

NaturalCallManager™ is the centric of handling call control as well as media control functions within the system. It is a pure SIP-based solution coordinating call control tasks among media servers, media gateways, SIP endpoints. It also provide a variety of APIs for creating interactive multimedia applications

▶ IP-based Multimedia Protocols

- ◆ Audio and video transport over RTP/UDP
- ◆ RFC 3550 and RFC 3551 (RTP and RTCP)
- ◆ RFC 2190, RFC 2429 for H.263
- ◆ RFC 2833 for DTMF
- ◆ RFC 3016 for MPEG-4
- ◆ RFC 3267 for AMR
- ◆ RFC 3264 for SDP

▶ SIP Protocols

- ◆ Compliant with SIP protocol RFC3261
- ◆ Support Proxy Server and Redirect Server to inter-network with the Softswitch

▶ IMS Standard Support

- ◆ Provide ISC interface defined by 3GPP and 3GPP2
 - 3GPP TS 23.228 Technical Specification Group Services and System Aspects
 - 3GPP2 IP Multimedia Subsystem (IMS) Stage 2 (Release 7)
- ◆ Support SIP Proxy mode compliant with 3GPP TS 22.228, 23.228, 24.229 standards
- ◆ Support terminating UA and redirect server compliant with 3GPP TS 22.228, 23.228, 24.229 and inter-networking with IMS S-CSCF
- ◆ Support originating UA compliant with 3GPP TS 22.228, 23.228, 24.229 and inter-networking with IMS S-CSCF

▶ Application Programming Interfaces

- ◆ Support Java JDK 1.6
- ◆ **SIP call control functions**
 - APIs to place / abort placing / answer/ release calls
 - APIs to transfer / abort transferring calls
 - Callbacks to handle outbound and inbound results
 - Callbacks to handle transfer results
- ◆ **PSTN call control functions**
 - APIs to place / abort placing / answer / release calls
 - Callbacks to handle outbound / inbound results
- ◆ **Media Control functions**
 - Establish / tear-down Media Server connections
 - Play / stop play / record / stop record audio wav files and video 3gp files
 - Generate / play dynamic text overlay menu
 - Audio (wav format) and video (3gp format) tape-in recording
 - DTMF detection and generation
 - Bidirectional or unidirectional channel bridge for audio and video sessions
 - Audio conferencing features – establish, add, delete, listen-in, tear-down, conference recording
 - In-band network announcement detection
 - Query channel status