

Salyens Smeet SDK™

H.323 & SIP video conferencing



The H.323 and SIP standards (defined and approved by the ITU and IETF respectively) are the most widely deployed signalling protocols in VoIP, multimedia communications, and video conferencing.

Some of the biggest benefits of the Salyens Smeet SDK™ is its emphasis on ease of use, portability, protocol independence, and proven interoperability with equipment from major vendors.

Vendors and developers that plan to develop multi-platform and multi-protocol applications for video conferencing will appreciate the Salyens Smeet SDK™ use of an API in standard C++ and STL, as well as the natural separation of the video conferencing functionality from the business logic and user interface specific to each application.

By adopting this “building block” approach that so well characterizes the Salyens Smeet SDK™, service providers will be able to cut down on software development costs and reuse more software from application to application.

The Salyens Smeet SDK™ is designed for ITU H.323 version 4 and IETF SIP protocol capable video conferencing applications. The number of simultaneous calls in a multi-conference is only limited by the user interface.

The Salyens Smeet SDK™ is a highly competitive solution for video conferencing, based on overall development cost and speed of implementation.

Salyens Smeet SDK?

Highlights

- H.323 version 4 and SIP compliant
- simple, yet flexible API in C++ and STL
- multi-platform (Windows, Linux, and Mac)
- multi-protocol (SIP, H.323)
- leading edge audio codecs (AMR, GSM, Speex, iLBC, G.726, G.711)
- leading edge video codecs (MPEG-4, 3GPP, H.263+, H.263, H.261)
- RTP/RTCP stack dynamically adapts to network conditions
- proven interoperability with equipment from major vendors (Polycom, RADVision, Tandberg D-Link) and 3G video mobile phones
- echo and noise suppression
- auto-configuration and changes applied “on-the-fly”
- IPv6 ready
- MMX, SSE2 optimizations
- internationalization (English, French, Japanese, etc)
- small footprint (1.0 MB for SmeetX)



Features

Platform Independence

A major concern for software vendors or developers is code portability or platform independence. The Smeet SDK™ is multi-platform, with sample applications for Windows and Linux. Optional GUI profiles include:

- MFC (Windows)
- ATL (Windows)
- GTK2 (Linux)
- wxWidgets (Windows, Linux and Mac)
- SDL (Windows, Linux, Mac, BSD, etc)

Supported Protocols

The Salyens Smeet SDK™ is protocol agnostic, with support for SIP and H.323 by default.

Multi-conferencing

The API is designed such that only the user interface and hardware may limit the number of simultaneous calls.

Security

Call setup can be secured through standard protocols (e.g. H.235).

Special input and output devices (e.g. “Null” audio and “Paused” video) guarantee that no useful media information is transmitted and/or received when privacy is required.

Interfaces

The Smeet SDK™ comprises over 80 functions organized around 6 simple, “core” interfaces (e.g. Init, Call and Error).

The default callbacks will suffice in most cases, and thus less than 10 functions are needed for a complete video conferencing call.

Configuration

The user may manipulate settings either natively (e.g. in the registry of Windows) or in XML files.

Changes in configuration (e.g. device, volume) take effect immediately if carried out through one of the “core” interfaces.

Internationalization

The Salyens Smeet SDK™ supports 1-byte and wide chars.

By means of “property” files, the Smeet SDK™ and accompanying sample applications can present textual information (e.g. menus, error messages) in various languages and updated immediately. Current languages include English, French and Japanese.

Automation

The Smeet SDK automatically adjusts the bit rate of media streams in order to constantly utilize all the available bandwidth.

It also monitors and adapts to network conditions while in a call.

Audio

Advanced audio codecs (e.g. AMR, GSM, Speex) provide near toll-quality voice, compressed down to as little as 5kbps.

Echo and noise suppression allow for a more natural video conferencing experience with loudspeakers instead of headphones.

Video

Leading edge video codecs such as MPEG-4 can sustain big picture sizes (e.g. VGA or bigger) and high frame rates, yet ensure a relatively low bit rate.

The Smeet SDK™ offers advanced video post-processing controls, such as flip (horizontal & vertical), brightness, contrast, hue and gamma.

