UbuCon India 2026

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Ubuntu Touch: freedom of choices in mobile OS space

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Canonical Qualcomm penpot



$ whoami

- Ratchanan Srirattanamet
- Ubuntu Touch maintainer, developer.
- Also interested in:
  - Web development
  - System administration
  - Software licensing



Outline

- What is Ubuntu Touch.
- History of Ubuntu Touch.
  - UBports community.
- Architecture of Ubuntu Touch.
  - How Ubuntu Touch re-uses Android HALs.
- Devices supporting Ubuntu Touch.
- Other Linux-based mobile OS.

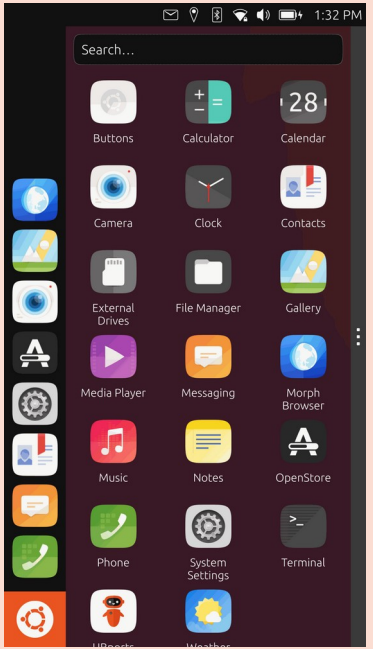
What is Ubuntu Touch?

- A Linux mobile operating system.
  - Not a yet another Android fork.
- Based on Ubuntu.
- Open-source. Privacy-focused.
- Maintained by UBports community.



What is Ubuntu Touch?

- Features
  - Ready for daily driving.
  - Convergence: dock your phone to screen, mouse, keyboard.
  - Lightweight: usable even on older devices.
  - Can run many Android apps (via Waydroid).
  - No “tracking”.

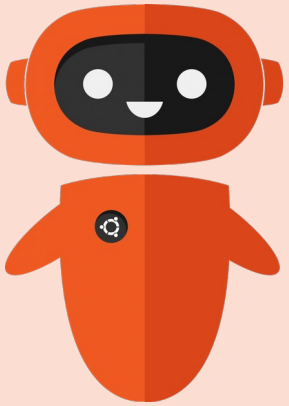


History of Ubuntu Touch

- Created by Canonical, as part of their “Ubuntu everywhere” vision.
- Preview in 2013, released in 2014, pre-installed devices in 2015.
- Abandoned by Canonical in 2017, but subsequently picked up by UBports community.

