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USER'S MOTIVATION OF USING IoT PRODUCTS: A CASE OF SMART HOME

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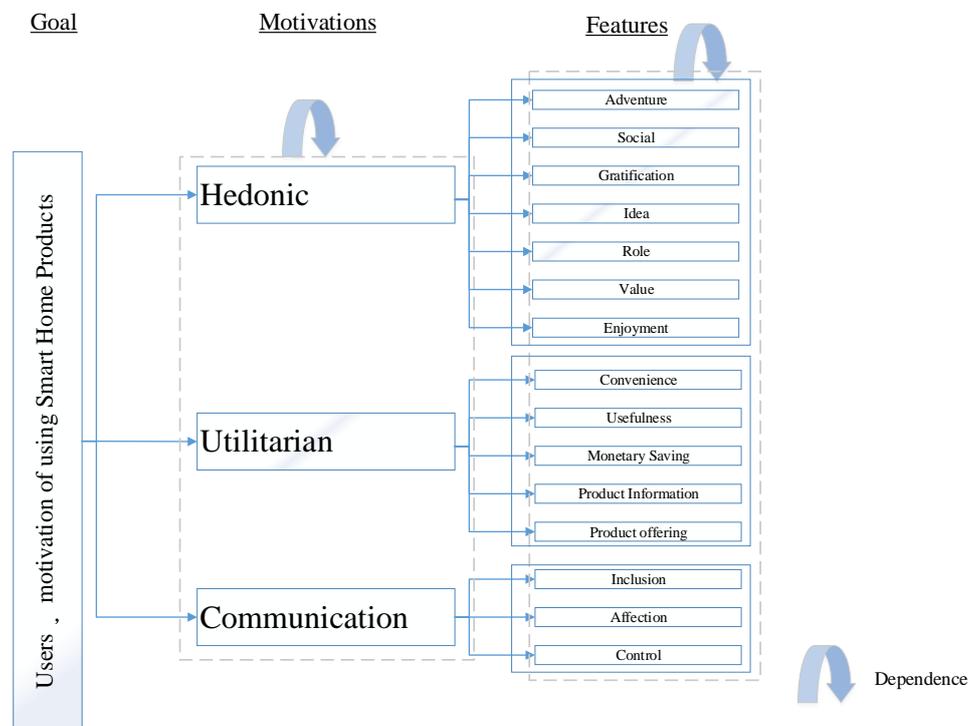
ABSTRACT

Introduction: In recent years, applications related to the concept of IoT become one of the most popular issues all over the world. Countries and enterprises devote themselves to developing the technique and application related to IoT. The range of its applications is very wide, including transportation, medical treatment, electricity, logistics, and home, etc. Asian countries set forth some development projects in the past decade, demonstrating the ambition and competition between countries in developing IoT products. Taiwan has started to push the development of smart home related applications since 2008. After development for some years, insufficiency in actual implementation and diffusion remains given our technological advantage.

Research purpose: The purpose of this research is to identify the user's motivation of using Smart Home products. It intends to discuss about the users' motives and prioritize the weights to enhance the probability of success for developing related products.

Literature review: IoT is a concept that every physical thing in this world could be connected to the Internet for different situations. Smart Home is one of the applications under IoT concept. There are many papers talking about the application framework and related technologies used in Smart Home, but they rarely give attention to users' motivation of using Smart Home products.

Research framework: The research framework contains three motivations—hedonic, utilitarian, and communication. And there are multiple factors affecting three motivations. The research model of this study is shown in figure below:



Research method: This research intends to study the motivation of users for using IoT products, taking smart home as an example. First, we study the related literature review and use modified Delphi method to identify the common critical features of smart home under each motivation category. Using these common features, we develop the ANP expert questionnaires to prioritize and assign weights for these features. The same process is applied to the three motivations and their weights are calculated.

Expected contribution: The result can enable developers of smart home products to understand what kind of consumer motives they should understand and attend to when developing and promoting smart home applications. This enhances the probability of success for developing related products in the future.

Current progress: This research has established the research model and reviewed the related literatures. Other stages will be completed before December 1, 2014.

Keywords: Internet of things (IoT), smart home, utilitarian motivation, hedonic motivation, communication motivation, modified delphi method, analytical network process (ANP).