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February 23, 2015

Ms. Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 Twelfth Street, SW  
Washington, DC 20054

*Via Electronic Filing*

**Re: GN Docket No. 14-28, *Protecting and Promoting the Open Internet*  
GN Docket No. 10-127, *Framework for Broadband Internet Service***

Dear Ms. Dortch,

Free Press submits this letter pursuant to the Commission's rules in 47 CFR §§ 1.1206(b)(iv) and 1.1203(c). These rules permit a direct written reply to an *ex parte* presentation made on the same day as the Commission's release of a Sunshine notice, so long as the reply is filed within two business days following the presentation.

This letter is Free Press' direct response to a written *ex parte* submitted by Verizon on February 19, 2015.<sup>1</sup> In Verizon's *ex parte*, it attempted to attribute the Census Bureau's observed increases in wireless investment primarily to the Commission's classification of mobile broadband service as a Title I service.<sup>2</sup>

As with many other filings from industry concerning investment, Verizon made several critical analytical errors that completely undermine its thesis. When Verizon's errors are corrected, the data demonstrates that the greatest period of growth in wireless investment was prior to that Title I classification.

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<sup>1</sup> See Letter to Marlene H. Dortch, Secretary, Federal Communications Commission, from William H. Johnson, Vice President & Associate General Counsel, Verizon Communications Inc., (filed Feb. 19, 2015) ("Verizon Feb. 19th Letter").

<sup>2</sup> *Id.* at 1 - 2 (internal citations omitted).

Some have suggested that high levels of capital investment in the mobile ecosystem, which (they assert) is subject to Title II regulation, demonstrate that reclassification of broadband Internet access service will not undercut future investment in broadband facilities. Chairman Wheeler, for example, has written that "[o]ver the last 21 years, the wireless industry has invested almost \$300 billion" under rules "similar" to those he is proposing for broadband Internet access, "proving that modernized Title II regulation can encourage investment and competition." This analogy is misplaced. The wireless industry's capital expenditures have been driven not primarily by CMRS voice service offerings, but by Title I mobile broadband services offered over 3G and 4G platforms. Data on which the Commission has relied in its wireless competition reports demonstrate this point conclusively.

- **Verizon presents the nominal Census Bureau capital investment figures, which are not adjusted for inflation.** This is a fatal error, as any conclusions about changes in historical spending must be drawn from data that accounts for inflation. As we show below, when the investment data is adjusted for inflation, Verizon’s argument falls apart.
- Verizon points to 2003 as the year when carriers began deploying mobile broadband services. Yet it fails to note that the Commission did not classify mobile broadband as a Title I service until March 2007. However, regardless of which year of demarcation is chosen, the data indicates stronger average annual growth in wireless industry capital investments in the period prior to these dates than in the periods following them:
  - The annual growth rate in wireless capital spending from 1998–2002 was more than 10-times higher than the annual growth rate from 2003–2013.
  - The annual growth rate in wireless capital spending from 1998–2006 was 3-times higher than the annual growth rate from 2007–2013, the period following the Commission’s classification of mobile broadband as a Title I information service. Put another way, **the annual growth rate in wireless investment declined by two thirds following the decision to classify mobile broadband as a Title I service and place it outside of Title II.**
- Verizon fails to describe the changes over time in wireless industry “capital intensity,” which is a measure of the industry’s capital spending divided by revenues. Capital intensity is an important metric for judging investment trends, as it is a direct reflection of how much of carriers’ earnings are re-invested in the network.
- Verizon failed to note the substantial portion of wireless industry revenues still attributable to voice, both before and after the deployment of mobile broadband services, and before and after the 2007 classification of these broadband services as information services. These voice service revenues are of course earned from the Title II-classified CMRS service.
- Verizon fails to note that its LTE network is subject to open access conditions, which contain Title-II-style nondiscrimination obligations. This omission is par for the course with carriers’ unfounded concerns regarding Title II’s impact on investment. Those opposing restoration of the law’s intended application never articulate a cogent mechanism by which investment will be harmed.

**Discussion: Verizon’s Case for A Title I Investment Boom Falls Apart When the Data Is Properly Adjusted For Inflation**

It’s data analysis 101: If you are working with historical fiscal data, and want to draw conclusions about changes over time, you must adjust for inflation. If you do not make that adjustment, you’ll be lead astray.

