Debian GNU/Linux on a mobile phone?!

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Embedded Software Meetup
GARDENA digital hub Zurich

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mobian

- Motivation
- History
- Debian
- Mobian
- Devices
- Debian on Mobile vs PC
- Apps
- Contribute
- Posh Development
- App Development
- Support

mobian

Motivation
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Mobian
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Debian on Mobile vs PC
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Posh Development
App Development
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- **PC in my pocket**, just one device for everything
- **Free software** only, do not pay with data, do not get influenced by the rich
- I want to use **self hosted services**
- I do not want to buy new hardware every 2nd year … just to get **security updates**...

Maemo
Nokia

2005 Nokia 770

OS: Maemo
250 MHz
64 MB RAM
128 MB Flash

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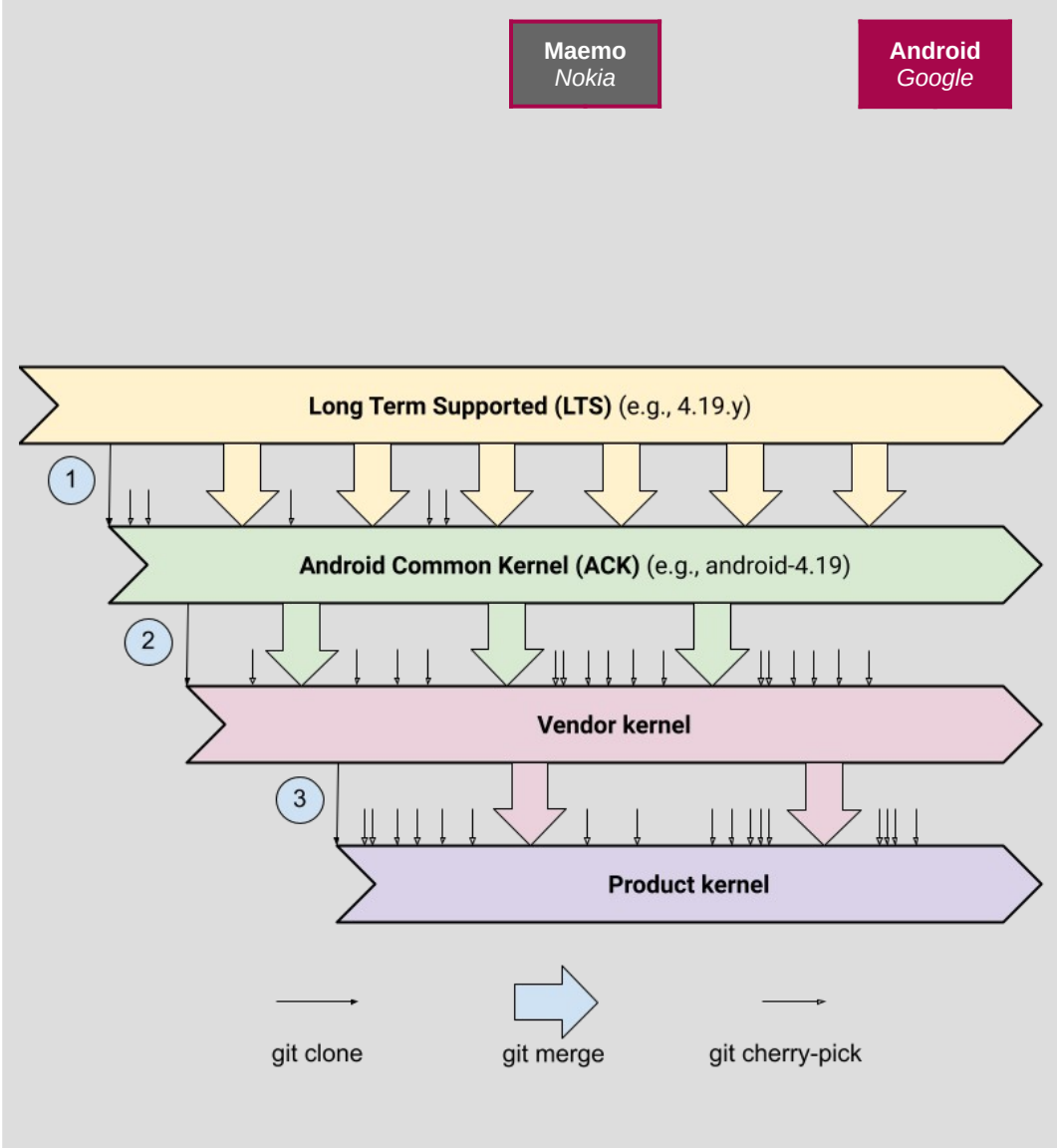
2008 Android

- Forced vendors to use heavily modified kernel
- Currently no Android phone is properly supported by mainline kernel



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Maemo
Nokia

Android
Google

2008 Openmoko

OS: Maemo
400 MHz
128 MB RAM
256 MB Flash

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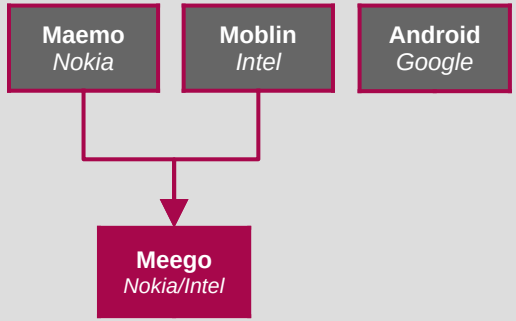
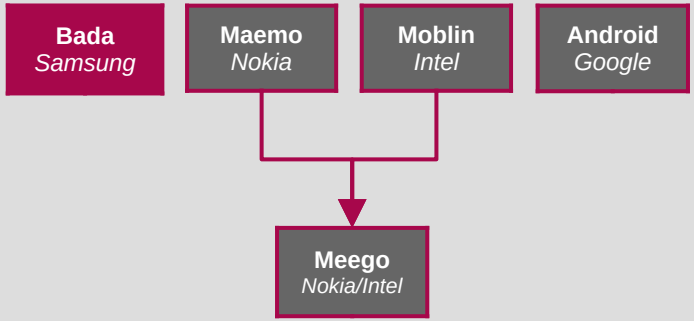
2009 Nokia N900

OS: Maemo, Meego
600 MHz
256 MB RAM
32 GB Flash



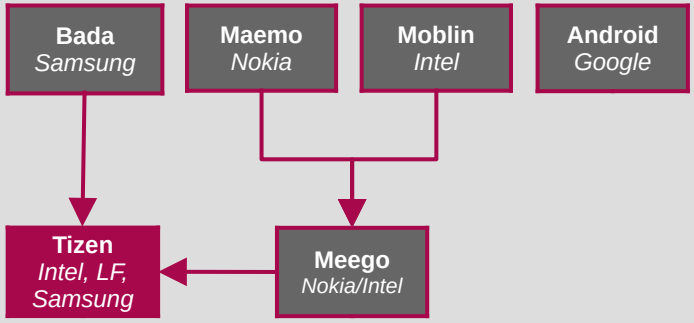
2010 Samsung Wave S8500

OS: Bada
1 GHz
384 MB RAM
2 GB Flash



2012 Samsung Gear 2

OS: Tizen
2 * 1.2 GHz
512 MB RAM
4 GB Flash



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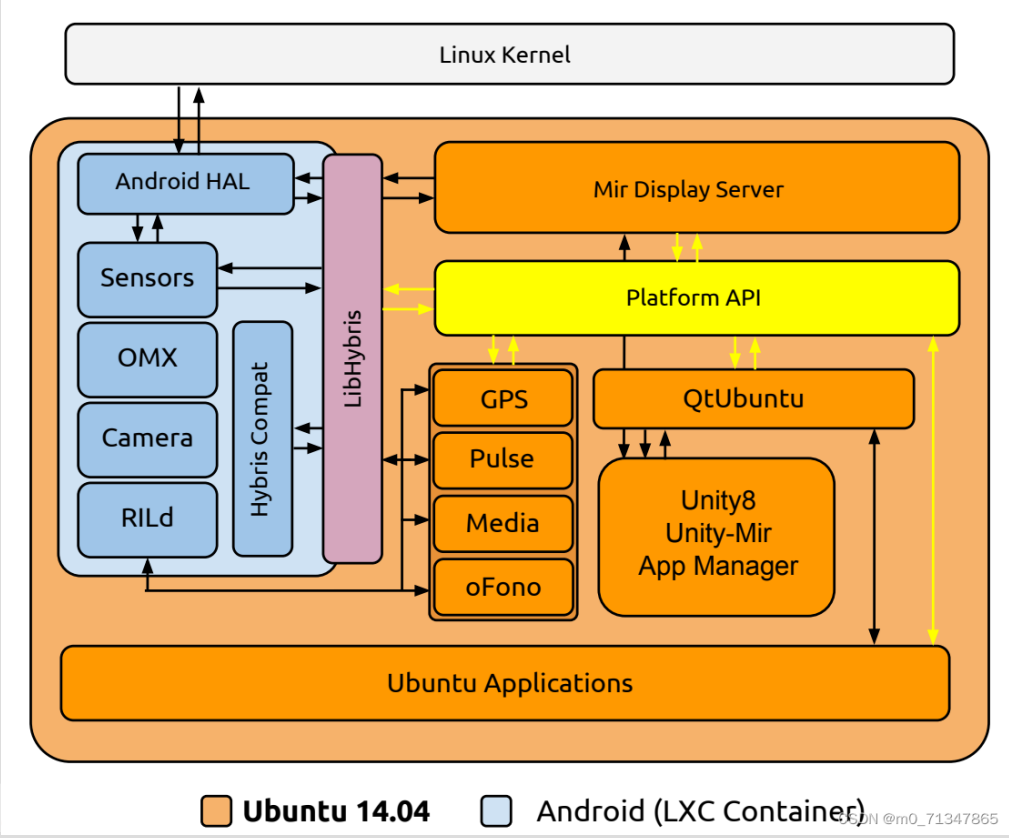
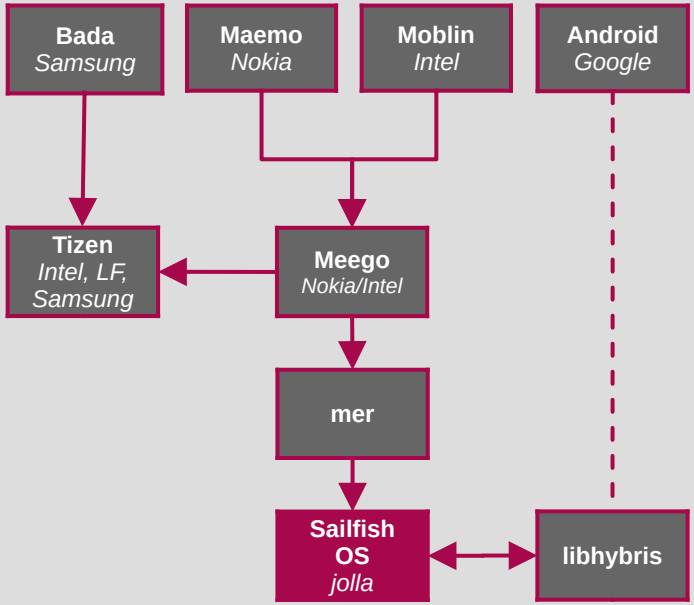
2012 libhybris

- Mix Android and GNU/Linux



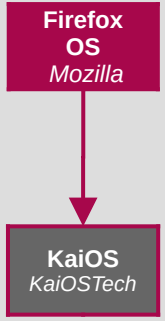
2013 Jolla Phone

OS: Sailfish OS
2 * 1.4 GH
1 GB RAM
16 GB Flash



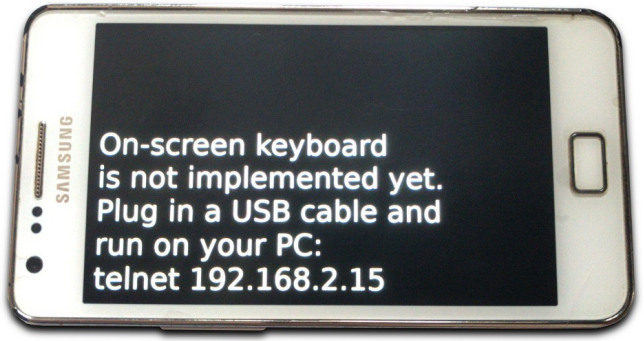
2013 Alcatel One Touch Fire

Firefox OS
1 GHz
512 MB RAM
160 MB Flash



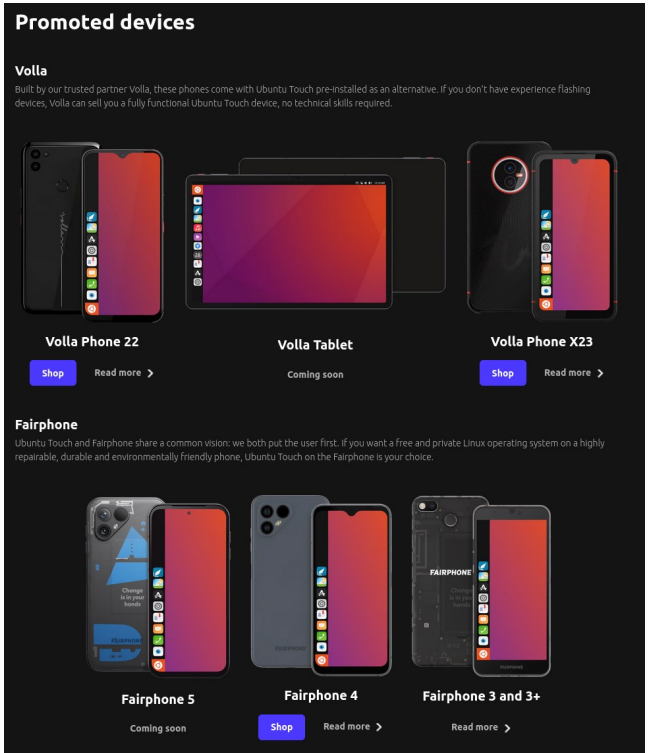
Focus Developing software for existing phones

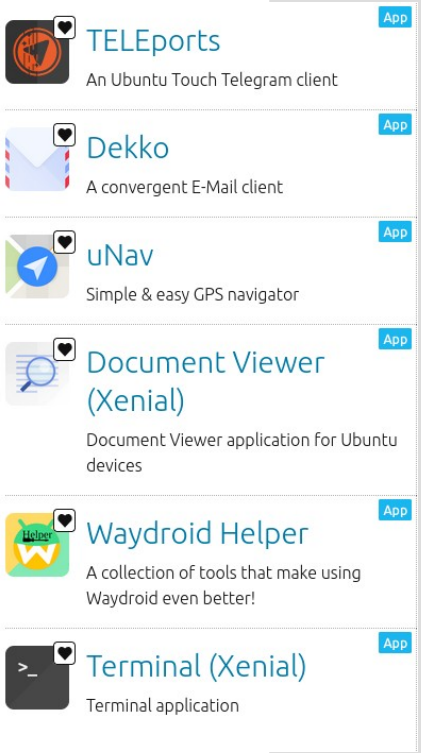
- **2014** KDE Plasma Mobile on Google Nexus 5
- **2017** PostmarketOS on Samsung i9100

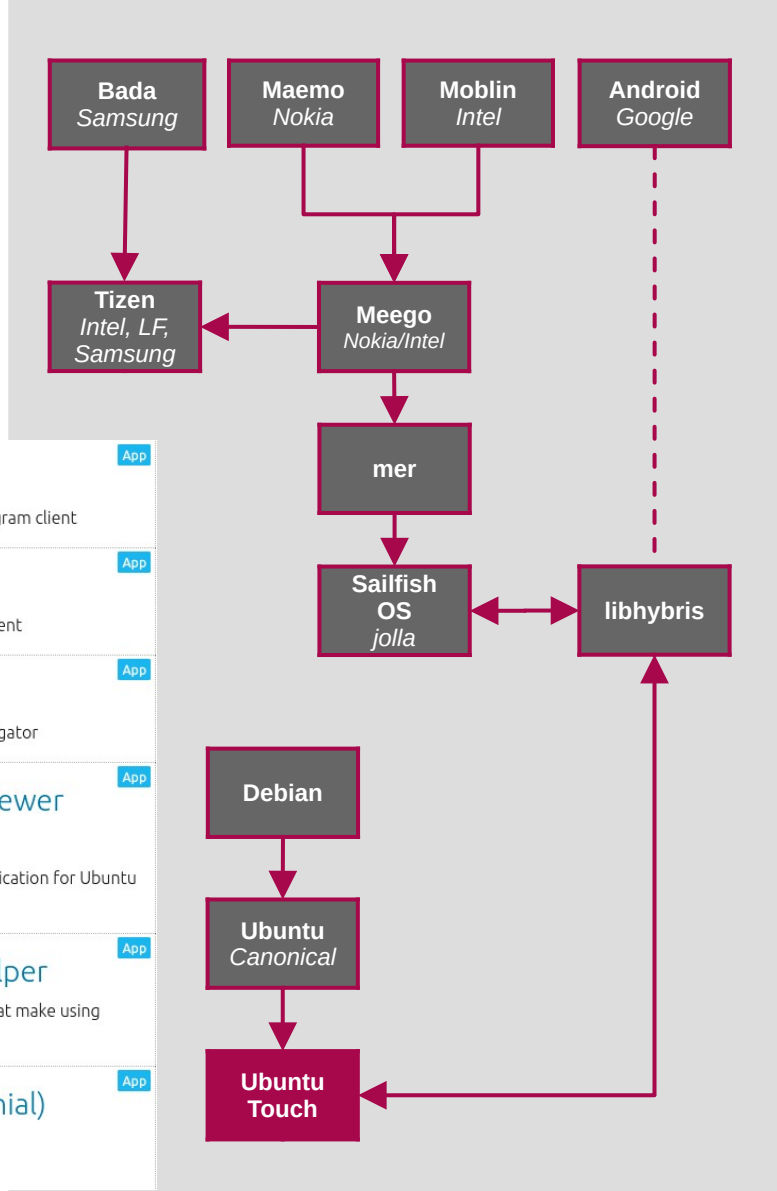


2017 Ubuntu Touch

based on ubuntu and libhybris







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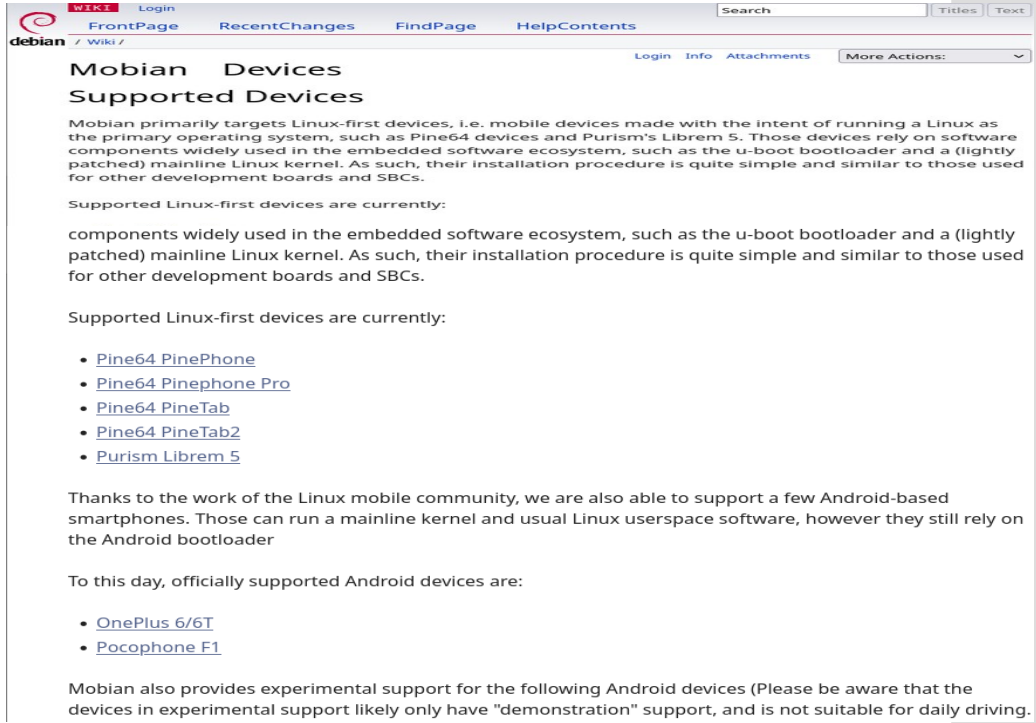
2019 Purism Librem5

- pureOS: Debian + phosh, libhandy
- Crowdfunding
  Goal 1.5 Mio US $ reached 2.2 Mio
- First free-software, free-hardware phone

2020 Pine64 PinePhone

- Initial OS: Ubuntu Touch
- Mobian running on PinePhone
- https://netzpolitik.org/2020/freie-smartphones-ist-das-pinephone-alltagstauglich/

2020 Mobian
based on Debian



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Mobian Devices
Supported Devices

Mobian primarily targets Linux-first devices, i.e. mobile devices made with the intent of running a Linux as the primary operating system, such as Pine64 devices and Purism's Librem 5. Those devices rely on software components widely used in the embedded software ecosystem, such as the u-boot bootloader and a (lightly patched) mainline Linux kernel. As such, their installation procedure is quite simple and similar to those used for other development boards and SBCs.

