The Tor Project: Applying Censorship Resistance Research to the Field

5th QUARTER OF PROJECT, Q4 OF THE YEAR: October 1, 2015 – December 31, 2015

Project Overview

Part one: Pluggable transport integration

Part two: Testing and network simulation improvements

Part three: Enhanced outreach

Foreign Assistance Framework: Internet Freedom Specific Indicators:

Q3 Project Timeline (July 1, 2015 – September 30, 2015) – Activity Summary

Pluggable transport integration

Project Objectives:

Outputs for the Quarter:

Outcomes:

Challenges:

Successes:

Testing and network simulation improvements

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Outputs for the Quarter:

Outcomes:

Challenges:

Successes:
Simplification of the area of our code that has the strongly-connected-components was a great milestone achieved that will improve our code and make it less painful for others to collaborate with us.

Enhanced outreach

Project Objectives:

Outputs for the Quarter:

Twitter’s verification of our Farsi Twitter account means that Iranian Twitter users will be able to trust the information that we disseminate there.

The main highlights of our work in social media for this quarter were related to our crowdfunding campaign and the announcement of our new Executive Director, Shari Steele.

Outcomes:

This quarter, we saw results from our efforts to popularize the idea of operating a Tor relay and contributing to the network: the art intervention in the museum and the still active relays from a year old campaign ran by EFF to support Tor.

Challenges:

Successes:

Press:

Next Quarter’s Planned Activities:

Pluggable Transport Integration

Testing and network simulation improvements

Enhanced Outreach
Project Overview

The project contains three main activities:

Part one: Pluggable transport integration

Tor will work to safely deploy transport technology to resist censorship, especially censorship based on deep packet inspection. This will be achieved by working with researchers to improve the usability, portability, security, and code maintainability for transports; integrating mature transports into experimental bundles for real users and feeding those results into further improvements; and improving and maintaining the application programming interface between Tor and the pluggable transport layer.

Part two: Testing and network simulation improvements

Tor will improve the correctness and stability of the core Tor software by streamlining and automating the process for launching a complete test; designing and scripting an automated test suite to exercise and stress as much of Tor’s functionality as possible; and extending Tor’s controller interface to allow better monitoring.

Part three: Enhanced outreach

To increase awareness and improve the sustainability of the Tor technology and research, Tor will develop dynamic messaging and targeted campaigns aimed at end users and volunteers. Tor will identify partner organizations for outreach activities, including diaspora populations from countries with low press freedom rankings, open source development groups, and NGOs supporting civil society.
Foreign Assistance Framework: Internet Freedom Specific Indicators:

a. Number of unique users of circumvention technology or secure communication technology (measured monthly):

Throughout Q4, just like for rest of 2015, we saw a steady number of ~2M users connecting directly to the Tor network.

![Graph showing directly connecting users from October 2015 to January 2016.](https://metrics.torproject.org)

**Q4 2015**

![Graph showing directly connecting users from January 2015 to January 2016.](https://metrics.torproject.org)

**Full year 2015**
While the number of directly-connecting users has been steady in 2015, we saw some growth for users connecting via bridges (please ignore the spike below, is not relevant). We started the year with under 20K daily users and closed above that mark with a continued upward trend.
These are very modest numbers, but for us it shows how our tools are becoming useful to users.

Another interesting observation that we had this quarter was the spike due to the Bangladesh government blocking social media websites such as Facebook. The community as well as the media picked up on this big jump in Tor usage coming from Bangladesh:

![Graph showing direct connecting users from Bangladesh from Nov-2015 to Jan-2016.]

The Tor Project – https://metrics.torproject.org/

Politics

Tor use skyrockets in Bangladesh after government bans social networks

By Patrick Howell O’Neill

Nov 23, 2015, 8:04am CT | Last updated: Nov 23, 2015, 8:17am CT

While the Western world fiercely debates encryption following the deadly terrorist attacks in Paris, tens of thousands of people are relying on the encrypted Tor network to bypass the Bangladeshi government’s aggressive internet censorship.

