“NeonAlbers” Digipainting

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ABSTRACT
In this paper we introduce an artistic artefact “NeonAlbers” which is a part of a larger system prototype in which traditional human-computer interface is hidden inside electronic art pieces in the home environment. In that prototype an electronic art piece acts as a communication device as well as an artistic artefact. “NeonAlbers” is an interactive artwork constructed with light and sound level sensors and two displays, which are hanging on the wall. The audience can alter the digipainting’s colors by triggering the light sensors in the environment. The artwork includes also loudspeakers. The purpose of the work is to study new ways to visualise information in the home environment and create new ubiquitous human-artefact interfaces.

Author Keywords

Interactive art, ubiquitous computing, UbiArt, information visualization, user participation

ACM Classification Keywords
H1.2. User /Machine systems H5.2. Information interfaces and presentation : User Interfaces, Interaction styles, Auditory feedback. J5. Fine Arts

INTRODUCTION
During recent years there has been significant increase of research and development activities in the intersection of new digital technologies and arts in general. In the same time new wireless technologies (WLAN and Bluetooth) have been introduced to be used in home environments. Sensory input and new artificial intelligence (AI) techniques (such as genetic algorithms and artificial neural networks) has been more commonly used as a basis for intelligent behaviour in electronic art installations [1]. Moreover the term Ubicomp (ubiquitous computing), which was first defined by Mark Weiser [2,3] a decade ago and revised to everyday computing by Abowd and Mynatt [4], has become like a buzzword in the computing research community.

ARTISTIC BACKGROUND
In our previous work we have described the Neon digipainting [5, 6], which will be a changing artwork and in the same time it will serve as an information channel for those living in the home environment, thus enhancing their communication. Similar approaches has been presented by other artists and researchers: Information visualization by artistic means is a main point in the research or art works by Redström et al [8], and Mynatt and Rowan [9].

One of the early artists who has used term ubiquitous (although art is ubiquitous in its whole existence) is Rich Gold at Xerox Parc. He introduced early in 1993 [10] the five basic characteristics of ubicomp (which he calls as UbiArt): UbiArt is 1) sensuous, 2) reactive, 3) talkative, 4) tacit and 5) colonising. These characteristics are also the principles in developing the Neon digipainting.

NEONALBERS - FUNCTIONALITY
NeonAlbers is a part of the Neon Digipainting, giving the insight how electronic art can be a part of our everyday living environment. “NeonAlbers” is an interactive artwork constructed with light and sound level sensors and two displays, which are hanging on the wall. The artwork includes also loudspeakers. One of the displays reacts to the light sensors in the environment and changes the colors of the squares in the display according to the light level values. The other display and loudspeakers reflect to the sound level and light level of the environment together. The purpose of the work is to study new ways to visualise information in the home environment.

In the figure 1 we can see demonstration of the artwork. The Albers -type [7] squares in the display change according to the light level of the environment. The light sensor can be calibrated so that it can be very sensitive to the light changes and so the colors in the display can vary in very smoothly. Here the communication is handled via the

EZIO communication board seen in the background. The other display gives same kind of pictures but uses also sound effects.

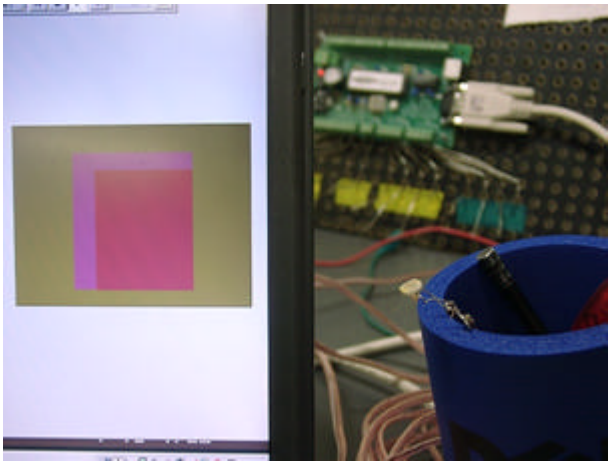

Figure 1. NEONALBERS demonstration prototype

Although "NeonAlbers" is basically designed for the home environment it can be also a public installation. Adding more light and sound level sensors and installing them in different places the more different interaction via public could be achieved. No artwork is an artwork without a spectator or a listener, but in "NeonAlbers" the spectator can change the artwork's content dynamically.

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