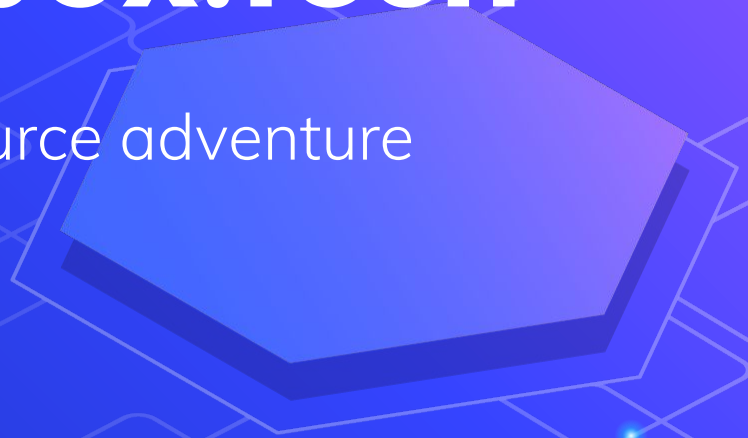
MrChromebox.tech

An unplanned open-source adventure



2025.03.20

Hello!

My name is Matt DeVillier

- 46 years old
- Live in Austin, TX USA
- Wife, 3 cats, 1 dog
- Firmware developer for Starlabs, LTD
- Home theater afficanado
- Likes to tinker with cars

How it all began

- Side hustle building custom HTPCs
- Early user/contributor to XBMC/Kodi
- Tried to turn a Chromebox into a HTPC (~April 2014)

TLDR: I bricked it =/

Early frustrations

- Not a firmware developer
- Not much experience with Linux
- No experience with git
- Stock RW_LEGACY firmware broken
  - USB3 ports non-functional under SeaBIOS (and the box only had USB3 ports)

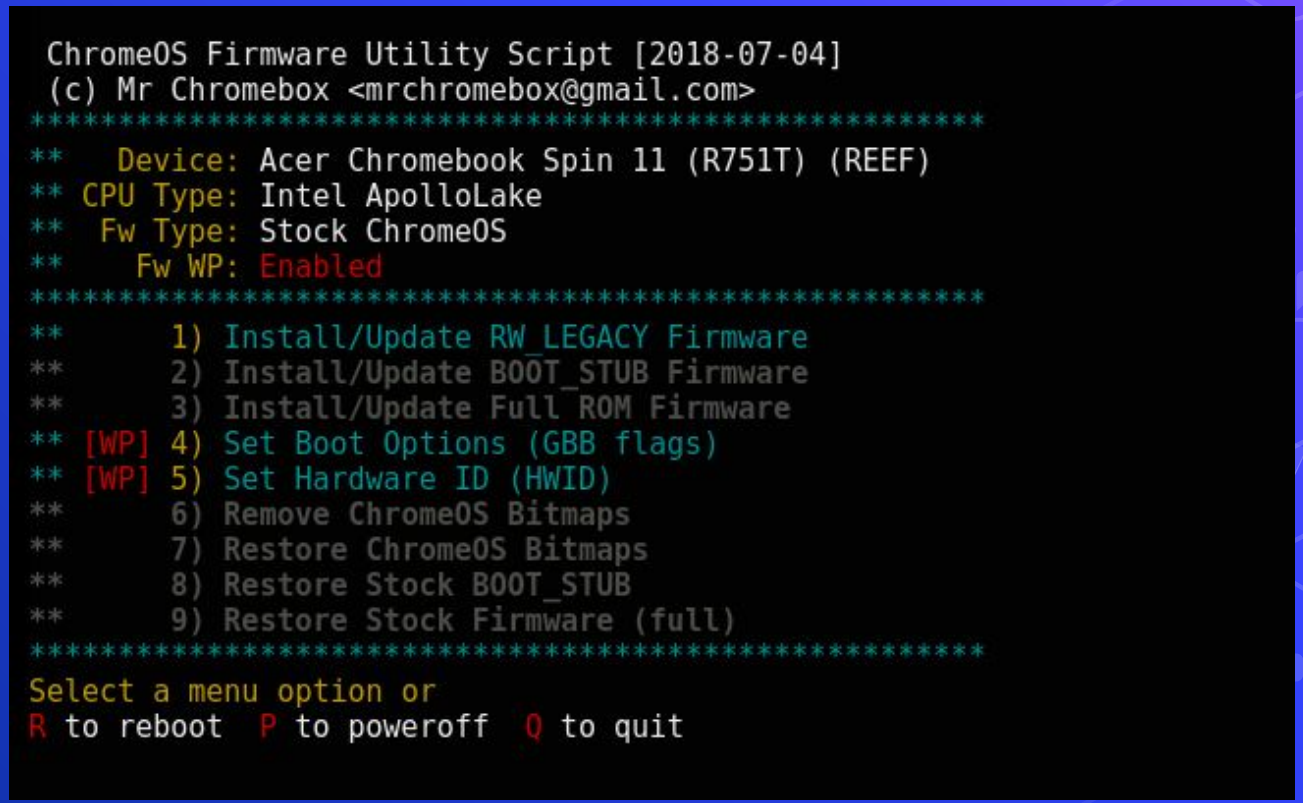
Early Successes

- coreboot source reasonably easy to understand
- Developers on IRC very helpful
  - Martin, Aaron, Duncan, other Googlers
- Was able to unbrick (slowly) using a Bus Pirate
- Was able to fix USB issues
- Wrote up instructions for others to replicate my work

Time to learn bash

- People are terrible at following directions
  - Especially copying commands to be run
- Needed to automate the process for flashing firmware and other related functions under ChromeOS

The Firmware Utility Script is Born



It started small

- Supported (4) Haswell Chromebox models
- coreboot + SeaBIOS
- Automated install of OpenELEC (Linux + Kodi)

Then grew big!

- Supports 300+ devices
  - All x86_64 ChromeOS devices (except first 2)
- RW_LEGACY support
  - Dual boot ChromeOS + Linux
- Full coreboot + edk2 image
  - Upstream coreboot + tweaks
  - Custom fork of edk2 (now coreboot default)

Project Goals

- 2nd life for EOL devices
- Provide full owner control of device
- Ensure broad OS support for devices running coreboot

Q&A