Proposition de recherche doctorale

Interacting with Avatars

Mots clés :

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- **Co-encadrant(s)** :
- **Unité de recherche** : Laboratoire Traitement et Communication de l'Information
- **Ecole doctorale** : École Doctorale Informatique, Télécommunications, Électronique de Paris
- **Domaine scientifique principal**: Divers

Résumé du projet de recherche (Langue 1)

Context: A fundamental concept of REVERIE is the natural interaction between users through the medium of a shared virtual world. REVERIE envisages an ambient, content-centric Internet-based environment, highly flexible and secure, where people can work, meet, participate in live events, socialise and share experiences, as they do in real life, but without time, space and affordability limitations. To achieve this goal, REVERIE will focus on the integration of cutting-edge technologies related to 3D data acquisition and processing, sound processing, autonomous avatars, networking, real-time rendering, and physical interaction and emotional engagement in virtual worlds. Objectives: This thesis aims at achieving visually and audibly immersive 3D media internet experience, more particularly at developing fully autonomous virtual characters able to engage and communicate with avatars of real world users in an emotional and expressive manner. The two key concepts of this research are interaction and autonomy.

Résumé du projet de recherche (Langue 2)

Several topics will be addressed: - Interaction with multiple avatars: endow the virtual autonomous agent with the capacity to decide whom to address, which topics of conversation to start, how to manage turn-taking. These decisions will rely on input coming from various modalities such as speech recognition and vision as well as on the nonverbal behaviors reproduced by the avatars. These input data will also be used to build a cognitive representation of the human interlocutors by the agent. - Social and collaborative interaction: The agent's behavior model will also take into account the social relationship the agent has with each avatar, its emotional states and other information that would be provided (eg, role). It will also consider the collaborative settings of virtual community world. Dynamics of group behaviors will be considered. Issues such as proxemics, gaze behavior will have to be addressed here as well.

Informations complémentaires (Langue 1)

la thèse se situe dans le projet IP Reverie