



## Cyta Case Study

### A Carrier IP-to-IP Transcoding and Mediation Solution for Unified Messaging

#### Background

Cyta is a semi-government organization. It was established with the aim of providing, maintaining and developing a comprehensive telecommunications service, both nationally and internationally. Cyta is considered to be the leading provider of integrated electronic communications services in Cyprus.

Geomant, with European headquarters in UK, is a Systems Integration and Services Delivery organization with over 100 employees. Geomant provides software, consulting, implementation and support services to partners and customers throughout the world. Specializing in Unified Communications, their partners include Microsoft, Avaya, Altitude Software and Inova Solutions.

#### Challenge

Cyta, within the scope of a project aimed at developing unique convergent services, wanted to build a Unified Messaging Service, based on Microsoft Exchange. Geomant was interested in providing a cost-effective Unified Messaging solution, based on the Microsoft Exchange Server 2007. This server operates with SIP/TCP signaling and uses the G.711 codec, while Cyta's systems use the SIP/UDP implementation and several different codecs. Therefore it was necessary for Geomant to search for a high availability, flexible IP-to-IP gateway and transcoding solution.

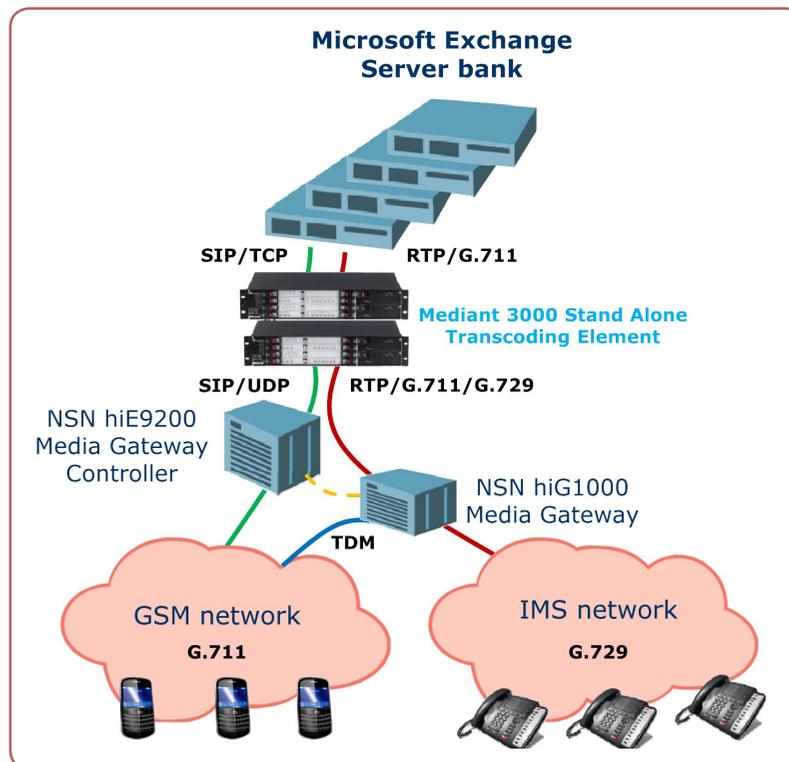
Some additional challenges that Geomant experienced included the interworking between different "dialects" of SIP used by the different network entities. For example the diversion information provided by the Mobile Switching Centers had to be manipulated to maintain interoperability with the Microsoft Exchange 2007 platform.

Another functionality that needed to be taken care of was load-balancing of the call traffic between the different Microsoft Exchange servers.



## Solution

Geomant deployed the AudioCodes Mediant™ 3000 for IP-to-IP transcoding and mediation. The following figure details the Cyta network diagram.



*Transcoding Element Solution at Cyta*

The diagram depicts that the Mediant 3000 which is positioned between the Microsoft Exchange server farm and the GSM and IMS networks. The Mediant 3000 is interfacing calls between the IMS network, the Cyta GSM network and Microsoft Exchange Server 2007. The Microsoft Exchange Server uses SIP over TCP, while the Cyta Softswitch is using SIP over UDP and both are mediated by the Mediant 3000. Additionally, load balancing between the different Microsoft Exchange Servers is also facilitated by the Mediant 3000. Lastly, the Mediant 3000 is performing advanced digit manipulation to resolve different call diversion information between the various networks.

## The Mediant 3000 was selected for the following reasons:

- SIP “normalization” capabilities. The Mediant 3000 is interoperable with a very large number of IP-PBXs, SIP proxies, and application servers. This IP-to-IP mediation feature leverages these interoperability capabilities in order to mediate between different SIP elements
- Support for up to 1000 LBR-to-LBR (low bitrate) transcoding sessions in a 2 rack-unit high platform, enabling the Mediant 3000 to be one of the highest density transcoding solutions for its size
- Investment protection that allows Service Providers to continue utilizing the existing infrastructure
- Proven interoperability with Microsoft Exchange Server 2007. AudioCodes is a Microsoft Gold Partner and its gateways are widely deployed with Microsoft Unified Messaging and Microsoft Unified Communications solutions
- The Mediant 3000 is a high availability platform. In version 6.0, intra-gateway redundancy will apply to IP-to-IP transcoding
- Fully featured EMS and Performance Monitoring. The Mediant 3000 has a rich set of performance monitoring counters via the powerful, but user-friendly EMS, which facilitates quick problem isolation and correction

## Result

After demanding acceptance testing, Geomant deployed two Mediant 3000 systems in a redundant configuration. The Mediant 3000 allows Cyta to continue to provide effective carrier-class service to its wireline and cellular subscribers.

“Geomant and AudioCodes have enabled us to leverage the investment in our Unified Messaging solution and allow both our wireline and wireless subscribers to benefit from this service,” stated Mr. Chrysis Phiniotis, Manager, FMC Project at Cyta. “The solution has been rapidly deployed and we are satisfied with its performance.”

“We are collaborating with AudioCodes on various Microsoft enterprise opportunities,” said Attila Megyeri, Microsoft Program Manager at Geomant. “We had to solve a coder inconsistency issue in a carrier environment for Cyta. We discovered the Mediant 3000 to be an ideal solution for this purpose, in terms of densities and interoperability. We are satisfied with this choice as the system is performing well and in accordance with our expectations.”

“We are pleased that Geomant selected AudioCodes’ Mediant 3000 for transcoding and mediation applications,” stated Avi Grabinsky, Director, Product Marketing, Systems Group at AudioCodes. “Transcoding and mediation is AudioCodes core competence relying on years of DSP and SIP expertise. Geomant’s professionalism and experience with AudioCodes product line has enabled a rapid deployment of this solution.”



## 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 leader focused on VoIP communications, applications and networking elements, 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, Residential Gateways, IP Phones, Media Servers, Session Border Controllers (SBC), Security Gateways and Value Added Applications. AudioCodes underlying technology, VoIPerfectHD™, relies primarily 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 emerging Voice networks.

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