

# Salyens Sjmf™ (Java Media Framework) and Sopal™ (C/C++)

## RTP streaming video plugins



The Real-Time Protocol (RTP, defined and approved by the IETF) is the most widely used protocol for streaming real-time media contents in VoIP, multimedia communications, and video conferencing.

Some of the biggest benefits of the Salyens video plugins are their emphasis on portability, session-setup protocol independence, and proven interoperability with equipment from major vendors.

The Salyens video plugins are designed for use with RTSP, H.323 and SIP capable video streaming applications.

The number of simultaneous sessions in a multi-threaded environment is only limited by the CPU and memory.

Sjmf™ is fully compliant with the Java Media Framework (JMF) specification, thus JMF applications can make use of these leading edge video codecs instantaneously and without recompiling.

Sopal™ provides an API in standard C, greatly simplifying integration with C/C++ applications.

The Salyens video plugins are a highly competitive solution for real-time media streaming and conferencing, based on overall development cost and speed of implementation.

## Salyens Sjmf? and Sopal?

### Highlights

- RTP compliant
- simple API in C/C++ and Java
- multi-platform (Windows, Linux, and Mac)
- leading edge video codecs: MPEG-4 AVC / H.264, MPEG-4 Part 2, 3GPP, H.263+, H.263
- multi-threaded encoding
- capable of adapting bit rate in-session
- low latency
- advanced error detection and recovery
- proven interoperability with equipment from major vendors (e.g. Polycorn, RADVision, Tandberg D-Link) and 3G video mobile phones
- MMX, SSE2 optimizations
- small footprint (400 ~ 800 KB)



## Features

### Platform Independence

A major concern for software vendors or developers is code portability or platform independence. The Salyens video plugins are multi-platform, with sample applications for Windows and Linux.

### Supported Protocols

The Salyens video plugins are session-setup protocol agnostic, and specifically tested with RTSP, SIP and H.323. Any application that uses the Real-Time Protocol (RTP) for transmitting media is supported.

### Multi-conferencing

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

### Interfaces

The Salyens video plugins comprise over 20 controls common to all codecs, and another 20 controls for codec specific features.

The default settings will suffice in most cases, and thus only a few functions (e.g. open, convert, close) are needed for a complete media streaming session

### Configuration

Changes in configuration (e.g. bit rate) take effect immediately.

## 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.

Sjmf™ also offers advanced video post-processing controls, such as brightness, contrast, hue and gamma.

### In Details

- MPEG-4 AVC / H.264 (rfc3984)
  - 4MV
  - Quarter Pel
  - PB Frames
- MPEG-4 Part 2 (rfc3016)
  - 4MV
  - Quarter Pel
  - PB Frames
  - Data Partitioning
  - MPEG Quantization
- H.263+ (rfc2429)
  - Unrestricted Motion Vector (annex D)
  - Advanced Prediction (annex F)
  - Advanced Intra Coding (annex I)
  - Deblocking Filter (annex J)
  - Slice Structure (annex K)
  - Alternative Inter VLC (annex S)
  - Modified Quantization (annex T)
- H.263 (rfc2190, rfc2429)

