



**SALERO**

# **Second Report on Commercialization and Marketing Activities and Detailed Demonstration Plan for PM37-48**

**SALERO Deliverable 12.2.2**





# Second Report on Commercialization and Marketing Activities and Detailed Demonstration Plan for PM37-48

## SALERO Deliverable D12.2.2

SALERO identifier: SALERO-D12.2.2-AM- Second report on  
commercialization and marketing activities and  
detailed Demonstration Plan for PM37-48-v03.doc

Deliverable number: D12.2.2

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Work package / task: WP12/T02

Document status: Final

Confidentiality: Public

Version	Date	Reason of change
1	2008-07-10	Document structure proposed by AM
2	2008-09-18	GVG, DTS, UPF and AM contribution
3	2008-09-26	JRS, DIT, PGP, BLITZ, URL, TAIK contribution
4	2008-09-30	Final version

The work presented in this document was partially supported by the European Community under the Information Society Technologies (IST) priority of the 6th framework programme for R&D.

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## Table of Contents

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<b>1</b>	<b>Executive Summary .....</b>	<b>1</b>
<b>2</b>	<b>Introduction.....</b>	<b>2</b>
2.1	Purpose of this Document .....	2
2.2	Scope of this Document .....	2
2.3	Status of this Document .....	3
2.4	Related Documents .....	3
<b>3</b>	<b>Commercialization and Marketing Activities.....</b>	<b>4</b>
3.1	Thomson Systems Germany (GVG).....	4
3.1.1	<i>Product Innovation .....</i>	<i>4</i>
3.1.2	<i>Commercialization Activities .....</i>	<i>4</i>
3.1.3	<i>Marketing Activities .....</i>	<i>4</i>
3.2	Blitz Games Studios Ltd(BLITZ) .....	5
3.2.1	<i>Product Innovation .....</i>	<i>5</i>
3.2.2	<i>Commercialization Activities .....</i>	<i>5</i>
3.2.3	<i>Marketing Activities .....</i>	<i>6</i>
3.3	Pepper's Ghost Productions (PGP).....	6
3.3.1	<i>Product innovation .....</i>	<i>6</i>
3.3.2	<i>Commercialization activities.....</i>	<i>6</i>
3.3.3	<i>Marketing activities.....</i>	<i>7</i>
3.4	Digital Theatre Systems (DTS).....	7
3.4.1	<i>Product Innovation .....</i>	<i>7</i>
3.4.2	<i>Commercialization Activities .....</i>	<i>7</i>
3.4.3	<i>Marketing Activities .....</i>	<i>7</i>
3.5	JOANNEUM RESEARCH Forschungsgesellschaft (JRS) .....	8
3.5.1	<i>Product Innovation .....</i>	<i>8</i>
3.5.2	<i>Commercialization Activities .....</i>	<i>8</i>
3.5.3	<i>Marketing Activities .....</i>	<i>8</i>
3.6	Leopold Franzens Universität Innsbruck (LFUI).....	8
3.6.1	<i>Product innovation .....</i>	<i>8</i>
3.6.2	<i>Commercialization activities.....</i>	<i>9</i>
3.6.3	<i>Marketing activities.....</i>	<i>9</i>
3.7	Activa Multimedia (AM).....	9
3.7.1	<i>Product Innovation .....</i>	<i>9</i>
3.7.2	<i>Commercialization Activities .....</i>	<i>11</i>
3.7.3	<i>Marketing Activities .....</i>	<i>12</i>
3.8	Fundació Barcelona Media – Universitat Pompeu Fabra (FBM-UPF) .....	14
3.8.1	<i>Product Innovation .....</i>	<i>14</i>
3.8.2	<i>Commercialization Activities .....</i>	<i>15</i>
3.8.3	<i>Marketing Activities .....</i>	<i>15</i>
3.9	Universitat Pompeu Fabra – Music Technology Group (UPF).....	16
3.9.1	<i>Product Innovation .....</i>	<i>16</i>
3.9.2	<i>Commercialization Activities .....</i>	<i>16</i>
3.9.3	<i>Marketing Activities .....</i>	<i>16</i>
3.10	Universitat Ramon Llull (URL) .....	16
3.10.1	<i>Product Innovation .....</i>	<i>16</i>
3.10.2	<i>Commercialization Activities .....</i>	<i>17</i>
3.10.3	<i>Marketing Activities .....</i>	<i>17</i>
3.11	Dublin Institute of Technology (DIT) .....	17

3.11.1	<i>Product Innovation</i>	17
3.11.2	<i>Commercialization Activities</i>	18
3.11.3	<i>Marketing Activities</i>	18
3.12	University of Glasgow (UG)	18
3.12.1	<i>Product Innovation</i>	18
3.12.2	<i>Commercialization Activities</i>	19
<b>4</b>	<b>Detailed Demonstration Plan</b>	<b>20</b>
4.1	Project Level Activities	20
4.2	Activa Multimedia (AM)	20
4.2.1	<i>Target Audience</i>	20
4.2.2	<i>Events</i>	20
4.3	Blitz Games Studios (BLITZ)	20
4.3.1	<i>Target Audience</i>	20
4.3.2	<i>Events</i>	21
4.4	Pepper's Ghost Productions (PGP)	21
4.4.1	<i>Target Audience</i>	21
4.4.2	<i>Events</i>	21
4.5	Helsinki University of Arts & Design (TAIK)	22
4.5.1	<i>Target Audience</i>	22
4.5.2	<i>Events</i>	22
4.6	Leopold Franzens Universität Innsbruck (LFUI)	23
4.6.1	<i>Target Audiences</i>	23
4.6.2	<i>Events</i>	23
<b>5</b>	<b>Demonstration Timetable</b>	<b>24</b>
<b>6</b>	<b>Conclusions</b>	<b>25</b>
<b>7</b>	<b>Annex 1: AM's iVACs Product Sheet</b>	<b>26</b>
<b>8</b>	<b>Annex 2: AM's Publications in Specialized Journals</b>	<b>28</b>
<b>9</b>	<b>Annex 3: TAIK's Publications in Specialized Journals</b>	<b>33</b>
<b>10</b>	<b>Glossary</b>	<b>35</b>

# 1 Executive Summary

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This deliverable has two separated parts. The first one is the report on commercialization and marketing activities, and the second one, is the demonstration plan for the PM 37-48.

For the report on commercialization and marketing activities, it has been explained how the SALERO results have affected the marketing plan of the commercial partners. It also describes the innovation in the commercial products and the different activities that have been carried out during the period, regarding commercialization as well as marketing.

This deliverable states the plans for the next and final twelve month period of the SALERO in which both the technologies and experimental productions resulting from those technologies will be demonstrated to conferences, trade fairs, relevant trade associations and appropriate commercial or prospective commercial partners.

The relevant partners in this deliverable fall into two categories; experimental production developers and toolset developers. In the former category are Aactiva Multimedia (AM), Blitz Games Studios (BLITZ), Pepper's Ghost Productions (PGP) and Helsinki University of Arts & Design (TAIK). In the latter with respect to tools, the partners are Aactiva Multimedia, Blitz Games Studios and Thomson Systems Germany (GVG).

## 2 Introduction

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### 2.1 Purpose of this Document

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This deliverable results from the union of two deliverables, one containing the second report on commercialization and marketing activities (former D12.1.2) and the other one defining the Demonstration Plan for PM37-48. Therefore, the document is divided into two different parts.

The first part of the document contains the report of the different commercialization and marketing activities done by all the partners to promote or commercialize products made with SALERO tools. Those activities were defined in D12.2.1 where they were described the Demonstration Plan for the second 18 month period.

The second part of the document describes the Demonstration Plan for the period PM37-48. As explained in D12.2.1, the demonstration activities are designed to promote late prototypes and near-market demonstrators of working technologies, to fine tune them and to help gain industry acceptance. Within the demonstration activities, manufacturers will loan prototype software and toolkits to media producers for demonstration in real contexts of use (experimental production and games production) to elicit pre-launch interest from potential customers, obtain experience of use and identify any customisation that is required. Demonstration activities are distinct from (and subsequent to) evaluation activities in which early prototypes and demonstrators undergo field trials and rigorous usability evaluations in realistic circumstances.

In the part “Demonstration Planning“ the necessary steps to demonstrate SALERO achievements in a commercial environment will be planned. This includes finding technology partners and reference customers, near-market scenarios, appropriate ventures for technology disclosures, competitive landscape and product differentiation, mid and long-term strategic fit within the product development road-maps of the commercial SALERO partners.

Set within this context, the purpose of this document is to identify the relevant and appropriate industry forums which will permit both research and commercial partners to demonstrate the achievements of the project within conducive and suitable frames of reference.

Extending from the DoW pertaining to WP9, the experimental production scenarios currently under development by the relevant partners are:

- Activa Multimedia: i-VJ (interactive Video Jockey); an IPTV (Internet Protocol Television) service with a 24/7 entertainment broadcast. VJ (virtual Video Jockey) will be the presenter of the broadcast.
- Blitz Games Studios: Triage Trainer.
- Pepper’s Ghost Productions: My Tiny Planets virtual world for 7-11 year old children is an on-line environment featuring the characters from the Tiny Planets television series. An updated character will be used to present missions and activities.
- TaiK: Turing Machine.

The toolsets used in the making of these productions will be shown in context.

### 2.2 Scope of this Document

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As the document has two separated parts, there are two different scopes of this document.

One is to explain how the business models of the SALERO partners and achievements and results of the SALERO project fit into this landscape and which activities are performed to get awareness by potential customers.

The other one is to describe the various demonstration activities which will be included in the period from month 37 to month 48 of the project. These will be identified by specific experimental productions and toolsets. If there are opportunities for combined promotion these will be highlighted. Combining promotional and demonstration activities must be treated with extreme caution, as for example a television commissioning editor will have no interest whatsoever in how a programme was made – simply that it was made.

The balance between trade shows and private meetings and presentations with business partners has to be identified also; games publishers and commissioning editors are unlikely to appreciate being placed in the spotlight, so these approaches will have to be handled with commercial sensitivity.

## 2.3 Status of this Document

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This is the final version of D12.2.2.

## 2.4 Related Documents

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Before reading this document it is recommended to be familiar with the following documents:

- Description of Work
- D12.1.1 Initial Report on Commercialization and Marketing Activities
- D12.2.1 Detailed Demonstration Plan for the Second 18-Month Period

## 3 Commercialization and Marketing Activities

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### 3.1 Thomson Systems Germany (GVG)

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#### 3.1.1 *Product Innovation*

The Bones framework is a next-generation environment for digital intermediate and post production that lets users create workflows tailored to their needs. The Bones framework has two primary components: a user interface that not only provides a common look, feel, and operation, but also serves as the heart of an end-to-end post-production workflow, and manages the process from data ingest to finished digital master; and a variety of high performance applications from which users can pick and choose.

The Linux-based post-production framework “Bones Dailies” provides a complete digital intermediate solution. With video and data transfer, dust busting, restoration and colour correction features, it can address day-to-day applications and creative tasks.

Bones Dailies provides advanced features for audio and image ingest, metadata capture, colour grading, Audio/Video synchronization, and play-out of dailies deliverables. The Bones framework interfaces directly with postproduction products such as film scanners and other high end capture devices. The open environment supports third-party applications, as well as render clusters to deliver optimum rendering times tailored to a user’s project. Using Bones applications, users can edit and conform transitions, rescale images, and convert clips to a variety of output formats such as 4k film data, HD and SD. Where third-party applications are desired, the environment manages the data transfer of images to and from workstations in a facility and collects them for conformance into a completed sequence. These images can be data- or video-originated (i.e., from a film scanner or a tape recorder). The Bones framework runs on a general-purpose Linux computer that can be connected to a storage area network (SAN) and its applications operate under a common user interface. This interface includes a number of powerful tools for post production, including a timeline for conformance editing and a flow graph for visualization and process management of the various stages of the production workflow.

