



Smartphones habits, necessities, and big data challenges

Muhammad Anshari ^{a,*}, Yabit Alas ^b

^a Universiti Brunei Darussalam, Continuing Education Centre, Brunei

^b Universiti Brunei Darussalam, Institute Asian Studies, Brunei

ARTICLE INFO

Available online 19 September 2015

Keywords:

Big data
Smartphone
Social networks
Instant messenger

ABSTRACT

Smartphone usage reframes our daily life activities to support ease, convenience, multitasking, and always connect with others wherever we are. The excessive use of a smartphone can generate a large amount of data. Recently, the term of big data is popularly used to describe data that is high volume, high velocity, and high variety and the exponential expansion and accessibility of data, both structured and unstructured. A smartphone with Internet produces a huge amount of data that will enhance users' experience through volume, value, variety and velocity. This study was done through inductive approach by distributing questionnaires in Brunei Darussalam (Brunei) to understand the smartphone habits of users in Brunei. The analysis had identified the concerns that become the focal point of a study on the habitual using of smartphones in daily activities. The study was conducted in specific context, yet the methods and findings can be used into broader contents and contexts. The majority of respondents use smartphones to access Internet excessively. Since, they depend on smartphones then they deserve to get better value added and services. The paper proposes the findings relating to the big data concept.

© 2015 Elsevier Inc. All rights reserved.

1. Introduction

Smartphones are becoming central to our everyday lives. Their main purpose is to fulfil tasks both at home and at work. Skierkowski and Wood (2012) stated that mobile phones are also very important in our lives. Mobile phones – known as cell phones by people – have become the fastest communication device around the world. Their developed versions are nearly replacing computers and they are pocket size. These properties are the biggest proof of why they are so important in our lives. Since 1996, one of the fastest growing novel technologies in the mobile phone market is a smartphone. Since its introduction, the numbers of smartphones have reached an estimated 1 billion and expected to reach 2 billion in 2015 (Rushton, 2012).

There are wide ranges of smartphones available for purchase such as Apple, Samsung, HTC, Blackberry, Sony, Nokia and many more. Each of the different brands has much to offer to suit the customers' need and lifestyle. Furthermore, advanced mobile operating systems such as IOS, Android, and Windows as well as myriads of useful applications (Apps) have made the smartphone as must to have devices. The invention of the smartphone in general has brought many effects on our daily life, working tools, and learning process for students. One of the most important features required in smartphones is the Internet connection that enables them to have 24/7 connectivity through the mini browser or Apps for many purposes, which may include searching for information, connecting to a social network, or downloading music, video and related stuffs. All recent smartphones provide connection to the Internet along with cameras, video or audio players. On the other hand, supplier and business organizations can reach their customers through their smartphone easily and conveniently. Therefore, it is important to examine a future trend of the smartphone through the view of emerging big data technology.

* Corresponding author at: Continuing Education Centre, Universiti Brunei Darussalam, Jl. Tungku Link, Gadong BE1410, Brunei Darussalam.
E-mail addresses: anshari.ali@ubd.edu.bn (M. Anshari), yabit.alas@ubd.edu.bn (Y. Alas).

The idea of big data came from the rapid growth of the volume of information that cannot be fit into the computers used to process them (Schönberger & Cukier, 2013). Therefore, what innovators did was that they invented computers or systems that are able to efficiently process the vast amount of data. Big data are collected whether through online or offline. These data can be gained from any online sources such as social media (Facebook or Twitter posts, etc) which can be used for the organization's use to understand the patterns made by the users or machines like smart metres e.g. recording how much energy consumption of electricity, water and even gas (Watson, 2014). This information amplifies the fact that data could be analysed and used to reveal patterns within the processed data. In other words, it could greatly help the organization to understand the habits of a customer and use it to their advantage; on the other hand, users may benefit from the comprehensive and appropriate information for their own decision-making (Low & Anshari, 2013).

