



# Android without Google

Andrew Rabert

# My Pocket Computer

- Camera
- Web browsing
- Chat
- Email
- Music
- Games
- RSS
- Navigation
- Calendar
- Phone
- One-Time Passwords
- Task Management
- Notes
- SSH
- Reading
- Alarms
- Calculator
- Flashlight

# Andrew + Android = Andrvoid?

- User since 2009
- Previously Symbian and Windows Mobile
- iOS = closed platform
- Android = open source



# Usage Patterns

- Always rooted
  - Kernel tweaks
  - Ad blocking
  - ***Features!***
- Always custom
  - Faster updates
  - Stability
  - ***Features!!***

...and Google.

# AOSP

- Android Open Source Project
- The official Android
- The stock in *stock experience*
- Owned by Google
- Barebones
- Limited device support



# LineageOS

- Custom ROM
- Near-stock Android experience
  - Built atop AOSP
- Google Play Services not included
- Extra features
  - Bluetooth battery
  - Quick tiles
  - More!
- Consistent across supported devices
- **Works great on my OnePlus 3T!**



# Google Play Services & Apps

- aka **Play Store**
- Available on 99% of Android phones.\*
- Cannot be included directly in custom ROMs
- Includes API's for:
  - Location / Maps
  - Google Play Games
  - IAP's (In-App Purchases)
  - DRM
  - Android Wear





# Audio Streaming

- Already had music collection
- Google Play Music too limited
  - Crappy UI
  - Poor organization
  - Closed API
- Settled with **Madsonic** + **Dsub**
  - Self-hosted
  - My music
  - Open source!
- Now **Airsonic** + **Audinaut**





# Doom for DOOM

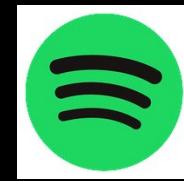
- Google removed **D-Touch**
  - Developer violated terms
  - Account perma-banned
  - Lost access to paid app
- Developer re-released on  
**Amazon App Store**
- Later forked to  
**GZDoom for Android**

*^\_^ free on my GitHub!*



# Amazon App Store

- Amazon's proprietary app store
- Paid and free apps
- Not on Play Store
- **Side-loadable!**



# Humble Bundle

- DRM-free game bundles
- Some also sold individually
- Often not updated
- Hit-or-miss

theHumble  
Bundle





# Ad Company Blocks Ad Block

- Google removed **AdAway** from Play Store
- Blocks ads in apps and browsers
- Open source
- Still available on **F-Droid**

# F-Droid

- Free and open source app repository
- No proprietary code
- User repositories
- **AdAway** and other banned apps



# Google Banned Apps In F-Droid

- **AdAway**
  - System-level ad blocking
- **Transdroid**
  - Torrent server management with search
- **NewPipe**
  - YouTube client
  - Also supports downloading and audio-only streaming
- **Yalp Store**
  - Alternative Google Play Store client
  - ???

# Yalp Store

- Unofficial, open source Google Play Store app
- Free apps without account
- Paid apps with account
  - Must have purchased them
- Updates apps
- **Violates TOS**





Go Host Yourself

# Self-Hosting

- Contact and calendar sync
- RSS feeds
- File storage and sync
- Audio & video streaming





- Files, contacts, calendar, notes, RSS...
- Community supported extensions
- Apps on all major platforms
- Web view is fantastic
- Open source



# Syncthing

- Distributed file synchronization
- Minimal impact to battery on mobile
- Apps on all major platforms
- Synchronizes **todo.txt**, **notes**, **photos**



- Video streaming platform
- Automatically identifies video metadata
- Has apps – no need to use them
- Works great in the browser
- **Nagware**
  - Soft-forked to **emby-unlocked**

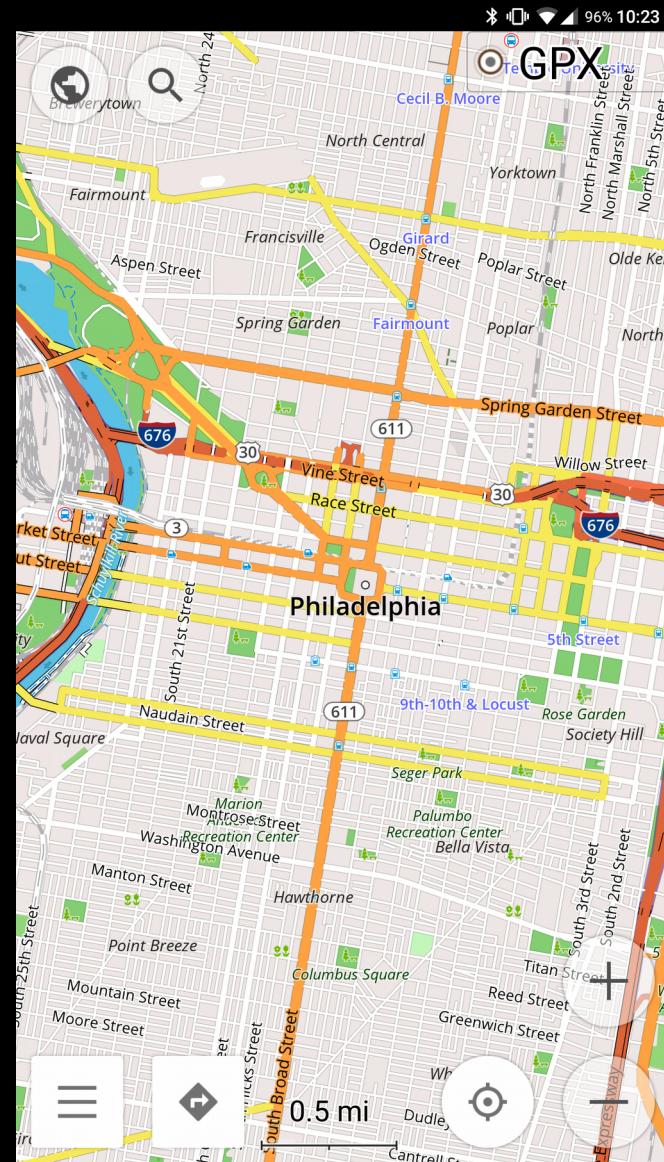
# pass

- Minimalist password manager
- GPG-based
- Versioned with git
- Synchronized over SSH
- Sweet Android app: **Password Store**
- Uh... it works for me

Apps?