Supported Linux-first devices are currently:

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Supported Linux-first devices are currently:

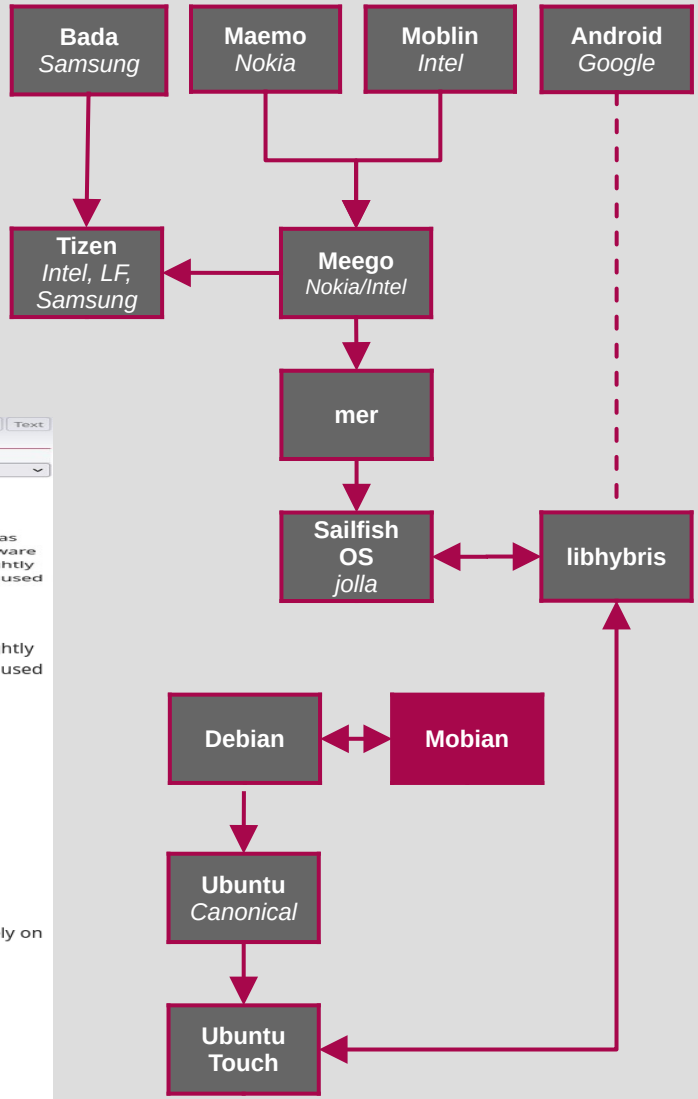
- Pine64 PinePhone
- Pine64 Pinephone Pro
- Pine64 PineTab
- Pine64 PineTab2
- Purism Librem 5

Thanks to the work of the Linux mobile community, we are also able to support a few Android-based smartphones. Those can run a mainline kernel and usual Linux userspace software, however they still rely on the Android bootloader

To this day, officially supported Android devices are:

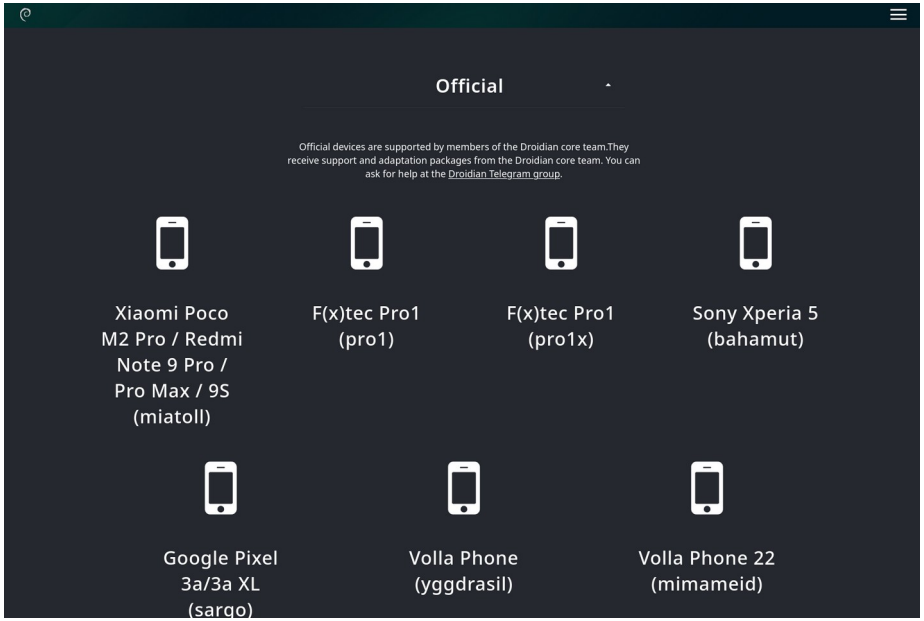
- OnePlus 6/6T
- Pocophone F1

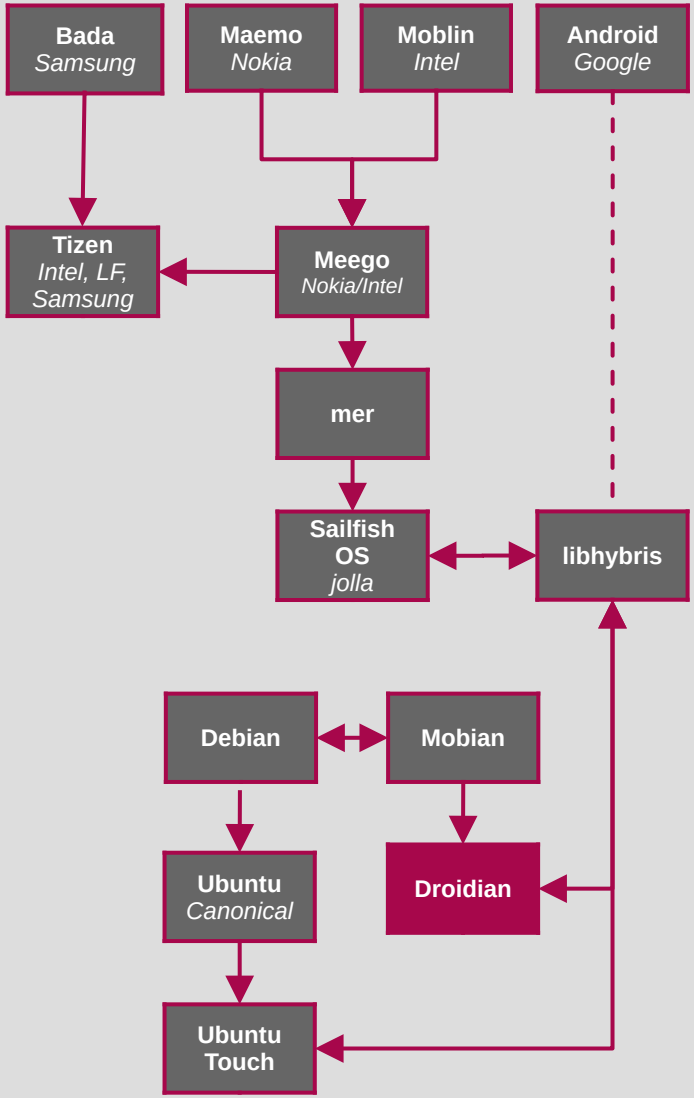
Mobian also provides experimental support for the following Android devices (Please be aware that the devices in experimental support likely only have "demonstration" support, and is not suitable for daily driving.



2021 Droidian

based on Mobian and libhybris





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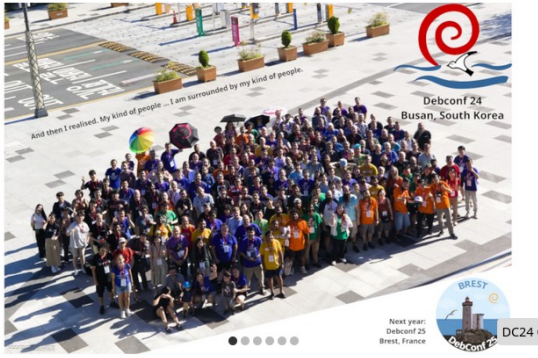
Free
Stable
Universal
No vendor

debian
The universal operating system

THE COMMUNITY

Debian is a Community of People!



People
Who we are and what we do

Our Philosophy
Why we do it, and how we do it

Get Involved, Contribute
How you can join us!

More...
Additional information about the Debian community

THE OPERATING SYSTEM

Debian is a complete Free Operating System!

Download

Other downloads

Why Debian
What makes Debian special

User Support
Getting help and documentation

Security Updates
Debian Security Advisories (DSA)

More...
Further links to downloads and software

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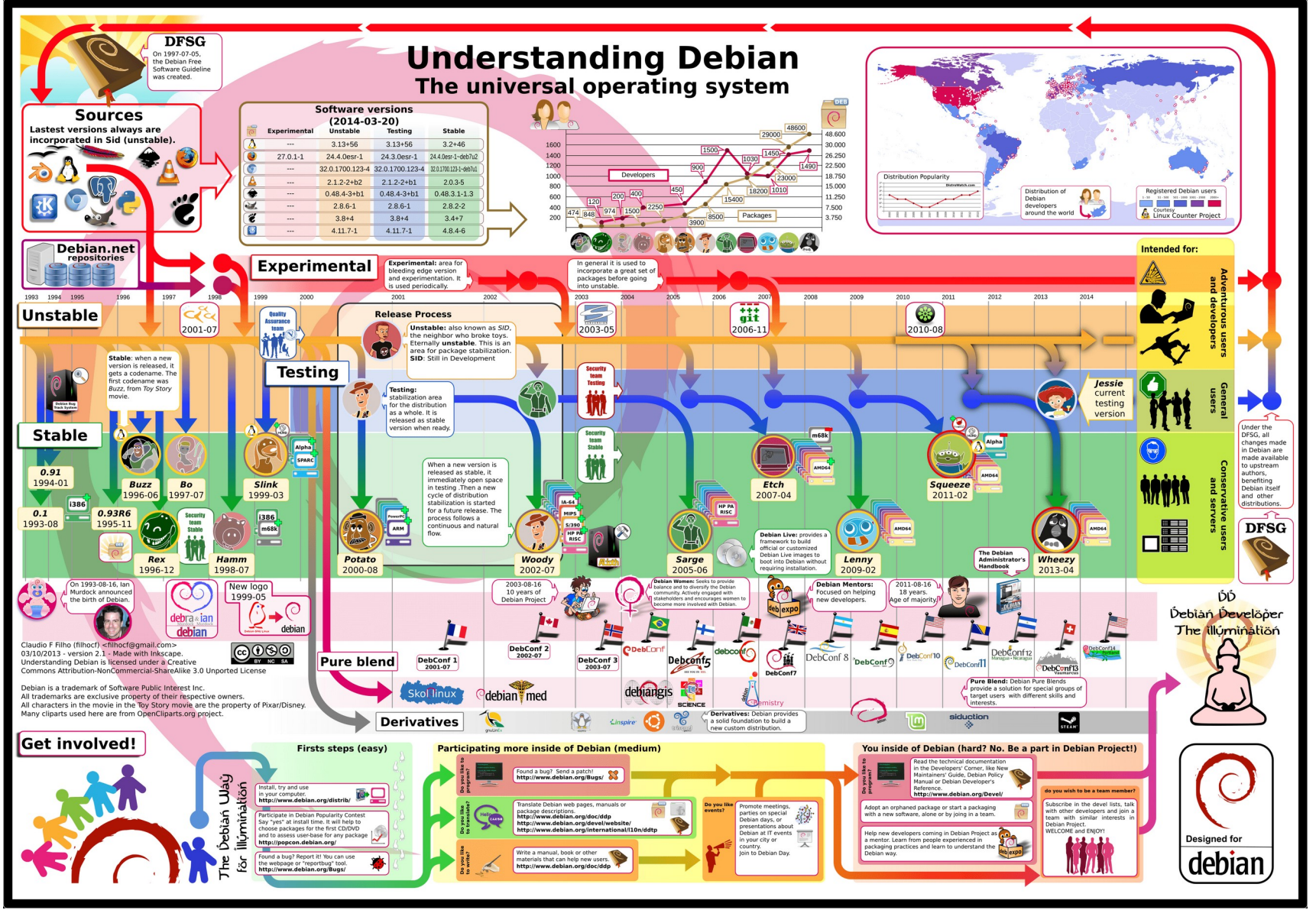

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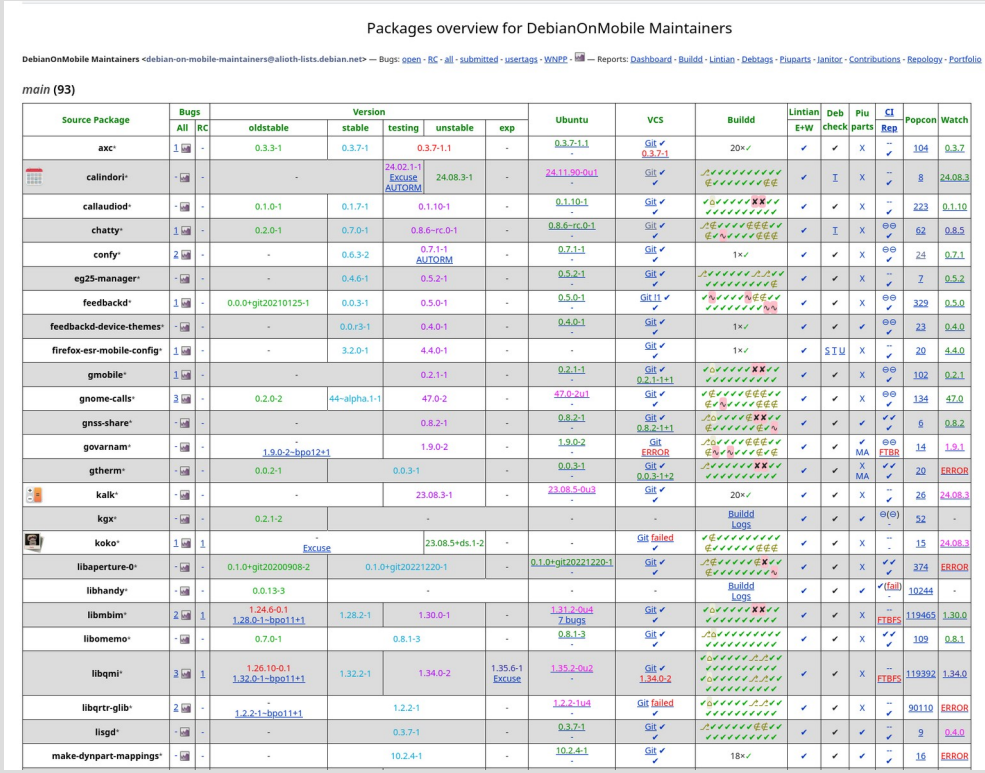
2020
DebianOnMobile

A Debian Team with focus on

- Maintaining about 90 packages
- That are mainly used on mobile devices



Packages overview for DebianOnMobile Maintainers

DebianOnMobile Maintainers <debian-on-mobile-maintainers@alioth-lists.debian.net> — Bugs: open - RC - all - submitted - usertags - WNPP - — Reports: Dashboard - Buildd - Lintian - Debtags - Piuparts - Janitor - Contributions - Repology - Portfolio

main (93)

Source Package	Bugs All	Bugs RC	Version oldstable	Version stable	Version testing	Version unstable	Version exp	Ubuntu	VCS	Buildd	Lintian E+W	Deb check	Piu parts	CI Rep	Popcon	Watch
axc	1	-	0.3.3-1	0.3.7-1	0.3.7-1.1		-	0.3.7-1.1	Git ✔ 0.3.7-1	20×✓	✔	✔	X	-- ✔	104	0.3.7
calindori	-	-	-		24.02.1-1 Excuse AUTORM	24.08.3-1	-	24.11.90-0u1	Git ✔ ✔	✓✓✓✓✓✓✓✓✓✓	✔	T	X	-- ✔	8	24.08.3
callaudiod	-	-	0.1.0-1	0.1.7-1	0.1.10-1		-	0.1.10-1	Git ✔ ✔	✓✓✓✓✓✓✓✓✓✓	✔	✔	X	-- ✔	223	0.1.10
chatty	1	-	0.2.0-1	0.7.0-1	0.8.6~rc.0-1		-	0.8.6~rc.0-1	Git ✔ ✔	✓✓✓✓✓✓✓✓✓✓	✔	T	X	⊖⊖ ✔	62	0.8.5
confy	2	-	-	0.6.3-2	0.7.1-1 AUTORM		-	0.7.1-1 -	Git ✔ ✔	1×✓	✔	✔	X	⊖⊖ ✔	24	0.7.1
eg25-manager	-	-	-	0.4.6-1	0.5.2-1		-	0.5.2-1 -	Git ✔ ✔	✓✓✓✓✓✓✓✓✓✓	✔	✔	X	-- ✔	7	0.5.2
feedbackd	1	-	0.0.0+git20210125-1	0.0.3-1	0.5.0-1		-	0.5.0-1 -	Git !1 ✔ ✔	✓✓✓✓✓✓✓✓✓✓	✔	✔	X	⊖⊖ ✔	329	0.5.0
feedbackd-device-themes	-	-	-	0.0.r3-1	0.4.0-1		-	0.4.0-1 -	Git ✔ ✔	1×✓	✔	✔	✔	⊖⊖ ✔	23	0.4.0
firefox-esr-mobile-config	1	-	-	3.2.0-1	4.4.0-1		-	-	Git ✔ ✔	1×✓	✔	S T U	X	-- ✔	20	4.4.0
gmobile	1	-	-		0.2.1-1		-	0.2.1-1 -	Git ✔ 0.2.1-1+1	✓✓✓✓✓✓✓✓✓✓	✔	✔	X	⊖⊖ ✔	102	0.2.1
gnome-calls	3	-	0.2.0-2	44~alpha.1-1	47.0-2		-	47.0-2u1 -	Git ✔ ✔	✓✓✓✓✓✓✓✓✓✓	✔	✔	X	⊖⊖ ✔	134	47.0
gnss-share	-	-	-		0.8.2-1		-	0.8.2-1 -	Git ✔ 0.8.2-1+1	✓✓✓✓✓✓✓✓✓✓	✔	✔	✔	✔✔ ✔	6	0.8.2
govarnam	-	-	- 1.9.0~2~bpo12+1		1.9.0-2		-	1.9.0-2 -	Git ERROR	✓✓✓✓✓✓✓✓✓✓	✔	✔	✔ MA	⊖⊖ FTBR	14	1.9.1
gtherm	-	-	0.0.2-1		0.0.3-1		-	0.0.3-1 -	Git ✔ 0.0.3-1+2	✓✓✓✓✓✓✓✓✓✓	✔	✔	X MA	✔✔ ✔	20	ERROR
kalk	-	-	-		23.08.3-1		-	23.08.5-0u3 -	Git ✔ ✔	20×✓	✔	✔	X	-- ✔	26	24.08.3
kgx	-	-	0.2.1-2		-		-	-	-	Buildd Logs	✔	✔	✔	⊖(⊖) -	52	-
koko	1	1	- Excuse			23.08.5+ds.1-2	-	-	Git failed ✔	✓✓✓✓✓✓✓✓✓✓	✔	✔	X	-- -	15	24.08.3
libaperture-0	-	-	0.1.0+git20200908-2		0.1.0+git20221220-1		-	0.1.0+git20221220-1 -	Git ✔ ✔	✓✓✓✓✓✓✓✓✓✓	✔	✔	X	✔✔ ✔	374	ERROR
libhandy	-	-	0.0.13-3		-			-	-	Buildd Logs	✔	✔	✔	✓(fail) -	10244	-
libmbim	2	1	1.24.6-0.1 1.28.0-1~bpo11+1		1.28.2-1	1.30.0-1	-	1.31.2-0u4 7 bugs	Git ✔ ✔	✓✓✓✓✓✓✓✓✓✓	✔	✔	X	-- FTBFS	119465	1.30.0
libomemo	-	-	0.7.0-1		0.8.1-3		-	0.8.1-3 -	Git ✔ ✔	✓✓✓✓✓✓✓✓✓✓	✔	✔	X	✔✔ ✔	109	0.8.1
libqmi	3	1	1.26.10-0.1 1.32.0-1~bpo11+1		1.32.2-1	1.34.0-2	1.35.6-1 Excuse	1.35.2-0u2 -	Git ✔ 1.34.0-2	✓✓✓✓✓✓✓✓✓✓	✔	✔	X	-- FTBFS	119392	1.34.0
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lisgd	-	-	-		0.3.7-1		-	0.3.7-1 -	Git ✔ ✔	✓✓✓✓✓✓✓✓✓✓	✔	✔	✔	-- ✔	9	0.4.0
make-dynpart-mappings	-	-	-		10.2.4-1		-	10.2.4-1 -	Git ✔ ✔	18×✓	✔	✔	✔	-- ✔	16	ERROR

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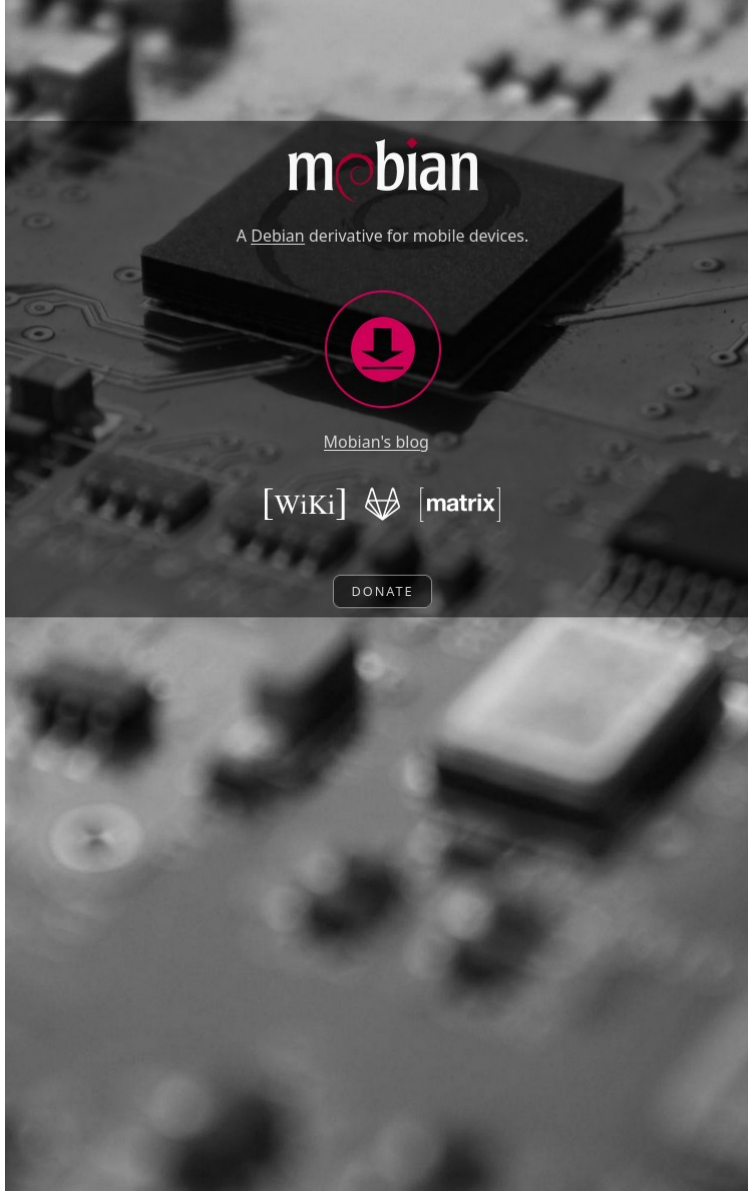
Mobian - A partial Debian Derivate

- **No strict need to follow DFSG**
- **28 source packages** (aiming for 20)
  - Mostly kernel packages with 100..300 downstream patches each scheduled pipelines for stable rebase
- **Debos based image builds**
  - Recipes for device customization
  - Weekly image generation



