



Peer pressure

MANY BARRIERS REMAIN TO THE TAKE-UP OF VOICE PEERING, NOT LEAST CARRIERS' RELUCTANCE TO GIVE UP REVENUE IN ORDER TO SAVE COST. **GEORGE MALIM** REPORTS

A few years ago, a logical assumption to make was that all voice would be “free” between two carriers. Voice was rapidly commoditising and it was clear that VoIP offerings such as Skype, Vonage, Jajah and their now numerous competitors were going to place voice revenues, international ones in particular, under great pressure. However, providers have taken the attitude that there is no reason why, although they may be directly interconnected with another carrier, they should do so for free. In fact, in most of the world such transactions are still paid for. After all, the market values carriers based on their revenues and relinquishing revenue in order to reduce costs will have a negative impact on their valuation.

This wasn't how it was supposed to be. Voice peering, sometimes referred to as VoIP peering, describes services and solutions that support the voluntary interconnection of two internet networks for the purpose of exchanging each other's voice traffic without PSTN involvement. The inference of the term peering is that it is settlement free but with IP that is not necessarily the case.

KEY DRIVERS

Eli Katz, chief executive of Xconnect, a provider of federated interconnect services that link IP carriers, thinks there are three key drivers for voice peering. “The drivers are quality, revenue and cost,” he says. “From a quality perspective, the more

directly you have a call going from service provider A to service provider B, the more likely you are to deliver a call as efficiently as possible. For example, a call that routes from TDM to IP to TDM has the worst possible transcoding while an IP to IP call is good. Quality is the inherent driver as to why I'd try to have as many relationships as possible. For instance, core quality measurements can be improved through peering. We've seen a 25% increase in average call duration of IP to IP calls over TDM to IP to TDM calls.”

“Peering also supports new revenue opportunities for carriers,” continues Katz. “To support carriers' new IP services, calls can only be run as IP to IP otherwise any new IP features will be lost. Carriers want



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guaranteed end-to-end IP connectivity so they can have as many IP connections as possible to support mass-market adoption of new services such as video.”

“Finally cost is a driver,” says Katz. “Peering enables carriers to avoid

unnecessary transit operations in the middle of a call, which eradicates margin impacts from dealing with additional carriers. It also allows the introduction of settlement free or billing keep models between operators that could reduce their

back-office costs. Capex can also be reduced because carriers don’t need to run uncritical TDM gateways and other interconnect infrastructure.”

In spite of carriers’ reluctance to shift revenue to cost saving, there is evidence that voice peering is gaining some traction. Stealth Communications, one of the pioneers of voice peering, operates its Voice Peering Fabric (VPF) which enables buyers and sellers of minutes to trade without a broker or counter-party and route minutes entirely within the IP domain without touching the PSTN or the public internet. The VPF handles approximately 900 million minutes per day and more than 300 billion minutes per year.

OUTSIDE THE US

Andreas Hipp, chief executive of Epsilon Telecommunications, has seen the topic is becoming of greater interest but concerns remain regarding how uptake will develop within international markets outside large, homogenised markets such as the US. “Voice peering is a very popular word these days and there are companies such as Stealth looking into this area and offering peering services mainly in the US,” he says. “As much as regulators are involved on a national level, I cannot foresee any involvement on the international part which is far more complex. With a single country as large as the US, it obviously makes it much easier on a national level, but making Europe one single market with one single legislation is still some time away I guess!”

For Steve Heap, chief technology officer, Arbinet, there are stark contrasts between the US and other regulatory regimes. “The US has a very complex interconnect infrastructure and also has new regulations for VoIP calls. Carriers think of VoIP interconnect as switch to



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switch while US regulations think of that as transmission.”

Given that, players could be forgiven for wondering which, if any, parts of the US model are likely to work in Europe. “National peering would be a good starting point for Europe as national legislation will be much simpler to achieve than a European one not to mention a global one,” says Hipp. “However national operators will also have to transform their way of interconnection with the incumbent to an IP-based platform. In addition, issues like number portability and ENUM will have to be addressed. I’m not sure if this can be handled by a private exchange as some of the core network functions would be outsourced which leads to a loss of control. It might work for small operators, but I doubt that the market leaders will adopt this quickly, if at all.”

