Mistranslating Broadband

I filed http://frankston.com/?n=BroadbandDefinition and http://frankston.com/?n=BroadbandInternet in response to the FCC's request for a definition of Broadband and the FCC NOI on Broadband. I want to be very helpful but first we have to make sure we are asking the right questions.

Defining "Broadband" is like defining "Ethernet". If someone asks for "Ethernet" you don't give them a CSMA network – you're likely to give them something more like token passing.

We first need to figure out what we mean in the sense of our larger goals and then we can call that "broadband".

I played a pivotal role in making "broadband" what it is today. When I was at Microsoft I made home networking happen. At that point US West came to use with their high-speed ADSL service that was considered too much for a single PC but a match for a home network. I purposely made sure that home networks were infrastructure not a profit center. More important I made sure there no necessary role for an installer or a service provider within the home.

This undermined the carriers' plans for the 1990's version of triple play in which each utility was supposed to pay the carriers for access to the customer. My original vision was to use smarter electronics that would adapt to the line --- after all what's the difference between a modem and DSL. But instead the carriers locked down the capacity of the copper wire to the speeds of the 1987 Interactive TV offering (if not less). In 20 years the performance has not improved – that's what happens when you define "broadband" as a service offering owned by those most threatened by the ability of users to create their own solutions.

This dynamic contrasts sharply, as I point out in http://frankston.com/?N=DumbPipes with what happened since the 1970 when we freed IBM's hardware from the limitations of their software and allowed others to discover the value latent in the computing hardware. It contrasts sharply with what has happened within our homes where, thanks to an accident of divestiture, we own our wires and thus the price performance improved by perhaps a million fold from modem speeds to gigabit networks at a lower price and no ongoing cost (http://frankston.com/?n=ZeroMarginalCost). Alas, RG-6 is still controlled by providers forcing us to use a silo to reach the aging set top boxes. (Ever try to put an STB on top of an LDC screen? – should be SBB)

The problem is that the question is not framed well and implicitly assumes a definition that is in keeping with the 19th century notion of communicating as a (telegraph) services. We need to first recognize that the Internet and the telecommunications industry are unrelated concepts – we just have had to force "The Internet" through the constrictions of telecom with modems and other artifacts.

We are using the term "Broadband" for "More Internet". So the question is what do we mean? The Internet is not something you "access" – that concept is firmly planted in what I call the "railroad" model (http://frankston.com/?n=Railroads) and misses the fundamental dynamic that has made the Internet such a phenomenon. We actually implemented the access model as PPoE and it failed because there is no point in keeping an old style broadband network to connect to some Internet out there somewhere. It was a concept tied to the old idea of long distance vs. local phone calls. Beware the metaphor!

We need to be very careful and not confuse the accidental properties of today's implementation of a prototype with the dynamic it hints at. For example the use of the IP address confuses naming and addressing and has made the implementation far more complicated than it need be. If the Internet is about end-to-end relationships in which we aren't dependent upon the middle then the failure to provide stable identifiers is problematic. Yet even a flawed prototype has been transformative – it would be a shame to step backwards and force it to stay within some sort of notion of "broadband" no matter how technically advanced it seems.

The very concept of telecom as a way to fund everything in the middle by selling services is antithetical to the Internet's end-to-end concept with a dysfunction dynamic that creates scarcity. We then compound

this by treating each kind of bit – wired vs. wireless, copper vs. fiber – differently (http://frankston.com/?n=SpectrumDirt).

It's remarkable that we managed to force "the Internet" through the existing telecom infrastructure and it's a testament to the power of the Internet which enables us to discover what is possible given the hand we're dealt. And no surprise – we find that a repurposed video distribution system is good for, guess what, video distribution. Yet no one asks why we can't do health care monitoring because that depends on being able to assume connectivity everywhere and that doesn't fit into the service-funding model.

So to answer your question – if we translate "broadband" as "opportunity" then we need to step outside the FCC's Regulatorium (http://frankston.com/?n=OCA) and figure out how to create opportunity (http://frankston.com/?n=OFI). Getting bits to flow is trivially easy (http://frankston.com/?n=OurCFR and http://frankston.com/?n=OurInternet). It's only difficult because we're forcing the bits through pipes laid down more than a century ago and the entire goal of the piper owners is to limit the flow lest they cede control and value to the us users and the economy.