



<https://tails.boum.org/>

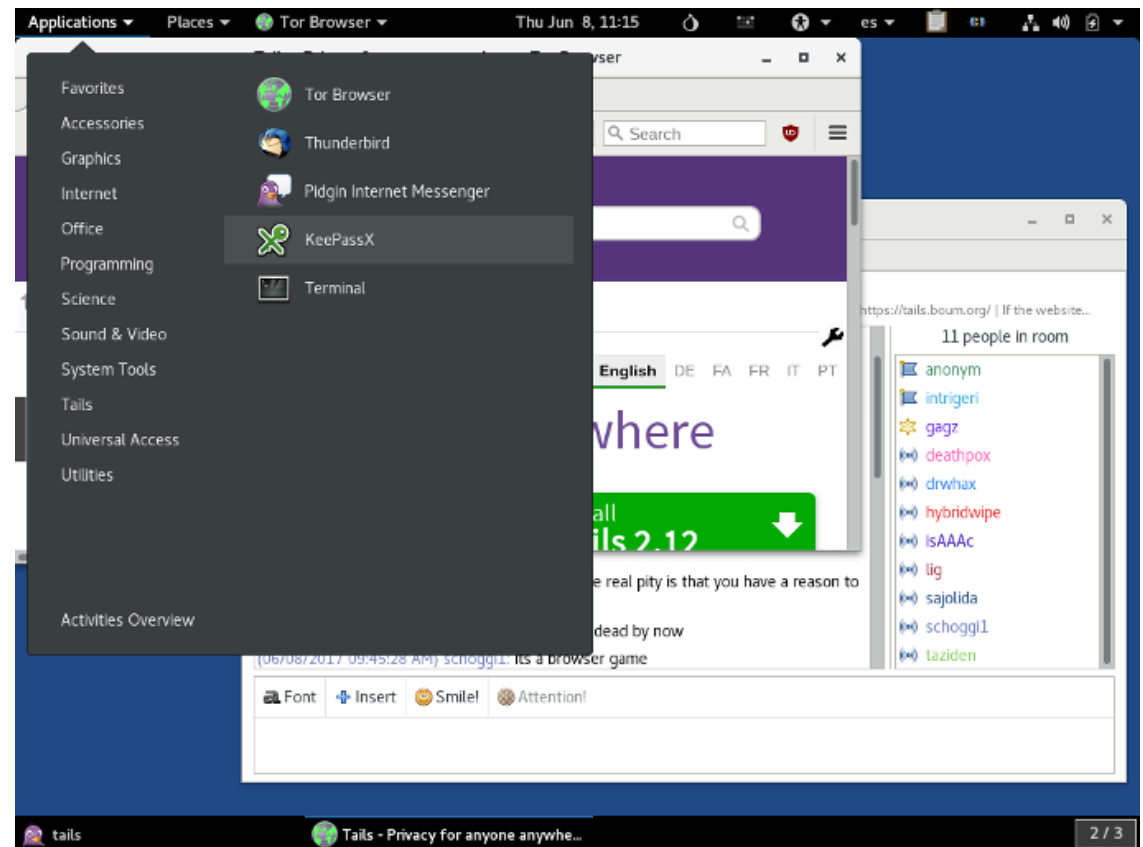
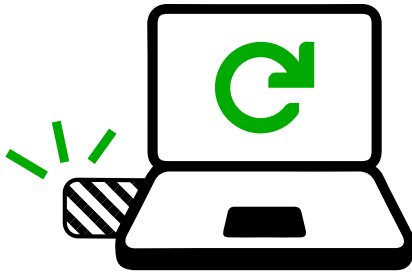
**User search y free software culture**

by sajolida

- 1. What is Tails**
- 2. Our usability process**
- 3. User research and free software culture**

# Tails

**Tails is a portable operating system that protects your privacy and avoids censorship.**



# Tails

- **Free software**

Linux, based on Debian, Tor, and GNOME

- **Portable**

Leaves no trace on the computer

- **Anonymity and censorship circumvention**

All network traffic goes through Tor

- **Privacy toolbox**

Includes many tools, security by default

# Who uses Tails

- Journalists



Edward Snowden:

*« Todos los periodistas que reportaron las revelaciones sobre la vigilancia de masa en 2013 dependían de Tails. »*