#### 3.1.2 *Commercialization Activities*

GVG was concentrating to reuse of invented SALERO technology in its own product development. Various media and metadata import and export functionalities were developed and integrated into the framework in order to commercialize research results. These activities were accomplished to support the integration of “Bones Dailies” into already established workflows within the film industry. The integration work has been verified by small focus or user groups in order to find widely accepted solutions. Professionals of the industry have been involved in the verification process.

#### 3.1.3 *Marketing Activities*

Although development is still ongoing GVG began marketing the Bones platform as a core device in digital post production workflows. The marketing activities for Bones Dailies were an integral part of the overall marketing strategy of the “Grass Valley Post Production Solutions” group. The Thomson System Germany corporate website is referencing Bones Dailies: [http://dft-film.com/software/bones\\_dailies.php](http://dft-film.com/software/bones_dailies.php). The GVG worldwide sales organisation was involved in different training activities in order to promote the technology within the post production community.

GVG showed and demonstrated prototype versions under controlled conditions to get attention of potential users. These activities included real commercial productions with support of the GVG engineering team. In addition GVG gave temporary licenses to customers willing to use the toolset for initial trials.

Major marketing activities were:

- The presentation of BONES Dailies on Dec. 5th and 6th 2007 at a major London post production house (Midnight Transfer). Professional users were given demonstrations and hand on sessions in a professional environment.
- Conducting a first complete dailies production for a commercial feature film project. Within 40 shooting days more than 120 film roles with more than 6000 takes were digitized, corrected and tailored.

Shows and exhibitions which GVG attended in 2008:

- NAB (Las Vegas, April 2008)
- Cannes Film Festival (Cannes, May 2008)
- Broadcast Asia (Singapore, June 2008)
- IBC (Amsterdam, September 2008)
- IBEE (Tokyo, November 2008)

## 3.2 Blitz Games Studios Ltd (BLITZ)

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### 3.2.1 *Product Innovation*

Blitz Games Studios Ltd is one of the world's most successful independent video games developers. Blitz Games Studios' technology has been acknowledged as among the best in the world by leading industry players, including Electronic Arts, Lucas Arts, MGM and Namco Bandai. Support from SALERO has enabled the studio to innovate, expand and deepen its offer, ensuring that our technology enables creativity and improves production pipelines, while performing robustly and dependably.

- Procedural realtime generation of believable characters of diverse ages and ethnicities, with realistic eye, head and breathing movement, is enabling the rapid creation of credible in-game characters or large crowds in a way never before seen in the industry.
- Improved animation techniques, based on the hierarchy of behaviour, movement, appearance, where behaviour is the most important for creating the illusion of reality, is supporting the realtime delivery of realistic avatars, giving Blitz Games Studios a competitive advantage in the industry.
- Component based editing system

The core concept is to remove the need for programmers to work on everyday tasks by providing a toolset for designers and artists, who can create, test and integrate their ideas, assets and work in the game engine. This approach improves production workflow, saves time, removes blocks on creativity and frees programmers to concentrate on the most complex tasks. The system is currently made up of:

- Visual component editing framework to give an integrated user interface
- Visual shader editor to add cinematic like post production effects
- Visual animation blending tool, to enable animators to instantly see the results of their work in context
- Finite state machine editor to maximise efficiency and minimise bugs in game scripting
- Distributed Asset processing

This system has reduced the time needed to process game assets for the game engine

The system is uniquely flexible to deal with all game types and needs, from puzzle to action adventure, karaoke to first person shooter.

### 3.2.2 *Commercialization Activities*

The tools partly developed with the support of SALERO are an integral part of Blitz Games Studios' technology and will not be separately commercialised.

Blitz Games Studios' customers are:

- Games publishers and commissioners of video games – this is currently the majority of its business
- Licensors of technology

In addition there are game playing members of the public, who pay for downloadable games created by Blitz Games Studios' teams and for which Blitz Games owns the IP; while these are not directly targeted in activity to commercialise SALERO tools, they benefit from the improved look and feel of games delivered by some SALERO tools, which encourages higher sales.

Many of the tools developed with the support of SALERO are already being used in Blitz Games Studios' commercial commissioned productions, where they are recognised by commissioners as adding value to the project.

Blitz Games Studios is constantly demonstrating advances in its technology, including that supported by SALERO, as a core part of business. The company wins commissions based on both its track record of reliability and creativity and its reputation for technology innovation. Demonstration material, partly created using SALERO tools, is regularly shown to leading industry figures in the games, film and TV fields both as part of a pitch for a particular project and as background to the company's strengths and capabilities. These demonstrations can be either on a one to one basis or at trade shows. Blitz Games Studios also seek opportunities to speak at high profile industry conferences and press coverage to encourage potential commissioners to discuss and experience its technology. Feedback from these meetings is invaluable for informing further development.

Blitz Games Studios licence its technology, including the SALERO tools, to partner games studios working with us on a sub-contract basis and are currently exploring the wider potential of licensing its engine and tools. BlitzTech, a new division of Blitz Games Studios, has been formed and it has also been created a new area of the Group website to drive interest and demand. They have secured and concluded one licensing deal to date.

### **3.2.3 Marketing Activities**

The BlitzTech website is operational [www.blitzgamesstudios.com/blitztech](http://www.blitzgamesstudios.com/blitztech) and will be highlighted in regular press releases about the company's technology.

SALERO supported tools are described and demonstrated in detailed pitch documents and videos, which are shown to all potential business partners.

Blitz Games Studios and its technology offer are represented and visible at all leading games industry international conferences. It is also presented to potential commissioners in the Serious Games market at international conferences for the armed forces, emergency services, commercial training services and the health sector.

Blitz Games Studios was present at the following events:

- D.I.C.E Las Vegas <http://www.dicesummit.org>
- Siggraph New Orleans <http://www.siggraph.org/s2009>
- Game Developer Conference (GDC) San Francisco <http://www.gdconf.com>
- Microsoft Game Fest <http://www.xnagamefest.com>
- Game Convention Leipzig <http://www.gc-germany.com>
- Austin GDC <http://www.austingdc.net>
- Games Convention Asia <http://www.gc-asia.sg>
- Game Connection Europe <http://www.game-connection.com>
- Virtual Worlds Forum Europe <http://www.virtualworldsforum.com>

## **3.3 Pepper's Ghost Productions (PGP)**

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### **3.3.1 Product innovation**

PGP is of course not a tools manufacturer but an end user; in this regard it is where appropriate and via the MTP web site, in a position to make active use of the tools and technologies developed in SALERO. In particular, these will focus on automated animation sequences for help characters. The intention is to make use of the automated animation tools from UPF which are being developed in conjunction with the Lingua Tag framework from DIT, TTS from URL and audio compression codec from DTS.

The product innovation in the context of graphics development is the high resolution renderings incorporated into the 2.5 d environment, along with video sprites extracted from the TV series content and embedded in the scrolling in-browser environments.

### **3.3.2 Commercialization activities**

MTP has a 3 year commercialisation plan which is currently being revised in light of new market developments and partnership opportunities. These are likely to include commercial arrangements currently under discussion with Discovery Kids, Playcrafter, Sesame Workshop and others.

### **3.3.3 Marketing activities**

A marketing plan is currently in development. No steps have currently been taken. It should be noted that the events attended by PGP in this area do not directly relate to commercialisation or marketing with the exception of identifying potential commercial / development partners (K-Zero, others).

## **3.4 Digital Theatre Systems (DTS)**

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### **3.4.1 Product Innovation**

The scalable audio codec partly developed within SALERO represents a step forward to offer new services and better user experiences in a world of increasing mobility and connectivity. Often, the network and connectivity is based on wireless technologies. Currently, user experience of media access, for example server-based audio listening through wireless, frequently is not a continuous and glitch-free one, be that in a home wireless network environment or in a travelling automobile. Interruptions occur and services become unavailable due to fluctuations in data bandwidth. With the new codec, the designed scalability embedded in the generated data streams helps to greatly alleviate or even eliminate such problems so that continuous services can be offered. Other innovative features include enhanced channel error tolerance, bandwidth flexibility that enables Fit-To-Stream and Fit-To-Media services, and also improved audio quality at low bit rate range.

To further enhance user experience on 2-channel play-back systems (eg. headphones, and stereo speaker system), a multi-channel sound virtualisation is being developed and improved upon. It employs the latest research results to bring a new level of 3D realism and clarity, not only for media entertainment experiences but also possibly for communication when used with the low bit rate scalable audio codec.

### **3.4.2 Commercialization Activities**

Related to DTS work within SALERO, commercialization activities include those in the following 2 main areas: design and implementation of application prototypes or products, and demonstration and support to DTS licensees' in their product designs. It has been the case for both the scalable codec and the virtualization work. While development is still on-going, some tested and proven techniques have been adopted and used for incremental changes and improvements to existing technologies and products. For example, improvement has been made to the codec used for secondary audio coding on the Blu-ray Disc platform. Also, work in virtualization helped the launch and roll-out of "DTS Surround Sensation"™ technology and products.

### **3.4.3 Marketing Activities**

Since last SALERO commercialization and marketing report, DTS continues its marketing activities both in maintaining consistent presence and exhibiting at major international shows and in organizing seminars and demonstrations to key clients worldwide.

The DTS corporate website (<http://www.dts.com>) has also gone through a major re-design and was updated with much information and active media contents. One section of particular interest is on DTS Surround Sensation ([http://www.dts.com/DTS\\_In\\_Consumer\\_Products/Surround\\_Sensation.aspx](http://www.dts.com/DTS_In_Consumer_Products/Surround_Sensation.aspx)), part of which was developed under DTS' SALERO project work.

Both DTS suite of technologies and specific applications and system solutions are demonstrated at exhibitions. Demonstrated technologies include DTS-HD Master Audio, DTS Digital Surround, DTS Surround Sensation and DTS NEO6. Demonstrated applications, industrial solutions and tools include home theatre, PC, broadcast, game, car, and pro-audio software tools such as DTS Master Audio Suite.

An in-complete list of major shows in which DTS exhibited during the period is as follows.

- CES 2008 (Las Vegas, 01/2008)
- NAB 2008 (Las Vegas, 04/2008)
- AES-123 (New York, 10/2007)
- AES-124 (Amsterdam, 05/2008)
- IBC 2008 (Amsterdam, 09/2008)
- CEDIA EXPO 2008 (Denver, 09/2008)
- IFA 2007 (Berlin, 08/2007)
- Computex 2008 (Taipei, 06/2008)

- IDF 2008 (Shanghai, 04/2008)

## 3.5 JOANNEUM RESEARCH Forschungsgesellschaft (JRS)

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### 3.5.1 *Product Innovation*

JRS has developed two major outputs so far in the SALERO project: An ontology for describing animations of virtual characters and an annotation tool using this ontology.

The ontology was developed jointly with partner LFUI, while the annotation tool is a development of JRS using LFUI's semantic services as a base.

#### **SALERO Virtual Character Ontology**

The SALERO Virtual Character Ontology is based on and extends the AIM@SHAPE Virtual Human ontology at several points. Most notably it adds a set of individual descriptors which are used in the Virtual Human ontology to define the behaviour of the virtual individual like his personality or demographics. The SVCC (SALERO Virtual Character Core) ontology adds descriptors to specify the personality and emotional state of a character (e.g. to specify his demographics, abilities of the character, social behaviour and also its role in a media production). Furthermore the relation between multiple characters in a story can be specified as well as a character's relation to the target audience.

The four main concepts of the ontology are:

- SALERO Character: The central point of the ontology, every other entity is connected to.
- Animation Clip: Covers the domain shared by all application partners – animating a virtual character.
- Emotional State: Supports annotation of a character's emotion(s).
- Personality: Modelled to describe social role, special abilities, species, demographics, etc.

#### **Semantic Annotation Tool**

Using the Virtual Character Ontology the semantic annotation tool (with the underlying technology branded "StaBTag") allows creating statement based annotation of related entities (objects, characters, emotions...) in a given media item very easily. This way of annotation provides significant advantages over simple unstructured free-text tagging, enabling semantic annotation with great ease of use.

