

European Network for the Advancement of Artificial Cognitive Systems

Project IST-026408



Instrument: Coordination Action
Thematic Priority: IST – Cognitive Systems

First Periodic Activity Report

Months 1-12

Period covered from **01/01/2006** to **31/12/2006** Date of preparation: **16/02/2007**

Start date of project: 01/01/2006 Duration: 36 months

Project coordinator: David Vernon

Project coordinator organization name: University of Genova

DIST – LIRA-Lab

Revision: 1.0

Table of Contents

Executive Summary	3
Project Summary	3
Summary of Work Performed	3
Section 1 – Project objectives and major achievements during the reporting period	4
Objectives and Achievements for the Current Period	4
Section 2 – Workpackage progress of the period	5
WP1 – Outreach	8
Workpackage objectives	
Progress towards objectives	
Deviations from the project work-programme	
List of deliverables	
List of milestones	9
WP2 – Scientific Outlook	10
Workpackage objectives	10
Progress towards objectives	
Deviations from the project work-programme	
List of deliverables	
List of milestones	
WP3 – Education	
Workpackage objectives	
Progress towards objectives	
Deviations from the project work-programme	
List of deliverables	
List of milestones	
WP4 – Online Resources	
Workpackage objectives	
Progress towards objectives	
Deviations from the project work-programmeList of deliverables	
List of milestones	
WP5 – Network Coordination	
Workpackage objectives	
Progress towards objectives	
Deviations from the project work-programme	
List of deliverables	
List of milestones	
WP6 – Management	
Workpackage objectives	
Progress towards objectives	
Deviations from the project work-programme	
List of deliverables	
List of milestones	
Section 3 – Consortium management	
Section 4 – Other issues	
ANNEX – Plan for using and disseminating knowledge	25

Executive Summary

Project Summary

The principal goal of the euCognition network is to advance the emerging area of artificial cognitive systems by fostering inter-disciplinary interaction, spanning a greater spectrum of people, perspectives, and applications than is possible in a single R&D project. It aims to leverage added value from existing work through interaction and to use this to encourage further contributions from new participants. A key objective of the network is to foster interaction between all the many different scientific sectors involved in this multi-disciplinary area and to help create truly inter-disciplinary perspectives.

The activities of the network cover four key concerns:

- (a) Outreach
- (b) Scientific Outlook
- (c) Education
- (d) On-line Resources for the Community

euCognition strives to support the research community that is already involved in FP6 projects in cognitive systems and to help other individuals from research institutes and companies become involved in this initiative. This is achieved by facilitating interaction between projects and collaboration between individuals on a variety of fronts, ranging from workshops, conferences, courses, exchanges of staff and students, development & dissemination of training material, access to development platforms, research planning, and the creation of an extensive dynamic web-based repository of resources for the greater community.

Summary of Work Performed

The following are a selection of highlights of the results achieved by the network over the past year.

- 1. Launch of the euCognition website
- 2. Launch of the euCognition wiki
- 3. Launch of the euCognition Roadmap initiative
- 4. Approval of 26 Network Actions
- 5. Launch of the Cognition Briefings programme
- 6. Inaugural meeting, Nice, February 20046.
- 7. 1st Six-monthly meeting, Vienna, July 2006.
- 8. IST 2006 Networking Session, Helsinki, November 2006.
- 9. Membership outstripped targets: 180 by year end (the target for 3 years was 120).

Date: 16/2/07 Version: No. 1.0

Page 3 of 25

Section 1 - Project objectives and major achievements during the reporting period

Objectives and Achievements for the Current Period

Our principal goals for the first year of operation of the network were:

- 1. Set up the euCognition website
- 2. Organize the inaugural meeting
- 3. Organize a six-monthly meeting
- 4. Launch initiatives to encourage the involvement of members
- 5. Grow the membership, with a focus on seeking new members from diverse backgrounds and especially seeking to involve those who have not been involved so far in CogSys-funded projects.

As will be evident from the following, all these objectives have been met. The website and an associated wiki are operational; statistics on access to each page are provided. Both the inaugural meeting in Nice in February and the 1st Six-Monthly meeting in Vienna were well-attended. In addition to the planned network action programme, two additional initiatives were launched to promote the involvement of the members: the euCognition research roadmap and the Cognition Briefings. Both are discussed below. The network action programme is proving increasingly popular and twenty-six actions were approved in 2006. Membership has grown beyond our expectations. We originally planned on having 120 members by the end of the three-year contract period. This number was passed after just six months and there were over 180 members by year end (see http://www.eucognition.org/members.htm). Significantly, more than 50% of the members are not involved in CogSys-funded projects. Members are drawn from a wide variety of research background. A list of members' stated interests has more than 270 entries (see http://www.eucognition.org/members_research_areas.htm).

Page 4 of 25

Section 2 - Workpackage progress of the period

Before proceeding to walk through the progress that has been achieved in each work-package towards the respective deliverables, it is worth making a few remarks on the nature of the deliverables and on network actions, the primary mechanism by which these deliverables are produced.

euCognition Deliverables

The deliverables of the euCognition project are unusual in that they are not itemized products but are rather the components of the euCognition website, populated by the outcomes of network actions. The website therefore plays a pivotal role in euCognition as it is the primary means by with the activities of the network are documented and assessed. To assist with this, every three months we make available a series of statistics on the frequency with which the website and wiki resources are being accessed so that they can be used as metrics to evaluate the success of the Coordination Action. These statistics are available on the website here

http://www.eucognition.org/website_statistics.htm

Each quarterly report shows the top 100 most frequently accessed pages on the website and access on the Wiki. It also provides access statistics for the ECVision website (European Research Network for Cognitive Computer Vision Systems) which is hosted by euCognition.

