

## **COMMUNICATION REPORT**

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Conveying Affectiveness in Leading-edge  
Living Adaptive Systems

**CALLAS**

Project IST-34800

Deliverable D423 WP4.2

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**Project Number:** ..... 34800  
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## Table of Contents

<b>EXECUTIVE SUMMARY</b>	<b>1</b>
<b>1. COMMUNICATION IN CALLAS</b>	<b>2</b>
1.1 INTRODUCTION	2
1.2 OBJECTIVES AND CHANNELS	2
<b>2. COMMUNICATING CALLAS TO A WIDE AUDIENCE</b>	<b>4</b>
2.1 CALLAS NEW WEB SITE	4
2.2 CALLAS PROMOTIONAL VIDEOS	6
2.3 CALLAS NEWSLETTERS	6
2.4 CALLAS PUBLIC DELIVERABLES	8
2.5 WEB SITE DYNAMIC PAGES AND NEWS	9
<b>3. COMMUNICATING CALLAS TO EARLY ADOPTERS</b>	<b>11</b>
3.1 THE C <sup>3</sup> (C-CUBE) CALLAS COMMUNITY CLUB	11
3.2 RATIONALE FOR RECRUITING AND ITS IMPLEMENTATION IN THE C <sup>3</sup>	12
3.3 C3 DEDICATED SPACE STRUCTURE	17
3.4 ANIMATION OF C <sup>3</sup> ACTIVITIES	20
<b>4. COMMUNICATING CALLAS TO SCIENTIFIC AUDIENCE</b>	<b>26</b>
4.1 SCIENTIFIC EVENTS	26
4.2 SCIENTIFIC PAPERS AND PUBLICATIONS	27
<b>5. INTERNAL COMMUNICATION</b>	<b>38</b>
5.1 COLLABORATION ACTIVITY AREAS	38
5.1.1 CALLAS Wiki	38
5.1.2 CALLAS repository	39
5.2 CALLAS GENERAL ASSEMBLY MEETINGS	39
5.3 INTERNAL TRAINING ACTIVITIES	39
<b>6. APPENDIX 1: CALLAS SCIENTIFIC PAPERS PUBLISHED DURING 2007</b>	<b>40</b>
<b>7. APPENDIX 2: CALLAS SCIENTIFIC PAPERS PUBLISHED DURING 2008</b>	<b>41</b>
Figure 2-1: CALLAS Newsletter Volume 1, Issue1 .....	7
Figure 2-2 Popularity of the CALLAS new web site after 1.5 months of operations .....	10
Figure 3-1: A snapshot of the C <sup>3</sup> main page .....	17
Figure 3-2: C <sup>3</sup> structural view .....	18
Figure 3-3 Typologies of members in the C <sup>3</sup> including Consortium members .....	21
Figure 3-4 Typologies of external members in the C <sup>3</sup> .....	21
Figure 3-5 Interest by categories for C <sup>3</sup> members (non CALLAS).....	21
Figure 3-6 Voting on C <sup>3</sup> for surveys purposes .....	24
Figure 3-7 Popularity of the C <sup>3</sup> web site after 1.7 months of operations.....	25
Figure 5-1: CALLAS Wiki Welcome Page.....	39

Table 2-1 CALLAS deliverables made public.....	8
Table 2-2 Exhibitions events and Press Echoes.....	10
Table 3-1 CALLAS events relevant for building the C <sup>3</sup> and press echoes.....	13
Table 3-2 Profile questions (visible to all C <sup>3</sup> members) at registration time.....	15
Table 3-3 Profile questions (kept private) at registration time.....	16
Table 3-4 direct invitation of members from C <sup>3</sup> .....	16
Table 3-5 Members of the C <sup>3</sup> [not including the CALLAS consortium] update Oct 28, 2008	20
Table 3-6 Discussion Forums at C <sup>3</sup> by categories .....	22
Table 3-7 Example of survey's results from C <sup>3</sup> .....	24
Table 4-1: CALLAS at scientific events from January to December 2007 (see Appendix 1: CALLAS Scientific Papers published during 2007).....	26
Table 4-2 CALLAS at scientific events from January to October 2008 (see Appendix 2: CALLAS Scientific Papers published during 2008).....	27

## Executive Summary

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This document summarises the Communication and Dissemination activities that have been carried out during the second year of the CALLAS project. The communication channels and tools that have been used are explained and actions summarised addressing both an external audience, by disseminating information, creating awareness and stimulating expectations, and internally within the consortium, supporting the creation of a project culture and brand.

# 1. Communication in CALLAS

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## 1.1 Introduction

There was an important change in month 21 of the project, with a transfer of responsibility for the Communication activities from Metaware, who have since left the project, to Nexture Consulting. The change has resulted in an intensified effort to raise awareness and to disseminate the project results especially to an external audience. The public web site was completely revised following the change and the “CALLAS Community Club”, nicknamed C<sup>3</sup> (C-cubed), was set up, with a view to attracting external entities to become involved in CALLAS. To date, some 80 members have joined.

## 1.2 Objectives and channels

The overall target objectives for Communication in CALLAS are:

- to establish mechanisms for effective and timely communication, defining a set of tools for exchanging information, setting up a network of identified contributors;
- to inform stakeholders of the progress of project development, communicating the achievements, the showcased technologies and their impact on the art and entertainment targets addressed, informing about next steps in the project, promoting a CALLAS Identity;
- to coordinate all levels and types of communication related to the project, centralizing responsibilities for authorizing each internal/external communication initiative, defining a workflow model for controlling the process;
- to encourage, support and sustain communication relationships with interaction between Stakeholders, creating spaces and opportunities for them to participate, through sharing of opinions, experience, comments, recommendations, using dedicated communication spaces and initiatives.

Five major Communication Channels have been considered in CALLAS, which respectively target:

- External communication to wide audience and Media: a report at M24 about tools associated to this communication channel a is provided in **Chapter 2**
- External communication to a community of early adopters: a report at M24 about tools associated to this communication channel a is provided in **Chapter 3**
- External communication to the scientific community: a report at M24 about tools associated to this communication channel is provided in **Chapter 4**.
- Internal communication within the Consortium: a report at M24 about tools associated to this communication channel is provided in **Chapter 5**.
- External communication to the European Commission. This channel follows from the CALLAS Description of Work and is implemented under the coordination of the Project Management function. It is not described in this document but in the Management Reports.

Different “language” is used depending on the targets. Communication channels and tools follow a pragmatic, two-fold “communication language” approach:

- *A technical/functional language, suitable to communicate properly and extensively the complexity of the project in terms of architecture, implementation details, components structure, development status.*

Communication that reflects this language targets the sharing of experience, practice and know-how among researchers and developers in CALLAS and effective communication of results to the European Commission, through executive presentations and reports that exploit values and achievements according to the DoW. Internal communication includes project updates, in-depth briefings, technical contributions, general information, and information related to participation to events and public initiatives. Formats/tools of this communication include meeting reports, web collaboration, memos, e-mails, presentations and more. Responsibility for internal communication is shared within the Consortium, coordinated by the Management function in CALLAS, as defined in the project quality plan.

- *A functional/promotional language, instrumental to communicate effectively to an external audience the opportunities offered by CALLAS.*

Here emotional participation is the goal, by associating involvement with ‘simplicity’. External communication refers to all activities that provide general project information: background, purpose, extent of project, testimonials, and case stories. Format/tools of these forms of communication may include workshops, discussion forum, media channels (radio, TV, press), newsletters, brochures, posters, surveys, provision of information kits and more.

This is a Marketing Communication responsibility, managed by the CALLAS Communication Director who supervises the process, implementing corporate image functions that follow the definition of a CALLAS Brand, identity and image. According to this all partner contributions to be externally published are subject to approval, reediting and modifications suggested by the Communication Director.

## 2. Communicating CALLAS to a wide audience

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The aim of these activities is to:

- Highlight the CALLAS project with a real-life situation.
- Explain how the CALLAS project came into being
- Relate the facts of the CALLAS project to the activities of the CALLAS Community Club (the C<sup>3</sup>)

Five basic rules are followed:

- Communication must be effective: use a clear language, simple and understandable, stressing the values of the Callas Project that can be perceived by the addressed target. Use a language based on functions, opportunities, advantages, benefits, and not only based on technology.
- Press/Media extended coverage: use Press/Media communication in an extensive way, delivering concise effective messages, adapting the language to the different situations to be managed. All delivered information must be homogeneous and coordinated.
- Leveraging on Official Speaking Opportunities: Official External Speakers have been identified, to guarantee a common external communication approach in all the public events where they are involved.
- Strong Brand Communication in each External Communication Initiative: all the external communication relevant to the CALLAS Project has to transfer the pride of belonging to the CALLAS Project Group, stressing CALLAS Brand, Identity and Image.
- Communication through Testimonials: “there is no better Salesman than the Client”: use Testimonials, possibly within the CALLAS COMMUNITY CLUB C<sup>3</sup> (C-CUBE), to deliver CALLAS Project Values currently recognized by the addressable Market

Current implementation of this channel is working properly and efficiently under coordination of the Communication Director.

### 2.1 CALLAS new Web site

An attractive showroom of the Project at [www.callas-newmedia.eu](http://www.callas-newmedia.eu) provides insights, documenting project progress and events where a direct contact with external entities can occur. The site was redesigned in September 2008 using the Joomla dynamic content management system and is now managed to reflect the project progress and a coherent external image. An ‘editor/contents responsibility’ is associated to the Communication Director who plans contents, calls for contributions, selects and arranges the publication.

The website is designed to address the interest of visitors from an enlarged audience. Major sections are briefly commented below.

#### **“Home”**

This is a welcome page to the site, providing a summary introduction to the project activities with link to all pages.

### ***“About”***

This section introduces the visitor to the research questions investigated in CALLAS, provides a description of the CALLAS Consortium and member organisations, recalls research areas relevant for synergy with other projects, and finally documents press articles that appeared in newspapers following initiatives that provided visibility for the project.

### ***“Insights”***

This section goes deeper into the R&D topics, providing introductory pages for the “Shelf” and the “Framework” and the emotional models theory, supported by a set of downloadable public CALLAS deliverables and a full list of scientific papers issued. An abstract of each paper is described and instructions for downloading are provided to protect IPR of the writers and publishers. Each paper is related to events and conferences where it was discussed, with links to the reference event page at “**All events**” and “**Notice Board**” sections.

### ***“Showcased technology”***

This section provides summary description of the progressive experiments made in CALLAS Showcases developments, documented by pictures and videos.

### ***“Promotional Material”***

This section presents documentary information for the wide audience including official project presentation kits, brochures, posters, videos (see 2.2), public deliverables (see 2.4) and CALLAS Newsletters (see .2.3)

### ***“Your C<sup>3</sup> Club”***

This section introduces the CALLAS social network initiative: the C<sup>3</sup> (C-Cube) CALLAS Community Club (see Chapter 3.1) and tells about the benefits of membership in the Community.

### ***“Private Area”***

This section is reserved to project members.

## 2.2 CALLAS promotional Videos

Videos are powerful vehicles of information, speaking from themselves and providing a direct touch of the technological advances which might be interest for artists and possible users. Featured videos on the web site at M24 include: videos of the Showcases, Shelf Components and exhibitions:



Galileo all'Inferno: an example of Digital Performances with CALLAS



Euclide: an example of Interactive Public Places



Ekuberant GRETA



Indolent GRETA



### VIRTUAL / VIRTUOSO



Ateneum Hall 1.2.2008

Other videos documenting components are foreseen, selected videos are also associated to specific survey activities at C<sup>3</sup> level.

