PV AUDIO DRIVERS

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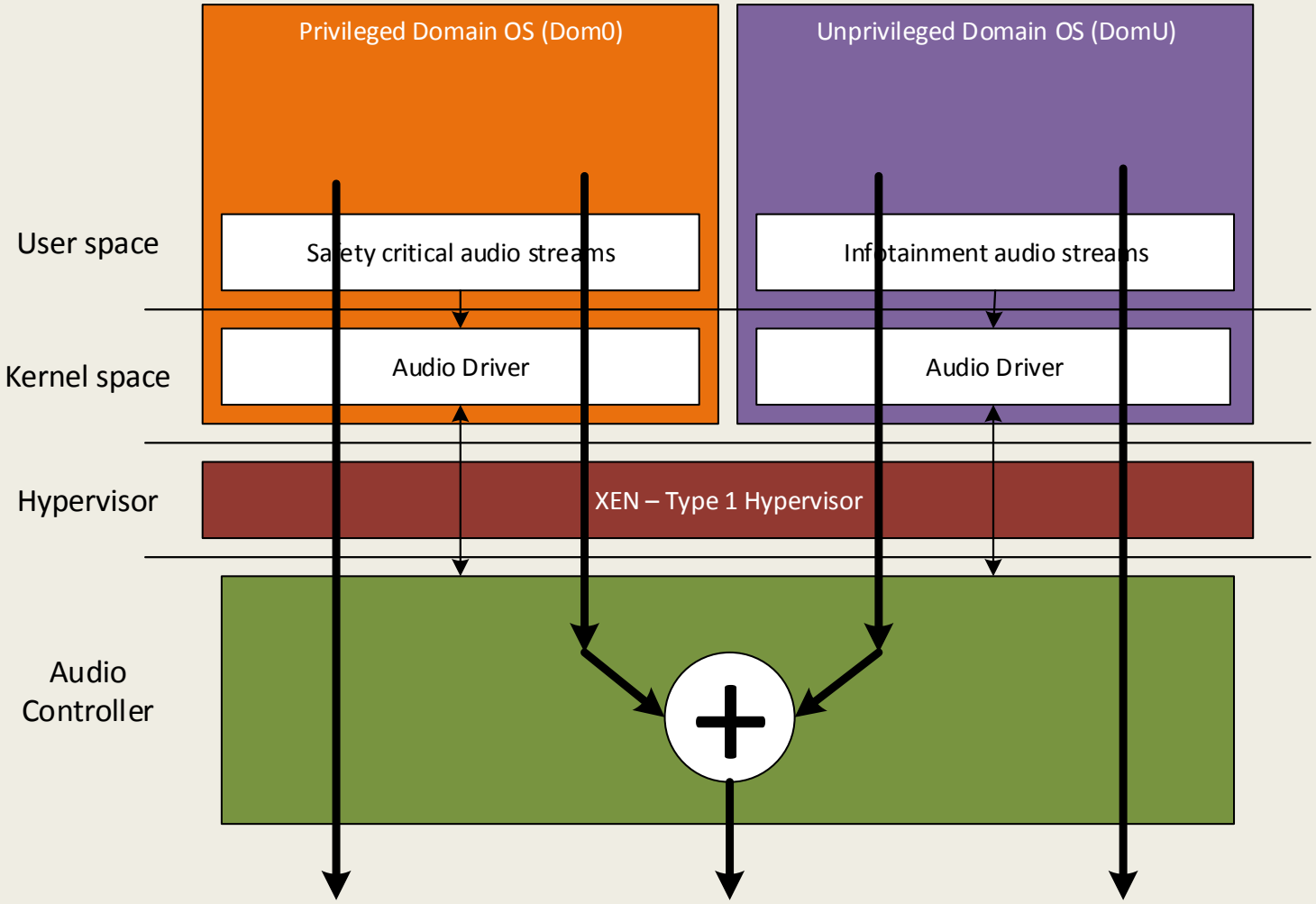
