libcamera: Unifying camera support on all Linux systems

Tuesday, 10 September 2019 16:00 (15 minutes)

The libcamera project was started at the end of 2018 to unify camera support on all Linux systems (regular Linux distributions, Chrome OS and Android). In 9 months it has produced an Android Camera HAL implementing the LIMITED profile for Chrome OS, and work is in progress to implement the FULL profile. Two platforms are currently supported (Intel IPU3 and Rockchip ISP), with work on additional platforms ongoing.

First-class Android support doesn’t only depend on the effort put on libcamera, but requires cooperation with the Android community and industry. In particular, libcamera has reached a point where it needs to discuss the following topics:

• Feedback from the Android community on the overall architecture
• Feedback from SoC vendors on the device-specific interfaces and device support in general
• Next development steps for libcamera to support the LEVEL 3 profile
• Contribution of libcamera to Project Treble and integration in AOSP
• Future of the Android Camera HAL API and feedback from libcamera team

Discussions regarding the shortcomings of the Linux kernel APIs for Android camera support, and how to address them, is also on-topic as libcamera suffers from the same issues.

As the Linux Plumbers Conference will gather developers from the Google Android teams, from the Android community, from the Linux kernel media community and from the libcamera project, we strongly believe this is a unique occasion to design the future of camera support in Linux systems all together.

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Session Classification: Android MC