

The Privacy Flag End-User Tools for Websites, Smartphones and IoT

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**PRIVACY
FLAG**



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Privacy Flag Project Enabling Crowd-sourcing based privacy protection for smartphone applications, websites and Internet of Things deployments



Introduction



Privacy Flag
engages
with the
crowd



Crowd evaluation



Android app
(apps & IoT)



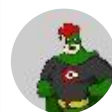
Browser add-on
(websites)



Additional Input



Automated
privacy enablers



Privacy Flag
experts input



Evaluation for:

- Websites
- Mobile Applications
- IoT registered networks



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PF smartphone app

- It allows users to get information on potential privacy risks from installed applications in their Android-powered mobile phones and tablets.
- It informs users whether installed software is considered privacy friendly or not friendly based on the analysis conducted by the Privacy Flag back-end system.



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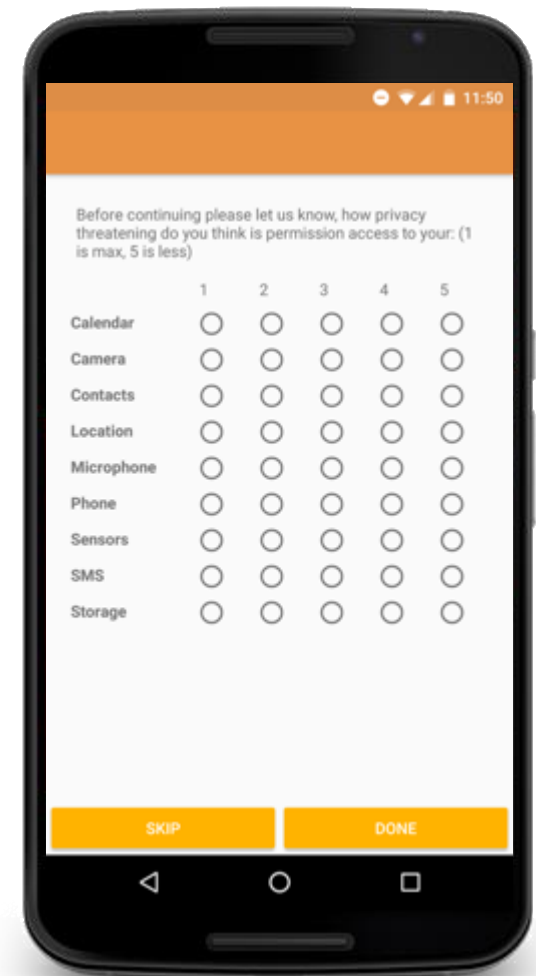
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PF smartphone app

Step 1: Users open the app for the first time

User is asked to classify the 9 main Android permission categories, how threatening each one is



