October 2, 2014

**VIA ELECTRONIC FILING**

The Honorable Thomas E. Wheeler, Chairman
The Honorable Mignon L. Clyburn, Commissioner
The Honorable Jessica Rosenworcel, Commissioner
The Honorable Ajit Pai, Commissioner
The Honorable Michael P. O'Rielly, Commissioner

Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

**Re: Written Ex Parte Communication**
*Seventeenth Annual Report on the State of Competition in Mobile Wireless, WT Docket No. 13-135*

Dear Mr. Chairman and Commissioners:

Nearly a year ago, CTIA – The Wireless Association® ("CTIA") submitted a report in this proceeding highlighting the investment, innovation, and dynamism that pervades the U.S. mobile market.[1] Today, CTIA provides a further update, demonstrating that the U.S. wireless industry continues to lead the world in 4G LTE investment and network deployment, while providing consumers with unparalleled choice and value.

Earlier this year, Department of Justice Assistant Attorney General for Antitrust Bill Baer looked "long and hard at the wireless industry" and found that "*the [wireless] market is thriving and consumers are benefitting from the current competitive dynamic*."[2] In talking about today's wireless marketplace, Chairman Wheeler more recently remarked that "the American consumer has been the beneficiary" of "new pricing and new services that have been spurred by competition."[3] The facts below reinforce yet again that the U.S. wireless market is a vibrant and competitive industry delivering network investment and welfare-enhancing benefits to consumers across the nation.

***The U.S. wireless industry leads the world in mobile investment***.

- U.S. investment in wireless outpaces the world. In 2013, U.S. carriers spent about **four times more on network infrastructure** per subscriber than the rest of the world spent.[4] Indeed, carriers in the U.S. – which has more people and a vast coverage area – spend more on capex than carriers in any other G7 country,[5] and U.S. carriers' network investment in 2013 was about **120% of the 28 E.U. countries** combined.[6]

- Network investment reaches all-time high. U.S. carriers invested a one-year record of **more than $33 billion in capital expenditures** in 2013, and have invested more than $260 billion in the last ten years alone.[7] U.S. carriers have been recognized as "investment heroes," with CTIA members topping PPI's list of companies with the highest levels of domestic capital spending over the past three years.[8]

- *U.S. carriers continue to invest heavily in spectrum*. U.S. carriers have paid **$53 billion in spectrum auctions** to the U.S. Treasury – $1.56 billion just during the first quarter of 2014,[9] with substantially more expected in the AWS-3 auction this fall.

***The U.S. is the clear leader in all that is 4G and LTE*.**

- *The U.S. tops the charts in LTE subscribers and service*. The U.S. has 5% of the world's wireless subscribers, but **47% of its LTE subscribers**.[10] **30% of U.S. subscribers have LTE service**, compared to just 4% of Europeans.[11] As of 2013, those U.S. LTE subscribers numbered 95.2 million **– a massive 44,168%** increase over 2010's 215,000 LTE subscribers.[12]

- *Mobile Broadband Speeds Continue to Increase*. Smartphone speeds have increased eight times over since 2010.[13] Average mobile connections speeds in the U.S. were about **30% faster than in Europe** and **55% faster than in the Asia Pacific region** in 2013.[14]

- *The U.S. sets the smartphone global pace*. More than **90% of all U.S. device sales were smartphones** in 4Q 2013, compared to only 65% of all European device sales in 1Q 2014.[15] In fact, the U.S. smartphone penetration rate is nearly **three times higher than the rest of the world**.[16] And the U.S. leads all G7 countries in the penetration level of 4G-capable devices.[17]

***The U.S. wireless industry provides unparalleled benefits*.**

- *U.S. consumers enjoy robust competition and superior value*. 97% of consumers may choose from **at least three wireless carriers**, and wireless penetration in the U.S. now exceeds 104%.[18] American wireless consumers use **five times more voice** and **twice as much data** as their counterparts in the E.U.[19]

- *Prices in the U.S. keep dropping*. Overall, the wireless Consumer Price Index (CPI) fell again in 2013. From December 2005 to January 2014, the **Wireless CPI fell 10%**, while the overall CPI for all items increased 18.9%.[20]

- *Consumer satisfaction with wireless is high*. U.S. wireless providers have the **most satisfied customers** of any G7 country.[21] U.S. consumers are also more satisfied with their smartphones than consumers in any other G7 country: for example, 74% in the U.S. are happy with their smartphone compared to 38% in Japan.[22]