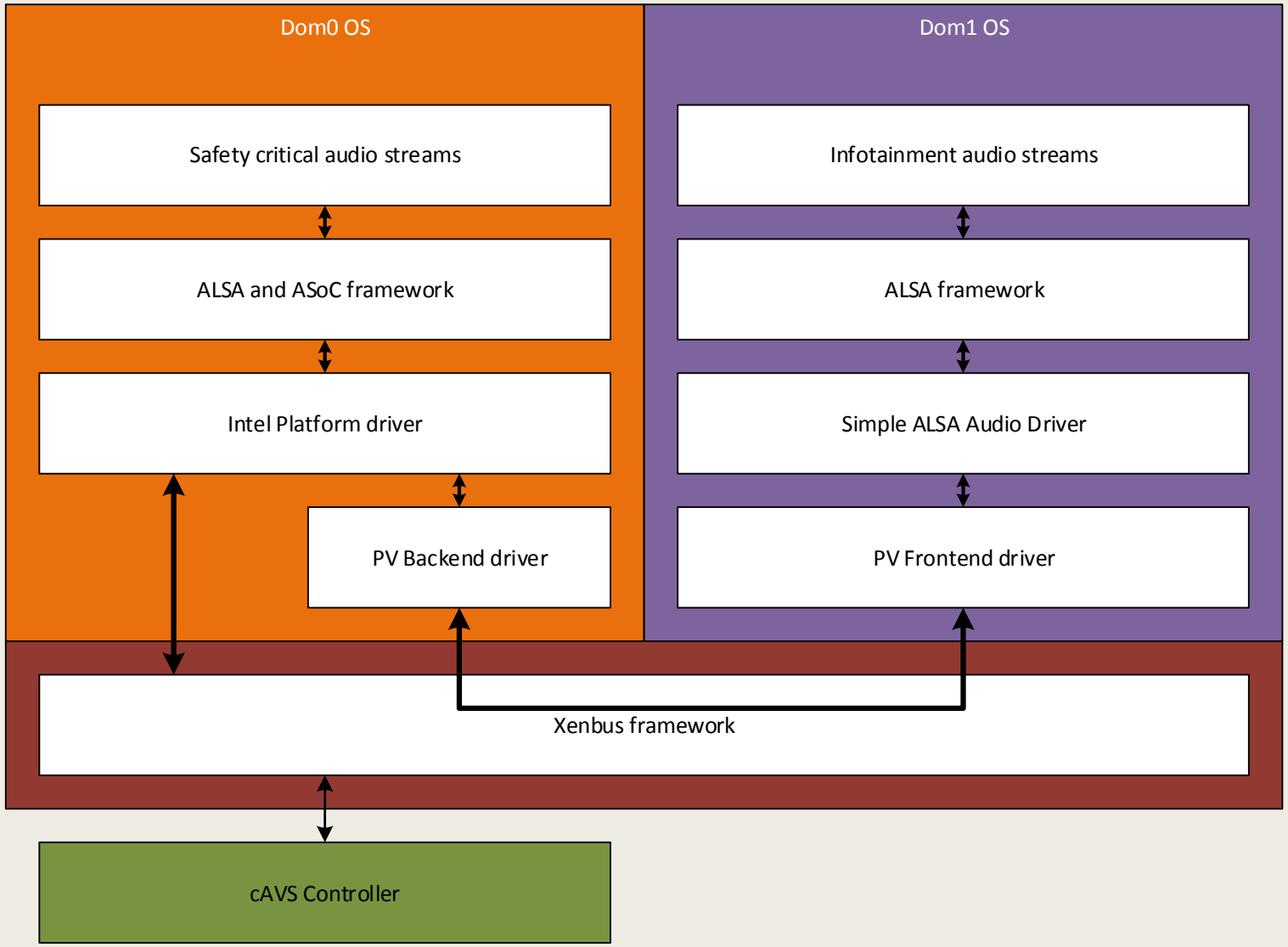
Acknowledgements: Vinod Koul

