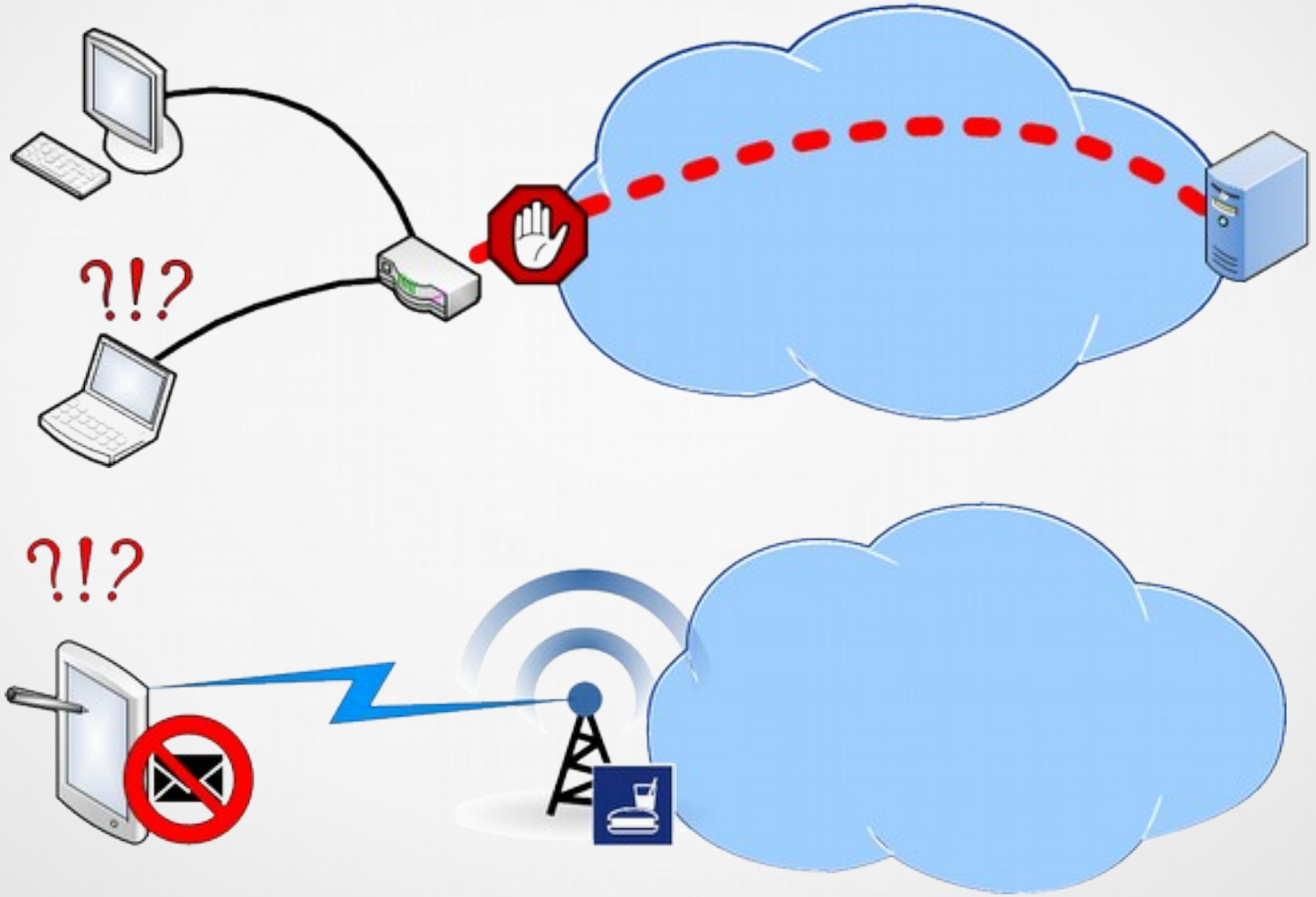
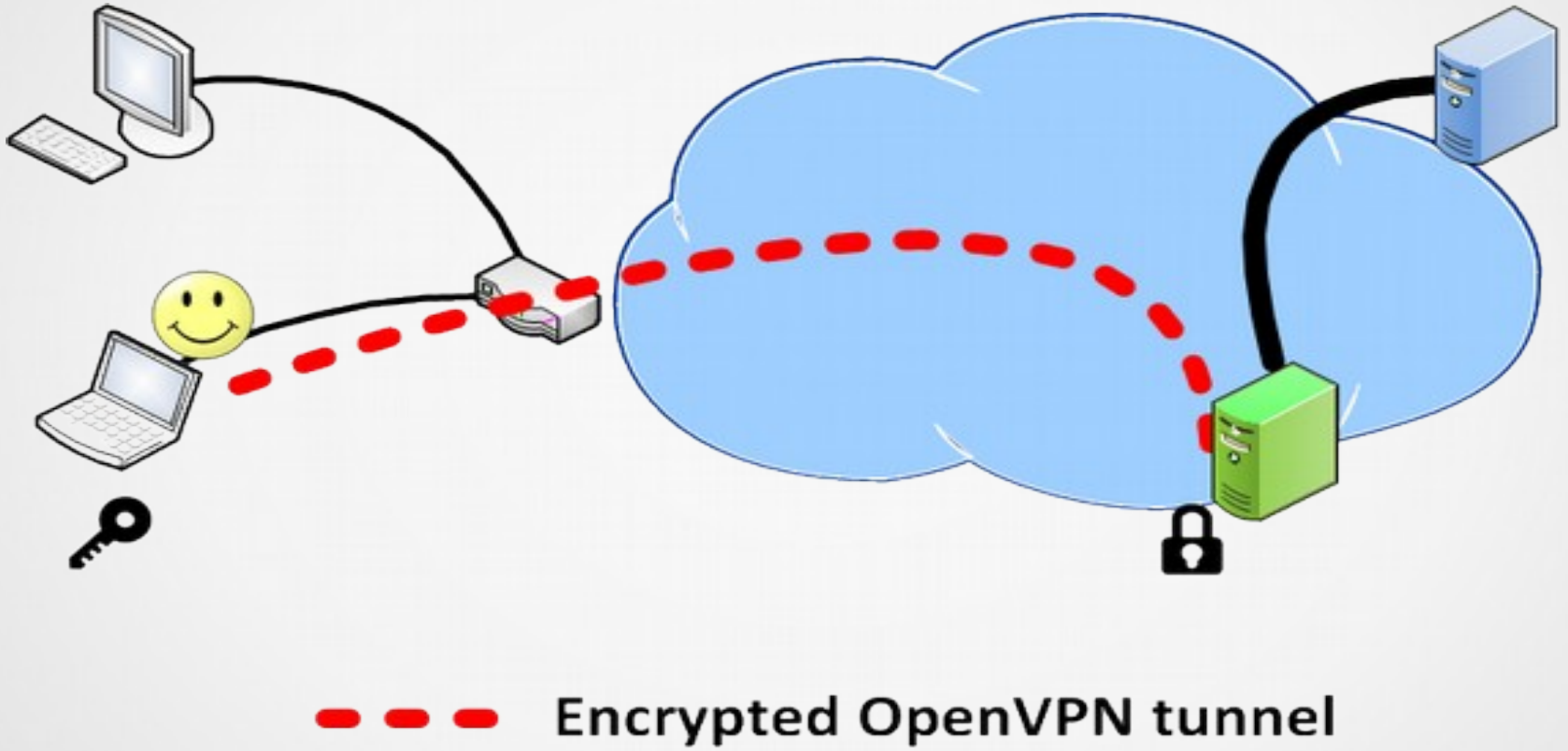
Arcadia Labs
Open source technologies
http://arcadia-labs.com
info@arcadia-labs.com

