Remote Conference in the Times of the Pandemic

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Abstract. The COVID-19 pandemic forced a sudden increase of remote activities including work, learning and also scientific conferences. Almost a year of experience in remote work, remote meetings and remote conferences clearly showed that these events are markedly different from their traditional counterparts. The aim of this workshop is to analyse factors influencing the user experience of remote conferences, thereby creating a set of guidelines for their future organizers. Patterns may be identified from personal experiences shared by HCI researchers as participants or organizers of remote conferences. Methodologically, the methods of Design Thinking combined with the auto-ethnographic approach will be employed for the workshop. Participants will be able to find new insights into the process of the organization of remote conferences and transform such insights into an actionable set of guidelines for future remote conference organization.

Keywords: remote conferences, virtual meetings, social experiences

1 Introduction

While remote conferences are much more accessible and cheaper than traditional conferences they provide some new challenges in many areas: social, organizational and technical. Without proper planning any remote conference can feel like a series of disconnected webinars with very limited, almost anonymous contact between presenters

and participants. In order to provide every participant with a meaningful experience it is important to understand their diverse expectations and limitations, and plan and organize the conference accordingly.

It may be argued that the COVID-19 pandemic is close to its end and with it scientific conferences will return to a traditional face-to-face format. We believe that even if it is true, probably remote conferences will remain popular events in the scientific world as researchers have already witnessed the advantages of remote participation (e.g., environmental friendliness). This workshop is proposed not only because there is not enough evidence to predict how the scientific conference landscape will evolve but also because authors believe that the current situation may impact all future conferences, making them more accessible and open. There is also a perspective for a new model of hybrid conferences, that will have to meet with the same challenges as any other online conferences.

2　　Objectives

Due to the mixed experiences of participants and organizers of remote conferences it is important to search for effective solutions for such events. The aim of this workshop is to create a platform for HCI researchers to explore issues pertaining to the remote conference organization and practices in the times of COVID pandemic. This in effect will allow creation of guidelines outlining the best approach to effectively organize remote conferences. To achieve this the workshop will bring together people that have personal experience in attending and organizing remote conferences and researchers specializing in social and human-computer interactions. Being members of HCI community we believe that HCI researchers in this community are the group with the most suitable knowledge and experience to be able to prepare guidelines that are the goal of this workshop. A typical HCI research methods used in developed areas of HCI like Participatory Design or Computer Supported Cooperative Work could be described as 'objective ethnography' where researchers observe or cooperate with users in order to get to know their perspective. In the course of searching for a new method of describing reality the use of auto-ethnographic approach is gaining popularity in the last years in the area of HCI. This approach focuses on the reflexive self-analysis of the researchers' personal perspectives [1].

3　　Target audience and expected interest

The workshop is intended mainly for people that are or will be organizing any remote conference or online event but also for researchers interested in areas of social interaction, HCI, virtual reality. We plan to draw on both the experience and expertise of HCI researchers, who may be both actors and designers in the situation of planning the remote conference. The personal experience in the area of remote conferences will be definitely a very valuable asset for the participants but we'd like to stress that it is not necessary.

4   Overall structure

Before the workshop, participants will be asked to prepare a position paper (min. 1 page) describing their experiences with remote conferences or/and their expectations. In order to facilitate this process workshop organizers will provide template containing a set of possible topics to consider when preparing such a paper, in the form of a set of open questions or mental exercises. The goal of this part will be for each of the participants to evaluate their experiences and realize their attitudes towards particular elements of the remote conference experience.

Such input from participants will ensure the effectiveness of the following main part of the workshop, that is the design session of the 'remote conference' understood as an innovative product, according to the five steps of typical Design Thinking methodology.