- *Wireless is driving good-paying jobs*. Nearly **four million U.S. jobs** are directly or indirectly associated with wireless, and those jobs pay 65% higher wages than the national average.[23] Continuing wireless investment is expected to create **1.2 million new jobs by 2017**.[24]

- *The apps economy is also a huge job creator*. U.S. app-related jobs have gone from virtually none in 2007 to nearly **750,000 app-related jobs** in 2013.[25] And the number of apps themselves continues to surge – from 800,000 apps in 2010 to 3.6 million apps in 2013 – a **347% increase in apps**.[26]

***Exponentially increasing consumer demand requires more spectrum***.

- *Mobile data use continues to grow unabated*. U.S. **mobile data use increased 732% between 2010-2013**, from 388 billion MB to 3.23 trillion MB.[27] Indeed, mobile data usage doubled from 2012 to 2013, and **mobile data use will increase about 650% by 2018**.[28]

- *Smartphones are driving data use*. The number of smartphones has more than doubled in the U.S. in the last three years – from 78 million in 2010 to 175 million in 2013.[29] The network traffic generated by a smartphone is 49 times more than a basic handset, and **smartphone traffic is predicted to increase 325% by 2018**.[30]

- *Tablets are also driving data use*. Tablets (CMRS, not Wi-Fi only) have grown 86% in the U.S. between 2010 (13.5 million) and 2013 (25.2 million).[31] The network traffic generated by a tablet is 127 times more than a basic handset, and **tablet traffic is predicted to increase by nearly 370% by 2018**.[32]

- *Mobile video is driving data use*. **Mobile video traffic has exploded 733%** from 24 PB a month in 2010 to 200 PB a month in 2013.[33] As a result, about **56% of all mobile data** is now data-intensive video, and that traffic will increase by 600% by 2018.[34]

- *The U.S. has the least amount of spectrum for LTE*. Despite the increase in data use along all vectors, the U.S. has the **least amount of spectrum available per LTE capable device** compared to its G7 peers: only 0.65 Hz/LTE capable device. By contrast, Canada provides its citizens with 37 times as much spectrum per person as the U.S. (24.21 Hz/LTE), and Japan provides four times more than the U.S. (2.58 Hz/LTE).[35]

While today's U.S. wireless story is one of remarkable success, making additional spectrum available remains critical to meeting consumer demand, promoting economic growth, and enhancing our Nation's global competitiveness. As Chairman Wheeler has aptly noted: "More spectrum means more speed, capacity and ubiquity of mobile broadband services such as 4G LTE and Wi-Fi networks."[36] CTIA looks forward to working with the Commission to make additional spectrum available and to set a regulatory course allowing the wireless marketplace to continue to flourish and serve U.S. consumers.

Pursuant to Section 1.1206 of the Commission's rules, 47 C.F.R. § 1.1206, this letter is being electronically filed via ECFS.  If you have any questions, please do not hesitate to contact me.

Sincerely,

/s/ *Scott K. Bergmann*

Scott K. Bergmann
Vice President, Regulatory Affairs
CTIA – The Wireless Association®

[1] *See* CTIA, THE U.S. WIRELESS INDUSTRY: LEADING THE WORLD IN INVESTMENT, VALUE, INNOVATION, AND COMPETITION (Nov. 2013), *appended to* Letter from Scott K. Bergmann, Vice President, Regulatory Affairs, CTIA – The Wireless Association®, to Chairman Thomas E. Wheeler, Federal Communications Commission, GN Docket No. 09-51, WT Docket No. 13-135 (Nov. 13, 2013).

[2] Edward Wyatt, *Wireless Mergers Will Draw Scrutiny, Antitrust Chief Says*, N.Y. TIMES, Jan. 30, 2014, at B3 (emphasis added), http://dealbook.nytimes.com/2014/01/30/wireless-mergers-will-draw-scrutiny-antitrust-chief-says/?_php=true&_type=blogs&_r=0; *see also* Bill Baer, Assistant Attorney General, Antitrust Division, U.S. Department of Justice, "Reflections on Antitrust Enforcement in the Obama Administration," Remarks as Prepared for Delivery to the New York State Bar Association (Jan. 30, 2014) ("Competition today is driving enormous benefits in the direction of the American Consumer."), http://www.justice.gov/atr/public/speeches/303269.pdf.

