EXPERTS IN MISSION CRITICAL COMMUNICATIONS

nemergent® solutions

MCX Client SDKs

ANDROID | LINUX | WINDOWS

Benefits

Future-proof technology

MCX is the technology that networks are starting to use now and will continue to use in the next decades. Standardized by 3GPP it is here to replace proprietary networks that lock organizations into a single vendor.

Fully featured and fully 3GPP standard compliant

Nemergent client SDKs constantly evolve adding features like support for MCVideo, MCData, eMBMS. Nemergent client SDKs are used to test standard compliancy and have been awarded in conformance tests as first client fully compliant with the standard.

Versatility via flexible APIs

Nemergent MCX client software is provided as SDKs for the different platforms which can be used to create completely different solutions. The SDKs not only allow to modify look & feel and workflows but thanks to its versatile plugins and APIs architecture completely different solutions from dispatchers, IWFs, embedded clients and handset GUIs for PTT.

Single architecture, multiple platforms

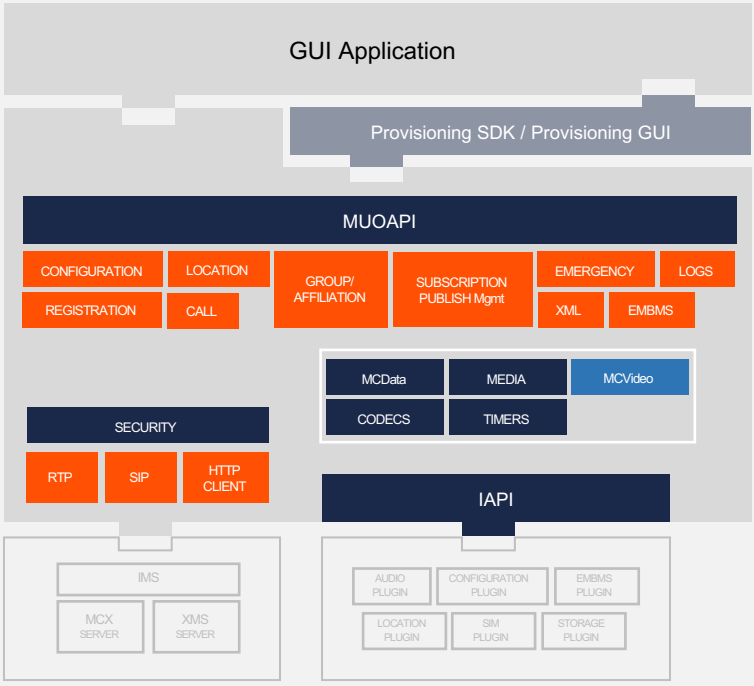
To be used in handsets, cab-radios, embedded vehicular devices, etc…, Nemergent's MCX Client SDK's architecture is based on an enhanced version of the MCOP platform, including more features such as MCVideo and MCData.

Multi-vendor integration

Nemergent MCX clients can be used with any standard compliant MCX server. The clients have been already integrated with most vendors of specialized hardware for public safety and public transport. Integration with PTT bottoms and functions is straightforward.

First class service

Nemergent, operates as an agile startup that treats its customers with first- class service, thanks to the support of MCX experts.



Nemergent's client SDKs are the solution to quickly develop fully standard MCPTT/MCX applications for public safety, public transport, and professional mobile radio use cases. Selecting standards based MCPTT/MCX technology is the only future-proof choice which guarantees integration with all technologies, interoperability and avoids vendor lock-in.

Nemergent is a leading expert in MCPTT/MCX and provides operators, vendors and integrators with a flexible MCX SDK for different platforms with clean APIs that provide flexibility to support all communication modes but take care of all the complexity associated with the technology and its protocols. Nemergent has participated in all ETSI MCX plugtests in their different categories integrating with all vendors.

The SDKs follow the MCOP architecture, with its APIs and plugins concepts, enhancing it with additional features and capabilities. The SDKs are so flexible that permit to implement not only clients but also dispatchers and IWF solutions for interoperability with other technologies.

Nemergent client SDKs are available for Android, Linux and Windows. In all its versions the SDK follows the same architecture permitting to port a solution to the different hardware platforms. Nemergent also provides a WebRTC Gateway that permits to create MCPTT Web applications.

Outsource to the client SDKs the handling and evolution of the MCX protocol stack, including IMS, ciphering, floor control etc., and focus in creating applications which provide value to your customers. Integrate your applications with proprietary hardware, create outstanding UX and rely on solid standard based technology.

MCX Client SDKs

ANDROID

The Android SDK is provided as Android services and applications. Its clean APIs and extendibility through plugins permit the creation of different MCX client concepts. A sample UI supporting all the main call modes, video calls and data is provided. Integration with proprietary buttons and custom peripherals is available via the hardware plugins.

LINUX

The Linux SDK is provided as a software library which can be used in all major distributions. The library provides the same clean APIs as all others SDKs and the plugin platform. Customers are using the Linux SDK to create MCX client for embebbed devices (e.g. cab radios), dispatchers and other MCX capable applications.

WINDOWS

The Windows SDK is provided as a library that can be used in Windows. It provides the exact same capabilities and APIs as the Linux SDK and it is used by customers creating dispatcher consoles for Windows and other MCX capable applications.

Supported Versions	• Android: minimum v7 • Linux: Ubuntu 14.04/16.04/18.04/20.04	• Windows 10
3GPP Standards	• MCPTT: TS 24.379, TS 24.380 • MCVideo: TS 24.281, TS 24.581	• MCData: TS 24.282, TS 24.582 • Security: TS 33.179, TS 33.180 • Fully IMS compliant client.
IETF Standards	• RFC 3711 (SRTP), RFC 3550 (RTP), RFC 7651 (IMS).	
Mission Critical Services	• MCPTT, MCVideo, MCData (SDS).	
MCPTT Call Types	• Private Call with Floor Control. • Private Full-Duplex. • Local Ambient Call. • Remote Ambient call.	• Emergency call. • Group calls with floor control. • Broadcast calls.
Additional MCPTT features	• Priority queueing for floor access. • Late-entry. • Functional Alias.	• Group call monitoring. • Display group members. • Manual, remote and implicit affiliation.
SDS	• Private and groups messaging.	• Predefined messages.
MCVideo	• Private video calls.	• Group video calls (with transmission control).
Voice codecs	• Android: AMR-WB, AMR-NB, PCMU.	• Linux, Windows: AMR-WB.
Video codecs	• H.264 BP.	
Security	• Separate Device and User Authentication (username/password). • IMS Authentication (IMS-AKA).	• Ciphering of signaling and media.
Location	• GPS and 3GPP cell data.	• Configurable periodic reporting.
LTE integration	• SIM card based authentication. • eMBMS.	• QoS and bearers.
Proprietary optional features	• KPI measurement. • Call history.	• Manual or batch provisioning configuration data. • Managed addressbook with remote updates.
Device integration	• Notifications configuration. • Integration with PTT buttons.	• Camara switch and selection.

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