

mCUE® Rich IP Communications Client on Android

mCUE 4G: Complete VoLTE and RCS/RCS-e Client

With 4G deployments revolutionizing the user experience and improving carrier profitability, D2 is uniquely positioned to ensure that its customers successfully create and deploy mobile services and devices that deliver the highest quality Voice over LTE (VoLTE) and rich communications suite (RCS) capabilities in the market.

The popularity of IP communications has radically changed the way we communicate. Today, companies offering over-the-top (OTT) communication services have forced traditional carriers to struggle with increased data usage and a reduction in profitable talk minutes. D2's mCUE 4G, leveraging the power of 4G technology, counterbalances these changes in consumer habits by enabling service providers to offer competitive, innovative IMS communications through a seamlessly integrated user experience. With mCUE 4G, they can quickly get new mobile devices to market that satisfy customer needs for advanced rich communications capabilities.



mCUE® on Android OS

mCUE 4G is the most advanced embedded IMS IP communications software solution for the Android™ OS platform, supporting both the IR.92 VoLTE and RCS/RCS-e GSMA standards to deliver features like HD voice, real time video call, instant message, presence, SMS-over-IP and VCC/CSFB on 4G mobile networks. Through tight Android system integration and optimization, mCUE 4G helps carriers and device manufacturers economically create new products such as smartphones, tablets, media phones and other mobile devices that deliver today's most in-demand IMS communications features.

The industry's first IP communications client to be deployed by a 4G mobile operator, mCUE is field proven and provides carrier-grade voice and video quality, as well as demonstrated interoperability (IOT). It is a complete communications client, providing all key layers from the UI and protocol stacks to a fully embedded media engine with a complete VoIP DSP module including wideband CODECs to an optimized video framework integration that supports native hardware video acceleration.

Highlights

Rich IP Communications: RCS and VoLTE (IR.92)

- VoIP, Video, IM, SMS, Presence, DR/SR-VCC
- Service Capability Discovery, enhanced address book and media/file share
- HD voice and video call/conferencing
- Interoperable with IMS and pre-IMS infrastructure

Carrier-grade

- Field proven: 1st carrier deployed 4G IP communications client
- Highest quality voice and video
- Robust and stable architecture
- Industry-leading interoperability (including successful MSF VoLTE IOT) & certification (GMS, BT, etc.)

Integrated

- Seamless user experience: Communication interface, address book & audio routing (earpiece, speaker phone, BT)
- Embedded media engine & platform optimization for real-time performance, lowest latency & superior AEC/NR
- Unique portable design for easy Android framework integration
- Modular, flexible and customizable architecture
- Enhancements and extensions compatible with 3rd party apps

D2 has meticulously designed mCUE 4G to leverage the best of the system's resources while achieving portability and easy Android framework integration. Whether it's through reduced latency or its ability to escalate a voice call to video, mCUE enables D2's customers and partners to quickly and successfully get products to market that offer a superior user experience.