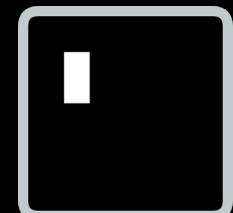
# OsmAnd

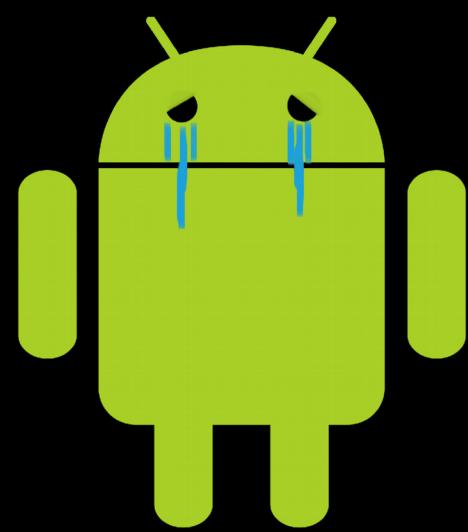
- GPS and maps
- Trip recording
- Uses OpenStreetMaps
- Offline navigation!
- Pairs well with AddressToGPS



# Noteworthy Apps

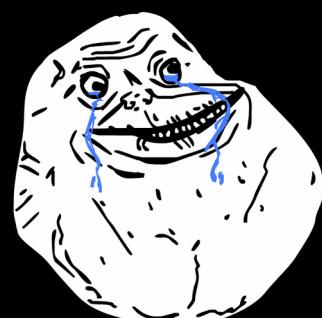
- Browser: **Firefox**
- Email: **K-9 Mail**
- Facebook: **Face Slim**
- Reddit: **Slide**
- Camera: **Open Camera**
- Gallery: **Gallery**
- SMS: **Silence**
- SSH/Terminal: **Termux**

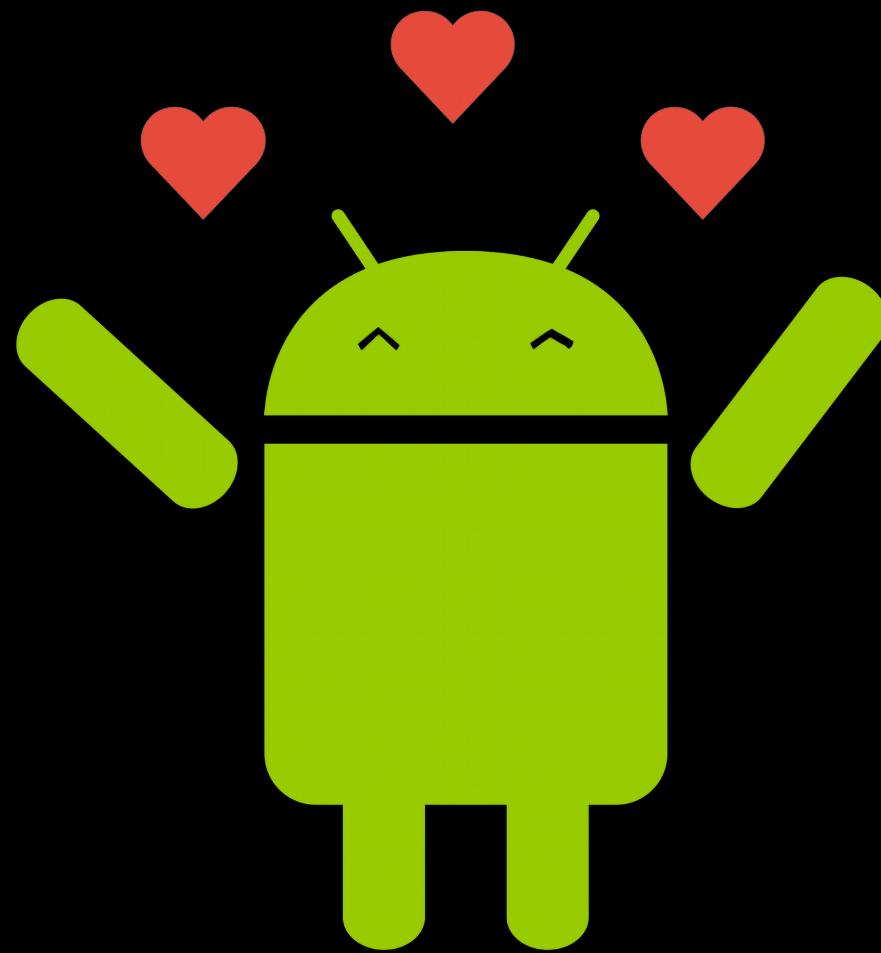




# Issues

- Google no longer releases Play Service-free development images
- Breaks Google Cloud Messaging
  - Trouble with proprietary chat services
- Mobile site experiences vary
- Device selection
- Tinder doesn't work







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