mozilla

curl

- a hobby project with a billion users

Daniel Stenberg,

Google Tech Talk

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This is a story
about an open
source project

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mozilla

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Please ask!

… just *maybe* everything isn't crystal clear at once.

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

mozilla

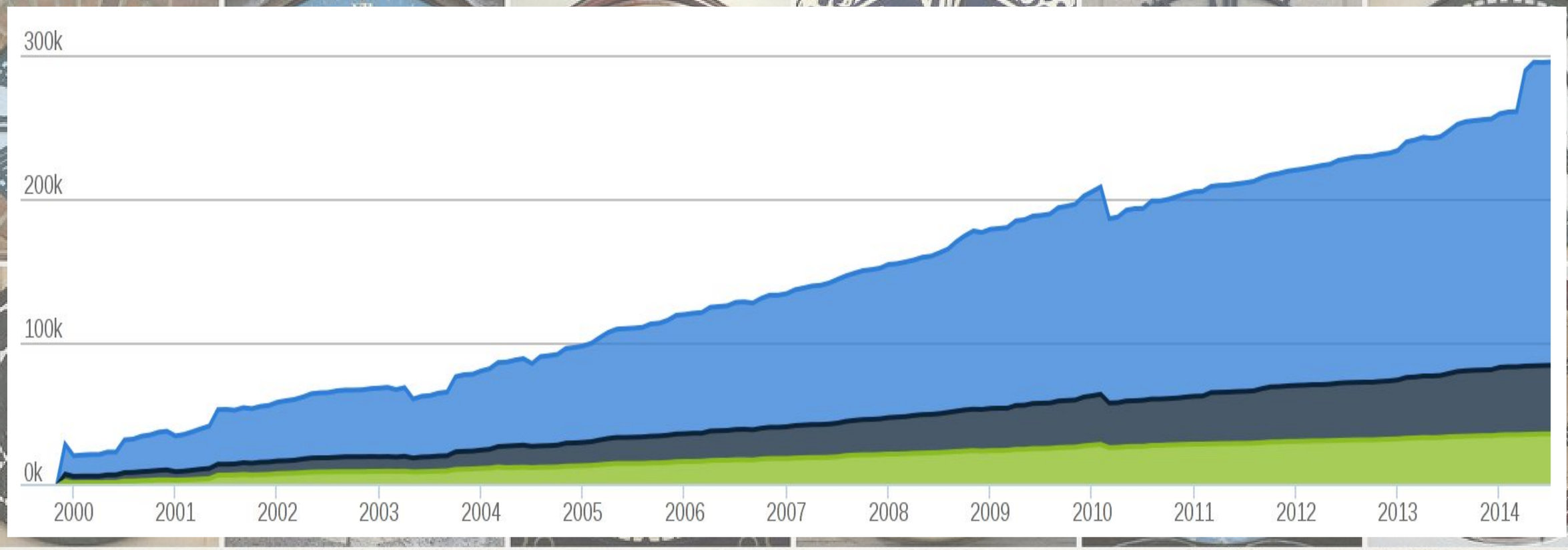
... became curl 1998

HTTP

Gopher

FTP

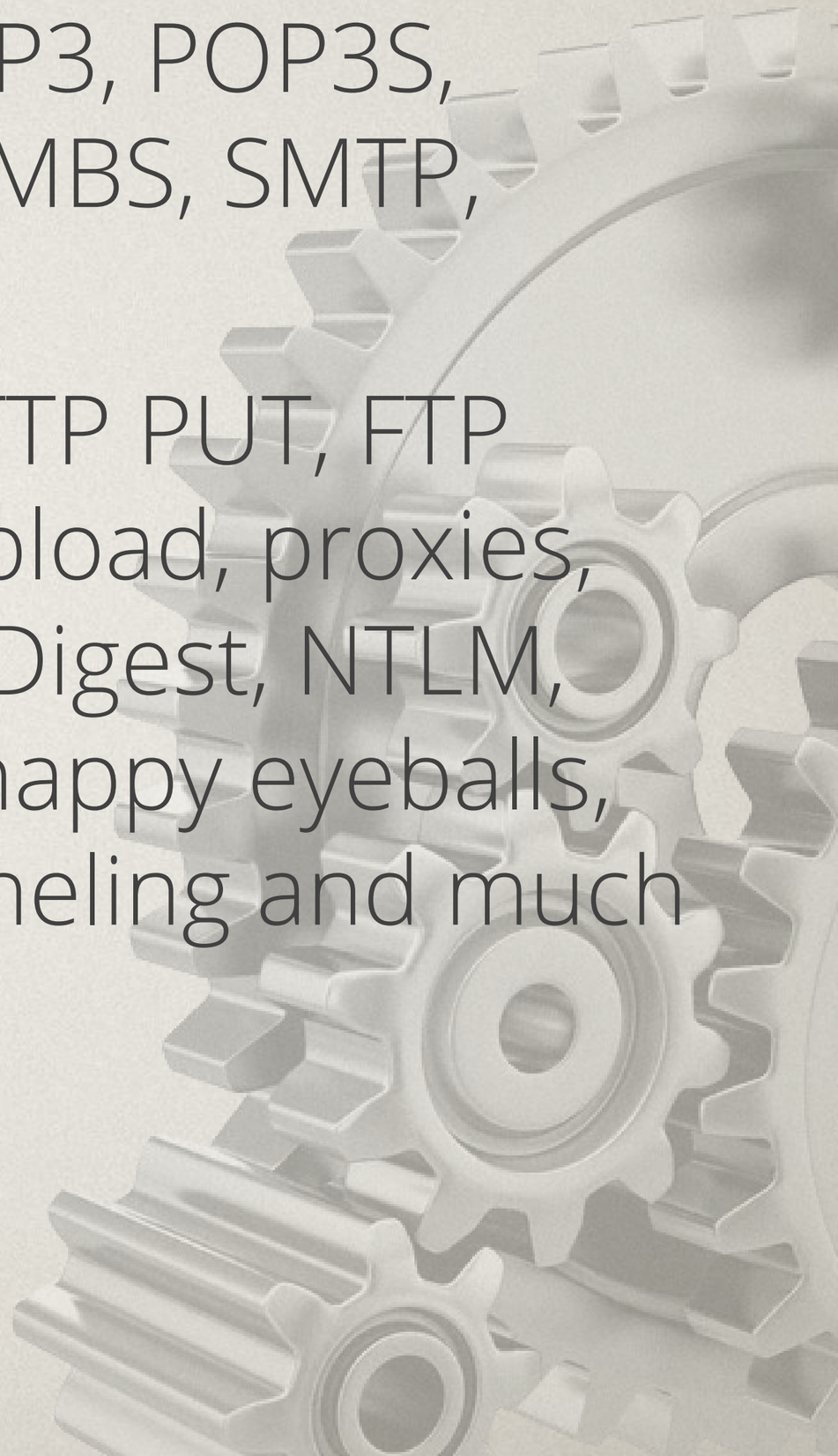
… and time passed…



2015

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



one billion users

a bunch of users

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,

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

Everyone here likely has a device using libcurl.

Probably even more than one!

Why use curl?