For convenience, we reproduce a sample of the most recent statistics below; please refer to the website for the full set.

1st January 2007

The following are the top 100 most popular web pages on the site.

Web pages are grouped in three categories: euCognition website, euCognition Wiki, ECVision website

euCognition Page	Number of requests
/Elizabeth_Spelke.pdf	3999
/Scott_Kelso.pdf	2088
<u>/inaugural.htm</u>	1913
/six_monthly_meeting_2.htm	1273
<u>/index.htm</u>	1226
/inaugural_programme.pdf	1088
/inaugural_presentation.pdf	1058
/Jiri_Wiedermann.pdf	1009
/euCognition_overview.pdf	976
/six_monthly_meeting_1.htm	927
<u>/news.htm</u>	914
/papers/Pinz06.pdf	855

/post-cognitivist/post-cognitivist_abstracts.pdf	813
/asm-whitepaper-final-060804.pdf	765
<u>/members.htm</u>	746
/registration.htm	634
<u>/events.htm</u>	601
/euCognition_Annex_I.pdf	546
/membership.htm	518
/six_monthly_meeting_1/Hanspeter_Mallot.pdf	514
/euCognition_Application_for_Membership.pdf	511

euCognition Wiki	Number of requests
/wiki/index.php?title=Main_Page	1264
/wiki/index.php?title=Research_Roadmap	468
/wiki/index.php?title=Definitions_of_Cognition	308
/wiki/index.php?title=Cognition_Briefings	254
/wiki/index.php?title=Applications_of_Cognitive_Systems	209
/wiki/index.php?title=What_is_Cognition%3F_One_View_of_Cognitive_Systems	179
/wiki/index.php?title=Cognitive_Architectures	171
/wiki/index.php?title=Course_Material	156
/wiki/index.php?title=Model_Curriculum	123
/wiki/index.php?title=Student_Forum	119

Network Actions

Network actions are the primary mechanism by which members of the network can receive modest funding for relevant tasks that contribute to the work of the network. These tasks cannot involve research (since this is prohibited by a Coordination Action contract) but can facilitate the creation of educational material, visits by staff and students, workshops, and making research resources available to members. A more complete list of the type of actions anticipated is available on the website here

http://www.eucognition.org/network_actions.htm

In the first year, twenty-nine network action proposals were submitted to the Executive Committee for consideration. Of these, twenty-six were supported and subsequently approved by the Commission. Three were declined. These are set out on the next page.

Date: 16/2/07 Page 6 of 25 Version: No. 1.0

Accepted Proposals	Proposed by
NA 002-1 Student Support for the Inaugural Meeting	Fred Cummins
NA 004-1 Student Visit to the SCAI Lab, University of Skövde	Tom Ziemke
NA 004-2 Student Visit to the SCAI Lab, University of Skövde	Tom Ziemke
NA 007-1 Application and research roadmap for artificial cognitive systems	Bill Sharpe
NA 010-1 Workshop on Information Theory, Neurobiology and Cognition	Juergen Jost
NA 011-1 5th European Neuro-IT and Neuroengineering School	Andreas Engel
NA 017-1 Symposium on Grand Challenge: Architecture of Brain and Mind	Aaron Sloman
NA 026-1 Workshop on Abstraction and Context in Cognitive Systems	Walter Kropatsch
NA 028-1 9th Int. Conference on the Simulation of Adaptive Behavior (SAB '06)	Jean-Arcady Meyer
NA 044-1 Action Selection for Intelligent Systems	Joanna Bryson
NA 047-1 Summer School on Humanoid Robots	Giorgio Metta
NA 050-1 Workshop on Embodying Cognition: Towards an Integrated Approach?	Antoni Gomila
NA 062-1 Staff Visit to University of Rome 'La Sapienza'	Barbara Caputo
NA 066-1 CD Proc. 3 rd Workshop on Anticip. Behav. in Adaptive Learning Systems	Gianluca Baldassarre
NA 068-1 Neurophysiology and Psychophysics material for CVOnline	Robert Fisher
NA 068-2 Optically scan five cognitive vision books for CVOnline	Robert Fisher
NA 089-1 Workshop on Attention in Cognitive Systems – WAPCV 2007	Lucas Paletta
NA 092-1 6th Czech-Slovak workshop on Cognition and Artificial Life	Jiri Wiedermann
NA 097-1 External Symbol Grounding Workshop 2006 (ESG2006)	Angelo Cangelosi
NA 097-2 Student visit to the University of Genoa	Angelo Cangelosi
NA 105-1 Connect with AI: cognitive robot education outreach initiative	Sethu Vijayakumar
NA 108-1 Staff Visit to the University of Genoa	Cecilio Angulo
NA 126-1 Workshop on Modelling Cognitive and Biological Autonomy	Alvaro Morena
NA 133-1 Student Visit to the Max Planck Institute Evolutionary Anthropology, Leipzig	Stefano Nolfi
NA 141-1 Symposium on Imitation in Animals and Artifacts	Manuel Lopes
NA 178-1 International Conference on Development and Learning (IEEE ICDL 2007)	Yiannis Dimiris
Declined Proposals	Proposed by
NA024-1 Scan Paths	Stavri Nikolov
NA068-3 Pattern Recognition Materials	Robert Fisher
NA113-1 Website Tools	Sabine Ploux

Details of all funded actions and their outcomes can be found on the website at

http://www.eucognition.org/network_actions_funded.htm

These 26 deliverables contribute in varying amounts to the three activities of Outreach, Scientific Outlook, and Education. In the work-package reports below, these actions are assigned to the activity to which they contributed most.