The annotation tool is envisioned to handle all types of media content (audio, video, 3D models and components, still images...) created at various stages in a media production workflow.

### 3.5.2 *Commercialization Activities*

As of mid-September 2008 the StaBTag annotation tool is in the state of a very early prototype, hence no major commercialization activities have been performed so far.

However, the tool was demonstrated at the third meeting of the SALERO User Group in Amsterdam (15 September, 2008) and has received positive feedback from a number of potential users. Several visitors at the meeting have offered to beta-test the tool in their real-world scenarios.

A potential scenario of integration of semantic annotation with a professional content management system has been discussed in two meetings with BLITZ. This will be pursued in the upcoming months.

### 3.5.3 *Marketing Activities*

- The semantic annotation tool StaBTag was first presented to the public at the third SALERO User Group meeting in Amsterdam.

## 3.6 Leopold Franzens Universität Innsbruck (LFUI)

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### 3.6.1 *Product innovation*

LFUI has been involved in the development of the artefacts as described by JRS in section 3.4.1 above. Furthermore, LFUI's main output is an ontology workbench supporting the main lifecycle of multimedia ontologies from their manual and semi-automatic creation through their use in semantic annotation and search and also economically relevant aspects like cost estimation. Part of the functionality is offered as Web services to be used by other applications.

The workbench especially supports:

- The creation of ontologies from existing multimedia metadata available in MPEG-7
- The manual engineering of ontologies supported by an ontology editor which allows textual and visual editing of ontologies
- Persistent storage of ontologies
- Manual annotation for non-experienced users
- Annotation of arbitrary resources supported by a set of annotation services
- Reasoning and search using ontologies supported by a set of semantic search services

### 3.6.2 Commercialization activities

LFUI did not do a separate commercialization of the developed artefacts. Parts of the functionality of the workbench will be used in tools developed by JRS who plan to commercialize those.

### 3.6.3 Marketing activities

LFUI presented several papers at conferences focusing on the workbench but also of benefits of semantic technologies for media production in general.

## 3.7 Activa Multimedia (AM)

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### 3.7.1 Product Innovation

The SALERO project has enabled Activa Multimedia (AM) to develop successful new product lines and improve its virtual character audiovisual content.

iVAC (interactive Virtual Automatic Characters) Commercial is the set of tools used to create these characters. Some of the tools' components were developed within the framework of the SALERO project. These include the Simple Character Editor, Program Editor, Template Editor, Program Generator, RT Program Generator, Program Renderer. The iVAC tool package also integrates other Activa Multimedia products developed outside the SALERO project such as some of the leading 3D products in the market (such as 3DS Max or Motion Builder). This tool package includes the latest improvements made from experimental tests and lets users generate videos presented by virtual characters that are automated to varying degrees. In many cases these videos are generated from the information in a database. AM uses this knowledge in two different ways:

- "Content capsules" that allow videos to be generated with virtual characters. They can be used on different channels and platforms such as the Internet, mobile phones and television. The virtual characters humanize the users' relationship with the devices by interacting with them and sending them messages with information and entertainment.

Some examples are the virtual guides on company web portals, TV presenters and characters, mobile phone applications such as movie guides, party invitations or birthday congratulations from a virtual celebrity, jokes, horoscopes, astrology, weather updates, notices, etc.

The type of content available for mobile phones includes:

- Movie premiere notices: A mobile phone application. Users are sent an MMS in which the iVAC character presents the week's major film release. The video comprises an introduction with the film title, a synopsis, a trailer and the character saying goodbye.



**Figure 1: Frame capture from "Movie Premieres" application**

- Astrology notice: Application for mobile phones. Users are sent a daily MMS in which a virtual astrologist reads them their horoscope.



**Figure 2: Frame capture from "Astrology" application**

- Jokes: Mobile phone application. Users are sent an MMS in which the friendly iVAC character Manolo tells them a funny joke.



**Figure 3 and 4: Frame captures from "Jokes" application**

- AM offers low-cost tools to create videos with virtual characters that can be easily and quickly customized. The system offers several pre-set models that clients can adapt to their specific needs. AM's iVAC Editor lets users create semi-automatic videos presented by virtual characters in an easy, intuitive way through the Internet. The virtual characters can read the information and move in a realistic manner with nearly perfect lip sync. The movements and infographics are synchronized with the audio. iVAC Editor also provides a catalogue of pre-set backgrounds and users can add their own graphics and titles.

The video file can be generated in different formats: avi (for TV and Internet), flv and wmv (for Internet and mobile telephony) and 3gp (for mobile phones).

The audio file is generated using TTS (Text-to-Speech). After selecting the voices and languages, the text is entered either manually or by inserting text files.

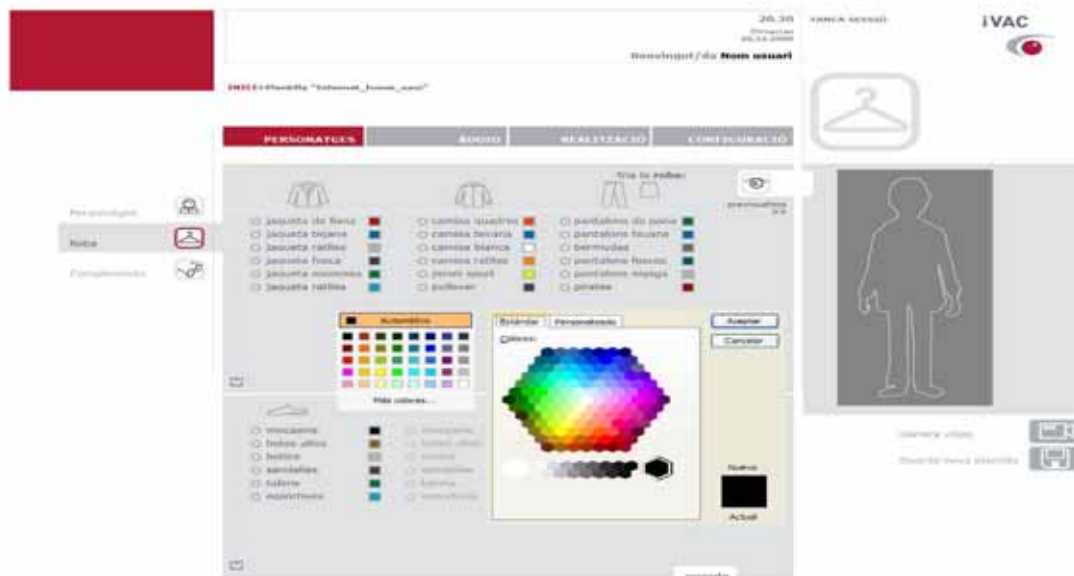


Figure 5: Screen capture from iVAC Editor tool.



Figure 6: Images of characters available in iVAC Editor catalogue.

### 3.7.2 Commercialization Activities

The following are some of the leading examples of the commercial use of AM's iVACs developed with SALERO technology.

#### TEMPS DE NEU – TUIXÉN – Virtual Weatherwoman

The virtual character Tuixén is the presenter of TV3's hit program "Temps de Neu" ("Snow Time"). With a good sense of humour, Tuixén presents the weather report section of "Temps de Neu". She gives the forecast, snow conditions and shows live shots of different ski slopes.

Tuixén is a multi-platform character. Her forecasts are available round-the-clock on the Internet and on mobile phones. Viewers can consult the weather forecast and ski conditions in the Catalan Pyrenees, the rest of Spain and the main ski resorts in Europe on the program's web site ([www.tempsdeneu.cat](http://www.tempsdeneu.cat)) or by sending an SMS to 7033 and indicating the ski resort for which they want information.



**Figure 7: Frame capture from program “Temps de Neu” with its virtual presenter.**



**Figure 8: Virtual presenter Tuixén**

### **TUIXÉN – Presenter at Expo Zaragoza 2008**

The content of the successful program “Temps de Neu” tied in with the water theme of the 2008 World Expo in Zaragoza. This was why Tuixén had no vacation this summer while the rest of her colleagues took a rest before the coming ski season. Tuixén spent the summer working as a virtual guide at the Catalan government’s Expo stand.

She welcomes visitors at the pavilion entrance, then presents the exhibition and gives up-to-date information on the water level of rivers and reservoirs in Catalonia.



**Figure 9: Some images showing Tuixén at the Catalan Pavilion at Expo Zaragoza 2008.**

Further Examples are:

- SARA – Virtual guide for the telecommunications company Amena
- LAIA – The virtual assistant at the Catalan government’s Citizen Information Service (Generalitat de Catalunya)
- RODOLFO CHIQUILICUATRE comedian representing Spain at Eurovision 2008
- “EL INTERMEDIO” – CARLES FRANCINO and FEDERICO J. LOSANTOS
- IN A STRANGE WORLD – BONSAI
- MAT – EGARSAT virtual guide
- SAM – The Virtual Weatherman

### **3.7.3 Marketing Activities**

Activa Multimedia has had stands at major international events displaying its products developed with the iVAC tool package and, therefore, with technology developed within the framework of the SALERO project. A number of videos have been shown at the company stand including SALERO experimental productions in which the name of the SALERO project and its logo appear. Activa Multimedia has also displayed some of its iVAC productions at several trade shows and exhibitions.

The following are AM marketing activities related to its iVAC product line and, therefore, to the SALERO project.

## Demonstration Events

- **BROADCAST**  
November 6-9, 2007  
FEMA - Madrid (Spain)
- **MWC**  
February 11-14, 2008  
Fira Barcelona - Barcelona (Spain)  
<http://www.mobileworldcongress.com/>
- **MIP TV featuring MILIA**  
April 7-11, 2008  
Cannes (France)  
<http://www.miptv.com/>
- **MAC**  
May 28-29, 2008  
Roca Umbert Fàbrica de las Artes - Granollers (Spain)  
<http://audiovisualmac.com/>
- **IBC2008**  
Conference: September 11-15, 2008 / Exhibition: September 12-16, 2008  
RAI Exhibition and Congress Centre - Amsterdam (Holland)  
<http://www.ibc.org/cgi-bin/displaypage.cgi?pageref=100>

## Exhibitions

### Step into the Television and Radio of the Future

Palau Robert (Barcelona, May 30th to August 3rd, 2007)

To celebrate Activa Multimedia's 10th anniversary, an exhibition was set up together with the Catalan Corporation of Audiovisual Media (CCMA) to review the evolution of television and radio over the years and their immediate future, including user interaction to access information on different communication channels. One of the company's most outstanding projects is its virtual characters created for different television programs and the virtual weatherman SAM, whose forecasts can be accessed on different multimedia services.

## Publications in Specialized Journals

In Annex 2 there is a selection of newspaper articles that have appeared in Spanish trade journals that refer to Activa Multimedia and products related to SALERO.

## Meetings

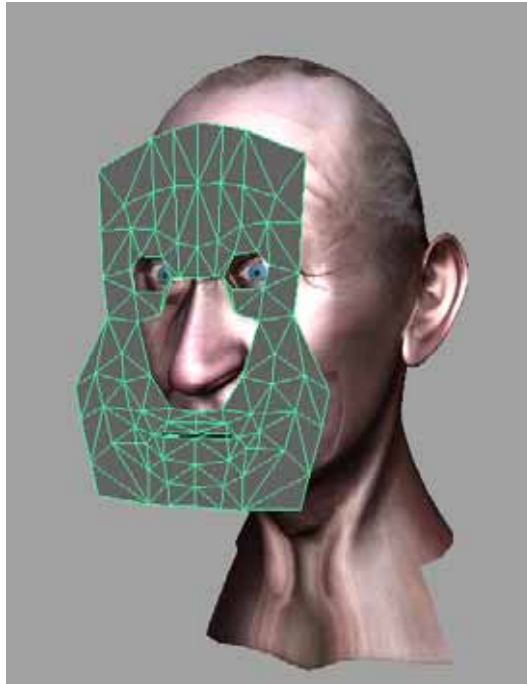
During that period, Activa Multimedia has done several meetings with clients from different audiovisual sectors. Those clients are the main Spanish TV stations, as well as the main mobile telephony operators and some internet portals. Several meetings have been done to show the SALERO Experimental Production for the evaluation of its possible commercial impact and its business interest.