This study concerns about the sustainable service-oriented businesses in response of organizations, either profit or non-profit, to the mass adoption of smartphones and the advancement of Information and Communication Technology (ICT) especially big data technology. A sustainable organization seeks to create long-term values by embracing the opportunities and risks related to the protection, enhancement, and sustainability of the important resources, which are data and information. Our study is aimed to figure out the habits of people on smartphones and how an information service provider could enhance users' experiences in response to the users' habit on smartphones. Even though, the study is conducted in Brunei, the discussions may trigger other researchers to expand into different contexts and scenarios. We conducted surveys with people in Brunei to find out the users' behaviour, habit, and preference towards the smartphone and their online activities. Big data is used to analyse the phenomenon due to the changing of business environment mainly caused by the Internet of Things, cloud computing, and Web 2.0. In the next section, we present a literature review of related work. Section 3 contains the methodology of our research. We present our analysis and findings and discuss them in Sections 4 and 5; finally the conclusion is presented in Section 6.

2. Literature analysis

Although a smartphone cannot replace all the desktop's or laptop's functionalities, it is handy and with the growing number of applications (Apps) developed for smartphones, they become very powerful devices. Unlike a desktop or laptop, smartphones can be carried around conveniently, either as devices for communication or devices for recording, playing or to some extent manipulating sounds, images and videos which are demanded by today's generation (Thompson, 2012).

According to Smith (2015), mostly, smartphones are used for calling, texting or basic Internet browsing. Research showed that 62% uses their mobile devices to search for information about health condition, 57% used it to do online banking, 44% used for information about a place to live, 30% to take class or get educational content, and 18% to submit a job application. The majority of smartphone owners use their phone to follow along news and share details of local happenings with others, whereas 68% frequently use their phone to follow breaking news events, and 67% used it to share pictures and videos.

With many Apps that can be conveniently utilized, the smartphone market is growing very fast. As such, the smartphone market is very profitable. Both old players and new players are competing to take advantage of the growing market by offering them innovative products. Amongst those players are Apple, Nokia, LG Electronics, HTC, Samsung, Acer, BlackBerry, Sony, Huawei and Google. Nowadays, the main player of SMD is Samsung, which accounts for 24.9% market share in Q2 2014, more than double Apple's, which is 11.7%. Other major players are Huawei (6.7%), Lenovo (5.2%), and LG (4.8%) (IDC: *Smartphone Vendor Market Share, 2014*).

Nowadays people are always in touch with their smartphone. For instance, Douglas (2011) described in South Korea, that more than 10 million smartphone users do mobile shopping in Tesco's South Korean network of shops. The commuters while waiting for the train from work, can simply do online shopping. The glass wall of subway stations plastered with pictures of Tesco's product, labelled with QR codes – black and white pattern; it's like a bar code. The user can scan it with their mobile devices and if their train comes before they finish shopping they can still shop inside the train.

They demand arrays of innovation in services and products accessible through smartphones that need responses from the service provider. For instance, users who drive vehicles demand for an attractive alert system in their smartphones for providing best route navigation and avoiding terrific traffic jam through accident live data updates at a specific location. This response is simply because users have been using smartphones for their daily life activities, including travelling. This requires sustainable innovation in both process and product developments to achieve sustainability in business. The demand for faster, cheaper, better services coupled with real time system management from customers has driven businesses to find integrated business strategies and solutions. In order to achieve this integration, information sharing is considered necessary to reduce inefficiency and waste of resources to foster sustainability (Mourshed, Matipa, Keane, & Kelliher, 2000). Information sharing can be facilitated through big data approach and methods.

2.1. Big data

Big data is a huge amount of data that able us to capture, link, collect, store and organize information. It is able to broaden its capabilities to transfer and share, predict, visualize, capture and search data. Big data is known as the fourth generation of computing (Watson, 2014). Because of the growth and evolution of Information and Communication Technology (ICT), big data extends its capacity in terms of volume, velocity and variety overtime (Anshari, Alas, & Guan, 2015).

In simple definition, big data is merely a huge amount of data, which is fast and diverse. In another perspective, big data is also known for the 3 Vs: *Volume, Velocity and Variety* (Laney, 2001). Big data is created very quickly in many different forms or volumes.

Download English Version:

<https://daneshyari.com/en/article/1026513>

Download Persian Version:

<https://daneshyari.com/article/1026513>

[Daneshyari.com](https://daneshyari.com)