Miracast on Linux
• HDMI over IP over Wifi
• Source → Sink via Wifi-P2P
Wifi Specs

- IEEE 802.11
- Wifi-P2P → Wifi Direct
- Wifi-Display → Miracast
Architecture

- P2P Transport Setup
- IP Link Setup
- TCP/UDP for A/V
Transport

-enumeration
- negotiation
- IP link setup
Enumeration

- wifi-scan
- IEs as filter
- (service discovery)
Negotiation

- wifi-P2P...
- ...or TDLS
- WPS + WPA2
IP link setup

- IPv6
- neighborhood discovery
IP link setup

- IPv6
- neighborhood discovery
- IPv4 + DHCP
But...
But...

- Drivers:
- not working:
  - b43, brcmsmac, rtl818x, ath5k
- supposed to work:
  - ath9k, ath10k, ath6k, iwl-mvm, bcmfmac
- what actually works:
  - ?
• iwl-mvm + intel wifi 7260
• wpa_supplicant: git-78f79fe5fc251e3a
“HDMI over IP”

- RTSP + RTP + h264 + audio + mpeg2-TS
Additional Features

- PTP
- HDCP
- UIBC
- split-sink
Others

- AirPlay
- Chromecast