Semantic Audiovisual Entertainment Reusable Objects Vision, Objectives & Results

SALERO Deliverable 10.5.2
Version 3 (updated December 2007)
Intelligent Content!
Content that listens? (P. Kafno*)

- Brings together multimedia, web & knowledge engineering
- Requires new kind of creativity
- Categorizes and meta-tags content
- Personalized, reactive; encourages re-mix and new directions
- Creates revenues

* Paul Kafno, Out of the Box - Expanding opportunities for content creators, Presentation IST Event, Helsinki 2006
Areas of Work & Major Achievements

- **Speech**
  - Linguistic analysis and tagging
  - Expressive speech generation
- **Animation**
  - Facial animation and lip-synching
- **Semantic description (emotion, context)**
- **Context based search & retrieval**
- **Experimental productions**
Major Achievements
Semantics & Context

- Semantic description
  - Description of emotion
    - based on activation/evaluation model
    - used in all applications
      - animation, speech tagging & synthesis, search & retrieval
  - Ontology-based annotation tool
  - Ontology for virtual characters/animation production
    - aim@shape virtual human ontology as starting point

- Context-based search and retrieval
  - Focus on user context
  - Integration of traditional approaches with semantic and content-based search
Major Achievements

Speech & Audio

- Corpus of emotional speech recorded
  - Duologues (separate recording of each voice)
  - Induced emotion
- Audio analysis
  - Stress and prosody
  - General audio qualities
- Expressive speech synthesis
  - Multilingual (Spanish, English)
  - Currently limited domains
- Audio/Voice transformation
  - Age, sex, artificial
- Scalable audio codec

Click [here](#) and [here](#) to listen to Audio Transformation demos on YouTube
Major Achievements
Facial Animation

- Maskle approach to transfer facial animation

- Click [here](#) to view demo video on YouTube
Major Achievements
Facial Animation

- High quality animation
- Depending on medical state
Major Achievements

Applications
Experimental Productions
Hack the Van

- Fully automatic production of daily series

- Click [here](#) and [here](#) to view demo videos on YouTube
Experimental Productions
Triage

- Serious game
- Triage Sieve training
  - highly realistic casualties

- Click [here](#) to view demo video on YouTube
Experimental Productions – MyTinyPlanets

- Interactive Web environment for primary school age group
  - Based on Bing & Bong
  - Featuring helper avatar „Robbie“
Experimental Productions
Full House

- Click [here](#) to view demo video on YouTube
Lessons Learnt

- “Semantic technologies” have to be gently introduced to the media industry
  - Not considered a core technology, yet
  - Industry interested if added value shown
- Reuseability of 3D-content limited
  - Game domain needs different/additional models
    - Lower resolution for real-time rendering
    - Complete 3D-environment
  - Different capabilities of devices
- Workflow and tools: real-time generation vs. post-production path
  - Real-time: creates content, uses and generates metadata
  - Post-production: modifies existing content, uses and generates metadata
- Keeping the industry motivated is a major management task
More Details on SALERO
http://www.salero.eu
http://www.youtube.com/intelligentcontent

SALERO aims at making cross media-production for games, better and cheaper by combining computer graphics, language technologies as well as content based search and retrieval.

Impact
SALERO will define and develop intelligent content for media production objects with context aware behaviours for self-adaptive use and delivery. Intelligent Content should enable the creation and re-use of complex media without the need to know little of the technical aspects of how the tools that generate such content work.

SALERO’s Main Innovation
Based on research into methodologies for describing, creating and consuming the concept of intelligent content will be verified by experimental prototyping.

Invitation: A User Group Event will be held on 15 February 2008.

News (24 January 2008): An overview and demos of the Audio Trainer salero has been added to the Showcase section of this website.
Semantic AudiovisuaL
Entertainment Reusable Objects

Thank you for your attention!

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