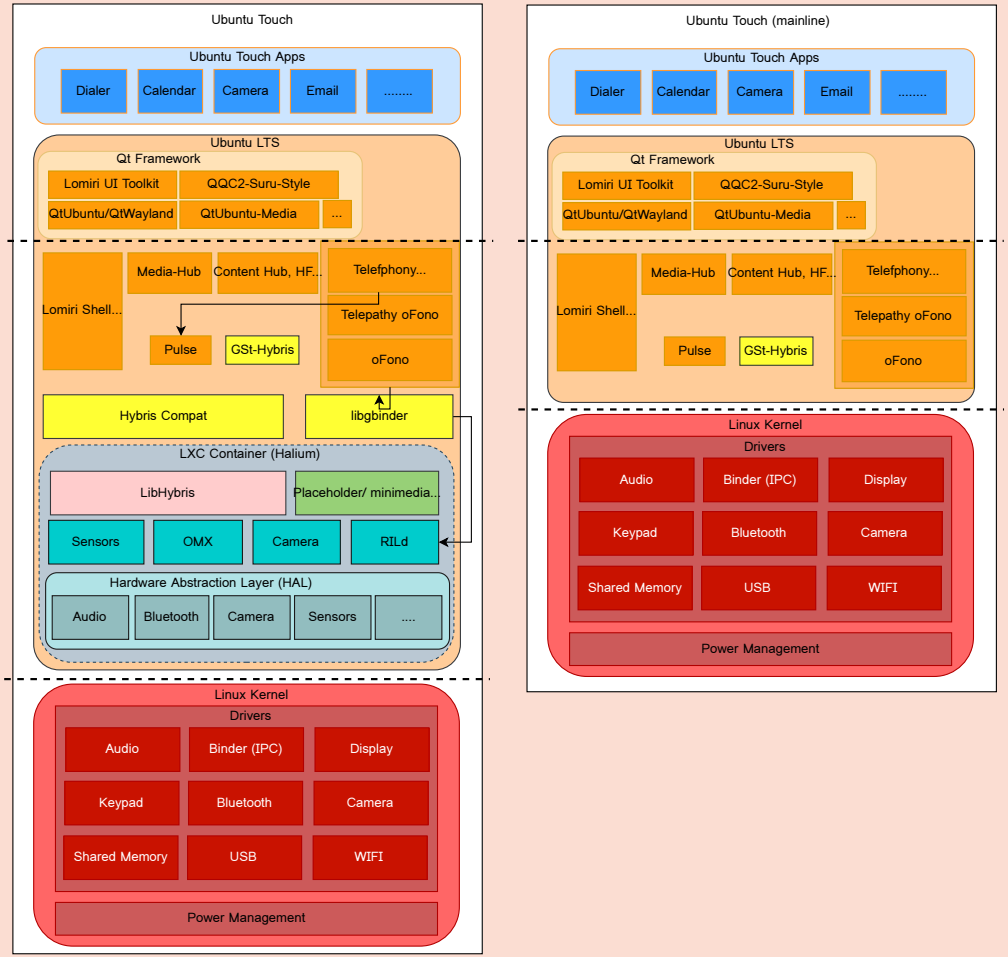


History of Ubuntu Touch



- UBports
  - Started in 2015 by Marius Gripsgard.
  - Initially focused on “porting” to devices.
  - Inherited the UT project as a whole after Canonical abandoned it in 2017. The UBports Foundation was founded in the same year.
  - Nowadays: a diverse community.

Architecture of Ubuntu Touch



Architecture of Ubuntu Touch

- Lomiri: the convergence shell
  - Born with UT, formerly known as Unity 8.
  - Use Mir as display server layer.
    - Nowadays a Wayland compositor.
  - Draw UI’s with Qt’s QML.
  - Morphs between phone, tablet & desktop modes.

Architecture of Ubuntu Touch

- Middlewares shared with desktops
  - Qt
  - NetworkManager
  - GStreamer
  - Pulseaudio
- Middlewares not seen on desktops
  - oFono
  - SensorFW
  - QtUbuntu-Camera
  - HFD-service

Architecture of Ubuntu Touch

- libgbinder
  - Implements Android’s Binder IPC protocol, using GLib.
  - Communicates with Android container.
  - Supports AIDL, HIDL.
  - Used for relatively-low-complexity things.