Tor use in Bangladesh jumped 380 percent this past week after the national government indefinitely banned Facebook, Instagram, WhatsApp, and Viber following widespread unrest over the execution of opposition politicians accused of war crimes in the 1971 war that split Bangladesh from Pakistan. Three million people died in the war.

We also saw a spike in Russia. The increase in usage in that country happened around the same time as news about the Russian airplane having crashed in Egypt was coming out, which could relate this increase to the need to find uncensored information about the event.²

We saw a modest growth in Pluggable Transports usage, going above the 20k daily users mark (catching up with bridge users):

b. Number of civil society actors trained in circumvention or digital safety techniques:

**Result:** We didn’t promote trainings to civil society actors this quarter. A lot of our efforts went into our Support Tor campaign which helped educate the general public about Tor as well as our participation on Chaos Communication Congress 32C3.

c. Number of USG-supported online tools developed or improved to maintain an open Internet:

**Results:**

- **Highlights for Pluggable Transport (PT):**
  - University of Berkeley UX research focus on PTs and bridges usage to bypass censorship.
  - Updated technical spec.
  - Start designing obfs5.

- **Highlights for Testing improvements:**
  - Test coverage continued to grow, now at 68.7%, in spite of the significant amount of additional new code that needed to be mastered.
  - We have achieved a great milestone in code simplification by reducing the size of the largest strongly-connected component to 19 features.

d. Number of individuals or organizations operating in Internet repressive countries that are provided with technical assistance to increase online security:

**Result:** 20 individuals operating in internet repressive countries were provided with technical assistance.

<table>
<thead>
<tr>
<th>Individuals trained</th>
<th>Country</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Germany</td>
<td>Foreign Ministry</td>
</tr>
</tbody>
</table>

e. USG-assisted campaigns and programs to enhance public understanding, NGO support and media coverage of digital threats and promotion of an open Internet:

**Result:** We are focusing on four areas of outreach; below are some highlights of this work in each area:

- Direct work with organizations:
In October, we received the good news that our proposal in conjunction with Facebook for the Internet Engineering Task Force (IETF) to formally recognize .onion domains was finally approved.

EFF published report stating that 567 relays from their 2014 Tor Challenge are still up and running.

State of the Onion and Hidden Services talk at Chaos Communication Congress 32C3.

- Outreach materials
  - Finalized storyboard for our animation explaining Pluggable Transports and Bridge Distribution and started animation production.
  - Created new swag for our Support Tor campaign.
  - Sent 140 t-shirts to relay operators or donors.

- Social Media:
  - @torproject_fa Farsi Twitter account was verified.
  - Fundraising campaign on Twitter.
  - Welcoming of our new Executive Director on Twitter.

- Media Support:
  - Media plan for Tor Messenger beta launch.

f. Number of times USG-supported analytic reports are cited by national and international media outlets:

**Result:** The metrics published by the Tor Project help illustrate stories about the impact of censorship circumvention tools. They also help provide educational information about the Tor network and services (e.g. Hidden Services, Pluggable Transports, etc.).

It is difficult to keep count of all the articles in which our metrics are cited, but we include here a selection of articles that highlight how the most-used metrics are cited in the media.

<table>
<thead>
<tr>
<th>Title</th>
<th>Media outlet</th>
<th>Metric cited</th>
<th>Date</th>
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<tbody>
<tr>
<td>With Messaging Apps Still Banned, Bangladeshis Turn to Tor (and Twitter)</td>
<td>Global Voices</td>
<td>Users connecting from Bangladesh</td>
<td>11/25/2015</td>
</tr>
</tbody>
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4 [https://blog.torproject.org/blog/landmark-hidden-services-onion-names-reserved-ietf](https://blog.torproject.org/blog/landmark-hidden-services-onion-names-reserved-ietf)
5 [https://www.rfc-editor.org/info/rfc7686](https://www.rfc-editor.org/info/rfc7686)
6 [https://www.eff.org/deeplinks/2015/10/hundreds-tor-challenge-relays-still-active](https://www.eff.org/deeplinks/2015/10/hundreds-tor-challenge-relays-still-active)
g. Number of times USG-supported analytic reports are discussed in established social media sites:

**Result:**

Our metrics are discussed on social media with direct links to our websites about our metrics. With hundreds of millions of users, it is hard to measure the total reach of our metrics-related posts, but a search for keywords such as “#Tor, usage, metrics” on Twitter provides us with some examples of these conversations on social media during Q4 2015:

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**Lawrence Alexander** @LawrenceA_UK - 17 Dec 2015

Huge spikes in Russia’s already-high #Tor usage in November. A bit steep to be organic traffic, so possibly malware?

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[Graph showing usage trends from October 2015 to December 2015, with peak usage in November.]

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2 [https://twitter.com/search?f=tweets&vertical=default&q=tor%20usage%2C%20metrics%20since%202015-10-01%20until%202015-12-31&src=typd]

3 [https://twitter.com/LawrenceA_UK/status/677446690996158464]
We also promote our blog posts about metrics that we are adding, or new usage numbers, through our Twitter account.

9. https://twitter.com/Florent_ATo/status/671933474505433089
10. https://twitter.com/torproject/status/664169187166838784
Q3 Project Timeline (July 1, 2015 - September 30, 2015) - Activity Summary

Pluggable transport integration

Project Objectives:

The idea is to separate Tor's anonymity and privacy properties from its censorship-resistance properties: the core Tor software focuses on building Tor circuits and getting the multi-layer encryption right, while the transport layer focuses on preventing an attacker from recognizing or blocking the client's connections to the rest of the Tor network. This modular approach lets us "plug in" new transports as needed---and since the transport layer is a separate program, it can be written in whatever rapid prototyping language is most convenient, allowing Tor to adapt much more quickly to a censor's new Deep Packet Inspection (DPI) tactics without needing to touch the core Tor program at all.

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11 https://twitter.com/torproject/status/664168624467386368
Outputs for the Quarter:

Task 1 (SponsorT, aka the work we did via the Internews contract): Write the initial evaluation (to be continually revised) of existing and soon to be deployed transports following the evaluation criteria set out in the proposal.

Updated the PT spec on Core Tor source code\textsuperscript{12} to reflect more updated guidelines for creating and implementing pluggable transports.

Now that we have done a lot of work on building these guidelines and documenting our evaluations of PTs,\textsuperscript{13} we've been planning the advocacy work to help the community adopt these resources.

We are planning on doing this work and two new evaluations with Internews starting on Q1 2016.

Task 2 (SponsorS, aka this direct contract): Maintain and extend obfsproxy, obfs4proxy, obfsclient and other Pluggable Transport codebases as needed, and assist developers and researchers who wish to use our frameworks to do relevant research.

We are designing and writing obfs5\textsuperscript{14} with more crypto and more aggressive link padding. This new design is in early stages; we still need to document and test most of the work.

For now, we are using a high speed stream cipher, a Ring-LWE key exchange algorithm, and a 448 bit ECDH implementation. The crypto part is tested and is really fast considering it is the first pass.

We are looking forward to continuing the work with obfs5, as it could dramatically increase link security to the guard.

Task 3 (SponsorS): Tor side pluggable transport related (and other) improvements.

Tor Browser 5.0.6:

- \textbf{Bug 17318}: Remove dead ScrambleSuit bridge
- \textbf{Bug 17473}: Update meek-amazon fingerprint

\textsuperscript{12} https://gitweb.torproject.org/torspec.git/diff/pt-spec.txt?id=0ef45b97b1a935489335fc31d625c463b076c1e3&d2=2f775a13e4b66a8984dfd721194f81ef363f2e38
\textsuperscript{13} https://trac.torproject.org/projects/tor/wiki/org/sponsors/SponsorT
\textsuperscript{14} https://git.schwanenlied.me/explore
Task 4 (SponsorS): Pluggable transport R&D (Catch-all)

Researchers Linda Naeun Lee, Serge Egelman, David Wagner, and David Fifield from University of Berkeley are performing usability research\(^{15}\) on the configuration dialogue box of Tor Browser to connect it to the Tor network.