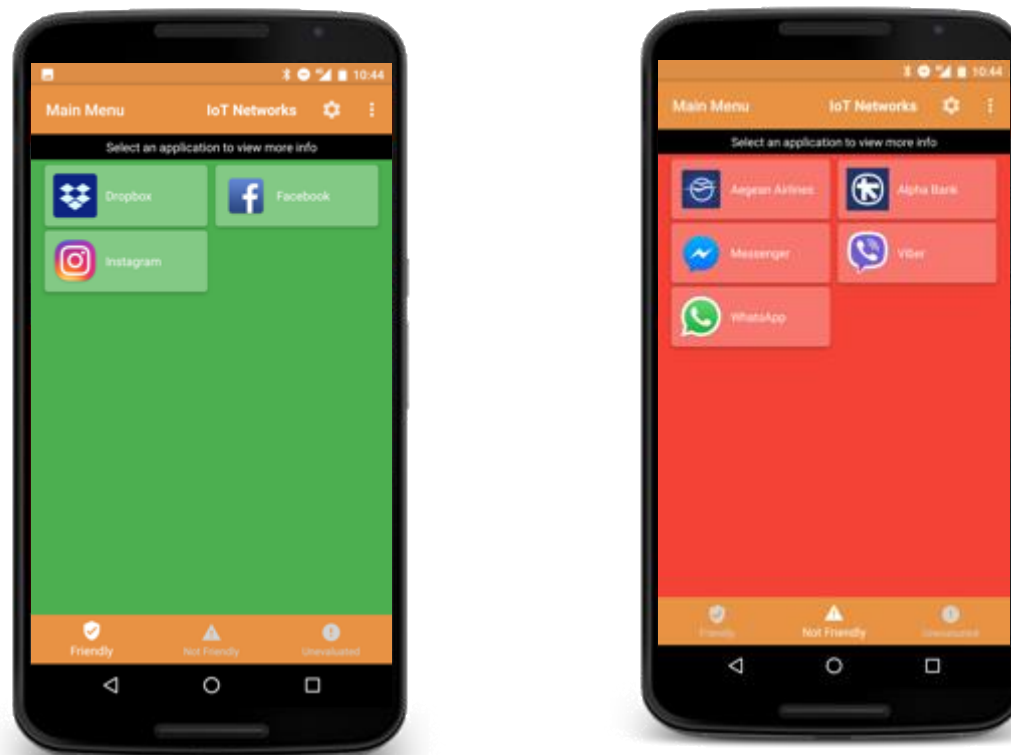
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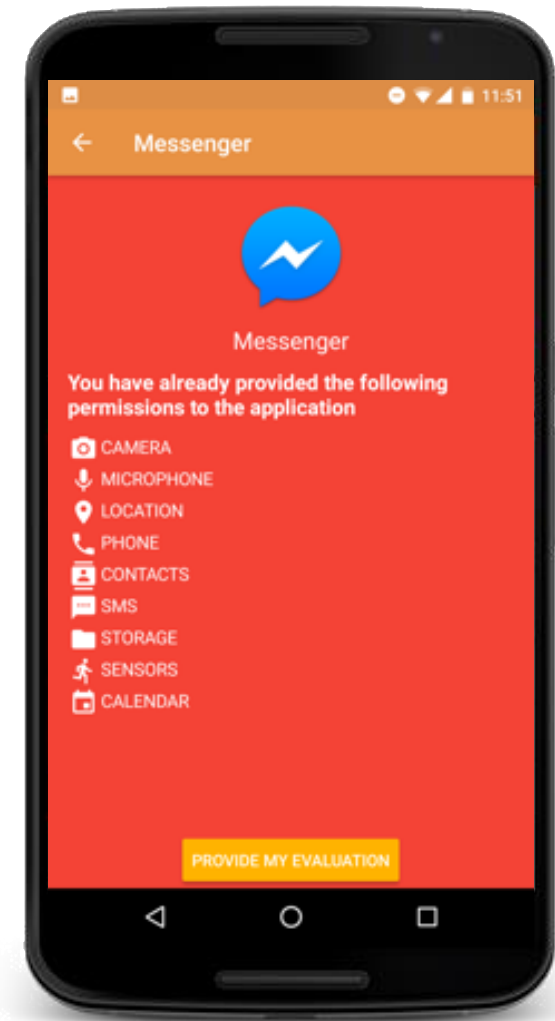
PF smartphone app

