

Before the  
**FEDERAL TRADE COMMISSION**  
Washington, DC 20530

In the Matter of )  
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Spring Privacy Series: Consumer Generated and ) Project No. P145401  
Controlled Health Data )  
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**COMMENTS OF  
THE CONSUMER ELECTRONICS ASSOCIATION**

The Consumer Electronics Association (“CEA”) is the principal trade association for the consumer electronics industry with more than 2,000 members, including manufacturers, technology developers, distributors, and retailers. CEA also produces the International CES (“CES”), the world’s largest and most important consumer technology trade show. With this unique and critical perspective, CEA welcomes the opportunity to show the Federal Trade Commission (“FTC” or “Commission”) staff the variety of ways that new health and fitness devices and applications are transforming consumers’ lives.<sup>1</sup>

CEA commends the FTC for its recent workshop on consumer-generated health data and its willingness to engage in a policy discussion that balances the need to protect privacy with the need to preserve and enhance innovation in the rapidly evolving health and fitness device market. The health and fitness device market is undergoing a revolution, enabled by design breakthroughs, advances in technology, and the mass adoption of consumer devices.

Manufacturers are developing, marketing, and delivering devices and applications that provide

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<sup>1</sup> As discussed further herein, in recognition of the growing role consumer electronic devices are playing in improving health and fitness, CEA formed the CEA Health and Fitness Technology Division. CEA and its members stand ready to further assist the FTC staff as it considers the privacy implications of consumer generated and controlled health data.

consumers with information about their health and wellness. Indeed, consumers are responding by adopting new health and wellness technology at astonishing rates.

## **I. CEA MEMBERS ARE AT THE FOREFRONT OF THE HEALTH AND FITNESS DEVICE REVOLUTION**

CEA and its members are at the forefront of the health and fitness device revolution, and CES has become a key staging ground for the new and innovative devices that help inform consumers about their personal health. The 2014 International CES showcased the ongoing explosion of digital health and fitness technology. This market segment is growing so quickly that the number of digital health and digital fitness technology companies at CES this year increased by 40 and 30 percent, respectively, over the number that attended the 2013 International CES. Several companies chose the 2014 International CES to announce the launch of new, innovative health and fitness technology and devices, including new fitness trackers, a wristband baby monitor for the deaf and hard of hearing, a smart toothbrush, a skull cap concussion sensor, and a smart bed, among many others.<sup>2</sup> These announcements were made by established and nascent companies alike, and from a variety of industry segments.

CEA and its members have taken a leadership role in this transformative revolution. On May 1, 2014, CEA announced its newly formed Health and Fitness Technology Division (the “HFTD”) to respond to the growing role consumer electronics devices are playing in improving

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<sup>2</sup> See Press Release, CEA, *Innovation Thrives at the 2014 International CES*, Jan. 16, 2014, <http://cesweb.org/News/Press-Releases/CES-Press-Release.aspx?NodeID=a973cd7e-6c73-4b1a-b620-a333813bece4> (noting announcements of the Intel Edison Chip for wearable tech; Jaybird Reign Fitness wristband; Kolibree Smart Toothbrush; LG Lifeband Touch fitness activity monitor; Moneual Smart Wristband Baby Monitor; Razer Nabu; Reebok CrossCheck; Rest Mimo Baby Monitor; Scanadu Scout; and Sleep Number X12 Smart Bed).

health and fitness.<sup>3</sup> The HFTD Board comprises industry leaders who will work with CEA staff to conduct market research and educate consumers about new health and fitness technology products, apps and services. As CEA president and CEO Gary Shapiro recently recognized, “[t]echnology innovations now offer unprecedented opportunities for consumers to take control of their health and engage in their personal fitness.”<sup>4</sup> CEA is committed to ensuring that companies can continue to innovate and produce products that will improve, and give consumers greater control over, their health and wellness.<sup>5</sup>

