INFORMATION SOCIETY TECHNOLOGIES (IST) PROGRAMME

ECVision

European Research Network for
Cognitive AI-enabled Computer Vision Systems

Thematic Network

First Six-Monthly Periodic Management Report

IST 2001 Workprogramme
Section IV.2.1 – Real-Time Distributed Systems
Sub-section (ii) – Cognitive Vision systems

Project Acronym: *ECVision*
Project Full Title: European Research Network for Cognitive
                                   AI-enabled Computer Vision Systems

Proposal / Contract No.:   IST-2001-35454
Date of Preparation: 17 October 2002
Period Covered: 1st March – 31st August 2002

PREFACE   2

This document summarizes the main activities of *ECVision* during its first six months of operation. It also presents a synopsis of the main outcomes under the headings of the various deliverables identified in the contract. It should be noted at the outset that many of the deliverables represent work in progress and, in fact, there will be several versions of the same deliverable over the lifetime of the project. The versions reported on in this document represent the first steps towards reaching the overall goals. Naturally, more progress has been made in some areas rather than others. However, all areas – Research Planning, Education and Training, Information Dissemination, Industrial Liaison, Information Infrastructure, and Management – have effectively launched their activities successfully. This is perhaps best encapsulated in the seven specific actions that were launched this semester. Details of these are included in the appendix.

DV 17/10/02

ECVISION ACTIVITIES: SELECTED HIGHLIGHTS 1ST MARCH – 31ST AUGUST.

The following highlights are taken from the announcements and news sections on the *ECVision* website (see http://www.ecvision.info/news/News.htm for full details).

22 March 2002	The *ECVision* kickoff meeting was held in Nice.
5 April 2002	A web-based bulletin board was created to faciliate discussion among members.
5 April 2002	*ECvision* is preparing a research roadmap for the the area of Cognitive Vision; contributions were invited.
6 April 2002	A special issue of the AI magazine (published by the AAAI) on cognitive vision systems will be published the spring of 2003.
9 April 2002	The 3rd International Conference on Computer Vision Systems ICVS'03 was announced and a call for contributions was issued.
10 April 2002	The official *ECVision* Website was launched
14 April 2002	Two email lists were made available: *ECVision*@lists.ecvision.info and executive@lists.ecvision.info
23 April 2002	First Call For Papers For BMCV 2002 - Biologically Motivated Computer Vision Workshop 2002, November 22nd-24th, 2002 in Tuebingen, Germany
1 May 2002	A set of guidelines on the preparation of proposals for the funding of specific actions and for the preparation of material for the *ECVision* website was published on the *ECVision* website.
3 May 2002	Two specific actions were launched in the Education and Training Area: • A restructuring of CVonline • A survey of what is already taught worldwide in the area of cognitive computer vision.
5 June 2002	P. Duygulu, K. Barnard, J.F.G. de Freitas and D.A. Forsyth were awarded the *ECVision*-sponsored Best Paper prize on Cognitive Computer Vision at ECCV 2002 for their paper "Object Recognition as Machine Translation: Learning a Lexicon for a Fixed Image Vocabulary".
11 June 2002	Arnold Smeulders, University of Amsterdam, and Jeanny Herault, INPG, were admitted as members of *ECVision*.
12 June 2002	Two specific actions were launched in the Industrial Liaison Area: • The development of a white paper on applications of cognitive vision systems • The creation of a prize on the best application development in cognitive vision systems.
26 June 2002	With the goal of making the *ECVision* website a useful resource for researchers, the links menu now allows to access over 100 sites.
27 June 2002	The Education and Training specific action to restructure CVonline is nearly complete.
11 August 2002	Robert Massen, Director of MASSEN machine vision systems GmbH, was admitted as a member of *ECVision*.
27 August 2002	The ECVision.org website was changed to ECVision.info
30 August 2002	A specific action was launched to develop a web-based keyword-indexed bibliography with abstracts of papers.

ECVISION DELIVERABLES DUE AT MONTH 6 (31ST AUGUST 2002)

Note that deliverables denoted TAx.y.z are effectively work in progress; the z denotes the month at which the current version is to be delivered. In all the following, this is month six (i.e. z=6).

