Cathal Enright

MSc in Management of Information Systems

An Exploratory Study of the Security and Privacy Issues Affecting the
Adoption of the Internet of Things

Patrick Joseph Wall

2016

Abstract

Every now and then a new technology is introduced to the world that becomes a prominent feature of our lives. Weiser (1991) envisioned that "*the most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it*". The Internet of Things (IoT) has the capability of doing just that as it is "*set to be the next big revolutionary technological change, it will change the way we live our lives*" (Singh, Tripathi et al. 2014). IoT is the next "*technological revolution*" (Tan and Wang 2010).

With the rise world-wide of smart technologies and 'smart' device ownership, IoT has emerged as one of the major trends shaping the future of technology. Everyday items such as TVs, cars, watches, light bulbs and refrigerators etc. are already being connected to the internet and many more are in development stages.

Although the IoT will add to the convenience in our lives, it will also create additional risks. Like all new developments, there is a potential for both increased opportunities and threats for users. According to an array of academic research papers ((Skarmeta and Moreno 2013) (Das 2015)), security and privacy are key concerns for IoT technology and its expansion into widespread use.

This paper aims to address the issue of IoT security and privacy by interviewing a group of IoT users about their concerns and perceptions on the subject. The paper highlights how existing approaches to ensure security in IoT are incomplete, and that many weaknesses and threats to its end users exist. The study will discuss the challenges and provide analysis for future research work to enable a more secure IoT environment.