## 2.3 CALLAS Newsletters

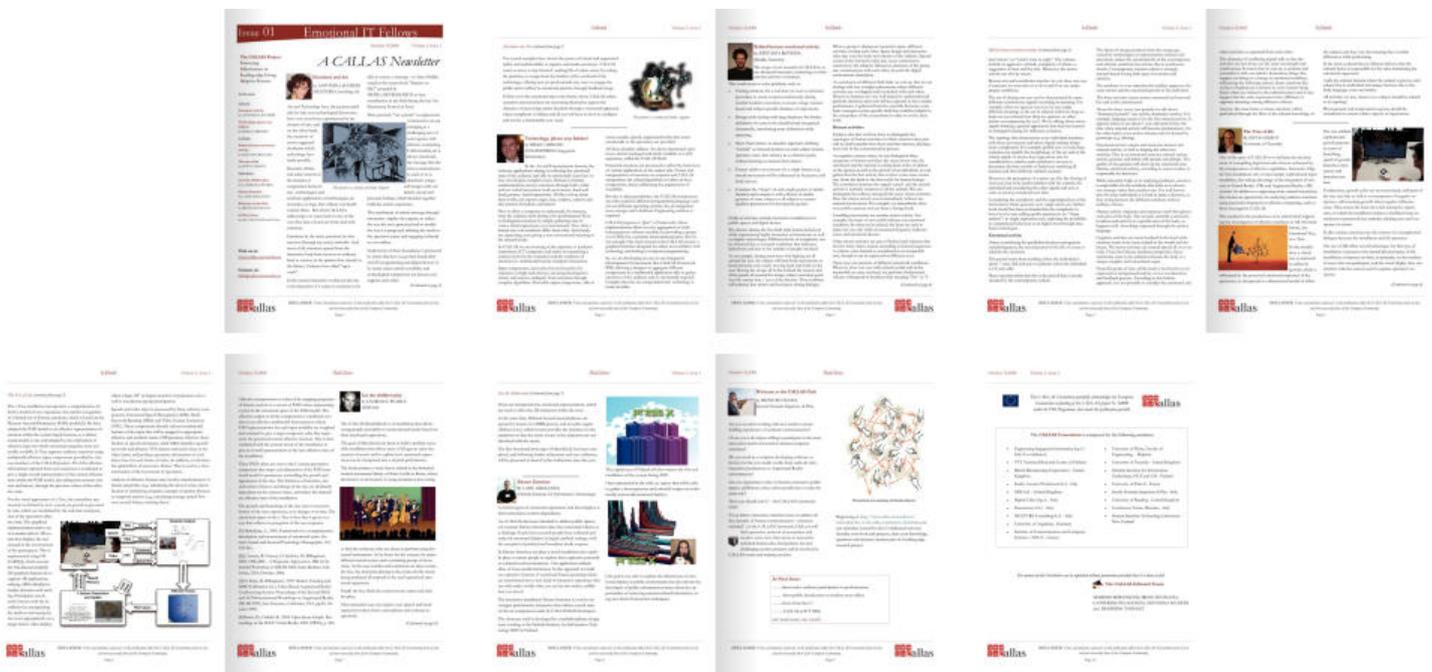
Publication of CALLAS Newsletters is foreseen to occur quarterly and started in M24 (15 October 2008). The strategy is to use them as an instrument to sponsor early adoption by cybernetic artists and technology providers. Contents will progressively make readers familiar with CALLAS topics, introduce some of them in-depth, provide flash news about major achievements in the period and inform about showcases and initiatives ongoing at C<sup>3</sup>.

Each issue will cover different types of contributions such as: detailed presentations of a shelf component or of a showcase, a presentation of a CALLAS event (training session, demonstration events, conference attendance, etc.), a presentation of a new member (or a category of members) of the CALLAS community.

The target is to reach a wide audience, not necessarily belonging to the scientific community only.

An editorial team is in charge of presenting the draft index to the General Assembly during meetings, to collect commitments from contributions, follow the editing workflow, selecting material. The editorial team is composed of complementary figures and is currently: Antonina Scuderi (NXT), Communication and Replicability director as chief editor, Massimo Bertoncini (ENG), Project coordinator and responsible for the Framework area, Catherine Pelachaud (Par8), representing the scientific side within the Shelf, Delphine Tonglet (SAZ), representing the Showcases area, and Irene Buonazia (SNS) representing the dissemination team.

Directly readable on the public web site, Newsletters will complement dissemination material for distribution at events and conferences.



**Figure 2-1: CALLAS Newsletter Volume 1, Issue 1**

Newsletter #1 features the following articles:

- *Emotions and Art* by Tonina Scuderi (NXT): introduction to the first issue
- *Technology, please stay hidden* by Diego Arnone (ENG): introduction to the Framework
- *Behind human emotions:* by Stefano Roveda (SAZ): presenting the artist's point of view about emotional interfaces
- *The tree of life* by Steve Gilroy (TEES): in-depth description of the e-Tree showcase
- *Let the children play* by Laurence Pearce (XIM): in-depth description of MusicKiosk showcase
- *Electro Emotion* by Lassi Liikkanen (HIIT): report on the performance Virtuali/Virtuosi (February 2008), showcasing CALLAS technologies

- *Welcome to the CALLAS Club* by Irene Buonazia (SNS): presentation and invitation to the C<sup>3</sup>.

The draft index for CALLAS Newsletter Issue 2 was discussed during the CALLAS General assembly in Augsburg (September 2008) and foresees the following articles:

- *Spectators in the feedback loop* by Marc Price (BBC): in-depth description of Interactive TV & ECA showcase
- *Look at me* by Amaryllis Raouzaïou (ICCS) in-depth description of Gaze recognition module
- *Greta* by Catherine Pelachaud (PAR8): in-depth description of shelf module emotional attentive ECA
- *One's Own Soundtrack* by David Fuschi (UOR): a view of emotional music
- *Voices from the CALLAS Community* (C<sup>3</sup> members): Starting from Issue 2 we plan to host an editorial space reserved to articles produced by CALLAS Community members in the C<sup>3</sup>, dedicated to introduce some of the new members of the community or interest groups that have joined the community.

## 2.4 CALLAS Public Deliverables

All public material (documents, presentations, etc) have been developed using Quality guidelines for Communication and are available on the web site for downloading<sup>1</sup>.

from the CALLAS Shelf project Library	
Identification and Selection of Modules	<a href="#">download</a>
Components First Release	<a href="#">download</a>
Emotional Natural Language Generator	<a href="#">download</a>
Specification for Model of Awareness	<a href="#">download</a>
from the CALLAS Framework project Library	
Emotional Model Specifications	<a href="#">download</a>

**Table 2-1 CALLAS deliverables made public**

<sup>1</sup> [http://www.callas-newmedia.eu/index.php?option=com\\_content&view=article&id=14&Itemid=13](http://www.callas-newmedia.eu/index.php?option=com_content&view=article&id=14&Itemid=13)

## 2.5 Web site dynamic pages and News

Public awareness is created through [RSS news](#) sent from the web site Notice Board, anticipated on the C3 pages and used towards Media and Press. To promote the values of the Project, the CALLAS Consortium participates to conferences in technical, artistic, cultural and industrial contexts, to expositions and concertation events with other projects. Also CALLAS specific events are internally planned, anticipated on C<sup>3</sup> and then published on the public web site and sent via RSS. Additional to the scientific events (see 4.1) dynamic pages inform about exhibitions and major dissemination events. A list of this class of events that occurred from M1 to M24 in the project is reported below linked to interest of the Media for the exhibitions.

October 2008							10
S	M	T	W	Th	F	Sa	
			1	2	3	4	
5	6	7	8	9	10	11	
12	13	14	15	16	17	18	
19	20	21	22	23	24	25	
26	27	28	29	30	31		

→ onward

"Orchestra Volante" Auditorium of Santa Cecilia<sup>2</sup>, Rome, Italy

### Press Echoes:

**18/Oct/2008** "L'orchestra volante è pronta per i cento anni di Santa Cecilia" [il Manifesto](#)

**17/Oct/2008** "Celebrating an Orchestra (Virtually) in Rome"- [International Herald Tribune blog](#)

**14/Oct/2008** "100-101, un secolo in mostra con l'Orchestra volante di Studio Azzurro" [ControLuce.it](#)

**12/Oct/2008** "100-101 i primi 100 anni dell'Orchestra di Santa Cecilia": press release on [Info.Roma.it](#); [Agora Magazine](#)

**3/Oct/2008** CALLAS for Santa Cecilia: article on [Cultura Italia](#) (Italian)

**2/Oct/2008** CALLAS and Santa Cecilia: download [press release](#) of the "Orchestra Celeste" event (Italian), article on [New Italian Blood](#)

July 2008							7
S	M	T	W	Th	F	Sa	
		1	2	3	4	5	
6	7	8	9	10	11	12	
13	14	15	16	17	18	19	
20	21	22	23	24	25	26	
27	28	29	30	31			

"Galileo in Hell" Arcimboldi Theatre<sup>3</sup>, Milan Italy

### Press Echoes:

**10/July/2008** Galileo all'Inferno: download [press release](#)

**08/July/2008** Galileo all'Inferno and CALLAS: the [event](#), playlist on [Youtube](#), press articles on [La STAMPA](#); [Corriere.it](#); [La Repubblica.it](#); [ilGiornale.it](#); [D3D](#); [LaVoce](#); [Giornale di zona.com](#); [Notizie.net](#); [ColliNews.it](#); [Loudvision.it](#); [FreeArtNews.it](#); [aTeatro.it](#);

**20/June/2008** Galileo in hell: a scientist's imaginary trip: [Media Slivers](#)

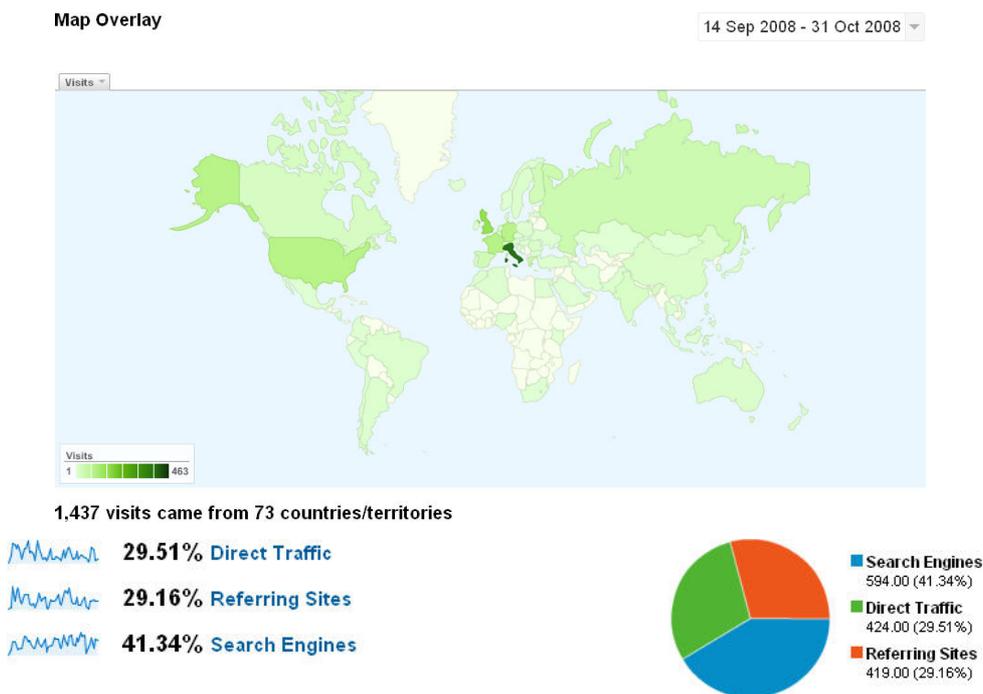
<sup>2</sup> <http://www.callas-newmedia.eu/the-cs-the-callas-community-club/exploitation-opportunities.html#CECILIA>

<sup>3</sup> [http://www.callas-newmedia.eu/the-cs-the-callas-community-club/exploitation-opportunities.html#Galileo\\_in\\_hell](http://www.callas-newmedia.eu/the-cs-the-callas-community-club/exploitation-opportunities.html#Galileo_in_hell)



**Table 2-2 Exhibitions events and Press Echoes**

A structured Media Plan strategy is under development within CALLAS, planned for implementation next year, to provide visibility and cultivate the attention of the press as far as the project consolidates its goals.



**Figure 2-2 Popularity of the CALLAS new web site after 1.5 months of operations**

<sup>4</sup> [http://www.callas-newmedia.eu/index.php?option=com\\_content&view=article&id=99&Itemid=9](http://www.callas-newmedia.eu/index.php?option=com_content&view=article&id=99&Itemid=9)

<sup>5</sup> <http://www.callas-newmedia.eu/all-events/114-22-23jan2008-bbc-festival-of-technology.html>

### 3. Communicating CALLAS to early adopters

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The building of a wide Community of interest in the CALLAS Project started since the beginning of the project and from M21 (September 2008) a social 'interaction' oriented approach the CALLAS Community Club, referred to as  $C^3$  = C-Cube, began consolidating a number of active members. The initiative aims at consensus building, critical mass aggregation around project topics and support to exploitation and replicability of project findings.