They are reporting their findings on our UX team email list and we are looking forward to working with them in implementing the improvements that the team is coming up with to fix usability issues in this very important step for Tor usage. We hope to help users easily understand when they need PT or bridges and how to use them.

![Dialogue Box clickable prototype draft based on research findings.](image)

Outcomes:

Worked on a strategy with Internews to increase adoption of our guidelines and documentations by community of developers. As part of this strategy, we participated in a developers meeting organized by Internews in Washington D.C. where we heard feedback from the developer community.

We also released a new version of the PT spec which we hope to continue to improve by implementing feedback from the community.


\(^{16}\) [https://marvelapp.com/9620ef](https://marvelapp.com/9620ef)
First drafts of obfs5, where we hope the crypto will be much faster and will improve first guard security, and first analyses of usability research around obfuscation tools, are outcomes we are excited to share for this quarter’s work.

Challenges:

One of the challenges our PT community currently has is coordination. As we have a lot of pluggable transport solutions that need to be improved, we created guidelines to assist developers so that their work can be more readily deployed to end users.

We are working with applications teams to collect feedback on how to better implement the user experience for using a PT, in hopes that it will help the communication between application developers and PT developers.

Successes:

Progress with obfs5 design, as we could test the first attempts of implementing the new crypto part we are creating for this PT.

We are very happy with our partnership with the University of Berkeley and their usability study on censorship obfuscation tools. PTs are very hard concepts to teach the users, and we are looking forward to learning more about the issues they are having while going through this process with our products.

**Testing and network simulation improvements**

**Project Objectives:**

Tor will improve the correctness and stability of the core Tor software by streamlining and automating the process of launching a complete test; designing and scripting an automated test suite to exercise and stress as much of Tor’s functionality as possible; and extending Tor’s controller interface to allow better monitoring.

**Outputs for the Quarter:**

Tor coverage with all tests is 68.7%; unit test coverage is at 44.5%. This is in spite of a significant amount of additional new code to master during the 0.2.8 series.

We have reduced the size of the largest strongly-connected-component in our code’s callgraph to 19 functions (from a peak of around 450), and we are extending our analysis tools to find other opportunities for code simplification. After some discussion with members of the formal verification community, we see our next steps for simplifying the code as specifying our intended modular structure and automating the process of finding violations of that structure.
We've implemented a number of controller features with a testing focus, in particular, several that expose details of the otherwise under supported hidden service subsystem.

Chutney is stable and in regular use. Our module isolation code is in the draft design phase.

Outcomes:

Continue test coverage of our code, achieving 68.7% of all tests and 44.5% of unit test coverage.

Simplification of our code, a step towards our modularization strategy.

Start to design our module isolation code.

Test support for controllers used by hidden service subsystem and bring more support to this area of the code.

Challenges:

Developer education, so we can ensure the quality of tests in new code follows our current standards, continues to be a challenge that we are putting forth substantial efforts to solve.

This is more teamwork than code work: some of the work done to help address this is definition of roles and maintainers of core Tor code. We hope that assigning sub-systems maintainers to help review different sections of the code will help us to decentralize this process and increase our capacity to ensure quality in all parts of the code.

Part of this challenge is the modularization of the code, as we mentioned in the previous quarter. We achieved an important milestone this quarter, as reported, but we still have much to do on this front.

Successes:

Simplification of the area of our code that has the strongly-connected-components was a great milestone achieved that will improve our code and make it less painful for others to collaborate with us.