Research Planning

TA1.1.6	Workshop & workshop proceeding/report
TA1.2.6	Position paper
TA1.3	Advances in computer vision
TA1.4	Advances in artificial intelligence
TA1.5.6	White paper on cognitive vision research
TA1.6	Benchmark applications
TA1.7.6	Research roadmap
TA1.8.6	Database of European research

Education and Training

TA2.1	Survey of existing courses on cognitive computer vision
TA2.2.6	Web-based repository of existing courseware and/or course slides
TA2.3.6	Web-based repository of M.Sc. and Ph.D. project proposals
TA2.8.7	Annual summer school on Cognitive Vision Systems

Information Dissemination

TA3.1.n	Electronic newsletter, published quarterly (month n = 3, 6)
TA3.2.6	Database of existing relevant publications (in PDF or HTML)
TA3.3.6	Annotated bibliography of literature, with summary of papers

Industrial Liaison

TA4.2.6	Directory of vision vendors, indexed by application, product type, deployed technology, industrial sector
TA4.3.6	Database of application-motivated R&D problems and information on successful and unsuccessful approaches to solutions
TA4.4.6	List of techniques and their usefulness (or not) in certain classes of problems

Information Infrastructure

SA1.1	CSCW infrastructure operational
SA1.2	Website core structure implemented

Management

SA2.1.6	Periodic management report

A status report on each of these deliverables is give below.

RESEARCH PLANNING

In general, progress in this target area has been slow this semester, despite the fact that several actions were to have been active from the outset. At time of writing, well into the second semester, there has been a significant increase in activity so this concern is being addressed, particularly in the generation of the research roadmap which is one of the key goals of this area.

TA1.1.6 Workshop & workshop proceeding/report

A Cognitive Vision Workshop, organized by Bernt Schiele and Luc Van Gool, was held in Zurich on the 19th and 20th September. Details of the workshop are available on the web at http://www.vision.ethz.ch/cogvis02/

TA1.2.6 Position paper

No position papers were formally produced in the first semester. However, a call for 'research dreams' was issued by the area leaders to stimulate input for the research roadmap and seven 'dream' position papers were submitted during the very early part of the second semester. These are:

1. Towards conscious general vision systems, Ja-M Geusebroek
2. Towards an Intelligent Cognitive Vision Platform, M. Thonnat
3. The Vigilant Environment, David Vernon
4. Research Dreams, Markus Vincze
5. Mapping on demand, Wolfgang Förstner
6. Cognitive vision in life science, Patrick Courtney
7. Interactive Cognitive Vision System, C. Garbay

The papers will be make available on the *ECVision* website in the near future.

TA1.3 Advances in computer vision

This work is still to be initiated. Unfortunately resources have not been available to address this issue. It is hoped that the special issue of the AI magazine to be compiled during December 2002 will form the basis for this paper. So the deliverable is slightly delayed.

TA1.4 Advances in artificial intelligence

This paper is presently being drafted by Hilary Buxton. The paper will appear in the near future.

TA1.5.6 White paper on cognitive vision research

The white paper is in preparation but has awaited the "Research Dreams" contribution (see TA1.2.6 above). In addition it will be tied to the AI magazine special issue mention above (TA1.3).

TA1.6 Benchmark applications

This effort has not yet been commenced. It awaits a tighter dialogue with the industrial applications areas (which has now been initiated). It is felt that a majority of the benchmarks ought to be grounded in real application demands.

TA1.7.6 Research roadmap

A collection of "research dreams" have been collected and a few more have been promised. The synthesis of a roadmap has awaited these research dreams to ensure that a reasonable section of the community is involved in the formulation of the roadmap. Over the next few months a first synthesis will be formulated as a basis for a review workshop to take place later this year or by early next year. This will form the basis for the first official version of the roadmap. This road map will form the basis for in-depth discussions at the CogVis workshop to take place in October 2003.

TA1.8.6 Database of European research

A database document might surface by the end of September (sponsored by external funds). [This database has been produced; we are seeking approval by the external sponsor for access].

EDUCATION AND TRAINING

TA2.1   Survey of existing courses

An email survey and some web searching has been done for existing courses that present material linked to Cognitive Computer Vision. About 8000 requests were sent, 100 replies received and about 50 relevant web-based pieces of information obtained. Most of the surveyed materials were presented as a part of a broader course, that range from 1-60 hours of lectures, with about 20 as average.

