



# 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

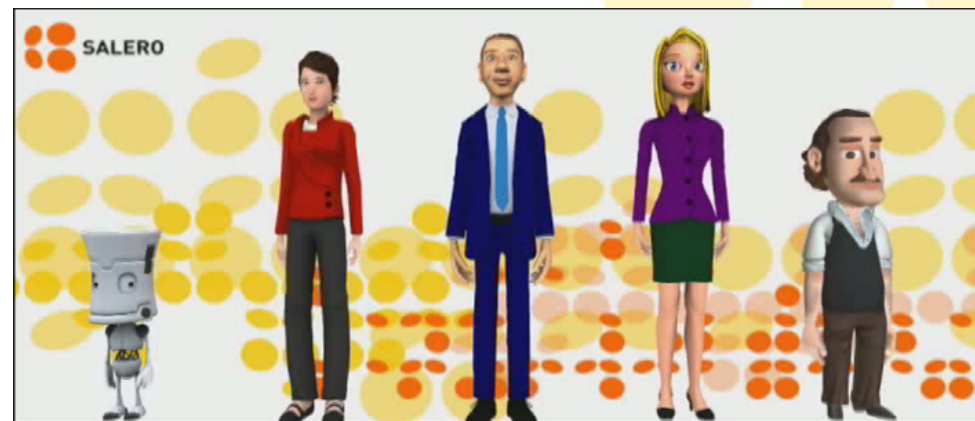
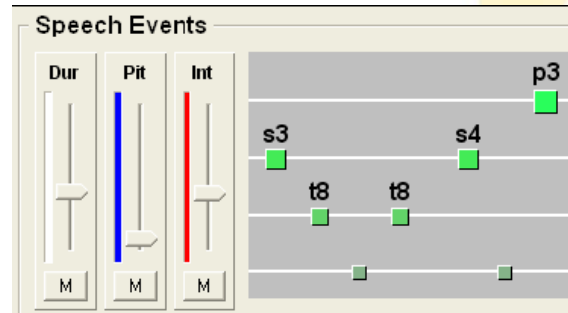


- Semantic description
  - Description of emotion
    - based on activation/evaluation model
    - used in all applications
      - animation, speech tagging & synthesis, search & retrieval
  - Ontology-based annotation tool
  - Ontology for virtual characters/animation production
    - aim@shape virtual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



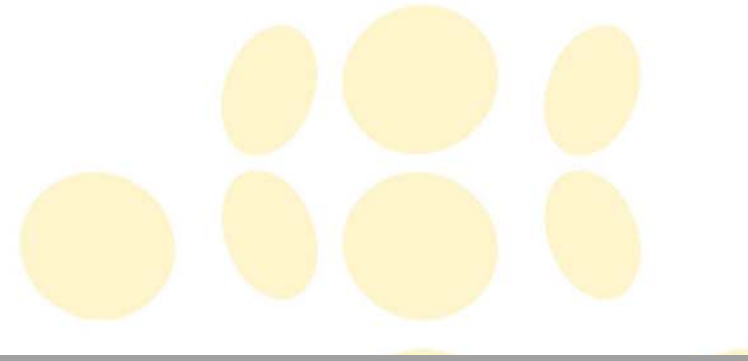
- Click [here](#) to view demo video on YouTube

# Major Achievements

## Facial Animation



- High quality animation
  - Depending on medical state



# Major Achievements Applications



The screenshot displays the 'elda.xml - ProgramEditor' interface. The main workspace is a timeline from 00:05 to 00:50, divided into tracks for various elements:

- Programa:** Contains blocks for 'bienvenida\_block', 'previsioid\_block', 'previsioid1\_block', and 'despedida\_block'. A 'bienvenida\_say\_city' event is also visible.
- Imagen:** Tracks for 'media/camera/mobil\_first\_person.xml' and 'media/camera/mobil\_panels\_mtn.xml'.
- Sonido:** Tracks for 'media/audio/fons\_musical\_curt.wav', 'textures/mobil/background/pop.tga', and 'textures/mobil/background/real.tga'.
- fondo:** Tracks for 'textures/mobil/base\_neta\_dema.tga' and 'textures/cities/Elda.tga'.
- panel\_mtn, panel\_left, panel\_mid, panel\_right, panel\_city, panel\_left1, panel\_mid1, panel\_right1:** Each track contains 'textures/mobil/sol.tga'.
- alemany:** Tracks for 'ninet\_cella\_d...', 'ninet\_e47', 'ninet...', 'ninet\_e46', and 'ninet...'.
- Cara, Gestos, Movimiento:** Tracks for 'lasalle\ORAL\_WEB\_NOCHE\_E...', 'lasalle\ORAL\_WEB...', 'lasalle\ORAL\_WEB\_NOCHE\_ELD403.wav', and 'lasalle\ORAL\_WEB\_NOCHE\_ELD404.wav'.

