"Talk to me", a digital art web installation

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Abstract. *Talk to me* is a digital art web installation that serves to augment the story world of *Override,* a theatrical production by Stacey Gregg, commissioned by Watford Palace Theatre (London) for the "Ideal World season". *Talk to me* intends to spark discussion and raise public awareness of the issues involved in digital media use - particularly the ways people configure their sense of selves and their social relations through digital media. The goal of the project is to establish a network of creative exchange between new digital research and its potential for drama in the interface between research and the creative arts, particularly theatre, and in addressing the issue of science and society. Subsequently, we have developed an online interactive multimedia installation which will function as a trans-medial extension of the play's themes on human augmentation and post-humanism.

Keywords: sound design, video art, digital effects, motion graphics, web programming, artificial intelligence, augmentation, digital media, interactive multimedia online installation, cyborg, post-humanism, digital effects on video, bot programming.

1 Introduction

The integration of technology and biology is often referred to as Trans-humanism. Within this umbrella term are myriad schools of thought, constantly evolving as technology both proliferates and accelerates. An existing subcategory is biotechnology and medicine. Alongside advances in reproductive science, genetic engineering, bionic limbs etc. are imminent ethical questions often split between the ancient fear of playing God and inevitable scientific advancement. At what point do we consider a life, which has been artificially extended and enhanced by way of implants, a pacemaker, chemical treatment etc. to be no longer human, but *cyborg*? At what point does genetic engineering become genetic determinism? And always, how do these questions impinge and impact upon our humanity and our understanding of humanness? The aim of this project is to spark discussion and raise public awareness of the issues involved in digital media use, particularly the ways people configure their sense of selves and in particular their social relations through using digital media. The goal of the project is to establish a network of creative exchange between

new digital research and its potential for drama in the interface between research and the creative arts - particularly theatre - and in the issue of science and society [1]. Subsequently, we have developed an online interactive multimedia installation which will function as a trans-medial extension of the play's themes on human augmentation and post-humanism.

2   The installation

The concept of the installation features a desk with a laptop or desktop computer, a chair and an Internet connection. The user can experience the installation both by viewing the computer monitor and by accepting the invitation of the voice to come to the screen and talk.

2.1   Web design

The web installation design consists of two macro scenes.

The opening two minutes feature a multimedia scene setting - similar in appearance to those of gaming platforms. This will engage the user with basic storytelling. Interconnectedness and technology are the key words representing the main theme of the narrative. The tone is one of simplicity and aesthetic distinctiveness.

After the opening video section the user reaches a point where he is no longer passive but implicated in the narrative: the user is encouraged to converse via a chat box with the play character of *Violet* using Chatbot technology tailored to mimic *Violet*.

Regardless of whether the user chooses to experiment with the chatting, *Violet* will visually disintegrate over the following 3 minutes of the installation. Users who choose not to converse with *Violet* will therefore still have an intriguing aesthetic experience.

2.2   Sound design

Talk to me is a fixed multimedia artwork, which is deeply rooted in and related to the play, *Override*. Theatre is itself a living sound drama. There nothing seems to be tangible, nor is it taken for granted. Theatre is the very opposite of inscribing sounds on a medium that will always remain permanent [2], for this reason the hard challenge with sound was to give to the installation user a perceptible clue of that relationship.

The sound design was devised to play a fundamental role in conveying an augmented experience - in terms of atmosphere - of what an audience would experience in the theatre attending the play *Override*. During the experience of the web installation sound co-occurs with the moving image and text, therefore any understanding of its workings should be viewed in the context of intermedia [3]. This means: coexisting media that conform, complement or contrast with one another [4]. The sound design underlying the whole installation has a meaningful and unexpected role, giving to the moving image a deeply abstract and conceptual character with a hazy, almost shimmering tint.

Both diegetic production sounds and processed production sounds are mixed with other sounding materials, which do not necessarily have direct referentiality to the visuals. This is done in order to produce a sound experience strictly interconnected with the narration. In this way sounds not related to any given source justify their placement within the soundtrack, oscillating between diegetic and extra-diegetic roles and driving the atmosphere towards a disintegration of meaning. The 1960's saw the start of sound liberated from its original, diegetic, function. The sound design in this work plays on the ambiguity between the sound reality and the sound transformation achieved through *musique concrète* techniques: that is, sounds appear believable through the phenomenon of synchresis: the same sounds are often unbelievable in real life. Music composition techniques nowadays play a basic role in sound design, informing the sound work. The practice of artistic elaboration of sound for the moving image provides to music and sound composition new tools such as synchrony, synchresis, empathetic and anempathetic relationships as well as different narrative roles [5]. Following these premises the sound path composed for *Talk to me* allows the installation user to recreate a personal significance across the exploration of the interaction process.

2.3   Interaction consideration

One of the great challenges in interactive design is actually creating real interactions between the artistic idea and the user.

A paradigm of interaction was established within the installation. It consists of a management-type model where the user can communicate something to a system and the system is able to communicate something back, allowing the user to carry on with another task. The code manages not only the feedback but also the significance of each action.

There is a correlation between the richness of interactive systems and the difficulty of creating it: the richer the interaction, the more can go wrong [6]. This is why the web installation is very clean and simple: it gives space to the power of the concept at the basis of the installation.

The classic user interaction model has been adopted: a terminal where a user inputs code commands that are then run and the results reported to the screen as textual typing. The interactive concept was to control the machine via a system of commands that the computer had been pre-programmed to identify. The user should not require a specific introduction to feel comfortable with the interactivity thanks to a very bare interface.

In order to perform the textual interaction a chatbot has been applied [7]. This serves as a conversational agent: a program designed to simulate an intelligent conversation with a human user via the textual method [13]. The primary aim of such simulation has been to induce the user into thinking that the program's output has been produced by a human [8], [9], [10].

The webservice "Pandorabots" has been used to provide a chatbot. It supports the development and exploitation of chatbots based on an open standard AIML (Artificial Intelligence Markup Language) [11].

"Pandorabots" operates a free website used to build and deploy virtual personalities in the form of human-like chatbots [12]. The chatbot programming

consisted of customizing the pre-programmed Pandorabot by changing some of its properties and by providing custom responses with a training interface. This free open-source-based community webservice has been very useful to obtain the character of *Violet*, which was obviously linked to the theatre play.

The soundscape adds a more comfortable and ordinary atmosphere during the first part of the video and creates a suspended ambience during the second part. Chat typing sounds have been recorded and modified using specific spectral transformation algorithms including spectrum scaling, shifting and spectral resolution techniques (i.e. degrading). Clear typing sounds were used during the first part of the chat in order to make the interaction with the bot more credible; as the video goes on the typing sounds became more and more abstract and unreal. Other electronic sounds were synchronised with *Violet's* eye movements in order to make her transformation into a cyborg more powerful and in augmenting the user's sensation of her eventual disintegration.

In considering the development of this project, we hope to explore the possibility of generating *intelligent living soundscapes* capable of high-level interactive sound control, through a real-time webcam based system which will allow automatic detection of user's facial gestures [13].

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