

Tech That Matters

DSL VDSL is at 100 meg over short distances, ready to double with DSM. Bonding also doubles speed. Improved performance reaches significant % of unserved. DSL repeaters very cheap way to bring “up to 6 meg” longer distances (~\$200).

Cable 30M homes can now get 50 meg down DOCSIS 3.0. 60% of U.S. in 2010-2011

85+% in 2013-2014. Upstream 50 meg at Comcast starting in months.

Specification designed to go to a shared gigabit. 95-99% reliable speed; balance still over 10 megabits. < \$100/home, fast to deploy

Fiber GPON 200 meg both directions \$200-400 gear Verizon FiOS <\$700/home passed. Costs dropping. \$20K/mile to run fiber – raises cost for low density

Wireless LTE/WiMAX 4-10 megabit typical. 95% of U.S. 2013 (McAdam, VZ) Shared 30-120 meg, so heavy HD TV use a problem. Nearly everyone will carry a phone better than today's iPhone. Extraordinary opportunities to create spectrum in many ways, starting with “use it or lose it” renewals and femtocells, then expanding non-interference to many more bands. (White space throughout)

Other: HD Voice, High cost switches eliminated, HD TV as costs come down

Biggest steps to broadband for all

Goal: 2011 98-99% megabits, 80% 50 meg, happy POTUS

Bring down backhaul cost by special access or overbuild. Reduce from \$110/mbps to perhaps 2.5 times urban cost of \$5-10.

Reach 40-70% of “unserved” for under \$500/home. That's easy: 30-40% of “unserved” can get cable TV but not data and are cheap upgrades. Many of rest can be reached with new towers or DSL repeaters. Do these first.

Save subsidies for costs companies won't cover. In particular, don't use public money for "success-based capex," such as any home connection or most switches/routers. Those are only needed when there are paying customers.

Mobile 3G/4G gear are usually cheap enough they will be installed on almost any tower with backhaul.

Establish standard costs for broadband subsidies. Typical RUS project costs 2-5 times what similar private projects costs. Real scandal. Cable/DSL should be less than \$500, fiber < \$1500 unless long runs of new fiber required.

Decide whether the last 1-2% get subsidies in the \$10K+/home range or better satellite?

Cell site exemption eliminated to encourage more 4G companies.

Understand “incidence of subsidy.” Is money – such as lifeline broadband – going to the public purpose or company profits. Follow the money - cui bono

Transparency on all subsidized costs so folks like me can spot abuses.