The social formula implemented conveys the message of a great opportunity open also to non-CALLAS members:

*"...Became an Actor in the CALLAS Project! Joining the CALLAS Community CLUB, YOU software developers and researchers will find an advanced, lively, friendly environment for YOUR work on New Media and affective interfaces. YOU Application developers, Providers, Artists and Final Users will gain insight into one of the most rapidly developing fields, and influence a large-scale, exciting project meaning to change the way of look: at contemporary and future media (...stressing active participation, CLUB identity, including an interactive 'tour' inside the Project)".*

#### 3.1 The $C^3$ (C-Cube) CALLAS Community Club

The CALLAS Community Club (referred to as the  $C^3$ ) sponsors opportunities for synergies between the project and partners external to the project, to gather 'mutual and reciprocal' advantages from the Club, encouraged to spread information about CALLAS through their own networks, seen as active multipliers. This is very relevant for the project as it represents an instrument for:

- Gathering direct, unfiltered feedback from various segments of the Community
- Reaching a group of people of influence (key communicators).
- Acquiring some hard perception data, prior to embarking on a specific action.
- Balancing pressure from a single interest group with immediate feedback from several different perspectives.
- Finding out what various stakeholder groups know and want to know
- Using the information to help prioritize actions and initiatives.

The  $C^3$  features a space for free circulation of ideas, where community members contribute to comment, test (and also criticize) the project. The  $C^3$  is hosted at a dedicated web space, distinguished from the public web site. A description is given in following section.

## 3.2 Rationale for recruiting and its implementation in the C<sup>3</sup>

The C<sup>3</sup> Callas Community Club is network open by invitation – only.

Dissemination events have been powerful instruments for recruiting, such as:

October 2008							10
S	M	T	W	Th	F	Sa	
			1	2	3	4	
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12	13	14	15	16	17	18	
19	20	21	22	23	24	25	
26	27	28	29	30	31		

PRESENCE 2008<sup>6</sup>

July 2008							7
S	M	T	W	Th	F	Sa	
		1	2	3	4	5	
6	7	8	9	10	11	12	
13	14	15	16	17	18	19	
20	21	22	23	24	25	26	
27	28	29	30	31			

EVA2008<sup>7</sup>

**CALLAS 2<sup>nd</sup> year of operations: press release** *Press Echoes:*

**17/Oct/2008** CALLAS press release (Italian) with echoes on [Comunicati-stampa.it](#), [IlVelino.it](#), [PMI-Dome](#), [Tribuna Economica](#), [MarketPress](#), [AreaPress](#)

**Sept/2008** EVA e il paradiso elettronico: article on [Digicult](#)

November 2007							11
S	M	T	W	Th	F	Sa	
				1	2	3	
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
25	26	27	28	29	30		

EVA MINERVA 2007<sup>8</sup>

November 2007							11
S	M	T	W	Th	F	Sa	
				1	2	3	
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
25	26	27	28	29	30		

Workshop at IED<sup>9</sup>, Sao Paolo, Brazil

**CALLAS 1st year of operations: press release**

**24/Dec/2007** Developing Affective Interface Technology for New Media, Digital Arts and Entertainment: article on [UsabilityNews.com](#), on [Usernomics](#)

**20/Dec/2007** EU project develops affective interface technologies for the new media: [article on Cordis](#); recall in [ACM News](#)

*Press Echoes:*

**23/Nov/2007** Interactive Installation Euclide: [Poster for Teatro Digital IED Centro Cultural Sao Paulo](#), [Studio Azzurro press release](#), [echoes at IED](#), [echoes at Artivisive.info](#)

<sup>6</sup> <http://www.callas-newmedia.eu/all-events/116-16oct2008-presence-2008.html>

<sup>7</sup> <http://www.callas-newmedia.eu/all-events/88-callas-at-eva-london-2008-london-united-kingdomjuly-22-24-2008.html>

<sup>8</sup> <http://www.callas-newmedia.eu/all-events/115-20-21nov2007-eva-minerva-2007.html>

<sup>9</sup> <http://www.callas-newmedia.eu/all-events/100-9-10nov2007-workshop-at-ied.html>

**19/Dec/2007** First Year of Research at CALLAS: download [press release](#) ; [Press release reprint on WEBITPR](#) ; on [Calibre Macroworld \(download\)](#); on [Pressbox.co.uk](#); on [Turk.Internet.com](#); on [Webbers Corner](#); on [IT Analysis](#); on [Tech Whack](#); on [DMN Newswire](#) ; on [XTVWorld.com](#); on [IT Director](#); on [NexGear](#); on [Creativematch](#); on [SearchByHeadlines](#); on [NewsBlaze](#); on [TechnoWorldInc](#), on [pressemeldungen.ac](#)

**06/Dec/2007** Det følsomme fjernsyn: [article on DR Forside](#)

May 2007							5
S	M	T	W	Th	F	Sa	
		1	2	3	4	5	
6	7	8	9	10	11	12	
13	14	15	16	17	18	19	
20	21	22	23	24	25	26	
27	28	29	30	31			

CALLAS Workshop on Digital Technologies and Theatre <sup>10</sup>

#### Press Echoes:

**20/May/2007** Il Business beni culturali: ICT l'anello mancante: [article on Corriere delle Comunicazioni](#)

March 2007							3
S	M	T	W	Th	F	Sa	
				1	2	3	
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
25	26	27	28	29	30	31	

EVA 2007<sup>11</sup>

**Table 3-1 CALLAS events relevant for building the C<sup>3</sup> and press echoes**

Direct recruitment of members follows this rationale:

- All people involved in the CALLAS project suggest names of potential candidates to the dissemination team, periodically or every time they find some interest in their current activity of research and participation in conferences.
- The dissemination team check the suggested contact, filling a “wish list” where such information is collected:
  - Title, first name, Surname, email
  - Organisation (URL of personal page, company / institution page / project page)
  - Where – Country, (if useful) physical address

<sup>10</sup> <http://www.callas-newmedia.eu/all-events/24-callas-workshop-on-digital-technologies-and-theatre-palermo-may-4-2007.html>

<sup>11</sup> <http://www.callas-newmedia.eu/all-events/22-callas-at-eva-2007.html>

- Type - Individual (I) or Company (C) or Organization (O)
- Typology – e.g. University Department; Broadcasting company
- Field of Interest – core research / business
- Organization Profile – notes on the dimension of the organization (individual company, corporation, etc.)
- contacted at / by – reports who suggested, met, knew from previous contacts the candidate member
- status – status of the recruitment (date of first invitation; direct contact; eventual positive or negative feedback, notes on how the candidate member could be contacted again)
- This wish list, filled in parallel with the restyling of the website, resulted useful to keep the status of recruitment activity. All partners are made aware of the status of recruitment.
- If the candidate member is not already directly known, the dissemination team sends a "first letter of invitation to the CALLAS project", introducing the project (aims, methodology), presenting potentialities of participating in the Community and asking permission to send an invitation via C<sup>3</sup>.
- The "first letter of invitation to the CALLAS project" is available in standard version, to be filled with the name of the candidate member and modified to better address candidate's interest and profile. Every candidate is contacted individually, without using multiple recipient mailing.
- Once the candidate declared his/her personal interest in the project, an invitation to join the C<sup>3</sup> is sent by the C<sup>3</sup> administrator.
- On C<sup>3</sup> the newcomer can fill a form adding information to his/her profile (name, profile of organization, email, skype address, full address), and identify main interests amongst the core research of the project ( Emotion research, Emotion synthesis, Multimodal interfaces, Augmented reality, Interactive media, Digital art Entertainment, Other) and expectations from the C<sup>3</sup>.

<b>Question Title</b>	did you read and accepted the TERMS and CONDITIONS specified at http://		
<b>Answer Type</b>	Longer Answer	<input checked="" type="checkbox"/> Required?	<input type="checkbox"/> Private
	<a href="#">Remove</a> <a href="#">Add Another Question</a>		
<b>Question Title</b>	Your Name and Surname		
<b>Answer Type</b>	One Line Answer	<input checked="" type="checkbox"/> Required?	<input type="checkbox"/> Private
	<a href="#">Remove</a> <a href="#">Add Another Question</a>		
<b>Question Title</b>	Your field of interest		
<b>Answer Type</b>	Multiple Choice	<input checked="" type="checkbox"/> Required?	<input type="checkbox"/> Private
<b>Choices</b>	Emotion research, Emotion synthesis, Multimod		
	<input checked="" type="checkbox"/> Can pick more than one		
	Separate each choice with a comma		
	<a href="#">Remove</a> <a href="#">Add Another Question</a>		
<b>Question Title</b>	Profile of your organisation		
<b>Answer Type</b>	Website Address	<input checked="" type="checkbox"/> Required?	<input type="checkbox"/> Private
	<a href="#">Remove</a> <a href="#">Add Another Question</a>		
<b>Question Title</b>	email address		
<b>Answer Type</b>	One Line Answer	<input checked="" type="checkbox"/> Required?	<input type="checkbox"/> Private
	<a href="#">Remove</a> <a href="#">Add Another Question</a>		
<b>Question Title</b>	skype address		
<b>Answer Type</b>	One Line Answer	<input checked="" type="checkbox"/> Required?	<input type="checkbox"/> Private
	<a href="#">Remove</a> <a href="#">Add Another Question</a>		
<b>Question Title</b>	your full address		
<b>Answer Type</b>	Longer Answer	<input checked="" type="checkbox"/> Required?	<input type="checkbox"/> Private
	<a href="#">Remove</a> <a href="#">Add Another Question</a>		
<b>Question Title</b>	your expectations from the C3		
<b>Answer Type</b>	Longer Answer	<input checked="" type="checkbox"/> Required?	<input type="checkbox"/> Private
	<a href="#">Remove</a> <a href="#">Add Another Question</a>		

**Table 3-2 Profile questions (visible to all C<sup>3</sup> members) at registration time**

- In the registration form there are also some questions analysed by the C<sup>3</sup> administrator team, and not available to other community members) to monitor the advancement of the dissemination strategy.

<b>Question Title</b>	where did you first hear of this project?		
<b>Answer Type</b>	Longer Answer	<input checked="" type="checkbox"/> Required?	<input checked="" type="checkbox"/> Private
	<a href="#">Remove</a> <a href="#">Add Another Question</a>		

<b>Question Title</b>	comments		
<b>Answer Type</b>	Longer Answer	<input checked="" type="checkbox"/> Required?	<input checked="" type="checkbox"/> Private
	<a href="#">Remove</a> <a href="#">Add Another Question</a>		

**Table 3-3 Profile questions (kept private) at registration time**

- Once the candidate registers on C<sup>3</sup>, the C<sup>3</sup> administrator welcomes him/her, usually suggesting threads to monitor, other members or events close to his/her core interest.
- Once registered, every member can send autonomous invitations to their own contact.

### Invite to 'CALLAS emotional IT fellows'

#### ▼ Enter E-mail Addresses

##### Send To

Separate multiple addresses with commas

##### Your Message (Optional)

[Send Invitations](#)

#### ► Invite Friends

Invite Your Friends to 'CALLAS emotional IT fellows'

#### ► Import from Web Address Book

Yahoo Mail, Hotmail, Gmail or AOL Mail



#### ► Import from Address Book Application

Microsoft Outlook, Apple Address Book, .CSV, etc.

