Visual Attentive Presentation Agents

NII Research Presented by a Team of Highly Realistic 3D Virtual Agents that Attend and Adapt to User's Interest by Using Eye Tracking Technology

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Goal

This research proposes visual attentive presentation agents as a novel means to adapt to users' visual interest in a highly intuitive and unobtrusive way.

Summary

Key research features:

- **Analyzing and interpreting human eye movements ("eye gestures")**
- **Automatically adapting the interface to users' visual interest**
- **Virtual research promotion scenario**
- **NII research content presented in a dynamic, interactive and story-like way**
- **Highly realistic 3D agents rendered in real-time using advanced graphic techniques**
- **Use of multiple input modalities (eye gaze, speech)**
- **Accounting for users' focus and shift of visual interest in the presentation in an entirely natural way**

Method

System

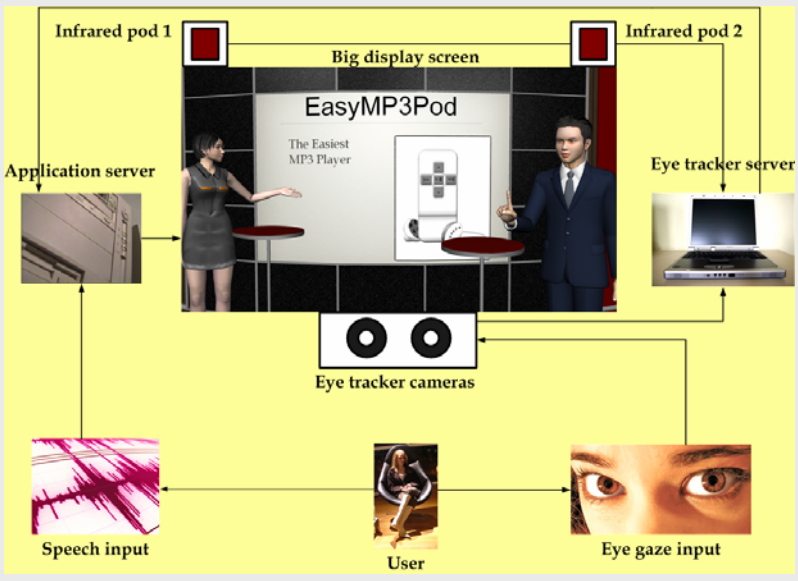
- **Life-like 3D agents**
- **Presentation scenery**
- **Input modalities: eye gaze and speech**
- **Non-contact video based eye tracker**

Detecting user interest

Computing interest scores of different interface objects in the scenery based on gaze patterns.

Possible interest objects are:

- **Agents**
- **Sub areas in presentation slides**
- **Environment**



NII Research Presentations

- **Professor Jun Adachi: Introduction to NII**
- **Professor Shin'ichi Satoh Feature Selection By AdaBoost For SVM-Based Face Detection**
- **Professor Seiji Yamada: Expansion with the Minimum User Feedback by Transductive Learning**

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