The survey results are temporarily at:

  http://www.dai.ed.ac.uk/homes/rbf/ECCV_SURV/ccvsyl2.htm

while awaiting completion of the database-driven interface.

The survey results are categorised by the start of an ontology of cognitive vision, which will feed into the encyclopedia and model curriculum activity of the project second half-year.

TA2.2   Web-repository of courseware and notes

This has been created as a subset of CVonline. It will have a different entry page focussed on *ECVision* and Cognitive Computer Vision. The survey already contains web links to the online materials of the respondees.

TA2.3   Web repository of MSc and PhD project proposals

No progress has been made on this to date.

TA2.8.6 Summer school

The first summer school is scheduled for Sept 2003 in Bonn, to be organised largely by Wolfgang Förstner. Most lecturers will be from the *ECVision* network with possibly one outside speaker. The plan is for 5 half days, each presented by one person. The 5 days map onto the 5 core project areas.

INFORMATION DISSEMINATION

TA3.1.3 and TA3.1.6   Electronic newsletter, published quarterly

The quarterly newsletter has been circulated to all members at months 3 and 6. It includes hot links to all new items and highlights on the *ECVision* web-site. David Vernon, as site manager and project coordinator, has assumed responsibility for this set of deliverables. Content so far has been limited to <10 items – restricted by postings by members – but this is hoped to grow as the network gains momentum.

TA3.2.6   Database of existing relevant publications (in PDF or HTML

A specific action (8.1) has been launched to address this deliverable with the specific goal of developing a keyword-indexed bibliography with abstracts of papers. Further details can be found in the appendices.

TA3.3.6 Annotated bibliography of literature, with summary of papers

The activity here has concentrated on preparation of 2 journal review papers. This is the start of a strategy to get expert summary of research in the sub-areas of cognitive vision. The first introduces issues in cognitive vision research and reviews nearly 200 papers on dynamic visual behaviour using a) logic and grammar, b) graphical models, c) deformable models, d) neural networks. This paper was submitted to CVIU in March 2002. The second introduces issues in learning flexible, generative models and reviews 80 papers on this topic for both graphical and deformable models. This paper was submitted to IVC in September 2002. Both will be put on the web-site acknowledging *ECVision* and will be used in the initial database above when available pdf and online links to the papers allow.

In addition, a special issue of IVC on understanding visual behaviour is in press and the special issue of AI magazine by Henrik Christensen is underway. Further agreement by IVC for a special issue on current opinion in Cognitive Vision will be sought for 2003.

INDUSTRIAL LIAISON

The aim of the industrial liaison in the *ECVision* network is to identify application drivers, highlight successes, and promote research trials, in all types of industries.

To achieve this the following activities were planned:

1. White paper
2. Database of research profiles (t12)   TA4.1.n
3. Database of vendors (t6)   TA4.2.6
4. Database of application motivated problems (t6)   TA4.3.6
5. List of techniques useful/not (t6)   TA4.4.6
6. Application prize (t12)   TA4.5.n

White Paper

Objectives
The objectives of this activity are to collate knowledge of existing systems and opinion on future trends in cognitive systems in the EU. This includes existing near cognitive and near future cognitive vision systems.

Outcome
A workshop is being organised with industrial players active in the area. The agenda is to be organized around presentations by participants of existing applications, followed by a discussion and brainstorm on the key trends and barriers. The outcome will be a white paper on industrial applications and potential applications to feed into the research roadmap to be developed by the project.

The workshop is being organised with 8 industrial participants, covering the areas: life science, media and entertainment, industrial inspection, photo libraries, surveillance, aerospace and robotics. The workshop includes people from *ECVision* projects such as DETECT and LAVA.

Some areas are not covered like manufacturing, telecommunications, automotive, education/training, medical.

To get as well an input from these subjects the first draft will be circulated in the network and within other industries.