Below we present the nominal Census data Verizon cited, alongside the inflation-adjusted values. The data shown in Figures 1 and 2 demonstrate just how important it is to adjust for inflation:

- **The inflation-adjusted data shows that Verizon is completely wrong** when it writes that the Census Bureau data demonstrate that “it was only when mobile providers began undertaking the [2003 and beyond] network upgrades and deployment needed to support these mobile broadband services that capital expenditures truly took off.”<sup>3</sup>
  - Capital expenditures in 2000 were the highest ever recorded.
  - The 2001–2002 expenditures, which occurred in the midst of and following an economic recession, were 24 percent higher than those made during 2008–2009 expenditures that were made during and following the most recent recession.
  - Wireless capital expenditures *declined* in 2007, the year mobile data was affirmatively removed from Title II. These were the lowest expenditures since 1999.
- As shown by the 3-year moving average in Figure 2, wireless capital expenditures are not driven by a particular regulatory structure, but by consumer demand. Growth in the late-1990s/early 2000s was driven by rapid consumer adoption of CMRS services; growth since 2009 has been driven by rapid consumer adoption of smartphones, ushered in by demand for iPhone, Android and other mobile computing devices.

**Figure 1: Census Bureau Wireless Capital Expenditures  
1998–2013 (Nominal and real values)**

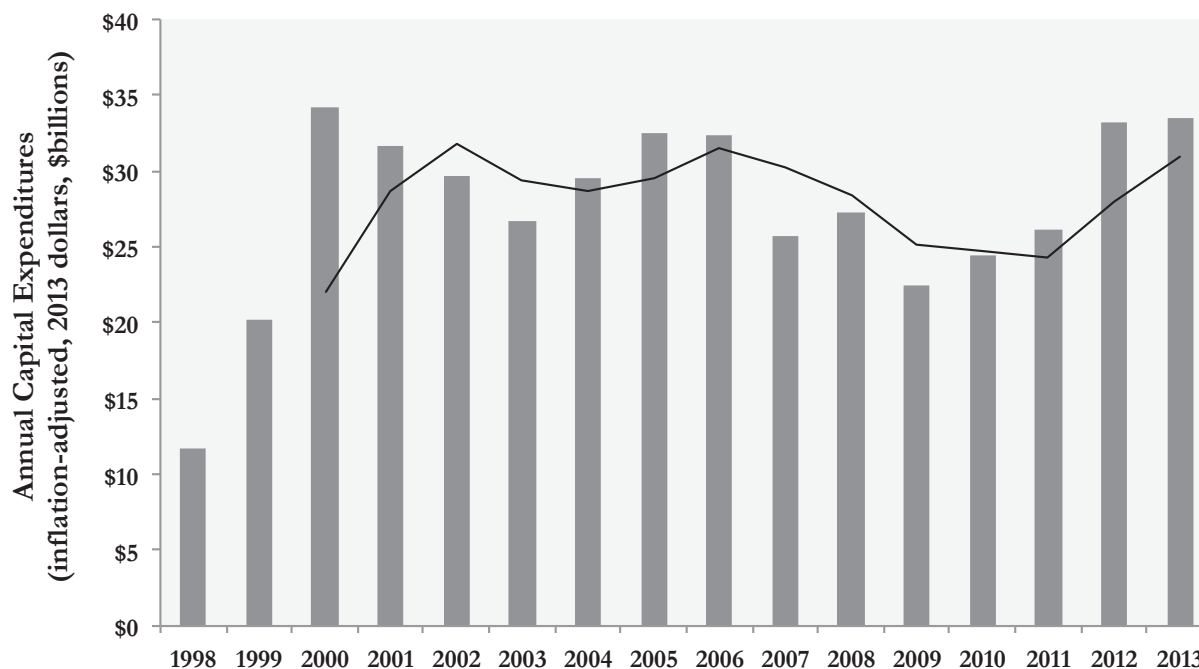
Year	Nominal (billions)			Real (inflation-adjusted, 2013 dollars; billions)		
	Total New Expenditures	New Structures	New Equipment	Total New Expenditures	New Structures	New Equipment
1998	\$8.2	\$2.4	\$5.8	\$11.7	\$3.4	\$8.3
1999	\$14.4	\$5.0	\$9.4	\$20.2	\$7.0	\$13.2
2000	\$25.3	\$7.7	\$17.6	\$34.2	\$10.4	\$23.8
2001	\$24.0	\$11.3	\$12.7	\$31.7	\$14.9	\$16.8
2002	\$23.0	\$11.4	\$11.6	\$29.7	\$14.7	\$15.0
2003	\$21.0	\$11.5	\$9.5	\$26.7	\$14.6	\$12.1
2004	\$24.0	\$11.7	\$12.3	\$29.5	\$14.4	\$15.1
2005	\$27.3	\$16.5	\$10.9	\$32.5	\$19.6	\$13.0
2006	\$27.9	\$12.6	\$15.3	\$32.4	\$14.6	\$17.7
2007	\$23.0	\$7.5	\$15.5	\$25.8	\$8.4	\$17.4
2008	\$25.2	\$6.6	\$18.6	\$27.2	\$7.1	\$20.1
2009	\$20.6	\$3.9	\$16.7	\$22.5	\$4.3	\$18.2
2010	\$22.8	\$4.4	\$18.4	\$24.4	\$4.7	\$19.7
2011	\$25.2	\$3.9	\$21.3	\$26.2	\$4.1	\$22.2
2012	\$32.9	\$5.7	\$27.2	\$33.2	\$5.8	\$27.5
2013	\$33.5	\$10.0	\$23.5	\$33.5	\$10.0	\$23.5

*Source: U.S. Census Bureau. Inflation-adjusted valued calculated by Free Press from BLS values.*

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<sup>3</sup> *Id.* at 2.