## 3.8 Fundació Barcelona Media – Universitat Pompeu Fabra (FBM-UPF)

### 3.8.1 Product Innovation

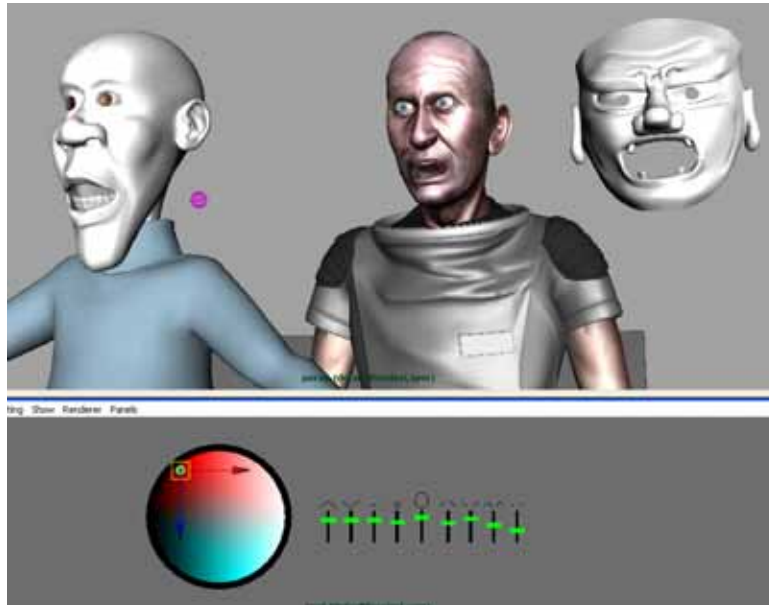
FBM-UPF is focused on developing tools for character animation and automatic production systems.

The *Maskle* automatic system for facial animation is a system that allows automatic transfer of facial expression generation techniques from a low-resolution ‘mask’ to a higher resolution face. The innovation of this work is in the sector of the automatization of the facial animation process, a process that traditionally is very time consuming. Using the *Maskle*, the user can rapidly animate a newly created character, creating a variety of different expressions and facial poses within a few minutes.



**Figure 26: The Maskle tool in action**

The *activation-evaluation model* for facial animation enables an animator to rapidly prototype several facial expressions. Given a face which has been prepared for animation (using either blend shapes or bone-weight interpolation), the activation-evaluation system deforms the face into a spread of expressions that depend only on two values: *activation* controls the degree of expression (i.e. whether it is a subtle or obvious expression), where as *evaluation* determines the positivity or negativity of the expression. For example, high activation and high evaluation values result in a ‘laughing’ or ‘surprised’ face, where low activation and high evaluation result in a ‘serene’ face. The innovation in this work is very high as it is addressing an important aspect of animation research, and extending the work of several recently published papers.



**Figure 27: The Activation Evaluation model**

In this field of animation production automatization systems, the graphics group at FBM-UPF is developing a set of tools that allow animation producers, broadcasters and multimedia designers to streamline repetitive and procedural defined processes related to the production of animation series for education or entertainment purposes, public information or customer personalized information systems, or any kind of computer animated content with any degree of repetitiveness or parameterization of contents.

This set of tools includes a rendering system capable of integrating 3D characters with full body animation, three-dimensional scenarios, titles, dialogs, music, audio effects, etc. in broadcast quality in real-time. A file format capable of describing of such a program and also the dynamic update of such programs was designed and implemented. Also a visual editor supporting this file format was designed and implemented to aid the directors to create, edit and update audiovisual programs in a straightforward manner. The system is enhanced by several other auxiliary tools such as a character editor, plug-ins to export contents from the most common modelling and commercial animation packages and file conversion tools to allow the interoperability of the developed system with other tools of the trade.

### **3.8.2 Commercialization Activities**

The relation established by FBM-UPF allows the communication flow of information between the most innovative partners of the media scenario, who are members of the *board of trustees* of FBM-UPF. Another key point that needs to be taken into account is FBM-UPF's subscription to the CIDEM initiative, specifically with the Pymera network, which promotes the collaboration between enterprises in the European panorama. As a result of this network, some enterprises have shown their interest in content automation processes provided by FBM-UPF. As a consequence some proofs of concept have been performed with some corporations with the aim of opening new markets, like advertising or financial institutions.

On one hand, taking into account the conclusions of the research done, some useful changes have been included in visualizations platforms developed in FBM-UPF that allow to the final customer to have a better result with the latest innovation. On the other hand, the results obtained by the final customers of the visualizations platforms allows to FBM-UPF to improve the quality and the usability of the systems developed.

### **3.8.3 Marketing Activities**

FBM-UPF has its own website that is updated monthly and includes videos of the present and past projects, with a complete description of the project, partners, publications and people involved. Thanks to the subscription to the CIDEM, news is published both in the periodic bulletin distributed over Catalonia, and also related to the European territory thanks to the relation with Pymera. The whole set of information is also collected in a set of promotional packs that include leaflets, posters and CDs with demos and documentation of the projects.

Meetings at national level are promoted and BM is present with stands showing documentation, research results and with the promotional material which allows the diffusion of the project and promotes the visibility of the project.

### 3.9 Universitat Pompeu Fabra – Music Technology Group (UPF)

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#### **3.9.1 Product Innovation**

The Audio Tools developed within the SALERO project are a set of VST plug-ins and offline tools including Voice Transformation, Tempo Transformation and Advanced Audio Equalizer.

Voice Transformation allows several singing and speech voice transformations using spectral techniques for modifying the character of the voice. Transformations include: transposition, quantization, vibrato, roughness, breathiness, whisper, timbre mapping and other spectral transformations. This tool is targeted to recording or post-production studios that require voice processing.

Tempo Transformation combines automatic rhythm analysis and time-scaling in order to transform the rhythm of an audio mix. The user can vary the tempo or add/subtract swing by using the GUI controls during the playback.

Advanced Audio Equalizer is aimed for the advanced equalization of commercial music productions. This is a powerful tool able to equalize the audio using energy histogram-based on different criteria. Some of its applications include: Remixing a piece by changing the volume of each instrument independently or removing instruments from the mix and then re-adding them processed by some effects or isolate one or several instruments to perform a musical analysis of a piece.

All this tools make the life of an audio engineer or producer easier allowing saving time of work recycling material by means of transforming old one instead of recording new one. This is achieved with the high sound quality of this tools that allow to be integrated in a professional post-production process chain.

#### **3.9.2 Commercialization Activities**

The SALERO User Group Task allow this tools to be tested by the media professionals and based on the feedback given by those, adapt the technologies from the research labs to the real world. Also the Voice Transformation is being tested within installations in museums with people from all ages to determine sound quality and naturalness for transformations of a wide range of voices. This will give a decent feedback by end-users to allow an improvement on quality and usability of the software.

#### **3.9.3 Marketing Activities**

The Music Technology Group of the Pompeu Fabra University has recently re-designed the website (<http://mtg.upf.edu>) including demo videos of the SALERO tools to show the tools to the market. Also a page inside the showcase section of the SALERO web has been created to exhibit the tools with videos explaining the audio transformation tools:

[http://www.salero.eu/en/showcase/audio\\_transformation.html](http://www.salero.eu/en/showcase/audio_transformation.html)

Also the technology under the voice transformation tool is being exhibited in the Cosmocaixa Museum in Barcelona in two installations: “The Kaleivoiceope” in the Nomb3s exhibition and “La meva veu fa ones” in the Sala Flash. Also “The Kaleivoiceope” was exhibited in the Cosmocaixa Museum in Madrid for one year in the Num3ros exhibition.

### 3.10 Universitat Ramon Llull (URL)

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#### **3.10.1 Product Innovation**

LaSalle-URL tools developed within SALERO are mainly based on the reduction of costs on creating a new synthetic voice for any Text-To-Speech synthesis whether is Domain-Specific or General Purpose system (Concatenative or Markov based). These tools are being developed along the Core System of the URL synthesis engine.

The main value-added feature of LaSalle-URL TTS is the possibility to work with the animated audiovisual productions time line being able to parse tagged information, to synthesize the desired speech with the appropriate constraints and to provide time referenced output regarding parameterization about event and lip synchronization. The appropriate input constraints for the synthesis may be any prosodic requirement as intonation, speed of delivery or intensity (stress) of the speech. Some examples of the mentioned prosodic and additional information may be phoneme

identification, pauses, spectral information or describing information. It has to be noted that the whole set can be time referenced at any time within the output files.

In order to improve the reusability of the different modules of the system, the voices or the dictionaries, a search of a standard for synthesis was carried out with unsuccessful efforts; only SSML is being considered by the W3C consortium and it is in an earlier stage of development not satisfying corpus tagging (dictionaries and phone sets) requirements.

MPEG-7 was also tackled to represent the corpus information; the problem came out when there was not any way to store the low-level information hierarchically. This set of low-level information is composed of: fundamental frequency, power and duration on the centre and boundaries of the phoneme as well as its Mel-frequency cepstrum values.

However, Festival Speech System provides a widely common used system and information representation (based on the concept of Utterance) that although has not been standardized, it is a benchmark of reference on the synthesis field of research. Consequently the URL-TTS system has been expanded to support the Festival link-interface. For that reason, if any festival component as *Unit-Selection*, *Letter to sound conversion* or *Clustering* is desired to be used on the system, it may be used without high effort.

Recently La Salle-URL is focusing its efforts on these directions:

- Improving and integrating its prosodic feature module (based on Case-Based Reasoning)
- Improve the Unit Selection on Concatenative Synthesis System.
- Improve the prosodic modification of the selected units based on PSOLA (Harmonic Plus Noise model is still on prototyping)
- Improve synthesis based on Hidden Markov Models based on CBR f0 prediction and Mixed Excitation Model.
- Standardized and synchronized output for being used on multimedia production.

### **3.10.2 Commercialization Activities**

URL has participated in the Barcelona and Amsterdam User Group meetings. Some companies were interested in its speech synthesis system. In the following URL will keep in touch with them in order to concrete future collaborations.

SALERO URL people are members of The Speech Technologies Thematic Network ("Red Temática en Tecnologías del Habla") that tries to obtain investments from enterprises for Speech Technology research, looking for new applications that can bring new business opportunities. The developed demonstrators can attract enterprises' interest.

### **3.10.3 Marketing Activities**

URL has created a web site to show different approaches to speech synthesis. When the speech synthesis is restricted to a set of components, it reaches high quality but lacks of flexibility. In the web there is a list of samples to illustrate use in different domains, from most restricted domain to most open domain: [http://multimodal.salle.url.edu/tts\\_prototype/](http://multimodal.salle.url.edu/tts_prototype/)

The synthesiser can be tested in this web introducing any text. The utterance is synthesised from the voice created jointly with PGP for Tiny Planets.

Moreover, URL participates in different events where speech synthesis systems from different organisations are evaluated. Firstly, URL speech synthesis system was presented to Albayzin (<http://jth2008.ehu.es/en/albayzin.html>), a system evaluation proposal of The Speech Technologies Thematic Network ("Red Temática en Tecnologías del Habla"). Results will be presented to the scientific community next November. URL will participate in the next Blizzard Challenge ([http://www.synsig.org/index.php/Blizzard\\_Challenge](http://www.synsig.org/index.php/Blizzard_Challenge)) that will take place in the next INTERSPEECH conference (Brighton, UK, September 6th 2009).

## **3.11 Dublin Institute of Technology (DIT)**

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### **3.11.1 Product Innovation**

DIT has performed research relating to emotional speech corpora in the SALERO project, including an emotional speech analysis method that can also be applied to character animation. As a result, work relating to semi-automated character animation for intelligent media production has continued. Rather

than focus only on lip-synching, the method described focuses on the rhythm of head, hand and body movements (in association with lip and eyebrow movements), detailing the gestures and inflections associated with the rhythms of human speech. This allows a movement sequence to be created that is independent of language or speaker, which is then stored with the speech asset for use and reuse as necessary. Tool development is ongoing, with a prototype having already been developed.