## II. CONSUMERS DEMAND THE NEW HEALTH AND FITNESS DEVICES AND APPLICATIONS THAT CAN TRANSFORM THEIR LIVES

In its comments to the FTC prior to the Internet of Things workshop last year, CEA was pleased to offer several examples of new, connected life-enhancing consumer electronics that

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<sup>3</sup> Press Release, CEA, *CEA Announces Formation of Health and Fitness Technology Division*, May 1, 2014, <http://www.ce.org/News/News-Releases/Press-Releases/2014/CEA-Announces-Formation-of-Health-and-Fitness-Tech.aspx>. Members of the inaugural HFTD Board include representatives from large consumer electronics manufacturers, health and fitness device-focused manufacturers, wireless service providers, operating system and software providers, and a fitness apparel company. *See id.* The HFTD, originating as the Health and Fitness Technology Working Group in 2010, has made several valuable contributions to the industry during the past four years.

<sup>4</sup> *Id.*

<sup>5</sup> Consumer electronics manufacturers currently are deploying innovative new technologies in a staggering number of markets, each with different health- and fitness-related benefits. Today, there are fifteen health and wellness markets (divided among four categories), and this list only will grow as the innovation cycle continues: (1) *Connected personal health devices*: blood pressure monitors; glucometers; insulin pumps; pulse oximeters; electrocardiograms; smart pill dispensers; and personal emergency responses systems; (2) *Connected fitness tracking devices*: digital pedometer/activity trackers; heart rate monitors; and GPS sports watches; (3) *Connected wellness devices*: sleep, stress, and diet monitors; and digital weight scales; and (4) *Health & wellness software and services*: health software and apps; wellness software and apps; and health and wellness services.

represent breakthroughs for those with chronic diseases, as well as for individuals seeking to maintain good health and monitor their activity.<sup>6</sup> These examples include:

- The Abiogenix uBox, a connected medicine storage device that tracks when users take their medication; sends reminders when users do not; and, when users so choose, can send alerts to caregivers or relatives if a dose is missed;<sup>7</sup>
- Verizon Telematics' LifeComm, a wearable cellular device that monitors the user's activity and sends alerts in the event the user falls and in other situations requiring emergency response;<sup>8</sup>
- iHealth's Pulse Oximeter, which clips onto a user's finger and measures blood oxygen levels and pulse rate;<sup>9</sup>
- The Lumo Back, which uses a sensor and software to encourage good posture;<sup>10</sup> and
- Fitbit wearable bands that track calories burned, steps taken, and sleep patterns.<sup>11</sup>

Demand for devices like these has accelerated in the past year and likely will continue to do so.

According to estimates from Parks Associates, device manufacturers sold more than 40 million

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<sup>6</sup> See generally Comments of the Consumer Electronics Association on the Privacy and Security Implications of the Internet of Things, at 10-11 (filed June 10, 2013).

<sup>7</sup> See Scott Jung, *Abiogenix's uBox Reminds You to Take Your Medication On Time*, *MedGadget*, Jan. 25, 2013, <http://www.medgadget.com/2013/01/abiogenixs-ubox-reminds-you-to-take-your-medications-on-time.html>; see also Abiogenix, <http://www.abiogenix.com/> (last visited May 31, 2014); my Ubox, <http://my-ubox.com/> (last visited May 31, 2014).

<sup>8</sup> See Verizon, Lifecomm, <https://www.verizontelematics.com/solutions/wellness.php> (last visited May 31, 2014).

<sup>9</sup> See iHealth, Wireless Pulse Oximeter, [http://www.ihealthlabs.com/health-and-fitness-products-wireless-wireless-pulse-oximeter\\_80.htm](http://www.ihealthlabs.com/health-and-fitness-products-wireless-wireless-pulse-oximeter_80.htm) (last visited May 31, 2014). iHealth also offers wireless blood pressure monitors, scales, and glucometers. See generally iHealth, <http://www.ihealthlabs.com/> (last visited May 31, 2014).

