

Abstract

In the framework of the PIL project, which I have directed at the University of Haifa as part of a long lasting set of Israeli-Italian collaboration projects, a "Living Lab" has been developed - a museum visitors' guide system was developed for the Hecht museum, located at the University of Haifa. One of the studied aspects is social interaction between visitors in the museum. In many cases, visitors come to a museum in small groups. In these cases, the visitors' social context has an impact on their museum visit experience. Knowing the social context may allow a system to provide socially-aware services to the visitors. Evidence of the social context can be gained from observing/monitoring the visitors' social behavior. However, automatic identification of a social context requires on the one hand identifying typical social-behavior patterns, and on the other using relevant sensors that measure various signals and reason about them to detect the visitors' social behavior. The talk will present such typical social-behavior patterns of visitor pairs, identified by observations, and then, the instrumentation, detection process, reasoning, and analysis of measured signals that enables to detect the visitors' social behavior. Simple sensors' data, such as proximity to other visitors, proximity to museum points-of-interest, and visitor orientation were used to detect social synchronization, attention to the social companion, and interest in museum exhibits. The presented approach may allow future research to offer adaptive services to museum visitors based on their social context, to support their group visit experience better.

The talk will briefly present the museum as a living lab and focus specifically on the analysis of social behavior of visitors.

C.V.

Prof. Tsvi Kuflik heads the Information Systems Dept. at The University of Haifa. Over the past ten years, the focus of his work was on ubiquitous user modeling applied to cultural heritage. In the course of his work, a "Living Lab" has been developed at the University of Haifa - a museum visitors' guide system was developed for the Hecht museum. It is available for visitors on a daily basis and serves also as a test bed for experimenting with novel technologies in the museum. Currently, the system is being used for research on Social Signal Processing where signals transmitted by devices carried by the visitors are used for modeling group behavior, in order to reason about the state of the group visit. Another research direction focusses on the use of intelligent user interfaces in ubiquitous computing within the "living lab". Where issues like interaction with large, situated displays; interrupt management; navigation support; temporal and lifelong aspects of ubiquitous user modeling are studied. Tsvi got BSc. and MSc. In computer science and PhD. In information systems from Ben-Gurion University of the Negev, Israel. Over the years Tsvi collaborated with local and international researchers, supervised graduate students working with him on this research, organized the PATCH workshops series (Personal Access To Cultural Heritage) and published about 200 scientific papers, out of them 30 papers about this specific research. Tsvi is also a distinguished ACM scientist and a senior IEEE member.