

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.**

In the Matter of

Comments – NBP Public Notice # 23

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GN Docket Nos. 09-47, 09-51, 09-137

**COMMENTS OF
THE UNITED STATES TELECOM ASSOCIATION**

We commend the Columbia Institute for Tele-Information (CITI) for its effort to compile a factual record describing where the United States broadband market is today and where it is headed. CITI is to be applauded not only for generating a useful snapshot of the current broadband landscape in the United States, but also for its approach. The CITI study takes a clinical approach to collecting and analyzing available facts and data, without attempting to assert causation or make policy recommendations. In sum, the study both reinforces the fact that, largely through the investments of private providers, broadband has been deployed and adopted in the United States at a rate rivaling any previous technology. At the same time, however, the report aptly demonstrates some of the challenges to delivering broadband to those areas and populations that remain unserved or underserved.

While the CITI study does an admirable job in compiling relevant information, we identify below several aspects of the CITI study where we believe there are contradictory facts that must be considered, in particular the forecast for carrier capital spending. We are also concerned that the CITI study may have defined “broadband” capital spending too narrowly and

we raise questions about the study's premises and conclusions regarding wireless substitution and price competition.

1. Capital Spending Forecasts

Insofar as the study provides forecasts that may serve as benchmarks for making and evaluating the impact of prospective policies, the forecasts must withstand scrutiny. We find the carrier capital expenditures forecast to be potentially problematic for reasons discussed in detail below.

The CITI study, on pages 30 and 64-67, projects that broadband provider capital expenditures will drop in 2009 and 2010 and continue slightly-declining through 2015. This projection is based on financial analyst estimates through 2011, and an assumption of a downward growth rate for the remaining four years, 2012-15.

First, market research forecasts contradict CITI's projection that that carrier capital expenditures are on a path of indefinite decline. On the contrary, market researchers have forecast that carrier capital expenditures will decline in 2009 and 2010, but resume growing in 2011 through at least 2013. Several examples follow:

- i. Yankee Group projects that global capital expenditures will decline in 2009, remain roughly flat in 2010, and start to rise in 2011. "We expect that [global] spending will remain essentially flat from 2009 to 2010, with an increase in capex of only 1 percent year over year.... The real recovery will occur in 2011, once operator confidence is restored and next-generation network rollouts become a necessity.... Latin America and North America will be

the first to reverse the trend...”¹ Yankee Group forecasts U.S. capital expenditures to decline in 2009 and 2010, resume growth in 2011 and surpass 2008 peaks levels by 2012.² See Figure 1 below.

ii. The Telecommunications Industry Association projects declines in 2009 and 2010 with a rebound in 2011-12: “For the U.S., telecommunications revenue is expected to decrease by 6.4 percent in the next two years, but rebound by 14.4 percent during 2011-12.... Further analysis shows that economic recovery during 2011-12 will be driven by pent-up demand for equipment upgrades. Growth in data traffic will strain network capacity and stimulate investment; availability of financing will fuel investment; and broadband growth will expand the platform for VoIP and IPTV.”³

iii. Infonetics projects that global carrier capital expenditures will bottom in 2010 followed by growth in 2011-13. In its Service Provider Capex, Opex, ARPU, and Subscribers Report (2009, 2nd Edition), “Infonetics’ projects a 2.8% downturn in worldwide carrier capex in 2009, followed by a flat 2010 and a slow return to growth in 2011 with the start of a new investment cycle.”⁴ We have no reason to believe the U.S. markets will follow a significantly different pattern.