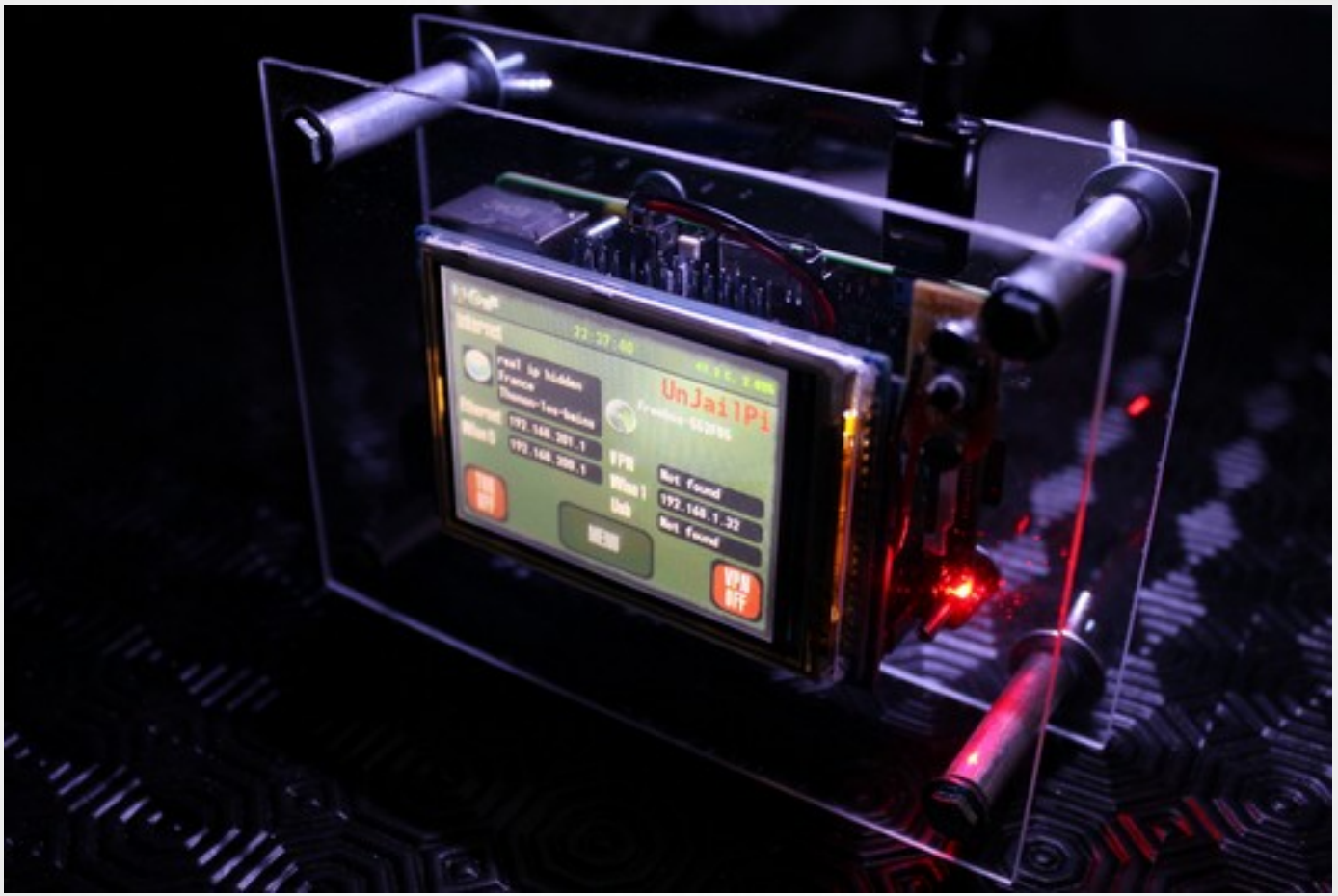
A need for an unrestricted Internet



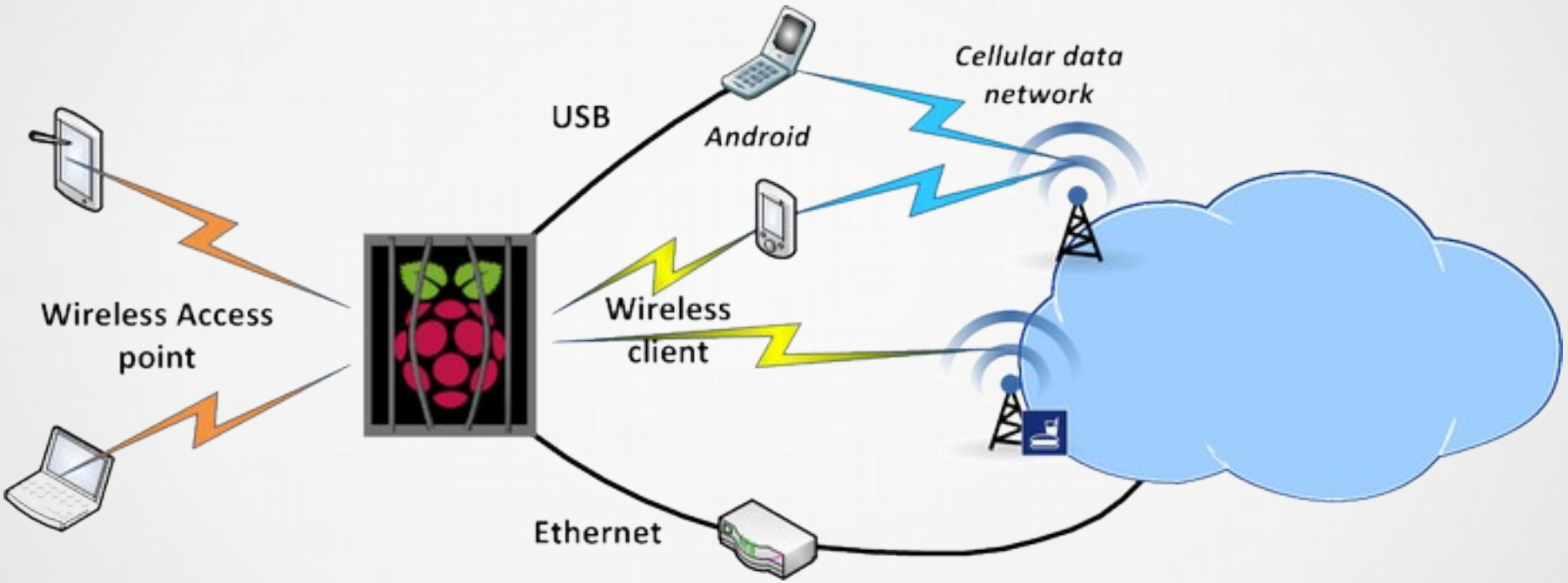
Solution : OpenVPN tunnel

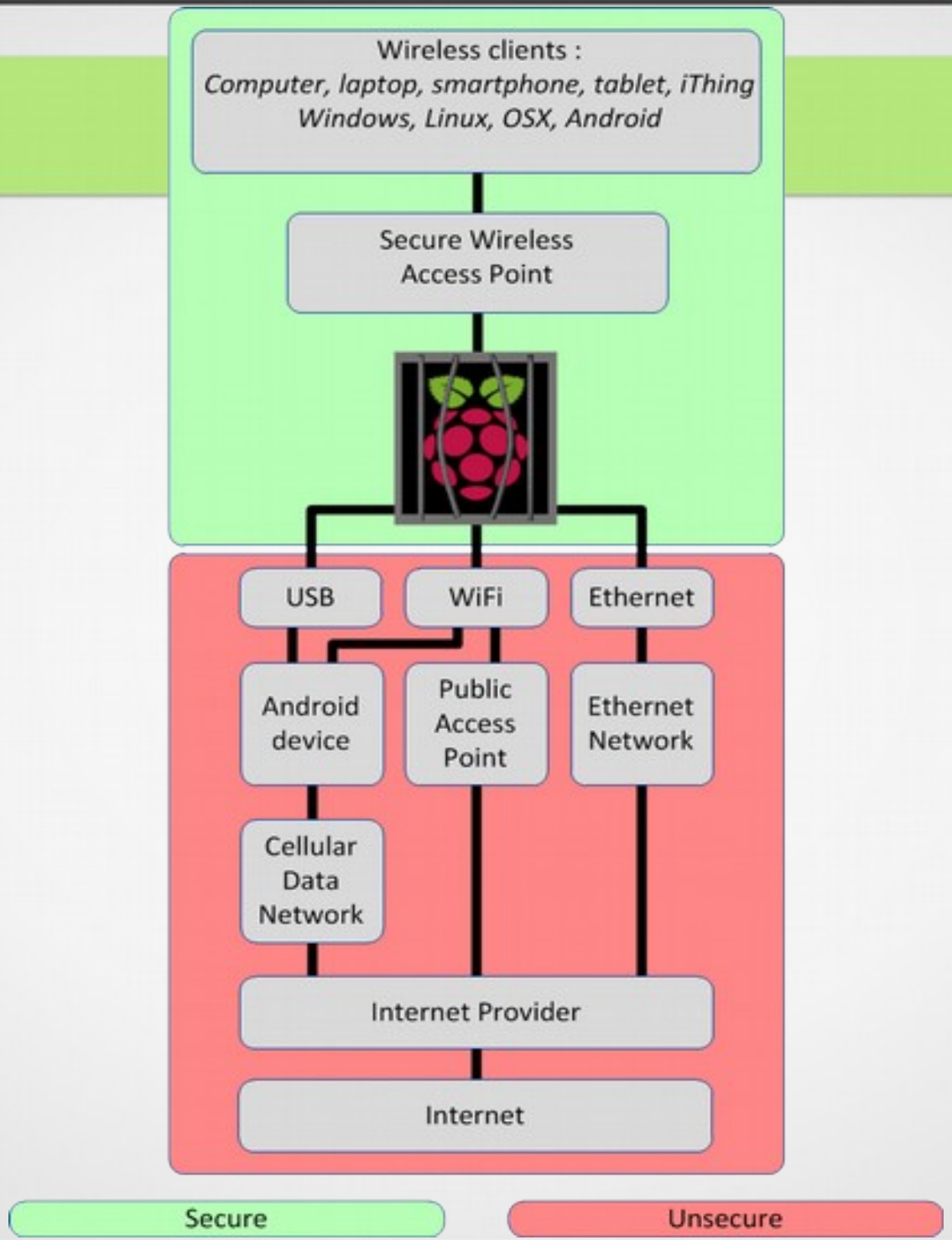


The Web Security Device is born



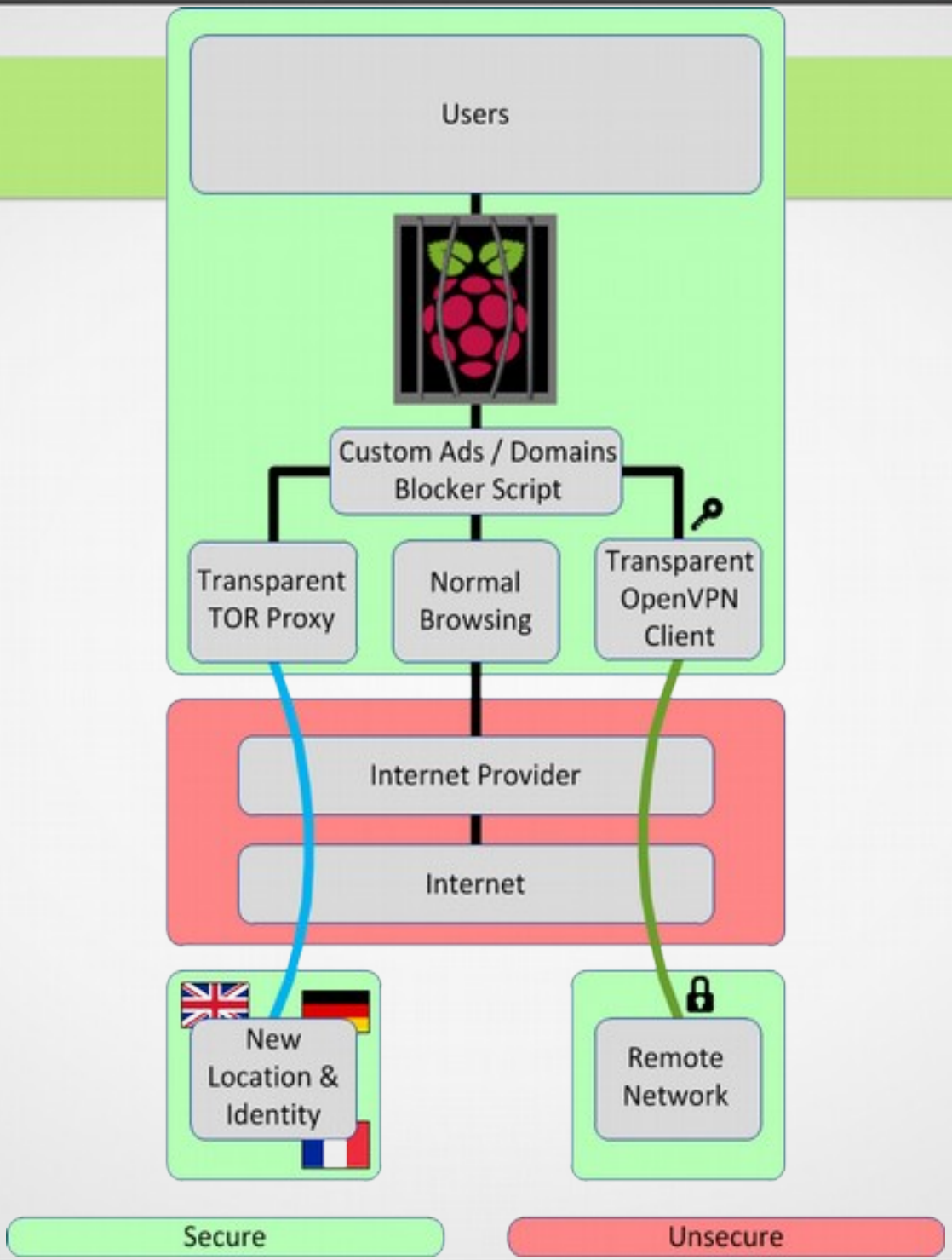