WP1 - Outreach

Workpackage objectives

The Outreach activity embraces both inter-project collaboration and the involvement of new blood from

academia and industry. It includes initiatives for bi-lateral exchanges, particularly focusing on individuals,

institutes, and companies that are not yet directly involved with funded projects, and providing where

necessary the resources for new pilot initiatives (e.g. providing access to platforms for experimental work

in embodied cognition).

Progress towards objectives

Membership

The membership of euCognition has grown steadily throughout the year. By year end, it had exceeded

180 members. It should be noted that the target number of members after three years was set at 120 in

the original proposal. It is likely that we will exceed double this number.

A new grade of 'Student Membership' was introduced after the inaugural meeting. At present, 39 of the

members are student members.

Over 50% of the members (105) are not associated with an on-going Cognitive Systems project. This

shows that we have succeeded well so far in our efforts to involve new people in the community.

The full list of members and their contact details can be found on the website at:

http://www.eucognition.org/members.htm

A list of the research areas cited by members in their membership applications can be found on the

website at:

http://www.eucognition.org/members_research_areas.htm

Over 270 distinct areas are cited. Although there is some overlap among many of the areas, this list

nevertheless shows the true diversity of euCognition members.

IST 2006

euCognition participated in the a Networking Session at IST 2006 in Helsinki on the 22nd November.

The title of the session was Embodied Emotion, Cognition and Action for Autonomous and Interactive

Artifacts. The web page for the session is here:

http://ec.europa.eu/information_society/istevent/2006/cf/network-detail.cfm?id=887

Date: 16/2/07 Version: No. 1.0

Page 8 of 25

Cognition Briefings

At the March meeting of the Executive Committee, It was decided to launch a special initiative to create a new resource for the community in an effort to help bridge the gap between the many disparate communities involved in the cognitive systems research and in the process to reach out to a broader audience. This resource takes the form of the euCognition Cognition Briefings, short articles written for a non-specialist audience. They aim to provide a quick and accessible introduction to a particular topic in cognitive systems with references or links for further reading. They are inspired by the Brain Briefings of the American Society for Neuroscience.

At present, members have contributed only seven briefings but this is expected to rise significantly over the coming year for two reasons. First, at the end of the year it was decided that every new Network Action should contribute at least one briefing to the wiki on the topic of the action. Second, Fred Cummins in his capacity as responsible for Outreach has launched a campaign to solicit briefings from each member individually. To date this has yielded many commitments, but the briefings have yet to follow.

The Cognition Briefings can be found on the euCognition wiki here

http://www.eucognition.org/wiki/index.php?title=Cognition_Briefings

Network Actions

NA 002-1 Student Support for the Inaugural Meeting	Fred Cummins
NA 004-1 Student Visit to the SCAI Lab, University of Skövde	Tom Ziemke
NA 004-2 Student Visit to the SCAI Lab, University of Skövde	Tom Ziemke
NA 062-1 Staff Visit to University of Rome 'La Sapienza'	Barbara Caputo
NA 097-2 Student visit to the University of Genoa	Angelo Cangelosi
NA 108-1 Staff Visit to the University of Genoa	Cecilio Angulo
NA 133-1 Student Visit to the Max Planck Institute Evolutionary Anthropology, Leipzig	Stefano Nolfi

Please visit the website for more details on each of these actions.

http://www.eucognition.org/network_actions.htm

Deviations from the project work-programme

None.

List of deliverables

Del. no.	Deliverable name	Workpackage no.	Date due	Actual/Forecast delivery date	Lead contractor
1	Outreach online resources	1	36	36	DIST

List of milestones

None.

WP2 - Scientific Outlook

Workpackage objectives

The Scientific Outlook activity embraces research planning and technology-watch actions. A large

amount of effort will be devoted to refining and developing the characterization of cognition that forms the basis of the network at its inception and thereby create an ambitious but inclusive research agenda. The

key focus of this activity is the cross-fertilization of ideas from many areas.

Progress towards objectives

Questionnaire

A questionnaire was launched at the end of the second half of 2006 to find out what workshops members would most like to attend. It also asked members to provide their definition of cognition and/or cognitive

systems and to say what applications they felt best demonstrated the distinct characteristics of cognition.

The questionnaire can be found here

http://www.eucognition.org/questionnaire.htm

and the responses can be found here

http://www.eucognition.org/questionnaire_results.htm

Network Meetings

Two general meetings were held during the past year:

1. Inaugural Meeting, Nice, 16-17 February 2006

2. 1st Six-Monthly Meeting, Vienna, 3 July 2006

The inaugural meeting was well attended with 54 people registering for the event, more than half the

members at the time. The meeting was addressed by five high-profile speakers:

Horst Forster, European Commission

Elizabeth Spelke, Harvard University

Jiri Wiedermann, Academy of Science of the Czech Republic

J A Scott Kelso, Florida Atlantic University

John Shawe-Taylor, Southampton University

The presentations are available on the euCognition website http://www.eucognition.org/inaugural.htm and

it is a measure of the impact of the meeting that Elizabeth Spelke's presentation has been accessed over

4000 times since the meeting, Scott Kelso's over 2000 times, Jiri Wiedermann's 1000, and John Shawe-

Date: 16/2/07

Page 10 of 25 Version: No. 1.0

Taylor nearly 400 (see website statistics here: http://www.eucognition.org/2007-01-01.pdf). In addition, a DVD of the five presentations was produced.

