OONI MOSS Progress Report
7th June 2018

During the months of April and May 2018, the OONI team primarily worked on the design and UX for the revamped OONI Explorer.

Design & UX for OONI Explorer

We finished the mockups for all the pages we need for the revamped OONI Explorer. We expect further iterations to be needed as we progress in implementing them, but we feel quite happy with the results of the mockups so far.

The mockups were designed in close collaboration with the engineering team to ensure that the audience of OONI Explorer understands the complex technical information presented and to ensure that what is presented is technically feasible.

Some of the principles that guided the redesign of OONI Explorer include the fact that this software component, in a way, showcases the types of data that OONI offers. Users of our apps may go to OONI Explorer to understand what they will be contributing to by running the tool. Researchers and the public at large will consult it to understand which questions they could have answered based on OONI data.

Based on this, we designed the interfaces around the idea that the deeper you navigate the OONI Explorer sitemap, the more detailed and technical the information becomes. As such, the top level pages contain more high level information, but the deeper you go, the more verbose and technical it becomes.

The design mockups include the following types of pages:

- **Landing page:** Introducing users to the platform (potentially with a video cast) and providing high levels stats pertaining to the amount of collected measurements, covered countries and networks, and the amount of censorship cases detected globally.
- **Country page:** Providing an overview of the top findings per country, automatically updated on an ongoing basis with the latest measurements. This page would show the types of websites blocked the most, the amount of detected middleboxes, and whether instant messaging apps and circumvention tools are blocked in that country.
- **Detailed findings in country page:** Providing detailed information pertaining to each test (for example, the testing of torproject.org with OONI’s Web Connectivity test). In
addition to high level information (such as whether or not a site is blocked), this page also includes the raw network measurement data (that can potentially be used as evidence). The mockups cover the findings for various tests (run in Italy), such as Web Connectivity, HTTP Invalid Request Line, NDT Speed Test, WhatsApp test, and Telegram test.

- **Explorer page:** Listing all the countries in the world, categorized per continent, and including a search tool. This page enables users to select the country of their choice to explore its measurements and findings.

- **All Results page:** Providing an overview of all of the most recent measurements collected from around the world. This page enables users to filter the results based on the following parameters: input (i.e. tested URL), OONI Probe test, country, ASN and date range. Users can also filter the results to only view the measurements containing confirmed cases of censorship, as well as network anomalies (potentially including censorship cases).

- **Error page:** Appearing if/when errors occur.

A big change in this redesign is also the importance of color coded views which make it visually easier to distinguish between different features and test groups. This work is in sync with the current (ongoing) redesign of the OONI Probe Mobile apps which have redesigned test groups, icons and color palettes. Users of OONI Probe will be seamlessly able to understand what's going on in OONI Explorer because of the consistent visual language between the two platforms. It was a great opportunity to try out our style guide components in the wild and to solidify them as well.

In the spirit of the last point, we also integrated a canonical footer design for OONI Explorer which will be consistent and connect users to the various OONI projects.

Relevant links:

- [https://github.com/ooni/explorer/issues/2](https://github.com/ooni/explorer/issues/2)
- [https://github.com/ooni/explorer/issues/1](https://github.com/ooni/explorer/issues/1)
- [https://xd.adobe.com/view/5ce42d4b-386e-44dc-679e-f509e9dc1a36-2ad5/](https://xd.adobe.com/view/5ce42d4b-386e-44dc-679e-f509e9dc1a36-2ad5/)

We have attached the mockups we designed as part of 2. Design & UX for OONI Explorer.
Circumvention Tools

Uncover evidence of network tampering, near and far.

27.6M Measurements | 181 Countries | 2700 Networks | 666 Censorship Cases

Canny sentence introducing Explorer

“Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque porro quae ab illo inventore veritatis et quas architecto beatae vitae dicta sunt explicabo.

How does it work?

“Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque porro quae ab illo inventore veritatis et quas architecto beatae vitae dicta sunt explicabo.

About OONI

Network Interference

- 666 scans are detected on 11 networks
- Instant Messaging might be blocked
- Circumvention Tools are working as expected

Analyze Data

“Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque porro quae ab illo inventore veritatis et quas architecto beatae vitae dicta sunt explicabo.

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Types of Websites Blocked

- Hate Speech

Expose Internet Censorship

“Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque porro quae ab illo inventore veritatis et quas architecto beatae vitae dicta sunt explicabo.