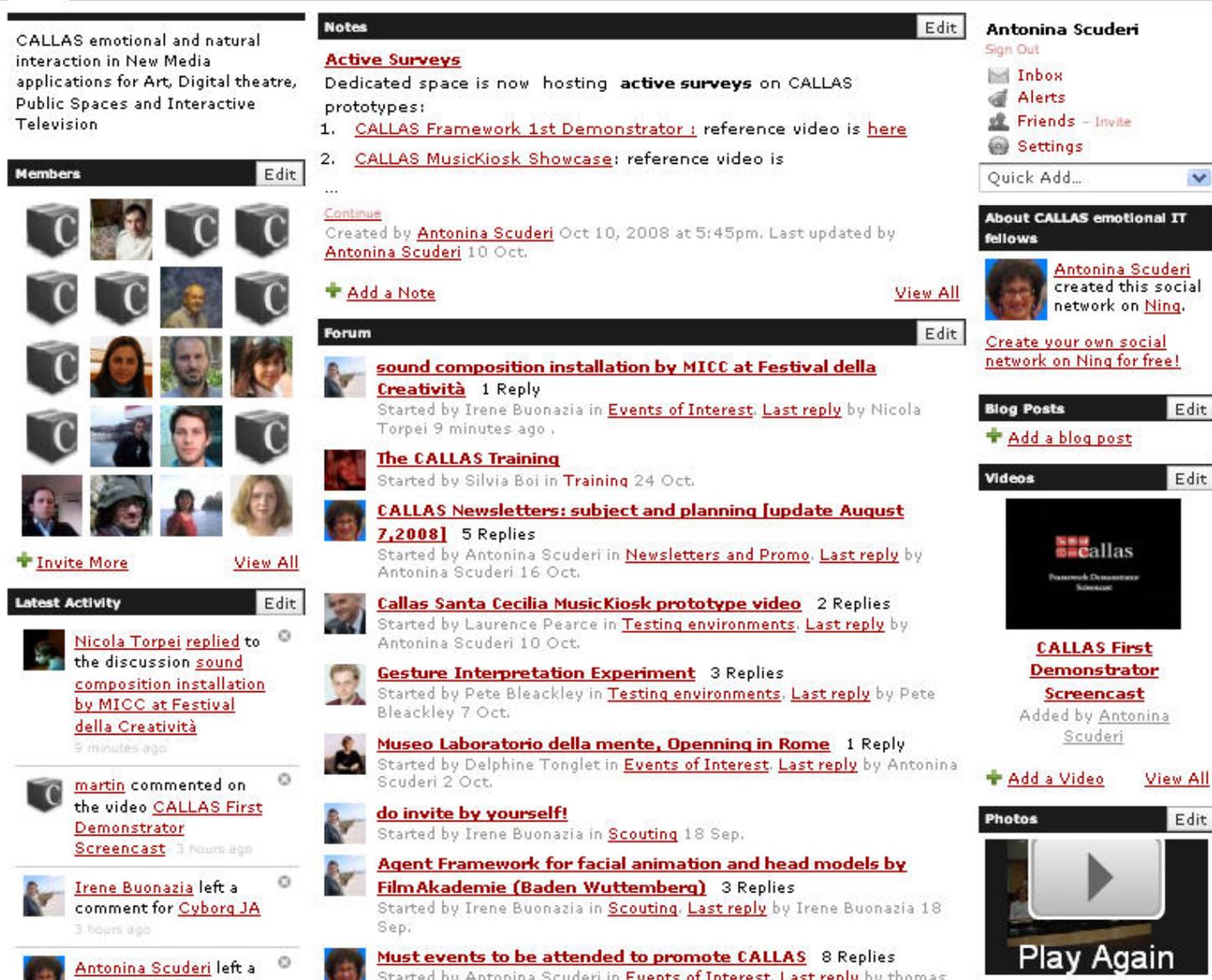
**Table 3-4 direct invitation of members from C<sup>3</sup>**

- Periodically, the list of members is updated and made visible also on the public CALLAS web site pages<sup>12</sup>.

<sup>12</sup> [http://www.callas-newmedia.eu/index.php?option=com\\_content&view=article&id=96#CURRENT](http://www.callas-newmedia.eu/index.php?option=com_content&view=article&id=96#CURRENT)

### 3.3 C3 dedicated space structure

The main page of the C<sup>3</sup> provides immediate visibility of latest discussions open to debate in CALLAS, conceived as response to two main weaknesses of managing communities: the difficulty to physically keep in touch with many members spread all over the world and the stimuli of reciprocal interaction.



**CALLAS emotional and natural interaction in New Media applications for Art, Digital theatre, Public Spaces and Interactive Television**

**Members** Edit

**Notes** Edit

**Active Surveys**  
Dedicated space is now hosting **active surveys** on CALLAS prototypes:

- [CALLAS Framework 1st Demonstrator](#): reference video is [here](#)
- [CALLAS MusicKiosk Showcase](#): reference video is

...

[Continue](#)  
Created by [Antonina Scuderi](#) Oct 10, 2008 at 5:45pm. Last updated by [Antonina Scuderi](#) 10 Oct.

[+ Add a Note](#) [View All](#)

**Forum** Edit

[sound composition installation by MICC at Festival della Creatività](#) 1 Reply  
Started by Irene Buonazia in [Events of Interest](#). [Last reply](#) by Nicola Torpei 9 minutes ago.

[The CALLAS Training](#)  
Started by Silvia Boi in [Training](#) 24 Oct.

[CALLAS Newsletters: subject and planning \[update August 7, 2008\]](#) 5 Replies  
Started by Antonina Scuderi in [Newsletters and Promo](#). [Last reply](#) by Antonina Scuderi 16 Oct.

[Callas Santa Cecilia MusicKiosk prototype video](#) 2 Replies  
Started by Laurence Pearce in [Testing environments](#). [Last reply](#) by Antonina Scuderi 10 Oct.

[Gesture Interpretation Experiment](#) 3 Replies  
Started by Pete Bleackley in [Testing environments](#). [Last reply](#) by Pete Bleackley 7 Oct.

[Museo Laboratorio della mente, Openning in Rome](#) 1 Reply  
Started by Delphine Tonglet in [Events of Interest](#). [Last reply](#) by Antonina Scuderi 2 Oct.

[do invite by yourself!](#)  
Started by Irene Buonazia in [Scouting](#) 18 Sep.

[Agent Framework for facial animation and head models by FilmAkademie \(Baden Wuttemberg\)](#) 3 Replies  
Started by Irene Buonazia in [Scouting](#). [Last reply](#) by Irene Buonazia 18 Sep.

[Must events to be attended to promote CALLAS](#) 8 Replies  
Started by Antonina Scuderi in [Events of Interest](#). [Last reply](#) by thomas

**Antonina Scuderi**  
Sign Out  
Inbox  
Alerts  
Friends - Invite  
Settings

Quick Add...

**About CALLAS emotional IT fellows**

[Antonina Scuderi](#) created this social network on [Ning](#).

[Create your own social network on Ning for free!](#)

**Blog Posts** Edit  
[+ Add a blog post](#)

**Videos** Edit

[CALLAS First Demonstrator Screencast](#)  
Added by [Antonina Scuderi](#)

[+ Add a Video](#) [View All](#)

**Photos** Edit

[Play Again](#)

**Latest Activity** Edit

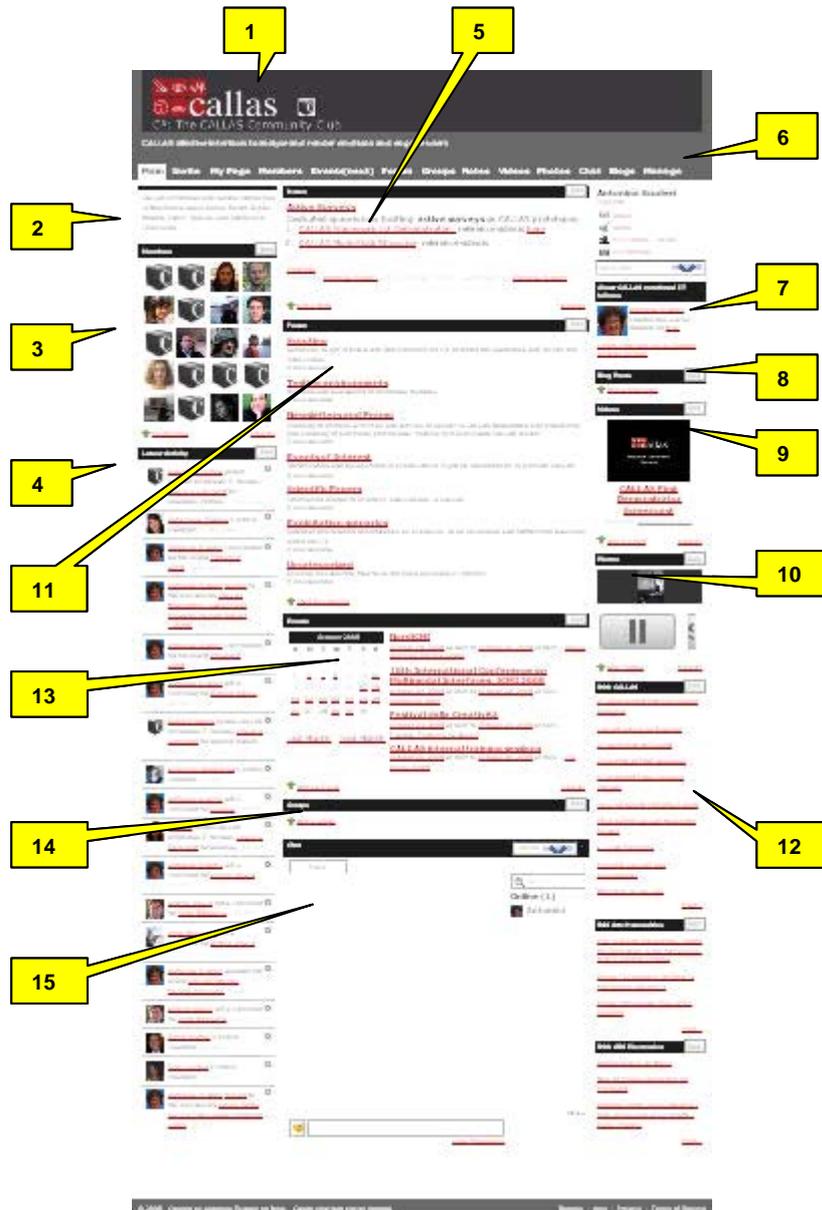
[Nicola Torpei](#) replied to the discussion [sound composition installation by MICC at Festival della Creatività](#) 5 minutes ago

[martin](#) commented on the video [CALLAS First Demonstrator Screencast](#) 3 hours ago

[Irene Buonazia](#) left a comment for [Cyborg JA](#) 3 hours ago

[Antonina Scuderi](#) left a comment for [Cyborg JA](#) 3 hours ago

Figure 3-1: A snapshot of the C<sup>3</sup> main page



**Figure 3-2: C<sup>3</sup> structural view**

The structure is supported by the social technology software provided by [NING](#), with appearance customised to reflect CALLAS identity and articulated by sections as shown in the layout above.

The sections refer to:

- 1 The CALLAS logo and short project overview header.
- 2 Welcome message to CALLAS emotional IT fellows: “CALLAS *emotional and natural interaction in New Media applications for Art, Digital theatre, Public Spaces and Interactive Television*”.

- 3 Registered members: latest 20 memberships upfront and link to the complete list. Each member profile is fully customizable with photo, basic information and everything they've contributed to the network.
- 4 Latest activity log: real-time activity stream to keep up with the members and to find out what they are saying, how they're interacting and what they're sharing.
- 5 Notes: adverts and useful information, hosting a space for surveys devoted to discussion by the CALLAS community about CALLAS demos, products, releases, etc. Surveys are periodically changed, as soon as new project outputs have been released and can be presented in a proper package. The first survey is concerning the screen cast of the Framework first demonstrator. A further one is dedicated to Musickiosk.
- 6 Horizontal Main Menu with direct link to main sections of the C<sup>3</sup>
- 7 Log in information box: direct link to "Invite" section, member friends list, member setting list, Inbox
- 8 Blog area: free members' area for personal blogs (presently not yet populated, as no blogs are open).
- 9 Videos: upload and sharing of videos relevant for CALLAS open to comments and linked to surveys.
- 10 Pictures: upload and sharing of pictures from CALLAS working sessions of the Consortium or other.
- 11 Forum: discussion area to get people talking, starting a discussion on any topic and watch members responding with posts, photos and attachments. Organised by categories of topics, in each posts are sorted from the most recent.
- 12 RSS feeds: from websites and/or communities selected as interesting for CALLAS community; currently, from [CALLAS web site](#), [Arts-Humanities](#), [ARS Electronica](#).
- 13 Events: list of next events, described with information on title, date, place / or link to a map, URL, organizing committee, list of members attending. The rationale for managing events on C<sup>3</sup> is to post here CALLAS or CALLAS-related events before they are official, to support the event organization or to decide who of the community is attending. Once the event or the CALLAS participation to the event has become official, the event is advertised in the official and public website too.
- 14 Groups of Interest: groups inside C<sup>3</sup> around special topics, interests, affinities and

more.

15

Chat area: internal system, showing who is currently logged on the network, supporting direct member-to-member chat when they are logged-in.

### 3.4 Animation of C<sup>3</sup> activities

C<sup>3</sup> accounts for a total of 67 members to date (October 28,2008), of which a total of 34 are external to the CALLAS Consortium and 33 are from CALLAS consortium partners' organisations.