<sup>10</sup> See LUMO, What is Lumo Back, <http://www.lumobodytech.com/what-is-lumoback/> (last visited May 31, 2014). The company has since launched Lumo Lift, a discrete device to help posture that can be worn "almost anywhere" thanks to its magnetic clasp and small size. See LUMO, <http://www.lumobodytech.com/> (last visited May 31, 2014).

<sup>11</sup> See generally Fitbit, <http://www.fitbit.com/> (May 31, 2014).

personal health and wellness products in 2013 and are predicted to sell more than 70 million such products annually by 2018.<sup>12</sup> In the U.S. market alone, revenues are predicted to rise from \$3.3 billion in 2013 to more than \$8 billion by 2018.<sup>13</sup> CEA forecasts that ongoing changes in the U.S. healthcare system will result in a 142 percent increase over the next five years in personal health and wellness product sales and software and service revenues.<sup>14</sup>

Consumer desire and demand for wearable fitness technology has exploded. The Vitality Group, a health and wellness solutions provider, found that the entire population—each gender, young and old, overweight or not—is embracing wearable fitness technology to track real-time physical activity.<sup>15</sup> Indeed, demand is skyrocketing. Last year, CEA observed demand for dedicated wearable fitness devices quadruple, making it the largest year-over-year increase for any category of fitness device. This growth appears likely to continue. ABI Research predicts that 90 million wearable computing devices will ship this year globally, driven largely by demand for sports, health, and fitness devices.<sup>16</sup>

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<sup>12</sup> See CEA, *The Connected Health and Wellness Market*, at 5 (Dec. 2013) (“CEA Market Research Report”).

<sup>13</sup> *Id.*

<sup>14</sup> *Id.*

<sup>15</sup> Press Release, The Vitality Group, *Fitness Devices Impacting Employee Health According to Vitality Study: Pedometers, activity trackers, and smartphone applications on the rise*, Apr. 23, 2014, <http://www.thevitalitygroup.com/fitness-devices-impacting-employee-health-according-to-vitality-study/>.

<sup>16</sup> Press Release, ABI Research, *Ninety Million Wearable Computing Devices Will Be Shipped in 2014 Driven by Sports, Health and Fitness*, Jan. 30, 2014, <https://www.abiresearch.com/press/ninety-million-wearable-computing-devices-will-be->.

### **III. HEALTH AND FITNESS DEVICES PROVIDE CONSUMERS WITH AN UNPRECEDENTED AMOUNT OF INFORMATION ABOUT THEMSELVES -- AND THAT'S A GOOD THING**

Innovation in health and wellness technology offers consumers unprecedented opportunities to take control of their health and improve their personal fitness. Collecting and providing consumers with health and wellness data encourages consumers—both those who are healthy and those with chronic diseases—to make smarter, healthier choices. Moreover, aggregated consumer-generated health and fitness data could unleash new services and applications and yield new insights that can revolutionize healthcare and dramatically improve the health and wellness of the public at large.

Consumers generally purchase health and wellness devices precisely because these devices track personal data. Consumers want to track and maintain this information so they can have a better understanding of their health indicators and activity levels. This information is powerful. It can encourage consumers to live healthier lifestyles and be more active. In addition, popular fitness trackers allow consumers to share wellness data about themselves with friends and family. By doing so, consumers can compete with friends for “steps” and encourage each other to be, and remain, active and healthy.<sup>17</sup> Thus, the use of this consumer-generated health data has the capacity to benefit large segments of society as a whole.

Before these innovative new technologies were available, most consumers had little to no access to detailed health and fitness information, which likely only was collected during hospital and doctor visits. Today, consumers can compile a tremendous amount of information in real-

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<sup>17</sup> See also ICF International, *Gaming to Engage the Healthcare Consumer*, at 2 (Nov. 7, 2013), available at <http://www.icfi.com/insights/white-papers/2013/gaming-to-engage-healthcare-consumer> (“Incorporating gaming principles—such as badges, leader boards, and the like—have proven to be effective methods for modifying human behavior.”).

time and use software and applications to identify trends and better understand their data. In this way, these consumer-centric products and services give consumers more access to, and control over, their health information than ever before.