Smartphones



Media Phones



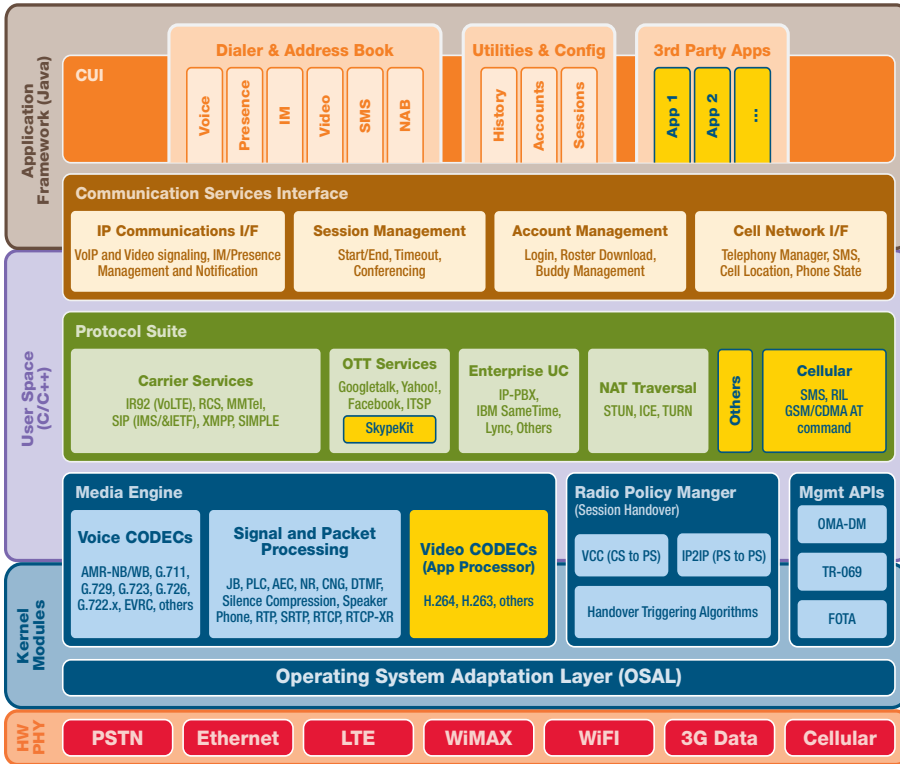
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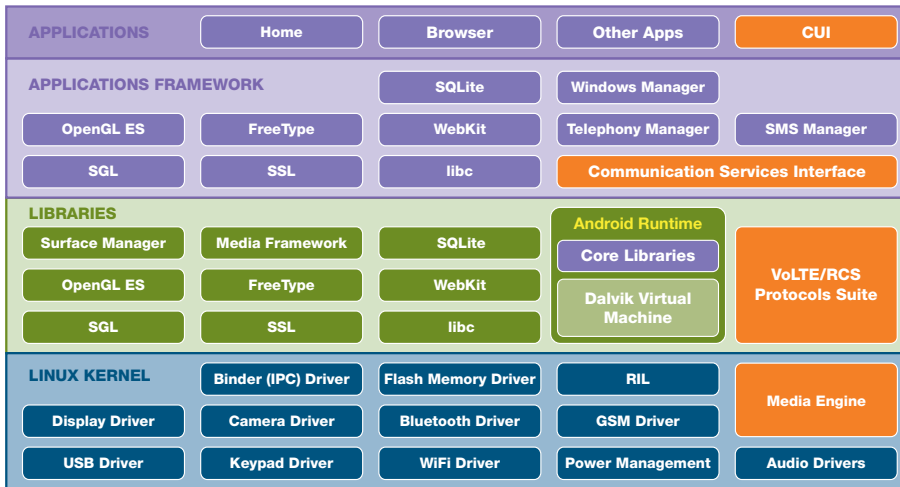
Tablets

mCUE Target Devices

mCUE Functional Diagram



Complete Android Framework and Linux Kernel Integration



 D2's IP Communications Extensions

mCUE Key Features

VoLTE IR.92

- VoIP and SMS/MMS over IP
- Comprehensive call features (hold, mute, merge, split, swap, audio sourcing, pause, wait, etc.)
- IR.92 Supplementary Services (Caller ID presentation and block, Call Forwarding - always, on busy, when unregistered, on no answer, Do Not Disturb, Multi-Party Conference, and Message waiting indication)
- Integrated contact list, history, session log

RCS /RCS-e

- Real-time video call and conference
- Converged address book with multi-service presence display
- IM/VoIM, Video, and File/Media Share

Voice Call Continuity

- CS-IP DR/SR VCC and IP-IP seamless call/session handoff
- Intelligent multi-radio monitoring and management
- Fixed Mobile Convergence (FMC) & WiFi Offload

Voice and Video Engine

- Voice Compression and Wideband (HD) CODECS
- Video module with voice/video sync and native H/W acceleration support
- Complete media engine framework with PLC, Adaptive JB, Echo Cancellation, AEC, VAD, etc.
- Carrier-grade voice quality and CPU MHz optimization via Kernel level integration

Multi-Protocol

- SIP, IMS, XMPP, SIMPLE, others
- Enterprise UC and PBX/IPPBX system support
- Multiple simultaneous session support including cross-service call/IM conferencing

Complete and Customizable Solution

- Complete integration with the Android framework
- Communications extensions available to third party apps