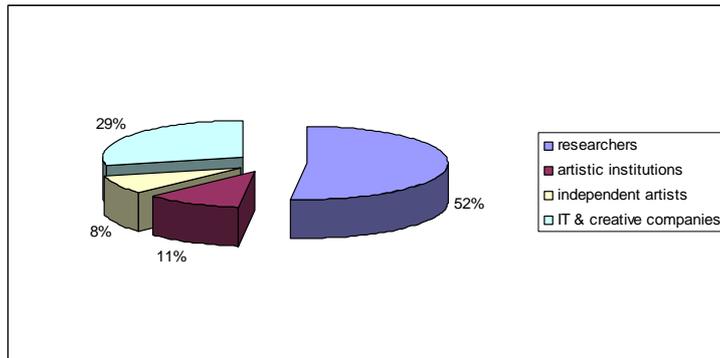
Nine countries are represented in the C<sup>3</sup> as follows:

1. [Denmark] Aalborg University Esbjerg
2. [France] La compagnie action de faire actions plurielles
3. [Greece] one individual independent company
4. [Italy] A&G Soluzioni Digitali ; MICC at University of Florence; University La Sapienza di Roma; HTLAB at University of Padova; University of Milan; ITSME Alliance; Rigel Engineering; MMComunicazione; Scenica Frammenti; Net Surfing; Web Models; two individual independent companies
5. [Spain] laboratory for Synthetic Perceptive, Emotive and Cognitive Systems – SPECS at UPF; one individual company
6. [Switzerland] University of design and art, Geneva
7. [The Netherlands] Theater Instituut Nederland; Amsterdam School of Cultural Analysis; one individual independent company
8. [United Kingdom] Center for Interaction Design in Edinburgh; Kings College London, Centre for e-Research; TDesign Units; CereProc Ltd; Visuosonic; CSriM, School of Music & School of Computing, University of Leeds; University of Nottingham; University of Sheffield
9. [USA] University of Wisconsin-Madison, Department of Educational Psychology

**Table 3-5 Members of the C<sup>3</sup> [not including the CALLAS consortium]  
update Oct 28, 2008**

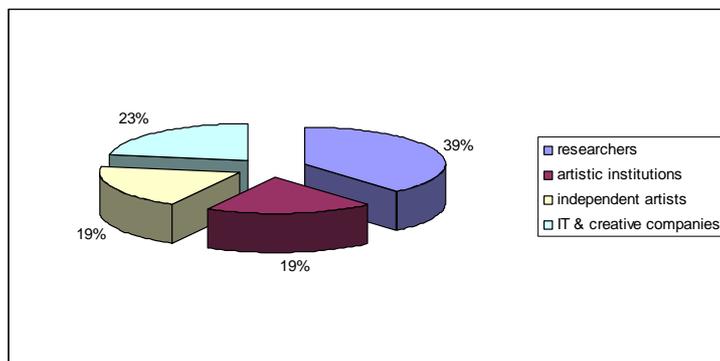
C<sup>3</sup> members can be grouped by 4 main typologies: Researchers, Artistic Institutions, Independent artists or representative of artists' groups and (people working in) IT & Creative Companies (broadcasting, games, design).

Considering the overall membership, including in it also the CALLAS project members, the largest group within the C<sup>3</sup> is the one composed by researchers, working at universities and laboratories; followed by IT, media and creative companies



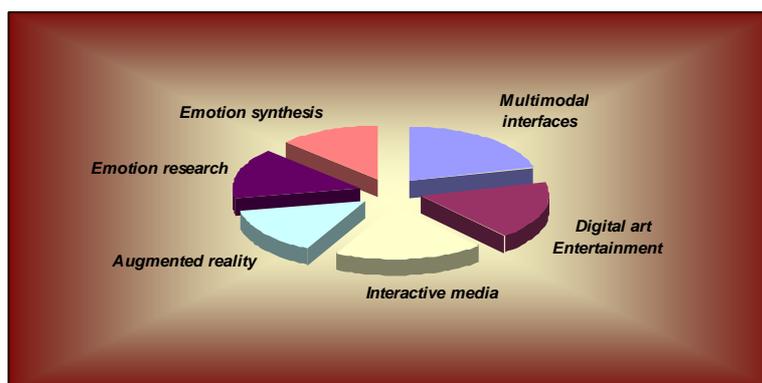
**Figure 3-3 Typologies of members in the C<sup>3</sup> including Consortium members**

More relevant can be a description of C<sup>3</sup> members not directly involved in the project. To date the spread is the following:



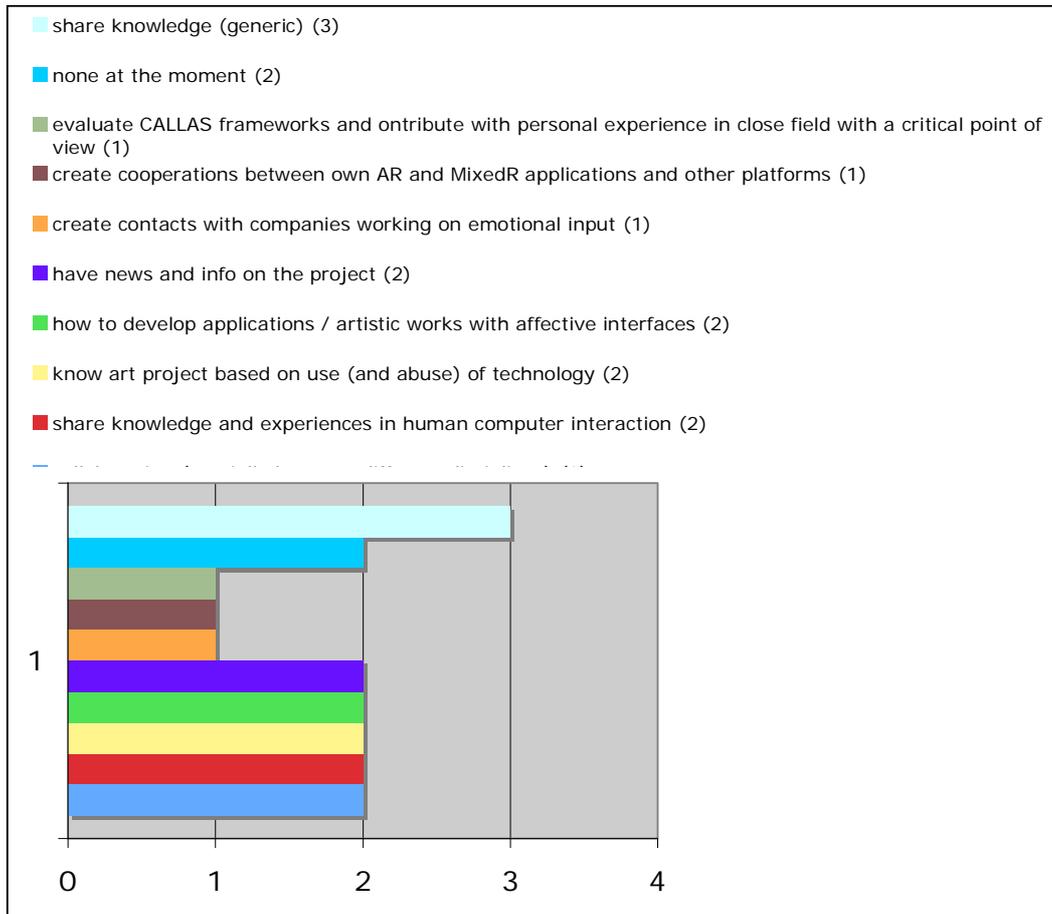
**Figure 3-4 Typologies of external members in the C<sup>3</sup>**

Members have been asked to define their main interests, selecting amongst a list of topics. As the answer was not mandatory, only a part of new members gave indication of interests. Answer can be multiple.



**Figure 3-5 Interest by categories for C<sup>3</sup> members (non CALLAS)**

Expectations of C<sup>3</sup> members (excluded CALLAS consortium) are rather interesting. As the answer is free, similar items have been grouped, but specific interests in Shelf Component, or Framework, have been kept evident.



### C<sup>3</sup> Activities

In these first months, forums have been mostly created by CALLAS partners, and are devoted to the discussion on how to manage some relevant issues related to dissemination strategies and tools. Forums are grouped in the following main categories:

**Scouting:** initiatives to get in touch with new members for C<sup>3</sup>, to widen the awareness and recruit new subscribers

**Testing environments:** test beds and evaluation of emotional features

**Newsletters and Promo:** planning of editorial activities and articles to appear in CALLAS Newsletters and production and planning of additional promotional material to disseminate CALLAS results

**Events of Interest:** identification and assessment of events that might be opportunities to promote CALLAS

**Scientific Papers:** information related to scientific publications in CALLAS

**Exploitation scenarios:** potential exploitation opportunities by scenarios, to be developed and furthermore analyzed within the C<sup>3</sup>: (see later discussion on IPR related to dissemination strategy)

**Training:** discussion on potential modules to be developed for early adopters

**Uncategorized:** all discussions not yet assigned a category

**Table 3-6 Discussion Forums at C<sup>3</sup> by categories**

The C<sup>3</sup> is now moving toward a real thematic approach, launching forums about relevant CALLAS results, e.g. when a component / showcase can be demonstrated and we can upload video (surveys) etc. It has been decided that C<sup>3</sup> should make available to the community not only general debate on topics, but also "premium contents", such as in-depth presentations of components, to involve more community members and reinforce the feeling they are part of a working group, on a higher level in comparison to normal web users accessing the official public website.

In this first phase, CALLAS dissemination team took the initiative to launch thematic forums and to invite community members to participate; other topics will be launched on CALLAS-related issues (e.g. Digital theatre) to sponsor discussion with members.

The intention of the CALLAS Consortium is to launch every month "the forum of the month" related to one of the newsletter's articles. This forum will be ideally monitored by a rotating partner, both in order to equally distribute the effort on this task, and to assure best competencies within CALLAS consortium.

### **IPR management**

An internal debate has been carried on in order to identify what the C<sup>3</sup> member could benefit from C<sup>3</sup> participation, and how, in the meanwhile, to protect Intellectual (or eventually commercial) Property Rights before the end of the project. The appropriate strategy has to support raising of the interest of people and organizations external to the project consortium, who are asked to join on a interest base, without availability of sponsorships or other kind of grants. The shared idea is to provide to C<sup>3</sup> members not only general and theoretical debates, but:

- more detailed information on components, showcases and framework, as detailed power point presentations;
- access to videos taken during the prototype first demonstrations and testing, even without a "commercial" packaging (considering C<sup>3</sup> members as "co-researchers" more then "potential customers", the importance of fast information on releases has been considered more relevant);
- access to event organization, to involve C<sup>3</sup> members and collect information on events they are preparing or attending (such action had a good feedback, with post by C<sup>3</sup> members external to CALLAS consortium)
- preview of demonstrative screen casts, to collect C<sup>3</sup> opinion on dissemination material);



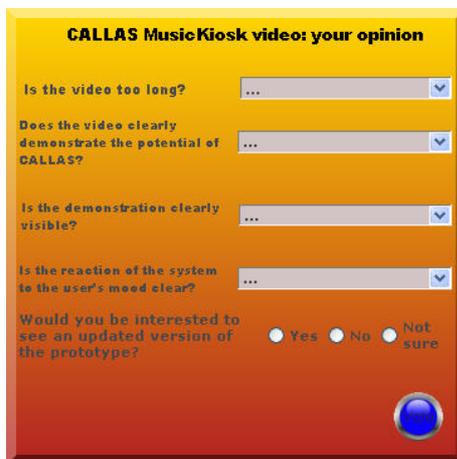
**CALLAS first Demonstrator screencast: your opinion**

Does the speaker explain well how the extracted emotions are managed and affect the file's behaviour?

Does the video make you understand the difference between the Framework and a demonstrator running on it?

Does the prototype demonstrate its ability in extracting emotions from the human-machine interaction?

Is the Graphical Interface proper enough to control the software?



**CALLAS MusicKiosk video: your opinion**

Is the video too long?

Does the video clearly demonstrate the potential of CALLAS?

Is the demonstration clearly visible?

Is the reaction of the system to the user's mood clear?

Would you be interested to see an updated version of the prototype?  Yes  No  Not sure

### Classifying Emotions from Gestures



How would you describe this person's feelings?