A 'Preview' window in the bottom right shows a 3D rendered character of a man with brown hair, wearing a blue suit, white shirt, and red tie, against a teal background with bokeh lights.

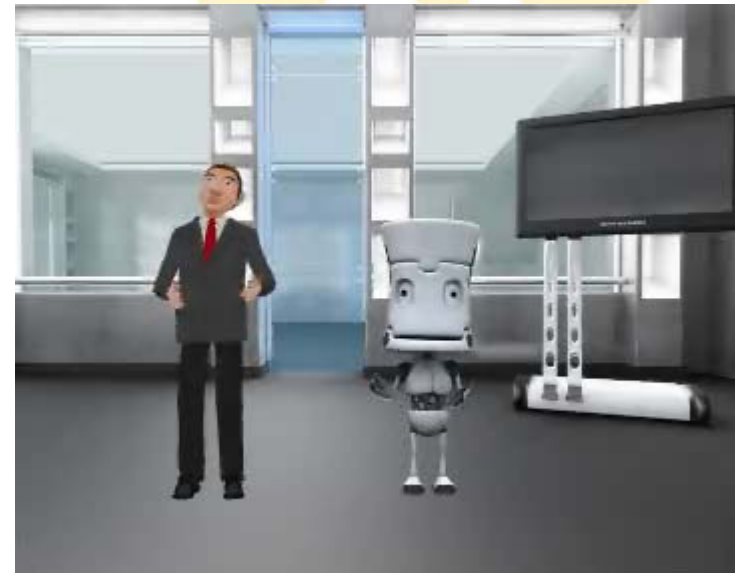
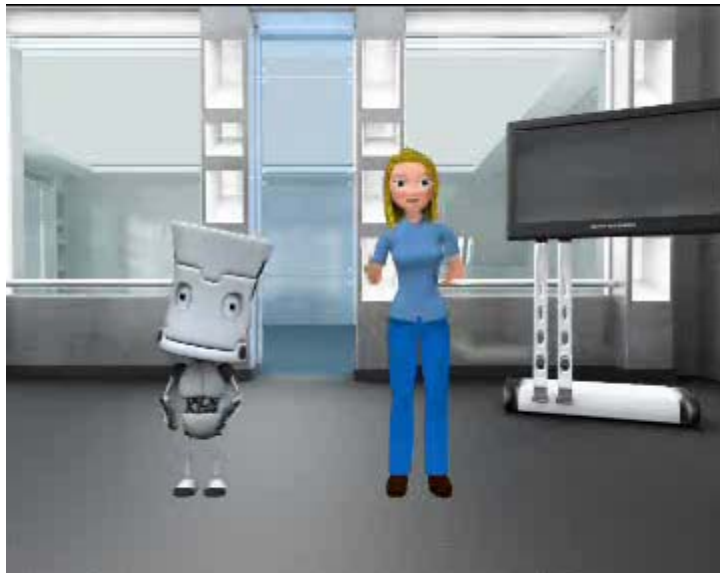
At the bottom of the interface, the status bar shows: 'Preparado', '0 clips seleccionados', '0 referencias seleccionadas', and a timer at '00:01:17'.

# 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>



Semantic Audiovisual Entertainment  
Reusable Objects

PROJECT SHOWCASE EVENTS RESOURCES CC

**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 content who need to know little of the technical aspects of how the tools that

## SALERO's Main Innovation

Based on research into methodologies for describing, creating, managing, editing, retrieving, and addressing characters, objects, sounds, language sets, and behavior. The concept of intelligent content will be verified by experimental production.

**Invitation:** A User Group Event will be held on **15 February 2008** available [here!](#)

**News (24 January 2008):** An overview and demos of the Audio Trainer. SALERO has been added to the Showcase section of this website.

SALERO - Intelligent Content [Edit Channel](#)



**intelligentcontent**

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

This work has been supported by the SALERO project (IST-FP6-027122) of the European Union.

Website: <http://www.salero.eu>

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06:23



**SALERO - Full House Demo**  
04:51

# Semantic Audiovisual Entertainment Reusable Objects