1. **Empathy** - on the basis of the material collected from the participants, Empathy Maps and Personas (a short description of a fictional person and their needs - quotes from the collected material will be used here) will be created. Thanks to the described personas, participants will be able to empathise with their needs and design solutions tailored to those needs. Participants of the workshop will be divided into smaller groups of 4-6 persons. The next steps are implemented separately in each group, which works on solutions for one persona.
2. **Problem definition** - after reading the description of the persona and its Empathy Map, each group reflects on what main problems/needs have emerged. Then participants formulate the main problem/issue regarding this persona. Solutions designed in further steps will be tailored for this specific need. Writing down an exact challenge/problem gives the group a sense of responsibility for solving this issue.
3. **Generation of ideas** - the next step is about generating ideas for concrete solutions. The brainstorming methodology is applied here. This stage participants do not care about the feasibility of the solutions, but about generating a large number of them. Thanks to this, when the obvious solutions are written down, it is possible to use natural creativity and generate ideas that are not obvious. During the group work participants are not allowed to criticize solutions, nor to discuss them. Then, from the large pool of all generated ideas (usually several dozens), the group chooses 2-3 to work on in further stages.
4. **Creation of a prototype** - the two or three most promising ideas selected in the previous stage are subjected to prototyping. The prototype is created quickly (5-10 min) from simple and cheap materials (paper, glue, newspapers, etc.). It can be a drawing, a model, or even a scene performed by the group. By building a prototype we achieve two goals: firstly, a different type of thinking is activated - about the specific properties and functions of a given solution. On the other hand the idea acquires a more tangible shape which is easier to present and discuss with other groups.
5. **Testing** - prototypes are presented to other groups in a simple form. Quick feedback is collected on the advantages and disadvantages of the solution. Then the group, enriched by the comments of the other groups, selects one of the two or three

prototypes and develops its next more detailed version. The second version is also discussed, feedback is collected and amendments are made. After the next stage of corrections the prototype is ready to be proposed as the final solution to the problem.

During the design process participants will also focus on the valuable characteristics not directly connected to the scientific course of the face-to-face conferences, like social contact, open discussion, creation of trust, etc. that are markedly more difficult to ensure during the remote conference. Especially those issues that make attending–and presenting to–a remote conference different to publishing a paper in a journal or presenting in a traditional way. During the workshop new ways of dealing with such areas of the conference will be proposed.

The last part of the workshop will consist of discussing the application of the technical solutions to the innovative 'remote conference' created in the Design Thinking session. We believe that this part will be very important in order to ground the ideas created during the design session in the available technical solutions, which will increase the chances that the ideas created during the workshop will be implemented in real life scenarios. During this part participants will get a broad overview of available free and paid software tools that can be used for video transmission, video and audio editing, streaming, chatting etc., learn what are the most critical elements of a remote conference and what measures should be taken to prepare for worst-case scenarios. We hope that in this part we will also be able to draw on the experiences of participants, but as the organizers of the workshop have the experience of conducting an effective remote conference (8th Machine Intelligence Digital Interaction 2020 [3]) this will also be an opportunity to share the best technical practices that we've tested during the conference.

5   Organizers

Julio Abascal is a Professor of the Department of Computer Architecture and Technology at the University of the Basque Country UPV/EHU (Basque Country, Spain), where he has worked since 1981. He directs the Egokituz: Laboratory of Human-Computer Interaction for Special Needs, focused on the application of Human-Computer Interaction methods to Assistive Technology, including the design of ubiquitous, adaptable, and accessible user interfaces, and assistive human-robot interfaces. He also researches methods and tools to improve sensory, physical and cognitive accessibility to the Web.
Cezary Biele is a Head of Laboratory of Interactive Technologies at the National Information Processing Institute. He is a human-computer interaction and human-technology interaction researcher with a background in psychology and psychophysiology. His main research area is interaction with new technologies (virtual reality, intelligent voice assistants, gaze-controlled interaction) among children and older adults. He was

a co-chair of a remotely organized 8th Machine Intelligence and Digital Interaction Conference 2020.