Internet doesn't follow specs

Open source

MIT licensed

Simple and stable API

Yet powerful API

HTTP library when libwww was the only choice

C library is still most portable

Bindings for every language

Decent documentation

Decent stability

Supports all the protocols

Fast

Allows disabling parts for footprint shaving

Many TLS backends

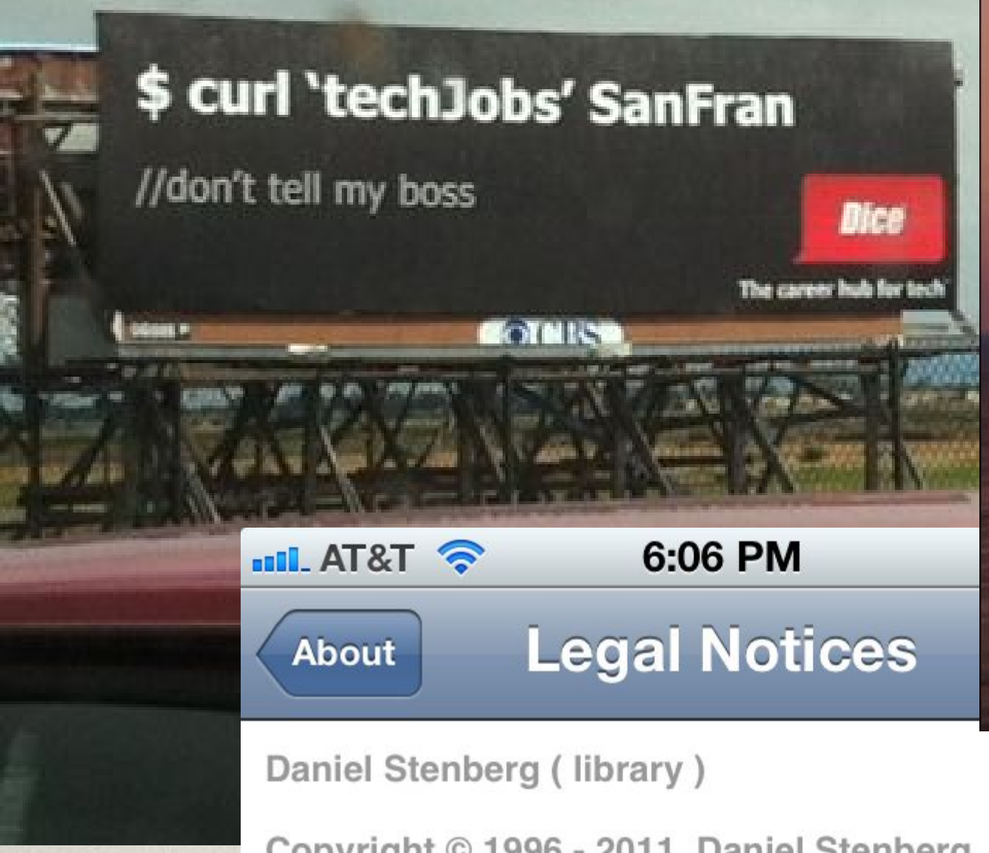
Small devices still like C

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

What is success ?

Is success important?

Whose success?



Daniel Stenberg (library)