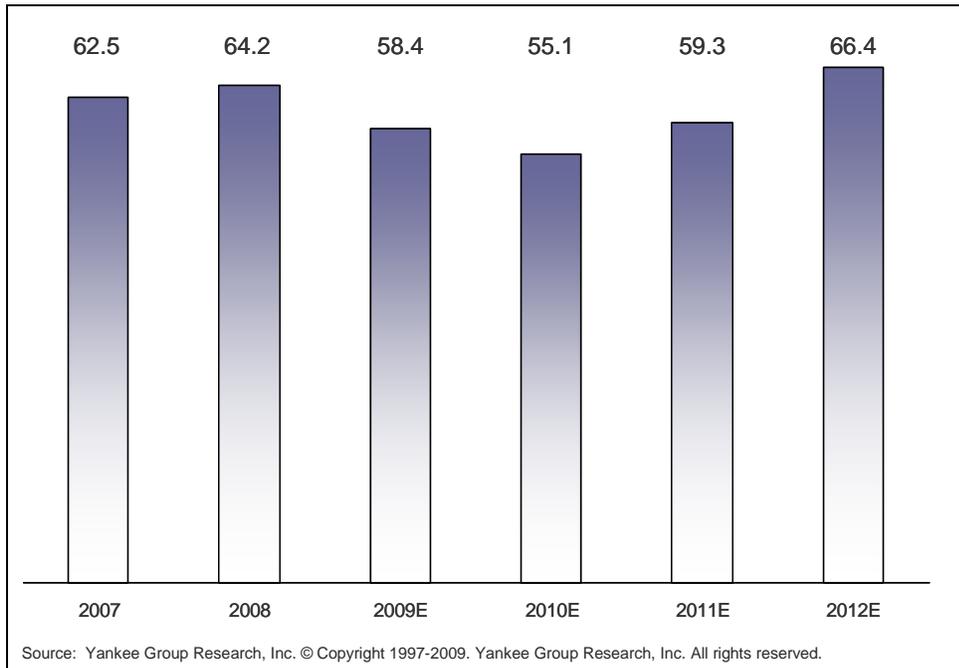
¹ Brian Partridge and David Vorhaus, Yankee Group, *Yankee Group’s Global Telecommunications Capex Forecast* (March 2009) at p. 1.

² Yankee Group Research, Inc.

³ Telecommunications Industry Association, press release announcing TIA’s *2009 ICT Market Review & Forecast*, May 21, 2009, available at http://www.tiaonline.org/news_events/press_room/press_releases/2009/PR-521_TIA_Forecasts_3_1_Percent_Loss_for_ICT_Industry_in.cfm (visited December 4, 2009).

⁴ Stéphane Teral, Infonetics, *Report Highlights for Service Provider Capex, Opex, ARPU, and Subscribers 2009 2nd Ed.* (May 19, 2009) available at <http://www.infonetics.com/cgp/b-capex.asp?sID=121> (visited December 4, 2009)

Figure 1: U.S. Carrier Capital Expenditures (\$ billions)



Second, the method CITI applies to forecast telco and wireless capital expenditures from 2012-15 (see Table 14 and footnote 248 on page 64) is to merely assume a continuation of a decline that financial analysts project through 2011—projections which are put into doubt by the market research cited above—and apply a mathematical formula to estimate that decline. Regardless of the discussions on page 65 that there *may* be no breakthrough technology and that certain technological developments *may* extend the lives of existing assets, the forecast merely projects the future from the past rather than developing a comprehensive, bottom-up forecast.

Obviously, forecasts of this sort necessarily involve certain assumptions that allow for differing conclusions. We do not believe, however, that the CITI capital expenditure forecasts in Table 14 on page 64 adequately take into consideration or distinguish the forecasts of these other highly respected industry analysts.

2. Broadband vs. Legacy Capex.

CITI attempts to distinguish “broadband” and “legacy” capital expenditures (see pages 30 and 64-67, Tables 5, 14, and 15, and Figures 20 and 21). But it is unclear how CITI categorizes “broadband” versus “legacy.” For instance, to the extent that “legacy” investment includes copper loops and circuit switching, this is clearly “legacy” investment. But if “legacy” as defined by CITI also includes, for example, investment in long haul backbone and metro transport to accommodate data traffic growth, wireless data backhaul growth, enterprise data services, and facilities and equipment used jointly for broadband and traditional services (such as central office upgrades, trucks, operating, billing and business support systems), many of these assets would be unfairly characterized as “legacy”. In an era when legacy services are declining and customers are switching to converged, broadband services it would seem to make little sense that telcos are investing significant portions of their capital to provide legacy services. Moreover, for joint use networks, the distinction between “broadband” and “legacy” has little meaning. It would be helpful to understand how CITI or its market research vendor has categorized capital spending as “broadband” and “legacy.”

3. Additional Points.

a. Wireless Substitution.

On page 60-61, CITI cites a number of reasons why analysts do not expect broadband wireless substitution, including the capacity differences between wired and wireless technologies. The CITI study concludes, “[w]e expect wireless to be largely complementary, with wireless substitution in broadband to reach only ~5% of households.” We presume, though it is not entirely clear, that CITI is referring only to *mobile*, not *fixed*, wireless substitution. We

