

Chapter 13

Meaning Makers: User Generated Ambient Presence

Germán Lado Insua

National University of Distance Education, Spain, and University College Dublin, Ireland

Mike Bennett

University College Dublin, Ireland

Paddy Nixon

University College Dublin, Ireland

Lorcan Coyle

University College Dublin, Ireland

ABSTRACT

Presence is an important part of our day-to-day lives. Often we will have a sense of who is around us and what they are doing by the sounds of doors closing, cupboards banging, footsteps on floors, voices vaguely heard through walls, etc. In digital spaces, such as GUI desktops, presence enhances our sense of connection with geographical separate friends and colleagues. In this article we report on Ambient Jewelry, which is a project exploring the intersection of individual and user generated customization with ambient presence displays. With this research we are seeking techniques that enable people to invent, discover and find new forms of ambient presence visualisations.

INTRODUCTION

Ambient Jewelry is a work-in-progress project that explores the intersection of individual and user generated customization with ambient presence. Awareness of presence is an important part of our day to day lives. Often we have a sense of who is around us and what they are doing by

the sounds of doors closing, cupboards banging, footsteps on floors, voices vaguely heard through walls, etc. As of yet presence representations, such as in Instant Messaging clients or on social networks such as Facebook, rarely enable us to control how our presence is represented. We cannot design colourful Jewels rather than virtual flowers (ambient presence avatars) that spin on our friend's desktops or webspace to show how fast we're typing. Nor can we create the relationships

DOI: 10.4018/978-1-60960-549-0.ch013

between arbitrarily designed presence avatars and how transforms of the avatars encode actions.

The designers of the presence systems specify the representation of presence. Within the project we took an open design approach. That is we acknowledge that users may be better suited to inventing presence representations to suit their needs, social status and social connectedness. There are two different roles for users to design and personalise Ambient Jewelry presence:

1. **The Creator of an Ambient Jewel:** They design an Ambient Jewel to fit their likes, e.g. they create the initial graphical design of a Jewel from a family photograph (static content). Then they make the Jewel dynamic by setting up how the graphical look of the Jewel changes based on their actions, e.g. type fast and Jewel blinks fast. Once a Creator has made a new Jewel they may share it with their friends. When a Jewel is shared with friends it is sent to the friend's remote desktop GUIs. When a Jewel is shown on a desktop it continues changing based on the Creators remote actions.
2. **The User of Ambient Jewels:** The User is the person who receives the Jewel and who sees it visually changing on their desktop. The design process still continues with the User because the User is able to use their friends' Jewels to decorate their desktop. A User with more Jewels has more options to arrange them into aesthetically and artistically appealing patterns, shapes and clusters.

By introducing sharing of the ambient displays we are indirectly forcing Users to reflect on Jewel meanings. Will groups of friends converge and create the same style of Jewels, almost forming a shared ambient display graphical language that is specific to their group or community? Or will certain graphical representations and Jewel transforms emerge across all Users, because they make "sense" in an ambient display? Will users

tend to create disturbing effects, e.g. blinking and spinning jewels? Or will a social consensus emerge with the implicit agreement not to use disturbing effects?

In this article we outline our framework for and approach to enabling Users to become designers of their ambient presence displays. We are especially interested in understanding how the Users of a Jewel perceive the Jewel Creators actions.

AMBIENT JEWELRY

Presence and Ambient Displays have been explored in many innovative research projects (Dey & de Guzman, 2006; Streitz, Röcker, Prante, Stenzel & van Alphen, 2003). For example InfoCanvas is an implementation of a user customizable ambient display where users can design the contents of the ambient display as part of information art (Stasko, Miller, Pousman, Plaue & Ullah, 2004). Another similar display is Scope (van Dantzieh, Robbins, Horvitz & Czerwinski, 2002), which consists of small iconic representations based on notifications.

There are numerous different approaches to digital presence awareness. Prior, Arnott & Dickinson (2008) tell us about an interface they created based on metaphors of the real world to help older adults understand the concept of Instant Messaging. While Kranz, Holleis & Schmidt (2006) created a novel physical device to share our on-line status. BuddyBeads (Kikin-Gil, 2006) is an example of research into creating physical Jewels that represent different emotions as non-verbal messages. Another interesting example is Ambient Furniture that connects two geographically separated family tables, e.g. place a cup on one table and a vague outline of the cup appears on the other table (Patel & Agamanolis, 2003).

Ambient Jewelry consists of a cross-platform framework that easily lets people create and share their presence avatars. These avatars, which we have called Jewels, consist of small shaped

3 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/meaning-makers-user-generated-ambient/53333

Related Content

Multicriteria Decision-Making Method Under a Single Valued Neutrosophic Environment

Shapu Ren (2017). *International Journal of Intelligent Information Technologies* (pp. 23-37).

www.irma-international.org/article/multicriteria-decision-making-method-under-a-single-valued-neutrosophic-environment/187179

Real-Time Crop Monitoring in Agriculture

Sumit Pahuja, Garima Singhand Prabhjot Singh (2021). *Artificial Intelligence and IoT-Based Technologies for Sustainable Farming and Smart Agriculture* (pp. 230-242).

www.irma-international.org/chapter/real-time-crop-monitoring-in-agriculture/268038

The Role of AI-ML Techniques in Cyber Security

Sima Das, Ajay Kumar Balmikiand Kaushik Mazumdar (2022). *Methods, Implementation, and Application of Cyber Security Intelligence and Analytics* (pp. 35-51).

www.irma-international.org/chapter/the-role-of-ai-ml-techniques-in-cyber-security/306858

Software Effort Estimation: Harmonizing Algorithms and Domain Knowledge in an Integrated Data Mining Approach

Jeremiah D. Deng, Martin Purvisand Maryam Purvis (2011). *International Journal of Intelligent Information Technologies* (pp. 41-53).

www.irma-international.org/article/software-effort-estimation/58055

Assessing Smart-Home Platforms for Ambient Assisted Living (AAL)

Michiel Brink, Ignacio González Alonsoand Johanna E.M.H. van Bronswijk (2013). *International Journal of Ambient Computing and Intelligence* (pp. 25-44).

www.irma-international.org/article/assessing-smart-home-platforms-for-ambient-assisted-living-aal/104159