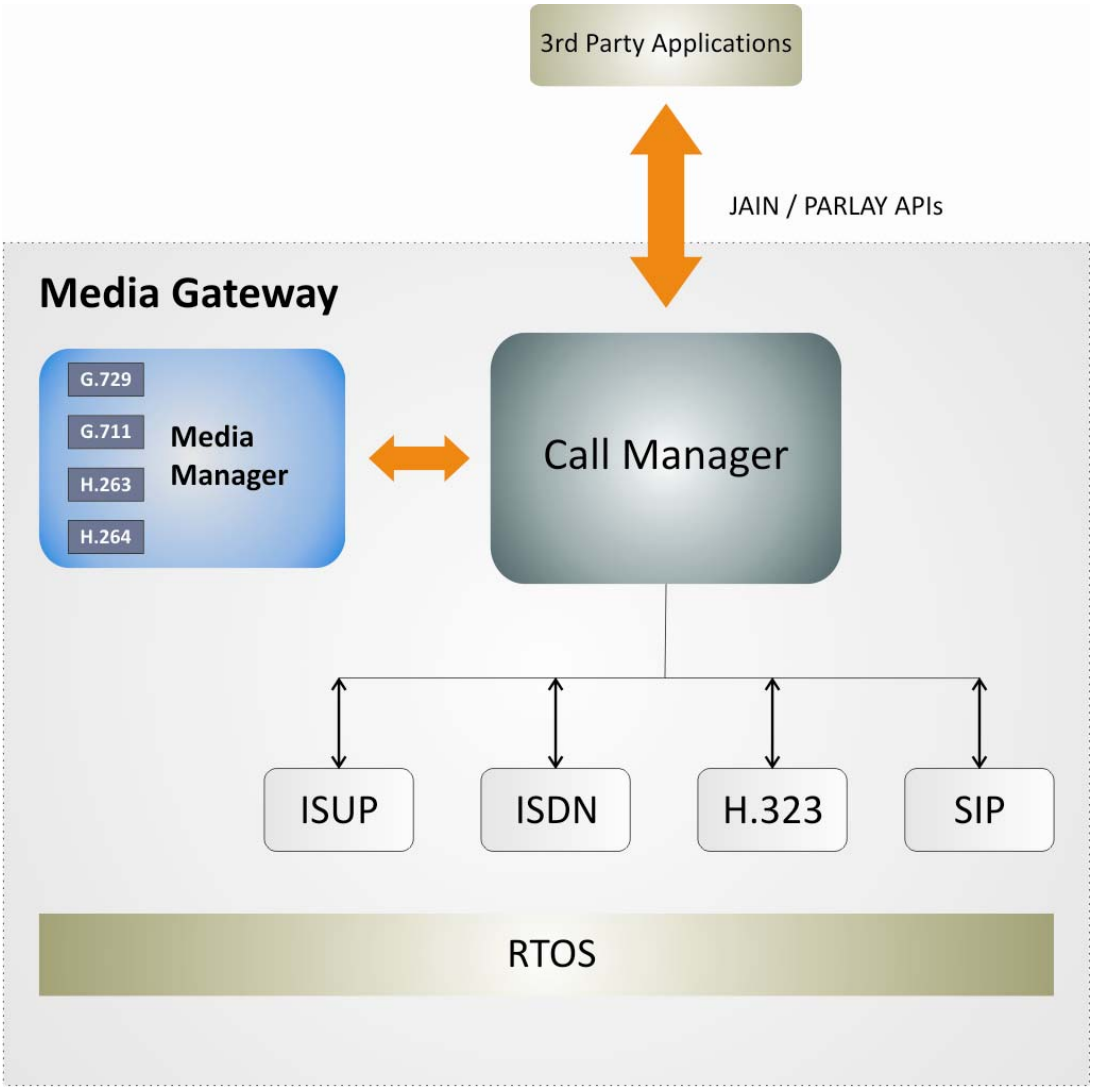
The Client | A large Media Gateway OEM

The Challenge | Call Control is the intelligence of a Media Gateway. The functionalities included controlling the call signals, routing call, Allocating/de-allocating media channels, releasing calls and providing enhanced services. The functionality of call control was time critical as the transmission of media had to be real time. QoS was also an important aspect of Call Control.

The solution | Zansys architected, designed, developed and tested the Call Control on the media gateway of the client. The application was developed on a Real-Time Operating System. The architecture and design of the application was highly modular. The concepts of real time systems were used to make the application time critical. The tasks were prioritized, lower priority tasks were pre-empted, resources were pre-allocated and mutex/semaphores were judiciously used. The signaling protocols that were controlled by the application were ISDN, H.323, SIP and ISUP. The media protocols were TDM and RTP. The codecs used for media encoding and decoding were G.711, G.729, H.263. H.264. The application provided enhanced services like conferencing.



Engagement model with the client | Zansys directly reported to the program steering group, providing regular status updates so that they had visibility of progress and could make informed decisions. Zansys successfully ensured that the project was performed with quality and was approached in a manner suitable for the program's strategy and goal, even though there were huge resource and management demands.

Business Environment | Following was the scope:

- Architect, design, develop and test the Call Control application
- Build the application from scratch
- Application had to be a real time system
- Multi-protocol support – ISDN, ISUP, H.323, SIP
- Multiple media type support
- Enhanced service support.
- Open APIs (Parlay/JAIN based) for enhanced service development

Benefits | The solution offered vast advantages to the client:

- **Modular** The application was designed in modules based on functionalities.
- **Flexibility** Features and functionalities could be easily added
- **Extensible** Due to open APIs, enhanced services or third party services could be developed.
- **Configurable** The application logic was data driven and hence, configurable.
- **Reliable and Robust** The application was tested under high load and was quite reliable.
- **Good QoS** and High performance

Achievement | The application was successfully delivered to the client meeting the quality and time standards. The media gateway with the application has been running successfully at numerous network operators sites with good performance.