

# FiOS – a Reality Check

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I wrote this in response to some interest in my experience with the reality of FiOS. The short summary is that there is no magic. Sure having Fiber is nice but it isn't that much different than my "cable" service. The bigger difference between Comcast and Verizon is in the nature of the businesses. Comcast is a content company trying to move on as it looks beyond the STB with its purchase of NBCU whereas Verizon seems to want to continue the 1990's vision of the STB as its entrée into the home.

We need to look past the shiny glass and wonder how wonderful FiOS really is. One strong lesson is that these companies need intervention – as long as they have their silos they are trapped in their own past. They are victims of the [Innovator's Dilemma](#) ever narrowing their user base and becoming more and more irrelevant. After all, it took them twenty years to become what cable companies were ten or so years ago.

I don't want to be entirely negative – Verizon recognizes the money is to be made using data not be limiting it. This puts them way ahead of others threatening caps and other meddling.

After writing this and playing a little more with the glitzy but broken "VZ Call Assistant" I am reminded of why old line companies have trouble doing software. They tend to treat it as a component they can specify and forget. Companies that understand software see it as a living thing and those involved have a sense about it. They also expect to learn by doing. Perhaps this is also the problem with hardware *companies* using to committing early on long term investments.

We also see this in the difficulty for many, but certainly not all, companies to provide API access. They are typically trying to patch over a business architecture that is at odds with ceding control. This is not necessarily due to business strategy driven more by feature lists rather than enabling architecture. "Broadband" being an example of this at the policy level.

I've had a number of broadband connections. I started with ISDN. In the mid 90's I was able to get [Continental Cable-vision](#)'s service (later renamed [MediaOne](#)). Fortunately Newton Mass was one of the very first to have broadband. Until I looked at the Wikipedia description I hadn't realized it was a US West acquisition. I knew of US West from when they approached Microsoft with their ADSL offering. It found its mate in my home networking effort.

I used had DSL subscription. Verizon "went by the book" and gave me 756Kbps for the same price as 1.5Mbps because I was over 12000.00 feet. No concept of a testing to see the actual performance of the line.

Skipping ahead to FiOS; I've already [written](#) about my experience in getting FiOS installed.

I now do have FiOS and discovered that Comcast has upgraded me to DOCSIS 3.0. What is interesting in my metering is that the performance of the two is comparable. There are differences. Yesterday I measured the performance between Boston and London and found that Verizon happened to be better during that test. It's as if you have to be on the right Internet – but isn't there supposed to be just one? Maybe. But I've seen packets between my two adjacent Comcast and Verizon devices route through New York and then Chicago. I need to emphasize I used only simple metering – more sophisticated metering might show different policies for network management which reflect corporate philosophy though not the kind of neutrality I've [written](#) about.

When I first got my FiOS connection I did a comparison (with the help of Doc Searls) of the video quality between the two and Comcast did seem to be a little more aggressive on HD compression but overall the offerings are comparable. And so are the Set Top Boxes though Verizon seems to have put more effort into software for the box. Too bad if you put the two boxes atop each other the IR signals are read by both though the channel lineups are different and some signals toggle. It's a reminder of how much the IR protocols and Set Top Box protocols are artifacts of a long-gone era that started with Zenith's [Space Commander](#).

Verizon does seem to be putting a lot of effort into making the STB into what it was supposed to have been back in the 1990's. They've added Twitter and Facebook and other widgets. My reaction to the Twitter widget is to titter as I watch it trying to use program name as keywords – lots of people use the word "cops". The IR remote controls are not very well suited to any nontrivial interaction. Even airlines have put keyboard on the backside of their remotes but it's hard to do that when you have to support millions of existing devices. In fact the Widgets on the screen seem to be an embarrassing attempt to get with the latest thing. Does Verizon really think it can finally fulfill the 1980's dream of Interactive TV as if the Internet were just a passing fad? Change comes slowly ... very slowly.



Verizon seems to be trying to improve the Set Top Box even as it becomes irrelevant. I just noticed a feature where it attempts to diagnose signal problems but it can't get past

the analog design point. They replaced analog noise with digital noise rather than moving to newer Internet protocols which degrade gracefully and don't behave differently for different "channels". Even for video on demand which is over IP there are decoding artifacts instead of graceful degradation.



One feature I noticed advertised recently is the ability to see your Caller-ID on the TV – at least in theory. I signed up and am still awaiting to see the CLID. I did install the Verizon Assistant program that is supposed to show up on my screen when someone calls so I can see who is calling and respond. The UI on the app is not of the PC culture. Some of this is in little things like not honoring my date/time format. I've seen this emphasis on cute UIs in consumer electronics companies, including camera companies that overdesign the products instead of working with the standards we've gotten used to.

The app is a reminder of Verizon's problems. It's a second attempt after the failure of [iobi](#). They depend on you having a faux landline. Verizon dropped VoiceWing, their IP based offering (and ATT dropped CallVantage). So they start out limiting their market to the trailing edge. And they can't seem to do the obvious – even if I add a number to the phone assistant's phone book it doesn't use the information when synthesizing the name for Call-by-name. So what use is it? The fact that it doesn't seem to work doesn't help but it seems almost a minor issue compared with the lack of any sense of a larger vision. If I tell it to automatically start when Windows starts it still requires a type the password again each time thus mooting the automatic startup.

This kind of silo thinking is endemic. If you use the Verizon ActionTec router then you can remote in to set your programming. But their router fails if you have a gamer in the house so I front end it with another router – at the suggestion of a Verizon techie. It's not that they lack the expertise but they lock it into their standard procedures. For example I have a dual WAN router but if I use it then I can't see the VoD content because the design presumes that I have a physical connection to Verizon. Having a second path (Comcast in this case) means that is no longer true. The VoD itself going through my Draytek route. I can get about 2½ HD streams. But, again, it doesn't degrade gracefully – you start getting incomplete decompression.

Comcast has some similar issues with IP. They assume that you are using their SMTP server from one of their wired addresses. That's a reason I now use DynDNS for email – it means I don't have to worry about which provider's wires I'm using.

The news isn't all bad, Verizon recently stopped blocking port 80 and genuinely appears to have a strategy of maximizing the capacity available as their competitors express fears of "too much" usage. This is the market working, albeit imperfectly, with a player that makes networking capacity a competitive advantage ... for now.

The real message of all this is that the companies providing broadband live in a different world – a world where they continue to use their infrastructure for their offerings and view the Internet as just another offering. This is as one would expect.

We see this elsewhere in telecom – MMS protocols are based on Internet standards but devoid of the dynamics that drive evolution. They are locked into telecom standards. No wonder it's so difficult to interconnect MMS between carriers – it has to fit through the constrictions of the silos.

The remedy is to force a discipline in which they do their own products over IP (or a successor protocol) just like the rest of us. There is nothing they offer that can be done over IP. We see this with Comcast offering Fancast and buying NBCU.

While I put both the Cable Companies and the (ex)Telephone Companies into the same basket as Telecom their fates may be different. The cable companies are really in the content business with the cable as a means that might become optional. The old line phone companies seem to treat their wires as an asset and are struggling to find other ways to make money.

This is the real face of broadband offerings – carrier systems with a little Internet on the side. It is not about taking advantage of connectivity. Why are we putting those whose business models are from the 19<sup>th</sup> century in control of the 21<sup>st</sup>?