Step 2: shows a list of all installed applications based on the evaluation



Step 3: users can view more information for each application,

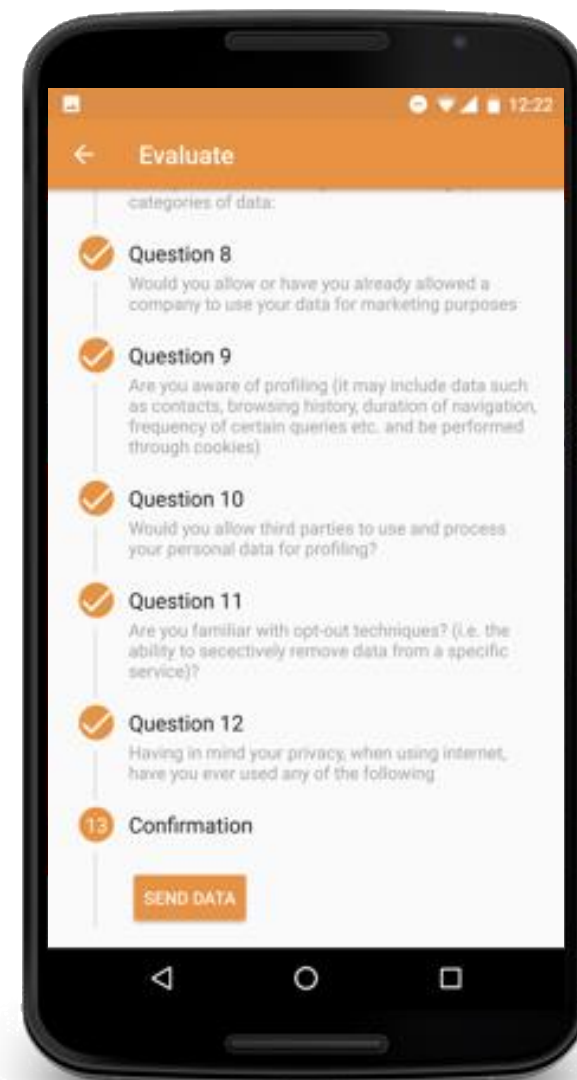
Including permissions given





PF smartphone app

Step 4: users can provide their own evaluation for the specific application



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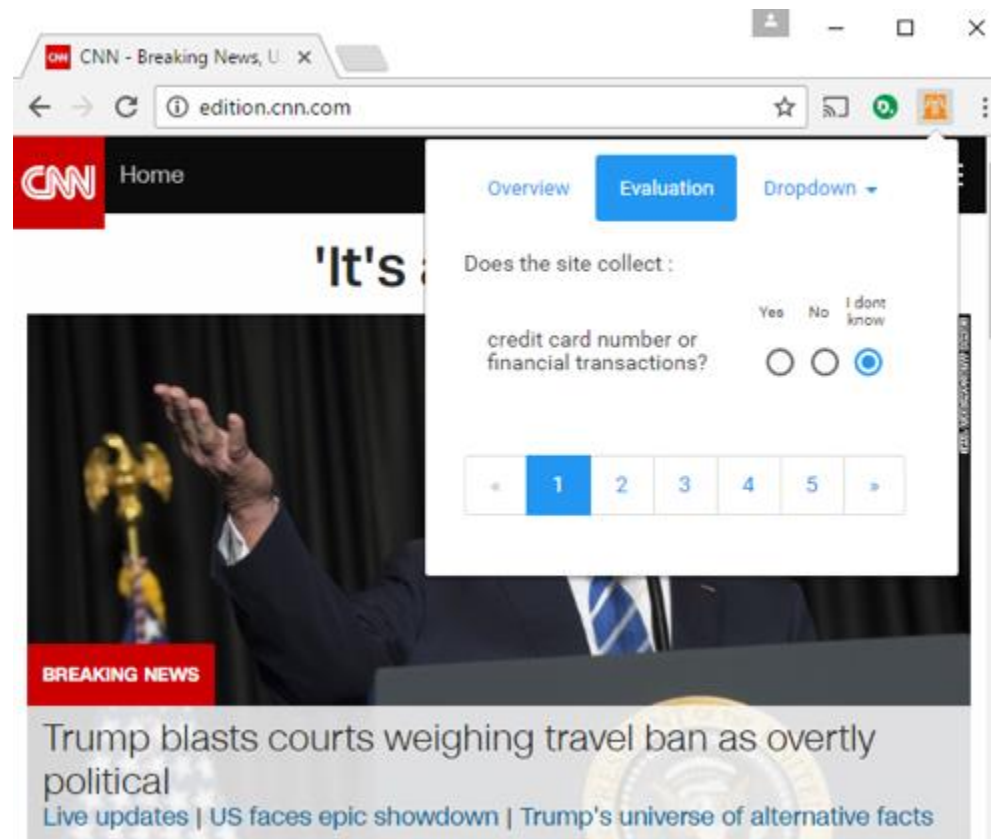


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PF web browser add-on

- A tool that allows users to get information about potential privacy risks when browsing throughout the Internet.
- The add-on informs users whether a web site is considered safe or not based
 - input gathered by technical enables
 - crowdsourcing data from end users.





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Implemented list of threats

The evaluation of the website is based on the top 20 threat matrix.

- *Does the website provide data encryption (SSL/TLS)?*
- *What information does the website/server directly learn about a user (using forms)?*
- *Which communication parties is data transferred to?*
- *Does the website use HTML cookies?*
- *Does the website use third party cookies?*
- *Does the website use HTML5 Web SQL database?*