### 3.11.2 Commercialization Activities

DIT are currently pursuing a patent for the method, and are also seeking further funding for software development to produce tools ready for commercialisation. Discussions on licensing have already taken place with Peppers Ghost Productions, and other companies have been approached as part of ongoing development.

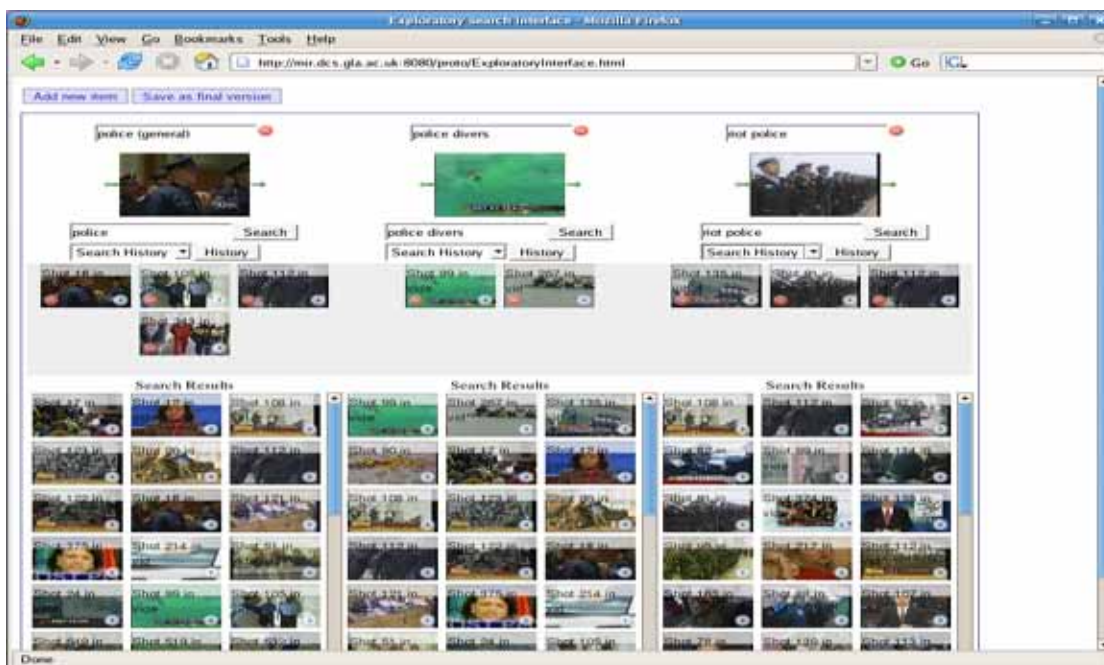
### 3.11.3 Marketing Activities

The animation method has been on display at the latest SALERO user group meeting, and has also been demonstrated to various interested companies at national level. The animation method won the DIT annual innovation award, where several Irish investors attended the presentation ceremony with associated coverage in the national press. A further presentation is scheduled for the beginning of October to over 200 Irish investors and companies as part of the annual Enterprise Ireland showcase, including individual meetings with interested parties currently being scheduled.

## 3.12 University of Glasgow (UG)

### 3.12.1 Product Innovation

A novel, video retrieval interface, the "FacetBrowser" has been developed by UG over the course of the SALERO project so far. This interface is based on earlier image and video retrieval systems developed by UG over the past. It is inspired by "storyboards" as often used in the media production industry. The interface allows users to create and search in multiple facets, and provides an overview of these multiple searches which are arranged in a linear sequence. A screenshot of the interface is shown in the figure below.



**Figure 28: Interface of the FacetBrowser**

Each search facet is contextualized by its position within the sequence, which allows context-based searches to be executed. Work is ongoing to take advantage of this extra contextual information in new versions of the system.

### **3.12.2 Commercialization Activities**

At the moment the FacetBrowser interface is still a prototype, although it has been successfully used in a number of lab-based user studies. The system is currently hosted on-line, on servers at the University of Glasgow, and its use by more people in a greater capacity, both inside and outside of the university, is currently under investigation.

## 4 Detailed Demonstration Plan

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In this section the demonstration plan for the last twelve month period by activity and partner will be identified. A couple of activities are planned on project level in addition to that a further activities are planned per partner in order to address different audiences for individual toolsets and experimental productions.

### 4.1 Project Level Activities

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#### **IBC 2009** (Sept. 2009, Amsterdam, <http://www.ibc.org>)

IBC 2009 will be used as the main demonstration event of the project concluding the series of user group events. It has been chosen, as the event has the most points of contacts with the activities of SALERO.

Project results (toolsets, experimental productions...) will be demonstrated either at a booth in the normal exhibition or as part of the new technology campus if still existent. In addition to this individual partners will present project results at the partners' booths.

#### **SAMT 2009** (Dec. 2009, Graz, <http://www.samt2009.org>)

SAMT is one of the main conferences in the area of semantic and digital media technologies. JRS has applied to organize SAMT 2009 and has been selected as organizer. This conference will be the main scientific dissemination event of the SALERO project

In regards to demonstration two activities are planned:

- SALERO's industrial partners will form the main part of the SAMT industry day
- Project results will be shown live during breaks

### 4.2 Activa Multimedia (AM)

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#### **4.2.1 Target Audience**

As explained in previous documents, Activa Multimedia's lines of business are heterogeneous. That brings clients of a very different nature but can be classified in three main customer groups:

- Television Networks and Audiovisual Production Companies
- Internet Portals
- Mobile Telephony Operators

For that reason, the demonstration plan focuses on actions addressing those three customers groups.

#### **4.2.2 Events**

The main effort to show the achievements of Activa Multimedia in the context of the SALERO Project in the next period will be concentrated in the presence in the main events of the audiovisual sector.

- MWC, Barcelona, <http://www.mobileworldcongress.com/>
- MAC 2009, Granollers, <http://audiovisualmac.com/>
- IBC2009, Amsterdam, <http://www.ibc.org/>
- BROADCAST 2009, Madrid, [http://www.broadcast.ifema.es/ferias/broadcast/default\\_i.html](http://www.broadcast.ifema.es/ferias/broadcast/default_i.html)

### 4.3 Blitz Games Studios (BLITZ)

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#### **4.3.1 Target Audience**

As previously described, Blitz Games Studios has two main target audiences and market aims:

1. To secure commissions from publishers or organisations by demonstrating its competence, creativity and proficiency through showcasing material created with its technology.
2. To secure license agreements for the use of its technology, although this is currently not the main focus of its business.

### **4.3.2 Events**

The video games industry is highly competitive and like many creative industries, business is often founded on personal relationships. For this reason, demonstration is usually on a one to one basis, where Blitz Games Studios is able to showcase the capacity of the technology in a controlled environment. Demonstrations are most often held at its offices or at the offices of a prospective business partner. They are also held in private rooms at key industry games industry events and conferences.

Blitz Games Studios will also attend, and actively seek speaking opportunities at, high profile conferences, where it expects to provoke interest and enquiries. Blitz Games Studios is expecting to attend, speak or pitch at some or all of the following as well as some that are not yet even on the horizon. Not all conferences have yet posted their 2009 information:

- D.I.C.E Las Vegas <http://www.dicesummit.org>
- Siggraph New Orleans <http://www.siggraph.org/s2009>
- BETT London <http://www.bettshow.com>
- Game Developer Conference (GDC) San Francisco <http://www.gdconf.com>
- GDC Paris <http://www.parisgdc.com>
- Microsoft Game Fest <http://www.xnagamefest.com>
- Develop Conference Brighton <http://www.develop-conference.com>
- Edinburgh Interactive Festival <http://www.edinburghinteractivefestival.com>
- Game Convention Leipzig <http://www.gc-germany.com>
- Austin GDC <http://www.austingdc.net>
- Games Convention Asia <http://www.gc-asia.sg>
- Game Connection Europe <http://www.game-connection.com>
- Virtual Worlds Forum Europe <http://www.virtualworldsforum.com>

## **4.4 Pepper's Ghost Productions (PGP)**

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### **4.4.1 Target Audience**

Pepper's Ghost Productions is in the process of developing a large update to the My Tiny Planets virtual world as a result of competitor analysis and market re-evaluation. This has required rolling the site back into alpha status and developing both a substantial quantity of new assets for the game as well as incorporating video and multiplayer activities.

It is intended to move back into formal Beta at the beginning of 2009, and to have conference and marketing support for this. During the next six months PGP will be involved with or attending and meeting with industry contacts at the events listed below. The target for this exercise is potential partners for distribution within the Virtual Worlds community as well as sponsors and advertising partners (the latter being subject to final discussions internally).

External audiences (target users) will be approached via promotions on gaming sites and related marketing activities, both pay per click and viral (also detailed below).

Presentations are currently being discussed with external commercial partners, including Discovery Kids.

### **4.4.2 Events**

- Engage! Expo (formerly the Virtual Worlds Conference, March 2009), <http://www.engageexpo.com/>
- DEMO 09 (March 2009), <http://www.demo.com/>
- DEMOfall 09 (September 2009), <http://www.demo.com/>

## 4.5 Helsinki University of Arts & Design (TAIK)

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### 4.5.1 Target Audience

#### Third Phase Experimental Cross-Media Production Target Audiences

TAIK's Third Experimental Production will be brought to wide audiences, as the planned production venue is the Museum for Contemporary Art Kiasma (<http://www.kiasma.fi>), Helsinki. Kiasma - this year celebrating its 10<sup>th</sup> anniversary - is the most significant platform for new and experimental media art in Finland. Its visitors are mainly audiences with a general interest for arts and culture, as well as professionals in these sectors. Visitors to the museum also include school pupils, art students and other educational groups, as well as tourists visiting Helsinki. Kiasma has 200 000 visitors annually, earning it the status of the most popular museum in Finland.

Experts and professionals in the arts and new media sector, international guests and media representatives will be handpicked to attend the private view and PR events of the production. Also audiences familiar with the earlier Cross-Media productions of the project (Full House, Turing Machine Opera and Turing Enigma Bot) will be targeted. The Third Phase production at Kiasma is expected to receive media attention similar to that of the Second Phase Experimental Productions. For instance, in 2008 the Turing Machine Opera Cross-Media production received wide and positive media coverage. Six newspapers, four magazines and one television programme provided media coverage and critique for the production. Overall, *Turing Machine* received critical acclaim from the press. All excerpts presented here are translated and paraphrased. According to HBL 30.3.2008 "in *Turing Machine*, the visuals fall perfectly into place and are a virtuous handwork on their own account." The biggest Finnish newspaper Helsingin Sanomat, in turn, summarizes 2.4.2008: "The end result is a fascinating one-hour experience, which should appeal to a wide audience and fit for international export." Kreativ, however, notes that the opera "requires prior knowledge on Turing's life in order to be completely understandable."

For the duration of the exhibition, the audiences will have direct contact with the production, and will be able to experience the work created with the aid of SALERO tools first-hand. The feedback for the Third Experimental Production will thus be provided by both experts and lay-men.

#### TAIK Media Lab target audiences

Target audiences for the Media Lab are lecturers, researchers, designers, artists, and professionals in new media and digital technology. Of the Media Lab's 60-70 MA and thirty Ph.D. students, 30 % are international. The Media Lab hosts four research groups, which include around thirty researchers, designers and artists. Its staff includes three professors, five lecturers and ten visiting lecturers. Both the staff and students, including visiting and international, are seen as target groups of the SALERO Cross-Media productions developed by Crucible Studio.

A notable addition to the audiences will be taking place in 2009, when the University of Art and Design commences a fusion with the Helsinki University of Technology and the Helsinki School of Economics, these three together becoming the new Aalto University. The staff, students, partners and networks of these two other Universities will provide new, direct channels for dissemination of the results achieved in the SALERO project.

