Recommendation
of the FCC Disability Advisory Committee

Adopted December 6, 2016

1) WHEREAS, the Internet of Things ("IoT")—collectively, Internet-connected devices that will facilitate technologies to support connected home life, transportation, commerce and civic solutions—is growing and poised to profoundly change the American economy and American society in the coming years[1];

2) WHEREAS, IoT has the potential to overcome numerous barriers to equal access to societal participation facing people with disabilities—including civic participation, communication access, physical access, and educational and occupational opportunities—and enhance their quality of life;

3) WHEREAS, some examples of contexts where IoT may be leveraged to increase accessibility support and services for people with disabilities include smart home applications, independent living, smart transportation, smart environment, smart cities, job integration, education and learning, two-way person-to-person communications, and other assistive technologies;

4) WHEREAS, IoT has the potential to impose new challenges for people with disabilities to directly interact with IoT products and services features, or to interact with IoT-powered services intended to offer modes or capabilities for user interaction, if accessibility is not accounted for in their development;

5) WHEREAS, some examples of these challenges include IoT systems that are aurally based without text displays or text input (such as voice recognition interfaces), which may exclude deaf, hard of hearing and speech-disabled people who cannot use those interfaces; IoT systems that are visually based without tactile and aural input and output, which may exclude blind, visually impaired, print disabled, and deafblind people who cannot use those interfaces; and IoT systems with only tactile interfaces, which may exclude people with mobility disabilities who cannot use those interfaces;

6) WHEREAS, accessibility for IoT with direct user interaction features or IoT-powered services intended to offer modes or capabilities for user interaction requires integrated interfaces that provide data and various communication channels and adaptation to the functional diversity of their users;

7) WHEREAS, stakeholders across industry and government are presently engaged in efforts to explore the potential challenges to IoT deployment and form a next-

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[1] *See, e.g.*, Afua Bruce, Dan Correa, and Shuhas Subramanyam, *Internet of Things: Examining Opportunities and Challenges*, White House Blog (Aug. 30, 2016), https://www.whitehouse.gov/blog/2016/08/30/internet-things-examining-opportunities-and-challenges; G3ist, Internet of Things: New Promises for Persons with Disabilities, A G3ict Business Case White Paper Series Researched in Cooperation with AT&T (July 2015), http://g3ict.org/download/p/fileId_1025/productId_335.

generation policy framework to harness broader societal benefits of IoT and address challenges around privacy, security, and reliability of IoT;[2]

8) WHEREAS, those efforts should also raise awareness among industry, government, and consumer stakeholders about the need for human-facing IoT products and services to be implemented consistent with universal design principles to the extent achievable, and also to provide the capability to interface with assistive and accessible technologies, in order to encourage the accessibility of IoT for people with various abilities;

9) RECOMMENDED, that, while the DAC offers no opinion about whether or, if so, the extent to which the Federal Communications Commission ("FCC") has jurisdiction over IoT products and services, that the DAC encourages the FCC to consider engaging the appropriate stakeholders, including industry, government, research, and consumer stakeholders, to encourage efforts to raise awareness among these stakeholders about the need for IoT products and services with direct user interaction features, or IoT-powered services intended to offer modes or capabilities for user interaction, to be implemented consistent with universal design principles to the extent achievable, and also provided with capabilities for interfacing with assistive and accessible technologies; and

10) RECOMMENDED, that in the course of that effort, the FCC consider seeking the recommendations of various industry, government, research, and consumer stakeholders about the accessibility benefits and challenges of IoT products and services within the Commission's purview for people with disabilities and identify possible solutions for maximizing those benefits and overcoming those challenges.

[2] *See, e.g.*, *The Benefits, Challenges, and Potential Roles for the Government in Fostering the Advancement of the Internet of Things*, NTIA Docket No. 160331306-6306-01, 81 Fed. Reg. 19,956 (Apr. 6, 2016).