BEFORE THE UNITED STATES FEDERAL TRADE COMMISSION

WASHINGTON, D.C.

COMMENTS OF MOBILE FUTURE	)
RE: INTERNET OF THINGS, PROJECT P135405	)

COMMENTS OF MOBILE FUTURE

Mobile Future submits these comments following the Federal Trade Commission's ("FTC" or "Commission") November 19, 2013 workshop examining issues associated with Internet-connected machine-to-machine "smart technologies," collectively referred to as the "Internet of Things."[1]

I. INTRODUCTION

Mobile Future is a coalition of cutting-edge technology and communications companies and a diverse group of non-profit organizations, working to support an environment that encourages investment and innovation in the dynamic wireless sector. Its mission is to help inform and educate the public and key decision makers in business and government on the broad range of wireless innovations that are transforming our society and the nation's economy.

Connected devices are part of a rapidly evolving mobile wireless ecosystem, and the growth of wireless devices continues to be staggering. There are 10 billion connected devices

[1] *Internet of Things—Privacy and Security in a Connected World*, FTC, *available at* http://www.ftc.gov/news-events/events-calendar/2013/11/internet-things-privacy-and-security-connected-world (last visited Jan. 4, 2014); *FTC Seeks Comment on Issues Raised at Internet of Things Workshop Project No. P135405*, FTCPublic.commentworks.com, https://ftcpublic.commentworks.com/ftc/netofthingsworkshop (last visited Jan. 4, 2014).

today.[2] Global connected device traffic is expected to grow 24 times over current levels in the next five years, and the resulting "Internet of Everything" could mature into a $19 trillion global market.[3] By 2020, data from connected devices is expected to be more than double all of the global Internet traffic from 2012.[4] In the future, virtually all consumer products will be able to connect to the Internet.

In order to maximize consumer benefits and economic growth opportunities, Mobile Future encourages the FTC and other regulatory bodies across the globe to help promote the continued development and deployment of advanced connected mobile devices and services through collaborative engagement with the innovation community.[5] Pursuing this constructive path will best ensure that our nation continues to be a mobile leader in the world – and that broad and diverse innovations continue to make their way to American consumers and throughout the U.S. economy.

There are a number of forms that this constructive engagement can take. For example, the FTC should facilitate service and design flexibility by promoting technology neutrality and

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[2] *Let's Talk: Connected Devices Infographic*, Mobile Future, *available at* http://mobilefuture.org/newsroom/lets-talk-connected-devices-infographic ("Mobile Future Infographic").

[3] *See, e.g.*, John Chambers, Chairman and Chief Executive Officer, Cisco, *CES Keynote: Connecting the Unconnected* (Jan. 7, 2014), *available at* http://tools.cisco.com/gems/cust/customerSite.do?METHOD=W&LANGUAGE_ID=E&SEMINAR_CODE=S19643&PRIORITY_CODE=000323326; *CES LIVE: Cisco's Chambers Says Internet of Everything, $19 Trillion Opportunity, Is Next Big Thing*, Forbes (Jan. 7, 2014), *available at* http://www.forbes.com/sites/connieguglielmo/2014/01/07/ces-live-cisco-ceo-chambers-to-deliver-keynote/ ("Cisco at CES"); Joseph Bradley, *et al.*, *Internet of Everything: A $4.6 Trillion Public-Sector Opportunity*, Cisco, 1 (2013), *available at* http://internetofeverything.cisco.com/sites/default/files/docs/en/ioe_public_sector_vas_white%20paper_121913final.pdf ("Cisco White Paper").

[4] *See* Mobile Future Infographic.

[5] Section 5 of the FTC Act, 15 U.S.C. § 45, prohibits the use of "unfair methods of competition . . . and unfair or deceptive acts and practices" and authorizes the FTC to enforce the prohibition. Section 5 provides, however, that the FTC's jurisdiction does not extend to, *inter alia*, common carriers subject to the Communications Act of 1934, as amended.

avoiding rigid, prescriptive guidance for nascent connected device services. The Commission also should encourage the use of technology-based solutions to help protect consumers, as connected devices can be designed and constructed with built-in capabilities that facilitate a seamless, beneficial user experience.[6]

II. THE INTERNET OF THINGS WILL PROVIDE SIGNIFICANT BENEFITS TO MOBILE WIRELESS CONSUMERS

The tens of billions of Internet-connected devices set to hit the market in upcoming years represent great opportunity for a new wave of innovation.[7] From your refrigerator and home thermostat, to your home security system or car, to your child's textbook or doctor's medical tablet, wireless technology is leaping beyond the telephone, tablet and laptop to connect the world around us to the Internet.[8] As this progress continues, the Internet of Things will further accelerate mobile opportunity and transform how people and our economy interact with the many tools of modern life.[9] For example, by the year 2020, 90 percent of new cars will be

[6] *See, e.g.*, Matthew Yeomans, *The Internet of Things: How Connected Devices Can Drive Sustainability*, Guardian (June 21, 2012), http://www.guardian.co.uk/sustainable-business/internet-of-things-connected-devices.