[3] Tom Wheeler, Chairman, Federal Communications Commission, Prepared Remarks, 2014 CTIA Show, Las Vegas, NV (Sept. 9, 2014), http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0909/DOC-329271A1.pdf.

[4] *See* DIDIER SCEMAMA, *ET AL*., 2014 WIRELESS CAPEX: BRICs & EUROPE TO PICK UP THE SLACK, BANK OF AMERICA MERRILL LYNCH, GLOBAL TELECOM EQUIPMENT, at Table 2 (Jan. 13, 2014); *see also* GLEN CAMPBELL, 2014: THE YEAR AHEAD, BANK OF AMERICA MERRILL LYNCH, GLOBAL WIRELESS MATRIX 4Q13, at Tables 1 and 2 (Jan. 8, 2014); CTIA, CTIA WIRELESS INDUSTRY INDICES REPORT, YEAR-END 2013 (June 2014) ("CTIA WIRELESS INDUSTRY INDICES REPORT").

[5] ROGER ENTNER, SPECTRUM FUELS SPEED AND PROSPERITY, RECON ANALYTICS, at 11 (Sept. 2014) ("SPECTRUM FUELS SPEED AND PROSPERITY").

[6] ROGER ENTNER, EVERY WAY YOU LOOK AT IT: US CARRIERS SPEND MORE IN CAPEX THAN THEIR EU PEERS, RECON ANALYTICS (June 9, 2014), http://reconanalytics.com/2014/06/every-way-you-look-at-it-us-carriers-spend-more-in-capex-than-their-eu-peers/.

[7] CTIA, BACKGROUND ON CTIA'S WIRELESS INDUSTRY SURVEY (June 2014), http://www.ctia.org/docs/default-source/Facts-Stats/ctia_survey_ye_2013_graphics-final.pdf?sfvrsn-2.

[8] DIANA CAREW AND DR. MICHAEL MANDEL, U.S. INVESTMENT HEROES OF 2014: INVESTING AT HOME IN A CONNECTED WORLD, PROGRESSIVE POLICY INSTITUTE, at 1, 4-5 (Sept. 2014), http://www.progressivepolicy.org/wp-content/uploads/2014/09/2014.09-Carew_Mandel_US-Investment-Heroes-of-2014_Investing-at-Home-in-a-Connected-World.pdf.

[9] Testimony of Chairman Tom Wheeler, Federal Communications Commission, Hearing on the FCC's Fiscal 2015 Budget Request Before the Subcommittee on Financial Services and General Government, Committee on Appropriations, U.S. House of Representatives, at 1 (Mar. 25, 2014) ("Wheeler Testimony"), https://apps.fcc.gov/edocs_public/attachmatch/DOC-326246A1.pdf.

[10] INFORMA TELECOMS & MEDIA GROUP, WCIS + DATABASE, SUBSCRIPTIONS & KPIs (4Q2013).

[11] *Id*.

[12] *Id*., 2010-2013.

[13] See, e.g., CISCO, VNI MOBILE FORECAST HIGHLIGHTS, 2013-2018, available at http://www.cisco.com/assets/sol/sp/vni/forecast_highlights_mobile/index.html#~Country.

[14] CISCO, VNI MOBILE FORECAST HIGHLIGHTS, 2013-2018, at "United States - Accelerating Network Speeds," "Western Europe - Accelerating Network Speeds," and "Asia Pacific - Accelerating Network Speeds," ("CISCO VNI MOBILE FORECAST HIGHLIGHTS"), http://www.cisco.com/assets/sol/sp/vni/forecast_highlights_mobile/#~Country (last visited June 10, 2014).

[15] CHETAN SHARMA, US WIRELESS MARKET UPDATE – 4Q 2013 (2013), http://www.chetansharma.com/US_Wireless_Market_Q3_2013_Update_Nov_2013_Chetan_Sharma_Consulting.pdf; ERICSSON, ERICSSON MOBILITY REPORT ON THE PULSE OF THE NETWORKED SOCIETY (June 2014), http://www.ericsson.com/res/docs/2014/ericsson-mobility-report-june-2014.pdf.

