

From: "Bret Berger" <bret@stoneflytech.com>
To: "Roger Hansen" <RHANSEN@uc.usbr.gov>
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Subject: Internet connection explanation

I thought I would try to explain more clearly how our Internet connections might work...

To get a high speed connection to the Internet you need to connect to someone else that has a high speed connection. Then you are on the Internet! There are (usually) two separate issues to be dealt with here: Internet access and Internet transport. First you find a provider who has a high speed connection of their own and contract with them to share their access with you. Second, you need to purchase transport to get the Internet from your provider's location to yours.

Internet Access

After talking to several people and also due to my own dealings with them, I've decided that InQuo (www.inquo.net) offers a good combination of price and service for Internet access. For \$765 on a one year contract they will provide 1.5 Mbps speed access (T1 speed) on the condition that your average sustained usage (ASU) is less than 128 kbps. This is the same service that the people downstairs from and Great Basin Internet have. Great, now we've got Internet access, how do we get it to where we need it?

Internet Transport

It is possible to purchase from US West and I assume other companies such as Sprint/MCI dedicated T1 speed transport from InQuo's offices in Salt Lake to Richfield and St. George. The problem is that it is prohibitively expensive... on the order of \$1,000/month for each circuit. Fortunately, our friends at US West offer a solution: frame relay. Frame relay (for our purposes) can be thought of as a giant network cloud that covers the state of Utah in any town of moderate size. You attach to the frame relay cloud in Salt Lake and also in Richfield. You then tell US West to set up a permanent virtual circuit (PVC) for you between those two points. Now they are connected as if there were a dedicated wire between them. Your Richfield location talks to InQuo over the frame relay cloud and at InQuo you are attached to the Internet. The advantage of frame relay is its pricing structure. It costs, on a one year contract, \$374/month to connect the Richfield location to the frame relay cloud. This cost is the same for any location in the state... it is distance insensitive. Another advantage is that we don't have to worry about the connection on InQuo's end. They are already tied into US West's frame relay network. We just get our Richfield location connected to the frame relay cloud, then InQuo tells US West to set up a PVC between them and us, and we are live on the Internet.

What I Have in Mind in More Detail

What I plan to do is this... I purchase from InQuo one year of Internet

access at \$765/month. I purchase from US West one year of frame relay transport to St. George for \$374/month. This gets me live on the Internet for \$1139/month. I can sell part of this access to the people in my office building and recoup some of my costs.

To get our Richfield location on the Internet we would purchase from US West T1 speed frame relay access for \$374/month (one year contract). We tell US West to set up a PVC between Richfield and St. George (cost about \$17/month). Richfield is now has a high speed connection to the Internet over the frame relay network. I would charge the project on the order of \$200-\$300/month for Internet access. This money along with whatever I make from my office neighbors should about put me in the black. Total costs for the Sevier project would be \$600-\$700/month.

If we did all of the above on a 3-year contract, the costs would go down 10%.

Justification for the Above

We now pay \$200/month for co-locating our server at Great Basin. In addition we had planned to pay \$150/month to co-locate equipment in Delta.

By offering dial-up service to the water users at large we could recoup about \$5-\$10/dial-up user towards the costs of the Internet connection/transport. It is probably not unrealistic to image having 100-200 users. Another thing we might consider is offering (for pay) high speed wireless Internet service in the area.

-bret