[7] *See, e.g.*, Chris O'Brien, *CES 2014: Consumer Electronics Show to Feature "Internet of Things,"* LA Times (Jan. 4, 2014), *available at* http://www.latimes.com/business/la-fi-ces-internet-things-20140105,0,3796601.story#axzz2pjWwCXLb ("By 2050, analysts project, there will be 50 billion Internet-connected devices, or five gadgets for every man, woman and child.").

[8] *See* Katy Bachman, *The 'Internet of Things' Heralds the Arrival of the Jetsons Age,* ADWEEK (Jan. 5 2014), *available at* http://www.adweek.com/news/technology/internet-things-heralds-arrival-jetsons-age-154724.

[9] *See, e.g.*, *Wireless Technology: The Internet of Things*, Verizon Wireless (Mar. 6, 2013), *available at* http://www.verizonwireless.com/news/article/2013/03/future-of-wireless.html; Claire Cain Miller, *Bits: Is 2014 the Year of the Connected Home?*, NY Times (Jan. 3, 2014), *available at* http://bits.blogs.nytimes.com/2014/01/03/is-2014-the-year-of-the-connected-home (discussing a refrigerator that sends a text message when the milk is running low, a remote lighting control system, and a smoke alarm that can also turn off gas furnaces if it senses a carbon monoxide leak).

wirelessly connected, making automotive the largest category of connected devices and services.[10]

Connected mobile technologies also have the potential to significantly improve the quality of healthcare, lower medical costs, expand the geographic reach of our nation's medical professionals, and empower Americans to take a more active and informed role in their health and wellness. Through mobile connectivity, the Internet can make virtually anything more intelligent – holding great promise to reduce greenhouse gas emissions; improve access to quality, affordable education; and lift our standard of living. In fact, the Internet of Everything could generate $4.6 trillion in value for the public sector globally over the next eight years – through cost savings, productivity gains, new revenues, and enhanced citizen services.[11]

New connected devices and services also can create scores of new jobs – and even whole new segments of our economy. Just eight years ago, the term "apps" did not exist. Today, mobile applications are a $26 billion industry,[12] and this year 10 billion devices are expected to download 77 billion mobile applications globally.[13] In a world where there are now more mobile devices than people, what's next? A similar torrent of innovation and growth fueled by the leap of connectivity beyond a per capita yardstick – to the rendering intelligent of virtually every object around us – the Internet of Everything.

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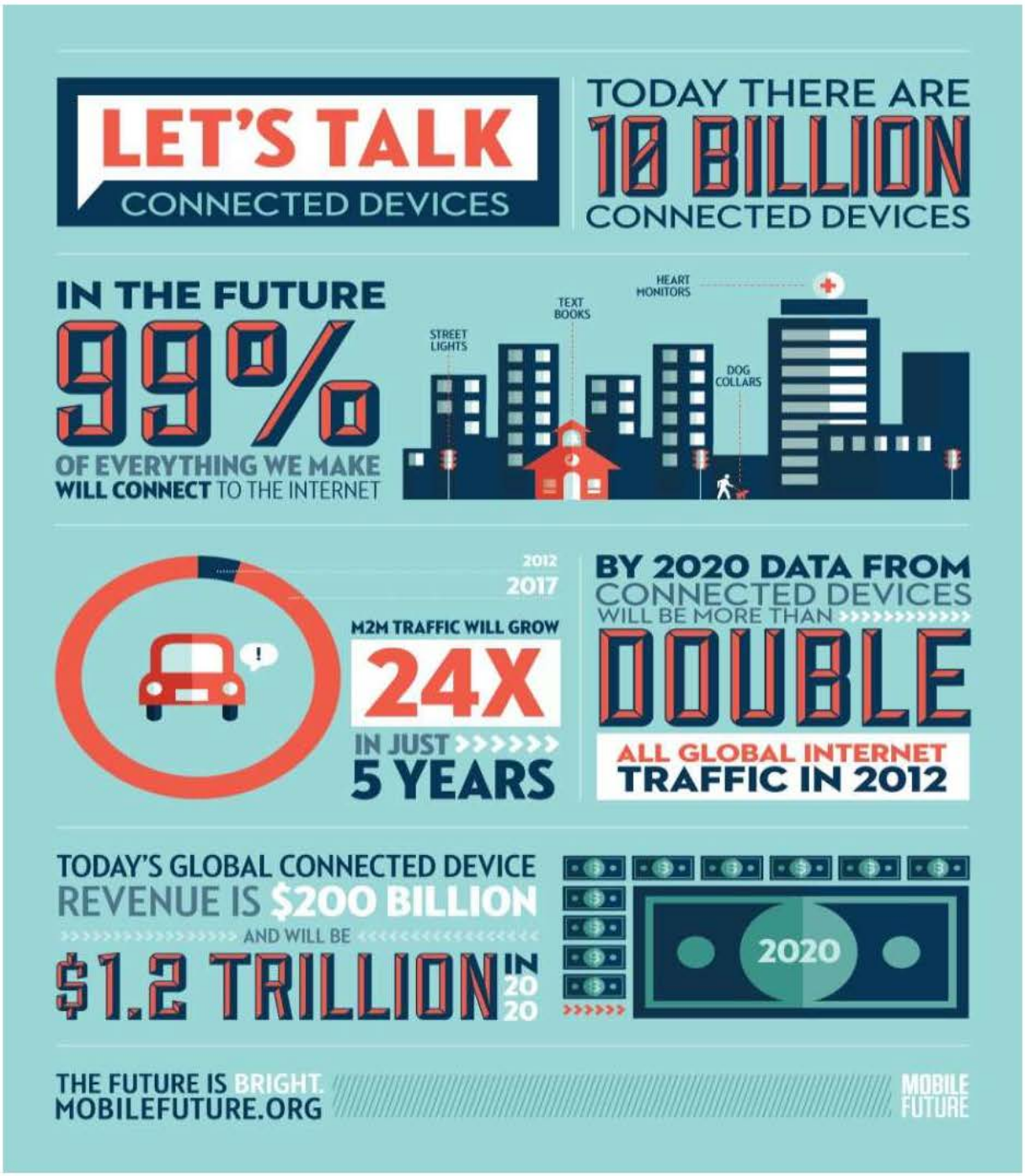
[10] *Apple, Google, AT&T, Sprint Make Inroads Into Connected-Car Market*, eWeek (Jan 4, 2013), *available at* http://www.eweek.com/mobile/slideshows/apple-google-att-sprint-make-inroads-into-connected-car-market; *see* SBD & GMA, *2025 Every Car Connected: Forecasting the Growth and Opportunity*, 1 (2012), *available at* http://www.gsma.com/connectedliving/wp-content/uploads/2012/03/gsma2025everycarconnected.pdf.