Timescale
- Meeting Monday 30th September 2002
- Draft report approximately October 2002
- Final draft end of 2002

*TA4.2.6   Directory of vision vendors, indexed by application, product type, deployed
            technology, industrial sector*

Objectives
The objective is to develop a directory of vision vendors, indexed by application, product
type, deployed technology and industrial sector. (TA4.2.n (month n = 6, 12, …, 36)).
However, as important as the database itself is the development of a methodology of how the
database should be built. It is essential to know to whom the database is aimed. Four possible
groups of people were identified, each with different needs:

- End Users: Usually don't care about the technology, they care about the solution
- Competitors: Could use the database to find new partners, ...
- Academics: Coud get an overview about possible new applications, ...
- *ECVision*: To detect trends

There are already a lots of sources available to find computer vision companies:

- Projects: EC Vision, Workshop, Prize, EUTIST Cluster, ...
- Magazines: Articles, Adverts, ...
- Address Lists: VDMA, UK Industrial Vision Association, ...
- Exhibitor lists: Vision, IPOT, ...
- Web Databases
- Personal contacts!

However, it is still quite difficult to validate their work in respect of cognitive vision methods.
Some obstacles are:

- The companies do not publish their internally used technology
- Some companies are not aware that they are using cognitive vision technlgies

Outcome

- Database of vision vendors, first file delivered (5 names)
- Development of a methodology, where to find vision vendors, using cognitive vision
  techniques, and how to validate their work

*TA4.3.6   Database of application-motivated R&D problems and information on successful
            and unsuccessful approaches to solutions*

Objectives
The objective is to develop a directory of application motivated problems to help possible
users of cognitive vision techniques to find solutions to their problems and to help cognitive
vision research scientists to focus their activity on new challenging problems.

Outcome
A first set of actions has been performed in the last months to investigate two different
sectors: i.e. the video content sector and the education and training sector.

The actions were the participation to two workshops and the organisation of a dedicated meeting:

1. Workshop on video content analysis, 3 and 4 July 2002 in Paris with 51 participants, 31 organisations from 7 Europeans countries. The applications were mainly multimedia and telecommunications. The attendees were mainly integrators and academic from the video coding sector.

2. Meeting on video content analysis, 12 July at INRIA Sophia Antipolis with 7 French participants. The applications were mainly multimedia and visual surveillance. The attendees were mainly integrators and academic from the video coding sector.

3. Workshop on video analysis for training and education, 29 July at Chiavarri Italy with 20 participants, 14 organisations from 6 countries. The applications were education and training for hospitals and for aerospace. The attendees were both end-users and integrators from the application domains and academic from the vision sector.

The main common outputs were the needs expressed by the end-users: there are now two many videos to process manually and the current systems are too far from end-users needs. In addition industrial integrators ask for reusable systems instead of dedicated systems built from scratch which are too costly to develop.

It appears that, even if the term cognitive vision has never been used *per se*, the techniques of cognitive vision or their goals were explicitly mentioned several times. In particular, the notion of ontology, learning, image understanding and video understanding.

In conclusion there is a need to build a link between the different actors. *ECVision* could be a way to create and maintain these links.

TA4.4.6   List of techniques and their usefulness (or not) in certain classes of problems

No action has been taken on this activity so far.

TA4.5.12   Application Prize

Objectives
The objectives are to recognise exploitation of cognitive vision technology and to raise the profile for the network within the application community as well as the profile of cognitive vision as a distinct domain.

The activity is a commitment to fulfil TA4.

Outcome
The main outcome of this activity is a prize which will be awarded to the best application using cognitive vision methods at ICVS in April 2003. The activity is supported by the magazine Image Processing Europe. They will publish the call for the prize in its September/October issue and announce the winner of the prize next year. Further support can

be expected from Image Processing Europe by participating in the judging panel and articles about the prize giving event.

We expect to attract the attention of candidates by distributing the prize leaflet at various exhibitions and conferences, such as BMVC (120 copies), DAGM (300 copies) and by circulating it in other EU networks (e.g. EUTIST/EXPANSIV network (20 projects by email)).

An online form is available on the *ECVision* home page (http://www.ecvision.info/industrial_liaison/Application_Prize.htm)

Timescale

- Announcement drafted
- Closing date: 31 December 2002
- Presentation: ICVS April 2003
- Judging panel is still to be appointed

INFORMATION INFRASTRUCTURE

SA1.1   CSCW infrastructure operational

The goal of this activity was to implement a computer-supported cooperative work environment to facilitate discussion forums, document exchange, and email distribution lists. Early on in the project, a bulletin board system was implemented and announced. However, no member ever posted to it so it was allowed to lapse and all effort was redirected to the implementation of the website which has since become a working environment.