Autonomous Mobile Access Point



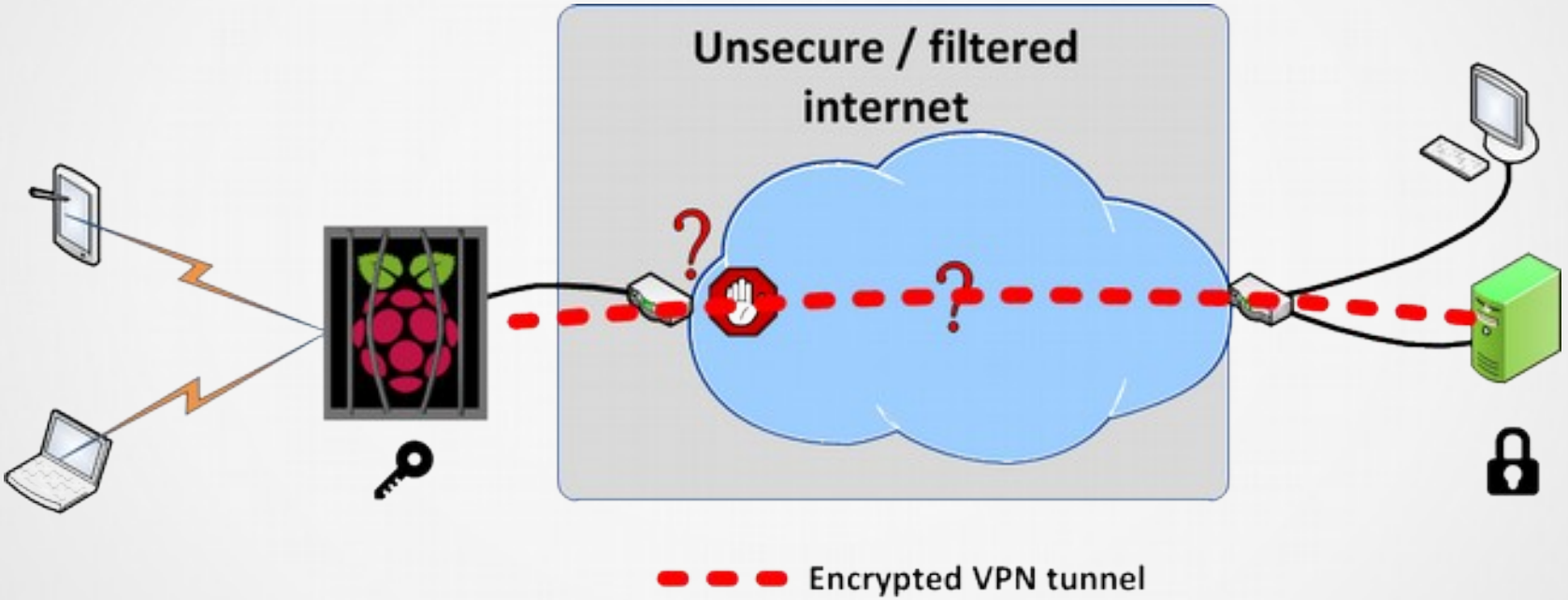

Wireless clients :
Computer, laptop, smartphone, tablet, iThing
Windows, Linux, OSX, Android
Secure Wireless Access Point
USB
WiFi
Ethernet
Android device
Public Access Point
Ethernet Network
Cellular Data Network
Internet Provider
Internet
Secure
Unsecure

Access Point Features

- WPA2-PSK security
- DHCP server
- Internet forwarding
- Dynamically addressed firewall rules
- Ad-blocker script with quick custom rules
- AP and DHCP server fully configurable in web interface


Users
Custom Ads / Domains Blocker Script
Transparent TOR Proxy
Normal Browsing
Transparent OpenVPN Client
Internet Provider
Internet
New Location & Identity
Remote Network
Secure
Unsecure