**Figure 2: Census Bureau Wireless Capital Expenditures  
1998–2013 (2013 values) – With 3-year Moving Average**



Source: U.S. Census Bureau. Inflation-adjusted valued calculated by Free Press from BLS values.

To illustrate how wireless capital spending has changed over time, and how this growth rate differed in the different periods under discussion, we present below in Figure 3 the Compound Annual Growth Rates (CAGR) of the Census Bureau investment data, both for nominal and real (*i.e.* inflation-adjusted) values.

**Figure 3: Growth Rates for Wireless Capital Expenditures,  
Selected Periods Between 1998–2013 (Nominal and real values)**

Selected Time Period	Compound Annual Growth Rate (Nominal Values)			Compound Annual Growth Rate (Inflation-adjusted, 2013 dollars)		
	Total New Expenditures	New Structures	New Equipment	Total New Expenditures	New Structures	New Equipment
1998-2013	9.8%	10.0%	9.8%	7.2%	7.4%	7.2%
1999-2013	6.2%	5.1%	6.8%	3.7%	2.6%	4.2%
1998-2002	29.4%	47.6%	18.9%	26.1%	43.9%	15.9%
2003-2013	4.8%	-1.4%	9.5%	2.3%	-3.7%	6.9%
1998-2006	16.5%	23.0%	12.9%	13.5%	19.9%	10.0%
2007-2013	6.5%	4.9%	7.2%	4.5%	2.9%	5.2%
1999-2002	16.9%	31.6%	7.3%	13.7%	28.1%	4.4%
2003-2013	4.8%	-1.4%	9.5%	2.3%	-3.7%	6.9%
1999-2006	9.9%	14.1%	7.2%	7.0%	11.1%	4.4%
2007-2013	6.5%	4.9%	7.2%	4.5%	2.9%	5.2%

Source: U.S. Census Bureau. Inflation-adjusted valued calculated by Free Press from BLS values.

The data in Figure 3 completely undermines Verizon's thesis that the *nominal* increases in annual wireless capital spending, highlighted in its February 19th *ex parte*, demonstrate an increase in capital spending that is related to either the advent of the post-2003 3G/4G data market, or to the FCC's classification of mobile broadband as a Title I service (which again, did not occur until March 2007).

- The annual growth rate in wireless capital spending from 1998–2002 was more than 10-times higher than the annual growth rate from 2003–2013.
- **The annual growth rate in wireless capital spending from 1998–2006 was 3-times higher than the annual growth rate from 2007–2013, the period following the Commission's classification of mobile broadband as a Title I information service.**
  - Unfortunately, the Census Bureau does not provide data prior to 1998. Because there was a large jump from 1998 to 1999, the validity of this one data point is questionable.<sup>4</sup> CTIA did report (and Verizon cited) investment data for the 1994–1997 period, but this data is not reliably comparable to the Census figures. CTIA data indicates a decline in capital expenditures from 1998 to 1999, contrary to Census Bureau data showing a large increase. (We discuss a similar analysis of the 1986–2013 CTIA capital expenditure data below).
  - If there is skepticism about the 1998 Census data, we've also included above in Figure 3 the CAGRs beginning in 1999. The general trends discussed above for the time periods of under discussion hold:
    - The annual growth rate in wireless capital spending from 1999–2002 was 6-times higher than the annual growth rate from 2003–2013.
    - The annual growth rate in wireless capital spending from 1999–2006 was 1.5-times higher than the annual growth rate from 2007–2013.

This data should not be at all surprising. Neither the beginning of the mobile broadband era, nor that service's subsequent classification as a Title I service, has done anything to change the basic telecommunications business calculus. In telecom markets, capital investments are closely related to revenues. For most carriers, capital spending will be in the 10 to 15 percent range (as a percent of revenues) – dipping below that range in recession years, and rising above it when new competitive pressures create a short-term need to increase capital outlays.

The fact is that capital spending in the wireless industry was not impacted by the classification decisions. And the mobile broadband era did not trigger some massive need to increase investment. The physical infrastructures were largely in place, as shown in Figure 1 above, which shows the massive outlays on new structures between 2000–2006 dropping sharply in 2007 and beyond. Indeed, even as it rolled out 4G LTE across its entire nationwide footprint, Verizon

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<sup>4</sup> The large jump from 1998 to 1999 observed by the Census Bureau could be explained by the then-exploding mobile voice market, due in large part to the new competition introduced from carriers like Sprint that acquired PCS spectrum in the 1994–1995 spectrum auctions and first used that spectrum to offer services nationwide in the late 1990s.