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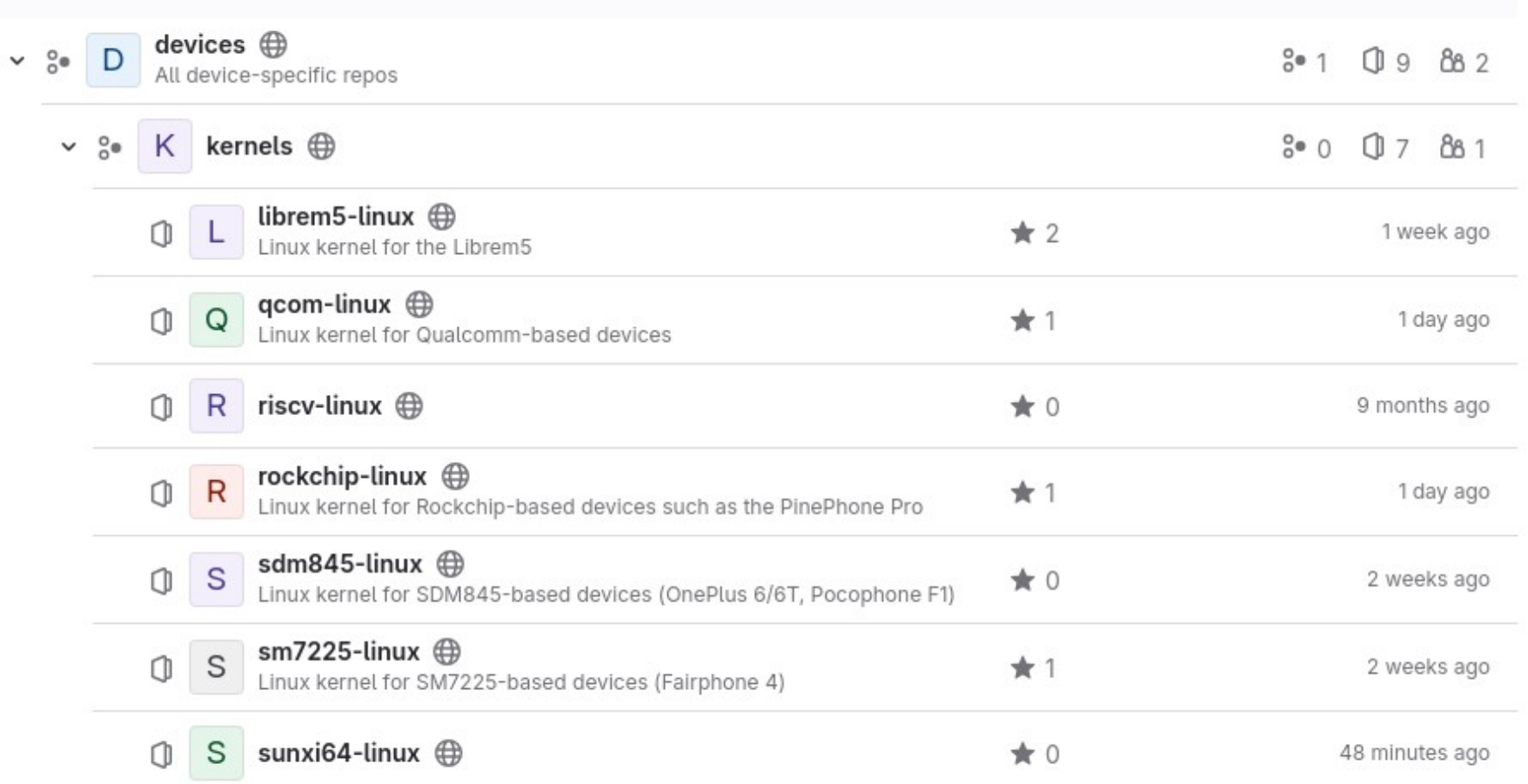
https://salsa.debian.org/Mobian-team



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Imagebuild with debos https://github.com/go-debos

Mobian Team / **mobian-recipes**

Name	Last commit	Last update
.gitlab-ci	gitlab-ci: add job rules to only act on ...	10 months ago
devices	devices: amd64: fix firmware script a...	3 weeks ago
include	packages-phosh: reinstate loupe as t...	2 weeks ago
overlays	Use mobian-archive-keyring package	5 months ago
scripts	Revert "scripts: add unstable/exp to ...	2 weeks ago
.gitignore	Add miniramfs	3 years ago
.gitlab-ci.yml	gitlab-ci: disable plasma-mobile build...	2 weeks ago
LICENSE	Initial commit	4 years ago
README.md	Apply 1 suggestion(s) to 1 file(s)	3 months ago
build.sh	recipes/build.sh: allow passing custo...	8 months ago
image.yaml	add btrfs-progs when building a syst...	8 months ago
installer.yaml	Various partition-related cleanups	1 year ago
installfs.yaml	Use mobian-archive-keyring package	5 months ago
rootfs-device.yaml	recipes: use `non-free-firmware` inst...	1 year ago
rootfs.yaml	rootfs: use `apt` action for installing t...	4 months ago

rootfs-device.yaml

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rootfs.yml

```
actions:
  - action: debootstrap
    suite: {{ $debian_suite }}
    variant: minbase

  - action: overlay
    description: Enable Mobian repository
    source: overlays/apt/
    destination: /etc/apt/

  - action: recipe
    recipe: include/packages-base.yaml
    Variables: ssh: {{ $ssh }}

  - action: recipe
    recipe: include/packages-{{ $environment }}.yaml
```

image.yaml

Device customization

```
- action: recipe
  recipe: devices/{{ $family }}/packages-base.yaml
  Variables: device: {{ $device }}

- action: recipe
  recipe: devices/{{ $family }}/bootloader.yaml
  Variables: device: {{ $device }}
```

devices/qcom/packages-base.yaml:

```
- action: apt
  recommends: false
  description: Install device-specific base packages
  packages:
    - qcom-support-common
```

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mobian / qcom-support / debian / control — Find file | Blame | History | Permalink

d/control: add new `qcom-support` package
Arnaud Ferraris authored 10 months ago — ab856377

control 1.83 KiB — Blame | Edit

```
1  Source: qcom-support
2  Section: metapackages
3  Priority: optional
4  Maintainer: Arnaud Ferraris <aferraris@debian.org>
5  Standards-Version: 4.6.2
6  Build-Depends: debhelper-compat (= 13)
7  Homepage: https://salsa.debian.org/Mobian-team/devices/qcom-support
8  Vcs-Git: https://salsa.debian.org/Mobian-team/devices/qcom-support.git
9  Vcs-Browser: https://salsa.debian.org/Mobian-team/devices/qcom-support
10 Rules-Requires-Root: no
11
12 Package: qcom-support-common
13 Architecture: all
14 Depends: ${misc:Depends},
15          droid-juicer,
16          firmware-atheros,
17          firmware-qcom-soc,
18          libdrm-freedreno1,
19          libqmi-utils,
20          make-dynpart-mappings,
21          mobian-tweaks-common,
22          mobile-usb-networking,
23          protection-domain-mapper,
24          qcom-phone-utils,
25          qrtr-tools,
26          rmtfs,
27          tqftpserv,
28 Description: Hardware support packages for Qualcomm-based devices
29  This metapackage pulls in all common packages needed to run on devices
30  based on Qualcomm SoC's.
31
```

mobian

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2023

bookworm

- **Not many** adaptive applications
- **mobile-tweaks** Device specific configurations
- **droid-juicer** extract FW from Android vendor partitions

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2025?

trixie

- **More** adaptive applications!
- **Cell Broadcasts**?!
- Improved support for **Qualcomm** devices
  - low-level userspace tools & services
    - **hexagonrpc**
      comm. with DSP, enabling sensors support
    - **q6voiced**
      enables voice calls on phones
- **tweakster**
  - Identify underlying device on boot-time and apply proper configs
- evince -> Papers

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Long term..

- Enable devices in **Debian's kernel**
  - needs mainline support -> help upstreaming patches
- Address still-not-properly-fixed **"voice call problem"**
  - callaudiod clashes with wireplumber
  - need to make it a **wireplumber plugin** with corresponding rules
- Qualcomm devices can use a 'vanilla' Debian userspace + downstream kernel

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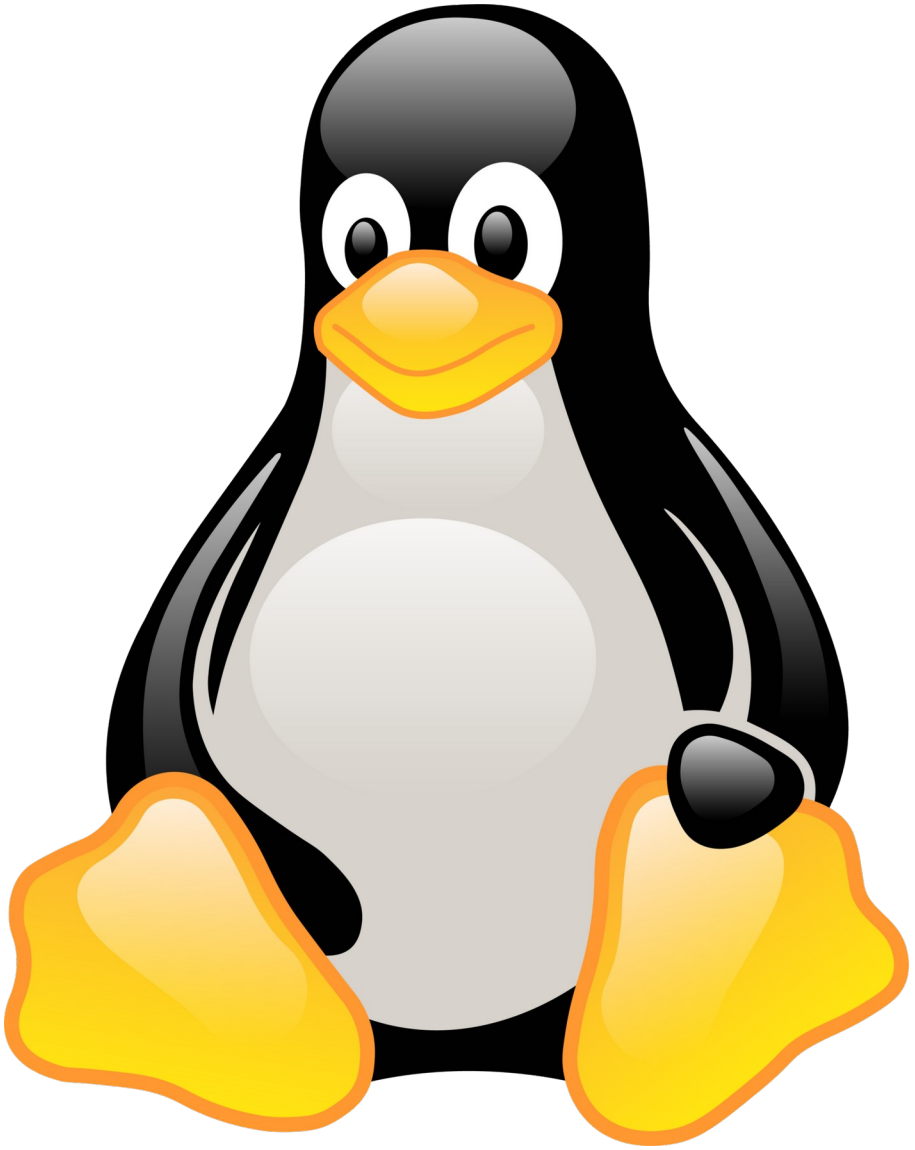
Linux-first phones

+ easy for development / debugging

+ easy to start with

- expensive compared to what you get



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Purism librem5

5.7″ IPS TFT 720×1440

+ First Debian Phone!
puri.sm contributes to Debian, Mobian, phosh..

* Price starting at $799

* Performance is OK:
NXP® i.MX 8M Quad core
Cortex A53, 1.5GHz
3 GB RAM, 32 GB eMMC + SDcard

* 13 / 8 MP Front/Rear Camera
medium quality

+ Kill Switches
WiFi, Cellular, Microphone/Cameras

+ Schematics + 3D designs

+ Shipped with PureOS
also based on Debian/Mobian

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Pinephone Pro

6″ 1440 x 720 IPS Gorilla Glass 4™

+ fair price $399.00
without Convergence Package

* Camera works, but bad quality

+ RK3399S
2x A72 @ 2 GHz + 4x A53 @ 1.5 GHz
4 GB RAM, 128 GB eMMC

+ Supported by most Linux distributions

+ 5 kill switches

+ Schematics and 3D files

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Pinephone

+ cheap! $199.99
incl. Convergence Package

- low performance
Quad-core 1.2 GHz Cortex A-53

- GPS unusable

- Camera works but slow and bad quality

+ Supported by most Linux distributions

+ 6 kill switches

+ Schematics and 3D files

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Android phones

+ cheap, 2nd hand

+ powerful

- proprietary bootloader

- dual boot is a challenge

- Kernel device support

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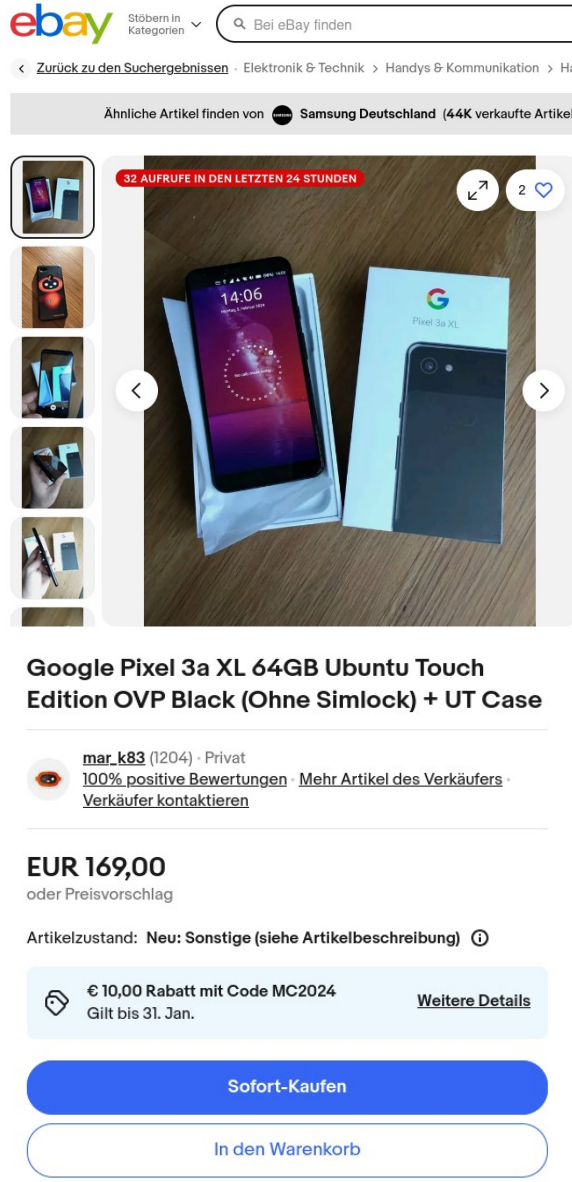
Google Pixel 3A (XL)

- *Camera not working (WIP)*

* Minor manual fixups needed

+ Doesn't need to suspend

+ 2 x 2,0 GHz + 6 x 1,7 GHz
4 GB RAM, 64 GB eMMC



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Fairphone 5

+ Good support in mainline Linux
Graphic via USB-C, WiFi, 5G LTE
Camera WIP
Audio WIP

- Mobian WIP

+ Spare-parts, instructions, schematics

+ Easy to unlock / flash / reflash
Android ROMs, ubuntu touch

+ Very powerful hardware
6..8 GB RAM, 128..256 GB UFS
1 x 2.7 GHz Cortex-A78 &
3 x 2.4 GHz Cortex-A78 &
4 x 1.9 GHz Cortex-A55

digitec.ch

What are you looking for?

Product range > Smartphones + Tablets > Smartphones > Fairphone 5

only 85 of 250 remaining

449.– was 549.–

Fairphone 5

256 GB, Transparent Edition, 6.46", SIM + eSIM, 50 Mpx, 5G

Ratings
223

Brand
More from Fairphone

Test reports
Good based on 9 tests

Delivered Thu, 5.12.
More than 10 items in stock

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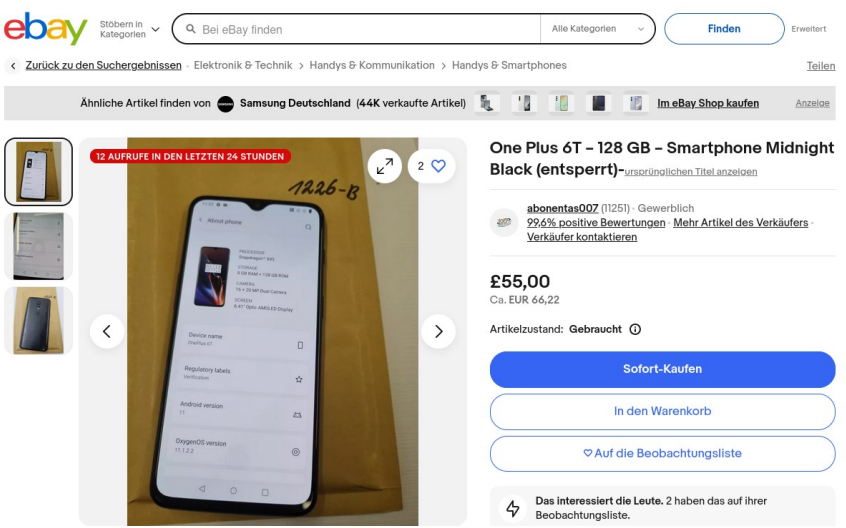
Oneplus 6(T)

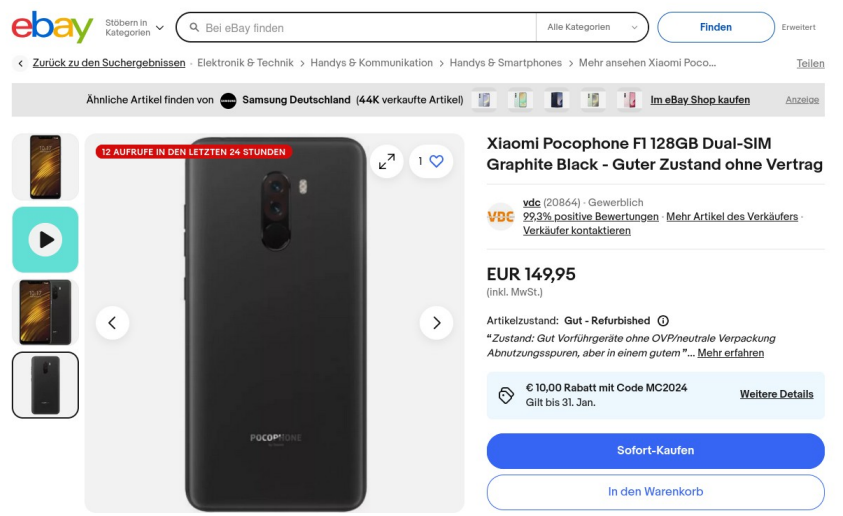
Xiaomi POCOPHONE F1

+ Good support in mainline Linux

+ Enough performance
4x 2.8 GHz Kryo 385 Gold &
4x 1.7 GHz Kryo 385 Silver
6/8 GB RAM, 64 .. 256 GB eMMC

- WIP: GPS, USB OTG, NFC, Camera, Calls





More information

https://wiki.debian.org/InstallingDebianOn/Xiaomi/PocophoneF1
https://wiki.debian.org/InstallingDebianOn/OnePlus/OnePlus6

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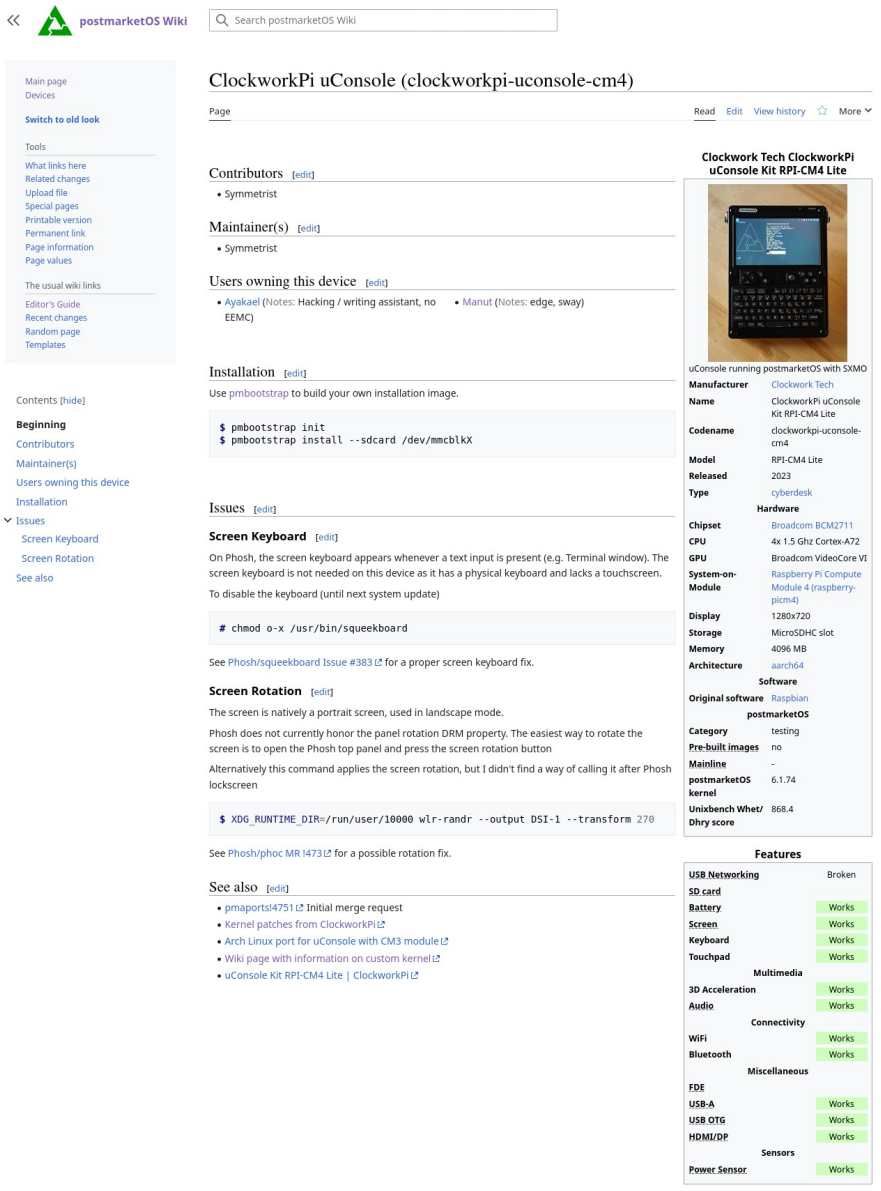
More information

https://wiki.debian.org/InstallingDebianOn

https://wiki.postmarketos.org/wiki/Devices



postmarketOS Wiki

Search postmarketOS Wiki

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See also

ClockworkPi uConsole (clockworkpi-uconsole-cm4)

Page — Read Edit View history More

Contributors [edit]
- Symmetrist

Maintainer(s) [edit]
- Symmetrist

Users owning this device [edit]
- Ayakael (Notes: Hacking / writing assistant, no EEMC)
- Manut (Notes: edge, sway)

Installation [edit]
Use pmbootstrap to build your own installation image.

```
$ pmbootstrap init
$ pmbootstrap install --sdcard /dev/mmcblkX
```

Issues [edit]
Screen Keyboard [edit]

On Phosh, the screen keyboard appears whenever a text input is present (e.g. Terminal window). The screen keyboard is not needed on this device as it has a physical keyboard and lacks a touchscreen.