Two email distribution lists were implemented:

ecvision@lists.ecvision.info   This address targets all members of the network. It is moderated on a daily basis by the coordinator, David Vernon.

executive@lists.ecvision.info   This address targets all members of the Executive Committee. It too is moderated by the coordinator, David Vernon.

SA1.2   Website core structure implemented

The *ECVision* website was launched originally in April 2002 as www.ECVision.org as a menu-driven website. Unfortunately, it has to be re-launched in August 2002 as www.ECVision.info as the registrar would not allow the .org name to be re-registered despite repeated communications over a six week period.   This hiccup notwithstanding, the website is being reasonably well used although unsolicited contributions from members have been slow in coming. As a mechanism of dissemination of information it is proving very successful. To date, it has received approximately 2000 hits.

Guidelines for contributors to the website can be found at:

www.ecvision.info/informationGuidelines_for_Web_Authors.htm

MANAGEMENT

The Management activity at network level has been handled cooperatively by the Coordinator, David Vernon, and the Executive Committee. This arrangement has worked very well. Jointly, the management responsibilities are:

• Collation and preparation of 6-monthly management reports
• Organization of six-monthly Executive Committee meetings
• Organization of six-monthly Network Workshops
• Processing and reimbursement of members costs
• Preparation of cost statements
• Processing of applications for funding by sponsored members
• Collation and processing of reviews of member status
• Collection and distribution of deliverables
• Assessment of Target Area progress and implementation of corrective

To date, the Advisory Panel has not been called on to adjudicate on any issue.

All of the management work required to coordinate specific areas (e.g. research planning, education and training, etc.) is devolved to the two area leaders in each area:

Research Planning: Henrik Christensen & James Crowley
Education and Training: Bob Fisher & Wolfgang Förstner
Information Dissemination: Hilary Buxton & David Vernon
Industrial Liaison: Patrick Courtney & Monique Thonnat

A number of issues are worthy of note:

1. *Six Monthly Cost Statements*
    The procedure for preparation of the six-monthly cost-statement has been simplified considerably.   It was agreed with the Commission that members do not have to submit six-monthly cost statements for any directly reimbursed costs, i.e. costs for travel, computing, other specific costs which have been reimbursed to the member by the Coordinator. These costs will be recorded on the principal contractor's individual cost statement. Only members claiming labour (and overheads on labour) need submit cost statements and these statements will comprise only labour and overhead costs: no travel, computing, or other costs.

2. *Sponsored Membership*
    The distinction between ordinary member and sponsored member has been abolished. The reason for this is that very little material has been contributed to the website by members and few if any would be eligible for elevation to the status of sponsored membership (and, thus, eligible to apply for funding for specific actions). In any case, we have already and quite legitimately broken the rule that

non-sponsored members won't be funded (e.g. sponsorship of ICVS 03 through specific action 13-1). Consequently, it was decided to abolish the concept of sponsored member and open up the possibility of funding for specific actions to all members in the hope that this will promote more activity in the network (and the delivery of more material).

3. *Applications for Membership*
   In general, the procedure for application for membership has worked well. The procedure is that the application is submitted to the Coordinator, who distributes it to the Executive Committee for discussion. Typically, the Executive Committee will vote on the applications. With the Coordinators casting vote it essentially takes just four votes in favour of an application to have it accepted. Most of the discussions have centred on the profile of the applicant, with the requirement that the applicant exhibit real activity in the area of cognitive vision being strongly enforced (perhaps not quite as strongly as some would like but strongly nonetheless). The impact of this is that a number of applications, who would be considered bone fide members of the computer vision community, have been declined membership. It was felt that this was necessary if ECVision is to keep its identity as a cognitive vision oriented network and not degenerate into a general computer vision network.

4. *Approval of Specific Actions*
   The procedure for application for funding of specific actions has also worked very well. In a similar manner to the above, the application is submitted to the Coordinator, who distributes it to the Executive Committee for discussion. Typically, the Executive Committee will vote on the applications. Once they reach a consensus, the application is forwarded to the Commission Project Officer, Colette Maloney, for approval. This procedure has ensured that focussed high-quality specific actions have been submitted and funded.