The 1st Six-Monthly Meeting was also well attended, with 55 people registering and several others turning up on the day. This was a thematic meeting on the topic of navigation and cognition. The guest speakers were:

Robert Sutherland, The University of Lethbridge
Sidney Wiener, Collège de France
Hanspeter Mallot, University of Tubingen
Jean-Arcady Meyer, Laboratoire d'Informatique de Paris 6
Ulrich Nehmzow, University of Essex
Paul Verschure, University Pompeu Fabra

Most presentations are available on the euCognition website http://www.eucognition.org/six_monthly_meeting_1.htm

euCognition Roadmap

One of the main goals of the euCognition network is to create a research roadmap that will help identify the requirements of cognitive systems and focus attention on key scientific challenges. Our plan is to create this roadmap in a variety of ways, including dedicated workshops and collaborative development by the members using the euCognition wiki. Our philosophy for the roadmap is that it should be application-driven and capability led.

A specific network action, NA007-1 led by Bill Sharpe, has been launched to support this activity. The goals of the action are to develop an application and research Roadmap for artificial cognitive system and to engage industry sectors in the development of the roadmap so that it links the research agenda to potential applications and impact.

The outcomes of this action are expected to be:

- A set of application scenarios, and sector roadmaps, defined in collaboration with representatives
 of industry sectors
- 2. A research roadmap linking all the applications to a common scientific language of requirements and capabilities, built by the research community for the research community
- 3. New dialogues and collaborations between industry and research