Daniel Cnotkowski is a Software engineer at National Information Processing Institute, Warsaw, Poland. His research focuses on Human-Computer Interaction in Virtual Reality. He has both theoretical and practical knowledge about Virtual Reality applications and has developed several VR applications that have been used for HCI research. He was also a part of a technical team of the 8th Machine Intelligence and Digital Interaction Conference 2020.

Gabriela Górska - a junior researcher in National Information Processing Institute and a PhD candidate at the Robert Zajonc Institute for Social Studies. She is interested in the research on social processed such as empathy, compassion, prejudice and discrimination, along with the studies on mindfulness meditation. She was responsible for guiding short meditations online for the participants for the 8th Machine Intelligence and Digital Interaction Conference in December 2020.

Jarosław Kowalski is a Senior Research Specialist in National Information Processing Institute, Warsaw, Poland. He is pursuing his doctoral dissertation about connected technologies and their relation to human "self". One of his main areas of interest are social and psychological aspects of new technologies (i.e. Internet of Things, Smart Environment), digital society and sociology of innovation. Author and co-author of several articles from the area of human-technology interaction.

Effie Lai-Chong Law is an associate professor at the Department of Computer Science, University of Leicester, UK. She obtained her PhD (summa cum laude) in Psychology from the University of Munich (LMU), Germany, under the prestigious scholarship of DAAD (German Academic Exchange Service). Her research domains are Human-Computer Interaction (HCI) and Technology-enhanced Learning (TEL). She focuses on usability and user experience (UX) methodologies, grounding them in theoretical frameworks, analysing research-practice gaps in implementing such methodologies, and developing new ones to address emerging needs. She has applied usability and UX methodologies in a range of e-learning areas, especially game-based learning, and is extending the scope to cultural heritage and subjective wellbeing.

Bartosz Muczyński is a junior researcher at Maritime University of Szczecin, Poland where he leads the laboratory of virtual and augmented reality systems and is a VR developer at National Information Processing Institute, Warsaw, Poland. He is interested in how VR technology can influence social interactions, especially during COVID-19 pandemic. He was leading a technical organization of the 8th Machine Intelligence and Digital Interaction Conference in 2020 and helped co-organizing several online events.

Abiodun Ogunyemi is a Research Fellow of Digital Transmission and Lifelong Learning at Tallinn University. His backgrounds are in Computer Science, Information Systems and Human-Computer Interaction. His research interests are in designing engagement for technology-enhanced environments, usability capability assessment, measurement of digital transformation impacts, adaptive and lifelong learning and human-centered software engineering.

Mariusz Wierzbowski is a Research and Technical Specialist at National Information Processing Institute, Warsaw, Poland, having a PhD in Electronics. His research

interests are in data analysis and machine learning and their applications to Human-Computer Interaction in Virtual Reality. He was a part of a technical team of the 8th Machine Intelligence and Digital Interaction Conference 2020.

Aldona Zdrodowska is a Social Psychologist specializing in Human-Computer Interaction and Media Psychology. Experienced UX researcher and enthusiast, data analyst and university lecturer. Her main research focus is UX, HCI and social and psychological aspects of the new media and technology use. She participated in several nationally and internationally funded research projects, both academic and business-oriented, among them EU Kids Online – as a researcher for the Polish team (since 2008). She is currently working as a senior R&D specialist in the Interactive Technologies Laboratory (National Information Processing Institute, Warsaw). She also teaches Social Psychology, Internet Psychology and Statistics courses at SWPS University of Social Sciences and Humanities. She was a Publication Officer of a remotely organized 8th Machine Intelligence and Digital Interaction Conference 2020.

6   Expected outcomes

Following outcomes are expected after this workshop:

1. Creation of a set of guidelines for the organizers of future remote conferences, that will allow them to create the events that will be both effective and pleasurable experiences for researchers, not only in the HCI field.
2. Providing an outline for new, interesting research areas related to networking and interaction during online events during COVID-19 pandemic.
3. Building a small community that can provide support to each other and will help conducting broad study in the mentioned areas.

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