

Backhaul cost clobbering rural and small carriers

Written by Dave Burstein - <http://www.fastnetnews.com/dslprimelist/112-dsl-misc/518-backhaul-cost-clobbering-rural-and-small-carriers->

Friday, 24 October 2008 18:12



Brett Glass faces Wyoming prices around \$100/megabit/second/month. Cogent's average charge per megabit is \$8-10 (minimum, 1 gig) and it's easy to get that kind of price in Denver, New York or Los Angeles. The Wyoming independents, and many other small companies, can't compete with Qwest when they pay 10-15 times as much for bandwidth. For Qwest or Comcast, the bandwidth cost is less than 3% of what they charge; for an independent with the same traffic, it could be a crippling 20-40%. (Cable upstream split problems a possible temporary exception.)

The Cry of the Wild

“The difference between life and death for many, many competitive ISPs”

Smaller DSL companies and fixed wireless buying throttling boxes

Brett is a Stanford trained engineer, well known in the software community. He loves living in Laramie, where he started LARIAT, perhaps the world's first wireless ISP. The legend in Laramie is that in 1868 "Big" Steve Long ran the mayor out of town and killed 13 men before a “vigilance committee” invaded the Bucket of Blood saloon and strung up Steve and his two half-brothers. Wyoming's come a long way since then, and Laramie is now home of the state university, nine radio stations, and 28,000 people. Brett's worked hard to build a place in the community. His early success was held up as an example of what WISPs were capable of, when people like Robert Pepper at the FCC gave rural wireless strong support. Now he is worried that no matter how hard he works, he can't compete.

I emailed Glass, “Would guaranteeing reasonable access to backhaul fiber and other 'essential facilities' make a significant difference to folks like you working locally?” He replied “It would make the difference between life and death for many, many competitive ISPs. We are currently being strangled, slowly, by the ILECs. We at least have unlicensed spectrum for the downstream side even if we are cut off from licensed spectrum and UNES. But if our supply of bandwidth is cut off at the wholesale level, or if its price is manipulated such that we cannot compete, we are out of business.”

Some much larger carriers, with hundreds of thousands of customers, are also being squeezed. In Britain, four giants are large enough to have their own fiber backbone – BT, Carphone Warehouse, Sky, and Virgin. For them, the BBC iPlayer is welcome, because more people will buy broadband in order to watch, and some will pay extra for higher speeds, which is almost all profit. But smaller carriers have to pay BT or the few alternatives high fees for backhaul. It's good news that BT has reduced backhaul costs (story below,) although the markup is still very high and you must be large enough to buy in gigabits. I believe, but haven't directly confirmed, that the ISPs dependent on eAccess in Japan have a similar problem, because eAccess hasn't brought the bandwidth prices down in proportion to the cost drop.

So I wasn't surprised to discover Sandvine was selling throttling boxes to DSL independents in Europe. Thinkbroadband rates 30 retail ISPs in the U.K. of which perhaps a dozen serve much of the country. (Picture, 30 logos on thinkbroadband.) In the last quarter, Sandvine added half a dozen DSL customers according to their financial reports. I believe these are all modest scale ISPs, where modest means too

small to reach the fiber economies of the top four. *Japan, Korea, and France have dropped from 7-10 serious competitors to 3-5 main companies. That is the likely course in Britain, I believe, unless Ed Richards of OFCOM steps in to make sure smaller companies get bandwidth at a price that's not 3-10 times what the big ones pay. I like competition and there are ways other than subsidies to bring down backhaul costs.*

If we want to preserve small and rural carriers, we need to find some way to bring down the local bandwidth costs. North Carolina, Ireland and France have strong regional programs to get bandwidth where it's needed, but much of the U.S. and UK do not. I am one of the very few who still believe in universal service, including legitimate subsidies. Unbundling interoffice fiber at a low price was very successful in France, and if Qwest would share backhaul with LARIAT that probably would work fine. All of that requires government action or money, which will take time. Is there a faster way?

For Laramie, it turns out the solution may be easy. Level 3 has a facility in the town which carries gigabits, but apparently the sales force isn't interested in such a small client. Before talking about unbundling fiber (like Japan) or government builds (like Ireland), someone at the FCC should call Don Gips at Level 3 and see if something can work out. It's a very small thing for Level 3 to do if asked. The state of Wyoming could also step in if it wanted to maintain competition, urging Qwest to sell bandwidth at a 200% markup, not the 1000% implicit in the prices I hear.

Small local incumbents have similar problems, sometimes ameliorated by cooperative purchasing through state associations. Their association recently called on the FCC to "ensure that rural ILECs have affordable, nondiscriminatory access to Internet backbone facilities, because rural ILECs' higher backbone expenses risk making faster bandwidth speeds unaffordable to end users." That in some cases can be resolved with minor changes to unbundling and USF rules. In particular, I would recommend that any company that request USF funds be required to provide a fair backhaul price to other carriers receiving USF funds, perhaps TELRIC plus a generous profit. Even with that generous profit, that would dramatically bring down costs to other carriers the government needs to subsidize. Verizon, AT&T, and Qwest, the big backbones, all receive USF in some areas and have very high backhaul prices in others.

If you're big enough to have your own fiber ring, there's a real but modest cost to upgrade the equipment. The bandwidth cost is about \$1/month/customer if you are a fair-sized incumbent or one of the large competitors, like Carphone Warehouse in the U.K. or Yahoo BB in Japan. The cost per subscriber for bandwidth is actually going down many places, because equipment prices are falling about as fast as traffic is going up.

This is a business of scale, **with a huge advantage for big companies in many ways**. In bandwidth costs, one (very) small, rural carrier I know is paying **11 times as much as a medium-sized company** I know. For the big carriers, (Comcast, Bell Canada, etc) bandwidth is such a small cost (less than 3% of price) the hubbub is lobbyist inspired nonsense. For small carriers, it can be brutal. 95+% of fast U.S. Internet connections come from incumbent telcos and cablecos with low backhaul and peering costs. Other countries aren't as totally dominated by one or two incumbents, but the vast bulk of broadband service is a few large companies almost everywhere except U.K. Retail (below.)