Figure 3-6 Voting on C<sup>3</sup> for surveys purposes

Date	Time	Does the speaker explain well how the extracted emotions are managed and affect the Nicole's behaviour?	Does the video make you understand the difference between the Framework and a demonstrator running on it?	Does the prototype demonstrate its ability in extracting emotions from the human-machine interaction?	Is the Graphical Interface proper enough to control the software?
30-Sep-08	10:30.3	Yes	No	I do not know	I do not know
30-Sep-08	12:11.5	Yes	Yes	Yes	Yes
30-Sep-08	06:10.3	Yes	Yes	Yes	Yes
01-Oct-08	07:19.1	Yes	I do not know	Yes	No
01-Oct-08	09:26.2	Yes	I do not know	Yes	Yes
02-Oct-08	01:46.5	Yes	I do not know	I do not know	No
02-Oct-08	05:12.1	No	No	Yes	Yes
03-Oct-08	09:03.3	Yes	I do not know	Yes	I do not know
03-Oct-08	12:25.0	Yes	Yes	Yes	Yes
06-Oct-08	01:36.6	Yes	Yes	No	Yes
08-Oct-08	07:44.5	Yes	No	No	No
09-Oct-08	08:06.2	Yes	Yes	I do not know	Yes
13-Oct-08	09:44.1	Yes	Yes	I do not know	Yes
13-Oct-08	11:52.5	Yes	Yes	Yes	I do not know
16-Oct-08	06:22.6	Yes	Yes	Yes	I do not know
17-Oct-08	12:33.4	Yes	No		

Date	Time	Is the video too long?	Does the video clearly demonstrate the potential of CALLAS?	Is the demonstration clearly visible?	Is the reaction of the system to the user's mood clear?	Would you be interested to see an updated version of the prototype?
10-Oct-08	10:55.1	Yes	Partially	Very clear	Partially clear	Yes
12-Oct-08	07:04.3	Yes	Partially	Partially clear	Partially clear	Yes
13-Oct-08	09:43.4	No	Fully	Partially clear	Partially clear	Yes
16-Oct-08	06:23.3	No	Fully	Partially clear	Partially clear	Yes
17-Oct-08	12:32.5	Yes	Partially	Very clear	Very clear	

Table 3-7 Example of survey's results from C<sup>3</sup>

Especially concerning first two items, it seemed important to define a common IPR strategy related to dissemination strategy, i.e. avoiding IPR policies discouraging a free debate by scientific and/or artistic researchers. Current orientation of CALLAS project members is to

evaluate 3 typologies of use:

- a. “embedding single Shelf components, already developed before CALLAS project”:

A direct contact will be initiated by the C<sup>3</sup> administrator with the partner who developed it, assessing the existence of licences involving also organizations not included in CALLAS consortium. If commercial exploitation is in force, the signature of a special NDA agreement will be a prerequisite.

- b. “embedding clusters of Shelf components, made available by CALLAS project developing new fusion models”

Interested C<sup>3</sup> members will be given access to the software by signing a NDA agreement with the CALLAS project.

- c. “embedding / evaluating the CALLAS Framework”

Interested C<sup>3</sup> members will be given access to the prototypal CALLAS software released as open source during the project.

For both b. and c, releases to C<sup>3</sup> will take place when proper downloading tools and related APIs will be available, and assuring practical training sessions and assistance for users, monitored by a rotating leader to be nominated in CALLAS.

#### Map Overlay

7 Sep 2008 - 31 Oct 2008



583 visits came from 22 countries/territories

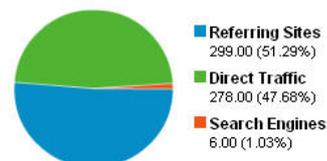


Figure 3-7 Popularity of the C<sup>3</sup> web site after 1.7 months of operations

## 4. Communicating CALLAS to scientific audience

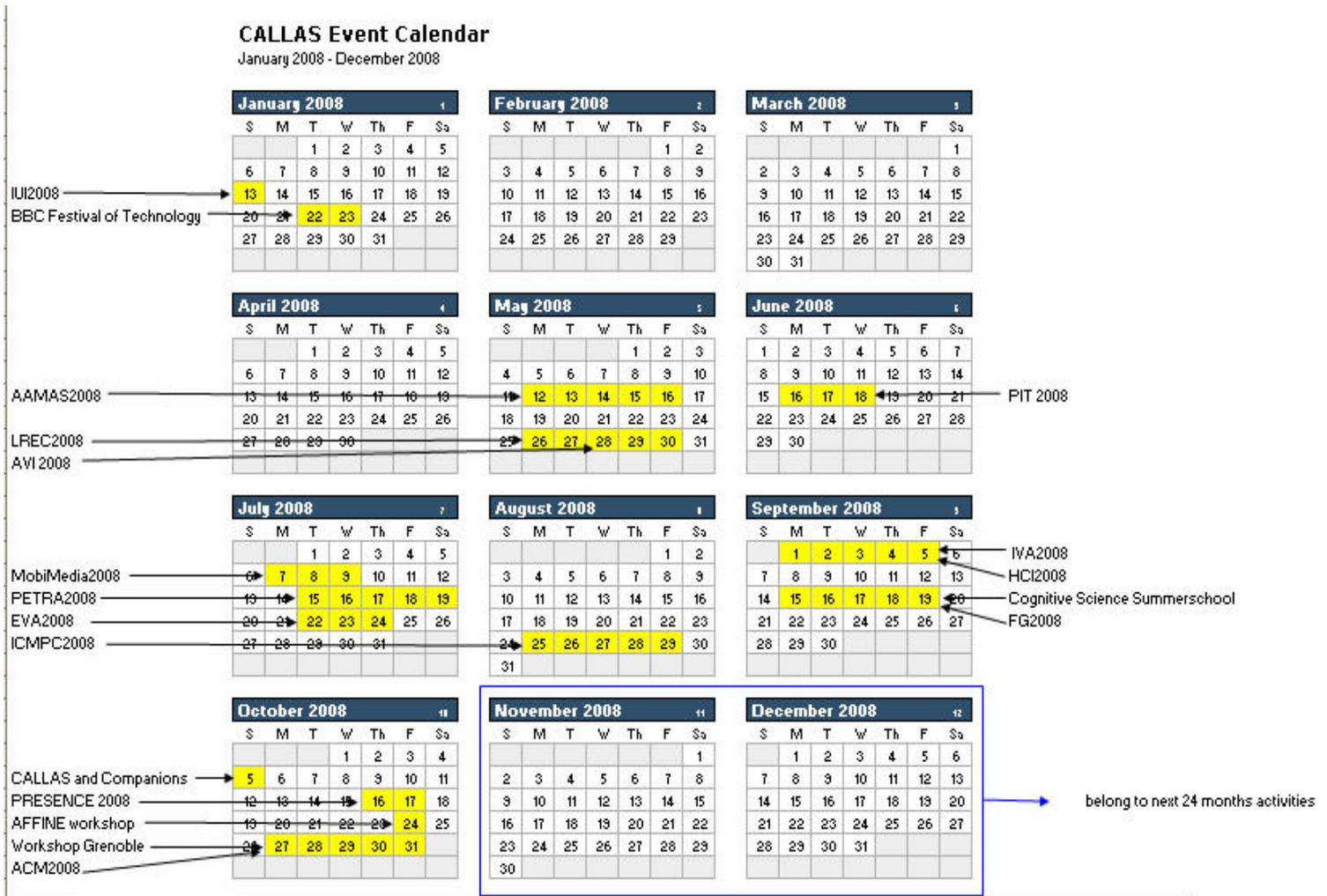
Wide distribution of scientific information is performed in the project, supported by the participation of project partners to key relevant events for the scientific community of researchers and academics.

### 4.1 Scientific events

Scientific events attended from beginning of the project activities until end of October 2008 (M24) are mapped below:



**Table 4-1: CALLAS at scientific events from January to December 2007 (see Appendix 1: CALLAS Scientific Papers published during 2007)**



**Table 4-2 CALLAS at scientific events from January to October 2008**  
(see Appendix 2: CALLAS Scientific Papers published during 2008)

## 4.2 Scientific Papers and publications

In conjunction with scientific events, several scientific publications have been accepted and presented, partially funded by the CALLAS project<sup>13</sup>. Abstract of accepted scientific publications are listed below in chronological order starting from the more recent (M24 back to M1).

- Automatic Recognition of Emotions from Speech: A Review of the Literature and Recommendations for Practical Realisation** – By Thurid Vogt, Elisabeth Andr e, and Johannes Wagner [UOA] - Article published on Springer

**ABSTRACT:** In this article we give guidelines on how to address the major technical challenges of automatic emotion recognition from speech in human-computer interfaces, which include audio segmentation to find appropriate units for emotions,

<sup>13</sup> <http://www.callas-newmedia.eu/insights/papers.html>

extraction of emotion relevant features, classification of emotions, and training databases with emotional speech. Research so far has mostly dealt with offline evaluation of vocal emotions, and online processing has hardly been addressed. Online processing is, however, a necessary prerequisite for the realization of human-computer interfaces that analyze and respond to the user's emotions while he or she is interacting with an application. By means of a sample application, we demonstrate how the challenges arising from online processing may be solved. The overall objective of the paper is to help readers to assess the feasibility of human-computer interfaces that are sensitive to the user's emotional voice and to provide them with guidelines of how to technically realize such interfaces.

2. **Estimation of behavioural user state based on eye gaze and head pose - application in an e-learning environment:** - By Stylianos Asteriadis, Paraskevi Tzouveli, Kostas Karpouzis, Stefanos Kollias [ICCS] – Article published on Multimedia Tools and Applications journal (Elsevier)

**ABSTRACT:** Most e-learning environments, which utilize user feedback or profiles, collect such information based on questionnaires, resulting very often in incomplete answers, and sometimes deliberate misleading input. In this work, we present a mechanism which compiles feedback related to the behavioural state of the user (e.g. level of interest) in the context of reading an electronic document; this is achieved using a non-intrusive scheme, which uses a simple web camera to detect and track the head, eye and hand movements and provides an estimation of the level of interest and engagement with the use of a neuro-fuzzy network initialized from evidence from the idea of Theory of Mind and trained from expert-annotated data. The user does not need to interact with the proposed system, and can act as if she was not monitored at all. The proposed scheme is tested in an e-learning environment, in order to adapt the presentation of the content to the user profile and current behavioral state. Experiments show that the proposed system detect reading- and attention-related user states very effectively, in a testbed where children's reading performance is tracked.

3. **E-Tree: Emotionally Driven Augmented Reality Art** - By Stephen W. Gilroy, Marc Cavazza, Rémi Chaignon [TEES] Satu-Marja Mäkelä, Markus Niiranen[VTT] Thuriid Vogt, Elisabeth André [UOA] Mark Billingham, Hartmut Seichter[HITNZ] and Maurice Benayoun artist. Reference event: ACM 2008, Ottawa, Canada.

October 2008							10
S	M	T	W	Th	F	Sa	
			1	2	3	4	
5	6	7	8	9	10	11	
12	13	14	15	16	17	18	
19	20	21	22	23	24	25	
26	27	28	29	30	31		

**ABSTRACT:** In this paper, we describe an Augmented Reality Art installation, which reacts to user behaviour using Multimodal analysis of affective signals. The installation features a virtual tree, whose growth is influenced by the perceived emotional response from spectators. The system implements a 'magic mirror' paradigm (using a large-screen display or projection system) and is based on the ARToolkit with extended representations for scene graphs.

The system relies on a PAD dimensional model of affect to support the fusion of different affective modalities, while also supporting the representation of affective responses that relate to aesthetic impressions. The influence of affective input on the visual component is achieved by mapping affective data to an L-System governing virtual tree behaviour. We have performed an early evaluation of the system, both from the technical perspective and in terms of user experience. Post-hoc questionnaires were generally consistent with data from multimodal affective processing, and users rated the overall experience as positive and enjoyable, regardless of how proactive they were in their interaction with the installation.

4. **Using Facial Expressions to Display Empathy in ECAs** - By Radoslaw Niewiadomski[Par8], Magalie Ochs[Universite' de Paris 6], Catherine Pelachaud [Par8] . Reference event: Workshop in Grenoble, France.

October 2008							10
S	M	T	W	Th	F	Sa	
			1	2	3	4	
5	6	7	8	9	10	11	
12	13	14	15	16	17	18	
19	20	21	22	23	24	25	
26	27	28	29	30	31		

ABSTRACT: In this paper, we propose and evaluate a novel approach for the expressions of empathy using facial expressions like superposition and masking.

Compared to other expressive empathic agents our agent uses two types of facial expressions simple and complex ones.

By simple facial expressions we intend spontaneous facial displays of emotional states (which can be described by one-word label) e.g. display of anger or contempt. The term complex facial expressions describes expressions that are the combinations of several simple facial displays (e.g. superposition of two emotions) or that are modied voluntarily by the displayer (e.g. masking of one emotion by another one). Aiming at finding the appropriate facial expression of an empathic ECA we have examined both types of expressions in empathic situations. The results of the evaluation show that people and more suitable facial expressions that contain elements of the emotion of empathy. In particular, complex facial expressions appear to be a good approach to express empathy.