Also on the topic of collaboration, the fact that despite the increase of our code base, our test coverage continued to grow, is another beneficial result of our work in educating new contributors on testing their code.
Enhanced outreach

Project Objectives:

We will make more people aware of the benefits of Tor, especially when censorship circumvention needs to be combined with privacy and anonymity to extend the time that civil society members can work in Internet-repressive environments.

Outputs for the Quarter:

Direct work with organizations:

Jacob Appelbaum worked with Trevor Paglen and Leif Ryge on creating an installation in The Edith-Russ-Haus for Media Art in Germany. They created the art installation called ‘Autonomy Cube,’ which is a cube with both a Tor exit relay and an open wifi that routes all the wifi traffic over the Tor network.

Opening this Thursday: #AutonomyCube - Major Tor exit node hosted in a museum because freedom requires autonomy.

Tor has a long term partnership with EFF, and in Q4 2015, they published a report stating that 567 relays from their 2014 Tor Challenge were still up and running.\[19\]

\[18\] https://twitter.com/torproject/status/656069736523022336
\[19\] https://www.eff.org/deeplinks/2015/10/hundreds-tor-challenge-relays-still-active
One Year Later, Hundreds of Tor Challenge Relays Still Active

As of this month, 567 relays from our 2014 Tor Challenge are still up and running—more than were established during the entire inaugural Tor Challenge back in 2011. To put that number in perspective, these nodes represent more than 95% of the roughly 6,500 public relays currently active on the entire Tor network, a system that supports more than 2 million directly connecting clients worldwide.

Tor is a tool that protects privacy on the Internet by routing web traffic through a series of nodes, or “relays,” creating a network of servers that act as way stations on data’s journey from point A to point B.

Tor also gave a workshop on EFF’s Techno-Activism night and on Aaron Swartz Day at the Internet Archive.

Another way we connect back with the many partners and supporters out there are our annual “State of the Onion” talks at the Chaos Communication Congress. At this talk, we discussed the big changes and events we experienced during 2015. We had some big announcements, such as our new Executive Director, Shari Steele, who joined us on the stage. We also invited Alison Macrina from the Library Freedom Project to share the stage with us and talk about her amazing work in educating librarians about Tor.

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20. [https://twitter.com/torproject/status/654702389077741568](https://twitter.com/torproject/status/654702389077741568)
21. [https://twitter.com/EFF/status/654382465461542912](https://twitter.com/EFF/status/654382465461542912)
22. [https://twitter.com/torproject/status/663473117747105792](https://twitter.com/torproject/status/663473117747105792)
23. [https://www.youtube.com/watch?v=EXEUE__ap08](https://www.youtube.com/watch?v=EXEUE__ap08)
24. [https://events.ccc.de/congress/2015/wiki/Main_Page](https://events.ccc.de/congress/2015/wiki/Main_Page)
This year at Chaos Communication Congress we also delivered a talk entitled, “Tor onion services: more useful than you think.” We discussed how our onion services work and demonstrated use cases that help demystify onion services, including apps such as OnionShare and Ricochet, and the onion service deployed by Facebook. We discussed new designs from what we are calling the “new generation of onion services.” We hope that this type of talk helps us to stay engaged with our community (in this case, thousands of people) and increase collaboration on our projects.

Outreach materials

25 https://www.youtube.com/watch?v=oh9D2r-ck40
During Q4 we launched our first crowdfunding campaign, and to go with it, we created a special t-shirt and sticker with the campaign theme: “This is What a Tor Supporter Looks Like.”

Your support is critical to our success

Donate $23 or more, get swag, take a picture and share it with us via #supportTor hashtag.

Perks

We mailed 140 t-shirts this quarter to supporters who are either running a relay or who donated to us. We are in the process of sending out thousands of ‘Thank You’ emails from our crowdfunding campaign that includes swag; our team is working hard to make sure our supporters get their prize.

Bridge and Pluggable Transports animation:

We finished our storyboards and moved on to work on editing the animation. Our estimation is that we will have the first version ready for feedback on Q1 2016.
What do you do when a website is blocked or censored?

Do you use Tor?