Wireless' annual capital intensity (capital expenditures as a percentage of revenues) declined (13.3 percent in 2010; 12.8 percent in 2011; 11.7 percent in 2012; and 11.6 percent in 2013, the year the company reached its stopping point of 298 million covered).<sup>5</sup>

### ***CTIA Data Confirms the Results Shown By Inflation-Adjusted Census Bureau Data***

CTIA, the wireless industry's main trade association (which counts Verizon as a member), has published its own estimates of the sector's capital expenditures (along with other metrics), dating back to 1986. The Commission made heavy use of this data in its first 10 *Annual Reports* on the state of competition in the wireless industry, as well as the four most-recent reports.<sup>6</sup> The 1986–2013 CTIA data is available online.<sup>7</sup> Below in Figure 4 we present the nominal CTIA and Census Bureau data, along with the inflation-adjusted values restated in 2013 dollars. As Figure 4 shows, the Census and CTIA data vary considerably in both directions in some years, while closely matching in others.<sup>8</sup> Figure 5 below charts the inflation-adjusted CTIA data from 1986–2013, and shows the 3-year moving average capital expenditure value.

CTIA's own data shown in Figures 4 and 5 once again demonstrate the folly of Verizon's assertion that the mobile broadband era, and the application of Title I to such mobile services, ushered in some large increase in wireless industry capital spending. Following the adoption of the 1993 amendments to the Communications Act, which authorized the Commission to exercise considerable forbearance from Title II for commercial mobile wireless services,<sup>9</sup> there was a steady trend of increased wireless industry capital investment. CTIA's data indicates that this investment peaked in 2004 – the year after the point of demarcation emphasized by Verizon in its recent *ex parte*. Investment declined from 2004 through 2009, and picked up again once demand for the iPhone and Android-based mobile computing devices reached critical mass.

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<sup>5</sup> See Verizon Wireless segment capital expenditures and revenues, as reported by the company in annual SEC 10-K filings. Verizon's LTE rollout began in earnest in 2010 and was completed in the middle of 2013. See Kevin Fitchard, "Verizon wraps up LTE rollout; plans all-VoIP phone launch for late 2014," *GigaOm*, June 27, 2013.

<sup>6</sup> The 11th, 12th and 13th *Annual Reports* only contain capital investment data reported by private analysts. The 14th–17th *Annual Reports* contain both CTIA and Census Bureau estimates.

<sup>7</sup> CTIA's Wireless Industry Survey, available at <http://goo.gl/RYn8rH>.

<sup>8</sup> We present the CTIA data in the interest of completeness, though we do note some apparent issues with the information. First, CTIA's values are sometimes in conflict with themselves, depending on where they are reported. Table 1 in the Commission's *10th Annual Report* indicates CTIA reporting \$18.9 billion and \$27.9 billion in capital expenditures for 2003 and 2004, while the figures in Table 22 in the *14th Annual Report* indicate values of \$14.1 billion and \$16.02 billion respectively. This discrepancy is not explained. Second, CTIA's results in many years are quite divergent from other sources – sources that more closely match those reported by the Census Bureau. For example, the FCC's *11th Annual Report* states that "[o]ne analyst estimated that the wireless industry spent roughly \$25 billion on capex in 2005, an increase of 18 percent from the \$22 billion spent in 2004, which in turn was on top of a 12 percent increase from 2003."

<sup>9</sup> See 47 U.S.C. § 332(c)(1)(A).

Figure 6 below presents the Compound Annual Growth Rates in wireless investment based on the CTIA capital expenditure data. The trends here mirror those of the Census Bureau data:

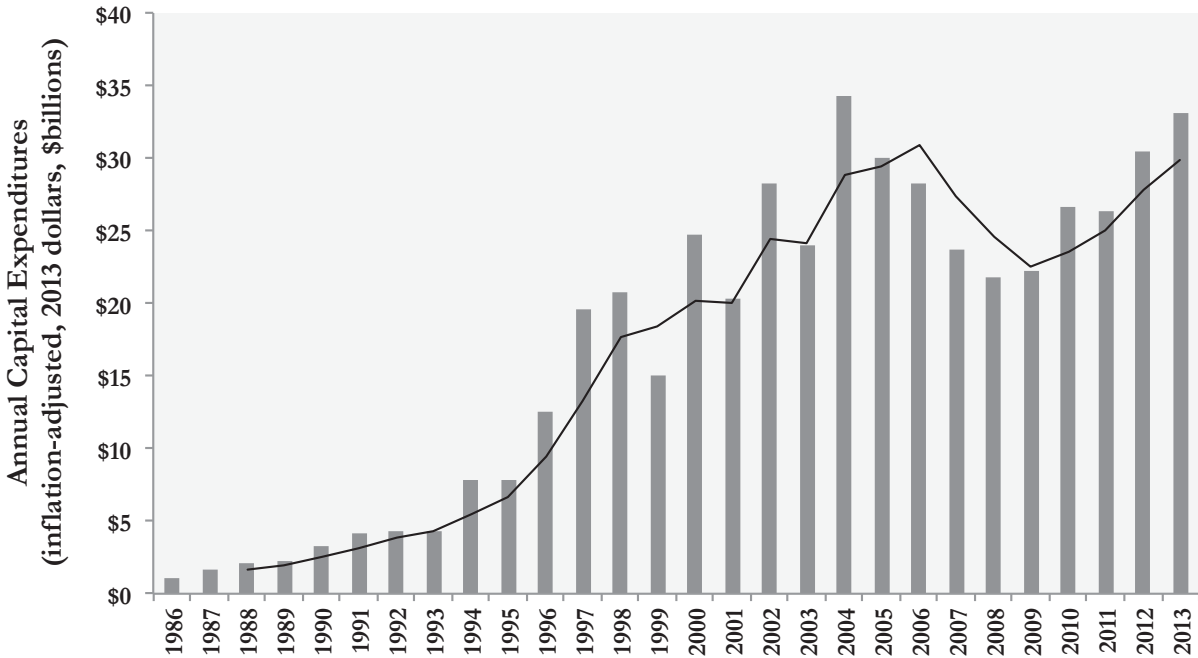
- According to CTIA’s estimates, from 1993–2002 the annual growth rate in wireless capital spending was more than 7-times higher than the annual growth rate from 2003–2013.
- According to CTIA’s estimates, from 1993–2006 the annual growth rate in wireless capital spending was nearly 3-times higher than the annual growth rate from 2007–2013, the period following the Commission’s classification of mobile wireless broadband services as Title I information services.

**Figure 4: CTIA vs. Census Wireless Industry Capital Expenditures – 1986–2013 (Nominal and real values)**

Year	CTIA Incremental Wireless Capital Expenditures (Nominal, \$billions)	Census Bureau Wireless Capital Expenditures (Nominal, \$billions)	CTIA Incremental Wireless Capital Expenditures (inflation-adjusted, 2013 dollars, \$billions)	Census Bureau Wireless Capital Expenditures (inflation-adjusted, 2013 dollars, \$billions)	Percent Difference Between Census & CTIA
1986	\$0.526		\$1.119		
1987	\$0.798		\$1.636		
1988	\$1.039		\$2.048		
1989	\$1.206		\$2.267		
1990	\$1.801		\$3.207		
1991	\$2.390		\$4.087		
1992	\$2.591		\$4.300		
1993	\$2.684		\$4.322		
1994	\$4.992		\$7.838		
1995	\$5.142		\$7.867		
1996	\$8.493		\$12.570		
1997	\$13.484		\$19.552		
1998	\$14.485	\$8.2	\$20.713	\$11.726	-77%
1999	\$10.722	\$14.4	\$15.011	\$20.160	26%
2000	\$18.360	\$25.3	\$24.785	\$34.155	27%
2001	\$15.406	\$24.0	\$20.336	\$31.680	36%
2002	\$21.892	\$23.0	\$28.241	\$29.670	5%
2003	\$18.945	\$21.0	\$24.060	\$26.670	10%
2004	\$27.927	\$24.0	\$34.350	\$29.520	-16%
2005	\$25.232	\$27.3	\$30.026	\$32.487	8%
2006	\$24.424	\$27.9	\$28.332	\$32.364	12%
2007	\$21.142	\$23.0	\$23.679	\$25.760	8%
2008	\$20.169	\$25.2	\$21.783	\$27.216	20%
2009	\$20.361	\$20.6	\$22.194	\$22.454	1%
2010	\$24.893	\$22.8	\$26.636	\$24.396	-9%
2011	\$25.317	\$25.2	\$26.330	\$26.208	0%
2012	\$30.094	\$32.9	\$30.395	\$33.229	9%
2013	\$33.141	\$33.5	\$33.141	\$33.500	1%

Source: U.S. Census Bureau, CTIA, FCC. Inflation-adjusted valued calculated by Free Press from BLS values.

**Figure 5: CTIA Wireless Capital Expenditures  
1986–2013 (2013 values) – With 3-year Moving Average**



Source: CTIA. Inflation-adjusted valued calculated by Free Press from BLS values.

