

# Supporting Multiple Identities in the Instant Messaging Virtual Community<sup>1</sup>

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## Abstract

*In recent years, Instant Messaging (IM) has become one of the most growing online communities, reaching millions of users at home and at work worldwide. As the community expands, assuming multiple identities (MID) becomes a common behaviour of the IM members. This paper reports our ongoing research on the support for MID. Our study used an online survey and face-to-face interviews to identify user needs in supporting MID in IM. The study has identified five themes including single nickname, multiple avatars, multiple statuses, boundary control and interoperability. Reflecting on these themes, we propose a model of MID support in IM.*

## Keywords

Instant Messaging, multiple identities, virtual community

## 1. INTRODUCTION

In the past twenty years, there has been an increasing number of *virtual communities*, where different degrees of online interactions such as making friends, exchanging ideas, acquiring knowledge, entertaining, etc. take place (Jones 1998, McCaughey and Ayers 2003, Renninger and Shumar 2002, Rheingold 1993, Smith and Kollock 1999, Turkle 1996). Virtual communities are open playgrounds where members can assume *multiple identities* (MID) for different purposes such as adapting themselves to the community or accomplishing their playing roles. People can be whoever they want to be such as the opposite sex, different races, better looking, etc. (Donath 1999, O'Brien 1999). “*I’m not one thing, I’m many things when I’m MUDing*” (Turtle 1996), “*I have three or four personae myself in different virtual communities*” (Rheingold 1993). Supporting MID is, therefore, essential for conducting and understanding interactions in virtual communities.

This paper reports our ongoing study of the support for MID in the Instant Messaging (IM) community. To begin with, the next section introduces the IM virtual community and discusses the support for MID in current IM. Then the results of our study are reported. Finally, reflecting on the findings from the study we discuss a possible solution for providing MID support and conclude the paper with the description of our plans for future research.

## 2. MULTIPLE IDENTITIES IN INSTANT MESSAGING

### 2.1. IM: A Growing Virtual Community

Back to the first days, IM was largely used as a text-based messaging service for teenagers’ chitchat, but increasingly many features such as voice chat, webcam, emoticons, avatars, etc. have been added to IM. Today, both text-based and multimedia messages are exchanged over IM networks. IM users are no longer limited to teenagers, millions of home users and business users are now members of the IM community. The population of IM home users increased 28% from 42 million in September 2000 to 53.8 million in September 2001 (Perera 2001), and enterprise IM is growing at approximately 20% annually (Shukla 2003).

Of late, there is a large body of research on IM (Grinter and Palen 2002, Handel and Herbsleb 2002, Isaacs et al. 2002, Nardi et al. 2000). Those studies mainly investigate the adoption of IM in a particular cultural group. For example, Grinter and Palen (2002) examined IM’s support of interpersonal communication amongst teenagers. Nardi et al. (2000), Handel and Herbsleb (2002), and Isaacs et al. (2002) explored the use of IM in the workplace. Unfortunately, to the best of our knowledge no research to date examines the support for MID in IM.

### 2.2. Support for Multiple Identities in IM

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As IM becomes popular, it is possible that one user uses IM in different domains (e.g., domestic and commercial) for many purposes under different identities. Hence, there is a need for supporting MID in IM. The current model of MID support in IM is that *one username carries one virtual identity*. This model is used by four most popular IM networks including American Online Instant Messenger (AIM), ICQ or 'I Seek You', Microsoft Service Network Messenger (MSN) and Yahoo! Messenger (Yahoo). Currently, IM users assume MID by registering usernames with one or many IM networks. When a user enters the IM community, this user can take on many identities simultaneously by logging into different IM networks with different usernames. However, the user can only use one username to log into each IM network at a time. For example, a user can have two Yahoo usernames and three MSN usernames; s/he can log into both Yahoo and MSN networks simultaneously using two usernames—one Yahoo and one MSN. However, at a time the user can only log into Yahoo with one username.

In addition to that, current IM does not support different settings for different people in a user's messenger list or buddy list. That means the user's setting appears the same to all people in the buddy list. For example, a Yahoo user customises her/his status as *'Boo, I miss you'*, then everyone in the user's buddy list sees the same status. As Turkle (1996) argue, the self in cyberspace is fragmented and multiple, but *"multiplicity is not viable if it means shifting among personalities that cannot communicate"*. Putting this argument in the IM context, although the current model of MID support encourages multiplicity, it does not allow flexible switching between different identities in IM.

### 3. THE STUDY AND RESULTS

Our study is composed of an online survey and face-to-face interviews.

- The online survey consists of 11 demographic multiple choice questions, 33 7-point Likert scale questions and 3 open-ended questions that are used to gain a broad understanding of how MID is currently assumed in the IM community. 173 participants<sup>2</sup> took part in the survey. The participants are students from several universities in Australia. All of them had used IM for at least 3 months. Most of the participants were in their early twenties and use IM regularly: 35.1% use IM many times per day, 32.4% use few times per day and 23.1% use few times per week.
- After finishing the survey, we conducted further informal interviews with 6 participants selected from the 173 participants of the online survey. The interviews aim to have a deeper understanding of MID assumption in IM.