But what if even Tor isn’t working? / But what if even Tor is blocked?

Don’t panic!!! The world hasn’t come to an end

Fortunately,...

... there are several ways...
to connect to the Tor network

In fact, many of these methods...

... are already built in...

... Tor Browser

Each of which aims to work...

... in a different scenario
Media Strategy:

Our press team did an amazing job promoting the beta launch of Tor Messenger. Thanks to our media work, the launch received highly positive coverage (over 90 articles) in major online news outlets. For example:

**Tor launches anti-censorship Messenger service**

By Chris Baraniuk
Technology reporter

30 October 2015  | Technology
Take 5 minutes and up your opsec game with Tor Messenger [Updated]
Sending chat traffic via Tor and requiring OTR is a big win for privacy.

by Cyrus Farivar - Oct 31, 2016 7:00am PDT

Social Media:
Our Twitter account continues to gain followers, now at 150k, a growth of ~25k from last quarter. We also had our Farsi account, @torproject_fa, verified by Twitter:

26 https://twitter.com/torproject_fa
Twitter’s verification of our Farsi Twitter account means that Iranian Twitter users will be able to trust the information that we disseminate there.

The main highlights of our work in social media for this quarter were related to our crowdfunding campaign and the announcement of our new Executive Director, Shari Steele.

Our first crowdfunding campaign had a two-fold mission: to educate the public about the diversity of people who use Tor (so it was part of our outreach strategy) and to raise money. We were successful on both counts. The campaign grossed $205,000. It was managed by a large team of Tor staff and volunteers, working with consultant Katina Bishop. We created a series of posts from famous people coming from different backgrounds explaining why Tor is important to them. We used the campaign slogan, “This is what a Tor supporter looks like” to create an educational message showing the different use cases of Tor and perspectives on why the project is so important. Here are some examples:
For Tor to be useful in an extremely repressive country like Ethiopia, it needs to be normal, as normal as HTTPS has become in the past few years. When you use Tor to do something quotidian, you're providing cover traffic for people who need to use Tor to do something extraordinary. So give, run an exit node, but at the very least, help make Tor utterly ordinary by using it as often as you can.

Ethan Zuckerman
DIRECTOR, MIT CENTER FOR CIVIC MEDIA; CO-FOUNDER, GLOBAL VOICES

In the age of ubiquitous digital surveillance and powerful adversaries, Tor is our best defense. Use it, teach it, and advocate for it to make the internet a little more free.

Alison Macrina
DIRECTOR OF LIBRARY FREEDOM PROJECT

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22. https://twitter.com/torproject/status/669197408715284481
This is what a Tor supporter looks like: @maltis in Parliament of North Rhine-Westphalia #Germany #SupportTor

https://twitter.com/torproject/status/672183745080901634
The @ACLU's @benwizner on building a relationship w/ @Snowden using Tor:
blog.torproject.org/blog/what-tor-...
#SupportTor

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https://twitter.com/torproject/status/679436526548332544
"Tor is what allows us to route around tyranny." - Deep thanks to Rabbi Rob and Lauren for their matching gift <3

Thanks, @doctorow family!
blog.torproject.org/blog/what-tor--- Please #supportTor: TorProject.org/Donate/Donate-

[31] https://twitter.com/torproject/status/677928074630049793
Please donate:
torproject.org/donate/donate-…
#SupportTor #32C3

Executive Director announcement:

[Link](https://twitter.com/torproject/status/681515577110827008)
We are thrilled to announce Shari Steele as Tor's new Executive Director!
blog.torproject.org/blog/greetings...
#SupportTor

The Tor Project is made up of a bunch of brilliant techies trying to protect rights in the digital world. I'm delighted that I can use my experience building and growing an Internet freedom NGO to help make Tor more operationally sound and sustainable.