http://www.eucognition.org/wiki/index.php?title=Research_Roadmap

Network Actions

NA 010-1 Workshop on Information Theory, Neurobiology and Cognition NA 011-1 5th European Neuro-IT and Neuroengineering School NA 017-1 Symposium on Grand Challenge: Architecture of Brain and Mind NA 026-1 Workshop on Abstraction and Context in Cognitive Systems NA 028-1 9th Int. Conference on the Simulation of Adaptive Behavior (SAB '06) NA 044-1 Action Selection for Intelligent Systems NA 050-1 Workshop on Embodying Cognition: Towards an Integrated Approach? NA 066-1 CD Proc. 3 rd Workshop on Anticip. Behav. in Adaptive Learning Systems NA 089-1 Workshop on Attention in Cognitive Systems — WAPCV 2007 NA 092-1 6th Czech-Slovak workshop on Cognition and Artificial Life NA 097-1 External Symbol Grounding Workshop 2006 (ESG2006) NA 126-1 Workshop on Modelling Cognitive and Biological Autonomy NA 141-1 Symposium on Imitation in Animals and Artifacts Juergen Jost Andreas Engel Aaron Sloman Aaron Sloman Natier Kropatsch Valter Kropatsch Jean-Arcady Meyer Joanna Bryson Antoni Gomila Gianluca Baldassarre Lucas Paletta Jiri Wiedermann Angelo Cangelosi Angelo Cangelosi Alvaro Morena Manuel Lopes	NA 007-1 Application and research roadmap for artificial cognitive systems	Bill Sharpe
NA 017-1 Symposium on Grand Challenge: Architecture of Brain and Mind NA 026-1 Workshop on Abstraction and Context in Cognitive Systems NA 028-1 9th Int. Conference on the Simulation of Adaptive Behavior (SAB '06) NA 044-1 Action Selection for Intelligent Systems NA 050-1 Workshop on Embodying Cognition: Towards an Integrated Approach? NA 066-1 CD Proc. 3 rd Workshop on Anticip. Behav. in Adaptive Learning Systems NA 089-1 Workshop on Attention in Cognitive Systems – WAPCV 2007 NA 092-1 6th Czech-Slovak workshop on Cognition and Artificial Life NA 097-1 External Symbol Grounding Workshop 2006 (ESG2006) NA 126-1 Workshop on Modelling Cognitive and Biological Autonomy NA 141-1 Symposium on Imitation in Animals and Artifacts Manuel Lopes	NA 010-1 Workshop on Information Theory, Neurobiology and Cognition	Juergen Jost
NA 026-1 Workshop on Abstraction and Context in Cognitive Systems NA 028-1 9th Int. Conference on the Simulation of Adaptive Behavior (SAB '06) NA 044-1 Action Selection for Intelligent Systems NA 050-1 Workshop on Embodying Cognition: Towards an Integrated Approach? NA 066-1 CD Proc. 3 rd Workshop on Anticip. Behav. in Adaptive Learning Systems NA 089-1 Workshop on Attention in Cognitive Systems – WAPCV 2007 NA 092-1 6th Czech-Slovak workshop on Cognition and Artificial Life NA 097-1 External Symbol Grounding Workshop 2006 (ESG2006) NA 126-1 Workshop on Modelling Cognitive and Biological Autonomy NA 141-1 Symposium on Imitation in Animals and Artifacts Walter Kropatsch Jean-Arcady Meyer Joanna Bryson Antoni Gomila Gianluca Baldassarre Lucas Paletta Jiri Wiedermann Angelo Cangelosi Alvaro Morena Manuel Lopes	NA 011-1 5th European Neuro-IT and Neuroengineering School	Andreas Engel
NA 028-1 9th Int. Conference on the Simulation of Adaptive Behavior (SAB '06) NA 044-1 Action Selection for Intelligent Systems NA 050-1 Workshop on Embodying Cognition: Towards an Integrated Approach? NA 066-1 CD Proc. 3 rd Workshop on Anticip. Behav. in Adaptive Learning Systems NA 089-1 Workshop on Attention in Cognitive Systems – WAPCV 2007 NA 092-1 6th Czech-Slovak workshop on Cognition and Artificial Life NA 097-1 External Symbol Grounding Workshop 2006 (ESG2006) NA 126-1 Workshop on Modelling Cognitive and Biological Autonomy NA 141-1 Symposium on Imitation in Animals and Artifacts Jean-Arcady Meyer Joanna Bryson Antoni Gomila Gianluca Baldassarre Lucas Paletta Jiri Wiedermann Angelo Cangelosi Alvaro Morena Manuel Lopes	NA 017-1 Symposium on Grand Challenge: Architecture of Brain and Mind	Aaron Sloman
NA 044-1 Action Selection for Intelligent Systems NA 050-1 Workshop on Embodying Cognition: Towards an Integrated Approach? NA 066-1 CD Proc. 3 rd Workshop on Anticip. Behav. in Adaptive Learning Systems NA 089-1 Workshop on Attention in Cognitive Systems – WAPCV 2007 NA 092-1 6th Czech-Slovak workshop on Cognition and Artificial Life NA 097-1 External Symbol Grounding Workshop 2006 (ESG2006) NA 126-1 Workshop on Modelling Cognitive and Biological Autonomy NA 141-1 Symposium on Imitation in Animals and Artifacts Joanna Bryson Antoni Gomila Gianluca Baldassarre Lucas Paletta Jiri Wiedermann Angelo Cangelosi Alvaro Morena Manuel Lopes	NA 026-1 Workshop on Abstraction and Context in Cognitive Systems	Walter Kropatsch
NA 050-1 Workshop on Embodying Cognition: Towards an Integrated Approach? NA 066-1 CD Proc. 3 rd Workshop on Anticip. Behav. in Adaptive Learning Systems NA 089-1 Workshop on Attention in Cognitive Systems – WAPCV 2007 NA 092-1 6th Czech-Slovak workshop on Cognition and Artificial Life NA 097-1 External Symbol Grounding Workshop 2006 (ESG2006) NA 126-1 Workshop on Modelling Cognitive and Biological Autonomy NA 141-1 Symposium on Imitation in Animals and Artifacts Antoni Gomila Gianluca Baldassarre Lucas Paletta Jiri Wiedermann Angelo Cangelosi Alvaro Morena Manuel Lopes	NA 028-1 9th Int. Conference on the Simulation of Adaptive Behavior (SAB '06)	Jean-Arcady Meyer
NA 066-1 CD Proc. 3 rd Workshop on Anticip. Behav. in Adaptive Learning Systems NA 089-1 Workshop on Attention in Cognitive Systems – WAPCV 2007 Lucas Paletta NA 092-1 6th Czech-Slovak workshop on Cognition and Artificial Life NA 097-1 External Symbol Grounding Workshop 2006 (ESG2006) NA 126-1 Workshop on Modelling Cognitive and Biological Autonomy NA 141-1 Symposium on Imitation in Animals and Artifacts Gianluca Baldassarre Lucas Paletta Jiri Wiedermann Angelo Cangelosi Alvaro Morena Manuel Lopes	NA 044-1 Action Selection for Intelligent Systems	Joanna Bryson
NA 089-1 Workshop on Attention in Cognitive Systems – WAPCV 2007 NA 092-1 6th Czech-Slovak workshop on Cognition and Artificial Life NA 097-1 External Symbol Grounding Workshop 2006 (ESG2006) NA 126-1 Workshop on Modelling Cognitive and Biological Autonomy NA 141-1 Symposium on Imitation in Animals and Artifacts Lucas Paletta Jiri Wiedermann Angelo Cangelosi Alvaro Morena Manuel Lopes	NA 050-1 Workshop on Embodying Cognition: Towards an Integrated Approach?	Antoni Gomila
NA 092-1 6th Czech-Slovak workshop on Cognition and Artificial Life NA 097-1 External Symbol Grounding Workshop 2006 (ESG2006) NA 126-1 Workshop on Modelling Cognitive and Biological Autonomy NA 141-1 Symposium on Imitation in Animals and Artifacts Jiri Wiedermann Angelo Cangelosi Alvaro Morena Manuel Lopes	NA 066-1 CD Proc. 3 rd Workshop on Anticip. Behav. in Adaptive Learning Systems	Gianluca Baldassarre
NA 097-1 External Symbol Grounding Workshop 2006 (ESG2006) NA 126-1 Workshop on Modelling Cognitive and Biological Autonomy NA 141-1 Symposium on Imitation in Animals and Artifacts Angelo Cangelosi Alvaro Morena Manuel Lopes	NA 089-1 Workshop on Attention in Cognitive Systems – WAPCV 2007	Lucas Paletta
NA 126-1 Workshop on Modelling Cognitive and Biological Autonomy NA 141-1 Symposium on Imitation in Animals and Artifacts Alvaro Morena Manuel Lopes	NA 092-1 6th Czech-Slovak workshop on Cognition and Artificial Life	Jiri Wiedermann
NA 141-1 Symposium on Imitation in Animals and Artifacts Manuel Lopes	NA 097-1 External Symbol Grounding Workshop 2006 (ESG2006)	Angelo Cangelosi
·	NA 126-1 Workshop on Modelling Cognitive and Biological Autonomy	Alvaro Morena
	NA 141-1 Symposium on Imitation in Animals and Artifacts	Manuel Lopes
NA 178-1 International Conference on Development and Learning (IEEE ICDL 2007) Yiannis Dimiris	NA 178-1 International Conference on Development and Learning (IEEE ICDL 2007)	Yiannis Dimiris

Please visit the website for more details on each of these actions.

http://www.eucognition.org/network_actions.htm

Deviations from the project work-programme

None.