5. **Affective intelligence: the human face of AI** - By L. Malatesta, A. Raouzaïou, K. Karpouzis [ICCS] - Article published on State-of-the-art in AI, IFIP book of Springer in the field of Human-Computer Interaction

ABSTRACT: Affective computing has been an extremely active research and development area for some years now, with some of the early results already starting to be integrated in human-computer interaction systems. Driven mainly by research initiatives in Europe, USA and Japan and accelerated by the abundance of processing power and low-cost, unintrusive sensors like cameras and microphones, affective computing functions in an interdisciplinary fashion, sharing concepts from diverse fields, such as signal processing and computer vision, psychology and behavioral sciences, human-computer interaction and design, machine learning, and so on. In order to form relations between low-level input signals and features to high-level concepts such as emotions or moods, one needs to take into account the multitude of psychology and representation theories and research findings related to them and deploy machine-learning techniques to actually form computational models of those. This chapter elaborates on the concepts related to affective computing, how these can be connected to measurable features via representation models and how they can be integrated into human-centric applications.

6. **Towards a Real-time Gaze-based Shared Attention for a Virtual Agent** - By Christopher Peters [Coventry University], Stylianos Asteriadis, Kostas Karpouzis[ICCS], Etienne de Sevin [INRIA Paris-Rocquencourt] -.Reference event: AFFINE 2008, Chania, Crete.

October 2008							10
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ABSTRACT: This paper investigates work towards a real-time user interface for testing shared-attention behaviours with an embodied conversational agent.

In two-party conversations, shared attention, and related aspects such as interest and engagement, is critical factors in gaining feedback from the other party and allowing an awareness of the general state of the interaction. Taking input from

a single standard web camera, our preliminary system is capable of processing the users eye and head directions in real-time. We are using this detection capability to inform the interaction behaviours of the agent and enable it to engage in simple shared attention behaviours with the user and object within the scene in order to study in more depth some critical factors underpinning engagement.

7. **Wave Like an Egyptian — Accelerometer Based Gesture Recognition for Culture Specific Interactions** - By Matthias Rehm, Nikolaus Bee, Elisabeth André [UOA]- Reference event: HCI 2008 Liverpool, UK.

September 2008							9
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ABSTRACT: The user's behaviour and his interpretation of interactions with others is influenced by his cultural background, which provides a number of heuristics or patterns of behaviour and interpretation.

This cultural influence on interaction has largely been neglected in HCI research due to two challenges: (i) grasping culture as a computational term and (ii) inferring the user's

cultural background by observable measures. In this paper, we describe how the Wiimote can be utilized to uncover the user's cultural background by analyzing his patterns of gestural expressivity in a model based on cultural dimensions. With this information at hand, the behaviour of an interactive system can be adapted to culture-dependent patterns of interaction.

8. **A listening agent exhibiting personality traits** - By Elisabetta Bevacqua, Maurizio Mancini, Catherine Pelachaud [PAR8]. Reference Event: IVA2008, Tokyo, Japan

September 2008							9
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ABSTRACT: Within the Sensitive Artificial Listening Agent project, we propose a system that computes the behaviour of a listening agent.

Such an agent must exhibit behaviour variations depending not only on its mental state towards the interaction (e.g., if it agrees or not with the speaker) but also on the agent's characteristics such as its emotional traits and its behaviour style. Our system computes the behaviour of the

listening agent in real-time.

9. **Expressions of Empathy in ECAs** - By Radoslaw Niewiadomski, Magalie Ochs, Catherine Pelachaud [PAR8] - Reference Event: IVA2008, Tokyo, Japan

September 2008							9
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ABSTRACT: Recent research has shown that empathic virtual agents enable to improve human-machine interaction. Virtual agent's expressions of empathy are generally xed intuitively and are not evaluated. In this paper, we propose a novel approach for the expressions of empathy using complex facial expressions like superposition and masking. An evaluation study has been conducted in order to identify the most appropriate way to

express empathy. According to the evaluation results people and more suitable facial expressions that contain elements of emotion of empathy. In particular, complex facial expressions seem to be a good approach to express empathy.

10. **A non-intrusive method for user focus of attention estimation in front of a computer monitor** - By Stylianos Asteriadis, Paraskevi Tzouveli, Kostas Karpouzis, Stefanos Kollias [Institute of Communication and Computer Systems - National Technical University of Athens]

September 2008							9
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**ABSTRACT:** In this work, we present a system that estimates a user's focus of attention in front of a computer monitor. The only requirements of the system are a simple web camera, and a software that detects and tracks the user's head position and eye movements. Based on a Machine Learning algorithm, the system can give real time results regarding user's attention or non-attention, by combining information coming both

from eye gaze and head pose, as well as user's distance from the monitor. The advantages of our system are that it is completely un-intrusive and no special hardware (such as infrared cameras or wearable devices) is needed. Furthermore, it adjusts to every user, thus not necessitating initial calibration, and can work under real and unconstrained conditions in terms of lighting.

11. **Bi-channel Sensor Fusion for Automatic Sign Language Recognition-** By J. Kim, J. Wagner, M. Rehm, and E. André [University of Augsburg]

September 2008							9
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**ABSTRACT:** In this paper, we investigate the mutual-complementary functionality of accelerometer (ACC) and electromyogram (EMG) for recognizing seven word-level sign vocabularies in German Sign Language (GSL). Using feature-level fusion of the bi-channel sensor data, we achieved an average accuracy of 99.82% for eight subjects and 88.75% for subject independent case. Most relevant features for all subjects are

extracted and their universal effectiveness is proven with an average accuracy of 96.31% for the subjects. Finally we discuss a problem of feature-level fusion caused by high disparity between accuracies of each single channel classification.

12. **MusicKiosk: When listeners become composers. An exploration into affective, interactive music** - By Liikkanen L [TKK] Pearce L [XIM] - Reference Event: ICMPC2008, Sapporo, Japan

August 2008							8
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**ABSTRACT:** We present a case study of an interactive, assisted composition system called MusicKiosk.

The system creates a composition based on the emotional states detected from users' voices. The experience is augmented by visualizing the music with interactive, animated characters. Custom-made musical elements are added or removed dynamically according to the detected mood. The

input for emotion detection is derived from the fusion of emotional speech recognition and keyword spotting. In upcoming user evaluation, we will use this system to explore natural interaction and the capacity of the system to create emotional feedback loops.

13. **Emotional Interfaces in Performing Arts: The CALLAS Project** - By I.Buonazia [SNS] M.Bertoncini [ENG] - Reference Event: EVA 2008, London.

**July 2008** 7

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**ABSTRACT:** CALLAS project aims at designing and developing an integrated multimodal architecture able to include emotional aspects to support applications in the new media business scenario with an "ambient intelligence" paradigm. The project is structured in three main areas: the "Shelf", collecting multimodal affective components (speech, facial expression and gesture recognition); the "Framework", a software

infrastructure enabling the cooperation of multiple components with an easy interface addressed to final users; and three "Showcases" addressing three main fields of new media domain: AR art, Entertainment and Digital Theatre, Interactive Installation in public spaces and Next Generation Interactive TV.

14. **Automatic Sign Language Recognition: vision based feature extraction and probabilistic recognition scheme from multiple cues** - By George Caridakis, Olga Diamanti, Petros Maragos, Kostas Karpouzis [ICCS] - Reference Event: PETRA2008, Athens, Greece

**July 2008** 7

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**ABSTRACT:** This work focuses on two of the research problems comprising automatic sign language recognition, namely robust computer vision techniques for consistent hand detection and tracking, while preserving the hand shape contour which is useful for extraction of features related to the hand shape and a novel classification scheme incorporating Self-organizing maps, Markov chains and Hidden

Markov Models. Geodesic Active Contours enhanced with skin colour and motion information are employed for the hand detection and the extraction of the hand silhouette, while features extracted describe hand trajectory, region and shape. Extracted features are used as input to separate classifiers, forming a robust and adaptive architecture whose main contribution is the optimal utilization of the neighbouring characteristic of the SOM during the decoding stage of the Markov chain, representing the sign class.

15. **Fusion of Sound Source Localization and Face Detection for Supporting Human Behavior Analysis** - By Markus Niiranen, Janne Vehkaperä, SatuMarja Mäkelä, Johannes Peltola, Tomi Rätty [VTT] - Reference Event: MobiMedia2008, Oulu, Finland

**July 2008** 7

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**ABSTRACT:** This paper describes a demonstrated concept implementation that combines sound source localization and face detection from video stream for supporting human behaviour analysis. System monitors space containing multiple persons using microphone array and video camera. The aim is to detect which person in the scene is producing the sound that is received by the microphones. For this task

the microphone array localizes the sound in the environment. Simultaneously face detection is performed to the video signal produced by the monitoring video camera. If face is detected from the bearing of the sound the system may decide that the sound is produced by the person who's face is detected. Preliminary results indicate that the fusion may give useful information for human behaviour analysis for space containing multiple persons.

16. **EmoVoice | A framework for online recognition of emotions from voice** - By Thurid Vogt, Elisabeth Andre, Nikolaus Bee [UOA] - Reference Event: PIT2008,

Kloster Irsee, Germany

June 2008							6
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**ABSTRACT:** We present EmoVoice, a framework for emotional speech corpus and classifier creation and for online as well as real-time online speech emotion recognition. The framework is intended to be used by non-experts and therefore comes with an interface to create an own personal or application specific emotion recogniser. Furthermore, we describe some applications and prototypes that already use our framework to track

online emotional user states from voice information.

17. **Exploring Emotions and Multimodality in Digitally Augmented Puppeteering** - By Liikkanen, L.A., Jacucci, G., Huvio, E., Laitinen T. [TKK] Elisabeth Andre [UOA] - Reference Event: AVI2008, Napoli, Italy

May 2008							5
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**ABSTRACT:** Recently, multimodal and affective technologies have been adopted to support expressive and engaging interaction, bringing up a plethora of new research questions. Among the challenges, two essential topics are 1) how to devise truly multimodal systems that can be used seamlessly for customized performance and content generation, and 2) how to utilize the tracking of emotional cues and respond to them in

order to create affective interaction loops. We present PuppetWall, a multi-user, multimodal system intended for digitally augmented puppeteering. This application allows natural interaction to control puppets and manipulate playgrounds comprising background, props, and puppets. PuppetWall utilizes hand movement tracking, a multi-touch display and emotion speech recognition input for interfacing. Here we document the technical features of the system and an initial evaluation. The evaluation involved two professional actors and also aimed at exploring naturally emerging expressive speech categories. We conclude by summarizing challenges in tracking emotional cues from acoustic features and their relevance for the design of affective interactive systems.

18. **Developing Affective Intelligence For An Interactive Installation: Insights From A Design Process** - By Liikkanen, L.A., Huvio, E., Samperio, R. [TKK] Seppänen, T., Väyrynen, E [Univ. of Oulu] - Reference Event: LREC2008, Marrakech, Morocco

May 2008							5
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**ABSTRACT:** This paper documents a case study from the development of an affective application called PuppetWall, which is an interactive installation built upon the puppeteering metaphor. It is designed to react to user expressions and visualize them on a large multitouch screen. We present an outline of the system and a review of comparable applications. We describe our initial design efforts in implementing emotion recognition

using speech and a novel way of using affective information to control the application. Based on an initial user test, we show how users try to exploit the system by eliciting various vocal expressions. We conclude our presentation by examining the lessons learned from this design iteration, focusing on the auditory cues available and the implementation of interactive features.

19. **Dancing the Night Away — Controlling a Virtual Karaoke Dancer by Multimodal Expressive Cues** - By Matthias Rehm, Thuri Vogt, Michael Wissner, Nikolaus Bee [UOA] - Reference Event: AAMAS2008, Estoril, Portugal

May 2008							5
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**ABSTRACT:**In this article, we propose an approach of nonverbal interaction with virtual agents to control agents' behavioural expressivity by extracting and combining acoustic and gestural features. The goal for this approach is twofold, (i) expressing individual features like situated arousal and personal style and (ii) transmitting this information in an immersive 3D environment by suitable means.

