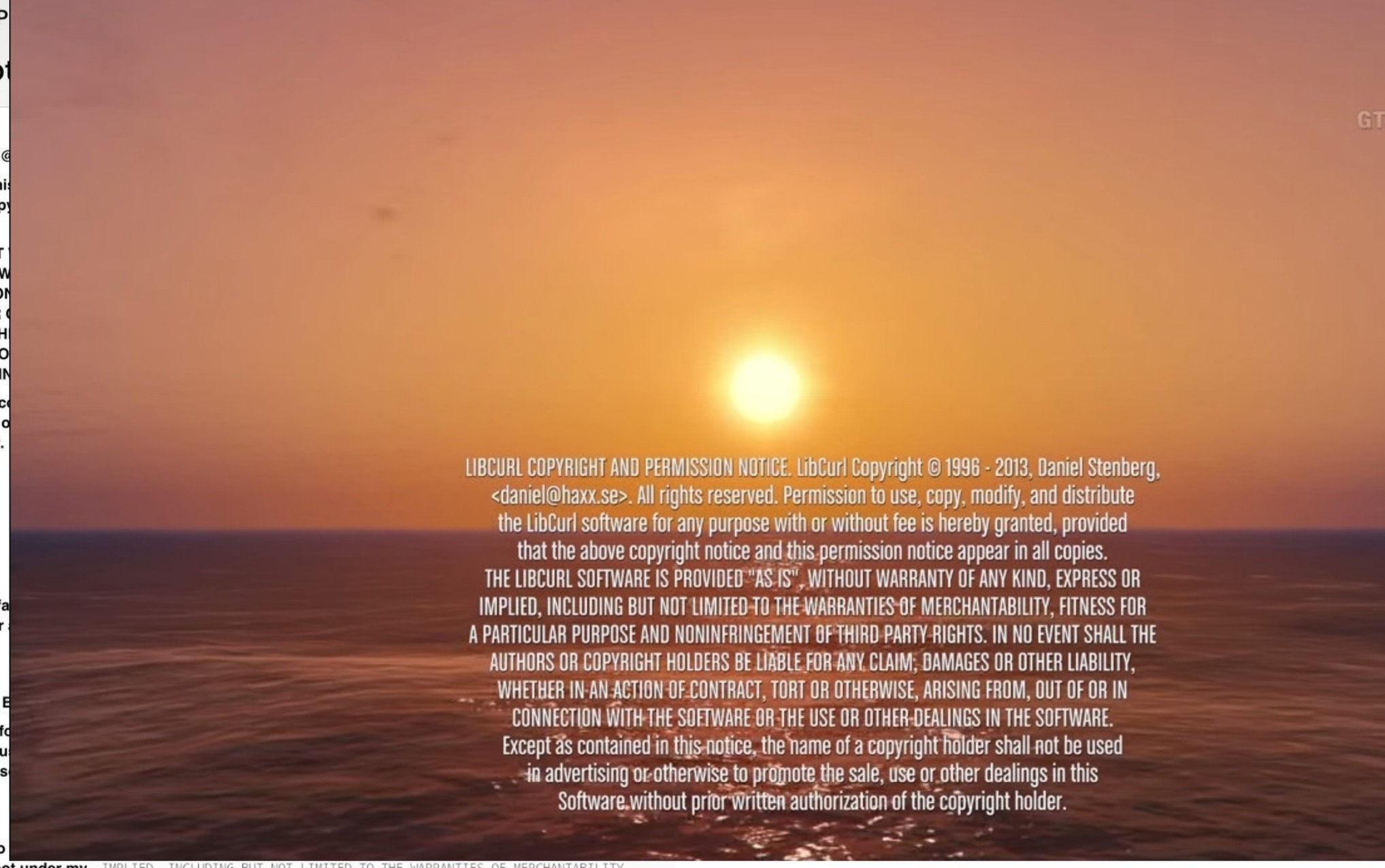
and can be used freely for any purpose (the GNU license bein
below for details.
[However, none of that term is relevant at this point in time. A
software components which he talks about have been remove
- RSA is no longer included, found in the OpenSSL library
- IDEA is no longer included, its use is deprecated
- DES is now external, in the OpenSSL library
- GMP is no longer used, and instead we call BN code from Op