These devices do more than just allow consumers to access and control their data. They can and do improve health outcomes by enabling consumers to act in response to the data they generate. The Vitality Group found that 13 percent of health and fitness device users within its wellness program who were not previously engaged in fitness activities reduced health risk factors by 13 percent, and users who were already active reduced risk factors by 22 percent.<sup>18</sup> These benefits are likely to intensify as consumers begin to use wearable devices and other consumer electronics to provide, *when consumers choose*, consumer-generated health information to their caregivers. The unprecedented amount and granularity of data may improve caregivers' ability to treat their patients. According to Dr. Peter Weiss, former National Health Care Advisor to Senator John McCain's Presidential Campaign, and technology advisor and consultant, Grayson Brulte:

Data gathered from wearable devices that is shared with your doctor through an opt-in, real-time secure connection is what we are calling "intelligent data." This is data gathered from smart devices, and then shared with your doctor in real-time before being added to your patient profile. Unlike a visit to the doctor today, during which a patient is able to provide only a slim snapshot of his or her current medical condition, "intelligent data" provides a complete beginning-to-end medical profile. This provides a more

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<sup>18</sup> Press Release, The Vitality Group, *Fitness Devices Impacting Employee Health According to Vitality Study: Pedometers, activity trackers, and smartphone applications on the rise*, Apr. 23, 2014, <http://www.thevitalitygroup.com/fitness-devices-impacting-employee-health-according-to-vitality-study/>.

holistic picture of an illness for the doctor to consider when making a diagnosis.<sup>19</sup>

These capabilities will improve as technologies and devices continue to improve. For example, Microsoft is expected to release a Smartwatch, which, unlike other already-released consumer devices, will track a user's heart rate continually over the course of the day,<sup>20</sup> and Apple recently announced its HealthKit service, which will enable the iPhone to track, record, and analyze users' fitness levels and, eventually, provide that information to healthcare providers in real-time.<sup>21</sup> Capabilities such as these will provide doctors with new insights that would not otherwise be apparent during an office visit.

Other devices and services already are saving consumers' lives. Personal Emergency Response Systems, for example, enable anywhere-anytime assistance services for those at high risk, including seniors.<sup>22</sup>

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<sup>19</sup> Peter D. Weiss and Grayson Brutle, *Doctors Will Play New Roles as Wearable Tech Evolves*, Ideas Lab, Apr. 29, 2014, <http://www.ideaslaboratory.com/2014/04/29/doctors-will-play-new-roles-as-wearable-tech-evolves/>; see also, e.g., Megan Anderle, *How doctors are using wearable technology*, Tech Page One, May 25, 2014, <http://techpageone.dell.com/industries2/healthcare/how-doctors-are-using-wearable-technology/> (describing current and next-generation wearable, ingestible, and implantable health technologies and hands-free patient care and communication).

<sup>20</sup> Parmy Olson, *Exclusive: A Microsoft Smartwatch Is Coming*, Forbes, May 29, 2014, <http://www.forbes.com/sites/parmyolson/2014/05/29/exclusive-a-microsoft-smartwatch-is-coming/>.

<sup>21</sup> See Ben Gilbert, *Apple's Health app for iOS 8 collects your vitals from Nike and more*, Engadget, June 2, 2014, <http://www.engadget.com/2014/06/02/apple-healthkit>.

<sup>22</sup> See, e.g., AT&T, AT&T EverThere, <http://www.att.com/att/InnovationStore/products/everthere/#fbid=g-EK3bEEgg0> (last visited May 31, 2014); Verizon, Lifecomm, <https://www.verizontelematics.com/solutions/wellness.php> (last visited May 31, 2014).

In the future, applying these services to granular, consumer-generated health and wellness information may enable accurate predictions of certain health events for seniors and individuals with chronic diseases,<sup>23</sup> allowing medical personnel to take action *even before an adverse health event occurs*. The health data that these innovative devices generate can protect individuals and save lives.