The study overall yielded much data which we are still analysing. This section reports preliminary results that mainly look at trends of the respondents' beliefs and usage. Five main themes have emerged from the study: single nickname, multiple avatars, multiple statuses, boundary control, and interoperability.

#### 3.1. Single Nickname

Members of the IM community recognise one another from their nicknames. A nickname can be edited by the *owner* or *other members*; thus members' nicknames can be the same or different from their IM usernames registered with IM networks. In some IM systems like MSN and ICQ, the users are allowed to edit their nicknames to what they want to be seen by other members, and others cannot modify those nicknames. For example, if a user creates a nickname as *'Dark angel'* then appears as *'Dark angel'* in other people's buddy lists, and they are unable to alter that nickname. However, other IM systems like Yahoo take an opposite approach by letting IM users to edit how they want to call people in their buddy lists.

This issue, single nickname, was not covered in the online survey, but grew out of the interviews. All six participants of the interviews found the method of managing nicknames used by MSN and ICQ very inconvenient. As stated by one participant *"MSN list is very annoying as it makes so difficult to find people. Many times, I want to look for a friend [in the buddy list] but I don't know who is who because my friends often change their nicknames. I have to go through the entire list and check their email addresses to find the one I am looking for"*. The study found that allowing IM users to edit their nicknames freely causes inconsistency in other users' buddy lists, hence providing a single nickname is a viable approach in supporting MID.

#### 3.2. Multiple Avatars

Our respondents found avatars interesting and useful. All respondents like avatars and use them for varied purposes ranging from a simple purpose such as *"avatar gives me something to look at when chatting"* to a more meaningful purpose such as expressing their mood to online friends, *"I use a funny avatar when I am happy"*. Around 80% of the respondents want to display different avatars when they chat with different people (mean = 5.18; std. dev = 0.91; n = 149). One participant responded *"I often use my real photo [as avatar] when chatting with Mom, Dad and my brother. But I'd use someone else's photos or cartoons when chatting with friends"*.

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<sup>2</sup> Some participants did not answer all questions, thus the number of valid respondents vary amongst questions.

On a practical level IM supports communication, but for many respondents IM is a place for social interactions, and sharing interests. We found that avatars are certainly effective in supporting IM to serve those purposes. As reported by one respondent *“If I have an interesting picture, I used to email to my friends. But now I often set the picture as my avatar so my friends can see it. But some pictures, I don’t want all people [in the buddy list] see it”*. Our respondents’ comments reflected the overwhelming interest in supporting multiple avatars in IM.

### 3.3. Multiple Statuses

While an avatar is a graphical expression of users, online status (referred to as status for short) is a text-based method commonly used by IM users to project themselves to other online friends. *“I often use status to tell my friends if I am sad or happy and also edit my status to tell them what I am doing like studying, cooking, and stuff”* said one participant. The text-based representation makes status very flexible in supporting the users to describe themselves to their online friends. *“Whenever my computer is switched on, I am in Yahoo. I don’t turn off my Yahoo even when I am busy doing assignments. I don’t want to use Yahoo default status like ‘busy’ I often use something like ‘working on law assignment’ instead.”* Nearly 75% of the respondents want to use different statuses with different people in their buddy lists (mean = 5; std. dev = 1.61; n = 149) (Figure 1). As the distribution of the responses is negatively skewed, we consider the median instead of the mean and std. dev. A median of 6 shows a strong need of providing multiple statuses in IM.

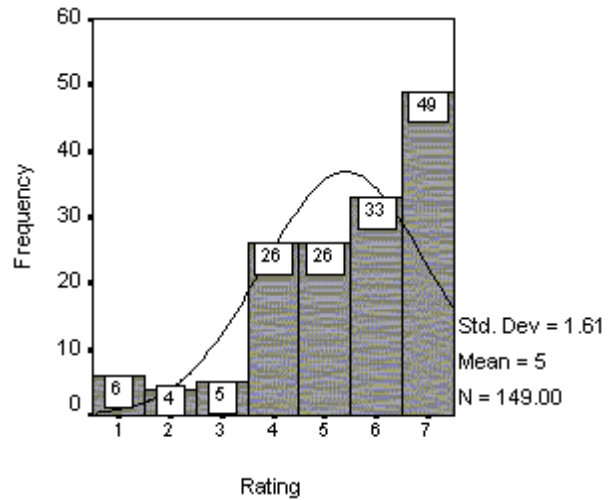


Figure 1: Responses to multiple statuses support

It is a common behaviour for IM users to interact with many people simultaneously. 92% of our respondents had used IM to chat with two people or more at the same time: 16.2% chat with a maximum of 2 people; 23.7% chat with a maximum of 3 people; and 52% chat with more than 3 people (mean = 3.20, std. dev = 0.09, n = 173). Often, topics of those concurrent conversations are different and people compose their status to reflect the topic of a conversation. One participant responded that after watching ‘Shrek 2’, she often uses the *‘donkey + dragon = so cute’* status when chatting with friends about the movie. Therefore, supporting multiple statuses allows IM users to customise their conversations with different people.