The European regulatory approach certainly differs to that of the US, as Heap at Arbinet continues to emphasise. “In Europe, often the European Union sets a broad principle, such as number portability, for example,” he says. “It then sets a directive that every member country has to institute portability but doesn’t necessarily set down definitively how that has to be implemented in each country. Therefore, in the case of voice peering regulations, how they are implemented would be left up to individual countries.”

WHERE AND HOW

Aside from regulations, carriers need to decide where, and how best to peer with partners. “The best place to set up these exchanges are central places or networked platforms where the connectivity to and from is simple and cost effective,” says Hipp. “Epsilon Connect, which is a platform for voice carrier interconnects, is establishing a large unified platform to facilitate voice interconnects for TDM and IP as well as the mix of both technologies. The main importance here is to have a private solution that bypasses the public internet to provide the quality of the transmission which is impossible on public IP.”

Hipp claims Epsilon currently has 220 global voice carriers and more than the equivalent of 10,000 x E1 of capacity activated, adding “that comes to more than 3.5 billion minutes per month of traffic on our network”. Epsilon Connect works as a “peering point” within telehouses but also between telehouses and the function can support both a peering

approach as well as a bilateral approach where network or interconnection costs are shared.

Heap thinks it unlikely that such telehouse capacity will be put under strain by the emergence of voice peering. Telehouses simply aren’t the best place for the hand-off to occur. “Telehouses used to have a meet-me room that you would be cabled down to from your floor or racks and the co-location building connected people together. Some even put electronic

where costs are more or less the same for everyone, so a swap-type arrangement could work,” he says. “However on an international basis, we still have many heavily regulated markets with often still only one provider with pricing ranges between 1c and 50c so free-of-charge transit seems to me impossible. The next hurdle is the huge revenues of wholesale voice which many operators will not want to lose.”

Katz thinks the groundswell is moving in



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switches in those rooms but they were only to connect people in the same building. Meeting someone in a telehouse is only useful if you’re specifically in that telehouse,” he says. “It’s not like the IP world, most voice services are dotted around so they don’t particularly meet in a telehouse. Voice peering is more about the end service providers. The company with the customer connects to the company with the other customer – they don’t tend to be in the same building.”

Hipp agrees. “I think the telehouse market will not really see an impact from the way the interconnection model is changing. Such involvement would add another ‘weak point’ to the infrastructure and add cost,” he says. “The transition from TDM-based switching systems to IP-based ones mainly has an impact on the transmission technology which is moving from an SDH-based platform to an IP /Ethernet-based one.”

NATIONAL PEERING

Katz sees national voice peering increasingly occurring in telehouses. “National services logically will happen in internet exchanges because that’s where the infrastructure is,” he says. “But there isn’t going to be a capacity problem developing. You don’t need that many racks to handle huge amounts of data.”

So what are the prospects for voice peering and does it really spell the end for traditional, bilateral interconnection? For Hipp, the initial applications are national and there is still a lot of value in bilateral interconnection. “There might be a movement away from straightforward bilateral interconnection on a national level

voice peering’s direction. “People are doing [voice peering] because market activity points towards this federation-based interconnect paradigm,” he says. “It’s not as if you can’t continue with bilateral interconnect while doing so, but this is absolutely the appropriate paradigm for IP interconnect and, over time, will replace classic, bilateral implementations. There might be accounting or CFO reasons why a carrier would want to keep their top line in place but there’s no reason why they should not adopt a peering model, particularly if traffic levels are similar. Management costs are significant so the model delivers efficiencies.”

For Heap it’s a case of keeping an eye on the context and recognising that there are a variety of ways in which to efficiently, securely and profitably handle voice peering. “To some extent, if you think about the wholesale voice world, it has probably been in existence for only 10 or 12 years,” he says. “Prior to 1998, most international traffic was just exchanged between PTTs and then the wholesale movement sprang up and there’s now tremendous competition that has driven prices and margins so low that people are now backing away. They’re starting to say ‘Why don’t we go back to dealing with a few partners?’. That attitude might provide a glimpse of a move to simpler structures. I think there are no longer cost savings to be made so why should carriers bother with the complexity? The overall direction might be a move to outsource that functionality. Why not go back to the core business and leave the international termination to somebody else?” ■