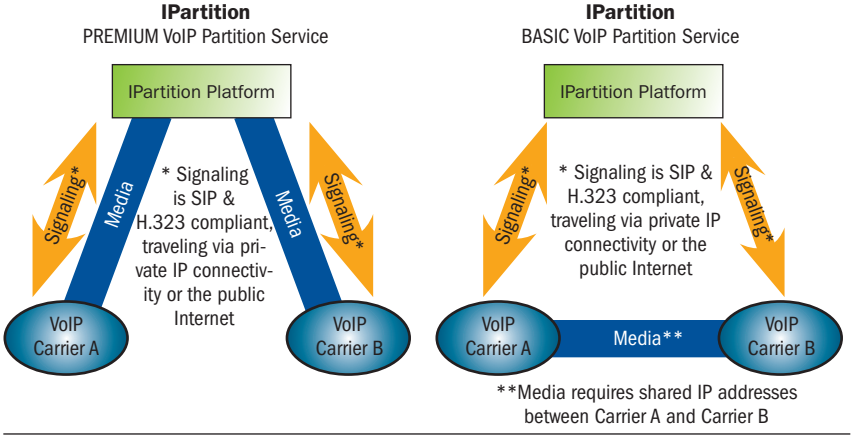
VoIP Peering Switch Niche

By Hunter Newby

Editor's Note: *The "VoIPeer Me" series follows in the footsteps of FAT PIPE's "Meet Me" series, which identified key carrier hotel interconnection points in North America and the Ethernet and VoIP network operators within them. This new series will demonstrate the marriage of Ethernet and VoIP through actual VoIP peering implementations of network operators within the carrier hotels. Our purpose is to show where VoIP peering currently exists, who provides it, who uses it and how.*

VoIP peering services are in demand and in use far and wide around the globe. As broadly as the term is defined, the various service types and functions that fall under it are of great significance and importance to the users – even if it is only a small component of their overall business. This is the case with Lunasat, a MENA (Middle East/North Africa) region service provider, and the IPartition service from General Telecom (GenTel).

General Telecom's Basic and Premium Service



Source: www.gentel.net

Lunasat delivers complete telecommunications solutions to the MENA region, be it by satellite, wireless or fiber, for services such as voice, Internet transit, data transport and TV broadcast. Its main expertise is in providing technical resources in difficult places to implement the most challenging projects, "on time, on specs and on budget."

One of its main business units is voice origination and termination from the MENA region, namely Iraq. As we all know, that is a rough neighborhood these days, and getting calls in and out predictably is not an easy task. In addition to the obvious issues with network quality, there is an issue with interfacing E-1's from the SDH-based (synchronous digital hierarchy) PSTN (public switched telephone network) to all flavors (session initiation protocal, H.323, etc.) of VoIP. As the bi-lateral, wholesale minutes world has shifted to using IP and the Internet for the switching protocol, provisioning and, in some cases, call media, carriers such as Lunasat have sought an easy way to interconnect their legacy networks to the IP networks.

The GenTel IPartition service fills the need quite nicely. GenTel has a rich history with switch partitioning, having been the largest provider of the TDM (time division multiplex) flavor via Nortel DMS 250s at 60 Hudson St. in New York City throughout the 1990s and into the 2000s. It has a lot of credibility and experience in running this sort of operation. The IPartition service is basically a VoIP switch partitioning service. The service comes in two forms, Basic and Premium.

The Basic level service is signaling only and allows the route information to be queried and returned via a public or private IP connection, but the call media is sorted out by the carriers themselves. In many cases with wholesale minutes to the far reaches of the world, the public Internet is used as the call media. This is due to the natural limitations of scarcely available transport, which is quite expensive, so the public, shared network is more accessible and affordable.

The Premium level service includes the media, which can be public Internet or private IP. This requires the additional step

of setting up the links from both sides of the call prior to any traffic being passed. The GenTel IPartition service uses Nextone session border controllers as the routing/switching core and provides users with many benefits and features including routing and call switching, protocol conversion, 24x7 network operation center, real-time reporting and access to something called the Global Village.

The Global Village is an exclusive community of carriers comprised of GenTel customers that are able to conduct transactions with one another with no transaction costs and minimal effort. Customers seeking routes, as well as those offering routes, can rapidly find each other in the Global Village. This acts as a directory service of sorts for GenTel customers. Helping customers transact with each other is a very worthy cause and builds great affinity to the service provider. This idea came about as a result of GenTel-sponsored customer gatherings known as Loop-Around Events. The primary reason for the events was to meet other GenTel customers that were already on-net to each other through the switch so that they could in effect bypass the local loop. What a concept – TDM bi-lateral peering!