- 666 scans are detected on 11 networks
- Instant Messaging might be blocked
- Circumvention Tools are working as expected

Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt.
Anomaly

Type: DNS Based Blocking

DNS Query Answers
- Resolver: 74.125.190.29
- Answers: 31.13.78.35

TCP Connect results
- Connection to 31.13.78.35:80 was successful
- Connection to star-mini.c10r.facebook.com:80 was successful

HTTP Response Body

Probe Metadata

<table>
<thead>
<tr>
<th>Software</th>
<th>OONI Probe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform</td>
<td>Android</td>
</tr>
<tr>
<td>Software Version</td>
<td>2.0.1</td>
</tr>
<tr>
<td>Measurement Kit Version</td>
<td>0.8.3</td>
</tr>
</tbody>
</table>

Raw Measurement Data

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Tampering detected

Responses from Middlebox

Response #0: Empty
Response #1: Empty
Response #2: Empty
Response #3:

Probe Metadata

Software: OONI Probe
Platform: Android
Software Version: 2.0.1
Measurement Kit Version: 0.8.3

Raw Measurement Data: "JSON"
Tampering detected

**Responses from Middlebox**
- Name tampering: False
- Value tampering: False
- Number tampering: False
- Name Capitalization: False
- Request Line Capitalization Tampering: False
- Total tampering: False
- Name Diff: "X-BlueCoat-Via"

**Probe Metadata**
- Software: OONI Probe
- Platform: Android
- Software Version: 2.0.1
- Measurement Kit Version: 0.8.3

**Raw Measurement Data**
**Download Speed by time**

<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Download Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>20.5 Mbps</td>
</tr>
<tr>
<td>1</td>
<td>21.0 Mbps</td>
</tr>
<tr>
<td>2</td>
<td>21.5 Mbps</td>
</tr>
<tr>
<td>3</td>
<td>22.0 Mbps</td>
</tr>
<tr>
<td>4</td>
<td>22.5 Mbps</td>
</tr>
<tr>
<td>5</td>
<td>23.0 Mbps</td>
</tr>
<tr>
<td>6</td>
<td>23.5 Mbps</td>
</tr>
</tbody>
</table>

**Upload Speed by time**

<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Upload Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10.5 Mbps</td>
</tr>
<tr>
<td>1</td>
<td>11.0 Mbps</td>
</tr>
<tr>
<td>2</td>
<td>11.5 Mbps</td>
</tr>
<tr>
<td>3</td>
<td>12.0 Mbps</td>
</tr>
<tr>
<td>4</td>
<td>12.5 Mbps</td>
</tr>
<tr>
<td>5</td>
<td>13.0 Mbps</td>
</tr>
<tr>
<td>6</td>
<td>13.5 Mbps</td>
</tr>
</tbody>
</table>

**Test Details**

<table>
<thead>
<tr>
<th>Server</th>
<th>Average Ping</th>
<th>Max Ping</th>
<th>MSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>beg01</td>
<td>43.0 ms</td>
<td>268.0 ms</td>
<td>1388</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Packet Loss</th>
<th>Out of Order</th>
<th>Timeouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000 %</td>
<td>0.0 %</td>
<td>0</td>
</tr>
</tbody>
</table>

**Probe Metadata**

- **Software**: OONI Probe
- **Platform**: Android
- **Software Version**: 2.0.1
- **Measurement Kit Version**: 0.8.3
Test Details
Application: Failed
Web App: Okay

End Point Status
- Connection to 31.13.78.35:80 was successful
- Connection to star-mini.c10r.telegram.com:80 failed

Probe Metadata
- Software: OONI Probe
- Platform: Android
- Software Version: 2.0.1
- Measurement Kit Version: 0.8.3

Raw Measurement Data

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Data
- Install Probe
- Explorer
- API
- Test Docs

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- Donate
- Partners
- Run OONI

Detect and measure internet censorship all around the world.
WhatsApp is working

Test Details
- Mobile App: Okay
- Web App: Okay
- Registrations: Okay

End Point Status
- Connection to 31.13.78.35:80 was successful
- Connection to star-mini.c10r.telegram.com:80 was successful

Probe Metadata
- Software: OONI Probe
- Platform: Android
- Software Version: 2.0.1
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Raw Measurement Data

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