- Zlib is now external, in a library
- The make-ssh-known-hosts script is no longer included
- TSS has been removed
- MD5 is now external, in the OpenSSL library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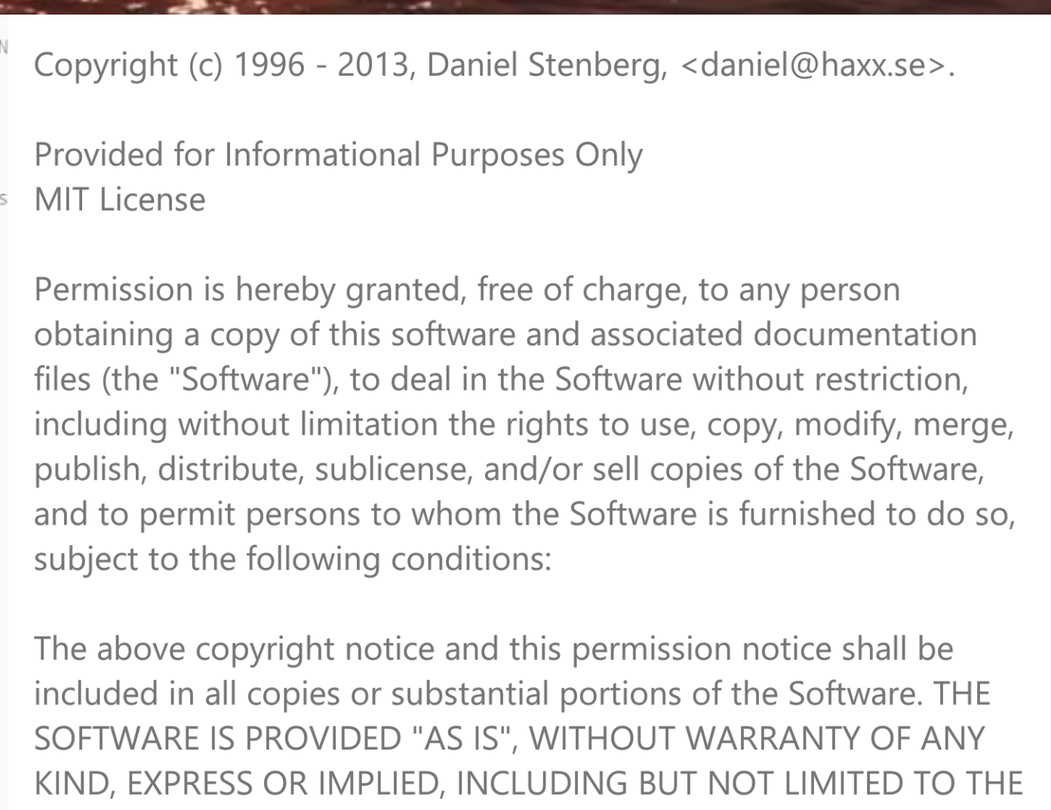
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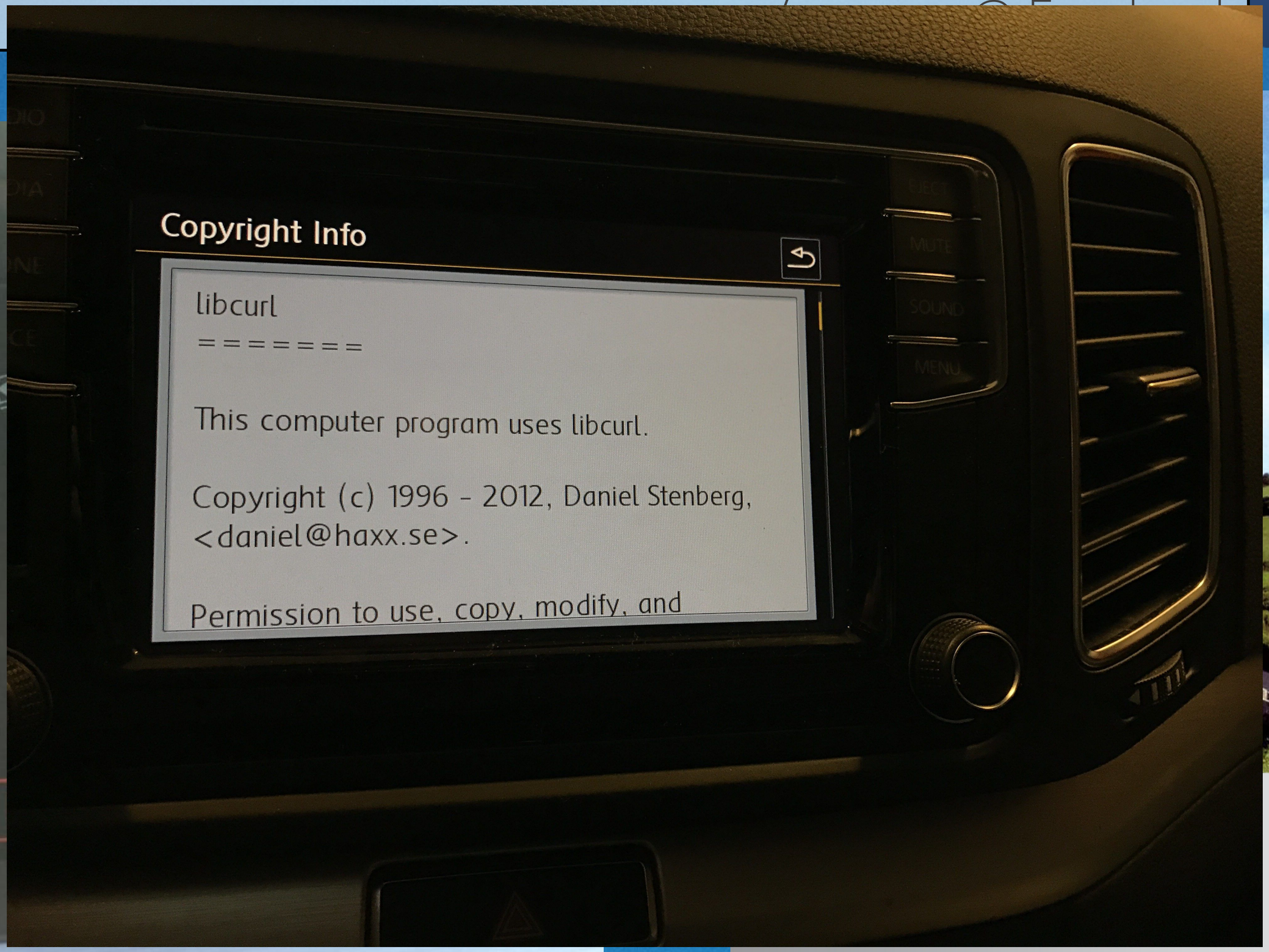
$ curl 'techJobs' SanFran
//don't tell my boss
Dice
The career hub for tech

