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# Using Tagging Games to Engage Expertise Profiling in Organizations

**Jun Zhang**

Pitney Bowes, Inc.  
35 Waterview dr.  
Shelton, CT 06484 USA  
[Jun.zhang@pb.com](mailto:Jun.zhang@pb.com)

**Tao Dong**

University of Michigan  
Ann Arbor, MI 48104 USA  
[dongtao@umich.edu](mailto:dongtao@umich.edu)

**Alexandra Mack**

Pitney Bowes, Inc.  
35 Waterview Dr.  
Shelton, CT 06484 USA  
[Alexandra.mack@pb.com](mailto:Alexandra.mack@pb.com)

**Yuling Wu**

Pitney Bowes, Inc.  
35 Waterview Dr.  
Shelton, CT 06484 USA  
[Yuling.wu@pb.com](mailto:Yuling.wu@pb.com)

**Abstract**

Collecting and sharing data on employee expertise in large organizations enables people to connect in order to get work done. The best way of collecting that data is by exploiting the social knowledge people have of their own colleagues expertise, however, the challenge is in engaging workers in the data collection process. In this paper, we present an expertise tagging game, as a novel method to collect various facets of people's expertise dynamically, and to reveal the knowledge

network in which expertise is shared and sought. Our pilot study indicates that the game is attractive to users, and different participation patterns are revealed.

**Keywords**

Expertise identification, social tagging, Game With A Purpose, participatory design, engagement design, expertise network

**ACM Classification Keywords**

Group and Organizational Interfaces – *collaborative computing, computer-supported cooperative work, theory and models, web-based interaction.*

**Introduction**

Finding expertise is one of the most common tasks for people to get job done. Our user research shows that within a large corporation, the ability to find worker's expertise enables people connect to experts to gain knowledge, recruiting experts to project teams, management of resources, talent development, and increase innovation and productivity.

Many computer systems have been built to support expertise finding in organizations [1]. These systems are usually called expertise finders or expertise recommenders. They recommend people who have the sought knowledge to information seekers based on the systems' collections of data that reflects people's

expertise. However, collecting data to build expertise profiles for these systems in an organization is a difficult and daunting task.

For early systems, common approaches for building expertise profiles mostly relied on human's manual work, such as editing personal profiles, assessment interviews, and extensive surveys. These methods are usually costly and time consuming. Furthermore, because of the dynamic nature of the expertise networks, these assessments usually became obsolete quickly and were difficult to maintain overtime.

Most modern systems use information retrieval techniques to discover expertise from implicit or secondary electronic resources. However, this approach also has many limitations. For instance, Lindgren et al. [6] found that automatic profiling by crawling users' documents in an organizational knowledge base did not provide a satisfactory expertise profile, as users reported the result is incomplete. Furthermore, because of the potential privacy and security concerns, organizations and individuals are reluctant to adopt such approaches

We have found that the best source of information on expertise comes from friends and colleagues. However, the challenge lies in mining that "local knowledge" of expertise data. By engaging people in the process of sharing their knowledge of others' expertise, a robust expertise finder can be built.

Our key problem was how to engage people in continually creating and updating expertise profiles for themselves and their colleagues. We decide to try a new approach: to make it fun by creating a social

game. Games have been used successfully to engage workers in other tasks, such as participatory design [5]. Inspired by Luis's work in ESP game [2], we designed a social game, called Expertise-Tagging Game (E.T. Game), try to address the expertise profiling issue. This paper describes our designs and the result of a pilot study.

### **Making Expertise-Tagging a Fun Game**

In order to make a game engaging, it must be fun, which raises the question of what "fun" is. Game literature cites different fun factors in games. For instance, some scholars viewed that fun primarily comes from the enjoyment of problem solving. Other emphasized other factors including competition, fellowship, discovery, expression, and submission [4]. We designed our game around these factors.

#### ***Fun as Enjoyment of Problem Solving and Competition***

Figure 1 shows the tagging interface of the E.T. game. The key action for a user to play a game is trying to tag a person with the keywords input by that individual or by other users who have played the game. The person's expertise tags are presented in a masked tag cloud when the game starts; the user types keywords in the text field once a time. If there is a match found, the matched word is revealed and the user earns some points based on how many other people have also tagged the same keyword. The goal of the player in the game is to reveal all the masked words in the tag cloud.



have tagged themselves. Totally 2306 tags were collected and 883 of them are distinct tags. These numbers indicate a high participation rate.

We interviewed 8 users to better understand their motivations and experiences in participating. From the interview, we found that users were motivated by different fun factors in playing the game. For instance, four users told us that they enjoyed the challenges of trying to reveal the words in tag clouds. Some players told us that they enjoyed competing with their peers to become one's best "knower" or top connectors of the organization. For instance, two of top players told us that once they played the game for three hours straight one day after the work trying to beat each other. Senior employees we interviewed were engaged by the social implications of the game rather than its competition nature. One manager told us that it can be a great team building tool. People can use it to recommend or recognize each other as well as learning what others are good at. One interviewee noted that it can "build a positive sharing atmosphere in the company."

Above all, the pilot study indicates that our design is a promising method of gaining long term engagement. For next step, we are going to deploy the system into a larger scale of user in the company to further study it.

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