



## Hova Networks Case Study

### Open-Source IP Telephony

Hova Networks helped a large international customer, based in Mexico, build a new IP-based communications infrastructure using the AudioCodes Mediant 1000 Multi-Service Business Gateway (MSBG) and 300HD Series IP Phones. The new system enabled the customer to deploy an IP-PBX system (hosted on the Mediant 1000) to handle communications between offices in Mexico and Brazil. It also provided the ability to interconnect seamlessly with the PSTN and SIP Trunks.

### Background

Hova Networks, based in Mexico City, was founded in 2004. After initially providing open-source VoIP solutions to its customers, the company changed its focus to developing its own technology to provide unified communications to business customers as a subscription service. Today, Hova offers companies a solution that enables them to manage their convergent infrastructures and help them in their transition to the world of unified communications.

This case study relates to one of Hova's customers that was planning to make the move to IP-based unified communications. The customer, a large cruise line company with branches throughout Latin America, was looking for a cost-effective solution for both voice and data communications between its own offices and with the outside world. The trigger for the customer to turn to Hova was its plan to open a new office in Brazil with a full range of communications services.



## Challenges

The customer had a number of basic requirements for the new system. These included:

- IP technology based on the SIP protocol
- E1 connections to the PSTN
- Growth capacity of up to 4 E1s per location
- Ability to interconnect with one or more SIP trunking providers
- Integrated PBX functionality
- Security for calls between Brazil and Mexico
- Growth capacity for future SIP Trunks with other offices in Latin America
- Provision of internet access for users' PCs at the new facilities in Brazil
- Centralized administration of the IP-PBX extensions
- Integration with the existing Avaya TDM PBXs at the branch offices in Mexico

One of the most important challenges faced during implementation was to enable direct dialing between the extensions in the Mexico and Brazil offices. Moreover, it was essential to establish communications between the new IP infrastructure in Brazil and the Avaya PBXs that were already operating at the Mexico offices.

Another one of Hova Networks' priorities was to guarantee maximum voice quality and user experience in the calls between both offices, in spite of the fact that they would have to be sent over unmanaged and unsecured internet links.

A further challenge to be considered was enabling remote access from the Mexico offices to certain applications that would be installed in the new office in Brazil, through a secured VPN.

With the introduction of an IP telephony infrastructure, Hova's customer was also interested in installing IP phones. These phones needed to be easy to use, fully interoperable with the rest of the system and able to provide very high voice quality.

## Solution

The solution chosen by Hova to meet their customer's requirements was based on the AudioCodes Mediant 1000 Multi-Service Business Gateway (MSBG) with the integrated Open Services Network (OSN) server module and Enterprise Session Border Controller (E-SBC) functionality.

AudioCodes MSBGs are based on AudioCodes' highly interoperable Media Gateway platforms which support a mix of digital and analog interfaces, strong voice processing capabilities and SIP protocol mediation. They also support a range of data processing functionalities including various WAN interface options, and static and dynamic data routing capabilities.

The Mediant 1000 MSBGs were supplied with 4 E1 telephony interfaces for the main office in Mexico and with 1 E1 for each of the branch offices. They also provided the WAN connection for all of the company's LANs, serving both the VoIP equipment and the users' PCs.

In order to provide remote access from Mexico to the other services installed in the new offices in Brazil, Hova decided to build an MPLS VPN between both offices, enabling secured access to the customer's applications. To create an additional level of security for the voice traffic, all calls were secured by the MSBGs using SIP TLS for signaling and SRTP for the packetized voice.

"The flexibility of AudioCodes' Mediant 1000 MSBG platform assisted our customer greatly in simplifying the deployment of its new IP-based communications network, while keeping capital costs in check. In addition, the high voice quality, ease-of-use and cost-effectiveness of the AudioCodes 300HD IP phones ensured that our customer's end-users could enjoy the full benefits of the new system."