Tor's new executive director is a digital privacy legend engt.co/IRLb3sq via @engadget #SupportTor

https://twitter.com/torproject/status/675314646782451712
https://blog.torproject.org/blog/greetings-tors-new-executive-director
https://twitter.com/torproject/status/676035785653551104
http://www.engadget.com/2015/12/13/tor-picks-eff-leader-as-director/
Outcomes:

This quarter, we saw results from our efforts to popularize the idea of operating a Tor relay and contributing to the network: the art intervention in the museum and the still active relays from a year old campaign ran by EFF to support Tor.

Our social media presence has shown how engaged we are with our community, and the results of our “Support Tor” campaign were incredible. We not only got endorsements from a diverse group of influential people, but our community joined us by sharing their support or inviting others to do so.

It was our first coordination of outreach materials, PR and media work around one themed campaign, and it was successful despite some resource limitations.
Also, this quarter marked our first time coordinating media/communications work with the launch of a new product. Tor Messenger’s release had a great repercussion in media outlets and social media.

**Challenges:**

We saw that our community is very engaged and that if we ask for support we will have a great response. This is a success and a challenge at the same time. We had an increase in incoming messages from our supporters that exceeded our capacity to answer them, and we are still working to catch up with the demand.

**Successes:**

**Directly working with organizations**

We are very happy with the continued work with organizations to popularize the idea of supporting Tor by running a Tor relay. In Q3 2015, we worked with the Library Freedom Foundation on getting libraries excited about running Tor relays. This quarter, we were excited to announce our art installation that is a Tor relay and wifi router that tunnels all traffic through Tor. In addition, we enjoyed the ongoing support from partners like EFF, which helps us to mobilize our community and keep them engaged; to see hundreds of relays still running from a campaign that they run over an year ago is really gratifying.

**Outreach materials**

We are excited with the success of our end of the year campaign and how the swag was very effective in spreading our “Support Tor” message:
_NSAKEY @ NSAKEY · 23 Dec 2015

I #SupportTor because on the Internet, nobody knows you’re a dog, and it should stay that way.

https://twitter.com/_NSAKEY/status/679880815195648000
A new Tor supporter. Thanks, @amanapalmer!

#ThisIsWhatATorSupporterLooksLike #SupportTor
Torproject.org/donate/donate...
THIS is what a Tor supporter looks like @HuffPostLive! Thanks, @mollycrabapple!
torproject.org/donate/donate-…
#SupportTor

Social Media

Great engagement from the community and the media during our major announcements last quarter:

#SupportTor crowdfunding campaign:

41. https://twitter.com/torproject/status/672557939899502593
Tor Messenger release:

42 https://twitter.com/harromueller/status/675349840151363584
43 https://twitter.com/TvdW/status/676021766754598913
Sick of waiting (years) for Adium to implement the convenient "Shared Secret" and "Question and Answer" verification for OTR? #TorMessenger

5:59 PM - 29 Oct 2015

I have retired Adium, am now fully on Tor Messenger. New XMPP OTR details here (arstechnica.com/ars-staff-pgp- ...) and here (github.com/cfarivar/crypt ...).

Shari Steele, new Executive Director announcement:

Awesome news for the @TorProject! Shari Steele was ED of @EFF for years & turned it into the juggernaut it is today.

8:51 AM - 11 Dec 2015

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https://twitter.com/garretr_/status/659895009282396161
https://twitter.com/cfarivar/status/660190409084268544
https://twitter.com/trevortimm/status/675357259006935040
Media Support

The media coverage of Tor Messenger beta launch was a big success. Our press release for the launch had very educational content, and our outreach to individual reporters prompted nearly 100 journalists to write positive pieces that educate users about the product. In this way, the user knows what to expect before even downloading the product. A significant number of

47 https://twitter.com/SCMagazine/status/675458835633565698
48 https://twitter.com/amnestydk/status/676325255347101700
reporters (such as Andy Greenberg from Wired and Julia Angwin from ProPublica) encouraged readers to switch from a less secure software tool (Adium) to Tor Messenger.