A Transparent OpenVPN proxy



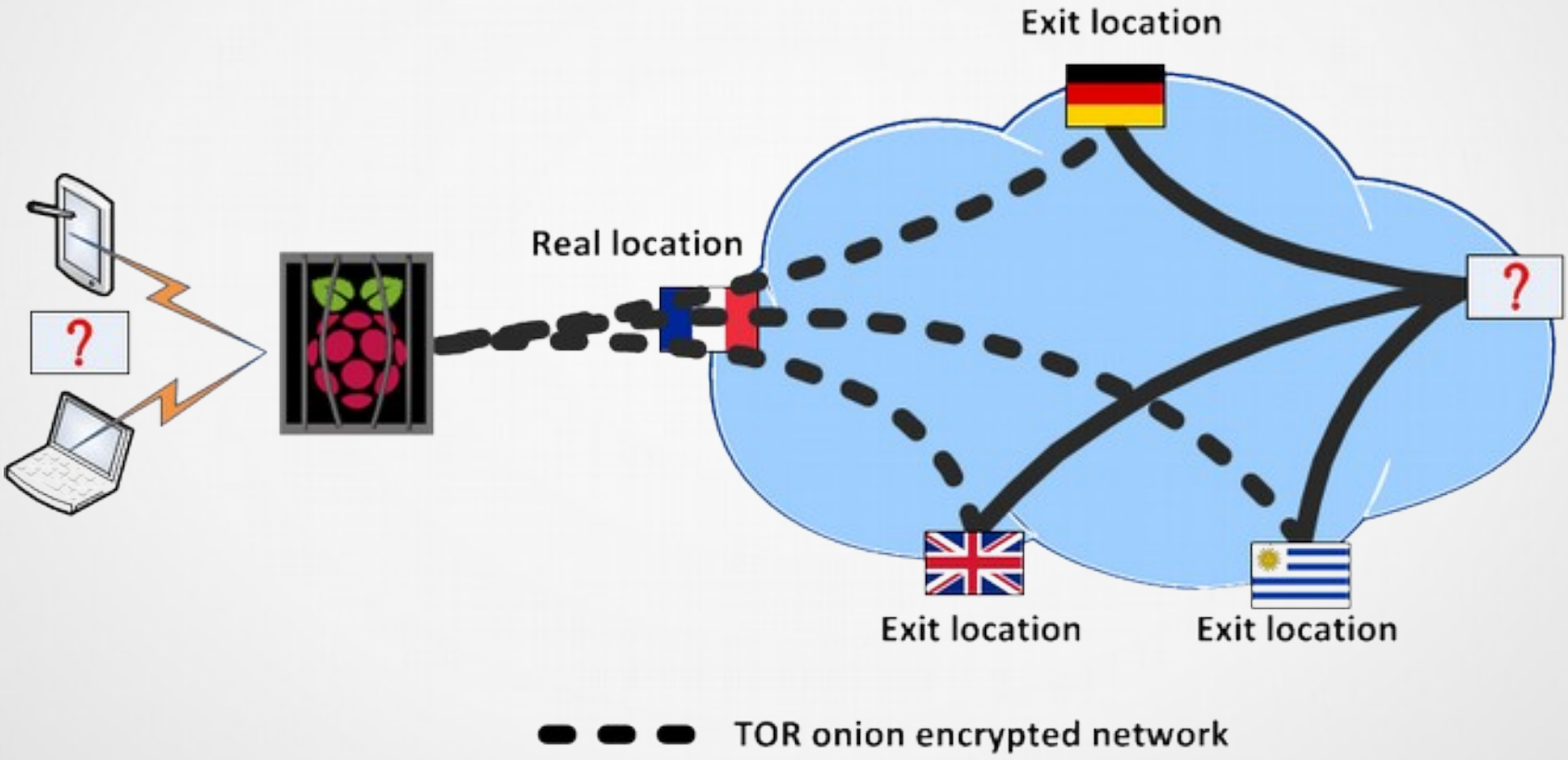
OpenVPN Features

- Point to point tunneling with internet forwarding
- Capable of traversing NATs and firewalls
- Very stable and fast over wireless, cellular and other non reliable networks
- No major vulnerabilities and considered extremely secure

- **Authentication** : self-generated OpenSSL certificate
- **Encryption** : AES-256