SA2.1.6   Periodic management report

This is the present document.

<div align="center">**APPENDIX I – SPECIFIC ACTIONS FUNDED IN THIS SEMESTER**</div>

Education and Training

Specific Action 6-1
Cognitive Vision Education Survey

Specific Action 6-2
Restructuring of CVonline

Information Dissemination

Specific Action 1-1
Best Paper Prize in Cognitive Computer Vision (ECCV '02)

Specific Action 8-1
Keyword Indexed Bibliography with Abstracts of Papers

Specific Action 13-1
ICVS'03 – 3rd International Conference on Computer Vision Systems: "Special Theme: Cognitive Vision Systems", Graz, 1st – 3rd April 2003.

Industrial Liaison

Specific Action 7-1
ECVision white paper of applications of cognitive vision systems

Specific Action 7-2
ECVision prize for best application development in cognitive vision systems

Details of each Specific Action are provided below

ECVISION SPECIFIC ACTION DESCRIPTION, WORKPLAN, & BUDGET

SPECIFIC ACTION 6-1
COGNITIVE VISION EDUCATION SURVEY

1. Action Area

Education and Training

2. Goals of the Action

To undertake a survey of what is already taught worldwide in the area of cognitive computer vision. This will include:

1) definition of task and preliminary survey result to help structure the search

2) survey

    2a) web search through home pages of key groups and people
    2b) direct email survey

3) collation and presentation of survey as a web page

3. Concrete Outcomes of the Action

A web page summarizing the result of the survey, with clickable links to other resources, summarizing topics taught, where taught, by whom, resources available, etc.

4. The Benefits to the Network from Carrying out the Action

The survey is a preliminary to developing the model cognitive computer vision syllabus. The links to resources, existing syllabi and who is teaching what would be usable by the rest of the consortium.

5. Effort

2 person weeks by a PhD student at Edinburgh
2 person weeks by a PhD student at Bonn

6. Start and Completion Dates

Start: May 1, 2002
End: June 30, 2002

7. Funding

Travel Costs

€1800

Computing Costs

€0

Other Project-Specific Costs

€0

Labour Costs

€1400 = 10 person days at €140/day including overheads (Edinburgh)
(€1166.67 excluding overheads of €233.33)

€2000 = 10 person days at €200/day including overheads (Bonn)
(€1666.67 excluding overheads of €333.33)

€600   unallocated balance for flexibility
(€500 excluding overheads of €100)

Total Cost

€5800

ECVISION SPECIFIC ACTION DESCRIPTION, WORKPLAN, & BUDGET

SPECIFIC ACTION 6-2
RESTRUCTURING OF CVONLINE

1. Action Area

Education and Training

2. Goals of the Action

Restructuring CVonline to make the vision concept structure more transparent, as a preparation for linking in the cognitive vision syllabus that ECVision will be developing.

Because of the way CVonline has evolved, the original hierarchical concept structure (now containing about 1400 topics) is hard to see because of the adjacent content links (now about 1200 links, but not evenly distributed).

3. Concrete Outcomes of the Action

A restructuring of CVonline that would fold away the content into leaves in the hierarchy.

4. The Benefits to the Network from Carrying out the Action

The restructured CVonline would provide as hot content links for the developing cognitive computer vision syllabus, as well as for general worldwide use.

5. Effort

4 person weeks by a PhD student

6. Start and Completion Dates

Start: May 1, 2002
End: June 30, 2002

7. Funding

Travel Costs

€0

Computing Costs

€0

Other Project-Specific Costs

€0

Labour Costs

€2800 = 20 person days at €140/day including overheads.
(€2333.33 excluding overheads of €466.67)

Total Cost

€2800

ECVISION SPECIFIC ACTION DESCRIPTION, WORKPLAN, & BUDGET

SPECIFIC ACTION 1-1
BEST PAPER PRIZE IN COGNITIVE COMPUTER VISION

1. Action Area

Information dissemination.

2. Goals of the Action

Promotion of the discipline.

3. Concrete Outcomes of the Action

Award of best paper prize at ECCV '02

4. The Benefits to the Network from Carrying out the Action

Greater appreciation of the importance of the discipline

5. Effort

Nil.