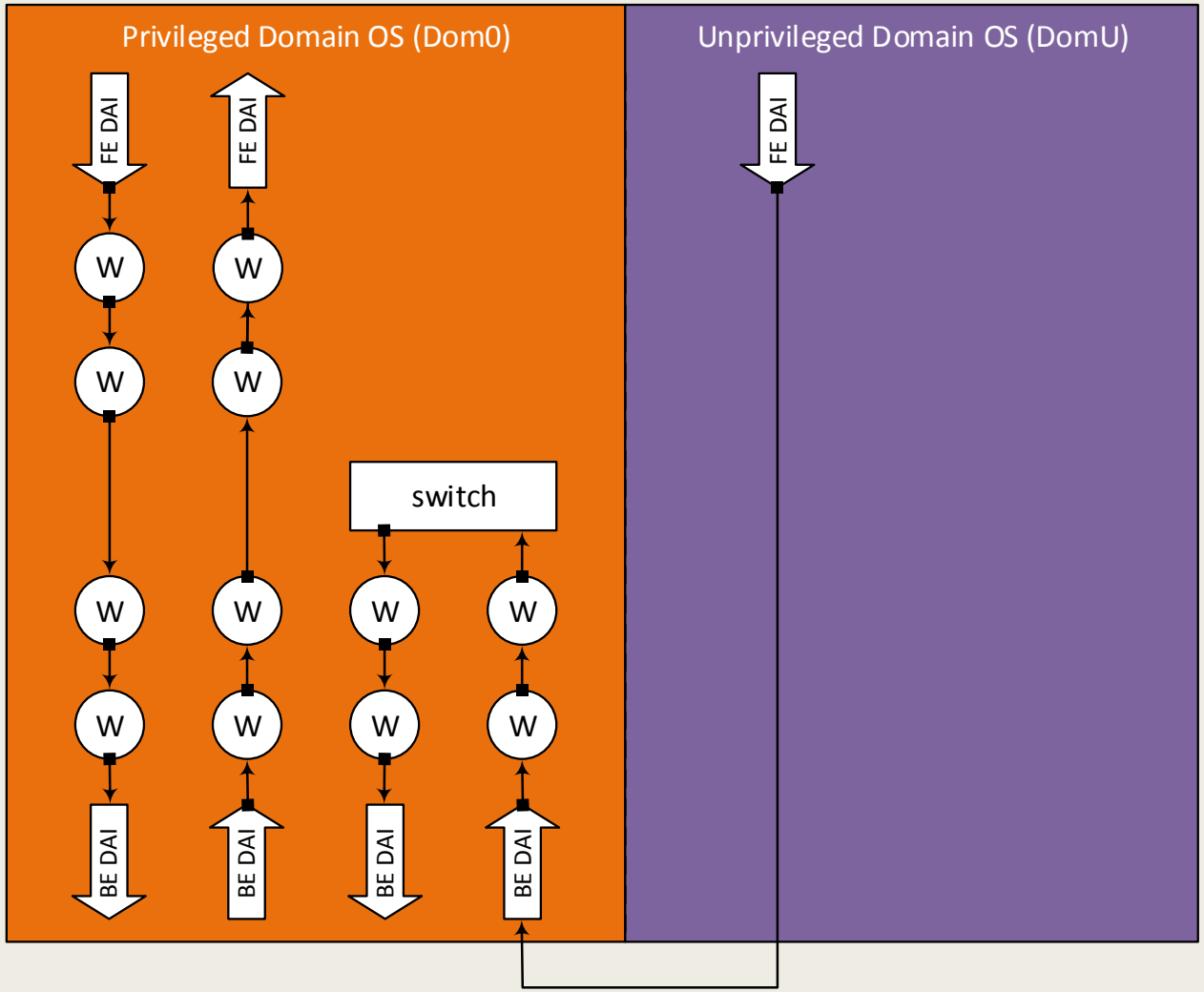
Requirement



Proposed solution



Platform driver changes



DomU and Frontend PV Driver

- DomU drivers does not control hardware directly
  - *Interact with hardware via DomO driver*
- Simple ALSA audio driver
  - *Creates PCMs to interact with applications*
  - *Passes application parameters to Frontend PV driver*
- Frontend PV driver passes application parameters to Backend PV driver
- Frontend driver interacts with Backend driver to close DAPM path when application starts the DomU stream
  - *DAPM logic on the DomO driver takes care of starting the stream on DomO driver*
  - *BE DAI ops on DomO driver takes care of HW programming*

DomO and Backend PV Driver

- DomO driver owns hardware
- Existing Intel ASoC platform driver is used on DomO with little modifications to interact with Backend PV driver
- Backend PV driver is added to receives stream parameters from Frontend PV driver
- DomO Platform driver creates a special BE DAI which receives data from DomU application
  - *Uses Host DMA channel to receive data*
- BE DAI ops programs the Host DMA channel based on stream parameters received from Frontend PV driver
  - *Programs BDL, SDxFMT etc.*

THANK YOU