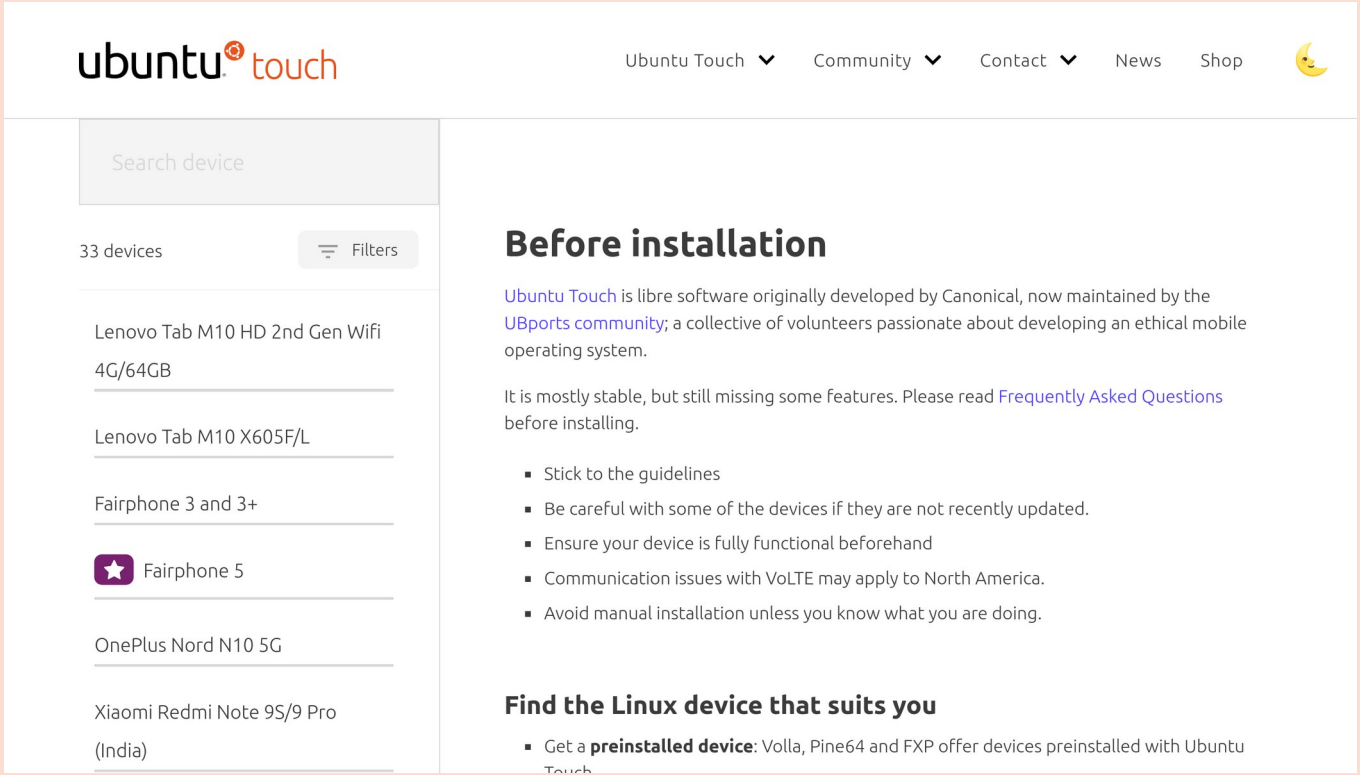
Architecture of Ubuntu Touch

- Libhybris
  - Modified copies of Bionic's dynamic loader + hooked functions for interoperability with host libc.
  - Loads either in-process HALs (e.g. libEGL) or another Android library.
  - Provides dlopen()/dlsym().
  - Used for high-complexity things.

Architecture of Ubuntu Touch

- UT’s application security model
  - Each app shipped in Click (Snap’s precursor).
  - Confined with AppArmor, has no access to user’s data.
    - Must request them from middleman (content-hub).
  - Permission prompt for HW access.

Supported devices



https://devices.ubuntu-touch.io

Other Linux-based mobile OS

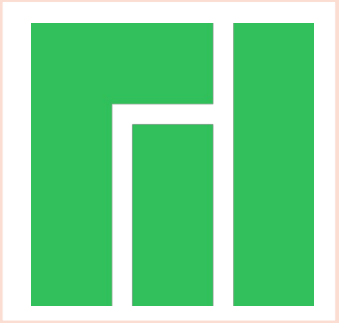












And many, many more...

Why?

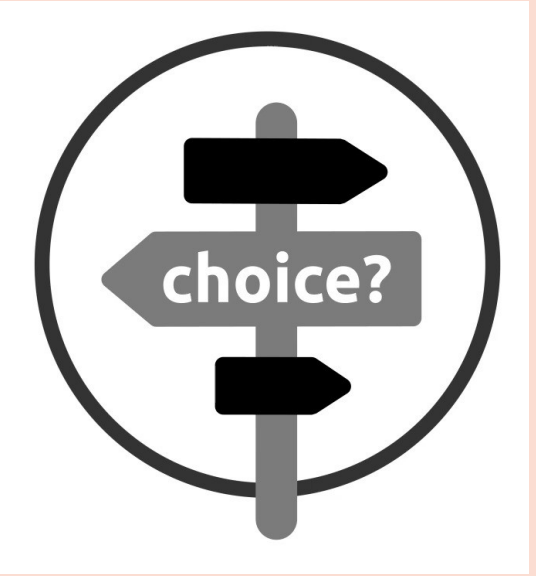




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Why?

Freedom does not exist
without real choice.
- UBports, 2019



Thank you!



- https://ubports.com/
- https://ubuntu-touch.io/
- https://t.me/ubports

- https://gitlab.com/peat-psuwit
- https://github.com/peat-psuwit
- https://x.com/peat-psuwit

Demos & stickers @ UBports booth