Press:

<table>
<thead>
<tr>
<th>Date Published</th>
<th>Media Outlet</th>
<th>Article Title</th>
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<tbody>
<tr>
<td>Oct 13th</td>
<td>Economic Times</td>
<td>More Indians are logging on anonymously using browsers like Tor, Freenet, I2P and Tails</td>
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<td>Oct 14th</td>
<td>The Daily Dot</td>
<td>Tor is getting major upgrades on iOS 9</td>
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<td>Oct 28th</td>
<td>The Verge</td>
<td>Facebook helps Tor's hidden sites get official recognition</td>
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<td>Oct 29th</td>
<td>Tech Times</td>
<td>With Facebook's Support, Tor Project's .Onion Domains Remain Hidden</td>
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<td>Oct 29th</td>
<td>WIRED</td>
<td>Tor Just Launched the Easiest App Yet for Anonymous, Encrypted IM</td>
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<td>Oct 30th</td>
<td>ZDNET</td>
<td>Tor Project launches encrypted anonymous chat app to the public</td>
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<td>Oct 30th</td>
<td>BBC</td>
<td>Tor launches anti-censorship Messenger service</td>
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<td>Nov 16</td>
<td>International Journalists</td>
<td>Five tools for journalists' online safety, privacy highlighted during</td>
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<td>Network (IJNet)</td>
<td>Aaron Swartz Day event</td>
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<td>Nov 25th</td>
<td>The Register (UK)</td>
<td>Tor Project: Anonymity ain't free, folks. Pony up</td>
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<td>Nov 30th</td>
<td>Fusion</td>
<td>The attack that broke the Dark Web—and how Tor plans to fix it</td>
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<td>Dec 4th</td>
<td>SC Magazine</td>
<td>Top 6 influential security thinkers</td>
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<td>Dec 7th</td>
<td>ZDNET</td>
<td>France considers public Wi-Fi, Tor network ban in wake of terror</td>
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<td>attacks</td>
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<td>Dec 10th</td>
<td>MotherBoard</td>
<td>Tor and Public Wi-Fi Safe in France, Prime Minister Says</td>
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<td>Dec 11th</td>
<td>BoingBoing</td>
<td>The Tor Project has a new executive director: former EFF</td>
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<td>director Shari Steele!</td>
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<td>Dec 11th</td>
<td>WIRED</td>
<td>Tor Hires a New Leader to Help It Combat the War on Privacy</td>
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<td>Dec 11th</td>
<td>The Register (UK)</td>
<td>Silicon Valley's Congresswoman comes to the defense of Tor</td>
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<td>Dec 14th</td>
<td>ZDNET</td>
<td>Twitter says 'Why not try Tor?' after issuing first state-backed hack</td>
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<td>alert</td>
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<td>Dec 29th</td>
<td>MotherBoard</td>
<td>The Tor Project Is Starting a Bug Bounty Program</td>
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Next Quarter’s Planned Activities:

Pluggable Transport Integration

Next steps are:

- Continue to work on obfs5.
- New release of obfs4proxy.
- Continue collaboration with PT’s development by reviewing tickets comments and code patches.

Testing and network simulation improvements

Next steps are:

- Document Chutney's internals more thoroughly, cleaning them up as needed.
- Finish work on some initial "broken tor" tests for chutney.
- Continue adding more tests to Tor.
- Finish design and write an alpha implementation of our module isolation framework.

Enhanced Outreach

We will continue to pitch positive news stories to the US and international media that reinforce the role that Tor plays in ensuring freedom of expression and other human rights. We will work more closely with allies to build and promote unified messaging about Tor, surveillance, and human rights to reinforce the fact that Tor is supported worldwide by many diverse organizations and prominent individuals.

We also plan to focus on a more targeted outreach approach that will leverage:

1. Our knowledge of the correct way to use the Tor network for the most user safety;
2. our special role as the technical developer of Tor and thought leader on privacy tools in advising groups about human rights and surveillance; and
3. our role as the developer of Tor in educating public policy influencers about the value of Tor in the context of free expression and human rights.