6. Start and Completion Dates

Start: 28/5/02
End: 31/5/02

7. Funding

Travel Costs
    €0

Computing Costs
    €0

Other Project-Specific Costs
    €800 (Prize money)

Labour Costs
    €0

Total Cost
    €800

ECVISION SPECIFIC ACTION DESCRIPTION, WORKPLAN, & BUDGET

SPECIFIC ACTION 8-1
KEYWORD INDEXED BIBLIOGRAPHY WITH ABSTRACTS OF PAPERS

1. **Action Area**
Information Dissemination – to promote the visibility and profile of cognitive vision

2. **Goal**
Development of keyword indexed bibliography with abstracts of papers.

3. **Concrete Outcomes**
- Annual distribution of content on CD to all members allowing appendices of video sequences with pointer to site or full pdf papers (depending on copyright restrictions) in March each year.
- 3 month calls to members for contributions (October, January, April and July)
- Keyword indexing compatible with Education and Training Ontology

4. **Benefits**
- Database of existing relevant publications with easily searchable format/index
- Bibliography (bibtex) of literature, with abstracts of all papers, for references
- Periodic distribution of web-site content on CD to all members, for fast access
- Database of research results (presentations, videos, etc.), for research-level update

5. **Effort**
60 person-days: 2 days per month for 30 months.

6. **Start and Completion Dates**

   Start: 01/10/02
   End: 01/03/05

7. **Funding:**

- Will not require travel costs
- Will use ActIPret PC and CD burner so zero computing costs
- Project consumables = €1k.
- Labour costs 60 days of post-grad @ €300 euros = €18k.
- **Total costs = €19k.**

ECVISION SPECIFIC ACTION DESCRIPTION, WORKPLAN, & BUDGET

SPECIFIC ACTION 13-1

ICVS'03 –
3rd INTERNATIONAL CONFERENCE ON COMPUTER VISION SYSTEMS
"Special Theme: Cognitive Vision Systems"

Markus Vincze
Vienna, May 6, 2002
Area of Contribution
Information dissemination
Goals
- Document the emergence of an engineering science of Computer Vision Systems and Cognitive Vision Systems
- Discuss the embedding of complete machine vision systems within the real world
- Increase the visibility of Cognitive Vision internationally
Concrete Outcomes
- 3 day conference and workshop/tutorials
- Planned: 30 papers, 30 posters (at least two each on Cognitive Vision)
- Planned: 3 workshops/tutorials (at least on the special conference theme: Cognitive Vision Systems)
- For more details please refer to the appended Call for Papers
Benefits of Network from Sponsoring ICVS'03
- Dissemination to international audience
- Visibility of ECVision on Call for Papers, web-site, brochures, etc.
- One year ECVision meeting organised together with conference
- Increased meeting and conference participation and discussion
Effort involved
Conference organisation:
TUV (Technical University of Vienna): 5 PM (2.5 PM provided by TUV)
JRG (Jonnaeum Research Graz): 6 PM (funded by JRG)
Expected Start and Completion dates
Start date: April 1, 2002
Conference date: April 1-3, 2003
Completion date: April 31, 2003
Requested Funding
Labour Costs:
Organisation assistant at TUV: 2.5 PM (= 50 PD, person days) distributed over the period of June 2002 to April 2003
Student labour costs: 2800 Euro (56 Euro/PD)

Conference Secretary at JRG: 6 PD during conference
Labour costs: 810 Euro (135 Euro/PD)

Travel Costs:
Travel costs of invited speaker Glyn Humphreys (University of Birmingham, UK)
Flight: 800 Euro
Subsistence: 600 Euro (4 days)

Total Funding Requested:

Item	Costs
Travel costs	1400 Euro
Labour costs TUV	2800 Euro
Labour costs JRG	810 Euro
Overhead on Labour (20%)	722 Euro
Total	**5732 Euro**

ECVision Specific Action Description, Workplan, & Budget

Specific Action 7-1

ECVision white paper of applications

of cognitive vision systems

ORGANISER: Patrick Courtney

Area of contribution

- o   Industrial Liaison

The goals of the action

To collate knowledge of existing systems and opinion on future trends in cognitive system systems in the EU.

