

Presented by

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Event

Linaro Connect BKK

Chromium with V4L2 playback

- is it ready today?

Overview

- Goal:
 - hardware video acceleration on chromium for security implementation
- Kernel interface for hardware video decode
 - V4L2
- Hardware
 - STiH410 B2120 from STMicroelectronics
 - DragonBoards from Qualcomm (96boards)

GPU

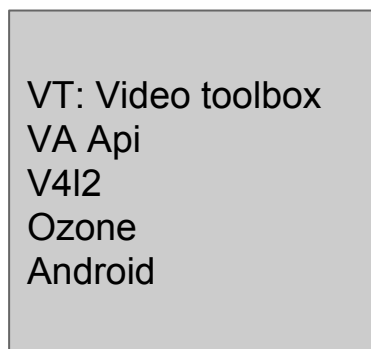
- STiH410 B2120
 - ARM Mali 400
 - R4p1: ST Wayland
 - R6p0:
 - EGL_EXT_image_dma_buf_import
 - ARM wayland
- DragonBoard
 - Mesa
 - 11.0:
 - EGL_EXT_image_dma_buf_import
(Only RGB/BGR are supported)
 - wayland

Chromium

- Challenge
 - Desktop to embedded device
 - Configuration
 - Android, Chrome OS, Linux, OS X
 - drm, egl, wayland, x11
 - Build and binary size
 - debug file are around 3.2GB
 - How to use YUV data

Chromium Video decode

- WebMediaPlayer interface



- Render thread, Gpu Thread

Video Frame format for decoder

- FFmpeg
 - YV12, YV16, YV24
- Vpx
 - YV12, YV24
- V4L2
 - NV12, I420, ARGB
- VA Api
 - RGB

GPU video decode: way to pass video frame

- V4I2
 - eglCreateImageKHR / EGL_LINUX_DMA_BUF_EXT
 - (tegra:
eglCreateImageKHR/EGL_GL_TEXTURE_2D_KHR)
- VA api
 - x11: Texture GL_TEXTURE_2D
 - ozone: Texture GL_TEXTURE_EXTERNAL_OES
- Android
 - Texture GL_TEXTURE_EXTERNAL_OES

Open Discussion

Thanks