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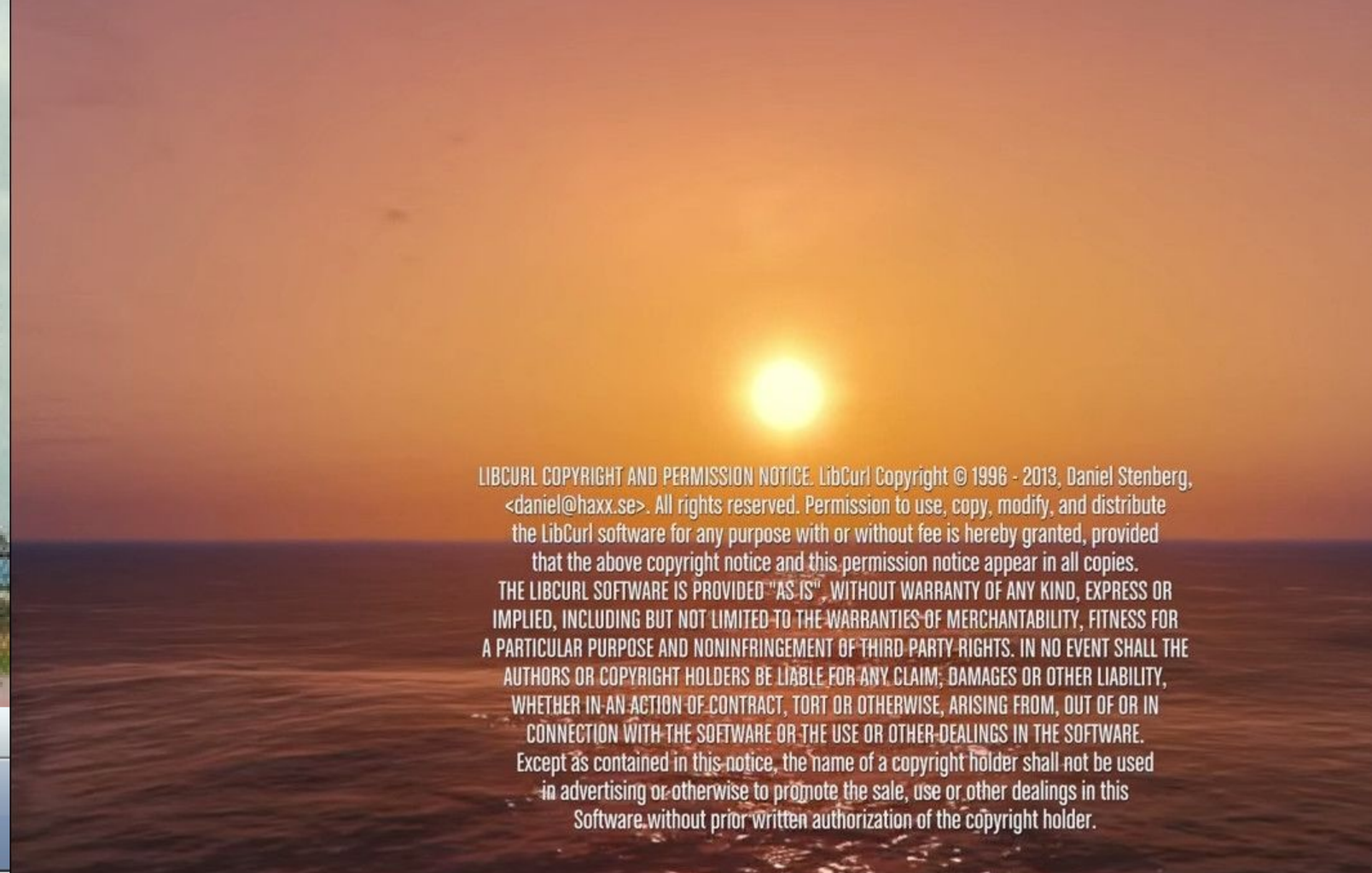


How is all this accomplished?