**Figure 6: Growth Rates for Wireless Capital Expenditures,  
Selected Periods Between 1986–2013 (CTIA data, 2013 values)**

Selected Periods	Compound Annual Growth Rates of CTIA's Reported Incremental Capital Expenditures (inflation-adjusted)
1986–2013	13.4%
1986–1992	25.1%
1993–2013	10.7%
1993–2002	23.2%
2003–2013	3.2%
1993–2006	15.6%
2007–2013	5.7%

Source: CTIA. Inflation-adjusted valued calculated by Free Press from BLS values.

CTIA’s historical data also reports total industry revenues and subscriber connections. We can use this data to examine the trend in “capital intensity,” or the percentage of revenues that are re-invested in new capital assets. The subscriber counts also enable an examination of how much capital is spent on a per-subscriber basis. This data is presented below in Figure 7, and shown in Figures 8 and 9 with 3-year moving average values.

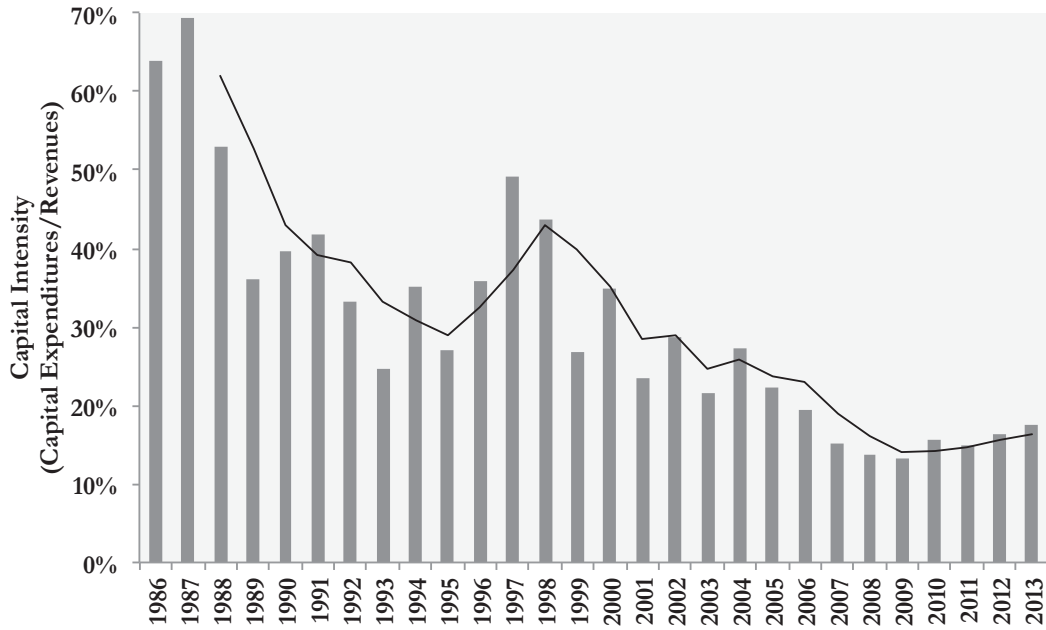


**Figure 7: CTIA Wireless Industry Capital Expenditures, Revenues, Capital Intensities & Per Subscriber Capital Expenditures – 1986–2013 (Inflation-adjusted, 2013 dollar values)**

Year	Annual Service Revenues (inflation-adjusted, 2013 dollars, \$billions)	Annual Capital Expenditures (inflation-adjusted, 2013 dollars, \$billions)	Capital Intensity (Capex/Rev)	Capital Expenditures per Subscriber Connection
1986	\$1.753	\$1.119	63.9%	\$1,641.91
1987	\$2.361	\$1.636	69.3%	\$1,328.88
1988	\$3.860	\$2.048	53.0%	\$989.52
1989	\$6.280	\$2.267	36.1%	\$646.16
1990	\$8.097	\$3.207	39.6%	\$606.96
1991	\$9.762	\$4.087	41.9%	\$540.79
1992	\$12.986	\$4.300	33.1%	\$389.77
1993	\$17.536	\$4.338	24.7%	\$270.95
1994	\$22.341	\$7.822	35.0%	\$324.11
1995	\$29.194	\$7.867	26.9%	\$232.85
1996	\$34.980	\$12.570	35.9%	\$285.40
1997	\$39.854	\$19.552	49.1%	\$353.49
1998	\$47.380	\$20.713	43.7%	\$299.29
1999	\$56.026	\$15.011	26.8%	\$174.45
2000	\$70.829	\$24.785	35.0%	\$226.40
2001	\$86.217	\$20.336	23.6%	\$158.41
2002	\$98.696	\$28.241	28.6%	\$200.62
2003	\$111.283	\$24.060	21.6%	\$151.58
2004	\$125.609	\$34.350	27.3%	\$188.59
2005	\$135.110	\$30.026	22.2%	\$144.43
2006	\$145.530	\$28.332	19.5%	\$121.57
2007	\$155.534	\$23.679	15.2%	\$92.72
2008	\$159.931	\$21.783	13.6%	\$80.58
2009	\$166.282	\$22.194	13.3%	\$77.70
2010	\$171.125	\$26.636	15.6%	\$89.90
2011	\$176.558	\$26.330	14.9%	\$83.33
2012	\$186.864	\$30.395	16.3%	\$93.10
2013	\$189.193	\$33.141	17.5%	\$98.74