are in the very early stages of so-called “4G” (fourth generation mobile) wireless deployment, which will provide throughput more comparable to current wireline broadband offerings. WiMAX services are currently being rolled out and Long Term Evolution will start to roll out shortly. It is too early in this process to draw a definitive conclusion about substitutability because we do not know how consumers may use broadband. The biggest mistake analysts make in discussing substitutability is assuming homogeneous product markets, i.e., all customers purchase the top speed tiers and use it for the most bandwidth-intensive applications. While many consumers are likely to use broadband for high definition video, others may be satisfied with standard definition video. While many customers will purchase bundled voice, data, and video services, others will continue to purchase services separately. In these alternative cases, 4G wireless may provide a perfectly acceptable substitute. For example, if a customer purchases traditional multi-channel video service from a cable or satellite company, 4G wireless may very well suffice for a high-capacity broadband connection. The Commission should exercise substantial caution in making predictive judgments regarding wireless substitution. This is particularly the case given the history of mobile voice substitution. While the bandwidth needs of voice service are different than constantly evolving broadband, we note that as little as a few years ago wireless was rejected as a substitute and presumed to be only a complementary technology because of issues such as signal quality and dropped calls. Today, wireless voice substitution is a fact for more than 20% of households in the United States, and another 15% of households who have both wireless and wireline service use wireless predominantly.⁵

⁵ Stephen J. Blumberg, Ph.D., and Julian V. Luke, National Center for Health Statistics, *Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, July-December 2008* (May 6, 2009) at pp. 2-3.

b. Price and Speed Competition.

On page 70, the CITI study states the following premise: "...service providers are engaged in 'speed competition' rather than price competition..." Price competition and service competition are not mutually exclusive. In fact, Tables 12 and 13 on page 62 show some declining ARPUs, which could reflect, in part, price competition. USTelecom has analyzed broadband prices for various speed tiers and found that prices within speed tiers have fallen significantly over time. We found that prices for a basic connection fell by half between 2001 and 2007 and the consumers in 2007 could get ten to twenty times the capacity in 2007 for the same price paid in 2001.⁶ More important, price competition must be seen in relation to cost – not only the incremental cost of adding another broadband subscriber, but the full cost of building and upgrading joint-use broadband networks. Broadband providers have invested over the last half decade—and will continue to invest—a large and growing amount of capital to build broadband networks capable of handling traffic volumes that are expected to explode for years to come. Meanwhile, legacy voice users are declining at the same time that incremental broadband subscriber growth is slowing on the S-curve. Without a discussion of how prices or ARPU relate to these complex cost issues, we see no justification for the blanket premise that broadband providers do not engage in price competition.

c. Wired Broadband Adoption Growth.

The CITI study cites two different figures for current wireline broadband adoption. On pages 10 and 59, the study cites 63% adoption; on pages 19, 25, and 26, the study cites 66% adoption (37% for cable and 29% for telco). It is possible that the lower figure represents an

⁶ See USTelecom, *Wireline Broadband Pricing 2001 - 2007* (June 2008) available at <http://www.ustelecom.org/uploadedFiles/Learn/Broadband.Pricing.Document.pdf> (visited December 4, 2009).

earlier point in the year and the larger represents a later point in the year. It is also possible that the different figures are different estimates from different sources, or it may be that the 63% represents an average of estimates (see Figure 17 on page 59) and the larger figure is one analyst's estimate (see page 19 footnote 38 and page.⁷ It is unclear from the text why the difference. But the difference may be important given CITI's projection that wired broadband peaks at about 69% of households in 2014-15.

d. Wireline Telco Broadband ARPU

The CITI study cites inconsistent figures for wireline telco broadband average revenue per user (ARPU). On page 33, the CITI study states that telcos generate monthly broadband ARPU of \$36 per month, while on page 61 the study states that ARPU is \$31. It is not apparent what distinguishes these two statistics.

4. Conclusion.

The CITI study does a commendable job in compiling a series of facts and projections describing the status of the United States broadband market and continuing trends. Despite the overall virtues of the CITI study, we are compelled to flag several targeted elements of the study which, in our view, require further consideration. In particular, we do not believe the CITI capital expenditure forecast adequately takes into consideration contrary data from other industry analysts. We point out that the study's distinction between "broadband" and "legacy" capital spending is not clearly defined and may have little relevance given the joint-use nature of our

⁷ We note that one analyst estimated based on household survey research that 63% of U.S. adults, which closely mirrors households, had some form of home broadband connection as of April 2009. See John Horrigan, Pew Internet & American Life Project, *Home Broadband Adoption 2009* (June 2009) at p. 13.

broadband networks. We also question the study's premature conclusion that wireless substitution will be minimal and its premise that broadband providers do not compete on price.

Respectfully submitted,

A handwritten signature in blue ink that reads "Jonathan Banks". The signature is fluid and cursive, with the first name "Jonathan" written in a larger, more prominent script than the last name "Banks".

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