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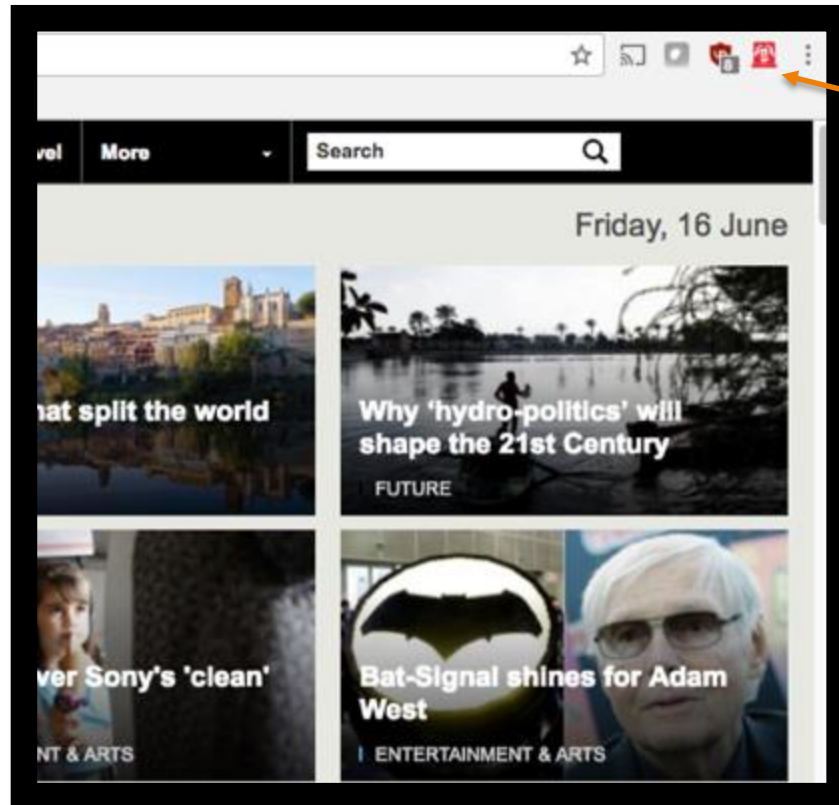


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PF web browser add-on

Step 1: user browses through the internet



PF flag quickly shows the evaluation of the site



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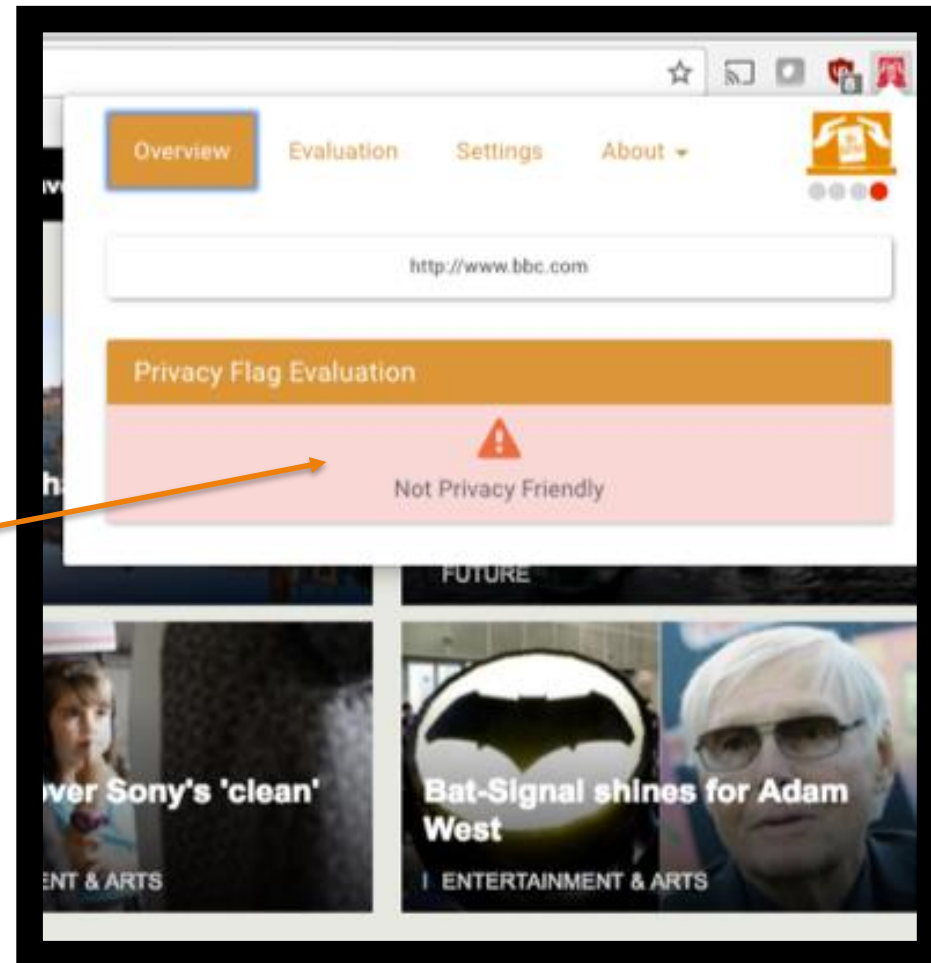
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PF web browser add-on