To disable the keyboard (until next system update)

```
# chmod o-x /usr/bin/squeekboard
```

See Phosh/squeekboard Issue #383 for a proper screen keyboard fix.

Screen Rotation [edit]

The screen is natively a portrait screen, used in landscape mode.

Phosh does not currently honor the panel rotation DRM property. The easiest way to rotate the screen is to open the Phosh top panel and press the screen rotation button

Alternatively this command applies the screen rotation, but I didn't find a way of calling it after Phosh lockscreen

```
$ XDG_RUNTIME_DIR=/run/user/10000 wlr-randr --output DSI-1 --transform 270
```

See Phosh/phoc MR !473 for a possible rotation fix.

See also [edit]
- pmaports!4751 Initial merge request
- Kernel patches from ClockworkPi
- Arch Linux port for uConsole with CM3 module
- Wiki page with information on custom kernel
- uConsole Kit RPI-CM4 Lite | ClockworkPi

Clockwork Tech ClockworkPi uConsole Kit RPI-CM4 Lite

uConsole running postmarketOS with SXMO

Manufacturer	Clockwork Tech
Name	ClockworkPi uConsole Kit RPI-CM4 Lite
Codename	clockworkpi-uconsole-cm4
Model	RPI-CM4 Lite
Released	2023
Type	cyberdesk
Hardware	
Chipset	Broadcom BCM2711
CPU	4x 1.5 Ghz Cortex-A72
GPU	Broadcom VideoCore VI
System-on-Module	Raspberry Pi Compute Module 4 (raspberry-picm4)
Display	1280x720
Storage	MicroSDHC slot
Memory	4096 MB
Architecture	aarch64
Software	
Original software	Raspbian
postmarketOS	
Category	testing
Pre-built images	no
Mainline	-
postmarketOS kernel	6.1.74
Unixbench Whet/ Dhry score	868.4

Features

USB Networking	Broken
SD card	
Battery	Works
Screen	Works
Keyboard	Works
Touchpad	Works
Multimedia	
3D Acceleration	Works
Audio	Works
Connectivity	
WiFi	Works
Bluetooth	Works
Miscellaneous	
FDE	
USB-A	Works
USB OTG	Works
HDMI/DP	Works
Sensors	
Power Sensor	Works

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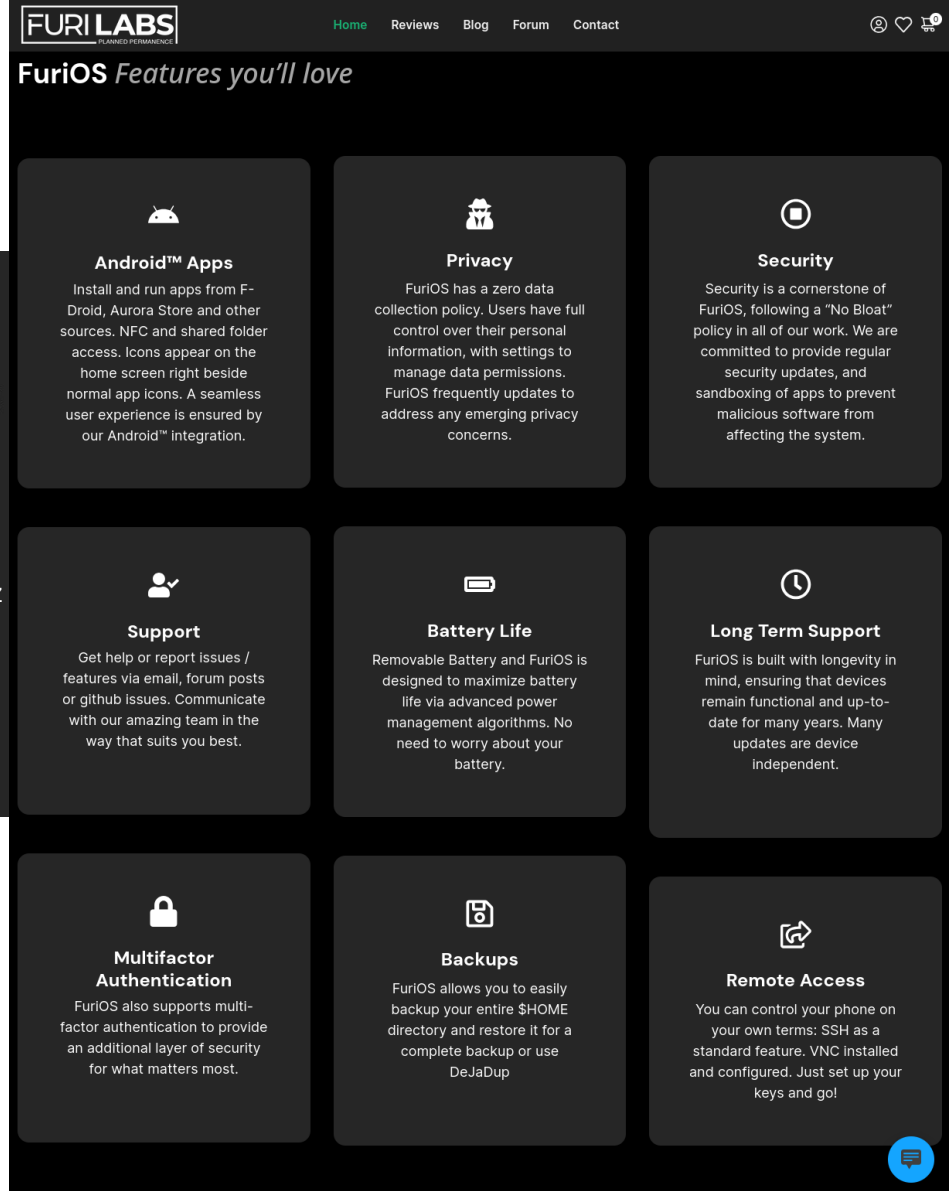
FuriPhone FLX1

Commits on Aug 20, 2024

debian: bump to 4.19.233
FakeShell committed on Aug 20 · ✓ 2 / 2

Linux 4.19.233
gregkh authored and FakeShell committed on Aug 20 · ✓ 2 / 2



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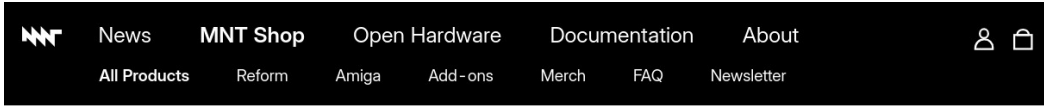
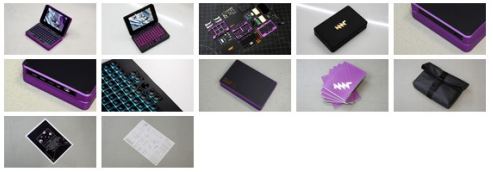
MNT Pocket Reform





MNT Pocket Reform

The Iconic Open Hardware Mini Laptop from MNT.

Ideal for using Linux on the go: MNT Pocket Reform is a fully-featured 7" mini laptop that is modular, upgradeable, customizable, repairable — and fully open source hardware.

Options

- (•) Assembly: Ready to Use **€900.00**
- ( ) Assembly: DIY Kit (no soldering required) **€850.00**

Customize

Case Color
Ultra Purple (+ €0.00)

CPU Module
A311D 4GB (+ €0.00)

Switches
Kailh Choc White (Clicky) (+ €0.00)

Handbook
Online Only (+ €0.00)

NVMe SSD M.2
No NVMe SSD M.2

Sleeve
No Sleeve

Poster (Limited Edition)
No Poster (Limited Edition)

Price

€900.00

Open Hardware

- All sources public
- Modifiable & reproducible
- Active community

Modularity

- Swap CPU, SSD, Keycaps
- Customizable
- Self-serviceable

Chassis

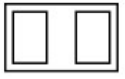
- Milled aluminum body
- Robust
- Recyclable

Keyboard

- Mechanical
- Customizable layout
- Dimmable backlight

Pointing Device

- Ergonomic trackball
- Precise pointing
- 4 Trackball buttons



Batteries

- Exchangeable
- Common size
- 2 Li-ion pouches with a total of 8000 mAh

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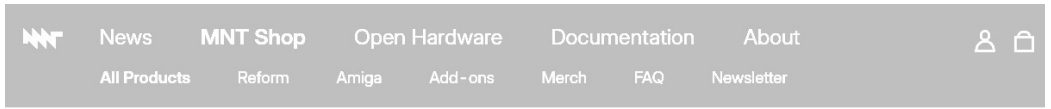
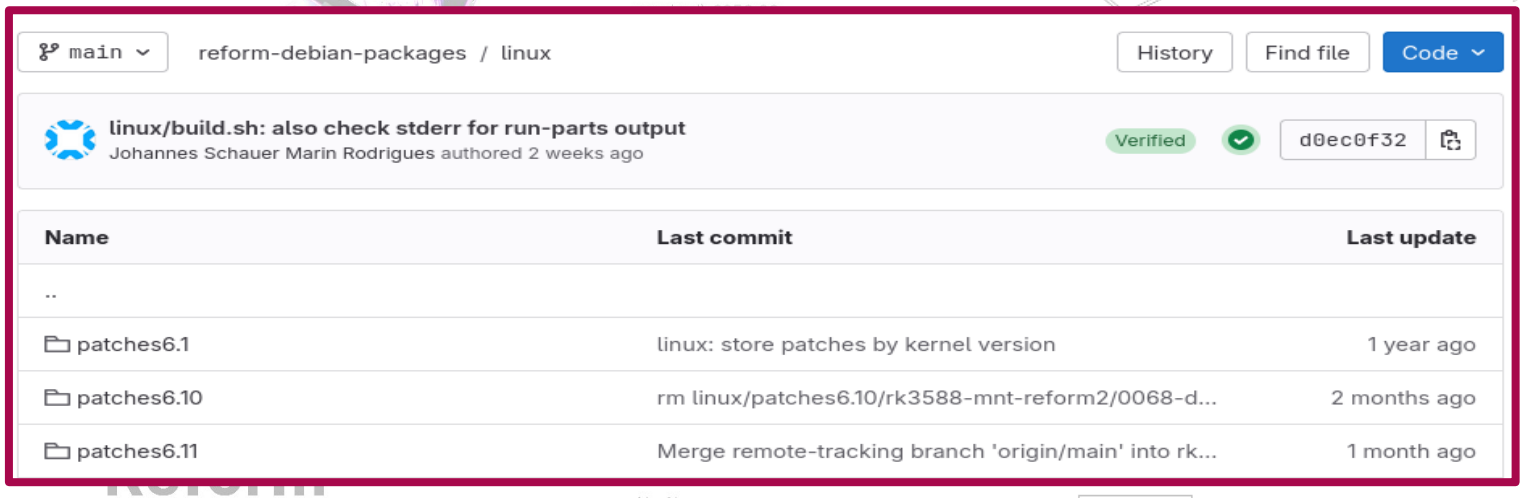
MNT Pocket Reform



Options

Assembly: Ready to Use €900.00

Assembly: DIY Kit (no soldering



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Poster (Limited Edition)

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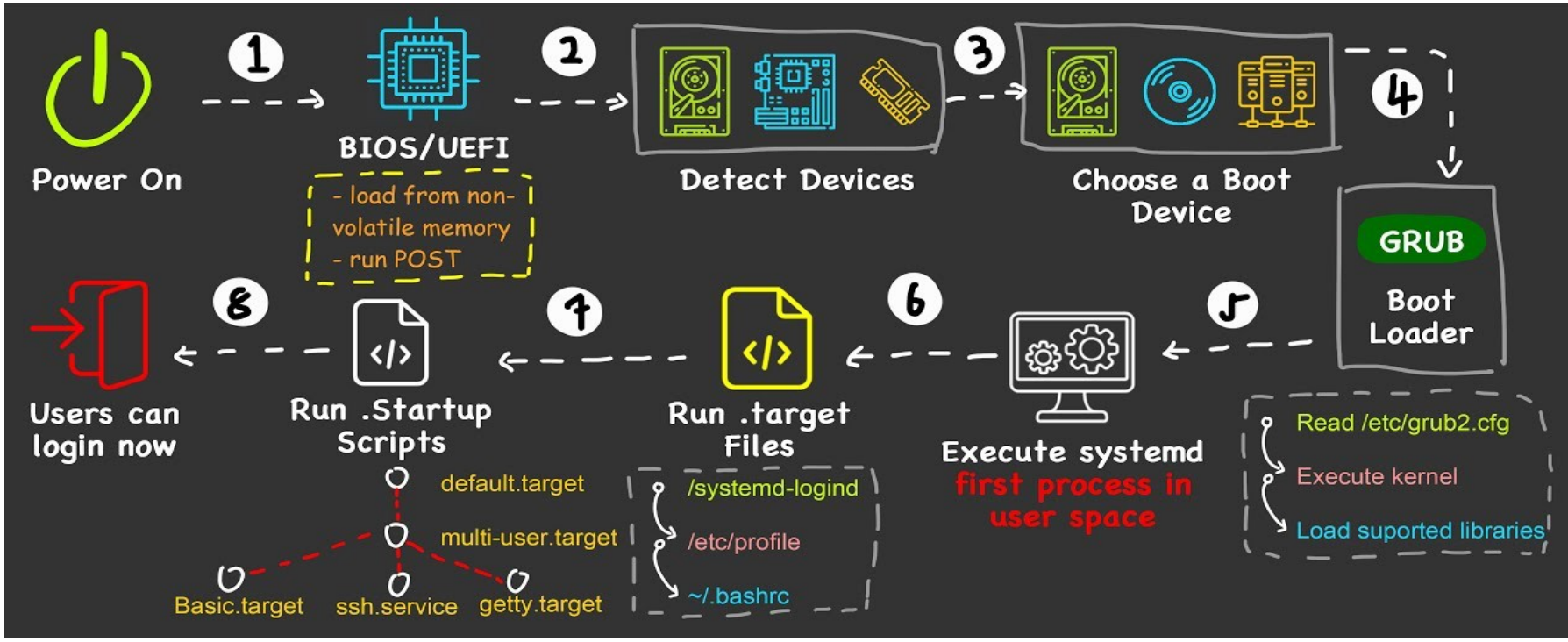
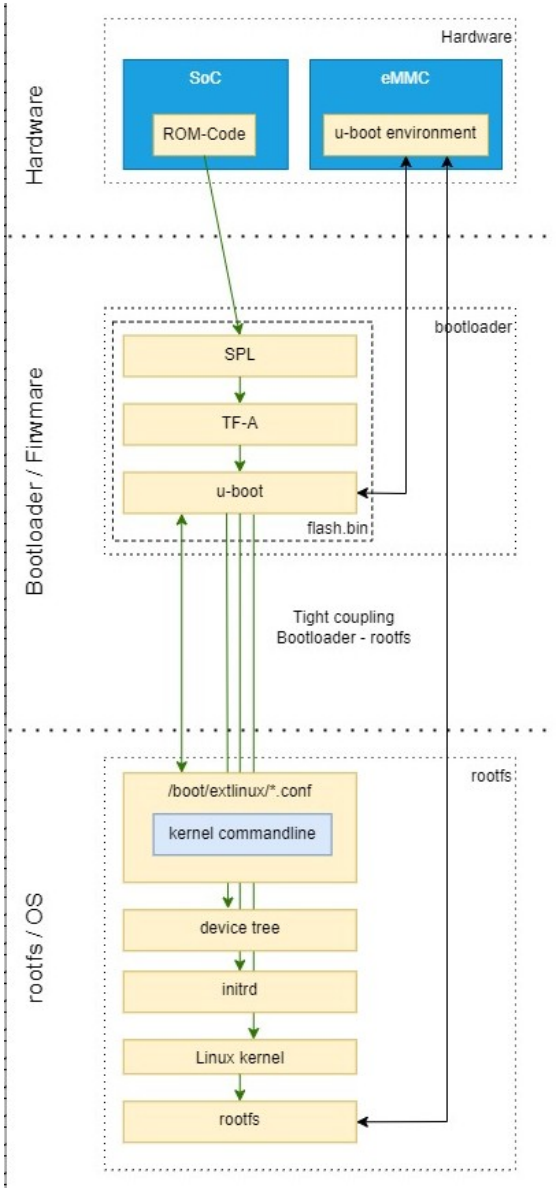
Booting PC



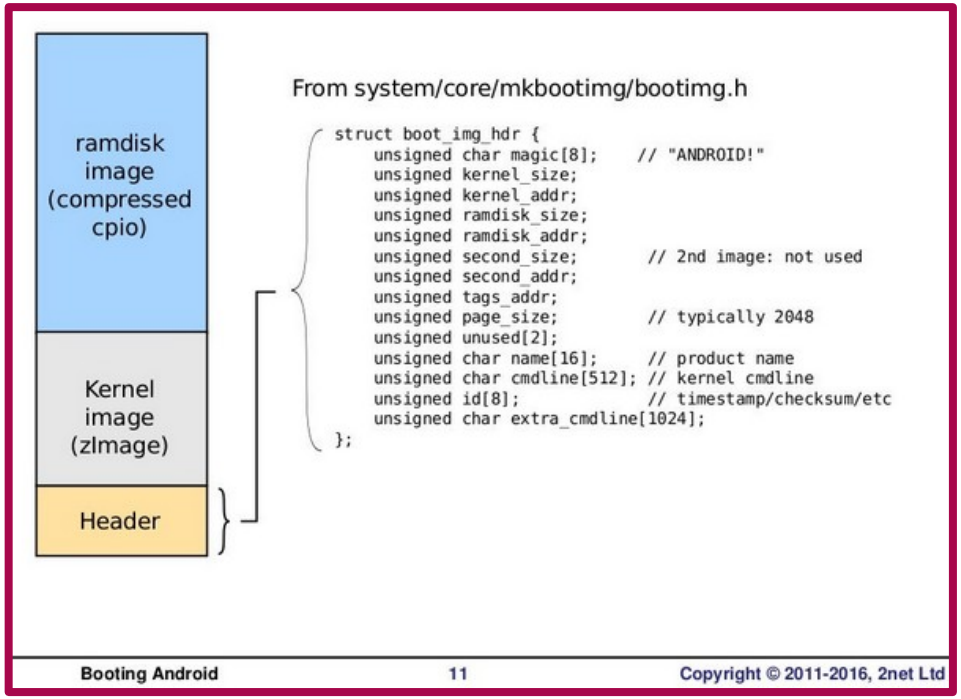
Booting Linux First Phone

- **No BIOS / UEFI, but**
  - Devicetree
  - Distroboot
- **Non-mainline Kernel**
- **No well defined interface between Firmware/bootloader and OS**



Booting Android

- **Proprietary Bootloader (cannot be replaced?!)**
- **Verifies signature of boot.img (unlock bootloader)**
- **boot.img:**
  - Also loads firmware blobs
  - To boot a ‘real Linux’:




```
echo "Creating boot image for ${FULLMODEL}..."
cat /boot/vmlinuz-${KERNEL_VERSION} ${DTB_FILE} > /tmp/kernel-dtb

mkbootimg -o /bootimg-${FULLMODEL} ${BOOTIMG_ARGS} \
    --kernel /tmp/kernel-dtb \
    --ramdisk /boot/initrd.img-${KERNEL_VERSION} \
    --cmdline "mobile.root=${ROOTPART} init=/sbin/init ro"
```

Booting systemd

Similar as on PC

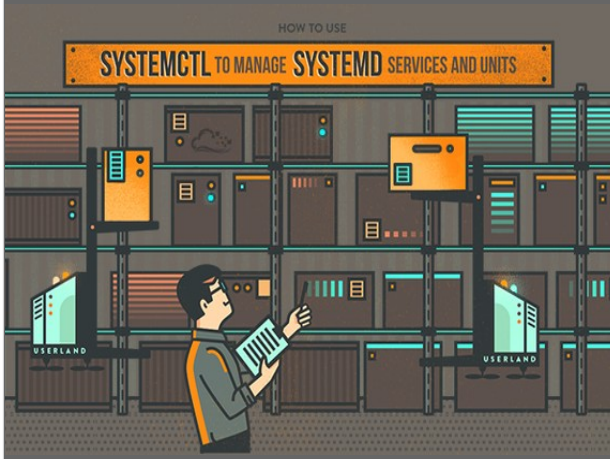
- udev
- plymouth
- LUKS
- bluetooth
- NetworkManager
- polkit
- upower
- fwupd
- udisks2
- dbus

More mobile specific

- modemmanager
- geoclue
- feedbackd
- systemd-growfs
- systemd-zram-setup
- wireplumber

Hardware specific

- iio-sensor-proxy
- eg25-manager
- mobile-usb-gadget



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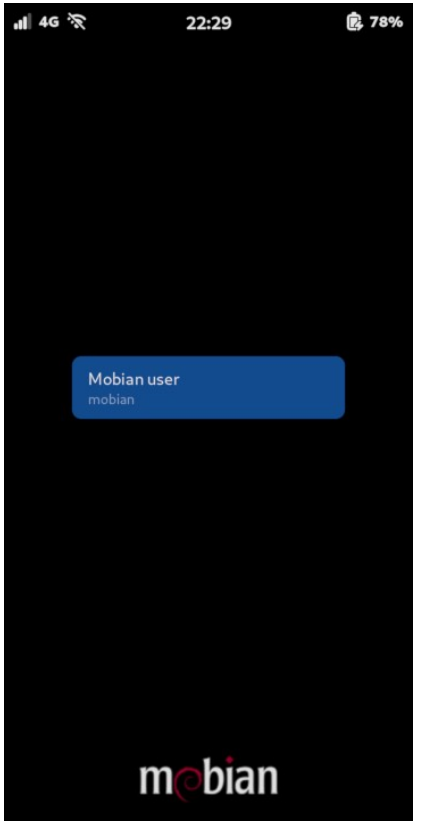
Login manager

