SIG on Telepresence Robots

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Abstract

In this document we explain the need and plans for a
SIG Meeting at CHI on telepresence robots. We
describe the organization of this SIG, our expected
attendees, procedure and schedule of topics to be
discussed as well as our recruitment plan. Our goal is
to provide a forum to discuss key issues surrounding
the uses and usefulness of telepresence robots,
including challenges and best practices.

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H.5.3 [Information interfaces and presentation]: Group
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Introduction
Robotic telepresence has become a popular medium
providing virtual inclusion and authentic social
interactions with people in different locations. For
example, telepresence robots have been used to
connect students and teachers in the classroom, allow
researchers and administrators to join meetings, enable
medical staff members to conduct patient rounds in
hospitals, and allow patrons to remotely tour libraries,
museums, and other facilities. Telepresence robots also

have the potential to alleviate the problem of isolation for people with accessibility challenges; such as disabilities or visa problems.

Many studies explored the support of telepresence for office work [7, 8, 10, 13] and attending conferences [1], educational settings [2, 6] and visiting relatives [5].

Robotic telepresence is an important medium as it particularly mimics to a great extent a face-to-face setting. Thus, many of the cues are available when telepresence robots are involved, such as facial expression, intonation, and accent. Some researchers found that telepresence robots improved the interpersonal social connections between the user and interlocutor [8, 13], and empowered the users [4, 12]. Nevertheless, many other researchers [5, 7, 11] highlighted challenges in that regard.

Robotic telepresence is not perfect; it offers many opportunities for people with accessibility limitations and yet poses other accessibility challenges [9]; for instance, most telepresence robots do not have hands to take elevators and lose internet connectivity.

This proposal describes the goals and procedure for a SIG on Telepresence at CHI 2018.

Goals of Organizing a SIG

Our objectives in organizing this SIG include but not limited to:

- Discussing the importance of robotic telepresence use and the opportunities they offer. We are particularly interested in brainstorming new types of use cases
- Discussing common limitations of telepresence robots and challenges to their use in the wild. We will also brainstorm ways to address these challenges
- Discussing best practices surrounding the use of telepresence robots, including tips and tricks to make robots more useful
- Discussing ways to make telepresence robots more widely available both to researchers and to the general public

This SIG would both promote discussion among established telepresence researchers and users, as well as allow attendees who are not familiar with telepresence robots to learn more about this technology and understand its opportunities and challenges.

Expected Attendees

We expect the event will be well attended by the following:

- SIGCHI attendees who conduct research on telepresence robots, robotics and accessibility research
- Curious SIGCHI attendees about the robots
- SIGCHI attendees who attended in the past using robots or envision using them in the future
- SIGCHI members doing research on disabilities
- SIGCHI attendees with disabilities

This event will be open to all attendees, not just those listed above.

Meeting Agenda

The meeting will last 80 minutes and will include several activities.

We will be start with a five-minute introduction presenting the goals of this meeting. In addition, we will invite an on-site employee of Suitable Technologies to give a brief introduction to the Beam telepresence robot.

Then, we will present some discussion topics over the course of 30 minutes, which includes, but not limited to:

- Why robots are useful/important;
- Barriers to their use and how to overcome the barriers;
- Best practices of telepresence use, tips and tricks;
- How we could pool resources to get telepresence robots more widely available for both attending events and for researchers

During the discussions we will provide various channels for participants to share their insights. Participants will be invited to the microphone to briefly share their insights publicly. Otherwise, they can use notecards that we will pass around for those who would rather share their insights anonymously. We will ask participants to write one idea per card and clearly mark each card as a positive or negative comment to aid in quick categorizing. Last not least, we will use twitter and monitor hashtag #CHI2018Telepresence.

The rest of the session will be used to create affinity diagrams [3] looking for patterns of ideas about telepresence robots. Cards on walls will be used and those with related ideas will be placed on walls or bulletin boards in clusters near to each other, which will allow patterns to be evident. By the end of the session, we will summarize these apparent themes that will become a starting point for discussions between the SIGCHI telepresence chairs and Community, SIGCHI accessibility chairs and Community. We will fold in twitter comments and create a report on telepresence to share our findings with the SIGCHI community.

Participant Recruiting

So as to recruit participants broadly, we will post to mailing lists at SIGCHI, IEEE, and related scholarly organizations that study telepresence robots. We will also ask authors of papers on telepresence to advertise the SIG by the end of their lectures and post to our own existing professional networks.

Primary Contact

Our primary contact is Houda El mimouni (he52@drexel.edu).

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