the project

curl and libcurl

Transfer data using internet application protocols

Stable products

Stable API

Maximum portability

MIT

Contributors

1300 in total

30-40 per release

Increasing

Small core team

Volunteers

Everything is in the public

on github
a few have push rights

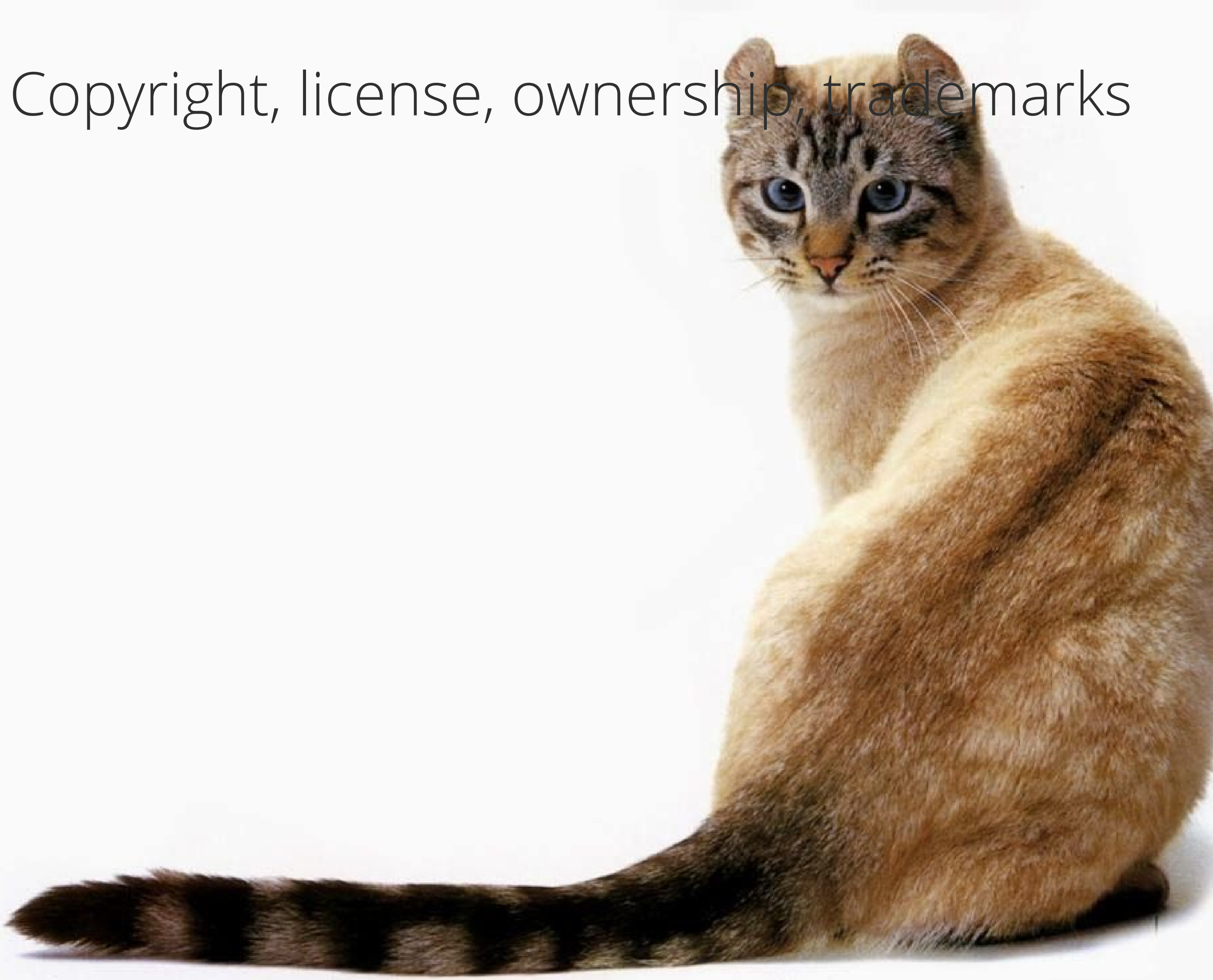
mailing lists

Will curl give us the next heartbleed ?

Will curl get us sued on patent claims?

Are contributors risking getting sued?

Copyright, license, ownership, trademarks



Copyright, license, ownership, trademarks

Daniel owns most copyrights

Larger contributions may get its own copyright claim

We assume donors have the right to hand over their code submissions

The license is fixed and will remain forever

We have no trademarks but there is an American trademark registered for “curl”

Individual contributors to the project contribute on their own free will

Who pays

Spare time hackers

Company paid contributors

Company paid feature development

Let's make it personal

This is the lead developer in this project

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

12,000 spare time hours and counting

24,000 emails sent

15,000 commits

Why I do it?

I'm enjoying creating something that is appreciated by others. Many others.

I want to make curl as good as possible

Everyone needs a hobby

It's the most fun I can imagine

Future

No, it truly never gets done

Protocols keep evolving

Open source code survives

There's no slow-down in sight

You can help!

Thank you!

http://curl.haxx.se/

Doing good is part of our code

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