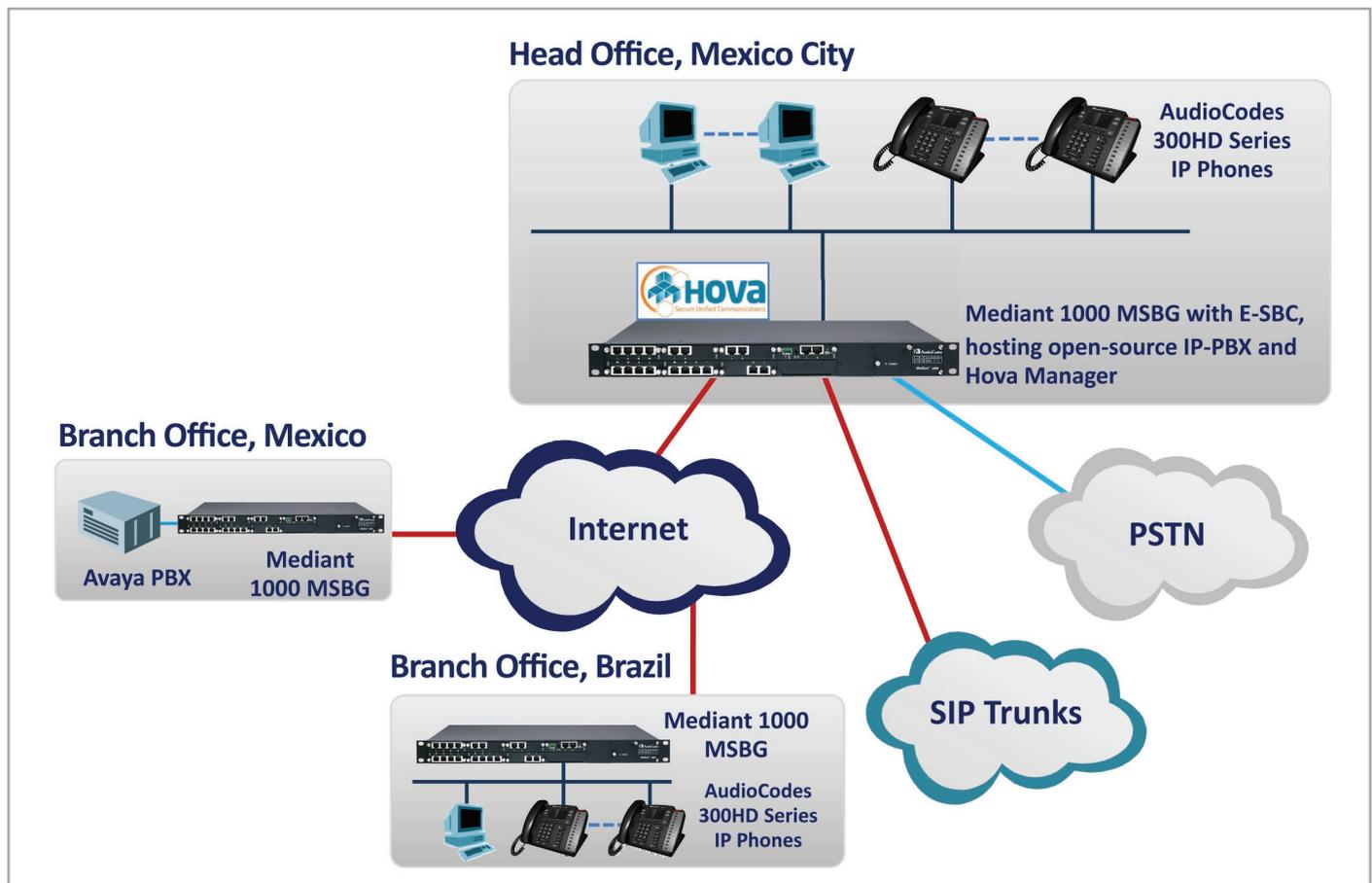
*Jorge Madrid – CEO, HOVA Networks*

The Mediant 1000's E-SBC functionality was used to enable smooth interconnection with SIP trunking providers. Based on years of experience in deploying SIP-based networks in multi-vendor environments, AudioCodes E-SBC products have proven interoperability with leading IP-PBX vendors and major SIP Service Providers. This ensures that SIP trunks can be deployed quickly and with minimal effort.

Hova Networks used AudioCodes MSBG's Open Solution Network (OSN) module to host its open-source IP-PBX solution and centralized "Hova Manager" management system at the customer's head office in Mexico. The OSN module is a fully-fledged server based on an Intel processor which resides on the Mediant 1000 platform. By using the OSN as the hardware platform for the IP-PBX and Hova Manager software, Hova's customer was able to limit capital and operational expenditure on the new solution, as well as reducing interoperability issues. OSN modules were also installed on the Mediant 1000 MSBGs at the branch offices to host the Hova Manager client software which records communications activities at the remote offices and reports the data back to the central system.

Another issue that needed to be resolved was integrating the branch offices in Mexico that already had a digital Avaya PBX, into the new infrastructure. The customer required transparent communications with the possibility of direct dialing between extensions on the Avaya PBXs and the new IP-PBX. Here again, Hova Networks was able to deploy the Mediant 1000 MSBG at the branch offices with an E1 interface to the Avaya PBX, effectively bringing the PBX extensions on-line.

Hova also deployed 120 AudioCodes 300HD Series IP Phones (100 310HD phones and 20 320HD phones) in Mexico and Brazil. The 300HD Series of IP Phones provides full SIP support and can integrate with a wide range of IP-PBXs, softswitches and other SIP-based application servers. The phones offer HD voice quality and a range of essential business phone features. Hova selected AudioCodes IP Phones because of their tight interoperability with the other elements of the new system and their ability to support high quality voice calls, even in unstable network conditions. They were also simple to install and configure and, with an intuitive design, were very easy to operate.



## Results

The system is currently operational in both Mexico and Brazil. The customer now benefits from reduced rates for calls within Brazil using the SIP trunking provider. In addition, the cost of the calls between extensions in both countries has been totally eliminated. The customer's employees can make internal calls between offices simply by dialing the extension number.

The cost of calls to external numbers in both countries has also dropped significantly, since the PSTN leg of the call is now initiated from the nearest point to the location of the recipient number.

Now that the new IP communications infrastructure is fully operational, the customer can consider connecting other affiliates in Argentina, Chile and elsewhere in Latin America. This network expansion can be carried out without the need for additional hardware or licensing in the offices in Mexico and Brazil.

## About AudioCodes

AudioCodes Ltd. (NasdaqGS: AUDC) designs, develops and sells advanced Voice over IP (VoIP) and converged VoIP and Data networking products and applications to Service Providers and Enterprises. AudioCodes is a VoIP technology market leader focused on converged VoIP & data communications and its products are deployed globally in Broadband, Mobile, Cable, and Enterprise networks. The company provides a range of innovative cost-effective products including Media Gateways, Multi-Service Business Gateways, Session Border Controllers (SBC), Residential Gateways, IP Phones, Media Servers and Value Added Applications. AudioCodes' underlying technology, VolPerfectHD™, relies on AudioCodes' leadership in DSP, voice coding and voice processing technologies. AudioCodes High Definition (HD) VoIP technologies and products provide enhanced intelligibility and a better end user communication experience in Voice communications.

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