List of deliverables

Del. no.	Deliverable name	Workpackage no.	Date due	Actual/Forecast delivery date	Lead contractor
2	Scientific outlook online resources	2	36	36	DIST

List of milestones

None.

WP3 - Education

Workpackage objectives

The Education activity is intended to help alleviate the significant difficulties posed by the multidisciplinary nature of the area. The goal is to provide an effective mechanism to bridge gaps between sub-disciplines and help researchers in one area come up to speed in other areas. It is targeted both at research practitioners and graduate students. The activities will include the organization of summer schools (or, perhaps, the coordination of the efforts of the Integrated Projects in organizing summer schools) and the creation of teaching material.

Progress towards objectives

As part of network actions NA068-1 and NA068-2, a new Visual Neurophysiology page for CVonline has been almost completed (c. 80% complete) and a framework for a Visual Psychophysics page has been started (c. 10% complete).

Visual Neurophysiology section for CVonline: about 450 content links so far. See current draft at:

http://homepages.inf.ed.ac.uk/rbf/CVonline/neuro.htm

Visual Psychophysics/Psychology section for CVonline: about 30 content links so far. See current draft at:

http://homepages.inf.ed.ac.uk/rbf/CVonline/psych.htm

Four out-of-print books have been identified for scanning with agreement of the authors, and we are now trying to ensure that the copyright situation allows the scanning.

J.E. W. Mayhew, J.P. Frisby; 3D Model Recognition From Stereoscopic Cues, MIT Press, 1991.

M.V. Srinivasan, S. Venkatesh; From living eyes to seeing machines, Oxford University Press, 1997.

R. Gregory; Mirrors in Mind, W.H Freeman and Company, 1997.

M.A. Fischler, O. Firschein; Intelligence: The Eye, the Brain and the Computer, Addison-Wesley, 1987.

Network Actions

NA 047-1 Summer School on Humanoid Robots

NA 068-1 Neurophysiology and Psychophysics material for CVOnline

NA 068-2 Optically scan five cognitive vision books for CVOnline

NA 105-1 Connect with AI: cognitive robot education outreach initiative

Giorgio Metta

Robert Fisher

Robert Fisher

Sethu Vijayakumar

Please visit the website for more details on each of these actions.

http://www.eucognition.org/network actions.htm

Deviations from the project work-programme

None.

List of deliverables

Del. no.	Deliverable name	Workpackage no.	Date due	Actual/Forecast delivery date	Lead contractor
3	Education online resources	3	36	36	DIST

List of milestones

None.

WP4 - Online Resources

Workpackage objectives

This work-package focuses on providing a dynamic web-based repository of material that will assist the cognitive systems community, in research, in education, and helping to make the relevance and importance of cognitive systems visible to the greater community.

Progress towards objectives

The euCognition Website was launched. It can be accessed via both www.eucogniton.org and www.eucognition.eu

It was originally intended to organize the website as a 2-D matrix of Activities (Scientific Outlook, Outreach, Education) and Areas (underlying paradigms, scientific development, topical issues). However, it was decided at the first meeting of the Executive Committe on the 13th January 2006 that the Areas dimension didn't help people understand the multi-faceted nature of the discipline and, therefore, this dimension was dropped. Thus, the website is now navigated through menus on the basis of Activities with sub-menus as appropriate.

Furthermore, it was also envisaged at the outset that there would be an automatic facility for members to contribute articles to the website. Unfortunately, the person that we had originally targeted to take charge of the development of the website declined to accept a contract and the Network Coordinator then had to step in and take responsibility for the design, implementation, and administration of the website. As a result, the website is configured less ambitiously on the server-side (i.e. there is no server-side database and query scripting). To compensate for this, in August 2006, a Wiki was added to allow the members greater flexibility to contribute material directly instead of sending information directly to the Coordinator. At present, we are running both main website and wiki in parallel to monitor the relative usage of each service. At some point in the future, we may consolidate these and opt for either one or the other delivery mechanism.

For easy reference on the current state of the website, a traversal of the menu system is listed on the following page with menus and sub-menus in bold and with menu items showing their respective URLs.