- **optional**
- **greetd, phog**



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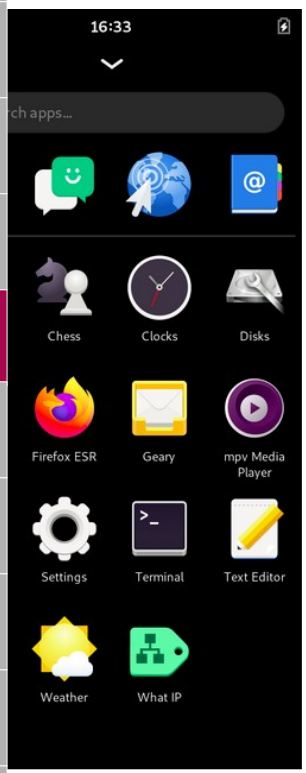

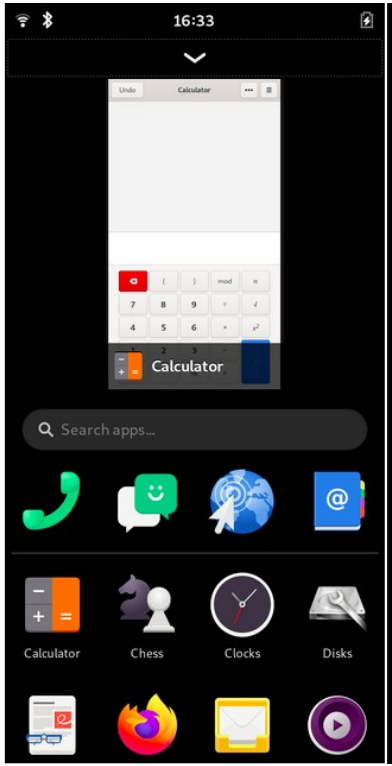

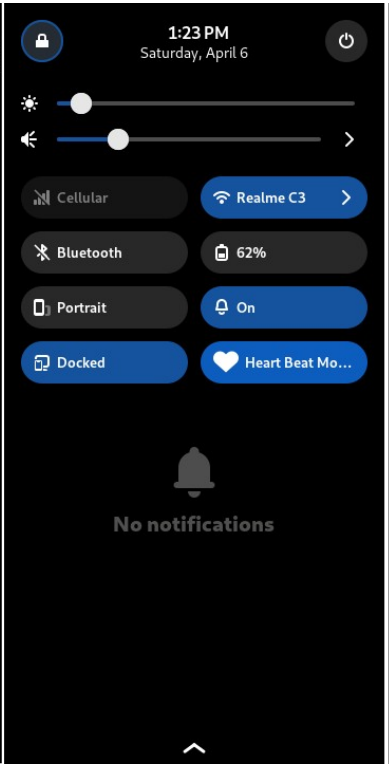

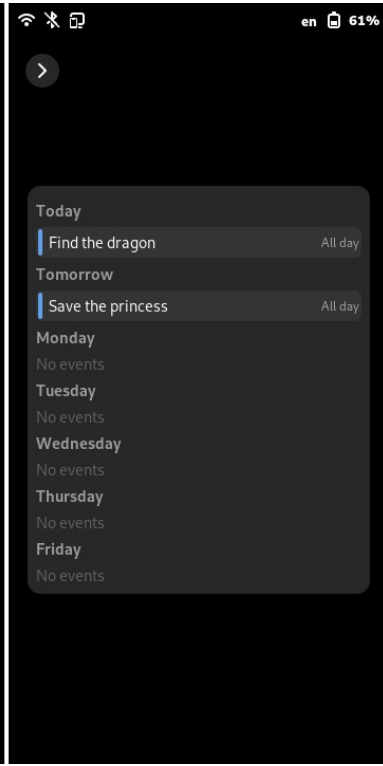

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KDE Plasma Mobile

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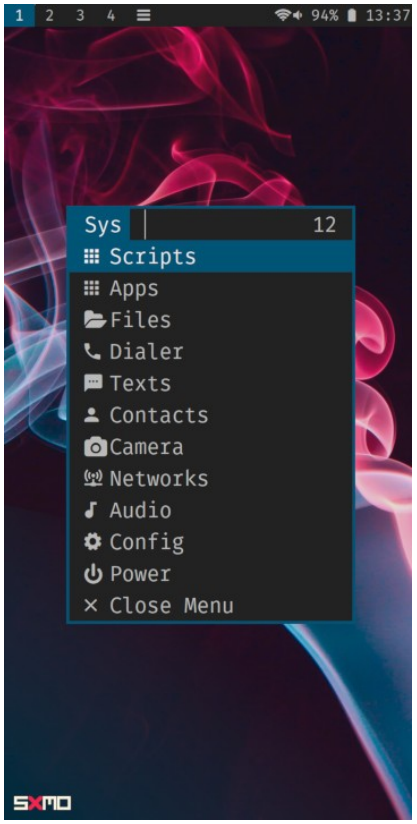
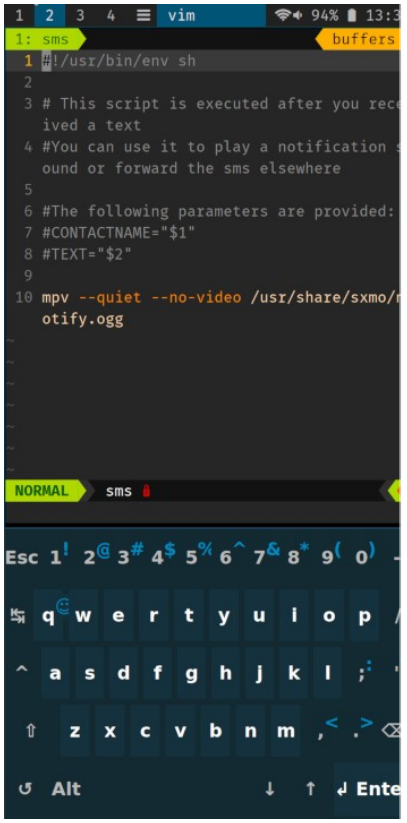
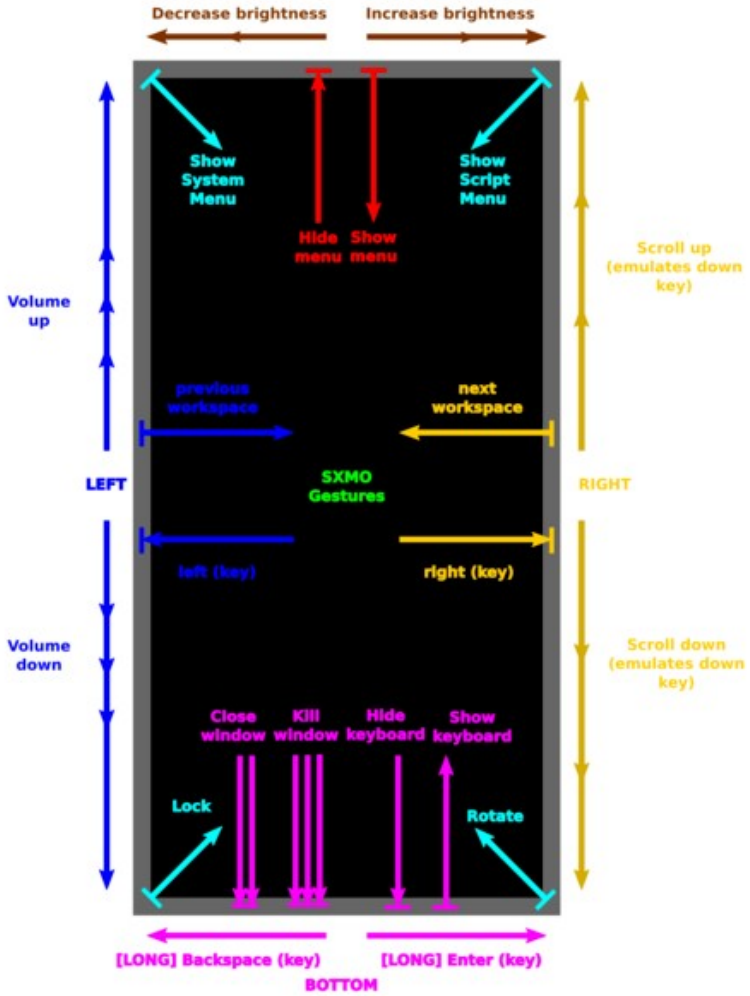
Sxmo a touch friendly sway configuration







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Lomiri from Ubuntu Touch packaged in Debian

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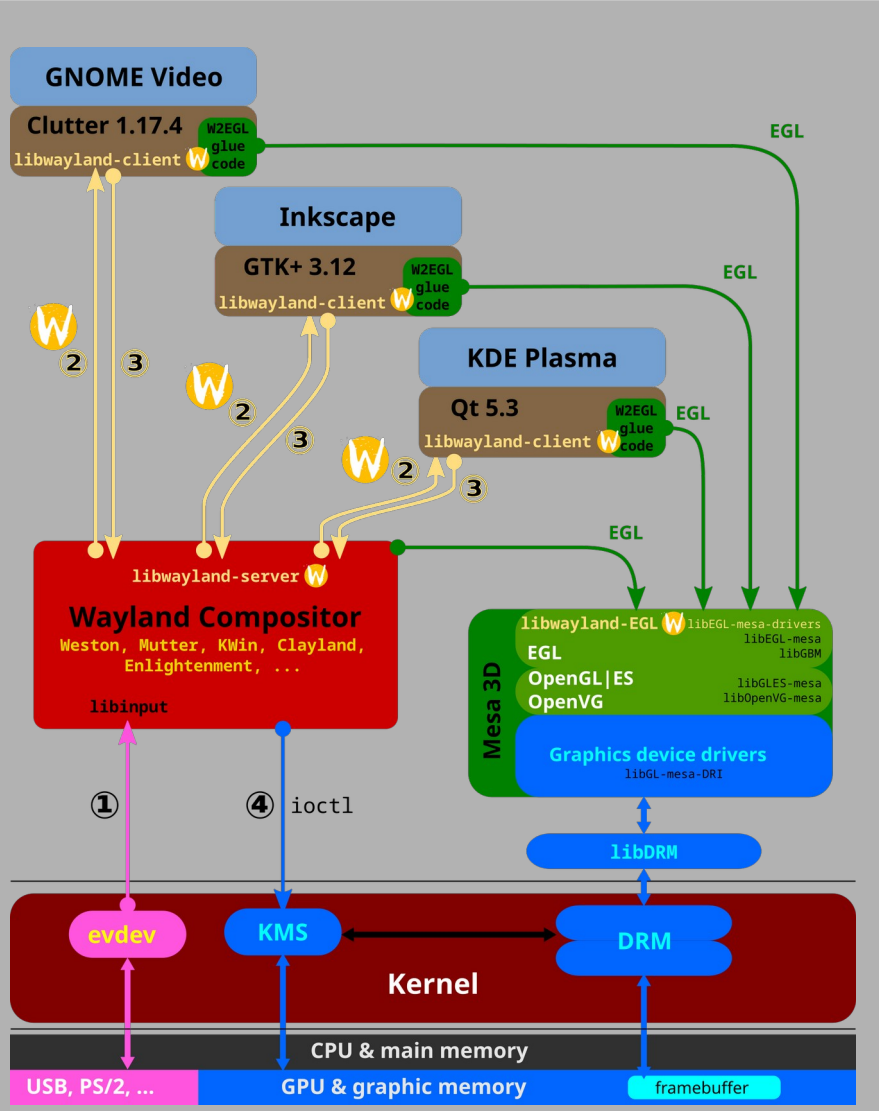
Wayland Compositor

Phosh libwlroots + phoc

Sxmo libwlroots + sway

KDE Plasma Mobile kwin

GNOME mutter



https://upload.wikimedia.org/wikipedia/commons/thumb/a/a7/Wayland_display_server_protocol.svg/1920px-Wayland_display_server_protocol.svg.png

mobian

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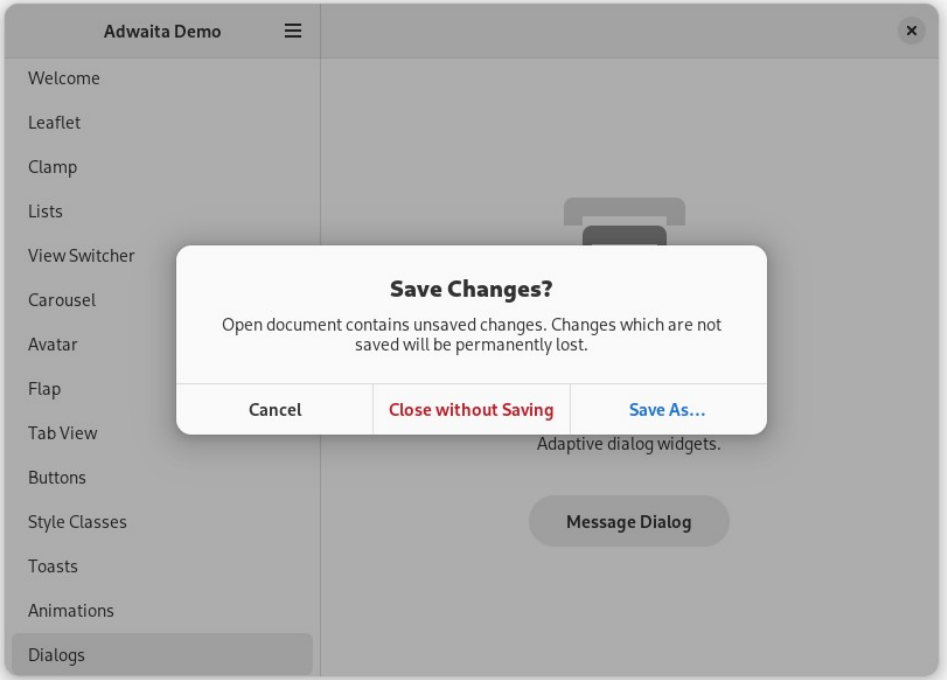
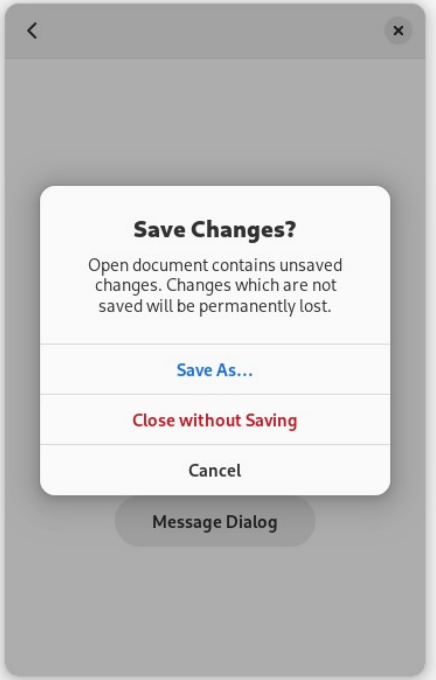
App Development

Support

Adaptive Layouts support in GTK and QT





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Connect peripherals by USB-C and BT

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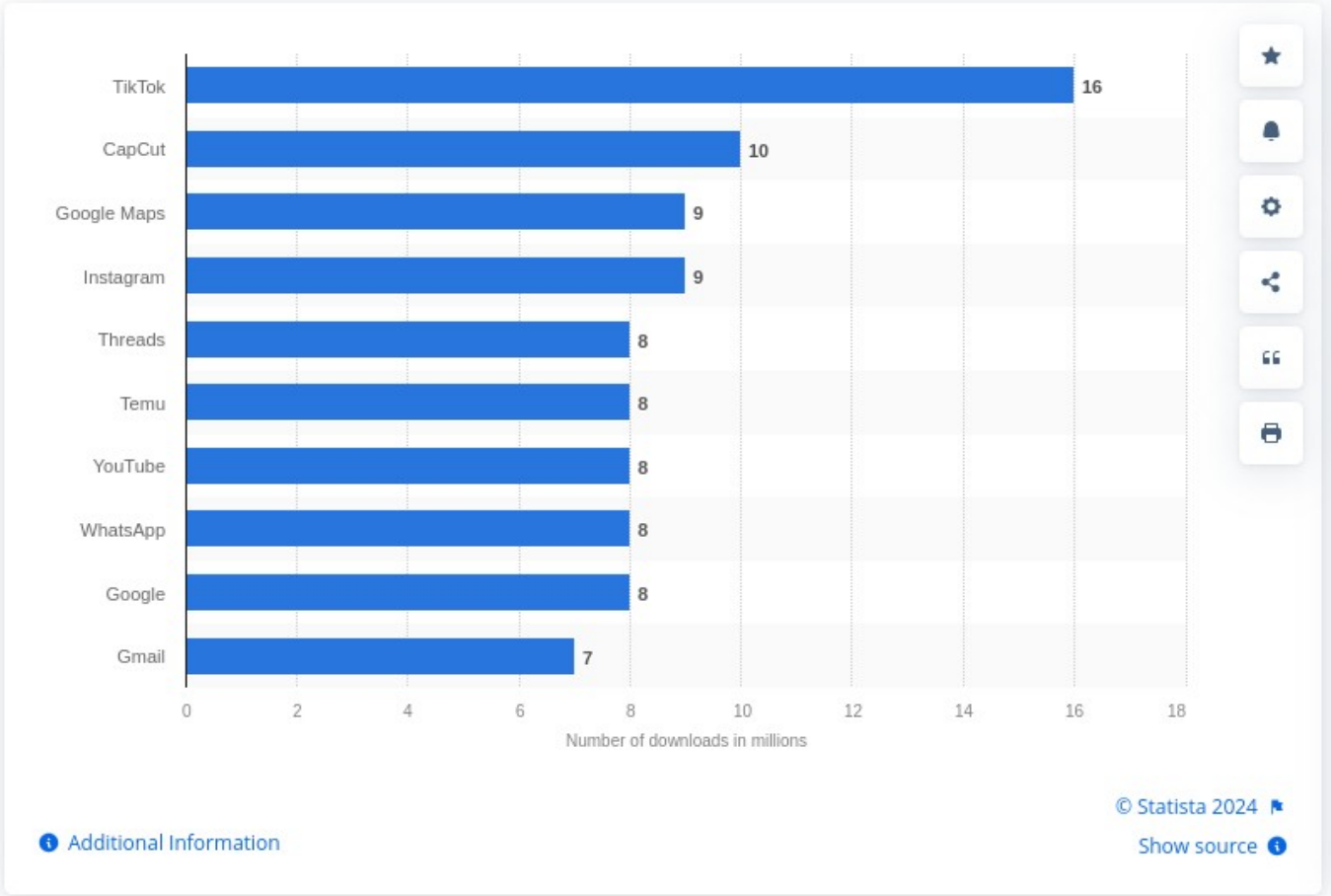
iOS Apps downloads in millions



https://www.statista.com/statistics/1448011/global-leading-ios-downloads-mobile-apps/

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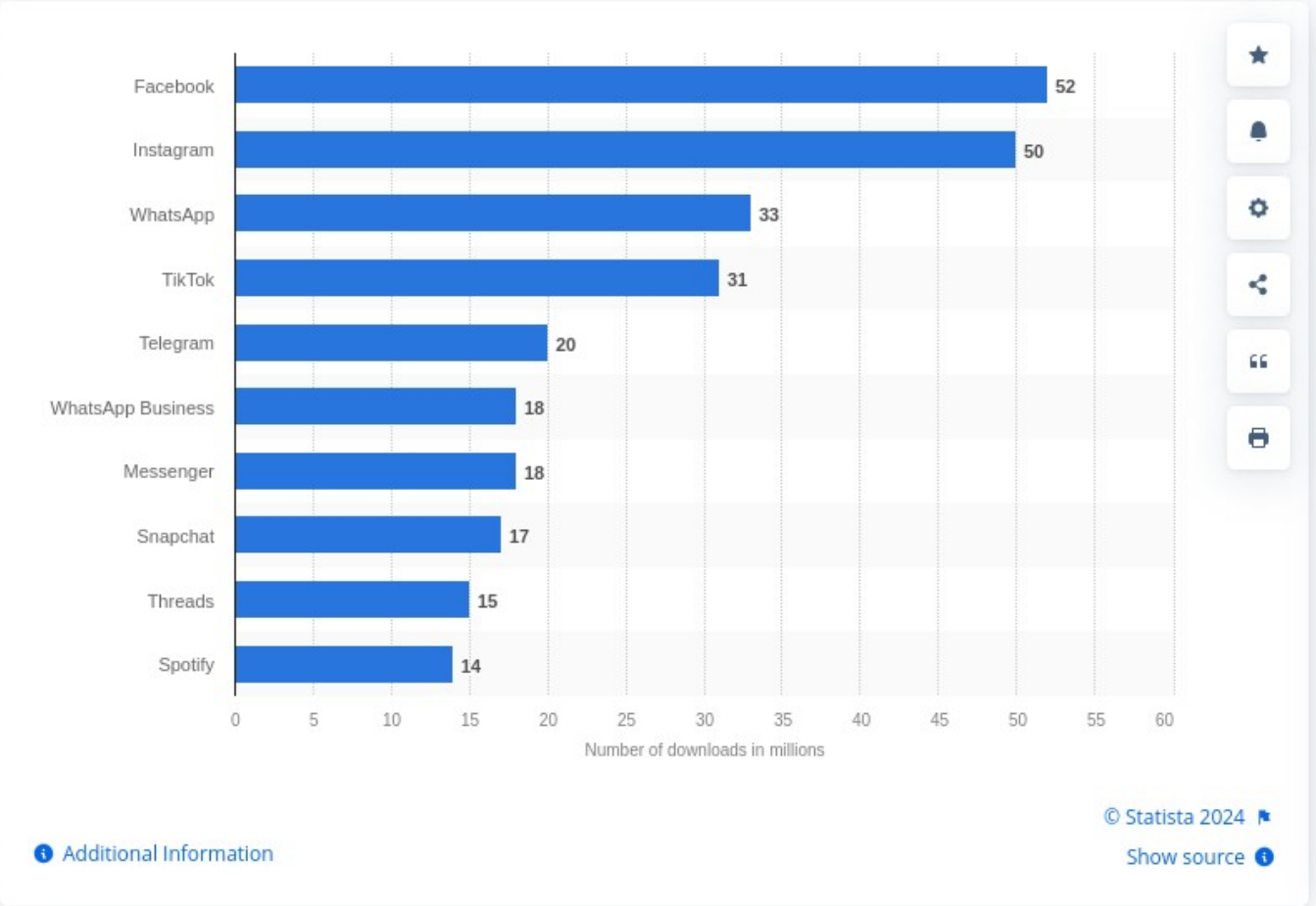
Android Apps downloads in millions



https://www.statista.com/statistics/1448018/global-leading-android-downloaded-mobile-apps/