> curl -X POST http://apiallthethings.com
-d {email:freetshirt@apigee.com}
{
Nasdaq
H&M
CONSCIOUS
EXCLUSIVE
Blazer in
Organic Silk
$129
apigee
I ♥ APIS
NEW YORK WATER TAXI
NYPD

"Cool.. we're running with the patch reverted in production now and it's solved quite a number of latency issues for us."



Mercedes-Benz

Open Source Software Used in PlayStation®4

- cURL
- eglib
- Ethernet driver
- Expat XML Parser
- **FreeBSD Kernel**
- FreeBSD's fsck/newfs commands
- FreeType2
- giflib
- ICU

Enter Back

Master of many things?

Subject: Multimedya isc-v:85

I have toyota corola with multimedya system that you have its copyright.

I need a advice to know how to use the gps.

Why use curl?

Internet doesn't follow specs

Open source

MIT licensed

Simple and stable API

Yet powerful API

C library is still most portable and flexible

Bindings

Decent docs

Decent stability

All the protocols

Fast

Footprint shaving

Many TLS backends

http://curl.haxx.se/libcurl/theysay.html

Why Open Source?

There was never any alternative to me

Wanted to contribute back

Would never even come close unless

No, I would not be rich otherwise

```
/***************************************************************************
 *                                  _   _ ____  _
 *  Project                     ___| | | |  _ \| |
 *                             / __| | | | |_) | |
 *                            | (__| |_| |  _ <| |___
 *                             \___|\___/|_| \_\_____|
 *
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 * furnished to do so, under the terms of the COPYING file.
 *
 * This software is distributed on an "AS IS" basis, WITHOUT WARRANTY OF ANY
 * KIND, either express or implied.
 *
 ***************************************************************************/
#include "curl_setup.h"

#ifdef USE_NGHTTP2
#include "curl_printf.h"
#include <nghttp2/nghttp2.h>
#include "urldata.h"
#include "http2.h"
#include "http.h"
#include "sendf.h"
#include "curl_base64.h"
#include "rawstr.h"
```

mozilla

How?