### 3.4. Boundary Control

We found that the way in which IM allows the user to be contacted at any time is a concern. Around 75% of the respondents want to control who can see them online (mean = 3; std. dev = 1.93; n = 149), as shown in Figure 2. Again, since the distribution of the respondents is highly positively skewed, we consider the median rather than mean and std. dev. A median of 2 indicates that the majority of the respondents disagree with the idea of not being able to control who can see them online. Some respondents choose to be invisible all the time because they do not want to be interrupted by other people. This was encapsulated by one respondent who stated, *“I never set status to available. I often start a conversation if I need to”*. It indicates that IM users are very careful about policing their boundaries of the social networks created by the IM community.

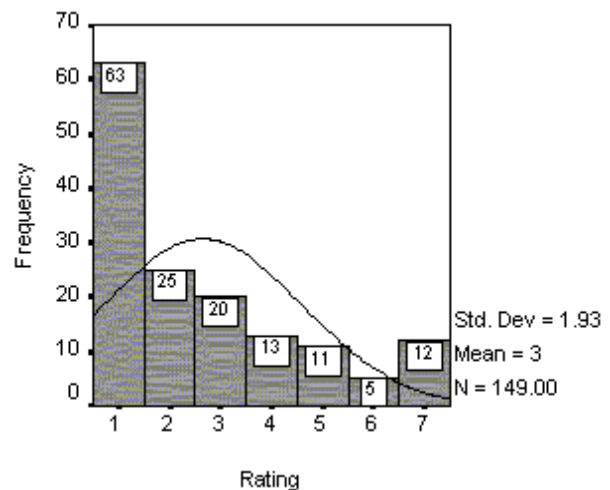


Figure 2: Responses to “I don’t want to control who can see me online”

### 3.5. Interoperability

*“I am using MSN since most of my mates use it”* is how one respondent justified why MSN is his favourite IM. It reflects the fact that IM users choose one IM tool not only because of its functionality, but also because of the choices of other people in their virtual community. Currently, there is a lack of interoperability across IM networks. Each IM network only supports its own registered users, for instance Yahoo users cannot log into MSN network and vice versa. One respondent said *“I like to use Trillian and Gaim, because I can install them in*

the lab and I can log in both MSN and Yahoo". When the users assume MID across different IM networks, it is crucial that they can easily switch between different identities. Hence, there is a strong need for interoperability between different IM networks. The users' shift from one identity to another should be transparent to IM services. That is, once the users join the IM community, they can assume any identity they want without having to know the IM service provider.

#### 4. DISCUSSION

In this section, we quickly discuss possible approaches to tackle the five issues reported above. First, regarding interoperability, this can be seen as a technical problem, which can be resolved by appropriate resource-sharing mechanisms between IM network providers. At an application level, developing systems like Trillian or Gaim that allow users to log into many IM networks simultaneously, can be one possible approach. Second, boundary control is a techno-socio problem that involves balancing between users' privacy and trust, and enforces high security. Much further work needs to be done to find a viable working policy for controlling a personal virtual boundary. Third, to support multiple statuses, multiple avatars and a single nickname, we propose a model that can support the one-to-many relationship between a *username* that a user registers with an IM network and their many *identities*. In our proposed model, as shown in the class diagram in Figure 3, each 'Username' or 'Group' can use many (1..\*) 'Avatar' and edit many (1..\*) 'Status'. That means, a user can create a separate avatar and status for each 'Nickname' in the 'Group'.

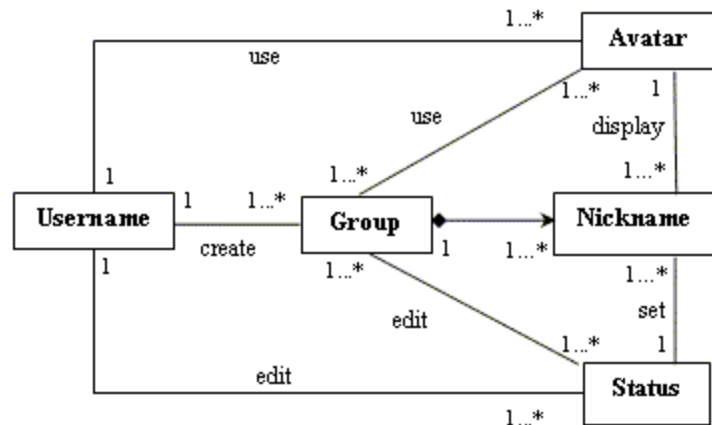


Figure 3: Class diagram shows the model of MID support

#### 5. CONCLUSION

Using an online survey and face-to-face interviews, we have identified five issues related to the support for multiple identities in the Instant Messaging (IM) community; they are single nickname, multiple avatars, multiple statuses, boundary control and interoperability. From the study, we have proposed a new model that supports multiple identities in IM. As future work, reflecting on the five themes growing out of the study, we will develop personas and scenarios that can be used to translate user needs into the design process.

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