Android

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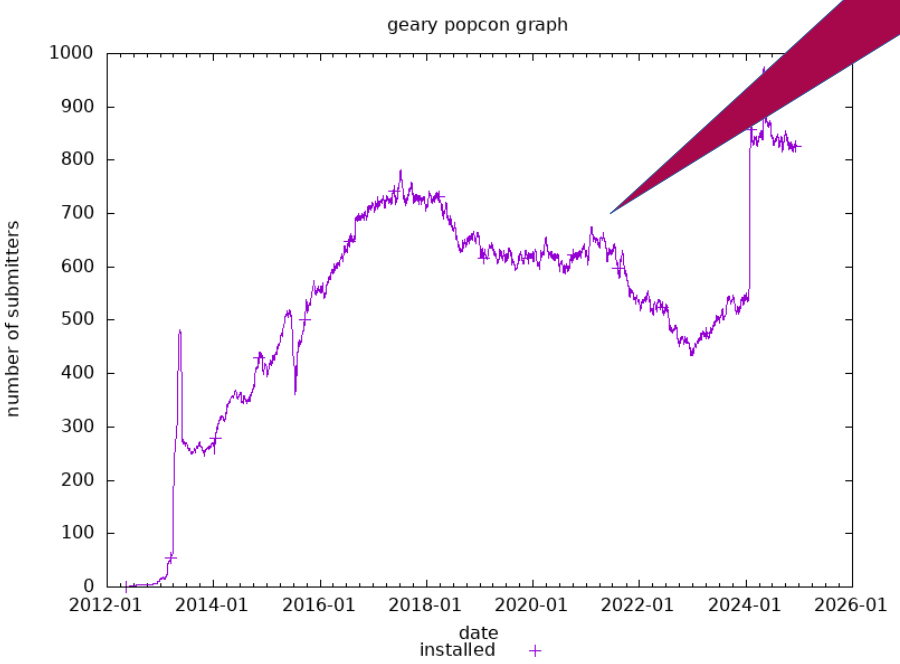
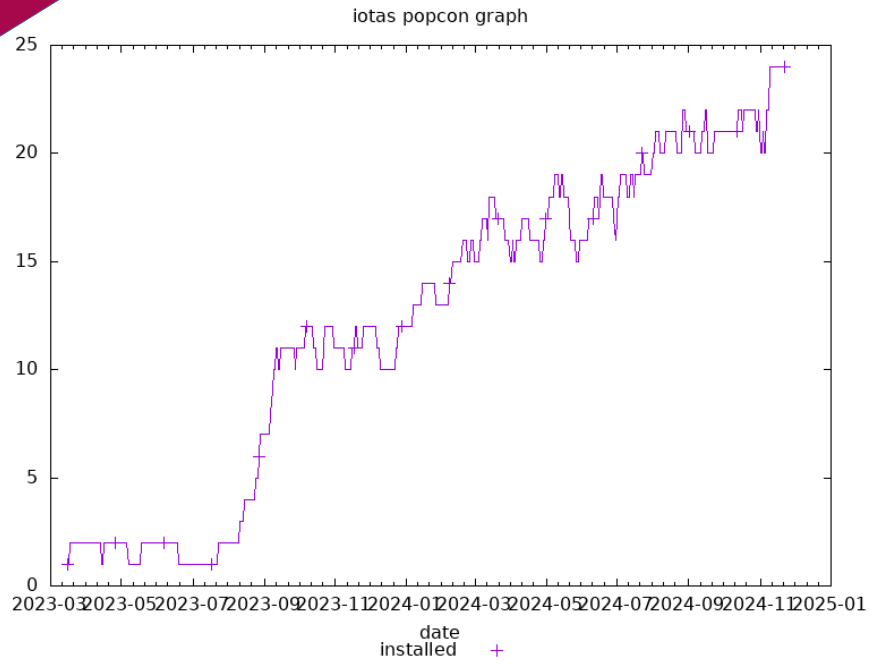
Debian Apps

downloads **NOT** in millions

debian

apt install geary





https://qa.debian.org/popcon.php

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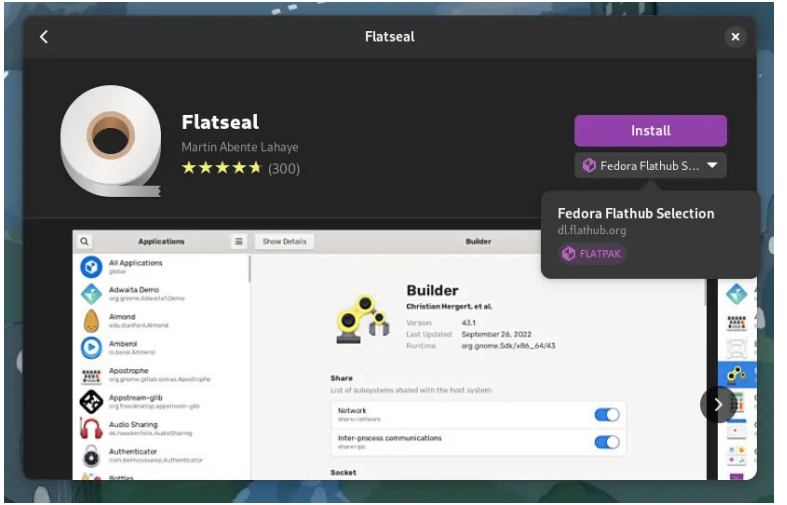
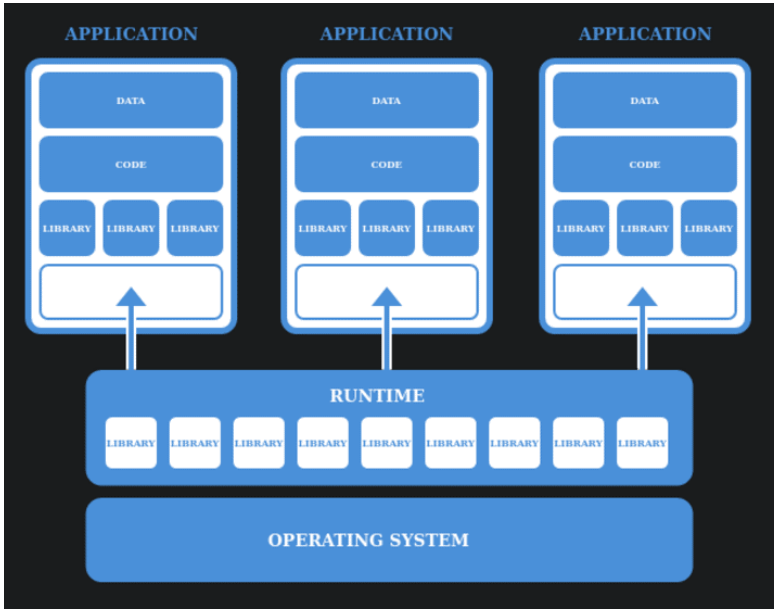
Flatpak

- **Security** container vs updates





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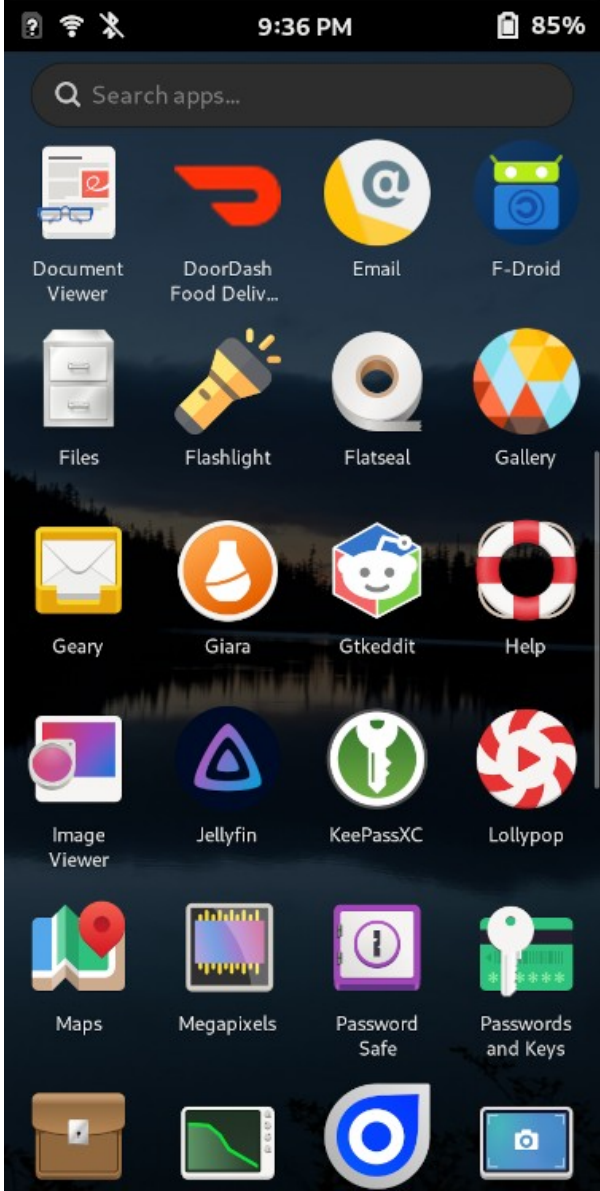
Waydroid run LineageOS in a container

- Performance impact
- Access banking apps not possible
- Device routing (e.g. camera) hard



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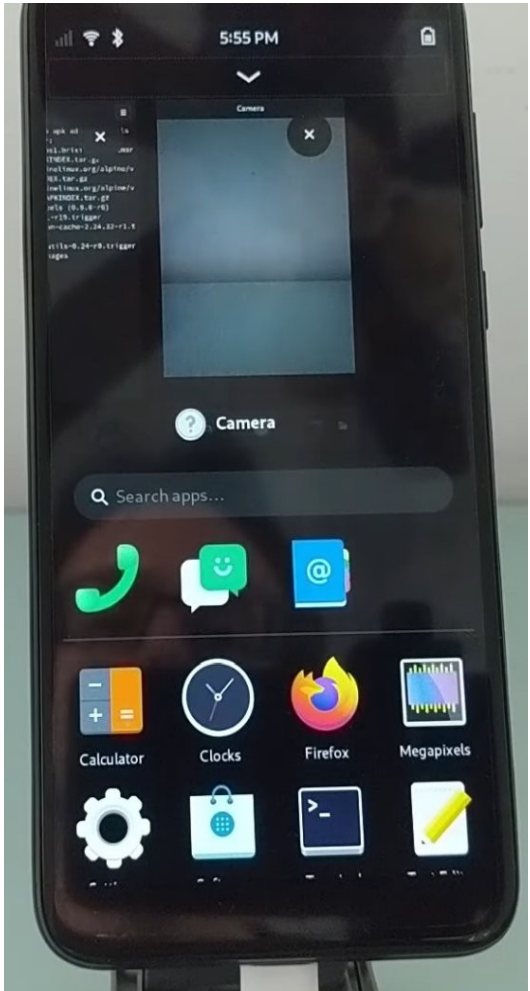
My Pinephone Phosh from Mobian trixie

- **Phosh comes with**
  gnome-settings * mobile-settings * gnome-software
  chatty * gnome-calls * anti-spam * geary
  calendar * endeavour * contacts * clocks
  firefox-mobile-config * epiphany
  gnome-maps * gnome-weather * gnome-calculator
  megapixel * eye of gnome
  clapper * lollypop * sound recorder * evince
  Usage * Powersupply * Phonetour
  gnome-text-editor * Portfolio
  phosh-osk-stack

- **I added**
  tuba
  numberstation * iotas * confy * passes-gtk
  cozy * podcasts (WIP) * goodvibes / shortwave
  saldo
  firefox plugins for Nextcloud
  btop * satellite



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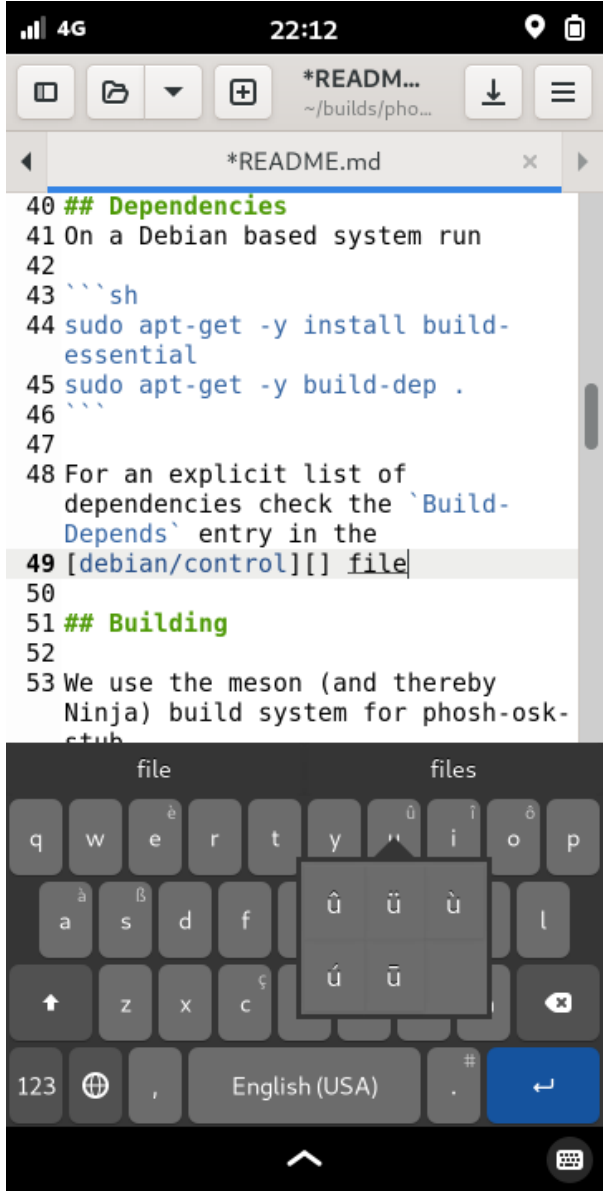
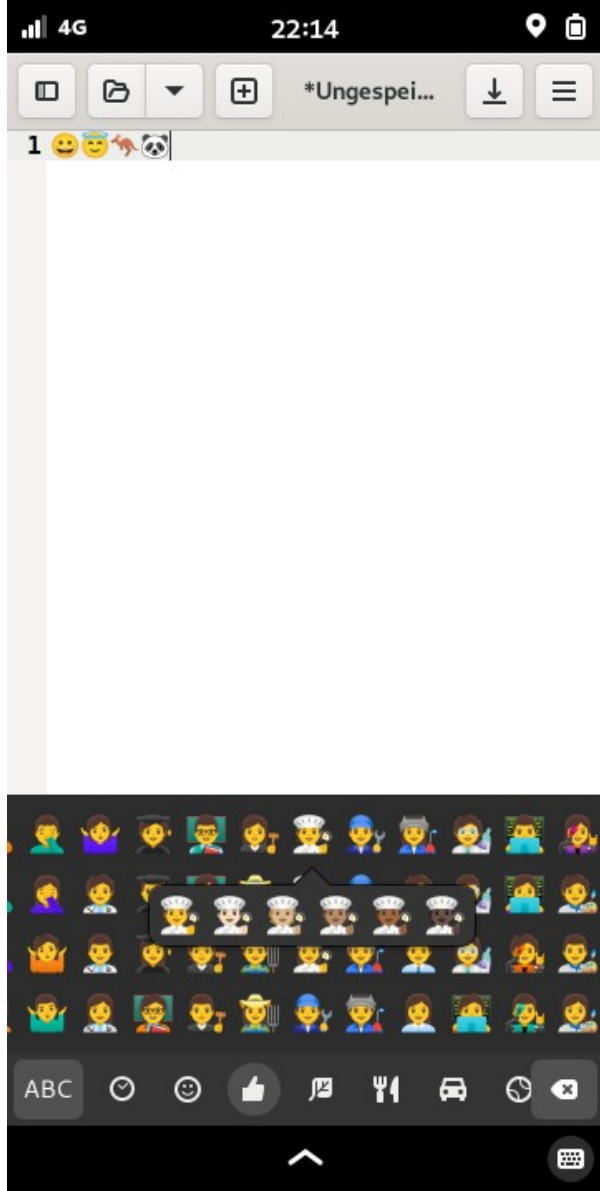
phosh-osk-stack





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Tuba mastodon client

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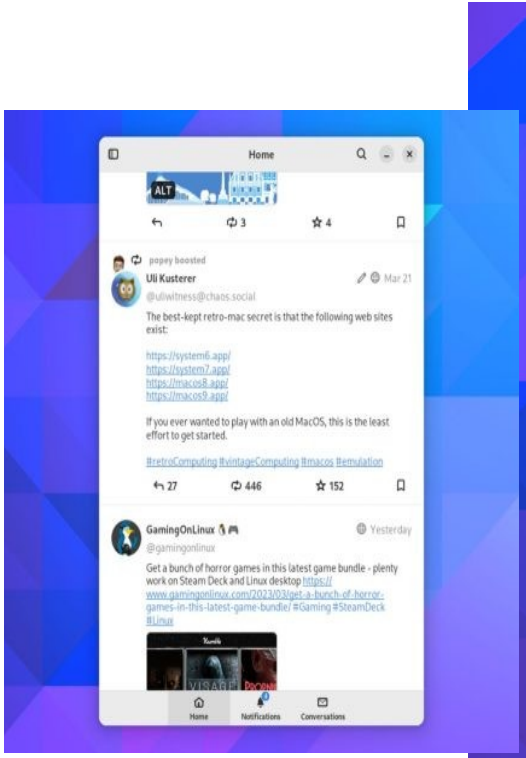

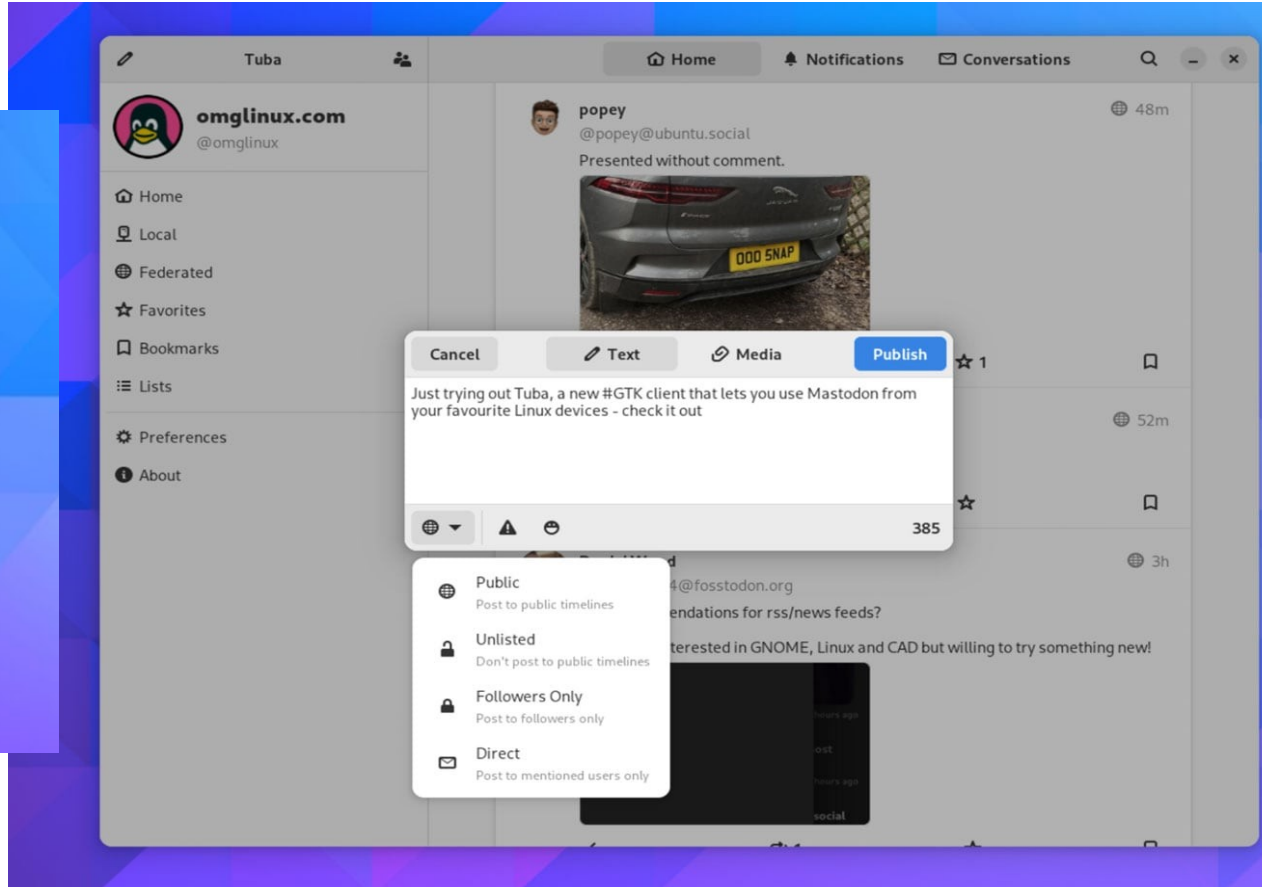

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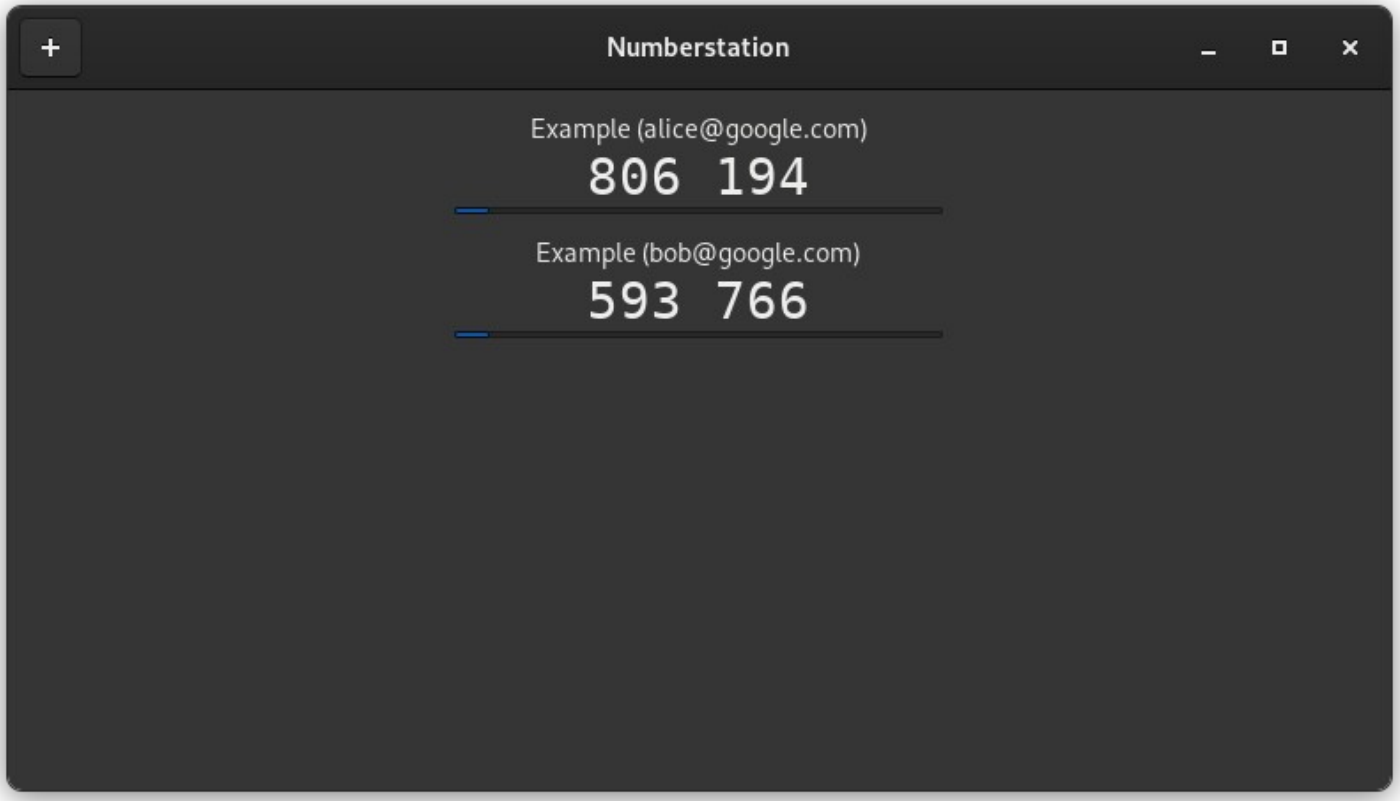
Numberstation OTP



