Chapter 1.7
Presence in Social Networks

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ABSTRACT

This chapter describes the mechanisms of presence in social networks and presents an ontology that frames the purpose, content, methods of production and methods of consuming presence information. The concept of presence in social networks has been steadily evolving along with the Internet. Recognised as an essential feature of all instant messaging services from the IRC onwards, mechanisms for constructing and consuming presence information have become more elaborate, with the addition of more sophisticated mechanisms for producing, consuming and representing presence. A model for systems that offer presence services is developed, and this enables a number of future trends to be identified.

INTRODUCTION

In the context of social networks the term "presence" has a number of distinct meanings. Commonly within the literature of virtual environments, the discussion of presence is concerned with the personal experience of being present; that is, the "perceptual illusion of nonmediation" (Lombard and Ditton, 1997). However, there is also the sense in which presence is about the exposure of personal states and the awareness of the states of others, a usage which derives from the indicators of online presence and availability found in various kinds of social software tools, particularly instant messaging.

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The earliest forms of presence awareness in the Internet age seem to have taken as their inspiration the LED indicator schemes of the Internet hardware itself, routers and switches, where a green LED indicates that a device has been connected to the network, and orange indicates connected but has communication problems. This 'physically connected' way of looking at online presence is embedded in the assumptions of the earlier presence mechanisms of IRC and AOL Instant Messenger, with its concepts of "Online" versus "Away". However, as we discuss later, the concept of "presence" at the social level is more complex, and has subverted the meaning of the original indicator states.

Many presence technologies remain within the context of the laboratory or art experiment, however there is a trend in social networks for presence to be seen as an essential part of 'being in the network', with new services emerging with a specific focus on presence, such as Twitter, Jaiku and Explode. The "buddy list", once the preserve of instant messaging, is now a common feature of social networking applications, with "buddy icons" of currently online users decorating the pages of many "Web 2.0" websites.

In this chapter we examine the meaning of presence, the technologies for producing and consuming it, and construct the ontology of this exciting but often neglected aspect of social computing.

THE MEANING OF PRESENCE

What is the Message?

There is a possible 'cultural divide' in the use of technologies such as instant messaging as being fundamentally either messaging applications or presence applications (Boyd, 2005). For advocates of the presence perspective, presence is not a means for identifying opportunities for communication, presence is the communication; the availability and state of the participants in the network is the message.

For example, while the ostensible purpose of the presence mechanism in a service such as Skype is to indicate availability for communication, the way in which the presence indication is made is also content in its own right; it also provides a communication channel at a different level from that of a full two-way conversation. Services such as Skype, AOL Instant Messenger, and MSN have long offered the "custom away message" or "mood message" to augment the meaning of the standard availability metadata. The "mood message" typically appears alongside the availability graphic as a short piece of text (see Figure 1.)

These messages provide a surprisingly rich mechanism for communication, and its therefore not surprising that new forms of "micro blogging" have emerged that extend this property, such as Twitter.

The Purpose of Presence

Why do agents expose presence information to others? While individual motivations may vary considerably, an overview of the available literature suggests a few possible categories of purpose:

Figure 1. Example of mood message in Skype
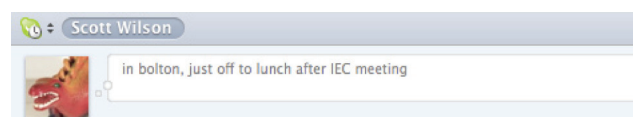
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