As far as the IPartition service is concerned, this is what Fadi Badr of Lunasat has to say: "GenTel acts as a D&B (Dun & Bradstreet) of sorts. They help us all by knowing which customers have a good credit history and good routes. This saves us a lot of time and money."

On the economic side, the IPartition service is not billed to the users by the port but rather as a fee per minute switched.

Lunasat VoIP Peering User Case Study

VoIP Peering User	
Lunasat	
Contact: Fadi Badr; Fadi@lunasat.com	
Type of entity: Wholesale Minutes Termination	
VoIP Peering Service Provider	
General Telelcom	
Contact: Randy Weinberger; rweinberger@gentel.net	
Network Architecture and Model	
Does your company currently generate revenue from voice traffic?	Yes
Were you seeking to reduce monthly opex by reducing the cost of voice minutes?	Yes
Is your current VoIP network all IP end to end?	Yes
Is your current VoIP network actually TDM call switching with an IP interface?	No
Bilateral VoIP Peering	
Are you using a bilateral VoIP peering service?	Yes
Does the service provider allow you to establish multiple direct bilateral relationships?	Yes
Is there a broker, counter-party or transaction fee associated with the minutes?	Yes
Do you send calls to only one VoIP service provider for termination?	No
Do you manage least cost routing of multiple VoIP service providers?	Yes
What is the percentage of savings achieved through this service? A=10-30%; B=30-60%; C=60%+	A
Multi-Lateral VoIP Peering	
Are you using a multi-lateral VoIP peering service (ENUM)?	No
Is the multi-lateral service easy to use?	n/a
Does the multi-lateral service eliminate the per-minute cost to terminate a call?	n/a
Was the motivation to use the service based on multi-lateral peering between your own sites?	n/a
Are there any fees for the use of the multi-lateral peering service?	n/a
Was the motivation to use the service based on multi-lateral peering between other VoIP networks?	n/a
If you are not currently using a multi-lateral (ENUM) service, do you plan to within the next 12-18 months?	Yes
Provisioning	
Do you interconnect to the VoIP peering service using Ethernet?	Yes
Do you interconnect to the VoIP peering service over the public Internet?	Yes
Were there savings realized moving from TDM to Ethernet for provisioning ports?	Yes
What is the percentage savings achieved through this service? A=10-30%; B=30-60%; C=60%+	B
Is the VoIP peering service providing protocol conversion (TDM-SIP, H.323-SIP)?	No
What is the savings from managed conversion services? A=10-30%; B=30-60%; C=60%+	n/a

This helps make the initial business case for users that might not have enough traffic to justify a high, fixed port cost but do wish to trade minutes with other carriers.

Bi-lateral peering services such as IPartition help carriers find better terminating rates, which saves them money, but they also indirectly help users save on bank fees for wire transfers by carrying over payments in a process called off-sets, or the off-setting of outstanding invoices. This is not actually a service of GenTel, or any service provider for that matter, but is a by-product of the stability of trading partners through such a platform. In a given month, one carrier may owe the other a sum of money that is not significant enough to send a wire payment, so they agree to make it up in voice traffic the following month to pay down the debt.

On the technical side IPartition is not multi-lateral and does not incorporate any electronic numbering or SRV mapping functionality. It is strictly a bilateral facilitator. Lunasat interconnects to the IPartition service using Ethernet, but has legacy E-1 connections to the MENA PTTs (postal telegraph and telecom). This contention exists within the core of the Lunasat network since many of the PTTs in the region have no IP interfaces. This is one of the main reasons why the GenTel service makes so much sense for Lunasat and anyone else with a similar network. For Lunasat, GenTel is the way they interconnect to anyone who wants to use Ethernet to connect to them. It is Ethernet aggregation, in a sense.

Another major reason the service makes sense is the ability to interface with IP networks of various flavors without having to deal with the protocol translations themselves. When it comes to establishing bilaterals on the customer side, Lunasat takes a different approach.

"It is better to agree with the other party as to what the interconnection type will be prior to making the deal" states Badr. "But in some instances one side may be SIP and the other can only do H.323."

Lunasat doesn't currently use the IPartition protocol conversion service, but Badr can see the value of it: "SIP will win out in the long run because it is easy, but H.323 is hard to figure out."

Overall, this is a very interesting, multi-faceted VoIP peering service and further proof that just because something is called "peering" doesn't necessarily mean that it is multi-lateral and free. VoIP peering has a lot to do with bi-lateral voice trunking as well as protocol conversion. **FAT**

Hunter Newby is chief strategy officer of tel[x]. If you know of a VoIP peering implementation and would like to suggest it for a future article, please email him at hnewby@telx.com.