NatureCHI 2017 – The 2ⁿᵈ Workshop on Unobtrusive User Experiences with Technology in Nature

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Abstract

Being in nature is typically regarded to be calming, relaxing and purifying. When in nature, people often seek to be mobile through physical activity such as hiking. But also, nature provides an opportunity for meditative, mindful or inspiring experiences remote from urban everyday life. Mobile Technologies such as sports tracking technologies, electronic tourist guides, mobile phone integrated cameras and omnipresent social media access, have potential to both enhance and disrupt a user's interaction with and experience of nature. This MobileHCI workshop follows on from the first successful NatureCHI workshop by focusing on the challenges associated with the design of mobile technologies that support unobtrusive interaction in nature.

Author Keywords

Nature; unobtrusive design; outdoors; mobile computing.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Figure 1. Examples of NatureCHI workshop interest areas: Mobile apps such as Pokemon Go can take us wondering in parks and nature (above) [**Error! Reference source not found.**], and novel technologies emerge to the nature contexts, e.g. Oculus rift has been trialed while skiing (below) [5].

Introduction

This workshop focuses on the topic of technology meeting nature. Nature is an integral part of our life, starting from the very origin of humankind, and continuing today in everyday aspects related to recreation, inspiration, and wellbeing. People seek relaxation and adventure on hiking tracks and mountains, and being far from urban centers and in isolation is part of the experience. In contrast, gardens and parks offer refreshing and aesthetic experiences nearby urban life. Nature offers a counterbalance to our hectic, always-on lifestyle. Engagement with nature creates positive feelings and calms negative emotions such as anger and aggression [2]. In an urban lifestyle, nature can be also sought through everyday environments and lifestyle selection. Sustainability and ecological values are linked to respect for nature. Materials that support an ecological way of living and designs that create awareness of the state of the environment have been proposed [8]. Nature is closely linked to food and nutrition, and pure and fresh ingredients are highly valued.

However, today we live in a world where technology has extended to almost all sectors of (developed world) life. Especially, mobile technology has enabled being always online, to be connected to our social network, track our activities, and document and share our everyday life *in situ*. The use of technology has also expanded to the nature context. It is common to track our routes and physical activity [1], or use mobile apps navigation that take us to points of interests as part of a game (Figure 1) or on hiking tracks [3]. Technology can also be used to bridge between different groups, such as indigenous or rural inhabitants [2]. On the other hand, the nature context is often sought as a

place for solitude. This has given rise e.g. to the concept introduced in [7], where mobile technology is used to guide people to unpopulated hiking routes. Research has also explored the use and possibilities of mobile technologies with different outdoor sports, such as climbing [6]. Nature and technology can also be combined in interactive materials and innovative interactive concepts. Steer et al. [9] utilize plants for interaction, and Colley et al. explore virtual reality skiing in winter nature (Figure 1) [5].

Altogether, mobile technology provides lots of possibilities to enhance user experiences in nature. Applications for navigation, wellness tracking, and photo sharing are common, and by certainly useful for many users. However, technology can also distract us. The use of technology may also disturb the nature experiences of other people, e.g. through distracting digital sounds or excessive photo taking.

This workshop addresses the overlapping areas of mobile technology usage and nature. It looks at the challenges, potential conflicts, and novel possibilities at the intersection, and seeks to provide new insights as well as research community growth.

The Workshop

Topics and Audience

The topics of interest for the workshop include, but are not limited to the following:

- Mobile Technologies that enable going into nature but do not interrupt the user's experience of nature
- Mobile HCI challenges resulting from the potentially demanding context of nature settings, e.g. cold, heat, brightness, limited charging resources, limited connectivity, etc.

- Novel UI mechanisms and metaphors for interacting with nature
- Nature integrated UIs and technologies
- Cultural aspects of interactions in nature
- Social acceptance of technology use in nature
- Non-use of technology vs. the use of enabling technologies in nature
- Reliance on mobile technology in nature, and its potential consequences
- Value based design and respect of nature
- Temporal design aspects and ephemeral user interfaces with nature as the use context
- Designing for individual users vs. travelling together, and converging and diverging user group behavior in nature
- Recommendations for being in the relevant context, e.g. weather, flood warnings, ground saturation
- Experience of co-design with stakeholders, e.g. national park authorities
- Supporting interaction with nature as an outdoor museum

This workshop will bring together researchers and practitioners from academia, industry (e.g. experience industry, tourism, natural resources) and art-based design to discuss and share their research and insight. We welcome participants working with user research, ethnography, design, prototyping, evaluation, natural materials, and want to facilitate a multidisciplinary approach through the workshop. The workshop web pages can be found at www.naturechi.net . Submission of extended abstracts is done via Easy Chair system.

Goals of the Workshop
The most important goals of the workshop are: 1) to build a network among people who are conducting research at the cross section of mobile technology and nature, 2) to identify the key trends of current research and future research guidelines in the area, and 3) to promote the research of technology usage in nature and make larger audiences aware of current research as well as the promise and risks related to the topic.

Organizers

Jonna Häkkilä is a professor at the Faculty of Art and Design, University of Lapland, focusing on interaction design with mobile and ubicomp technologies. Currently she is working e.g. on using nature materials for interactive systems and aesthetic wearables.

Nicola J. Bidwell is Prof. and Prof. Extraordinaire at the Universities of Namibia and Pretoria in southern Africa and affiliated researcher at Royal Melbourne Institute of Technology, Australia. Since 2003 Nicola has focused on designing interactions with ICTs for rural settings and Indigenous and African cultures.

Keith Cheverst is a Reader with the School of Computing and Communications, Lancaster University. A significant focus of his research centers on the design and deployment of mobile systems that provide support for locative media experiences and wayfinding in both rural and urban settings.

Johannes Schöning is a Lichtenberg Professor and Professor of Human-Computer Interaction (HCI) at the University of Bremen in Germany and co-director of the Bremen Spatial Cognition Center (BSCC). His main research interests lie at the intersection between human-computer interaction (HCI), geographic information science and ubiquitous interface technologies.

Simon Robinson is a Research Officer at Swansea University. His work focuses on the human side of mobile interaction, arguing for heads-up and real world-based approaches.

Ashley Colley is User Experience researcher and PhD student in the UX team at University of Lapland. He has extensive background as a creative technologist, e.g. among wellness tracking, and interactive prototypes.
Felix Kosmalla is a doctoral student at the German Research Center for Artificial Intelligence. His primary interest lies in human computer interaction in sports.

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