In addition, consumer-generated health and wellness information may offer opportunities far beyond improved healthcare provided to individuals. The ability of health and fitness devices to aggregate vast amounts of consumers' health and wellness information may allow new insights into the human body and health. Put another way by Dr. Leslie Saxon, a cardiologist at the University of Southern California Keck School of Medicine, “[w]hat’s going to accelerate health as much as anything is consumer devices having [medical] features on them so that we’re continuously collecting the data over a large population of patients. [Consumer electronics manufacturers] have the ability to, unlike medical companies, create continuous engagement with their users.”<sup>24</sup>

This groundbreaking opportunity has not been lost on manufacturers. As he announced Samsung’s vision for digital health just two weeks ago, Young Sohn, Samsung’s chief strategy officer, said he attended the event “to outline the single greatest opportunity of our generation: To better understand our physical well-being, to give a voice to what is happening in our

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<sup>23</sup> See, e.g., Adario Strange, *Apple Prepping Sensors That Predict Heart Attacks, Report Says*, Mashable, Feb 16, 2014, <http://mashable.com/2014/02/16/apple-iwatch-could-include-heart-attack-predictor/>.

<sup>24</sup> See Fred O’Connor, *Wearable devices with health IT functions poised to disrupt medicine*, PC World, May 1, 2014, <http://www.pcworld.com/article/2150680/wearable-devices-with-health-it-functions-poised-to-disrupt-medicine.html>.

bodies.”<sup>25</sup> Samsung’s Digital Health Initiative intends to use open hardware and software platforms to accelerate the development of advanced sensors, algorithms, and data collection and analysis<sup>26</sup> and, as part of the initiative, Samsung partnered with the University of California, San Francisco to create the Center for Digital Health Innovation that will work to validate the sensors and algorithms produced within the Samsung ecosystem.<sup>27</sup> These innovations truly have the capability to revolutionize medical understanding, as well as healthcare.

#### **IV. CONSUMER TRUST IS VITAL TO REALIZING THE BENEFITS OF INNOVATIVE HEALTH AND WELLNESS TECHNOLOGY**

CEA and its members are committed to earning and maintaining consumers’ trust so that they can continue to deliver on the promise of these new life-enhancing technologies.

Consumers recognize that health and fitness devices will generate and collect personal data.

Indeed, consumers use these devices precisely for that reason. But consumers will not use them if they do not trust the devices to protect their data. Manufacturers and service providers understand and take seriously the need to provide data privacy and security features that protect consumer-generated data and allow consumers to control when and with whom they share their data. Indeed, consumer trust and privacy protections are brand differentiators, particularly with respect to devices that collect and use consumer-generated health data. In this way, consumers’

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<sup>25</sup> See Alexis Madrigal, *How Wearable Devices Could Get Doctors’ Stamp of Approval*, Forbes, May 29, 2014, <http://www.theatlantic.com/technology/archive/2014/05/how-wearable-devices-could-officially-enter-the-doctors-office/371858/>.

<sup>26</sup> Press Release, Samsung Electronics, *Samsung Launches Major Digital Health Initiative*, May 30, 2014, <http://www.fiercemedicaldevices.com/press-releases/samsung-launches-major-digital-health-initiative-0>.

<sup>27</sup> See Alexis Madrigal, *How Wearable Devices Could Get Doctors’ Stamp of Approval*, Forbes, May 29, 2014, <http://www.theatlantic.com/technology/archive/2014/05/how-wearable-devices-could-officially-enter-the-doctors-office/371858/>.

interests in protecting their data are aligned with manufacturers' and service providers' interests in providing new health and fitness devices.

**V. CONCLUSION**

CEA appreciates the opportunity to comment on the important, life-changing developments in the health and fitness device market. CEA and its members are ready to assist FTC staff as it further considers these important issues.

Respectfully submitted,

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/s/

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