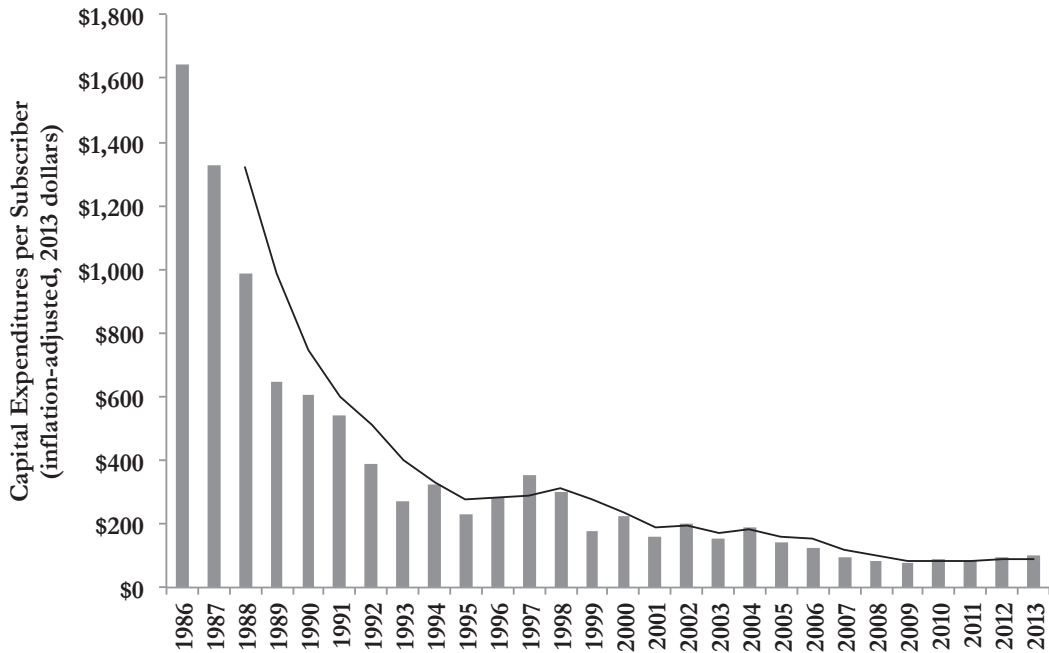
Source: CTIA. Inflation-adjusted valued calculated by Free Press from BLS values.

**Figure 8: CTIA – Wireless Industry Capital Intensity (1986–2013)**



Source: CTIA. Trend line represents 3-year moving average values.

**Figure 9: CTIA – Wireless Industry Capital Expenditures per Subscriber Connection – 1986–2013 (Inflation-adjusted, 2013 dollar values)**

