The Switch Is On

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.

There are various methods and benefits of VoIP peering for different types of networks. We will attempt to identify as many of them as possible.

Did someone say IP everywhere? Remember, voice over IP doesn't mean "voice all IP." Maybe one day common sense and evolution will have run their course, but for now and probably a while there's still a whole bunch of TDM (time division multiplex) voice switching and transport out there.

Not that there is anything wrong with all of the big iron, but the benefits of routing calls as IP versus circuit-switching are quite clear these days. The issue facing many legacy voice carriers is how to get from the past to the future in the present. That quandary has left open a very nice business opportunity that a few VoIP peering service providers have stepped into: TDM-to-IP conversion.

One such provider, Interoute, has created an outstanding platform called the Virtual Voice Network (VVN), and a major component of it is conversion services. The VVN is based on Sonus switches in several major global markets, which are tied together creating an on-net situation for all of those that participate. The participation comes in the form of a tried-and-true business model in the wholesale voice business: switch-partitioning.

What's different about the VVN is the revenue model. They charge a monthly port-fee and don't meter the minutes. At its core is a major voice switch, though, so users get all of the features and functionality. The added dimension to this service (and why it fits under VoIP peering) is that the switch interface accepts TDM handoffs and then converts that call into IP to be carried to its destination as SIP (session initiation protocol). In many cases the destination remains within the VVN. For those that do not, Interoute provides the public Internet access to carry the SIP call to the far end. Additionally, private peering links can be established from the VVN to other networks through a cross-connect or Layer 2 circuits.

This is a very valuable function for many large voice carriers with huge sunk investments in TDM gear that either can't or won't make a full swap for new IP gear. While they evaluate new equipment the world spins. Since they don't want to lose out on business opportunities in the IP world, they look to Interoute to fill the need. In many instances today the most aggressive route buyers and sellers only accept IP handoffs. So, without creating a patchwork solution, the TDM carriers get converted. This buys them some time and keeps suppliers and customers happy.

In addition to this bridge between the old and new, Interoute has created a marketplace for its users of the VVN called Arena. This is an online facilitator of introductions between customers that are seeking particular destinations around the world. It is a simple, yet very smart tool that helps drive business between users, keeping them happy and using more and more of the VVN as their deals close.

One of the users of the VVN and Arena is Total Telecom International. They are an international wholesale TDM voice carrier that uses Interoute and the VVN to convert their circuit minutes to packets. This helps Total Telecom save time and money and also helps them find customers.

"The VVN and Arena have really assisted our organization in executing our business plan," states Jeffrey Scott, company senior vice president sales and marketing. "Being on the platform has positively transformed our business in terms of speed to market, efficient and flexible use of capacity, as well as increased global presence." Total Telecom also has found that the Interoute technical team helps them resolve provisioning issues independently, allowing Total Telecom to focus on selling.

"Total Telecom is a very good fit for our services," says John Wilkinson, Interoute director, voice services. "Any carrier that has similar network architecture and is looking for an efficient, seamless integration with IP would also be well served in this environment."

As more legacy carriers connect to the VVN and join the

Arena the marketplace grows. Since these are all bi-lateral arrangements there are no middlemen brokers to deal with, or the associated fees. In a very competitive market such as wholesale minutes, eliminating those fees can be important to the bottom line.

In essence the Interoute conversion service almost can be seen as the signaling before the call is placed. It's not the signaling itself, but by converting from TDM to an IP domain it enables the use of IP signaling. IP really is just a way for all parties to be speaking the same language for provisioning purposes. This makes everything much easier and brings the cost of running a network down considerably.

The "peering" portion of the Interoute service has as much to do with the directory of members within the Arena as it does the networking aspect of the VVN. Knowing who you can peer with on the same platform is paramount. Without other networks on the same system to transact with, there really is no business case for being there in the first place. Overall this is a very good example of a few different components of VoIP peering. So, if you're an old dog looking for a new trick maybe you should track a path to Interoute. **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.

TTI VoIP Peering User Case Study

VoIP Peering User	
Total Telecom International	
Contact: Jeffrey Scott; scottjef@optonline.net	
Type of entity: Carrier Wholesale	
VoIP Peering Service Provider	
Interoute	
Contact: John Wilkinson, John.Wilkinson@interoute.com	
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?	No
Is your current VoIP network actually TDM call switching with an IP interface?	Yes
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?	No
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?	No
Provisioning	
Do you interconnect to the VoIP peering service using Ethernet?	No
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?	n/a
What is the percentage savings achieved through this service? A=10-30%; B=30-60%; C=60%+	n/a
Is the VoIP peering service providing protocol conversion (TDM-SIP, H.323-SIP)?	Yes
What is the savings from managed conversion services? A=10-30%; B=30-60%; C=60%+	B

*One office still uses a legacy switch. However, the rest of the operation including clients is IP-to-IP.