

The Peering Mess

The FCC needs to finalize some of its broadband plan changes now.

By Steven S. Ross ■ *Broadband Communities*

The Internet, as is often said, is a network of networks. Worldwide, about 5,000 carriers have deals with one another to move data. In a transit deal, one network agrees to carry inter-network traffic for another network for a fee; in a peering deal, carriers exchange traffic bound for each other's customers. There are millions of peering agreements. Together, they shape the Internet. The more peering, the fewer hops are needed to get from point A to point B. Reliability goes up. Effective bandwidth goes up. We bandwidth hawks like peering.

Dominant carriers have a love-hate relationship with peering, whether directly with another carrier or through neutral third parties. Increasing peering, because it cuts the number of hops, reduces the amount of traffic – the zeros and ones don't travel circuitous routes to their destination. And peering is cheaper than paying transit fees. In fact, dominant carriers can avoid almost all transit fees by peering.

When one party to a peering agreement generates a lot more traffic than another, bean counters start talking about new peering agreements – even though peering, like international trade, reduces costs for everyone even if it is unbalanced.

Because neutral peering nodes can have a local impact on ISP revenue, by removing a honeypot of transit traffic revenue, smaller local carriers sometimes try to subvert local peering points. For instance, IXNM, the only neutral peering node in New Mexico, just closed its doors after a decade in operation.

STATE GOVERNMENT ROLE

Many smaller local ISPs saw IXNM as a threat. However, the state government

was particularly hostile – despite the fact that IXNM dropped bandwidth costs from hundreds of dollars per Mbps into the \$20 to \$30 range. The University of New Mexico (UNM) would not join, although New Mexico State University did. One UNM claim was that cheaper access would stimulate more traffic and increase its Internet bills.

The state's Department of Information Technology, according to IXNM's John Brown, would not hook up to IXNM even though the physical link was already there and its up-front cost would have been zero. Commercial ventures such as 360Networks, Akamai and Global Crossing all connected. But handling, on average, only about 40 Mbps inbound and 30 Mbps outbound daily, the peering point could not generate enough revenue to stay in business.

Most traffic heading from one point in New Mexico to another now must travel across state lines. And as Packet Clearing House (www.pch.net), the nonprofit that supports neutral peering, points out, successful peering nodes have rarely failed to enhance local economies.

MOVE FASTER!

The FCC is working on a new policy to reform intercarrier compensation rules and move money from the voice-oriented Universal Service Fund to enhance broadband, generally in areas that are now too sparsely populated to be served economically.

The new rules would also make peering and transit agreements more

attractive. The Bandwidth Hawk does not envy the FCC staff in this quest, one that is mandated by the National Broadband Plan. Many existing revenue streams will shrivel or disappear, and the current owners of these streams certainly have gone to their congressional representatives to complain.

So far, the proposed changes seem on balance to benefit bigger carriers that might not need the revenue as much as rural ISPs. In addition, major carriers already dominate peering use because everyone wants to peer with them.

However, as much as I wish the FCC to tread carefully, I am concerned that the regulatory uncertainty is helping to drive up the cost of capital for rural ISPs. (I find it bizarre that local banks are willing to make unsecured seven-year loans to my Boston-area condominium at 5 percent but want 12 percent or more for 10- or 15-year loans to local network builders.) By separating the peering and transit changes from the others and moving forward with them now, while the stakes are still low, the FCC could help reduce this regulatory uncertainty.

A policy that favors the creation and use of neutral peering points and revenue-neutral data transit (particularly important at the edges of networks), especially with so many new middle-mile fiber builds bankrolled by the stimulus program, seems a no-brainer. It would make life a little easier for rural carriers, even if the connection wasn't always obvious. ❖

About the Author

Contact the Hawk at steve@bbcmag.com.