Step 2: user opens the add-on to view more info

Current Evaluation



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PF web browser add-on

Step 3: user provides his own evaluation

Overview Evaluation Settings About

Is the following data collected? (with or without your consent)

	Yes	No	IDK
Personal data, for example user name, address, email	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Credit card number of financial transactions	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Data from your contacts, calendar, or social network accounts	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

1 2

Overview Evaluation Settings About

Is there clear and understandable information on

	Yes	No	IDK
who is collecting the data	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
what is their contact details	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
the purpose for which the data are collected	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

SUBMIT

1 2

User submits his evaluation



PF application - IoT

- It allows users to get information on potential privacy risks from installed IoT deployments based on Crowd information
- It allows users to provide their feedback on existing or register a new IoT deployment in the registry



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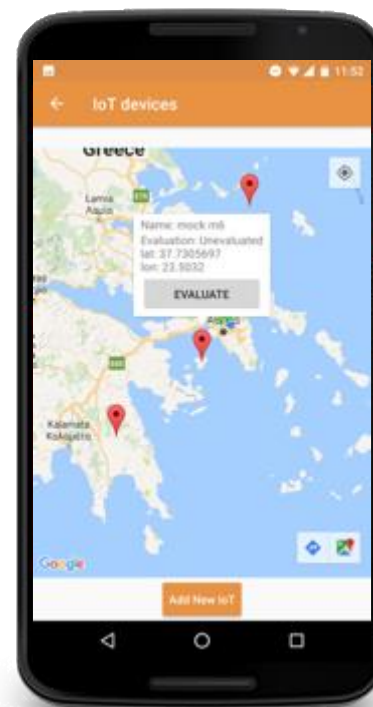
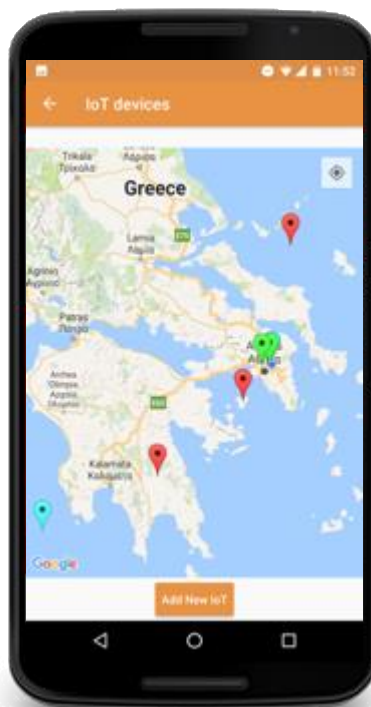
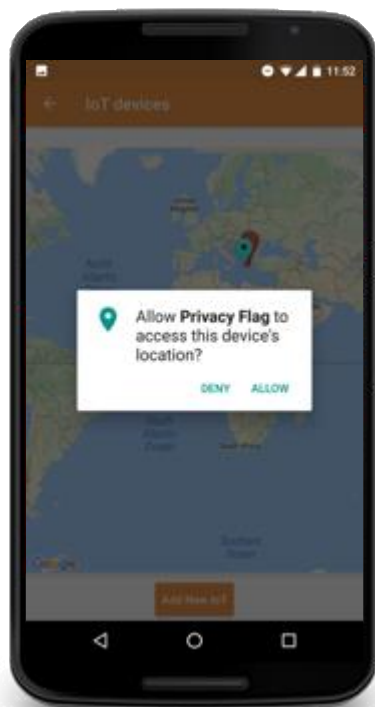


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Registry of all IoT deployments in PF

