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1. FROM VIRTUAL REALITY TO VIRTUAL STORYTELLING

On one hand, we oppose reality to fiction. Our everyday experience, people rather than fictional characters, the plausibility of events, things whose existence can be supported by material evidence. On the other hand, we oppose reality to illusion, defined, to paraphrase Wittgenstein, as the bewitchment of our thoughts by our senses. We believe, at least in our everyday life, that there are objective states of affairs, faithfully turned into cognitive content through our sense-data.

Virtual Reality (VR) has endeavoured to recreate a plausible illusion of reality or, short of achieving it, some form of immersion based on our perception and our physical involvement. The shortcoming of this approach was that not much used to happen in those virtual worlds. So, we started populating them with virtual characters. However, something else was required to attribute a global consistency to their behaviour over the whole environment.

Over the past years, Virtual Storytelling has almost grown to the status of a discipline of its own, with its own methods and dedicated conferences. More teams take upon storytelling research, and the notion itself has become increasingly popular among traditional VR researchers. Is Virtual Storytelling an accidental convergence of the two vehicles of illusion, fiction and simulation? Is it an attempt to make sense of the VR experience, to impose some form of coherence over events in virtual worlds, using social and cultural knowledge? Or is it just the natural extension of VR as a medium [1], anticipating an era of digital convergence?

The answer probably lies in all of these hypotheses, as essentially Virtual Storytelling is a synthetic concept, standing for several different, sometimes opposed, approaches.

In this talk, I would like to examine some fundamental aspects of Virtual Storytelling, from the attribution of meaning to experience in VR, sometimes described as “emergent storytelling”, to the development of Interactive Storytelling technologies supporting interactive narrative, with which we have been more specifically involved over the past years.

2. INTERACTIVE STORYTELLING

Many approaches to Virtual Storytelling have been described, and we would like to propose three dimensions along which they can be categorised:

- The mode of user involvement: the user can play the role of a specific character throughout the narrative, or act as a director, or be a spectator with the ability to interfere in “God-mode”.

- The immersive nature of the installation: in the traditional VR sense, whether the user is immersed in the installation or using a desktop system.

- The type of narrative control: from the absence of any narrative control in purely emergent storytelling to global plot representations controlling virtual characters and determining the legality of user interventions from the narrative perspective.

Our early research (see Figure 1) has developed an approach we have named character-based storytelling [2]. Taking as a starting point the duality between character and plot, the storyline is projected over individual roles for the virtual characters. This results in an interactive narrative driven by independent virtual actors, yet participating in the same story. The user interferes with the story through physical interventions in the virtual world or by influencing virtual characters using speech recognition. We have
illustrated this approach on a virtual sitcom scenario. In the storytelling paradigm, though he can intervene at anytime, the user essentially watches the unfolding story as a spectator.

More recently, we have addressed Mixed Reality Interactive Storytelling [3], extending previous research [4] by incorporating the interactive storytelling techniques previously developed (see Figure 2). We re-incorporated the user as a member of the cast, extending both his involvement and his immersion. The system follows a magic mirror metaphor, in which the user’s video image is captured in real-time, mixed with a virtual world including synthetic characters, and projected on a wide screen facing the user, who sees himself taking part in the story. In this rather unusual form of experience, the user is at the same time an actor and a spectator. In the supporting application example, the user plays the role of the villain in a short James Bond movie episode, the main narrative drive being provided by the Bond character’s role. The user’s acting is analysed by a multimodal system based on speech recognition and gesture analysis and is interpreted as a response to Bond’s actions, which determines the evolution of the scene [3].

One of the best-known visions of VR in popular culture, the Holodeck™, is also a narrative environment (which has inspired Virtual Storytelling as well [5]). Virtual Storytelling can be seen as a research into the meaning of the virtual experience, about the semantics of situated action in VR.

3. ACKNOWLEDGMENTS
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4. REFERENCES