Introduction

These are the proceedings of the ISon 2013 (Interactive Sonification Workshop) that took place in Erlangen, Germany, on December 10th 2013 organized by Fraunhofer IIS.

The ISon 2013 meeting is the 4th International workshop on Interactive Sonification, following the initial ISon 2004 workshop held in Bielefeld and the previous ISon 2007 workshop in York and ISon 2010 workshop in Stockholm. These meetings offer the chance to:

- meet experts in sonification,

- present and demonstrate your own research,

- strengthen your European networking in sonification research,

- learn about new exciting trends.

In this workshop will pay special attention to the problem of reproducible research and pervasive computing in Interactive Sonification to:

- explore how the rapidly changing world of computer interfaces and pervasive computing is providing new widely available platforms for sonification,

- allow for the formal evaluation and comparison of Interactive Sonification systems,

- establish standards in Interactive Sonification,

- set up a network of interested researchers in the field and exchange experiences.

High quality was be assured by a peer-reviewing process, and besides this proceedings publication, a special issue on Interactive Sonification will by published in the IEEE MultiMedia magazine.

About ISon

Sonification and Auditory Displays are increasingly becoming an established technology for exploring data, monitoring complex processes, or assisting exploration and navigation of data spaces. Sonification addresses the auditory sense by transforming data into sound, allowing the human user to get valuable information from data by using their natural listening skills. The main differences of sound displays over visual displays are that sound can:

- Represent frequency responses in an instant (as timbral characteristics)

- Represent changes over time, naturally

- Allow microstructure to be perceived

- Rapidly portray large amounts of data

- Alert listener to events outside the current visual focus

- Holistically bring together many channels of information

Auditory displays typically evolve over time since sound is inherently a temporal phenomenon. Interaction thus becomes an integral part of the process in order to select, manipulate, excite or control the display, and this has implications for the interface between humans and computers. In recent years it has become clear that there is an important need for research to address the interaction with auditory displays more explicitly.

Contents

These proceedings contain the conference versions of all contributions to the 4th International interactive Sonification Workshop. We very much hope that the proceedings provide an inspiration for your work and extend your perspective on the new emerging research field of interactive sonification. Norberto Degara, Andy Hunt, Thomas Hermann ISon 2013 Organisers