### 4.5.2 Events

- Installation at the Museum for Contemporary Art Kiasma, Helsinki, Finland (April/May -August 2009, specific dates under negotiation, to be confirmed)
- Media Lab Demo Day, May 2009, University of Art and Design Helsinki. A two-day event targeted at national and international new media experts.
- Media Lab Research Symposium "Character & Agency in Interactive Production", May 2009, University of Art and Design Helsinki
- SALERO User Group meetings
- Festivals, competitions, exhibitions - as opportunities arise. Plans to propose the production to Ars Electronica International Competition for CyberArts and Festival in Linz ([www.aec.at](http://www.aec.at)), and to the Computer History Museum in Silicon Valley, California ([www.computerhistory.org](http://www.computerhistory.org)).

## 4.6 Leopold Franzens Universität Innsbruck (LFUI)

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### **4.6.1 Target Audiences**

LFUI is interested in promoting the benefits of semantic technologies in general and of their use in media production in particular. Demonstrations of research results are planned at appropriate conferences in the fields of semantic technologies and multimedia or combinations of both. Furthermore LFUI plans to demonstrate the output of SALERO at the next European Semantic Technology Conference which is targeted at industries interested in semantic technologies.

### **4.6.2 Events**

- 3rd International Conference on Semantics and Digital Media (SAMT 2008), 03.-05.12.2008
- 18th International World Wide Web Conference (WWW2009), 20.04.-24.04.2009
- 6th European Semantic Web Conference (ESWC 2009), 31.05.-04.06.2009
- 3rd European Semantic Technology Conference (ESTC 2009), 30.09.-02.10.2009

## 5 Demonstration Timetable

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Timings of specific events

<b>Partner</b>	<b>Event</b>	<b>Date</b>
<b>AM</b>	Mobile World Congress	February 2009
<b>AM</b>	MAC	May 2009
<b>AM</b>	IBC	September 2009
<b>AM</b>	Broadcast	November 2009
<b>GVG</b>	Inter BEE	February 2009
<b>GVG</b>	NAB	April 2009
<b>GVG</b>	IBC	September 2009
<b>PGP</b>	Virtual Worlds Conference New York	March 2009
<b>PGP</b>	Demo	March 2009
<b>PGP</b>	DEMO fall	September 2009
<b>Blitz</b>	GDC	February 2009
<b>Blitz</b>	Siggraph	August 2009
<b>Blitz</b>	Games Convention Leipzig	August 2009
<b>Blitz</b>	Games Convention Asia	September 2009
<b>Blitz</b>	Games Connection Europe	September 2009
<b>TAIK</b>	Installation at KIASMA	April-August 2009
<b>TAIK</b>	Media Lab Demo Day	May 2009
<b>TAIK</b>	Media Lab Research Symposium	May 2009
<b>Project Level</b>	IBC	September 2009
<b>Project Level</b>	SAMT	December 2009

## 6 Conclusions

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In this document the industrial and academic partners involved in SALERO explained the product innovation they have obtained with the developed tools. The report of the commercial and marketing activities shows how those activities fit in each partners overall strategies and regular activities.

Because there will be no single media tool for demonstrating the SALERO results, the industrial partners will focus their commercialisation activities on the enhancement of their existing products and on showing the commercial possibilities of the SALERO experimental productions.

The software tools developers and academic institutions will disseminate results to the research community in their normal ways, via institutional web sites, publications and presentations in journals and at conferences. In addition they will also use the results and the enhanced know-how for future R&D activities.

In the next period the SALERO toolset will be promoted to suitable target audiences in the end-user, toolset-developer and broadcast communities, which will in turn allow for timely input and consideration by the appropriate respondents.

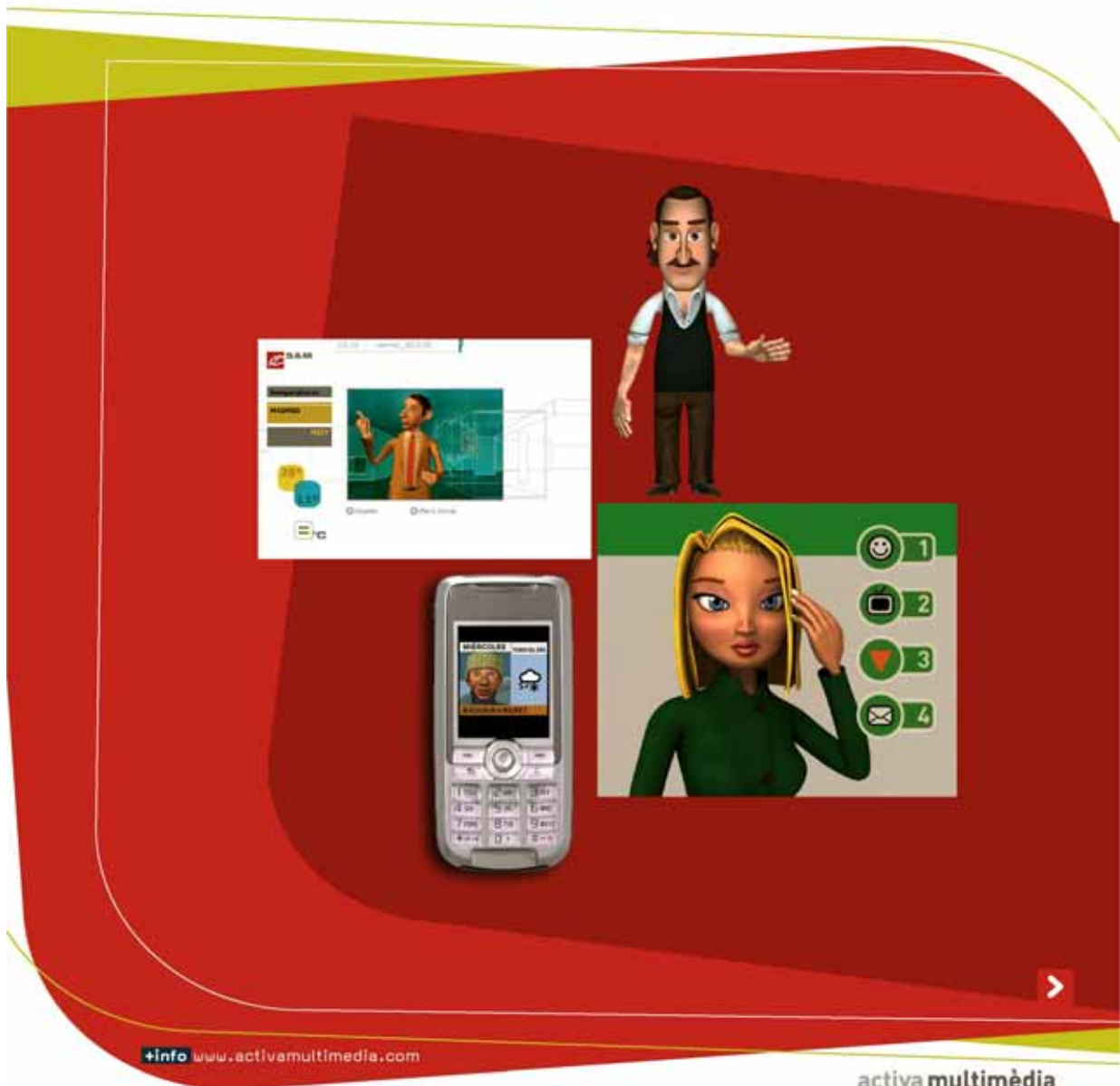
## 7 Annex 1: AM's iVACs Product Sheet

Contents and Services

# iVAC



Interactive Virtual Automatic Characters.



+Info [www.activamultimedia.com](http://www.activamultimedia.com)

activa **multimèdia**  
digital  


ivAC



## Interactive Virtual Automatic Characters.

**ivAC (Interactive Virtual Automatic Characters)** produces automatic virtual characters for TV, Internet and Mobile Telephony.

**activa\_multimèdia** offers a number of products and services. It can create projects based on virtual communication and provides the technical needs to fully automate sequence generation.

### CATALOGUE OF PRE-DESIGNED CHARACTERS

- > Customized design of 2D/ 3D characters
- > Animation
- > Infographics
- > High-quality automatic lipsync
- > Automated or real-time animation

### AUTOMATION OF VIRTUAL CHARACTERS

- > Automatic animation from text or voice
- > Synchronization of movements and infographics
- > Integration with recorded voice or TTS (text to speech)
- > Integration with intelligent response systems

### SAM, THE WORLD'S FIRST AUTOMATIC WEATHERMAN

- > Automatic forecasting for any city in the world
- > 3D character
- > Multilingual: 17 languages
- > Movements synchronized with graphics and maps
- > Available for television, Internet and mobile telephony
- > Can be integrated with any standard TTS engine (text to speech)

### MANAGEMENT OF CHARACTERS FOR 3D VIDEO PORTALS

- > Editing tool for presentations
- > Character selection tool
- > Low-cost production of virtual guides
- > Titling and infographics
- > Integration of real audio or TTS (text to speech)

### ADVANTAGES

- ivAC** generates videos based on animated virtual characters and integrates 3D models, animation, voice, music and effects, and other elements. The system simplifies the automatic production of videos for television, Internet and mobile telephony.
- > **TELEVISION** Animated characters for children, animated logos, virtual continuity presenters, meteorologists, caricatures for TV shows, etc.
  - > **INTERNET** Virtual guides for web portals (companies, museums, government agencies, etc.), intelligent navigation assistants such as meteorologists.
  - > **MOBILE TELEPHONY** Virtual guides to video portals, avatars, mobile weather forecast assistants.



+info [www.activamultimedia.com](http://www.activamultimedia.com)

IMAGINA Centre Audiovisual  
Gasper Fàbregas 81, 2a. planta  
08950 Espiugues de Llobregat, Barcelona

T. +34 93 557 25 30  
contact@activamultimedia.com

activa **multimèdia**  
digital  


## 8 Annex 2: AM's Publications in Specialized Journals



COMUNICACIÓN MÓVIL

activa multimedia digital

# Activa Multimedia presenta nuevos servicios para la comunicación móvil en el 3GSM

*El servicio en inglés del meteorólogo Sam y un editor de personajes virtuales son los grandes lanzamientos de la línea IVAC de la empresa.*



*El meteorólogo Sam*

Activa Multimedia Digital presenta en la nueva edición del 3GSM World Congress grandes novedades para la comunicación móvil enmarcadas en su línea IVAC de creación de personajes virtuales. Por un lado, el meteorólogo Sam presenta su cara más internacional con su versión en inglés, y por otro, se presenta la nueva herramienta de animación automática de personajes virtuales a partir de voz real o texto.

Activa Multimedia presenta también su nuevo **editor de personajes virtuales**. Dirigida a medios de comunicación móvil, TV e Internet, esta aplicación permite producir animaciones de forma sencilla y económica.

El nuevo sistema genera automáticamente videos con personajes de 2D o 3D, a partir de una locución, un archivo de voz o un texto que se convierte en voz sintética. De forma instantánea, se crea un video adaptado a la duración del audio con un personaje animado que lee e interpreta las frases, moviéndose de forma natural y con una sincronización de labios automática de alta calidad.

El editor de IVAC permite crear clips con personajes virtuales a los que el usuario puede personalizar, incorporando cualquier tipo de logotipo o marca de forma sencilla y tantas veces como se desee. Los clips pueden tener distintas realizaciones y se adaptan a cualquier duración del texto o del archivo de voz.

Este sistema de animación automática está indicado para la gestión de personajes en videoportales 3G, guías, avatares o asistentes para dispositivos móviles. Además, los videos pueden adaptarse perfectamente a cualquier plataforma: tecnología móvil, TV, Internet, PDA...

Además de las novedades de la línea IVAC, Activa Multimedia presenta también otros productos de información meteorológica para móviles: servicios en WAP, SMS, MMS o iMode, entre otros.