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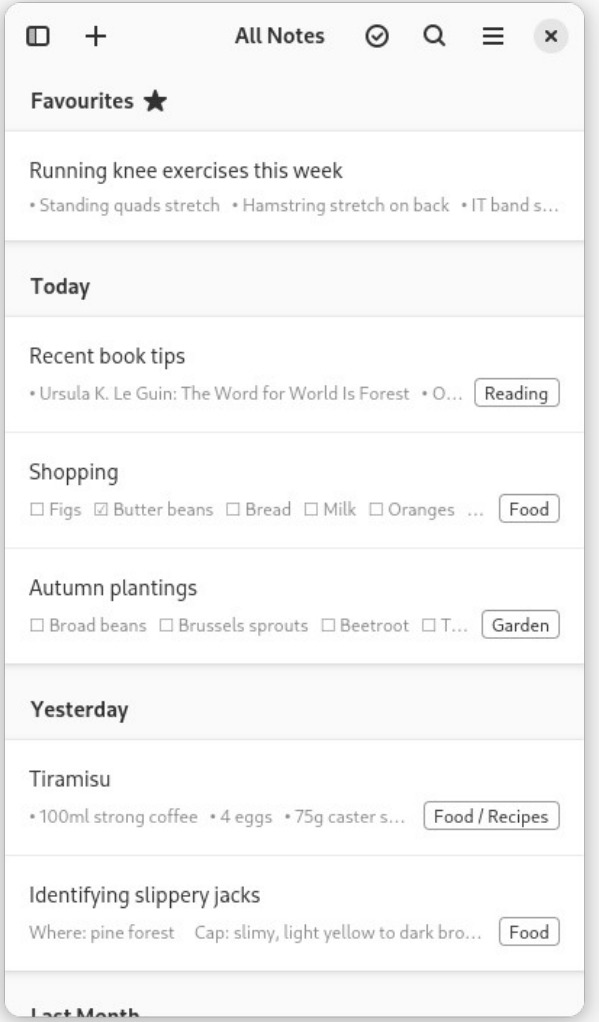
iotas Notes



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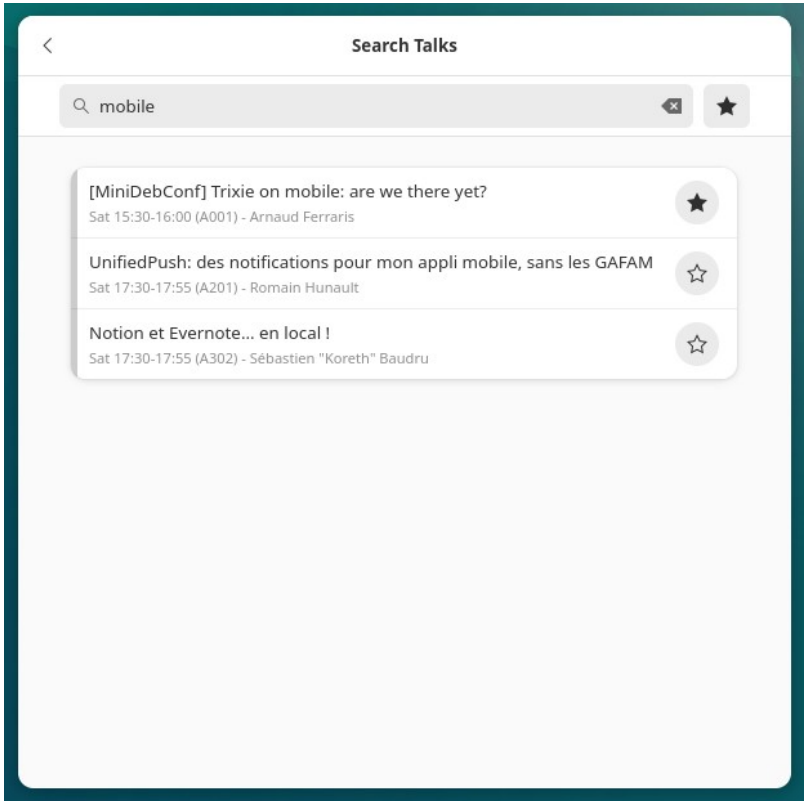
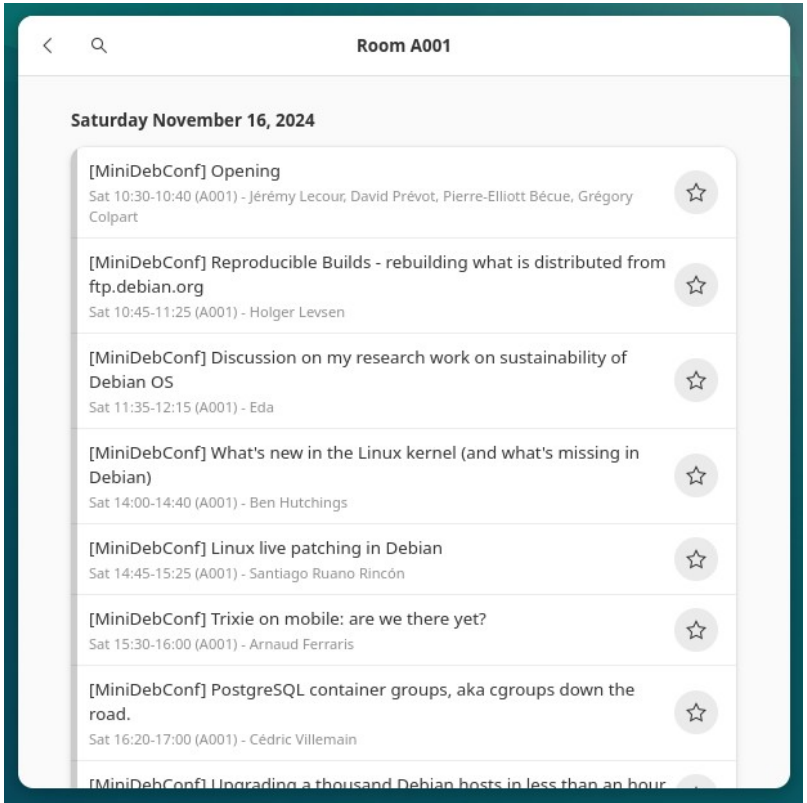
confy Conferences





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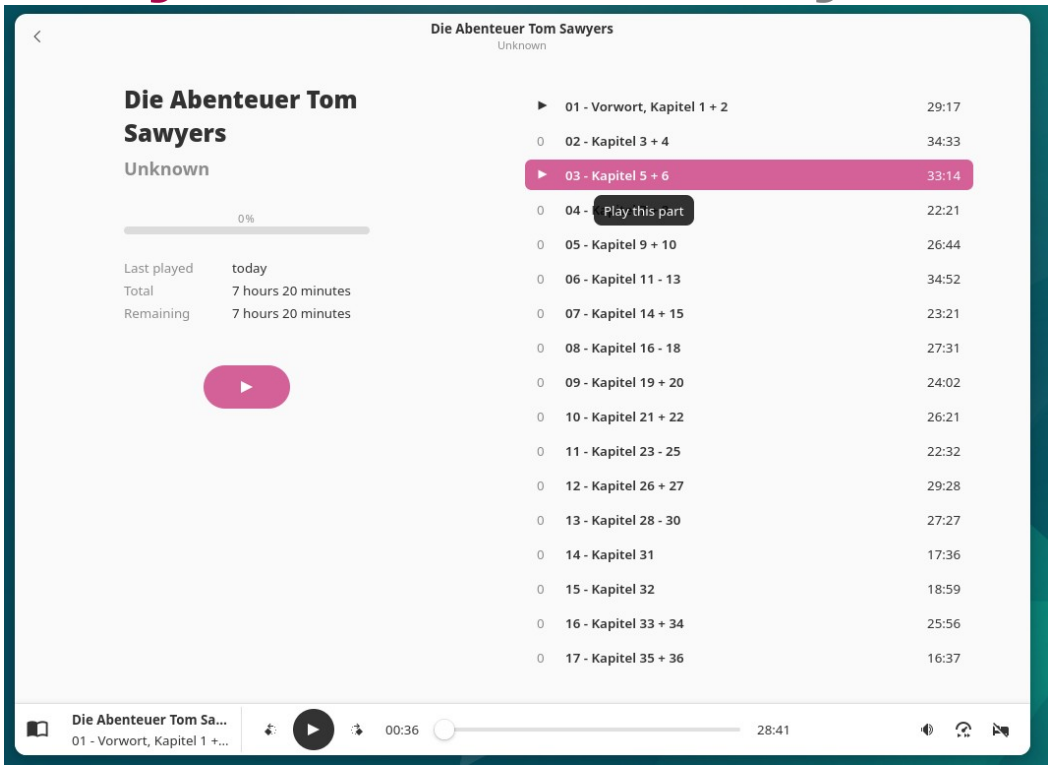
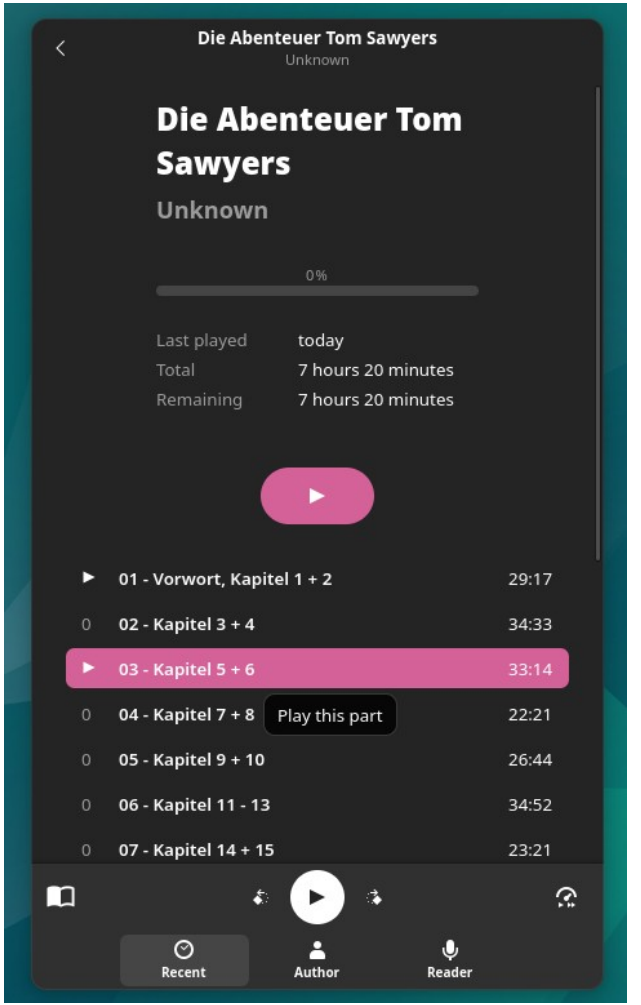
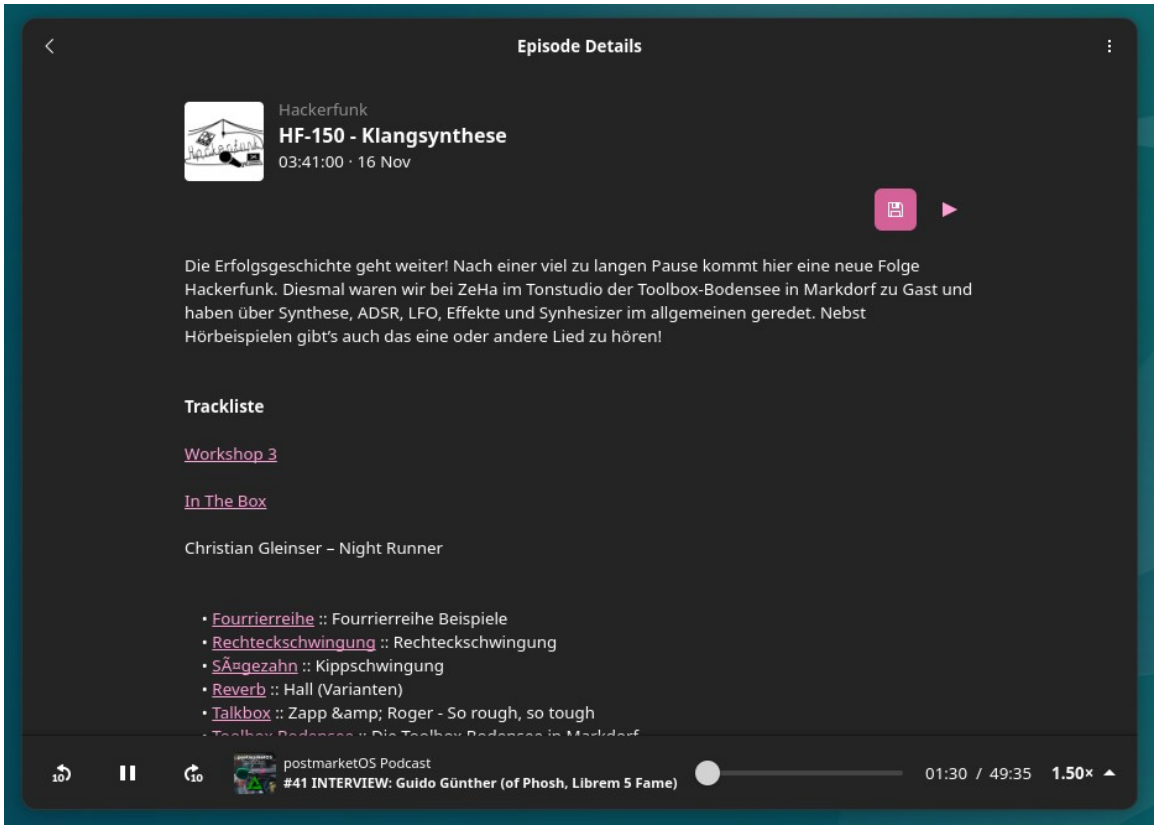
cozy Audiobook Player





Podcasts WIP



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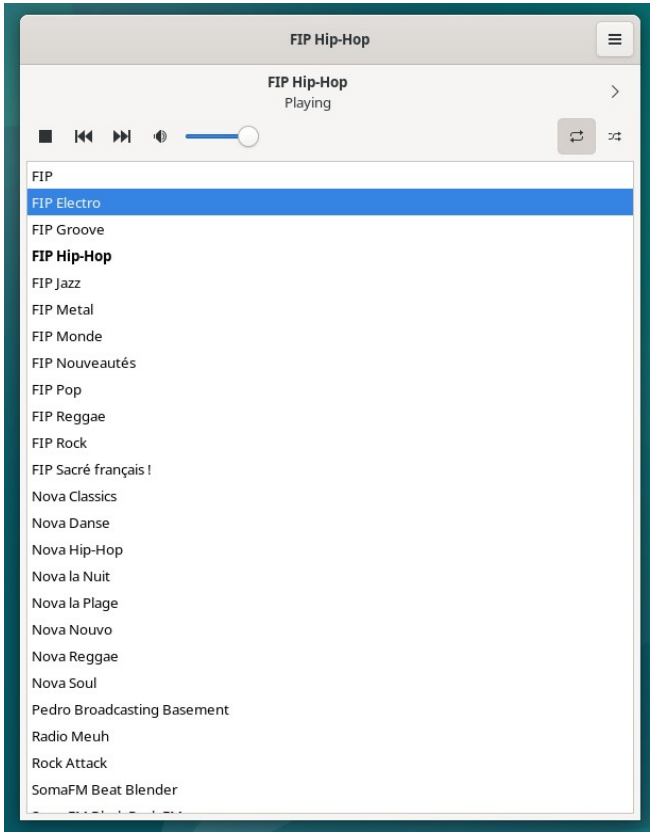
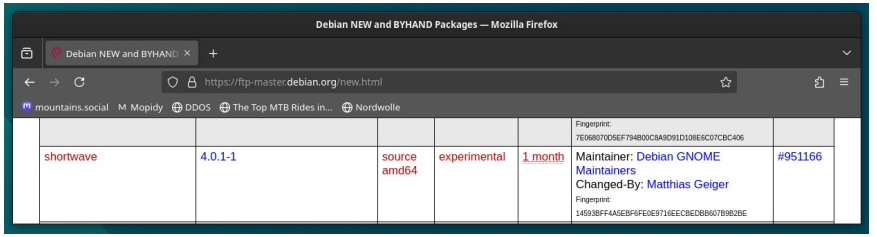
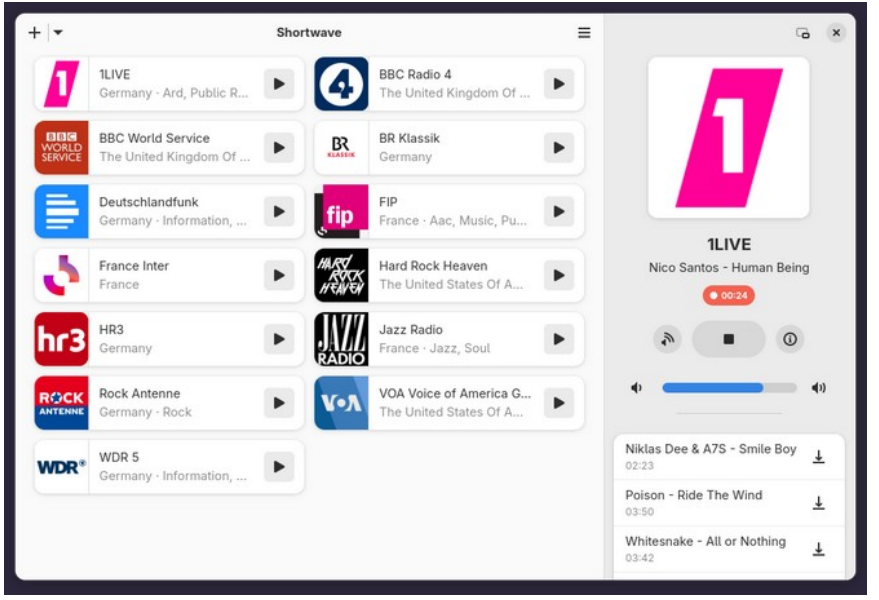
Goodvibes



Shortwave WIP





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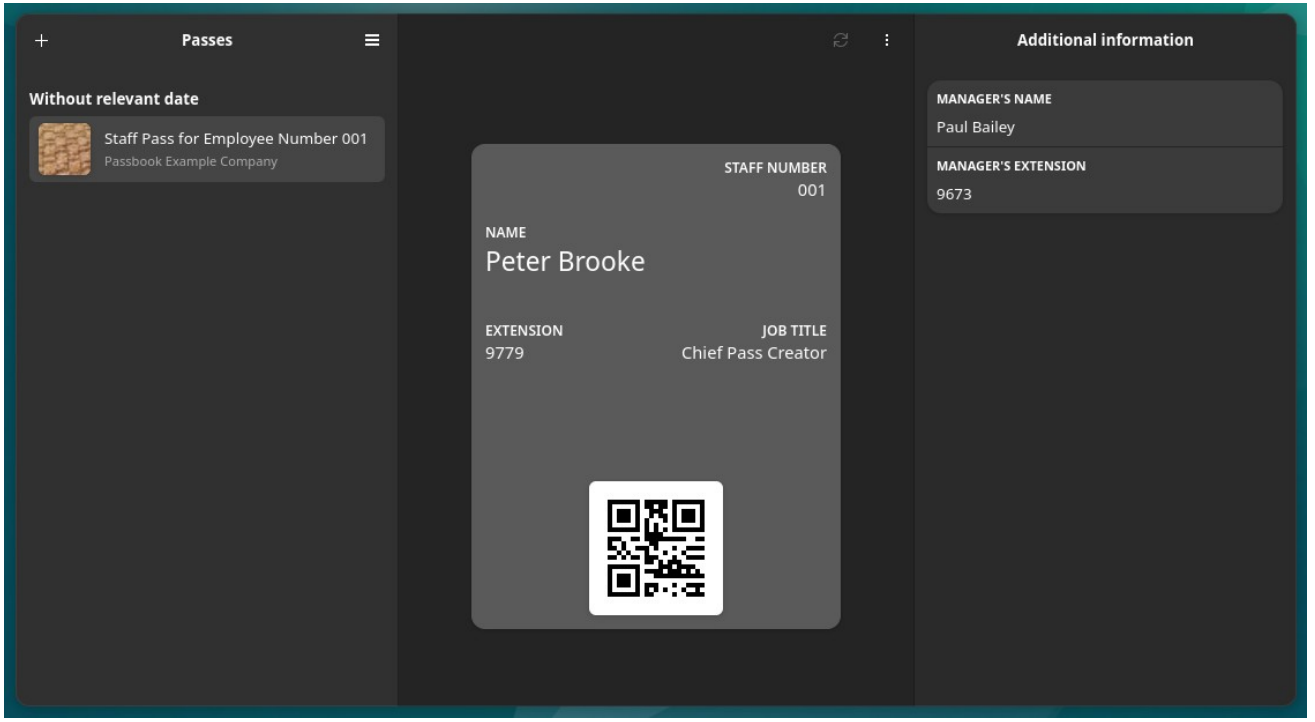
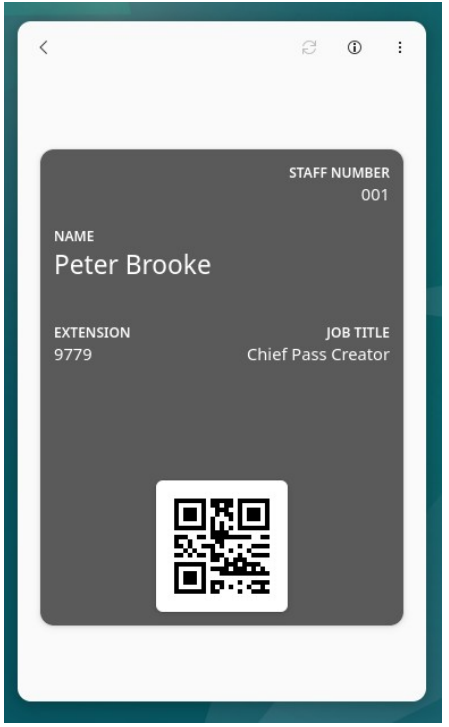
passes-gtk Boading Passes