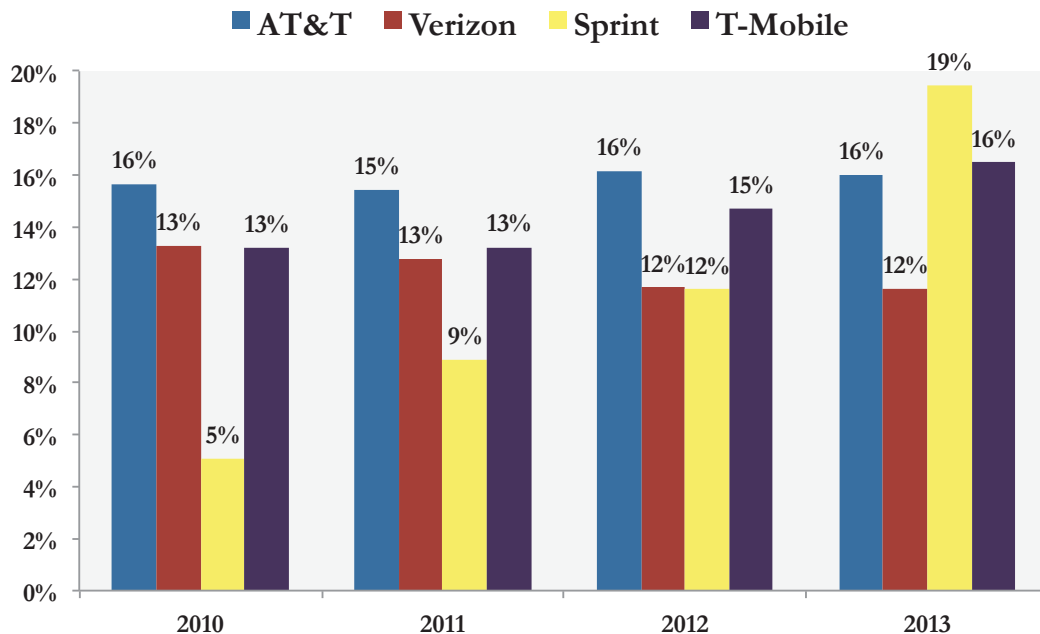


Source: CTIA. Trend line represents 3-year moving average values

This data indicates once again that there's nothing whatsoever special or superior about the investment in the post-2003 or post-2007 periods:

- **Capital intensities increased following the enactment of the 1993 amendments to the Communications Act.** This increase largely reflects the introduction of competition in the wireless industry that followed that enactment, with the PCS broadband spectrum auctions and the subsequent deployment.
- **The percentage of wireless industry revenues invested back into the network declined after 2004,** even as carriers undertook substantial deployment of 3G networks.
- **Following the 2007 Commission classification of mobile broadband as a Title I information service, the percentage of wireless industry revenues invested back into the network declined for two consecutive years.** Capital intensity for the industry increased slightly after 2010, largely due to LTE deployments and substantial increases in capital intensity by T-Mobile and Sprint (see Figure 10 below).
- From 2003 to 2013, annual per subscriber capital investment declined from \$151.58 to \$98.74. In the full year prior to the Commission's classification of mobile broadband as a Title I information service, per subscriber capital investment was \$121.57. In 2013 this value stood at \$98.74.

**Figure 10: Capital Expenditures as a Percentage of Revenues – Big-4 National Carriers (2010–2013)**



Source: Company Annual SEC 10-K Reports

**Conclusion: The Data Indicates That The Wireless Industry Thrived Under Title II, And The Classification of Mobile Broadband As A Title I Information Service Was Not Followed By A “Take Off” In Capital Spending, As Verizon Claims.**

Verizon’s *ex parte* attempted to portray a mobile-broadband era increase in wireless capital industry spending, using nominal values for investment. But as any competent analyst understands, no conclusions can be drawn from the historical analysis of nominal data, particularly over long periods of time. Such data must be adjusted to account for inflation, lest misleading conclusions arise.

Once the Census Bureau and CTIA data on capital expenditures is adjusted for inflation, we see Verizon’s case fall apart completely. There simply was no post-2003 boom (at the very beginnings of 3G mobile broadband network deployment) and no post-2007 boom (the year in which the Commission classified mobile broadband as an information service) in wireless industry capital investment.

Indeed, we can look at the seven years before and after the Commission’s 2007 classification, and see that average annual wireless industry investment was *higher* prior to the classification of mobile broadband as a Title I service than it has been subsequently (see Figure 11):

**Figure 11: Average Annual Wireless Industry Capital Expenditures – 2000–2006 vs. 2007–2013 (Inflation-adjusted, 2013 dollars, \$billions)**

7-Year Period Pre- / Post-Title I Classification	CTIA Estimates	Census Bureau Estimates
2000–2006	\$27.161	\$30.935
2007–2013	\$26.308	\$27.538

Source: U.S. Census Bureau, CTIA. Inflation-adjusted valued calculated by Free Press from BLS values.

**Chairman Wheeler was 100 percent correct.** According to CTIA’s own data, during the 21-year period from 1986–2006 – *i.e.*, before classification of mobile broadband outside of Title II – the U.S. wireless industry saw a cumulative \$297 billion in capital investment (inflation-adjusted).

No matter where you draw the line, be it post-2003 or post-2007, the fact is that wireless carriers invested more of their earnings back into their networks during the Title II era than they have during the mobile data and/or Title I eras (see Figure 12):

**Figure 12: Wireless Industry Capital Intensities for Select Periods (CTIA Data)**

Selected Period	Capital Intensity
1986–2006	27.8%
1986-2002	32.8%
1993-2002	32.1%
1993-2006	27.2%
2003-2013	17.5%
2007-2013	15.3%

Source: U.S. Census Bureau, CTIA. Inflation-adjusted valued calculated by Free Press from BLS values.

These are the facts and data, presented in the appropriate and responsible manner. We hope that as it moves to a final decision in these proceedings, the Commission will consult the primary sources discussed above. The data speaks for itself, and points towards one and only one conclusion: classifying mobile and fixed broadband Internet access services as telecommunications services will not harm ISP industry investment. There's simply no historical evidence to suggest such a result, and neither is there any theoretical basis for such claims. Investments in high-cost networks are driven by market fundamentals, and the fundamentals in this market are, and will continue to be bright.

Respectfully submitted,

/s/ S. Derek Turner

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