1. Introduction

Talking avatar, an animated speaking virtual character with vivid human-like appearance and natural real or synthetic speech, has gradually shown their potential applications in human computer intelligent interactions, because of its communication abilities to deliver rich verbal and nonverbal information by voice, tones, eye-contact, head motion and facial expressions, etc. Possible applications of talking avatar include a virtual storyteller for children, a virtual guider or presenter for personal or commercial website, a representative of user in computer game and a funny puppetry for computer mediated human communications. Avatars are increasingly being used to communicate with users on a variety of electronic devices, such as computers, mobile phones, pads, kiosks, and game consoles. Avatars can be found across many domains, such as customer service and technical support, communication aids, speech therapy, virtual reality, education and training, as well as film productions and entertainments. It is clearly promising that talking avatars will become an expressive multimodal interface in human computer interaction.

However, current research on human emotion has not yet advanced to the stage where it is possible to synthesize an affective intelligent talking avatar who can express their feelings and emotions through vocal and facial behaviors as natural as human beings. To this end, recent researches aim to generate appropriate speech and facial expression according to the emotional content to enhance the affective expressivity of talking avatar. The long-term goal is to implement an expressive talking avatar with not only lip-articulation but also emotional facial expressions.

This special issue aims to bring together researchers and technologists engaged in the development of expressive talking avatar. It will focus on original/unpublished research papers that report novel algorithms, approaches, systems and new applications in the area of expressive talking avatar synthesis and animation. It will also consider survey articles that focus on the state-of-the-art technologies and new trends and challenges in this area. All submitted papers will be peer reviewed and will be selected on the basis of their quality and relevance to the main theme of this special issue.
2. Topics

The scope of special issue includes, but not limited to:

- Audio/visual speech synthesis
- 2D/3D Facial expression analysis and generation
- Head/eye motion analysis and generation
- Multimodal Information integration algorithms and approaches
- Affective computing in talking avatar synthesis
- Human computer interaction using talking avatar
- Talking avatar applications: PC or embedded system
- Singing Synthesis and Virtual Singer
- Social and conversational agents
- Virtual Humans
- Tools for avatar animation
- New areas that involve avatar synthesis and its applications, e.g. expressive speech synthesis, voice conversion, graphics in 3D model, etc.

3. Tentative Schedule

Submissions due: December 31, 2013
Notification of the first round review: January 31, 2014
Final acceptance notification: February 28, 2014
Final manuscript due: March 30, 2014
Publication date: Autumn 2014 (Tentative)
4. Guest Editors

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5. Submission Guidelines

The authors are required to follow the Author’s Guide for manuscript submission to the Multimedia Tools and Applications Journal:
https://www.editorialmanager.com/mtap/

Please choose “Expressive Talking Avatars Synthesis and Animation” upon submission.

Original manuscripts should be submitted through the online submission system. Should you have any questions, please feel free to contact the corresponding guest editor (Prof. XIE, lxie@nwpu.edu.cn)