Shop Banzai!: A mobile application to establish channels for targeted word-of-mouth advertising

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Despite the rapidly growing Internet, a significant amount of retail products that remains non-existent on the web makes it difficult to gather related information about them. In this paper, an Internet mobile application that utilizes user-generated content to provide relevant product information to the users was proposed. This application serves as a platform for smartphone owners to share word-of-mouth within a smaller social circle, assisting them across the decision-making process. As the word-of-mouth on the present Internet has varying impacts, the controlled environment in this applicaton will help to measure its effectiveness in relations to context, source credibility, relevance, and triggering event.

I. Introduction and Background

This trend of doing research on the Internet has expanded to shopping as e-commerce and smart handheld devices start to enjoy their popularity in the recent years. However, word-of-mouth still remains one of the unexplored areas in terms of innovation in this platform.

According to a recent research by McKinsey, word-of-mouth has the strongest impact when its content fulfills the following criteria: trusted, influential, relevant, and comes from own experience (Bughin, Doogan, & Vetvik, 2010). However, in the existing system, it greatly varies in all these respects.

As the number of smartphone owner increases, people start to do their research about products in the brick-and-mortar stores itself, regardless whether they will purchase them online or at the physical store (Smith, 2013).

However, a major drawback of doing research online is the inconsistency of information availability. For example, a single product on an online retailer's website may be present in multiple pages (for example, with different reviews). Also, the large number of products that do not exist on the web further adds to this problem.

II. Word-of-mouth platform

There are two main factors that were taken into account in deploying this service into the smartphone platform: convenience and functionality. Smartphones provide the mobility that allows users to look for information easily even during shopping, and its hardware functionality can be utilized to create an interactive application.

This application is designed to help people in making the purchase decision process from the very first step, which is the discovery/awareness stage. The direct recommendations from close friends or relatives within the social network have a much stronger impact on users' behavior.
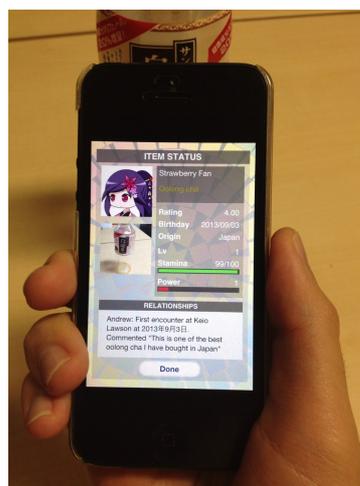

Figure 1. Client's user interface displaying item's "social" data

On the product research stage, two alternatives are provided for product search: barcode scanner and in-app search engine.

While many smartphone applications provide barcode scanners, they are still limited in terms of how far-reaching they are in covering the range of items that are available in the current market. For this reason, the barcode-scanning function in this application allows users to register new items, post ratings & reviews, input location of purchase, etc.

Using a product's barcode (UPC, EAN, JAN, etc.) as a unique identifier would prevent the occurrence of duplicate accounts within the system; thus creating a more concise and rigid database (Google, n.d.). After an item has been registered into the system, the item's account will be created permanently and users would be able to retrieve its data via barcode-scanning or search engine.

Our approach in providing a novel and engaging user experience is to integrate a game aspect into it, which adds a layer abstraction by treating items similarly to real people (by having their own birthday, nicknames, country of origins, relationships, etc. [as shown in Figure 1]). This

item's "social" data is not only used to help users in making a purchase decision, but also to create the story-telling aspect of the game. In other words, every item is building its own story as more users purchase and scan the item.
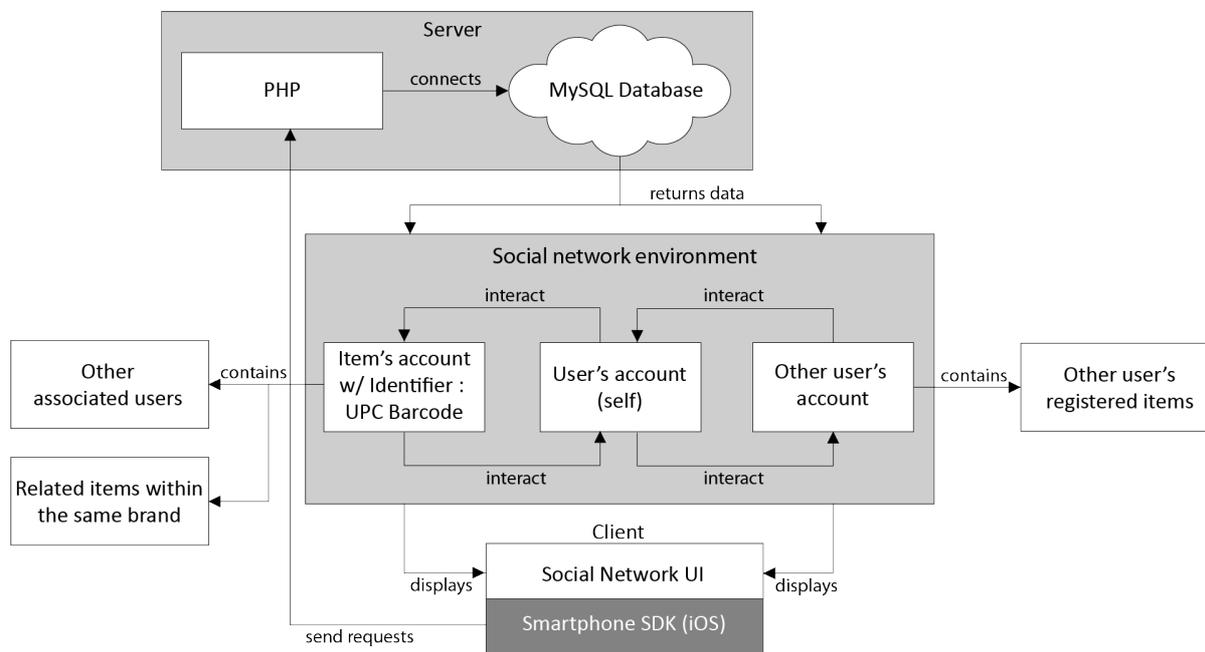
Figure 2. System architecture of Shop Banzai!

III. System Architecture

This system follows the traditional client-server model [as shown in Figure 2], in which clients send HTTP requests over the network to a remote server to upload and retrieve data (it is currently developed on iOS platform).

The remote server contains a relational database that manages users and items data within the social network and responds to client's requests. In the case of registering an item's name into the system, users' input of strings that is received by PHP will go through a string preparation (PRECIS Framework [4][5]) before they are registered in the system, to ensure a user-friendly platform for search.

The main essence of the system is the social network, which manages interconnected relationships between users and items. Users can see the list of purchased items that have been recorded through barcode scan. In an item's profile page, user can see other related items based on the items' brand, and also which other users have previously bought the item.

Staying true to the concept of a social network, users are able to interact with one another by looking up other user's purchased items, filtering the items by category, finding items that both parties have in common, etc. Furthermore, there is

also a built-in recommendation system (similar to e-mails) in the application that allows users to specifically recommend purchased items to even smaller groups of people, creating a conducive environment for targeted word-of-mouth advertising.

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