# Who uses Tails

- Human-rights defenders
  - Journalists in Mexico use Tails to investigate human-right violations by companies.
  - NDI (National Democratic Institute) used Tails to create a data collection system during elections in Belarus.
  - The Operational Security Professional's Association works with shelters to integrate Tails in their security plan for domestic violence survivors

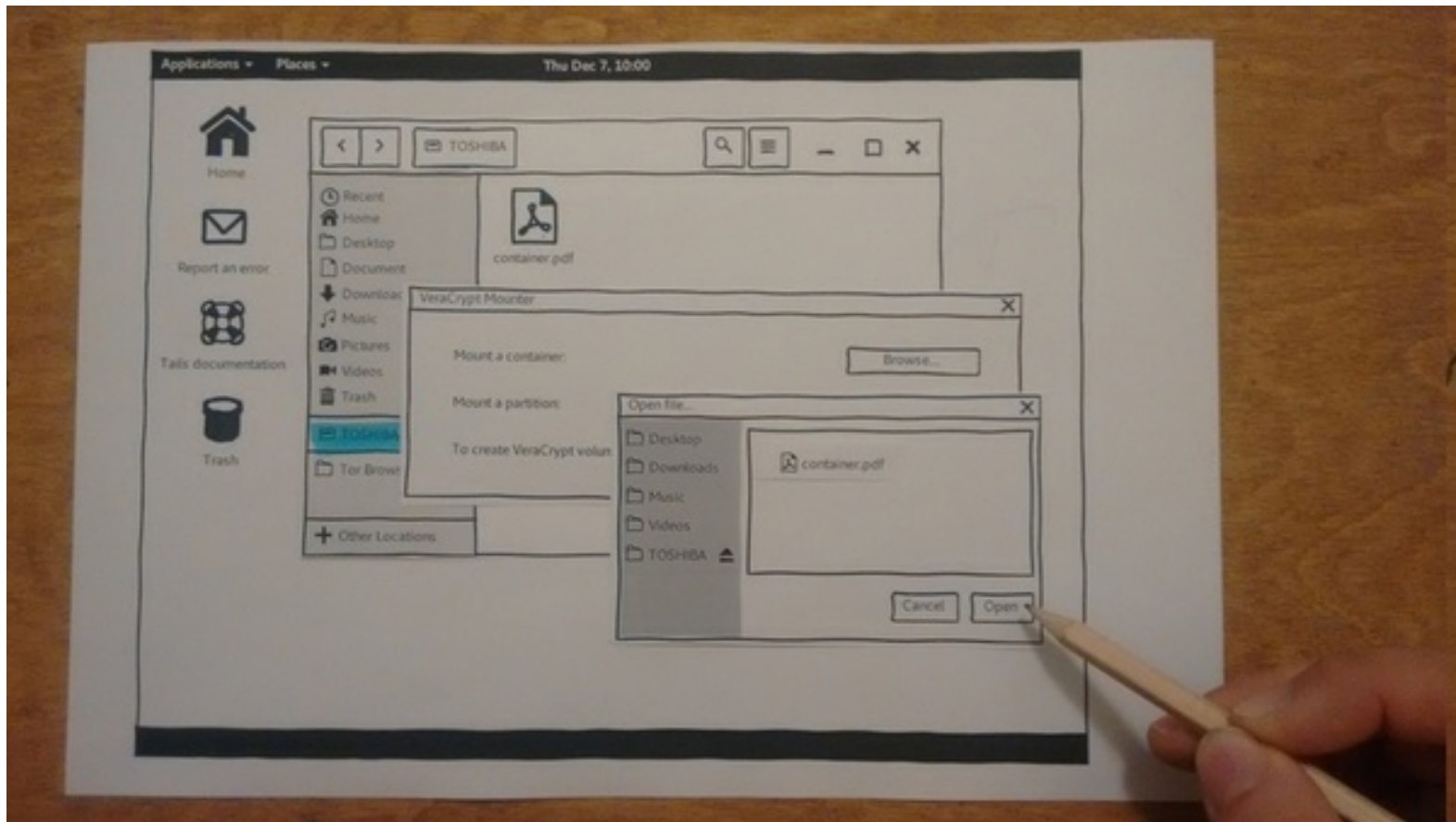
# **Our usability process**

# **Step 0: What to build?**



# Step 1: Paper prototyping

- Always test the design before writing any code!