The concrete outcomes of the action

Output is a report with initial contributions to TA4.2, 4.3 and recommendations,

Methodology

organise workshop bringing together (8) industrial players with an interest/experience in cognitive vision applications, to brainstorm where we are now, what the key trends are, what the short, medium and long term applications are area, and what are the main barriers. Participant will be expect to present applications in their own sectoral area which are near- or potentially cognitive. Candidate sectors include security, automotive, games, entertainment, white goods construction, medical, training and eduction, life science.

Proposal plan

1. draft invitation and brief. Emphasise benefits of participation and non confidenial nature of discussion
2. Validate with ECVision area leaders and key members
3. collate contacts from existing Cognitive vision projects (DETECT, VISATEC, LAVA) other IST project, area leaders, etc. Candidates are: Charles Dance, Xerox; (from DETECT for media) (from VISATEC for manufacture); (from JLC); (from HIC); 2-3 others?
4. select location (UK?) and date (mid May 2002)
5. book room
6. send out invitation
7. run workshop
8. draft report. Report is expected to have sections on definitions, motivation, existing cognitive-like applications, trends, future applications, barriers, expectations.
9. circulate and review report
10. update
11. publish on website

12. add feedback form
13. thank all

The benefits to the network from carrying out the action

Profile for the network within application community

Information on state of the art for research roadmap

The effort involved

0.5 man month total (10 days at 450/day)

Expected start and completion dates

start May 2002 end Sept 2002

Requested funding:

- o Travel Costs: €6000 (travel to workshop 8 x 750)
- o Computing Costs: nil
- o Other Project-Specific Costs: €1000 (room+equipment hire)
- o Labour Costs: €4500 (10 man days total at 450/day)
- o Overhead €900 (20% of €4500)
- o **TOTAL €12400**

ECVISION SPECIFIC ACTION DESCRIPTION, WORKPLAN, & BUDGET

SPECIFIC ACTION 7-2

ECVision prize for best application development

in cognitive vision systems

ORGANISER: Patrick Courtney

Area of contribution

- o Industrial Liaison

The goals of the action

Recognise exploitation of cognitive vision technology

Raise profile for the network within application community

Raise profile of cognitive vision as a distinct domain

Fulfill commitments in TA4

The concrete outcomes of the action

Prize awarded to developers at high profile event

Press articles on prize and cognitive vision

Proposal plan

14. produce brief: to recognise and promote the existence of cognitive system systems in the EU.
15. draft selection process: prize to be EU1000 (to be confirmed) to be awarded to a vision system developed in the EU exhibiting characteristics of cognitive vision system (learning, reasoning, recognition and categorisation, and goal specification) and having significant economic or social impact. Emphasis will be on systems rather than modules. Systems based mainly on signal processing techniques, structural image analysis, or where the uncertainty has been removed from the task will not be considered. The prize may be shared between the owner and developer of the system. References from users are welcomed.
16. draft application form. including criteria ('in what way does the system exhibit.....?'), and references
17. appoint judging panel (3-6 recognised experts) and prize giver (public figure)
18. confirm selection and awarding process with panel
19. select prize giving event (possible Hanover fair March 2003, IST conference Nov 2002). Confirm with organisers. Check costs, additional arrangements required
20. set timescales for deadline (poss oct 2002, jan 2003)
21. announce and promote competition

22. collate entries and pre-filter ineligible
23. pass onto judges
24. check references
25. make decision
26. production of physical prize
27. award prize at event
28. announce result and promote
29. thank all
30. evaluate

Due to the importance of the profile required for such as activity, it is proposed that it be carried out in partnership with Image Processing Europe (alternatively Advanced Imaging Magazine USA)

The benefits to the network from carrying out the action

Profile for the network within application community

Profile for cognitive vision as a distinct domain

The effort involved

0.5 man month total (10 days at 450/day)

Expected start and completion dates

start May 2002 end Dec 2002 or April 2003

Requested funding:

- o Travel Costs: €1000 (travel to prize event for prizegiver)
- o Computing Costs: nil
- o Other Project-Specific Costs: €1500 (prize including trophy)
- o Labour Costs: €4500 (10 man days total at 450/day)
- o Overhead €900 (20% of €4500)
- o **TOTAL €7900**