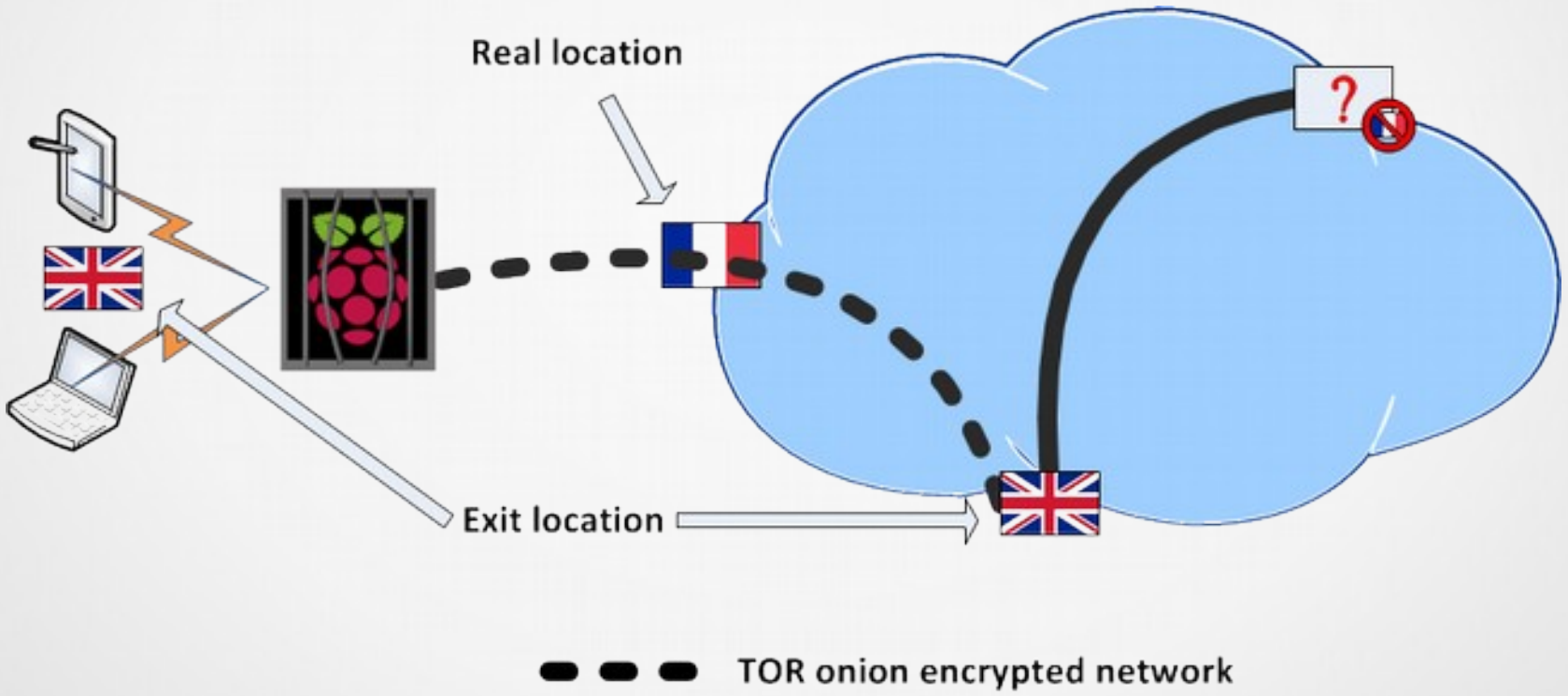
A Transparent TOR Proxy

- Anonymous browsing



A Transparent TOR Proxy

- Access forbidden websites / services based on location



TOR Features

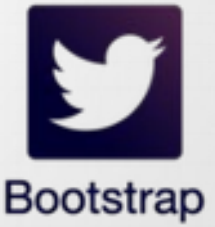
- Prevents people from learning your physical location or browsing habits
- Helps defend individuals against traffic analysis
- Helps businesses to keep their strategies confidential
- Helps activists to anonymously report abuses or corruption
- Helps journalists to protect their research and sources online
- Helps people to use online services blocked by their local Internet providers

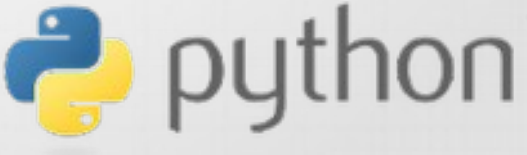
Additional Features

- Touch display + control software
- Web interface for advanced settings
- Software and OS on accessible SD-card : easy and economical to maintain, repair, replace
- Very low power consumption : ~5 Watts, runs on a phone charger (1 Amp mini)
- Onboard battery : ~4h running time
- External battery : adds ~8h and charges onboard battery
- Very easy to clone and deploy

Used Licences / Software parts

- Creative Commons Attribution-ShareAlike
- GNU General Public License 2 or 3
- Apache Licence 1.0
- BSD Licence
- PHP Licence
- MIT Licence





Target audience

- Journalists
- Activists
- Every kind of job/activity that require confidentiality / privacy / security
- Every kind of job/activity that require secure remote access
- «Normal» people who want to fight a form of network surveillance that threatens personal freedom and privacy

Planned improvements

- Improved privacy filters
- Improved internet access monitoring
- Improved power management / monitoring

- Model 1 : actual handheld device with improved custom enclosure
- Model 2 : router-like box

Semifinalists

THE HACKADAY PRIZE

The Hackaday Prize will be awarded to the best example of an open, connected device.

Who will rise to the occasion before time runs out in November?

You build the future.
You go to Space.

Give this project your support on :
https://hackaday.io/project/2040-Web-security-everywhere

Arcadia Labs

Open source technologies

http://arcadia-labs.com
info@arcadia-labs.com

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Hardware-libre

http://hardware-libre.fr
http://hardware-libre.ch