Date: 16/2/07 Page 15 of 25 Version: No. 1.0

Traversal of the euCognition Website: http://www.eucognition.org

Home http://www.eucognition.org/index.htm

More Info

Membership

List of Members http://www.eucognition.org/members.htm

Members Research Areas http://www.eucognition.org/members_research_areas.htm

Apply for Membership http://www.eucognition.org/membership.htm

Contact Details http://www.eucognition.org/contacts.htm
About euCognition http://www.eucognition.org/about.htm
Reimbursement of Costs http://www.eucognition.org/costs.htm

Network Actions

Apply for a Network Action http://www.eucognition.org/network_actions.htm

Funded Network Actions http://www.eucognition.org/network actions funded.htm

Executive Committee http://www.eucognition.org/exec.htm

Meetings and Workshops

Network Meetings http://www.eucognition.org/network meetings.htm

Executive Committee Meetings

http://www.eucognition.org/exec_meetings.htm

http://www.eucognition.org/workshops.htm

Useful Links

ECVision http://www.ecvision.org

Cognition Unit

Home Page http://www.cordis.lu/ist/cognition/index.html
Contacts http://www.cordis.lu/ist/cognition/links.htm
Events http://www.cordis.lu/ist/cognition/events.htm
Open Calls http://www.cordis.lu/ist/cognition/links.htm

Exchange Rates

Current rates http://www.ecb.int/stats/exchange/eurofxref/html/index.en.html
http://www.ecb.int/stats/exchange/eurofxref/html/index.en.html
http://www.ecb.int/stats/exchange/eurofxref/html/index.en.html
http://europa.eu.int/stats/exchange/eurofxref/html/index.en.html
http://europa.eu.int/eur-lex/lex/JOIndex.do?ihmlang=en

Contract Documents
Website Statistics

http://www.eucognition.org/contract_documents.htm
http://www.eucognition.org/website_statistics.htm

euCognition Artwork http://www.eucognition.org/logo.htm

News

Announcements http://www.eucognition.org/news.htm
http://www.eucognition.org/news.htm

Open Student Positions http://www.eucognition.org/student_positions.htm

Events and Calls http://www.eucognition.org/events.htm

Outreach

euCognition Wiki http://www.eucognition.org/wiki/

http://www.eucognition.org/guestionnaire.htm Questionnaire

Questionnaire Results http://www.eucognition.org/questionnaire results.htm

Definitions of Cognition http://www.eucognition.org/wiki/index.php?title=Definitions of Cognition

http://www.eucognition.org/wiki/index.php?title=Applications_of_Cognitive_Systems **Applications**

Exchanges and Visits http://www.eucognition.org/exchanges.htm

Software Resources http://www.eucognition.org/software resources.htm

Outlook

euCognition Wiki http://www.eucognition.org/wiki/

Questionnaire http://www.eucognition.org/questionnaire.htm

Questionnaire Results http://www.eucognition.org/guestionnaire results.htm

Exchanges and Visits http://www.eucognition.org/exchanges.htm Research Planning http://www.eucognition.org/planning.htm White Papers http://www.eucognition.org/white papers.htm Proceedings and Abstracts http://www.eucognition.org/proceedings.htm

General Articles http://www.eucognition.org/general_articles.htm

Affect and Emotion Articles http://www.eucognition.org/affect emotion articles.htm **Dynamical Systems Articles** http://www.eucognition.org/dynamical_systems_articles.htm Cognitive Vision Articles http://www.eucognition.org/cognitive vision articles.htm Post-Cognitivist Psychology http://www.eucognition.org/post-cognitivist_psychology.htm

Education

euCognition Wiki http://www.eucognition.org/wiki/

Questionnaire http://www.eucognition.org/questionnaire.htm

Questionnaire Results http://www.eucognition.org/questionnaire results.htm

Exchanges and Visits http://www.eucognition.org/exchanges.htm Summer Schools http://www.eucognition.org/summer_schools.htm Ph.D. and M.Sc. Dissertations http://www.eucognition.org/dissertations.htm Postgraduate Courses http://www.eucognition.org/courses.htm

Traversal of the euCognition Wiki: http://www.eucognition.org/wiki/index.php?title=Main Page

Research

http://www.eucognition.org/wiki/index.php?title=Research_Roadmap Research Roadmap Controversies in Cognitive Systems Research

http://www.eucognition.org/wiki/index.php?title=Controversies in Cognitive Systems Research

Education

Model Curriculum http://www.eucognition.org/wiki/index.php?title=Model Curriculum Course Material http://www.eucognition.org/wiki/index.php?title=Course_Material Student Forum http://www.eucognition.org/wiki/index.php?title=Student_Forum

General Topics

http://www.eucognition.org/wiki/index.php?title=Cognition Briefings Cognition Briefings Definitions of Cognition http://www.eucognition.org/wiki/index.php?title=Definitions of Cognition

Applications of Cognitive Systems

http://www.eucognition.org/wiki/index.php?title=Applications of Cognitive Systems

Date: 16/2/07 Page 17 of 25 Version: No. 1.0

Email Lists

There are two email lists which can be used to send email to all members and members of the Executive Committee. These are

members@eucognition.org
executive@eucognition.org

Both lists are moderated by the Network Coordinator so that all emails have to be approved before they are distributed to the recipients. This ensures no spam is distributed and that mail coming from euCognition is seen to be relevant to the members' interests. Postings to the members email distribution list are restricted to items directly linked to euCognition, such as events that are co-sponsored by the network. Notices on other relevant events (e.g. calls for papers, workshop announcements) are posted on the website.

Deviations from the project work-programme

The website is navigated using conventional drop-down menus implemented with client-side scripts. With the exception of the wiki, the server-side of the website is implemented with static HTML rather than PHP scripts and a mySQL database.

List of deliverables

Del. no.	Deliverable name	Workpackage no.	Date due	Actual/Forecast delivery date	Lead contractor
4	euCognition website	4	36	36	DIST

List of milestones

None.

WP5 - Network Coordination

Workpackage objectives

WP5 deals with the coordination of the network activities and monitoring the coordination of the Network Actions. The work focuses on the coherent development of the activities of the network overall, on building an integrated community within the network, on maximizing the interaction between the various activities and areas, and on ensuring that the network is as relevant as possible to all concerned: the membership, the cognitive systems community, and the community at large.