- Rapid prototyping tool (*WireframeSketcher*)

# Step 1: Paper prototyping

- Faster:
  - Avoid throwing code away
  - Avoid debates
  - Avoid specifications & deliverables
- Better:
  - Avoid designing the impossible
  - Make the most of what's possible
- Stronger:
  - Developers really want to fix the problems
- Carolyn Snyder, *Paper Prototyping* (2003)

# Step 2: Code



# Step 3: Moderated user testing

- 5 users
- Record!
  - Screencast: *Kazam*
  - External camera: *VLC*



- Steve Krug, *Don't make me think*, Chapter 9

# Step 4: Prioritize the problems

Participant	P1	P2	P3	P4	P5	B	C	B/C
Looks for Synaptic but can't find it (without <u>admin</u> password)	■	■			■	3	1	3.0
Doesn't know which <u>admin</u> password to enter when prompted	■	■	■	■	■	2	3	0.7
Doesn't find our doc when searching <u>online</u> for "how to be root on tails"					■	2	1	2.0
Tries first <u>`su`</u> instead of <u>`sudo`</u>		■	■	■		1	3	0.3
Doesn't open the <i>file</i> URL from <u>sudo</u> (without <u>admin</u> password)	■					1	1	1.0

# Step 5: Fix



# **User research and free software culture**

# Bug reporting culture

- We wait for people to tell us their problems instead of actively looking for them
  - We miss many smaller problems
  - We can only guess how bad the problems are
  - We lack empathy



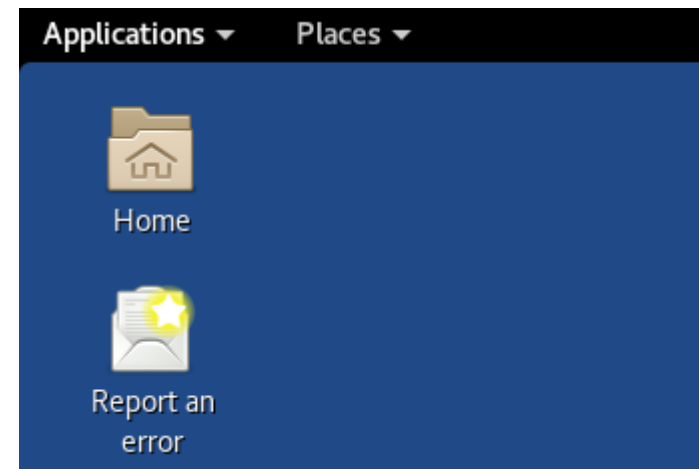
# Vocal minority

- 23 000 daily users → ~ 150 000 users if weekly
- 32 active users on our bug tracker in 2018
- 1/5000
- Matthew Paul Thomas (2008):

*« Si no se hacen pruebas de usabilidad frecuentemente, los proyectos dependen de retornos subjetivos por parte de pocas personas muy motivadas. Pero lo que dicen estas personas no es necesariamente representativo del conjunto de usuarias, ni tanto solo de su propio uso. »*

# Silent majority

- *WhisperBack*: integrated error reporting tool
- ~ 500 users in 2018
- 1/300 (× 15)
- David Nichols and Michael Twidale (2003):



« [...] Reportes de incidencias integrados son muy buenos para resolver problemas de usabilidad en proyectos de código abierto. Es decir, hacer que los usuarios reporten sus problemas al momento de tenerlos durante el uso de una aplicación. »

# Patches are (not always) welcome

- Havoc Pennington, *Free software and UI* (2002)
  - « *Se le puede dar al usuario literalmente una infinidad de opciones. Pero cada una tiene un coste de usabilidad. Entonces un programa con opciones infinitas es infinitamente malo. El trabajo del diseñador es seleccionar cuales opciones son realmente utiles.* »
- Hard to say no. Even harder to remove a feature.

