

# audio system recipes in HH

status & evaluation

# Existing Situation (GG)

- Option `agl-audio-4a-framework`
  - Used to exclusively enable 4a
  - `agl-demo` feature currently enables it by default
  - and also `agl-demo-nopulseaudio` (w/o 4a-pulse plugin)
- Option `agl-audio-soundmanager-framework`
  - enables soundmanager (aka pulse-plugin similar to audiomanager)

# Proposal for HH in gerrit review

- Change to use pipewire
  - pipewire will provide the link to the appfw
- Keeps 4a and legacy code present w/ ifdef's

# Current issues

- We require quite a complex switch between 4a and non-4a in the recipes
  - anyone built w/ soundmanager recently at all ???
  - we need to simplify that while we switch to pipewire
- Keeping multiple systems around will be a challenging maintenance burden
  - pick one or multiple : duplicate [ ] sources , [ ] app builds, [ ] images
- Decision Point: SAT must decide if UCB supports a single audio system (Pipewire based) going forward or have multiple options with the multiplied effort.
- Decision Point: If we keep Sound Manager and 4a around, SAT must decide when to EOL these options. Generally we are saying we will no longer support 4a updates starting with HH release!

# Single option in HH (=pipewire)

- PipeWire is a new switch in aglsetup. Remove the 4a and Sound Manager switches
- + Easier code implementation. Can remove #ifdefs in apps and services that require knowledge of which audio implementation is in use
- + Audio will work but policy plugin available in Icefish
- + Apps are already ported and need less code (if old code removed)
- - unicens/agl-service-unicens needs to be ported
- - Knife switch. HH will not support sound manager or 4a

Details: <https://confluence.automotivelinux.org/display/MAIN/Audio+-+AGL+F2F+May+2019+Notes>

# Multiple audio systems as option

- If multiple systems are an option at build time (i.e, we leave Sound Manager and 4a and Pipewire as options), then we're adding complexity at multiple levels:
  - bitbake:
    - we need to rewrite the recipes to support multiple audio systemd (virtual/audioframework everywhere). Currently we have only a semi-functional switch.
    - interop or conflict ?
  - aglsetup - Need to add a conflicting features check
    - features are additive. up to now we had no 'conflicting' features and no 'conflicts' flag
    - Aglsetup would fail if **BOTH** 4a and Pipewire are selected.
  - apps:
    - different source code or lot of ifdef's
  - binaries / packages / packagefeed
    - multiple variants to build
- TLDR: NOT A GOOD IDEA !