Progress towards objectives

Responsibility for the coordination of the network is shared by the members of the Executive Committee, which comprises the following twelve members.

David Vernon University of Genova; now at Etisalat University College

(network coordinator)

Fred Cummins University College Dublin

Markus Vincze Technische Universitaet Wien

Tom Ziemke Högskolan i Skövde

Erik Hollnagel Linköpings Universitet; now at Association pour la

Recherche et le Développement des Méthodes et

Processus Industriels (ARMINES

Christoph von der Malsburg Ruhr-Universitaet Bochum; now at the Frankfurt Institute for

Advanced Studies (FIAS)

Bill Sharpe The Appliance Studio Ltd.

Guy Tiberghien Centre National de la Recherche Scientifique (CNRS)

Juergen Jost Max Planck Institute for Mathematics in the Sciences

Andreas Engel University Medical Center Hamburg-Eppendorf

Peter F. Dominey Centre National de la Recherche Scientifique (CNRS)

Matthias Scheutz Notre Dame University

The Executive Committee met on three occasions in the past year:

13 January 2006

24 March 2006

6 October 2006

Notes on each meeting can be found on the website here

http://www.eucognition.org/network_meetings.htm

In 2006, the Network Coordinator sent approximately 120 emails to the Executive Committee, i.e., one every three days. This provides a measure of the strong degree of active participation of the members of the Executive Committee in the coordination of the network.

Deviations from the project work-programme

None.

List of deliverables

Del. no.	Deliverable name	Workpackage no.	Date due	Actual/Forecast delivery date	Lead contractor
5	Network Coordination online resources	5	36	36	DIST

List of milestones

None.

WP6 - Management

Workpackage objectives

WP6 deals with management of the consortium management and focuses mainly on handling the financial aspects such as reimbursement of claims for costs to members, reporting, and other contractual issues.

Progress towards objectives

This is dealt with in section 3 on consortium management.

Deviations from the project work-programme

None.

List of deliverables

Del. no.	Deliverable name	Workpackage no.	Date due	Actual/Forecast delivery date	Lead contractor
6	euCogntiiton website	6	36	36	DIST
7	Final plan for using and disseminating knowledge	6	36	36	DIST
8	Report on raising public participation and awareness	6	36	36	DIST

List of milestones

None.

Section 3 - Consortium management

The tasks that are included in this work-package are:

- 1. Processing of applications for membership
- 2. Processing and reimbursement of members' costs
- 3. Prepare consolidated financial report
- 4. Collection and collation of audit certificates
- 5. Liaison with Commission Project Officer
- 6. Collection and distribution of deliverables
- 7. Monitoring of project budget against expenditure
- 8. Collation six-monthly management reports
- 9. Preparation and issue of sub-contracts
- 10. Maintenance of member database

All ten tasks have been carried out successfully by the Network Coordinator on a daily basis for the past 12 months.

In the following, we will highlight some special issues.

Website Administrator

As mentioned above, the person that we had originally targeted to take charge of the development of the website declined to accept a contract and the Network Coordinator then had to take responsibility for the design, implementation, and administration of the website.

Changes in Contractor Responsibilities

Responsibilities for the three areas of Outreach, Scientific Outlook, and Education rotate among the members of the Executive Committee on a semi-annual basis, approximately.

In the first nine months, those responsible were:

Outreach Erik Hollnagel
Scientific Outlook Tom Ziemke
Education Markus Vincze

From October 2006 to March 2007, those responsible are:

Outreach Bill Sharpe (with particular focus on the euCognition Roadmap)
Scientific Outlook Fred Cummins (with particular emphasis on cognition briefings)

Education Matthias Scheutz

Changes to the Consortium

During the year, Erik Hollnagel moved to the Association pour la Recherche et le Développement des Méthodes et Processus Industriels (ARMINES), Sophia Antipolis, and Christoph von der Malsburg moved to Frankfurt Institute for Advanced Studies (FIAS). As a result, Linköpings Universitet and Ruhr-Universitaet Bochum are withdrawing from the consortium. The formalities required to do this are being attended to at present. ARMINES have submitted the required documentation to become a contractor and FIAS in is the process of doing so. It was decided to defer the required contract amendment for these changes until all the material had been collected and implement the changes as a single amendment. During the year, the University of Edinburgh also became a contractor to facilitate their work under network actions NA068-1 and NA068-2.

Domain Names

The consortium has acquired the rights to the euCognition.eu and euCognition.org domain names. We continue to use the .org versions in our day-to-day work as it conveys an image that is more open to international involvement.

We also acquired the rights to the CogSys.eu, CognitiveSystems.eu, and CognitiveRobotics.eu domain names. These domain names point to the Cognition Unit (Unit 5) Commission website http://cordis.europa.eu/ist/cognition/index.html

Page 23 of 25

Section 4 - Other issues

None.

ANNEX - Plan for using and disseminating knowledge

Section 1 - Exploitable Knowledge and its Use

The euCognition project is a Coordination Action and therefore does not involve the creation of exploitable knowledge.

Section 2 – Dissemination of Knowledge

The euCognition project is dedicated to the production of freely-available resources for the advancement of the discipline of artificial cognitive systems. These resources are available on the euCognition website and Wike at www.eucognition.org

Publications

None.

Dissemination Activities

These are treated in Workpackage 1 on Outreach.

Section 3 – Publishable Results

None at this point.