# Root cause analysis

**Give me some painkiller!**



- Five whys

Sakichi Toyoda

# Observe instead of listening

- Jakob Nielsen, *1st Rule: Don't Listen to Users*  
<https://www.nngroup.com/articles/first-rule-of-usability-dont-listen-to-users/>
- Behavioral (what people do)
  - User testing, paper prototyping, integrated error reports
- Attitudinal (what people say)
  - Interview, surveys, mailing lists, bug reports
- Christian Rohrer, *When to Use Which User-Experience Research Methods*  
<https://www.nngroup.com/articles/which-ux-research-methods/>

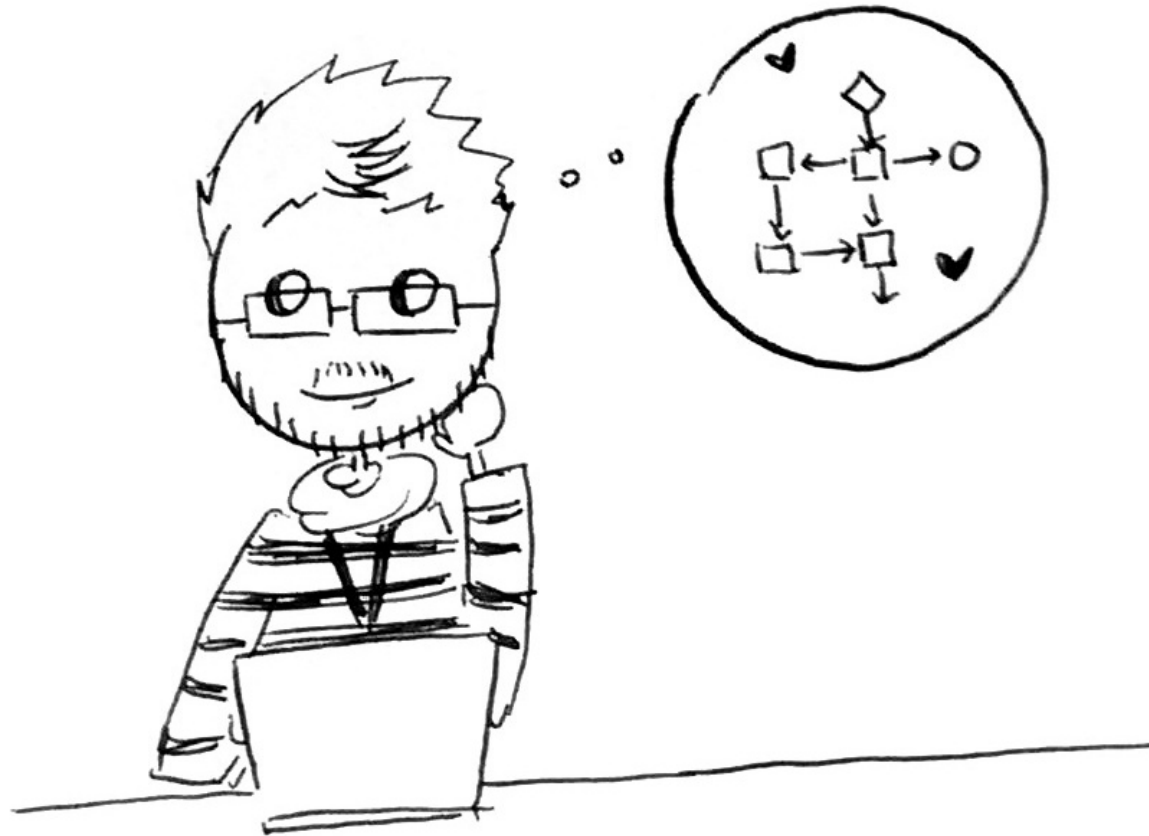
# User research takeaways

Don't	Do
Write code, test afterwards	Test, then write code
Listen to what people say	Observe what people do
Pay too much attention to the vocal minority	Find ways to learn about the silent majority
Fulfill requests	Understand the root cause
Say “yes” by default	Learn how to say “no”

# Litterature

- Havoc Pennington, *Free software and UI* (2002)  
<https://ometer.com/preferences.html>
- David Nichols and Michael Twidale, *The Usability of Open Source Software* (2003)  
<http://firstmonday.org/ojs/index.php/fm/article/view/1018/939>
- Matthew Paul Thomas, *Why Free Software has poor usability, and how to improve it* (2008)  
<https://web.archive.org/web/20080805012124/http://mpt.net.nz:80/archive/2008/08/01/free-software-usability>

# Thank you!



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<https://un.poivron.org/~sajolida/unam.pdf>