Contributors

1500 in total

30-40 per release

Increasing

Small core team

Volunteers

Everything is public

mailing lists

on github
a few have push rights

Who pays

Spare time hackers

Company paid contributors

Company paid feature development

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How to write software that ends up getting used by billions of people

Write good software

Write lots of code

Provide useful options and APIs

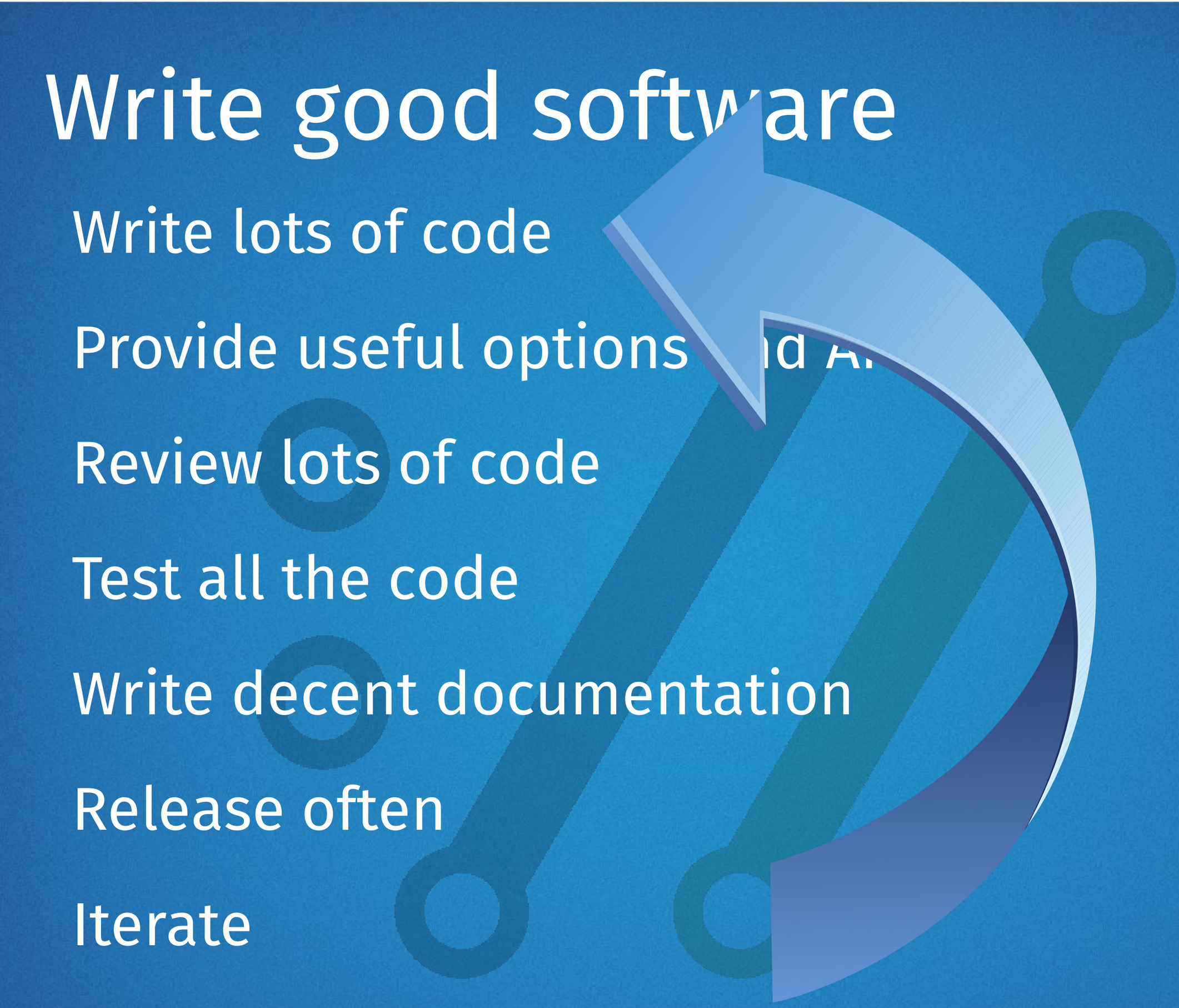
Review lots of code

Test all the code

Write decent documentation

Release often

Iterate



Repeat until it actually succeeds

Will curl give us the next heartbleed?

I hope not

Static code analyzers

Tests

MOSS code audit

Documentation

Reviews

Valgrind

Fuzzing

Code style

(at 60+ CVEs and counting)

Let's make it personal

This is the lead developer of this project

mozilla

This is my primary hobby

On average, I work two hours on curl per day

Every day of the week, every week of the year

Since 1998

Part time paid by Mozilla since 2014

14,000 spare time hours and counting

24,000 emails sent

15,000 commits

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Why I do it?

