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## Discovery and Presentation of Community Membership at a Physical Event

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## **Discovery and Presentation of Community Membership at a Physical Event**

### **ABSTRACT**

In many contexts, an individual is part of a large group gathered together and may not know that there are others present that she knows. This disclosure describes techniques that, with user permission, automatically identify others present at an event that the user has something in common with. With user permission, attendees at an event are identified and their attributes are retrieved from online profiles. Subsets of attributes are identified that correspond to small groups and users that members of the subset are notified of the presence of others in the subset. A user interface is provided that uses color, shape, or other attributes to make it easy for a user to identify others in the crowd that they may know.

### **KEYWORDS**

- Physical event
- Social network
- Social group
- User profile
- User attribute
- User group
- Community membership
- Location determination

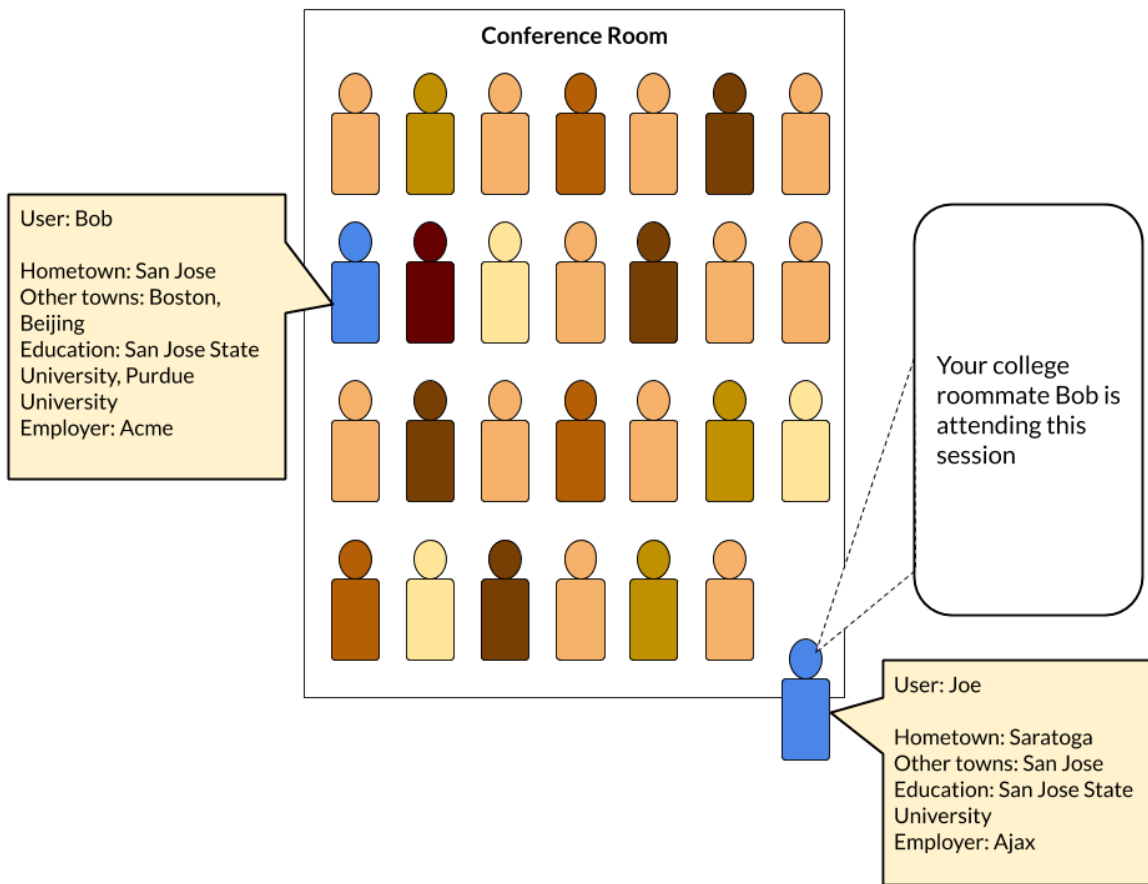
### **BACKGROUND**

In many contexts, individuals gather in large groups or crowds, e.g., at a business conference, at a concert, at a restaurant etc. In such situations, an individual may often not know that she is in the same community as others that she knows. For example, a long-lost friend can be sitting next to a person at a restaurant; however, not knowing that the person is in the same location can lead to the individual missing a chance to reconnect. Further, for many individuals,

a crowd of people can be anonymous and scary, e.g., to find someone to begin a conversation with.

