

Measuring Results, Avoiding Rip Off

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- Now also write the "DOCSIS Report"
- Working on evidence-based policy
- No interesting conflicts of interest

Measuring Results, Avoiding Rip Off

My guidance would be: data, data, data; jobs created quickly; money spent quickly; very hard-nosed. Things are going very fast and he needs real analysis - and he doesn't get it from many people.

What we want

Goals:

- 1- Jobs, jobs, jobs.
- 2- Practical within 6-18 months
All else is commentary, per transition team.
- 3- Good for the future infrastructure, competition, community, economy
- 4- Getting the most for government money
- 5- Decency - Help those in need

Some Lucky Journalism

- Style is empirical. Lucky lately
- Reported that the major companies couldn't spend more than \$2-3B at 25% subsidy. Asked them. Couldn't ramp in less than 3-4 years. \$20B couldn't be spent in 6-18 months
- 20% tax credit for 100 meg fiber would pay Verizon \$1B even if they didn't add a single additional job or line to their plans. Dropped after Saul Hansell did some excellent reporting
- Discovered that \$2-3B (at 25% subsidy) would provide megabit wireless to 98-99% of the population in 2 years
U.S. steel, concrete and construction labor. Smartest part of stim
- Reported that upgrades of DSL, cable, and wireless on existing towers would add few jobs, because mostly imported equipment and upgrade already in plans.
- Reported AT&T probably couldn't build much more than the 30M U-Verse in 2007 Annual Report. Already 2M behind in December. Day after House voted subsidy, they cut U-Verse by a third due to shortage of trained workers.
- Estimated early January that \$5-8B is all that could sensibly be spent (25% subsidy.) The eventual \$7.2B is similar. They did a remarkable job under pressure to match the stimulus to what's practical. Bill has more than rurals can sensibly spend, demand stimulus crock. I would have paid Verizon to do 5M FIOS/year instead of 3M, good job creator.

Jobs, Availability, Take Rate

More interesting:
Cost to customer
Waste of public money
(e.g. Qwest wants 500% subsidies - lawyer may not know)
Eliminating USF/ICC
Poor people excluded (verizon cuts out most poor people, by requiring credit, not even debit card.)
Dealing with impending

First what is and will be

Unserved wireline
4-7% if Kyle ad companies are telling truth -
Wireless
8% no towers (Verizon LTE to over 90% ASAP 2-10 megabits without subsidy. Upgrades happening, no jobs, mostly equipment)
Speed - Wireless easy - market upgrading everyone to 2-10 meg state of the art

First what is and will be

Jobs - direct almost only from construction or towers. Cable should build out, upgrade 3%
Maps could be in 60 days for 3.5M, not 350M, unless sabotaged by carriers refusing data. Ripping off government actual cost 20-40% of numbers here, some returned by customer
Rural over subsidized by 40-70%. Shovel in from government, shovel out to wall street. Leveraged so much most insolvent if subsidizes reduced. Qwest is losing 12%/year

First what will be without subsidized

Wireline
50 meg to 60% in 2011, 80+ percent in 2013 unless Brian is lying
Wireless 90+% state of the art 2-10 meg
Rural - missing towers, 4-7%
Take rate: as high as with \$100's of millions telling old people the Internet exists.

Real Job Results

Jobs: Direct Raul's numbers seem to be a good total estimate - iff the spending is additional. Some good - building fiber and towers. Some weak - upgrading existing wireless, cable, and DSL mostly equipment, not U.S. labor.

Raul calculates indirect multiplier similar to alternatives. Probably building roads is similar, so broadband has no advantage.

Timing

- Verizon took 4 years to ramp FIOS, AT&T fell two years behind on U-Verse, Paris behind 12 months already.
- Asked carriers and experts what was practical to build. Estimated maximum total based on 60% increases at Verizon and AT&T, wireless towers, and unserved rural costs.

What Would Be Without Stimulus

- Verizon 6M FIOS, AT&T 12M U-Verse, Comcast, Cablevision 100% DOCSIS 3.0. Per company financial filings.
- So any response to the stimulus needs to be above that.

What I Know, Business

- \$40 billion in construction takes years to ramp. Most plans set 2-3 years in advance.
- 4 carriers are 60% of lines, 8 carriers > 80%. Ask those 8, and you come close. Carefully estimate balance. Not perfect, but should be close.
- 60+% of U.S. getting 50 meg by 2010, based on announced cable and Verizon builds

What I Know, Network

- 94-97% already covered. Probably 80% over 10 meg down capable. Unserved and underserved surprisingly few.
- At least half of the unserved can get 5/1 with \$200 repeaters, used by dozens of small telcos. Others can get 10 and 50 with cable upgrades under \$400.
- My opinion: 200 meg fiber (Verzion GPON, etc.) is worth a subsidy. No other large subsidy appropriate unless 50 meg or better.
- Costs are less than in estimates. FIOS costs \$700/home, U-Verse \$300/home, cable DOCSIS 3.0 < \$100 home. Rural areas will be higher, but even doubling those figures is much smaller than figures quoted. Only fiber and 1-4% of rural really expensive.

Network Effort Probably 80-90% Hype

- “Network Effect” totally unproven, based on reading the original studies, not the press releases. POLD and less interested than 2002
- **There is no good data.** CK \$114B probably 4-10 times too high, but need data. ITIF 300,000 jobs discredited by Crandall, Greenstein, and anyone who thinks a minute. Facts inaccurate as well.

Take Rate Carefully Measured

Incredible claims of results on many projects. Perhaps the worst bit of nonsense I've seen is one claim that “demand stimulus” was effective because more people in Kentucky took broadband than the national average. During that same period availability in KY went from 60% to 95%, according to the same source. The national availability during the same period grew by less than 10%.

It's highly likely the increased take rate was due to increased availability, not any promotion campaign.

Obvious Numbers

- Deployment & speed
- Take rate
- Best measurement of indirect and network

Added Factors

- Capex up or down
- capex/depreciation to identify laggards
- Price, service quality (by complaints)
- Access to poor. Verizon won't sell DSL without a credit card, per website
- Information for consumers. Drew

Cost

- Establish standard costs. Compare, allow exceptions only when needed.
- Transparency. Publish the whole proposal, including things like equipment prices for me to spot problems.
- Measure and benchmarks - Scott.

Related goals

- Reducing high cost and ICC. Support subsidies when needed
- Get research done. Technology, not just economics. Huge return. (DSM example)
- Real about competition.

Be creative

- International comparisons in depth
- Price international and regional
- Rural backhaul cost – fix
- Does every highway have fiber included. Yes!
- How much spectrum increased

Abstract structure of markets cross-nationally

- Triple play broadband, TV, phone
- \$50 (30 euro) France, maybe Japan (5-8)
- \$80 Britain, Germany, (shared)
- \$110 U.S., Canada before exchange (2 1/2)
- \$140 Recently Ireland, Greece (1 1/2)s

Other Measures

- Openness – Another discussion
- Saving Qwest and RLECs from insolvency
- Technical quality