it always amazes me when people talk about content delivery on the internet. They discuss it as if there is unlimited bandwidth available. Well guess what. There is not.

Sure, new bandwidth is being added onnetworks every day. But guess what, our ability to consume bandwidth is growing far, far faster than the speed at which it is being added. Call it digital gravity. The bigger and more powerful our PCs become, the more specialized processors that are enabled with internet connectivity, the more bandwidth we all consume.

There are some basic facts about the internet that remind me of driving on the 405 in Los Angeles. Traffic jams happen. There is no end in sight for those traffic jams. The traffic jams are worse at certain times of the day. Whether its the 405 or the internet.

Uless of course we add multiple tiers of service so that users, companies and applications that want to, or need to avoid those traffic jams have alternatives. We need HOV lanes and toll roads on the net as badly as we needthe HOV lanes on the 405.

Take this to the bank. The more we upload and download and share:

standard definition video, high definition video,home movies in DV and eventually HDV,multiple megabit photos the more bandwidth weconsume.The more PCs and servers we backup online, themoreWeb2.0 applications we use, the more new database applications come online, the more bandwidth we consume. The more bandwidth we consume, the more internet traffic jams we have. The more internet traffic jams we have, the worse our internet applications perform.

If the holy grail to some is any video content in high definition, anytime anywhere from the internet , well guess what, your 15mbs download speed is going to crawl like a 14k hayes modemduring peak use times. You think its bad now, having to wait overnight for that video to download. It can get a lot worse.

We can try all the tricks we want. Edge servers, peer to peer, it wont matter. Just like a 20 lane highway is still going to have gridlock if enough cars use it, so will the net.

But wait, theres more. That doesnt even account for the problems and hassles of network providers exchanging traffic.

Which leads to the foolishness of the information wants to be free movement. Video on the net is a nice to have application. Self publishing is a nice to have application, whether video or any other format. For our entertainment driven society, it seems to be the low hanging fruit that realizes the value of the net. Wrong.

The internet is a great enabler and equalizer not because if can do the easy stuff. Not because it can replace photocopied newsletter of the 70s, or provide an alternative to VHS cassettes, or provide an alternative to satellite or terrestial radio or tv, but because it can help people in ways that can change and savetheir lives.

Medical and home diagnostic applications require bandwidth. They also require a quality of service that cant be interrupted because little Johnny down the road is trying to download the entire NBC schedule for his freshman highschool class. To enable mission critical applications, you have to have mission critical reliability. And that mission critical reliability has to be able to reach any home that a broadband connection can reach. To do that you need multiple tiers of service.

I would rather have little Johnnys grandma getting priority for her video checkup with the doctor at the hospital over little Johnnygetting his bandwidth to upload the video of the prank he pulled onhis buddy.. I would rather make sure that information from life support or other important monitoring equipment, medical or otherwise is finding its way without interruption, and without the end user having to pay for an off the net solution. These are the applications that make the net great. These are the applicatins that offer equal opportunity to those who are disadvantaged.

I want the telcos and the cable companies and the wireless companies to work out a way to exchange traffic at multiple quality of service levels.

At that point, the internet becomes a viable means for important applications it cant support today. We will see a number of new applications developed, whether medical or otherwise, that cant be put in place today, simply because there are definable levels of service.

This doesnt mean that we all cant do all the fun things wecurrently use the net for. It just means that we will watch applications zip by us in the internet HOV lane. Yes, some of those applications will be commercial and geared towards non mission critical apps. If the networks are smart, they will account for this and prioritize applications within the “HOV” lane. Yes, it will mean some content will cost more if we want it faster, but that will be our choice. Just as

If information wants to be free. So be it. It will just take a little longer to get it.