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BEEHD Client Framework for Public Safety over LTE

In the last decade, LTE mobile networks have evolved to become the next-generation technology for Public Safety Communication infrastructure, substituting legacy technologies based on narrowband such as P25 and TETRA, which support mainly audio services. The technology and standards use the benefits embedded in wideband networks by offering stronger usage of live mobile video and audio, multicasting and broadcasting capabilities, location, situational awareness, dispatching and more.

Softil's BEEHD is a cross-platform client SDK, designed for chipset vendors, device manufacturers, system integrators, application developers and service providers looking to accelerate the development of IP-based Voice and Video over LTE (VoLTE and ViLTE) for mission-critical applications.

The BEEHD has intuitive and flexible APIs that developers can use to quickly implement applications while meeting the requirements of Public-Safety critical communications, focusing on first responders such as remote medical assistance, search and rescue, firefighting and law enforcement personnel, as well as any other authority that benefits from real-time situational awareness.

Advanced PS-LTE Capabilities

- Voice and Video: Calls over IP and LTE
- Push-to-Talk (PTT): Broadcasting live audio to members of a specific group, in accordance with MCPTT
- Push-to-Video (PTV): Instant sharing of first-responder video streams to members of a specific group
- High Quality Audio and Video: Ensuring the ability of emergency response team members to clearly see the scene and understand the speaker in real time
- Instant Messaging and Chat: Group messages to recipients
- Presence: Providing online data on the availability of first responder group members
- Emergency Alerting: Prioritized/urgent access to the network

Softil's BEEHD developer solution for Public Safety includes compliancy with 3GPP and IETF Standards, support of GSMA's VoLTE, interworking with IP Multimedia Subsystems (IMS), scalability, and security features required by mission-critical standardization.

Highlights

- Ready-to-use, Multi-platform Client Engine: Consolidated framework for signaling, call control and media handling.
- Shortest Time to Market: Reduces development, integration, and testing efforts.
- Guaranteed High Quality of Experience: Utilizes advanced algorithms to ensure superb video quality even in harsh network conditions.
- Interoperability: Standard based and tested.
- Integration with Hardware: Provides an optimized solution for many chipsets and seamless integration with peripherals.
- Operating Systems: Supports Android, iOS, Windows and Mac OS X.

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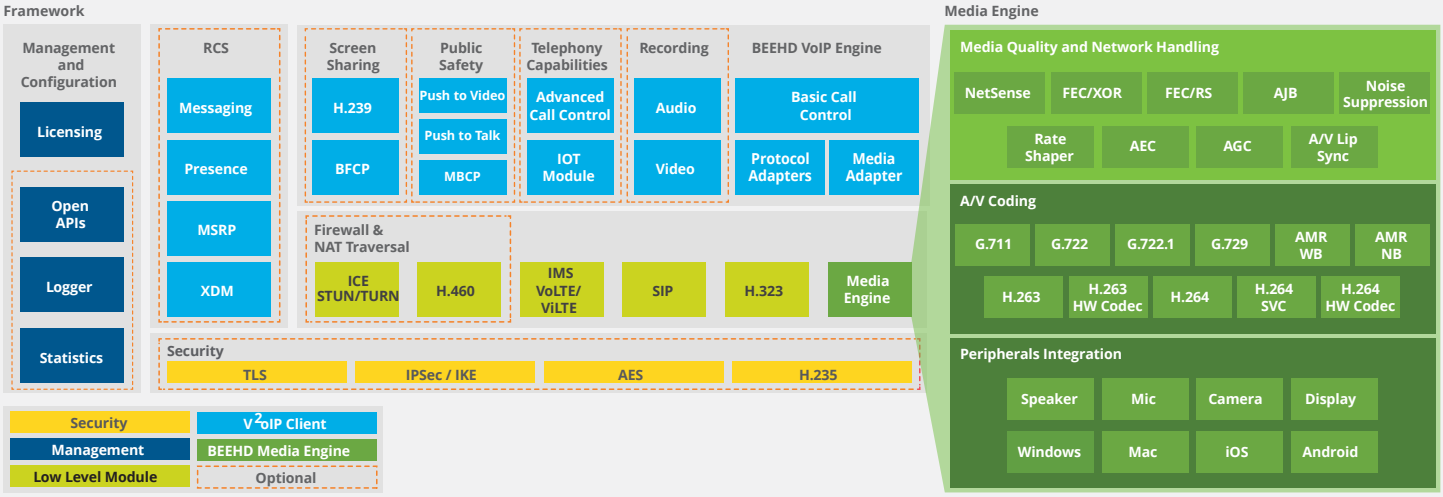
Modular Architecture:



Product Specifications			
Public Safety	■ VoLTE IR.92 and IR.94 ■ Push-to-Video	■ Push-to-Talk ■ One-to-many Audio and Video	■ Many-to-one Audio mixing
Signaling Protocols	■ SIP (RFC 3261) ■ IMS/VoLTE SIP	■ H.323 V6 ■ Presence and IM: SIMPLE	■ FW/NAT Traversal: H.460, ICE, STUN ■ TURN
Operating Systems	■ Windows ■ Mac OS/X	■ Android (software codecs) ■ iOS (software codecs)	
Hardware Codec Acceleration	■ Qualcomm Snapdragon ■ Samsung Exynos	■ Intel Atom ■ Texas Instruments	■ NVIDIA ■ MediaTek
Management	■ Configuration and provisioning logger ■ Open APIs	■ Call history ■ Web launcher supporting: Internet Explorer, Chrome, Firefox and Safari	■ Contact list management (in application)
Security	■ AES-128 and AES-256 ■ TLS	■ IPsec ■ SRTP	■ H.235 ■ IKE
Supplementary Services	■ Hold ■ Mute	■ Transfer ■ Forward	■ Multi-parties (using MCU) ■ Inband DTMF (RFC 2833)
Quality	■ Reed Solomon FEC (Forward Error Correction)	■ NetSense™ bandwidth estimation and adaptation technology	
Collaboration	■ For SIP: BFCP ■ For H.323: H.239	■ Ancillary data channel for user custom data communication	
Audio	■ G.711 ■ G.722 ■ G.722.1 ■ G.729	■ AMR WB, AMR NB ■ Automatic Gain Control (AGC) ■ Audio Echo Cancellation (AEC) ■ Noise Suppression (NS)	■ Audio Packet Loss Concealment (PLC) ■ Audio Recording
Video	■ H.264 ■ H.263 ■ Frame rate: up to 30fps	■ Resolution: CIF/VGA/SVGA/720p/1080p ■ Supports H.264 cameras ■ Capture snapshot to JPEG file	■ Text overlay ■ Video recording
Interoperability	■ Interoperable with all leading vendors and any standard video calling systems		
RCS – Rich Communication Suite	■ Option based Capability exchange ■ Stand Alone Messaging ■ CPM, CPIM based Instant Messaging ■ IM large message mode (MSRP)	■ Multiple recipients (multi 1-1 IM) ■ Store & Forward ■ HTTP/HTTPS Provisioning ■ Integrated Messaging Inbox, including SMS	■ Voice and Video Calls ■ SIMPLE presence ■ File Transfer ■ XDM

For more information, contact Softil at info@softil.com

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