Activa Multimedia, empresa de soluciones y servicios para el mundo audiovisual, estará en stand 7A37 en el 3GSM World Congress, que se celebrará en Barcelona del 12 al 15 de febrero.

[www.activamultimedia.com](http://www.activamultimedia.com)  
[www.ccrtv.cat](http://www.ccrtv.cat)

88 SEÑAL DIGITAL



Telenotícies  
Catalunya Informació

10:

Dijous 15/02/

CATALUNYA SOCIETAT POLÍTICA MÓN ECONOMIA OCI I CULTURA ESPORTS EL TEM

ÀUDIOS ENQUESTES ESPECIALS IMATGES VÍDEOS

AL MÒBIL USUARIS

Cerca

## Societat

**Economia:** La telefonia mòbil es troba a Barcelona

**Societat:** Set dies en imatges

**Societat:** La reflexió ciutadana de Quim Monzó

En directe

24

TV3.cat

Catràdio.cat

**Especials:** 2006: Convivint amb la diferència

**Especial / Societat:** Contra el "mascler criminal"



En Sam és el primer presentador 3D del món que ofereix la previsió del temps de centenars de ciutats a la carta en vídeos generats automàticament.

PUBLICITAT

### Enllaços patrocinats

**Préstec Cotxe Nou**  
No pagui res els 3 primers mesos. Fins a 50.000 euros. 6.75% a 8 anys.

**Triu entre milers de cotxes d'ocasió**  
El teu auto d'ocasió està a AutoScout24. Cerca per marca, model, km...entre més de 1.5 milions de cotxe en tota Europa.

**L'assegurança intel·ligent - Direct Seguros**  
Benvingut a Direct Seguros. Calcula aquí ràpidament el pressupost per a la teva assegurança de cotxe de manera intel·ligent i estalvia't un 10% per contractar-la online.

09/02/2007 13.21  
Barcelona

## Activa Multimèdia presenta els seus personatges virtuals

mida del text

L'empresa d'R+D de la CCRTVI, especialitzada en la creació de tecnologia i continguts multimèdia, Activa Multimèdia Digital, ha presentat des del seu propi estand, el 7A37, desenvolupaments emmarcats dins la línia de creació de personatges virtuals. D'una banda, hi ha el meteoròleg Sam, el primer presentador 3D del món. De l'altra, una nova eina d'animació automàtica de personatges virtuals a partir de veu real o text.

En Sam és el primer presentador 3D del món que ofereix la previsió del temps de centenars de ciutats a la carta en vídeos generats automàticament. Les seves previsions, totalment adaptades a l'ergonomia dels mòbils, són consultables a través d'MMS o WAP en terminals GPRS i UMTS.

L'altra novetat és l'editora de personatges virtuals, una aplicació per produir animacions amb personatges de dues o tres dimensions a partir d'una locució, un arxiu de veu o un text. El sistema, adreçat a mitjans de comunicació mòbil, televisió i internet, crea automàticament un vídeo adaptat a la durada d'aquest arxiu amb un personatge animat que interpreta les frases i es mou i parla de manera natural.



ALTRES NOTÍCIE

El govern només

HOME VIDEO POPULAR

Página 1 de 1

### Ventura Claret, Elisabet

**De:** vpnews@videopopular.es  
**Enviat:** jueves, 01 de febrero de 2007 4:30  
**Per a:** Ventura Claret, Elisabet  
**Tema:** VPnews

## Personajes virtuales para móvil

Activa Multimedia presentará en el 3GSM World Congress su nuevo editor de personajes virtuales iVAC, que a partir de una locución, un archivo de voz o un texto (que se convierte en voz sintética) puede crear automáticamente una animación, que se mueve de forma natural y con una sincronización de labios (*lip-sync*) de alta calidad.

El Generador de iVAC permite personalizar el aspecto, la ropa e incluso el fondo de escenario donde el personaje se desenvuelve. El sistema está indicado para la gestión de personajes en videoportales 3G, guías, avatares o asistentes para dispositivos móviles, y además puede adaptarse para tecnología móvil, televisión, internet o PDA.

activa multimedia



noticias

## TV MÓVIL

# Comunicación móvil con Activa Multimedia

La filial tecnológica de la CCRTV presenta nuevos servicios para la comunicación móvil en el 3GSM World Congress de Barcelona.

Coincidiendo con una nueva edición del 3GSM World Congress de Barcelona, Activa Multimedia Digital ha presentado importantes novedades para la comunicación móvil enmarcadas en su línea iVAC de creación de personajes virtuales. Por un lado, el meteorólogo Sam muestra su cara más internacional con su versión en inglés, y por otro, se presenta la nueva herramienta de animación automática de personajes virtuales a partir de voz real o texto. Sam es el primer presentador 3D multiplataforma del mundo que ofrece la previsión a la carta de cientos de ciudades en clips de vídeo generados automáticamente y que puede adaptarse a cualquier idioma. Es el primero de la generación iVAC (Interactive Virtual Automatic Characters), de personajes virtuales para todo tipo de medios interactivos. La generación automática de los vídeos de Sam, completamente adaptados a la ergonomía del móvil y consultables a través de MMS o WAP

en móviles GPRS y UMTS, se obtiene directamente de una base de datos de información meteorológica. A partir de esa misma base de datos, Sam puede leer la previsión automáticamente en cualquier idioma. Gracias a su versatilidad, un año después de su presentación en castellano, Sam se abre completamente al mercado internacional con el lanzamiento del servicio en inglés.

Activa Multimedia presenta también su nuevo editor de personajes virtuales. Dirigida a medios de comunicación móvil, televisión e Internet, esta aplicación permite producir animaciones de forma sencilla y económica. El nuevo sistema genera automáticamente vídeos con personajes de 2D o 3D, a partir de una locución, un archivo de voz o un texto que se convierte en voz sintética. De forma instantánea, se crea un vídeo adaptado a la duración del audio con un



personaje animado que lee e interpreta las frases, moviéndose de forma natural y con una sincronización de labios automática de alta calidad. El editor de iVAC permite crear clips con personajes virtuales a los que el usuario puede personalizar, incorporando cualquier tipo de logotipo o marca de forma sencilla y tantas veces como se desee. Los clips pueden tener distintas realizaciones y se adaptan a cualquier duración del texto o del archivo de voz. Este sistema de animación automática está indicado para la gestión de personajes en videoportales 3G, guías, avatares o asistentes para dispositivos móviles. Además, los vídeos pueden adaptarse perfectamente a cualquier plataforma.

Activa Multimedia presenta también otros productos de información meteorológica para móviles: servicios en WAP, SMS, MMS o iMode, entre otros.



### Editor de personajes virtuales

*Activa Multimedia presentará en el 3GSM de Barcelona un editor de personajes virtuales para que los medios de comunicación móvil, TV e Internet, puedan producir sus propias animaciones de forma sencilla y económica*



(16/01/2007) Activa Multimedia Digital centrará su asistencia a la feria de telefonía móvil 3GSM, que tendrá lugar en Barcelona del 12 al 15 de febrero, en la línea IVAC de creación de personajes virtuales.

Tras presentar al meteorólogo Sam, el primer presentador 3D multiplataforma del mundo que ofrece la previsión a la carta de cientos de ciudades en clips de vídeo generados automáticamente, Activa Multimedia presenta en esta edición su nuevo editor de personajes virtuales dirigido a medios de comunicación móvil, TV e Internet, para que puedan producir sus propias animaciones de forma sencilla y económica.

El nuevo sistema genera automáticamente vídeos con personajes de 2D o 3D, a partir de una locución, un archivo de voz o un texto que se convierte en voz sintética. De forma instantánea, se crea un vídeo adaptado a la duración del audio con un personaje animado que lee e interpreta las frases, moviéndose de forma natural y con una sincronización de labios automática de alta calidad.

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noticias

HI-COM

## Captura de movimiento a partir de vídeo

Montar un estudio de captura de movimiento en cualquier lugar en donde se puedan situar dos cámaras ya no es una idea descabellada.

**M**ovimiento es un nuevo programa que captura el movimiento de cualquier objeto no rígido a partir de dos o más secuencias de vídeo o imágenes. De este modo, Movimiento permite llevar a cabo sofisticadas capturas de movimiento de rostros, manos, brazos y cuerpos enteros sin precisar de una instalación aparatosa en un espacio limitado. Ahora, gracias a Movimiento, cualquier espacio en el que puedan situarse un mínimo de dos cámaras puede convertirse en el plató de captura de movimiento.

Movimiento ha sido desarrollado a partir de la tecnología de rastreo (tracking) 3D de Realviz. Esa misma tecnología de Realviz es la que desde hace más de 8 años cosecha éxitos en el mundo de los efectos especiales a través de las distintas versiones de Match-Mover y, más recientemente, con la integración de su tecnología en los sistemas Inferno y Flame de Autodesk.

Por eso, en Movimiento también es posible combinar los procesos de rastreo de cámara 3D (matchmoving) y de captura de movi-



miento. El material necesario para llevar a cabo la captura de movimiento son dos o más secuencias de imágenes, tanto si están sincronizadas como si no lo están. En el caso de secuencias de imágenes no sincronizadas, cualquier acontecimiento puntual que pueda distinguirse con claridad en las secuencias procedentes de todas las cámaras puede ser utilizado para activar la sincronización.

Movimiento funciona con secuencias de cualquier frecuencia de presentación de imágenes y de cualquier definición, y las cáma-

ras utilizadas para la captura pueden ser fijas o estar en movimiento. El resultado puede exportarse directamente a Motion Builder, 3ds max y Maya de Autodesk, o a XSI de Avid.

Movimiento puede adquirirse como aplicación independiente, para que el usuario lo utilice con las cámaras de las que ya disponga, o puede adquirirse en un paquete que, además de la aplicación, cuenta con 4 cámaras equipadas, incluyendo ópticas, trípodes y cabezales de los trípodes, una estación de trabajo y los elementos necesarios para interconectar las cámaras con la estación de trabajo.

Imagínese que, para un anuncio, para una película o para ilustrar un documental, se haya creado, con la ayuda de su programa favorito de modelado y animación 3D, unos dinosaurios estupendos. Quizás al realizador se le pueda ocurrir que la captura de los movimientos de un elefante o de cualquier otro animal que se pueda encontrar en cualquier zoo, serían de gran ayuda para dar naturalidad a los movimientos de esos dinosaurios. Con esta herramienta es posible lograrlo.

TV MÓVIL

## Colaboración Activa Multimèdia - Cromosoma

En el marco del 3GSM World Congress, las dos empresas acuerdan integrar tecnologías para enriquecer sus productos de contenidos para móviles

**A**ctiva Multimèdia y Cromosoma han llegado a un acuerdo de colaboración tecnológica que permitirá crear animaciones personalizadas para móviles donde el usuario sea el protagonista. El acuerdo, presentado en el 3GSM World Congress, consiste en la combinación de dos tecnologías: "IMAGINA-T" y el desarrollo de personajes virtuales interactivos (IVAC).

La tecnología de Cromosoma "IMAGINA-T", que se presenta en el 3GSM, hace posible uno de los productos más innovadores en el ámbito del entretenimiento con móviles. Esta nueva tecnología permite a los usuarios de telefonía móvil adquirir animaciones donde ellos son los protagonistas. El usuario sim-

plemente tiene que enviar un MMS con su foto y automáticamente recibe una animación protagonizada por él mismo. De esta manera, el usuario podría jugar con su futbolista favorito, hacer un tapón al mejor jugador de baloncesto del mundo, convertirse en un presentador del tiempo... Cromosoma pretende así dar respuesta al número creciente de usuarios que reclaman ser más que puros espectadores de lo que pasa y hacer, con IMAGINA-T, que el usuario sea el protagonista.