[11] Cisco White Paper at 1.

[12] *Gartner Says Mobile App Stores Will See Annual Downloads Reach 102 Billion in 2013*, Gartner (Sept. 19, 2013), *available at* http://www.gartner.com/newsroom/id/2592315 (last visited Jan. 9, 2014).

[13] *See* Cisco at CES at 1.

To illustrate the vast potential and growth trajectory of connected devices – if allowed to continue to play out in a constructive policy environment – Mobile Future released an infographic visually highlighting the burgeoning ecosystem of connected devices.



Sources available at http://mobilefuture.org/newsroom/lets-talk-connected-devices-infographic.

III. THE FTC SHOULD ENCOURAGE INNOVATION IN THE INTERNET OF THINGS

Consumers deserve a mobile future that is defined by perpetual innovation, job creation, and economic growth. Technology-neutral policies that encourage vigorous private sector investment and innovation are key to the ongoing growth and vibrancy of the Internet of Things, as well as the continued competitiveness of the U.S. wireless sector and its ability to keep both innovation and economic opportunities flourishing. Because of the diversity of devices that are likely to be connected and the rapid pace of innovation, static one-size-fits-all policies and/or technology and design mandates are likely to stifle the very innovation that is most likely to lead to the greatest breakthrough consumer benefits.

For these reasons, the FTC should take care to avoid any action that could limit the ability of innovators to invest in, develop, and deploy new and beneficial connected devices. It should facilitate service and design flexibility by promoting technology neutrality and avoiding rigid, prescriptive guidance for nascent connected services. The innovation behind the Internet of Things provides consumers with new ways of interacting with virtually any object, and it is impossible to know specifically how connected services and applications will adapt to meet the needs of consumers over time. Consumer expectations also will continue to evolve as the Internet of Things expands and becomes more integrated with everyday life.

In addition, new connected device technologies will provide additional opportunities to protect consumers, and the FTC should encourage the use of technology-based solutions to address any consumer concerns that may arise. For example, connected devices can be designed and constructed with built-in protections (including data privacy and security protections) to facilitate a seamless, beneficial user experience. Should any specific consumer protection issues arise as connected device technologies are deployed, the FTC's first focus should be on

constructively engaging stakeholders to develop workable solutions. In today's dynamic environment, driven by rapidly evolving technology, changing consumer demands, and other fast-moving market conditions, stakeholders are well-equipped to address any such issues effectively if concerns are raised. Moreover, a collaborative approach is most likely to yield both bold new innovations and timely, effective consumer protections.

IV. CONCLUSION

Mobile Future looks forward to working with the FTC and the mobile innovation community to continue fostering innovation and growth in the burgeoning Internet of Things. America's consumers are living in a wireless world, and their expectations for connected devices will continue to change and grow. In helping to meet these expectations, government can and should play a valuable and productive role. First and foremost, government must continue to move quickly and confidently in ensuring that American consumers and innovators will have adequate spectrum resources, which will be the *sine qua non* for continued innovations in our mobile future in areas such as the Internet of Things. And as nascent connected device technologies evolve, the FTC can also play a crucial role by enabling this innovation to continue unfettered so that Americans can reap the full potential of the Internet of Things to improve our lives, grow our economy, and bolster U.S. competitiveness in a connected world.

Respectfully submitted,

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