

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 switch. Leave Sound Manager switch intact.
- + 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 (target 8.0.1)
- - Knife switch. HH will not support 4a. Sound Manager sources will be included, but will not be built or tested by AGL.
- - Bluetooth audio will not be functional in 8.0.0. Target patch release 8.0.1 for Bluetooth audio

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 !