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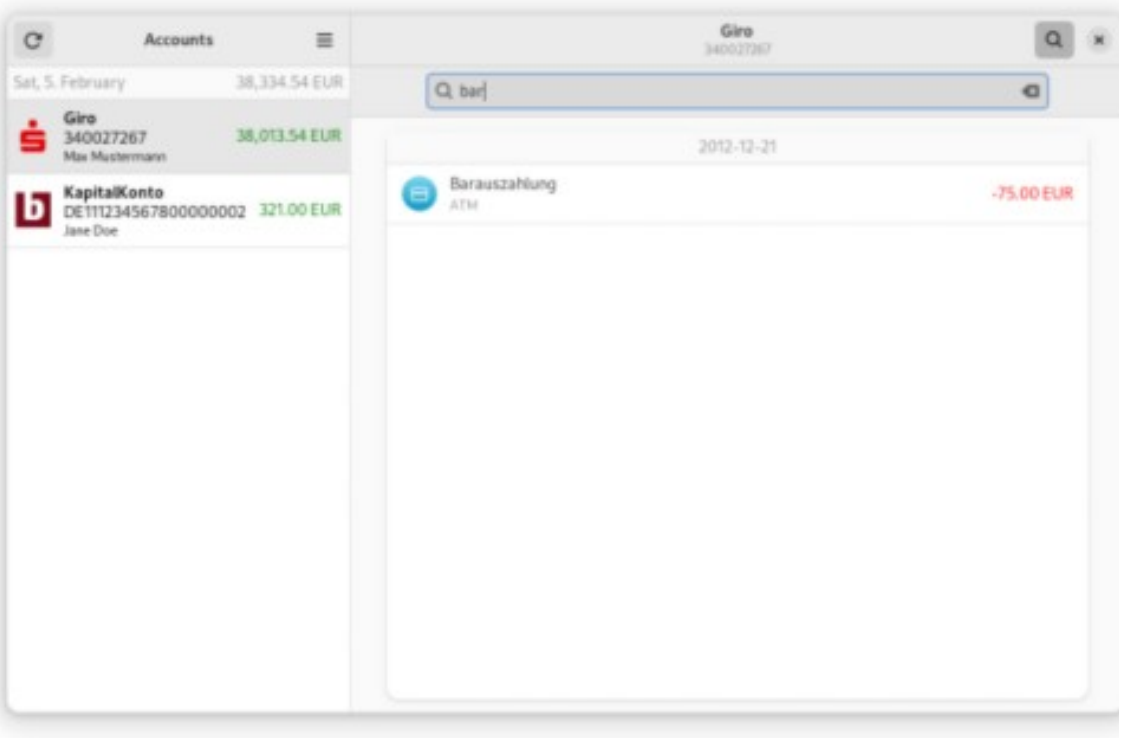
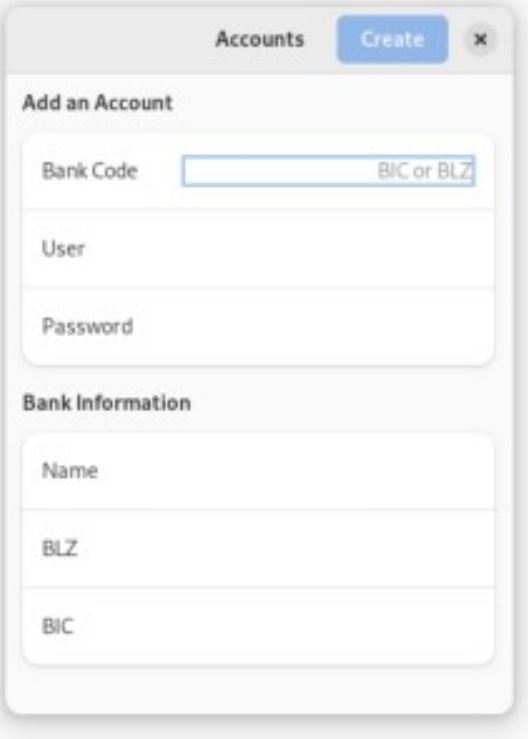
saldo Bank Accounts





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btop System Monitor

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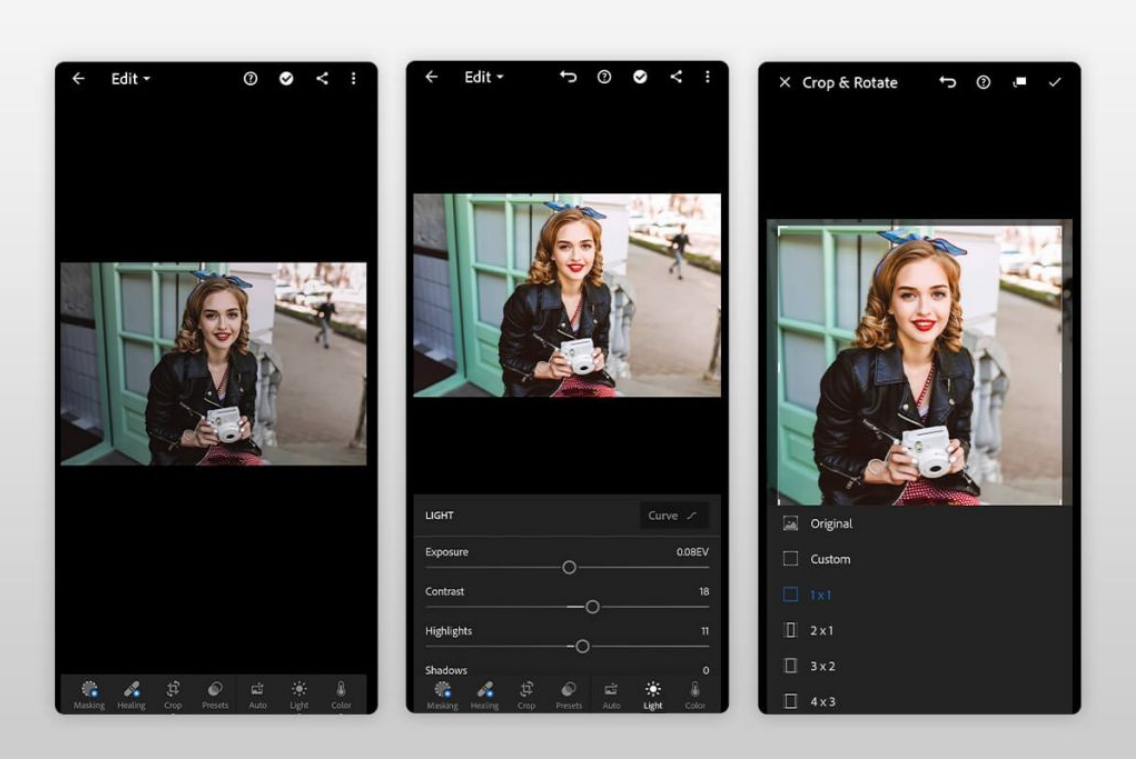
What am I missing?

- Gallery
- QuickEdit photos



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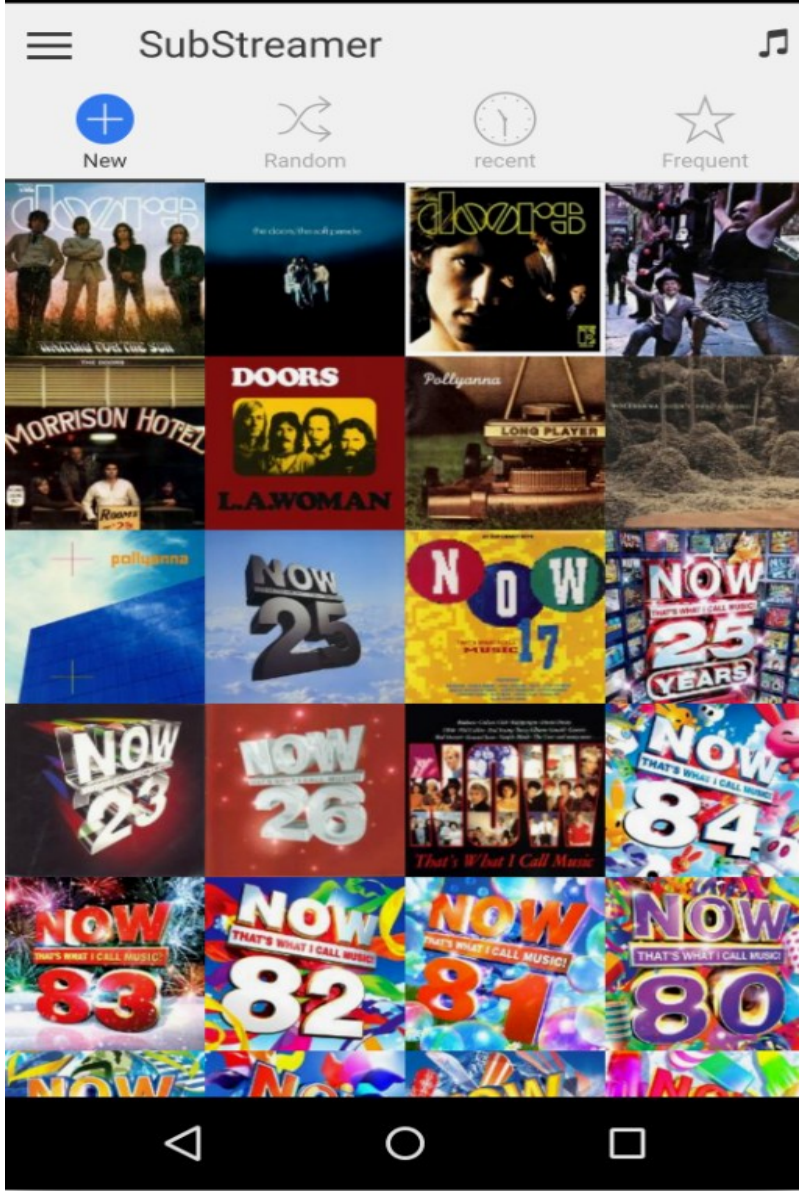
What am I missing?

Music Streaming

- Ampache, Subsonic, ...



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What am I missing?

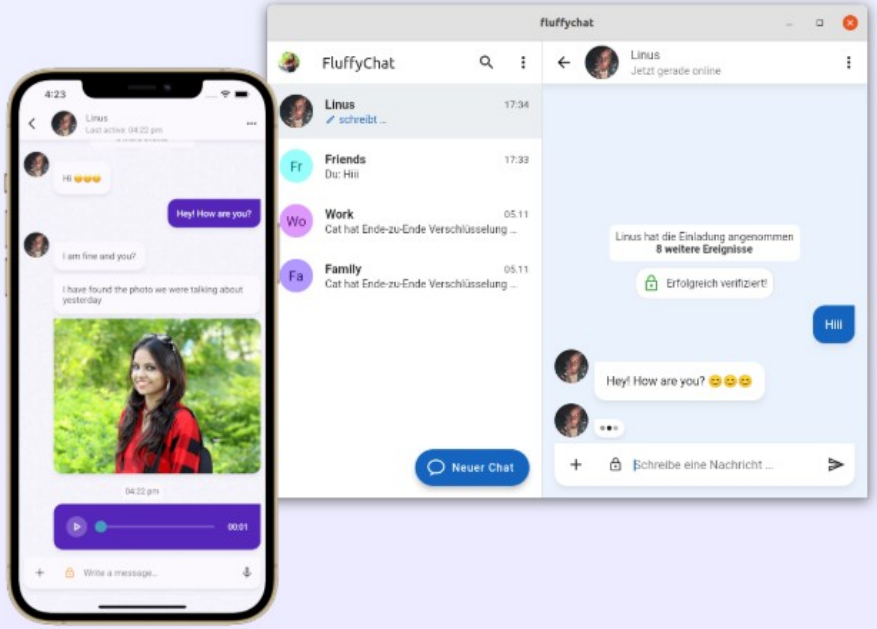
- More advanced **Matrix client** including **Audio / Video calls**

  → Might be solved by newer version of ‘nheko’?

- FluffyChat or element can be used as FlatPak

fluffychat

The cutest messenger in [matrix]



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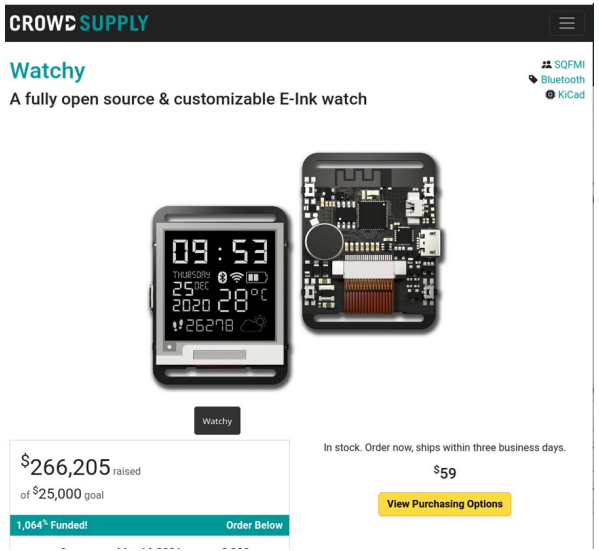
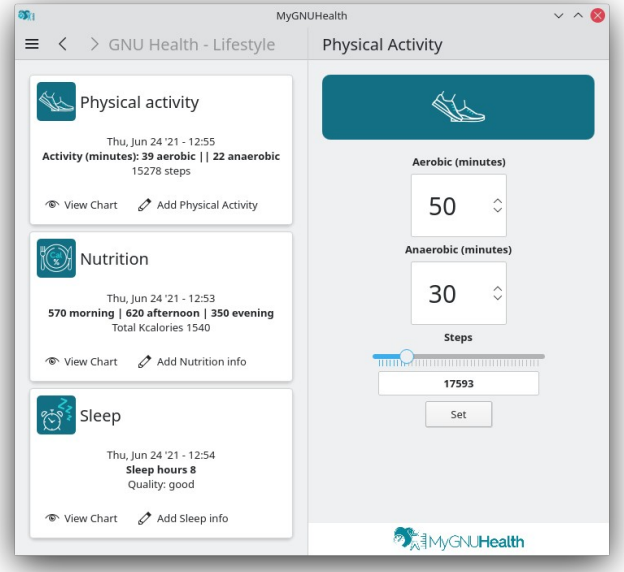
What am I missing?

Garmin Connect

→ MyGNUhealth
→ Asteroid OS





What am I missing?

Komoot, Outdooractive

→ hikr.org
→ map.geo.admin.ch
→ Openstreetmap with old Garmin device

Navigation with live routing and offline maps

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What am I missing?

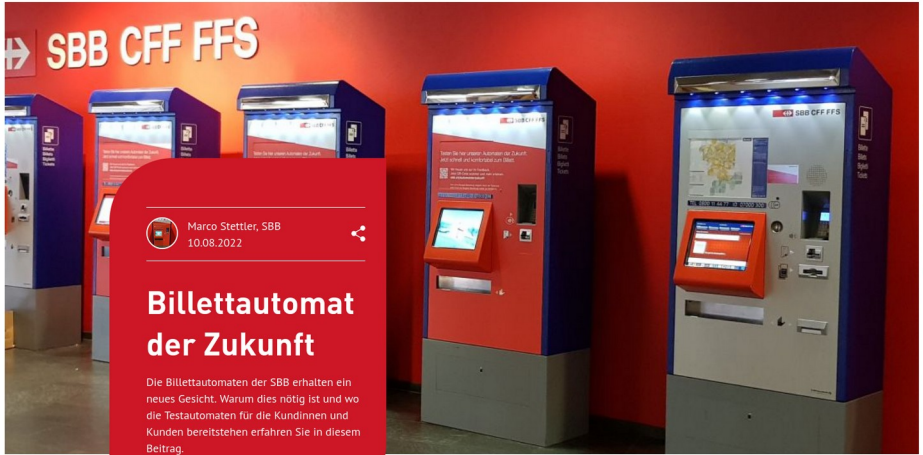
TALER

- **Twint, Apple/Google Pay**

→ GNU Taler

- **SBB, easypark**

→ Pay cash



QR-Code-Falle an Zürcher Parkuhren

2 min

Gauner nutzen Parkuhren in Zürich für ihre Masche: Mit falschen QR-Codes locken sie Autofahrer in eine Falle und gelangen so an Kreditkartendaten. Jetzt schlägt selbst die Stadt Alarm. Doch es gibt Hinweise, wie sich solche Betrugsversuche erkennen lassen – und wie man sicher zahlen kann.

Erstausstrahlung:
Do 12. Dez. 2024 18.00 Uhr

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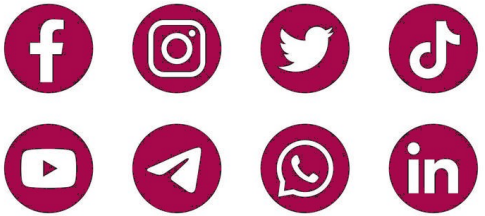
What am I missing?

- **Camera with good quality**
- **Face-Id / Fingerprint**
- **Less Battery consumption**

What others might miss



- **Tiktok, Insta, LinkedIn, Tinder, Facebook**

  → Fediverse: Mastodon

- **Spotify, Netflix**

  → Bandcamp, local library, friends
  cinemas, TV, Mediathek

What others might miss

- **Strava**

  → sport club, real friends

- **Games**

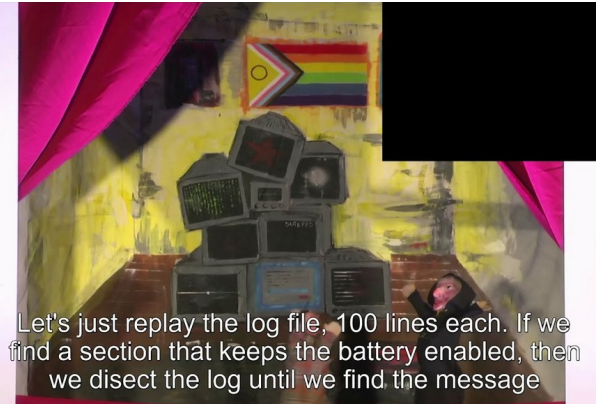
  → steam?

- **Shopping apps like temu, aliexpress, zalando, …**

  → Use a webbrowser

- **Public cars, scooters and bike rentals**

  → Kasperltheater: Leihroller hacken



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- Mobian is developed on https://salsa.debian.org/mobian-team
- Debian on Mobile https://salsa.debian.org/DebianOnMobile-team/
- **Test and report**
- **Improve documentation** https://wiki.debian.org/Mobian
- **Package for Debian**
- **Mainlining: Linux kernel device support, drivers**

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- Live Demo!

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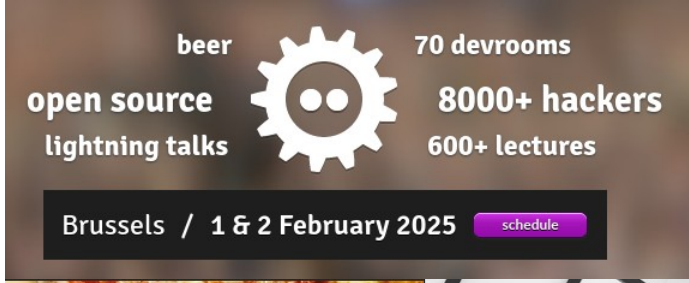
Offline

Debian Treff Switzerland
https://wiki.debian.org/LocalGroups#Switzerland
DaPizi Josephstrasse 27 Zurich
Every 1st Tuesday of the month 6:30pm
Exception: Next meetup 7th of January

FOSDEM Brussles (BE)
https://fosdem.org/2025/schedule/track/mobile/
FOSSS on Mobile Devices devroom
February 01-02 2025

debconf Brest (FR)
https://debconf25.debconf.org
July, 14-20 2025



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Debian on Mobile vs PC
Apps
Contribute
Posh Development
App Development
Support

Offline

https://events.ccc.de/congress/2024/infos/index.html

mobian

- Motivation
- History
- Debian
- Mobian
- Devices
- Debian on Mobile vs PC
- Apps
- Contribute
- Posh Development
- App Development
- **Support**

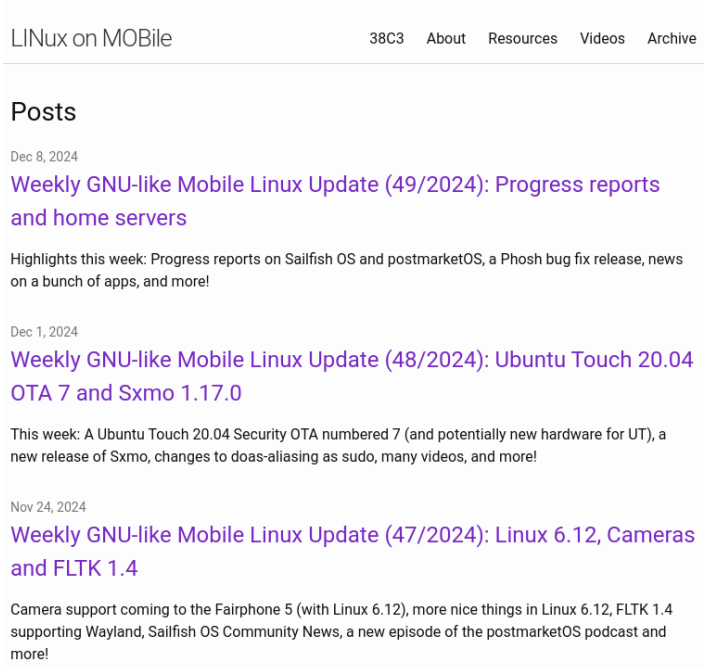
Online

https://matrix.to/#/#mobian:matrix.org

https://matrix.to/#/#mobian-dev:matrix.org

https://linmob.net/

https://linuxonmobile.net/

This presentation is available at

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