

## The "Quantified Self": Security Risks of GPS/Fitness Tracking Devices

Barcena, Wueest, and Lau (2014) from Symantec (a large, well-known cyber-security company) defined the "quantified self [movement]" as a self-tracking (via technology) lifestyle. People have adopted tracking their whereabouts, selfies, personal biometrics, and "every facet of their lives with the aid of technology" (Barcena et al., 2014, p. 4). One would be surprised about the kind of information that may be tracked including: body pH, menstruation/fertility, stool/bowel motion, location, altitude, time, travel, sexual activity, and tooth brushing (Barcena et al., 2014). Any data that may be tracked may also be used in a malicious way which brings the topics of privacy and security to the forefront of discussion.

Data tracked by fitness devices and/or mobile apps are not exempt from vulnerabilities (Eadicco, 2014; Kovac, 2014; Mills, 2011). Netflix employees hacked Fitbit during their 2014 company competition to create new features; they created a sleep function that paused Netflix when the Fitbit wearer fell asleep (Betzner, 2015). A German anti-virus company, AV-TEST, noted that 6 out of 9 of the top-selling fitness trackers can be hacked into via any Bluetooth-enabled device (Betzner, 2015). President Obama's Fitbit Surge was potentially a national security nightmare, and Senator Chuck Schumer appealed to companies to tighten security loopholes (Gilbert, 2015).

GPS beacons are no better. People do not realize how much information they are leaking out by publicizing their running or walking route, for example. Someone can easily build a profile on the device-wearer--location, favorite routes, work-time, off-time, time-away-from-home, neighborhood, economic status/wealth, favorite stores, shopping habits, frequented gas stations, and etc. Technology has made it easy for stalkers and/or data harvesters (e.g. for marketing, and targeting) (Mills, 2011). Magid (2014) noted that 20% of fitness apps did not transmit passwords securely, and 52% of apps did not disclose privacy policies.

Awareness of technology and the "quantified self movement" is like the tip of an iceberg. Right now, people are riding the waves of excitement over technology capabilities and capitalism. It is everything below the "tip of the iceberg" that has potential to haunt consumers. Technology is a double-edged sword. It is imperative that humans develop enough foresight and vision so that technology does not become a runaway train.

## References

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