

EMPATHY IN HUMAN COMPUTER INTERACTION

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ABSTRACT

This workshop aims to bring together a multidisciplinary range of researchers to consider empathy in human computer interaction, focusing on the diverse range of empathic emotional experiences that a user can have when interacting with a computer. The main focus of this workshop will be synthetic characters and the development of empathy with such characters, considering issues such as appearance, features, behaviour and context. The workshop will involve the presentation of position papers by participants followed by a consideration of design issues for an empathic synthetic agent in a particular context. A range of issues will be discussed aiming to consider issues relevant to the development of empathic relations with synthetic characters. The papers and results of this workshop are to be submitted for publication in an edited book.

Keywords

Empathy, empathic agents, synthetic characters

1. INTRODUCTION

Empathy has been defined as “An observer reacting emotionally because he perceives that another is experiencing or about to experience an emotion” [8]. Humans, when interacting with computers can be led to feel empathy, and experience a diverse set of emotional reactions to the computer applications. This workshop aims to explore how empathy can be represented and evoked.

Synthetic characters are becoming increasingly widespread as a way to establish communication between users and computers [2] and research suggests that synthetic characters have particular relevance to domains with

flexible and emergent tasks where empathy and believability are crucial to the goals of the system [5].

In considering empathy and synthetic characters, it is important to distinguish between empathy on the side of the character [4] and empathy felt by the user [6]. Our focus is on the latter and in this workshop we aim to consider behaviours and features that can allow the user to build an empathic relation with a synthetic character and to consider issues related to appearance, situation, and behaviour that may trigger empathy in the user. Amongst the topics and issues we aim to consider are:

- Theories / models of empathy
- Embodiment and empathy
- Empathic synthetic verbal and non-verbal behaviour
- Interactive narrative and empathy creation
- Use of empathy in health, social and recreational applications
- Measuring empathy in human computer interactions.
- Sound and music for empathic interactions

Using empathic interaction maintains and builds user emotional involvement to create a coherent cognitive and emotional experience. This results in the development of empathic relations between the user and the synthetic character, meaning that the user perceives and models the emotion of the agent experiencing an appropriate emotion as a consequence.

A number of synthetic characters have been developed where empathy and the development of empathic relations have played a significant role. These include theatre [1], storytelling [3] and personal, social and health education [7]. The results from such research identify that it is possible to evoke empathic reactions from users and that this can result in stimulating, novel interactions. Further, applications such as Carmen’s Bright Ideas [6] highlight the potential of synthetic characters for exploring complex social and personal issues, through evoking empathic reactions in users.

Achieving empathy in human computer interactions relies on a broad and diverse array of technologies, perspectives, and people and the interconnections between them, fitting well within the overall HCI theme of designing for life. The main goal of the workshop is to bring together people studying empathy in general and in particular empathy in human computer and interactions. We expect that at the end of the workshop a deeper understanding of the role of empathy in human computer interactions will have been developed. Further, and in practical terms, we expect to publish a book on the topic of "Empathy in Human Computer Interaction" with selected and extended papers based on the presentations at the workshop.

2. WORKSHOP PROCEDURE

The Call for Papers will be submitted to relevant mailing lists e.g. CHI, British HCI, AISB and a micro-site will be developed to support the workshop (call for papers, relevant links, organizer details). The workshop panel will be contacted to ensure that they are still able to commit to reviewing papers. Once papers have been submitted they will be reviewed by panel members, the reviews will then be collated into a form that can be emailed to participants along with acceptance or rejection letters

The workshop will be divided into a number of different sessions, allowing participants to present their own work and interact collaboratively with others to consider issues related to empathy and human computer interaction. The sessions will include:

Introduction: Participants will be asked to bring a poster (representing their position paper) to the workshop. Each participant will be asked to introduce themselves and discuss their poster for 5 -10 minutes.

Design and Innovate: Participants will split into three small groups and will attempt to design a system to represent and evoke empathy for the user. This system will be in the domain of personal and social education (within which the workshop's organisers are working). Participants will be provided with an outline specification of this system and the context within which it will be used.

Each group will present the results of their design effort allowing the other participants to learn from their ideas. This session will be concluded with a summary of the points raised.

Debate and Speculate: A set of questions will be posed by the organisers for the participants to discuss. These questions will consider issues such as:

- Which models of empathy are most appropriate within the context of human computer interaction and / or human-human computer mediated interaction?

- How much impact does context have on empathy?
- What are the characteristics of domains, goals and tasks that could benefit from empathy in HCI?
- What are the characteristics of interactions involving empathy and how could these be supported?
- How can empathy be measured and how can an empathic interaction be evaluated?

The aim will be to try to explore these issues. Broad and deep discussions on the topics are expected in order to reach some agreement on the answers.

Summary and Road-map: The main outputs of the day will be summarised and ways forward for empathy in human computer interaction will be considered, providing a road-map for future activity within this area.

3. REFERENCES

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