I enjoy creating something that is appreciated by others. Many others.

I want to make curl as good as possible

Everyone needs a hobby

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Why I work on curl

It's the most fun I can imagine

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curl://up

March 18-19, 2017

Future

No, it truly never gets done

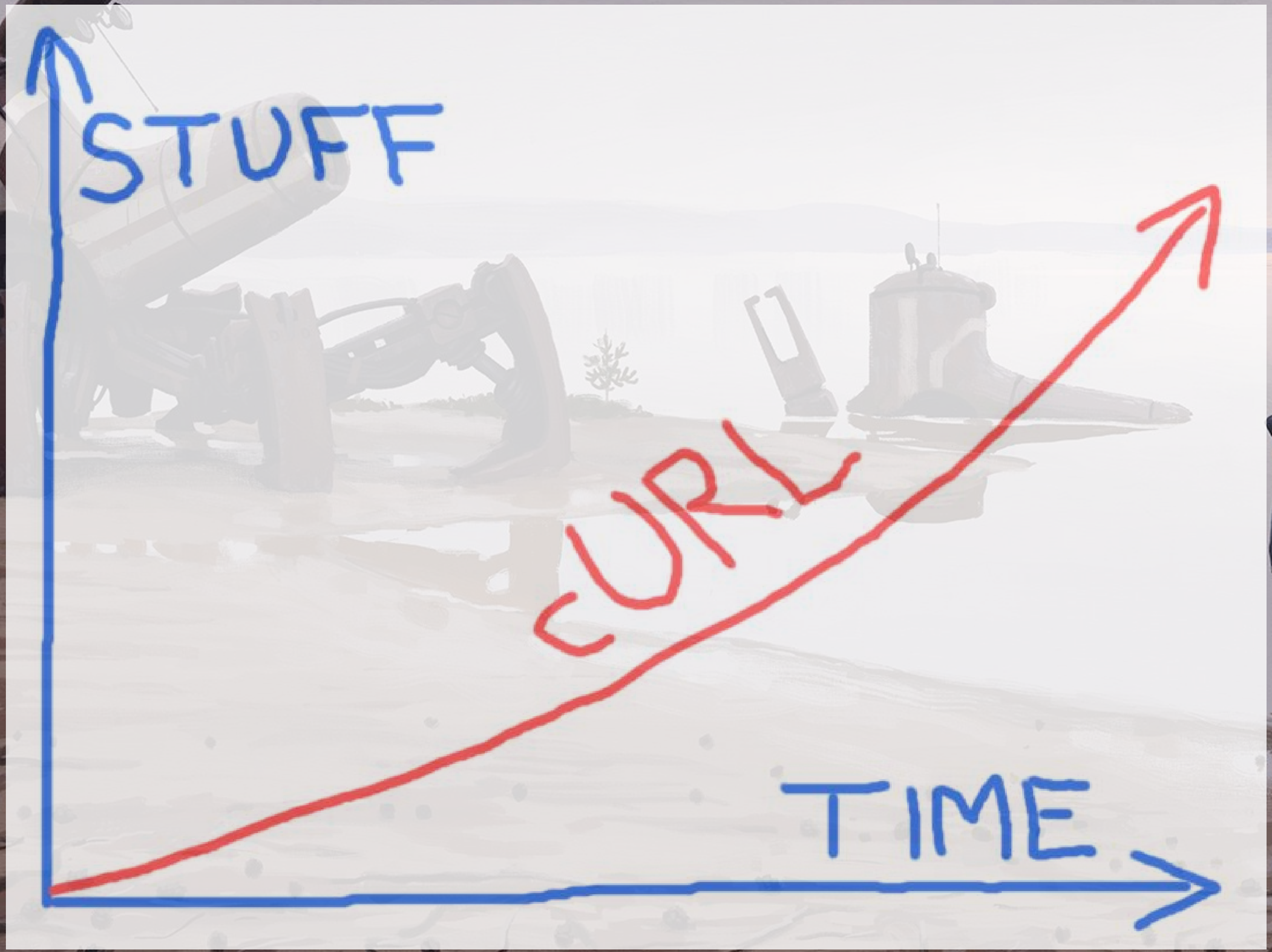
Protocols keep evolving

Open source code survives

No slow-down in sight

You can help!

Roadmap



Thank you!

https://curl.haxx.se/

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Questions?

Doing good is part of our code

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