Por su lado, Activa Multimèdia presenta diferentes novedades en su línea IVAC de creación de personajes virtuales. La más destacada es la nueva editora de IVAC, un sistema destinado a medios de comunicación móvil, televisión e Internet. La editora crea

automáticamente un vídeo adaptado a la duración de una voz o un texto con un personaje animado que interpreta las frases y se mueve y habla de manera natural. El meteorólogo Sam es otro de los productos destacados de la empresa en el 3GSM. Se trata del primer presentador virtual 3D del mundo que ofrece la previsión a la carta de centenares de ciudades en vídeos generados automáticamente. Es el primer y el más emblemático de los IVAC de Activa Multimèdia.

Tanto Cromosoma como Activa Multimèdia están interesadas en integrar las tecnologías respectivas para enriquecer sus productos y posicionarse con más fuerza dentro del mercado de los contenidos para móviles.

## 9 Annex 3: TAIK's Publications in Specialized Journals

SD.26 TISDAG 1 APRIL 2008 HUFVUDSTADSBLADET

KULTUR

# Livet som ett halvätet äpple

**MULTIMEDIA**

**TURING MACHINE**

Av Erkki Ursin och Visa Oscar. Libretto Taina Seitovirta på basis av Miko Jaakkola och Jussi Lehtonen, skådespelare Turing Regg, Janne Lehmusuu. Projektörer: Merja Nieminen, Ljot, Marja Kupiainen, Juha Hostikka, Imar, Mia Heikkinen, sopran, Antti Nieminen/Jaakko Nieminen, dans. Opera Skaalan föreställning på Korjaamo.

Opera, elektronisk musik och virtualescenografi. Multimedia är dagens experimentella konst och framtidens melodi. Om multimedieverken inte alltid nått upp till att vara ett fullödigt samkonstverk har det ofta berott på att den mediala biten inte bearbetats tillräckligt långt, men i Opera Skaalan och Konstindustriella högskolans medielaboratoriums samproduktion *Turing Machine* faller den visuella biten snyggt på plats och är ett virtuost hantverk för sig.

Operan utspelar sig kring den engelska matematikern och logikern Alan Turing, som knäckte tyskarnas kodspråk under andra världskriget och var datamaskin



**STARKT VISUELLT ELEMENT.** Dansaren Antti Nieminen och sångarna Mia Heikkinen och Juha Hostikka avtecknar sig mot virtualescenografin i multimedieoperan *Turing Machine*.

nens teoretiska fader, och som grönadad en personlig tragedi för sin homosexuallitets skull. Turing dog 1954 med ett halvätet äpple och cyanidflaskor bredvid sig, och man antar att det var självmord; den mer spekulativa teorin är att han visste för mycket och måste rjas ur vägen.

Ett halvätet äpple är en nästan för bra symbol för ett liv och ett livsverk som klipps av i förtid. Äpplet är en utgångspunkt och en slutpunkt för föreställningen, och däremellan rymms ett rikt symbolspråk som inte är för abstrakt och inte heller för konkret. 3D-projeeringarna tecknar bilder av någonting som kan tolkas som innanmät i en stor

datamaskin eller ett komplicerat kopplingschema, en matta av radiovägar, roterande radarantennar och alfa-, beta- och pi-symboler; där är hela registret för vetenskapemans som ägnade sitt liv åt att foga nollor och ettor.

Det vokala partiet har drag av minimalistisk opera och musikal. Den relativa enkelheten i vokallinjen är till fördel; tenoren **Juha Hostikka** och sopranen **Mia Heikkinen** ger ett ökosystem lyft åt denna märkliga vetenskapemans liv, och visar att det går att sjunga vackra och sensitiva operarior kring upptäckten av en felande länk i relativitetsteori. Kompositörerna **Erkki Ursin** och **Visa Oscar** bjuder med keyboard och sång, och soundset är både artificiellt och levande på samma gång.

**Turing Machine** sjungs på engelska trots att texten adapterats från en finskspråkig pjäs av **Miko Jaakkola** och **Jussi Lehtonen**. Det är ett tecken på att föreställningen är avsedd för export, och det är den vörd.

**MIKAEL KOSK**  
mikael.kosk@utu.fi

*Turing Machine* ger ända i dag och i morgon kl. 19 i Korjaamo, Tällgatan 51 b.

HS 12.4.08

# Kiehtova multimediamusikaali

► Opera Skaalan ja Taideteollisen esitys avaa Alan Turingin legendaa

► Opera Skaalan ja Taideteollisen korkeakoulun medielaboratorion yhteistyönä, multimediatiesitys *Turing Machine* osuu otolliseen maaperään.

Teknologia ihmistöiden ja hävöläiseen on sinä määrin osa elämäntilanteen, perheen, englantilaisen Alan Turingin (1912-54) elämä ja kuolema. Turing oli filosofi ja tiedemies, joka sota-aikana kehitti tietokoneita ja murti saksalaisen Enigma-salakkriptinkoodin.

**OPPERA**

**Erkki Ursin ja Visa Oscar:** *Turing Machine* Kulttuurikeskus Korjaamolla. **Libretto** Taina Seitovirta **Miko Jaakkola** ja **Jussi Lehtonen** näyttämön johtaja, ohjaaja **Janne Lehmusuu**, projektioiti **Merja Nieminen**, valot **Harri Pellonen**, ääni **Marja Kupiainen**, laulu **Juha Hostikka** ja **Mia Heikkinen**, tanssi **Antti ja Jaakko Nieminen**.

Multimediasoperan tai -musikaalin nimi *Turing Machine* viittaa koneeseen, jonka ideojena Turing loi modernin tietojenkäsitteelytieteen. Lisäksi hän pohti ihmisen ja tietokoneen samankaltaisuutta sekä sekoitusta. Turing oli Bejtansin turvallisuuspalvelulle ensin välttämätön, sitten varallinen mies - lopulta myös "rikollinen" ja hyljeksi yksi lään vasemmistolaisuudesta ja homoseksuaalisuudesta vuoksi.

Kun hänet löydettiin kuolleena puoleksi syödyt, vyyntä silloin omanan vieraista, kaikki legendan ainekset olivat valmiit. Tästä projekti on saanut ensi kerran näytännöllisyyden: omanan vieraista multimediatiesityksessä hyvien ja pahan työn puolta sekä symboloivat itse elämä, suorittaneet myös fyyskalis-matemaattista todellisuutta.

**Turing Machine** käsittelee multimedialla mutta älykkäällä tavalla elämän enigmat. Tasa-talle professooran erilaisista virtuaalimallinnuksista: cityn sykkästä strukturoituneen, joka vaikuttaa hermoverkkoiksi, strukturaalisiksi kartoiksi, tähtikarttoiksi. Hölkkäviä tanssita on näytännöllä oman elämänsä juoksa, joka huuhottaa oravapöytänsä suorituspaikassa.

**Juha Hostikka** Turingin alust-egona ja **Mia Heikkinen** feministisessä vastavoimassa laulavat kunnioit, kirkkaasti ja selkeästi englanniksi käännetty libretto tekstin ja musiikkilainat soolona ja duettona, joita muokataan elektronisen valaistuksen voimin.

**Myös laulajana esiintyvä Erkki Ursin ja Visa Oscar** vastaavat käsitteellistämisen länsä musiikkia, joka on



**Mia Heikkinen (v.a.), Antti Nieminen ja Juha Hostikka** *Turing Machine*-esityksessä tärkeässä osassa olevien omanien karellä.

kekseleitä ja mielikuvitusellista eläkövällöine tehoituneen, elektronisuuksilla - mirtinabunio-, pop- ja disko-lähtökohtineen. Elektronikan ja simulaation tuottama äänimaailma on rakas vailla muusisuu-

den sivumakus.

Tuloksena on kiehtova tunnelma kunnioit kokemus, joka vedostuu mää erilaisimpiin katsojaryhmiin ja soveltuu myös ikäomaisena vierailla.

**Veijo Murtomäki**



JUSSI AALTO

Tanssija Antti Nieminen (vas.), sopraano Mia Heikkinen ja tenori Juha Hostikka tulkitsevat Alan Turingin uskomatonta elämää.

## Ooppera tietokoneen isälle

► Kulttuuritehdas Korjaamon lattialla kiemurtelee kilometreittäin kytkemätöntä kaapelia. Mustien lonkeroitteen lomassa pomppi työn touhussa Oopperaseurue Skaalan henkilökunta: alkamassa ovat harjoitukset tietokoneen isästä, **Alan Turingista**, kertovaan minioopperaan ja multimedia-teokseen *Turing Machine*.

"Nou hätä!" ohjaaja **Janne Lehmusvuo** toistelee, vaikka esityksen ensi-iltaan perjantaina on vain kolme päivää. Ilmassa on jännitystä, ja kuinkas muuten, onhan kyseessä kotimaisen oopperan kantaesitys.

**Harjoitukset** pääsevät vihdoin käyntiin, kun säveltäjät **Eepi Ursin** ja **Visa Oscar** ovat saaneet tietokoneensa kytkettyä monimutkaisen oloisiin virityksiin. Videotykkit alkavat syyttää seinälle kuvaa, joka muistuttaa tietokoneen sisälmyksiä.

Siellä, tietokoneen sisällä, juoksee Alan Turing, eli tenori **Juha Hostikka**. Hän kertaa konemusiikin tahtiin

Alanin uskomatonta elämäntarinaa. Säveltäjät tietokoneittensa takana sämpläilevät ja nyökyttelevät rytmissä vähän kuin teknokonsertissa. Hyvä meininki!

**Matemaatikko** Alan Turing (1912-1954) keksi tietokoneen teoreettisen mallin, eli Turingin koneen, vuonna 1936. Turingin merkittävin saavutus oli toisen maailmansodan aikana saksalaisten Enigma-salakoodin purkaminen Turingin koneella.

Ooppera Skaalan ja Taide-teollisen Korkeakoulun multimedia-teos kertoo muustakin kuin Turingin saavutuksista tietokoneiden maailmassa. Nimittäin Alanin suorallisuudesta kohtalosta.

Turing pidätettiin vuonna 1952 homoseksuaalisesta suhteesta, joka oli tuolloin rikos Britanniassa. Hän sai valita rangaistuksen kahden vuoden vankilatuomion ja kemiallisen kastration väliltä. Turing valitsi vuoden kestävästi hormonihoidon nais-hormoneilla. Hänelle alkoi kasvaa rinnat.

**Nöyryyttävän** tapahtumaketjun myötä myös Turingin lojaalisuutta Britannialle alettiin kyseenalaistaa. Kylmän sodan ilmapiirissä häntä epäiltiin turvallisuusriskiksi.

Turing kuoli 1954 haukattuaan syanidilla myrkyttyä omenaa. Oliko kyseessä itsemurha, sitä ei kukaan tiedä.

"He prepares a poison apple, so beautiful and red", sopraano **Mia Heikkinen** laulaa pahaenteisesti ja liihottelee Turingin ympärillä. Niin, ooppera lauletaan englanniksi, joten italian alkeita ei tarvitse kotona kerrata ennen esitystä. Tenori **Juha Hostikka** alias Alan Turing jää myrkyomena kädessään istumaan penkille, loppukuva on suora kopio Manchesterissa sijaitsevasta Turingin muistopatsaasta. Tietokone-maisema seinällä sammuu. Päässä jyskyttää vielä tekno-biitti.

Laura Kytölä

► **Turing Machine** multimedia-teos Kulttuuritehdas Korjaamolla (Töölönkatu 51 b) klo 19. Liput 13 ja 18 e.

## 10 Glossary

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### Partner Acronyms

AM	Activa Multimedia, ES
BLITZ	Blitz Games Studios Ltd, UK
DIT	Dublin Institute of Technology, IE
DTS	Digital Theatre Systems, UK
FBM-UPF	Fundació Barcelona Media – Universitat Pompeu Fabra, ES
GVG	Thomson Systems Germany, DE
JRS	JOANNEUM RESEARCH Forschungsgesellschaft mbH, AT
LFUI	Leopold-Franzens Universität Innsbruck, AT
PGP	Pepper's Ghost Productions Ltd., UK
TAIK	Taideteollinen Korkeakoulu, FI
UG	University of Glasgow, UK
UPF	Universitat Pompeu Fabra, ES
URL	Universitat Ramon Llull, ES