Step 1: view all existing networks based on users location



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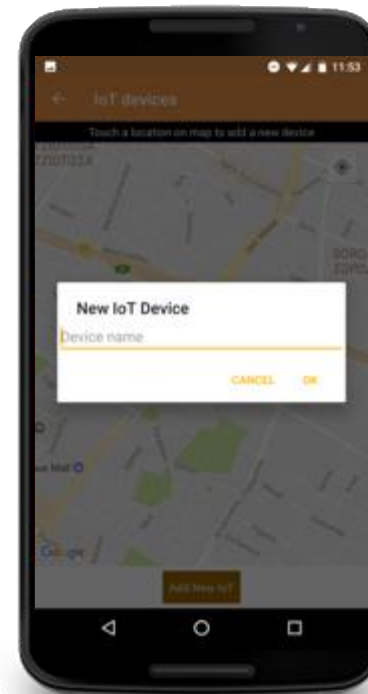
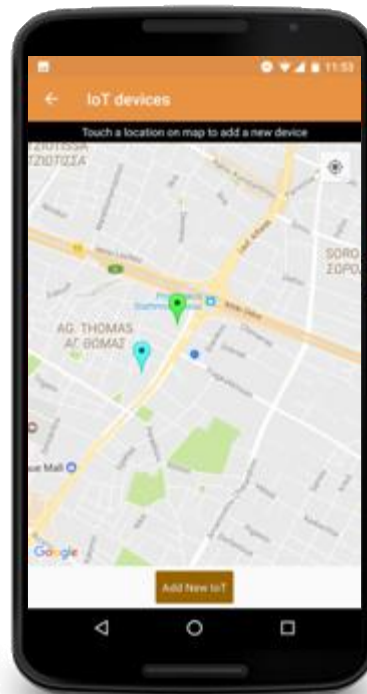
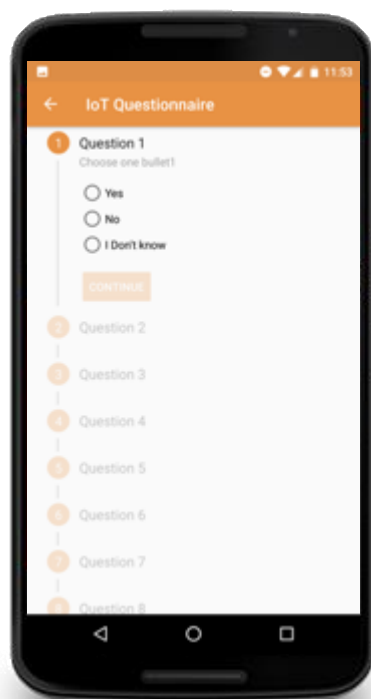


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Register a new IoT and provide evaluation

Step 2: provide user evaluation or register a new IoT device/deployment



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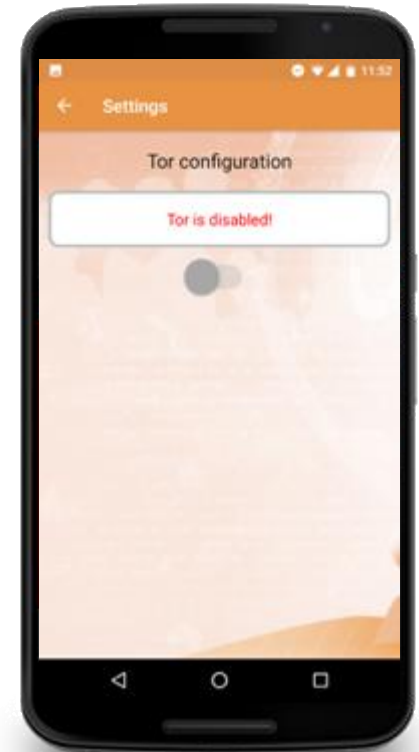
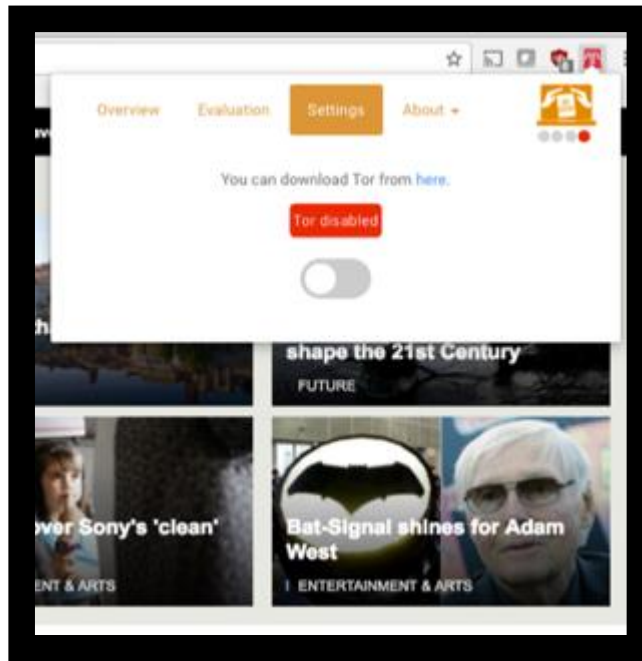
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A thought on anonymity

All Privacy Flag tools can work over Tor network providing user anonymity



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