[16] CTIA, Wireless Quick Facts, http://www.ctia.org/your-wireless-life/how-wireless-works/wireless-quick-facts (last visited Sept. 25, 2014); *see also* CTIA WIRELESS INDUSTRY INDICES REPORT at 11, 29 (implying 55% smartphone penetration of U.S. population); *eMarketer: Worldwide Smartphone Usage to Grow 25% in 2014*, FIERCEWIRELESS, June 11, 2014 (reporting 19.8% smartphone penetration of global population), http://www.fiercewireless.com/press-releases/emarketer-worldwide-smartphone-usage-grow-25-2014.

[17] SPECTRUM FUELS SPEED AND PROSPERITY at 26.

[18] CTIA WIRELESS INDUSTRY INDICES REPORT at 21.

[19] CISCO VNI MOBILE FORECAST HIGHLIGHTS.

[20] *See* U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, CONSUMER PRICE INDEX: ALL URBAN CONSUMERS – (CPI-U), U.S. CITY AVERAGES, WIRELESS TELEPHONE SERVICES (Series ID CUUR0000SEED03), http://data.bls.gov/cgi-bin/dsrv (last visited Feb. 20, 2014); CONSUMER PRICE INDEX: ALL URBAN CONSUMERS – (CPI-U), U.S. CITY AVERAGES, ALL ITEMS, www.bls.gov/ro5/cpiushistorical.pdf (last visited Feb. 20, 2014).
[21] SPECTRUM FUELS SPEED AND PROSPERITY at 1.
[22] *Id.* at 1, 32.
[23] Larry Summers, "Technological Opportunities, Job Creation, and Economic Growth," Remarks at the New America Foundation (June 28, 2010), http://www.whitehouse.gov/administration/eop/nec/speeches/technological-opportunities-job-creation-economic-growth.
[24] ALAN PEARCE, J. RICHARD CARLSON, MICHAEL PAGANO, WIRELESS BROADBAND INFRASTRUCTURE: A CATALYST FOR GDP AND JOB GROWTH 2013-2017, INFORMATION AGE ECONOMICS, at 25 (Sept. 2013), http://apps.fcc.gov/ecfs/document/view?id=7520949630.
[25] Michael Mandel, *752,000 App Economy Jobs on the 5th Anniversary of the App Store*, PROGRESSIVE POLICY INSTITUTE BLOG, July 8, 2013, http://www.progressivepolicy.org/slider/752000-app-economy-jobs-on-the-5th-anniversary-of-the-app-store/.
[26] CTIA Research; Distimo reports on individual independent applications stores (2010-2013); PocketGamer.biz, App Store Metrics, http://www.pocketgamer.biz/metrics/app-store/ (last visited Sept. 29, 2014); AppBrain, App Brain Stats, http://www.appbrain.com/stats/number-of-android-apps (last visited Sept. 29, 2014); Daniel Rubino, *With 160,000+ apps, Microsoft breaks down the numbers for the Windows Phone Store*, WPCENTRAL, June 26, 2013, http://www.wpcentral.com/160000-apps-microsoft-windows-phone-store-numbers; *Infographic: Exploring the Amazon App Stores*, APP ANNIE, Apr. 13, 2013, http://blog.appannie.com/amazon-explore/; Kunal Dua, *BlackBerry World now contains over 130,000 BB10 apps*, NDTVGADGETS, Sept. 27, 2013, http://gadgets.ndtv.com/mobiles/news/blackberry-world-now-contains-over-130000-bb-10-apps-424613; other app store websites (*e.g*., Mobango, 1Mobile, Soc.io Mall).
[27] CTIA WIRELESS INDUSTRY INDICES REPORT at 146-47.
[28] CISCO VNI MOBILE FORECAST HIGHLIGHTS at "United States - 2018 Forecast Highlights" and "United States - 2013 Year in Review."
[29] CTIA WIRELESS INDUSTRY INDICES REPORT at 12.
[30] CISCO VNI MOBILE FORECAST HIGHLIGHTS at "United States - 2013 Year in Review" and "United States - Device Growth Traffic Profiles – Smartphone."
[31] CTIA WIRELESS INDUSTRY INDICES REPORT at 11-12.
[32] CISCO VNI MOBILE FORECAST HIGHLIGHTS at "United States - 2013 Year in Review" and "United States - Device Growth Traffic Profiles – Tablets."
[33] *Id*., multiple years.
[34] *Id*. at "United States - 2018 Forecast Highlights" at "United States - Mobile Applications."
[35] SPECTRUM FUELS SPEED AND PROSPERITY at 7-8, 36.
[36] Wheeler Testimony at 4.