20. **Cultural gaze behavior to improve the appearance of virtual agents** - By Nikolaus Bee and Elisabeth André [UOA] - Reference Event: IUI2008, Canary Islands, Spain

January 2008							1
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**ABSTRACT:** Finding cultural dependencies on eye gaze behaviours in conversations to derive general rules that are valid beyond culture would be crucial. In this way we like to build a gaze awareness model to provide visual feedback to users interacting with virtual agents. This work aims to give an overview of literature dealing with eye gaze and culture. In addition to that we claim that eye gaze behaviour for virtual agents is important. And further, we describe methods for measuring users' eye gaze.

21. **Affective Interactive Narrative in the CALLAS Project** - By Fred Charles, Samuel Lemercier, Marc Cavazza [TEES] Thurid Vogt, Nikolaus Bee, Elisabeth André [UOA] Maurizio Mancini, Catherine Pélachaud [Par8] Jérôme Urbain [FPMS] and Marc Price [BBC] - Reference Event: ICVS2007, Saint Malo, France

December 2007							12
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**ABSTRACT:** Interactive Narrative relies on the ability for the user (and spectator) to intervene in the course of events so as to influence the unfolding of the story. This influence is obviously different depending on the Interactive Narrative paradigm being implemented, i.e. the user being a spectator or taking part in the action herself as a character. If we consider the case of an active spectator influencing the narrative, most systems

implemented to date have been based on the direct intervention of the user either on physical objects staged in the virtual narrative environment or on the characters themselves via natural language input. While this is certainly empowering the spectator, there may be limitations as to the realism of that mode of interaction if we were to transpose Interactive Narrative for a vast audience.

22. **An Emotional Responsive AR Art Installation** - By Stephen W. Gilroy, Marc Cavazza, Rémi Chaignon [TEES] Satu-Marja Mäkelä, Markus Niiranen [VTT] Thurid Vogt, Elisabeth André [UOA] Mark Billingham, Hartmut Seichter [HITNZ] and Maurice Benayoun artist - Reference Event: ISMAR2007, Nara, Japan

November 2007							11
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**ABSTRACT:** In this paper, we describe a novel method of combining emotional input and an Augmented Reality (AR) tracking/display system to produce dynamic interactive art that responds to the perceived emotional content of viewer reactions and interactions. As part of the CALLAS project, our aim is to explore multimodal interaction in an Arts and Entertainment context.

The approach we describe has been implemented as part of a prototype "showcase" in collaboration with a digital artist designed to

demonstrate how affective input from the audience of an interactive art installation can be used to enhance and enrich the aesthetic experience of the artistic work. We propose an affective model for combining emotionally loaded participant input with aesthetic interpretations of interaction, together with a mapping, which controls properties of dynamically generated digital art.

23. **A High-level Event System for Augmented Reality** - By Jean-Luc Lugin, Remi Chaignon, Marc Cavazza [TEES] - Reference Event: ISMAR2007, Nara, Japan

November 2007							11
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ABSTRACT: 3D graphics systems increasingly rely on sophisticated event systems derived from collision detection mechanisms, which support the discretisation of Physics as well as high-level programming and scripting. By contrast, Augmented Reality systems have not yet adopted this approach. We describe the development of a high-level event system on top of the ARToolkit environment incorporating the ODE Physics engine. We first define a typology

of events encompassing interactions between virtual objects as well as interactions involving markers. We then describe how these events can be recognised in real-time from elementary collisions detected by the ODE Physics engine. We conclude by discussing examples of high-level event recognitions and how they can support the development of applications.

24. **Dynamic Behavior Qualifiers for Conversational Agents** - By Mancini, Maurizio / Pelachaud, Catherine [PAR8] - Reference Event: IVA2007, Paris, France

September 2007							9
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ABSTRACT: We aim at defining conversational agents that exhibit qualitatively distinctive behaviours. To this aim we provide a small set of parameters to allow one to define behaviour profiles and then leave to the system the task of animating the agent. Our approach is to manipulate the behaviour tendency of the agent depending on its communicative intention and emotional state. In this paper we will define the

concepts of Baseline and Dynamic line. The Baseline of an agent is defined, as a set of fixed parameters that represent the personalized agent behaviour, while the Dynamic line, is a set of parameters values that derive both from the Baseline and the current communicative goals and emotional state.

25. **Searching for Prototypical Facial Feedback Signals** - By Bevacqua, Elisabetta / Tellier, Marion / Pelachaud, Catherine [PAR8] Heylen, Dirk [University of Twente, The Netherlands] - Reference Event: IVA2007, Paris, France

September 2007							9
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ABSTRACT: Embodied conversational agents should be able to provide feedback on what a human interlocutor is saying. We are compiling a list of facial feedback expressions that signal attention and interest, grounding and attitude. As expressions need to serve many functions at the same time and most of the component signals are ambiguous, it is important to get a better idea of the many to many mappings between displays and functions. We asked people to label several

dynamic expressions as a probe into this semantic space. We compare simple signals and combined signals in order to find out whether a combination of signals can have a meaning on its own or not, i. e. the meaning of single signals is different from the meaning attached to the combination of these signals. Results show that in

some cases a combination of signals alters the perceived meaning of the backchannel.

26. **Model of facial expressions management for an embodied conversational agent** - By R.Newiadomsky, C. Pelachaud [PAR8] - Reference Event: ACII2007, Lisbon, Portugal

**September 2007** 9

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**ABSTRACT:** In this paper we present a model of facial behaviour encompassing interpersonal relations for an Embodied Conversational Agent (ECA). Although previous solutions of this problem exist in ECA's domain, in our approach a variety of facial expressions (i.e. expressed, masked, inhibited, and fake expressions) is used for the first time. Moreover, our rules of facial behaviour management are consistent with the predictions of

politeness theory as well as the experimental data (i.e. annotation of the video-corpus). Knowing the affective state of the agent and the type of relations between interlocutors the system automatically adapts the facial behaviour of an agent to the social context. We present also the evaluation study we have conducted of our model. In this experiment we analysed the perception of interpersonal relations from the facial behaviour of our agent.

27. **Emotional Multimodal Interfaces for Digital Media: The CALLAS Challenge** By M.Bertoncini [ENG], M. Cavazza [TEES] - Reference Event: HCI2007 Beijing, China

**July 2007** 7

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**ABSTRACT:** Emotional multimodal interfaces aim at achieving the highest level of naturalness in human-computer interaction. One of the main challenges for CALLAS European R&D project is to implement the concept of affective emotional input for interactive media rather than within a traditional interface paradigm. Affective and emotional interfaces are generally concerned with the real-time identification of user emotions

to determine system response. They rely most often on Ekmanian emotions such as joy, fear or anger. However, interaction with new media such as interactive narratives, digital theatre or digital arts involves different ranges of emotions on the user's side, some of which correspond to responses to aesthetic properties of the media, or characterise the user experience itself in terms of enjoyment and entertainment. To identify these, more complex articulations of modalities are required. Such key aspects are currently investigated within the CALLAS project in the specific area of Art and Entertainment applications.

28. **Integrating the User in the Social Group Dynamics of Agents** - By Matthias Rehm, Birgit Endrass, and Michael Wissner [UOA] - Reference Event: SID 2007 Trento, Italy

**July 2007** 7

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**ABSTRACT:** This paper introduces the Virtual Beergarden as a virtual meeting place for agents and users. The agent's behaviour is controlled by a behaviour control component, which allows testing different theories of social group dynamics. Agents interact via natural language that is generated by a statistical language component and takes into account the social interaction categories and the social relationships

between agents. The user can freely navigate and interact with the other agents relying on the above mentioned components. An evaluation shows if the user can really be integrated in the agents' social group dynamics.

29. **Tomorrow's Media and Emotional Interfaces: the CALLAS Project** - By M.Bertoncini. A.Pandozy [ENG] - Reference Event: EVA 2007, Florence, Italy

March 2007						
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**ABSTRACT:** Emotional and multimodal Interfaces aim at achieving the highest level of naturalness in Human-Computer Interaction. A major trend for Multimodal Interfaces research activities in recent years has been the investigation and the development of affective interfaces, which are able to analyse and render emotions as part of interactive systems. These have been developed as an extension to

Multimodal interfaces, in particular agent-based interfaces in which the user engages in "social" communication with digital characters. As a consequence, early affective interfaces have mostly involved those simple emotional models which are able solely to detect and/or to animate the six basic emotion categories.

## 5. Internal communication

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Five basic guidelines are implemented

- Exchanging Experience and Practice: to facilitate the sharing of information and competences among different partners of CALLAS Project, stimulating collaboration to reach common objectives, using technical/functional language.
- Strengthening CALLAS Identity: to reinforce the understanding of CALLAS Project Identity among CALLAS Partners, sharing common CALLAS culture and image, as the base for an effective external communication.
- Sharing objectives: to create a positive background, sharing mission and goals of CALLAS, assuring a proactive approach to reach strategic objectives.
- Creating motivation: to reinforce the pride of being partners in CALLAS belonging to an project of scientific excellence.
- Improving collaboration: to promote and guarantee harmonized collaboration within the project

Current implementation of this channel is working properly and efficiently.

### 5.1 Collaboration activity areas

#### 5.1.1 CALLAS Wiki

All information on technical, management aspects and project activities in CALLAS are kept in a the project Wiki where evolution and history are kept about CALLAS topics, responsibilities, action items, contents, plans, discussions, deliverables and software production processes.

The Wiki is the main collaboration tool to share information across CALLAS partners. It is a private area set to host all project documents, whose access is controlled.

The Wiki Welcome page is centrally maintained by the Management function in CALLAS and it highlight the path to reach all subjects developed in further pages.



**Main**

Hello [Tonina Scuderl](#)  
[Log Out](#)  
[→ Create personal sidebar](#)

**Main Web**

- [Create New Topic](#)
- [Index](#)
- [Search](#)
- [Changes](#)
- [Notifications](#)
- [Statistics](#)
- [Preferences](#)

**Wells**

- [AdministrativeArea](#)
- [Main](#)
- [Sandbox](#)
- [TWiki](#)

You are here: [TWiki](#) > [Main Web](#) > [WebHome](#)

## Welcome to the CALLAS wiki!

### The CALLAS Project

- [Shelf](#)
- [Framework](#)
- [Showcases](#)
- [Management](#)
- [Awareness](#): [Communication and Dissemination](#), [Training \*\*New!\*\*](#), [Demonstration](#)
- [Replicability and Future Perspectives](#):
  - [Task Leader Giusy Caruso \(ENG\) Tech Watch](#): [live page](#)
  - [Task Leader Giusy Caruso \(ENG\) Industrial Watch](#): [live page](#)
  - [Task Leader Laurence Pearce \(XIM\) Standards and activities towards standard bodies](#): [live page](#)
  - [Task Leader Tonina Scuderl \(NXT\) Scenarios, Business Models and Sw licensing](#): [live page](#);
  - [Task Leader Laurence Pearce \(XIM\) Best Practice](#): [live page](#)
  - [Task Leader Laurence Pearce \(XIM\) Guidelines for Replicability](#): [live page](#)
- [Project Overview](#)
- [Workpackage Leaders](#)

**Figure 5-1: CALLAS Wiki Welcome Page**

Layout of all other pages in the wiki is free, by definition for a wiki, and each contributor organises its space according to his/her requirements and populates it by priority subjects.

Internal Demos to communicate internally the achievements made, project deliverables and contributions are debugged and assessed at Wiki level before becoming official and being issued to the European Commission or published on the Web or on the C<sup>3</sup> Club pages.

### 5.1.2 CALLAS repository

A specific part of the wiki hosts the Administrative Area, where all contractual matters and all official delivery to the European Commission are stored for common reference.

## 5.2 CALLAS General Assembly meetings

Meetings of this type bring together all members in CALLAS and are major events for discussion of research questions to address and check points of progress made.

Generally held quarterly, after project kick-off a total of eight (8) General Assembly meetings occurred in the project, additional to several complementary technical and research meetings. Organisation and management is done according to the project quality plan (defined at M2 – December 2006) and follow-up is logged at CALLAS Wiki pages.

## 5.3 Internal training activities

The CALLAS Training Program, whose objective is to educate technical people and to improve their communication skills about R&D achievements, is internally piloted to understand efficacy of delivery modules to external audience, but it represents also an instrumental communication tool for the project itself.

First internal training in CALLAS occurred on October 29-30 in Rome<sup>14</sup>.

<sup>14</sup> See <http://www.callas-newmedia.eu/all-events/119-29-30oct2008-pilot-callas-training-sessions.html>

## 6. Appendix 1: CALLAS Scientific Papers published during 2007

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Appendix 1 (20MB) is contained in a separate file.

## 7. Appendix 2: CALLAS Scientific Papers published during 2008

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Appendix 2 (20MB) is contained in a separate file.