## DESCRIPTION

In social situations where an individual is among a group of people or a crowd, it is often helpful for the individual to know if there is someone in the crowd that they know. Also, even in a crowd of strangers, if an individual can see things that they have in common with others, it can help the individual start a conversation to connect with someone in the crowd on a personal level. This disclosure describes techniques that enable providing notifications to individuals to enable establishing such connections.



**Fig. 1: Providing a notification of the presence of a known person in a crowd**

Fig. 1 illustrates an example of providing a notification of the presence of a known person in a crowd. As seen in Fig. 1, a user Joe enters a large, crowded conference room that includes many other individuals. The user is provided a notification, e.g., on their device, that his college classmate, Bob, is in the conference too.

The notification is generated based on identifying the presence of one or more other individuals that share one or more attributes with the user. Attributes that are shared by a relatively small number of people may be deemed interesting. For example, at an college alumni gathering that individuals attend with their families, a large proportion of the attendees may share the “college” attribute, which is therefore less interesting, than another attribute “Computer Science, Class of 2015” which may be shared by a much smaller number of the attendees. On the other hand, in a gathering where the attribute “college attended” is far from the current location and/or far removed from the current date, finding someone from the same school/time is likely of interest to a user and hence may be suitable for a notification to be provided to the user. On the other hand, if the user is presently near campus and currently in school, this attribute is likely not worth a notification.

The importance of an attribute may be determined on the user’s context. For example, for a speaker that is about to give a speech, seeing how many audience members attend a local college may be of interest and therefore, may be provided as a notification. For example, prior to the speech, the speaker and/or their staff may be able to assess the composition of the audience based on their public profile information. Based on such identification, the speaker can then tailor their speech, e.g., to focus on issues that are likely to be particularly important to the audience. In another example, people at a bar may be able to form groups of individuals with common interests.

With user permission, attendees at an event may be identified using available location determination techniques such as Bluetooth beacons, global positioning system (GPS) sensors, WiFi assisted location determination, cellular triangulation, etc. When an individual is detected as present at an event, their permission is obtained and profile attributes such as hometown, social network followers/friends, education, group memberships, etc. are retrieved from their online profiles, e.g., at a social networking provider, email provider, or other service. Only such attributes as permitted by the user are accessed, and at a granularity that the user permits. For example, certain attributes for which the user denies permission are omitted, while other attributes are processed (e.g., instead of using the user's exact age, an age range may be used) prior to use.

Upon retrieval of attributes, matching individuals (that have attributes in the same attribute subset) are identified, and a notification is provided to each user (as shown in Fig. 1). Further, attributes may be coded by shape, color, or other parameter, and displayed in a user interface at the corresponding user position. In the example of Fig. 1, the matching user Bob is represented in blue color, indicating to the user Joe that Bob is his college roommate. While Fig. 1 shows a notification, a user interface via an app or a webpage may be provided that enables a user to view the location and identify people or groups that they have something in common with.

## **CONCLUSION**

This disclosure describes techniques that, with user permission, automatically identify others present at an event that the user has something in common with. With user permission, attendees at an event are identified and their attributes are retrieved from online profiles.

Location determination technologies such as GPS, indoor localization, triangulation, etc. are

utilized to determine attendees and their location, and user profiles are obtained from social network profiles or other online profiles. Subsets of attributes are identified that correspond to small groups and users that members of the subset are notified of the presence of others in the subset. A user interface is provided that uses color, shape, or other attributes to make it easy for a user to identify others in the crowd that they may know.