

Third Six-Monthly Meeting & Mid-Term Review

Industrial activities TA4

*Frankfurt Airport Conference Centre
Friday 19th September 2003*

Highlights

- White paper industrial applications
 - Productive workshop
 - Excellent contacts
 - Additional novel challenges identified
 - Report for roadmap and dreams (TA1)
- Vendor database
 - Several entries of innovative firms completed

Introduction to TA4

- Aims: to identify application drivers, highlight successes, and promote research trials, in all types of industries
- Overview – status/deliverables - actions
 - Database of research profiles TA4.1.n
 - Database of vendors TA4.2.6
 - Database of application motivated problems TA4.3.6
 - List of techniques useful/not TA4.4.6
 - White paper SA 7.1
 - Application prize TA4.5.n/SA 7.2

Database of research profiles TA4.1.n

- No specific activity in this area
 - information collected in research planning
 - A list of all active computer vision groups in Europe has been made available on the website. This list of groups was compiled and edited by Danica Kragic and Henrik I Christensen, Computational Vision and Active Perception, Numerical Analysis and Computer Science, Royal Institute of Technology, Sweden.
 - The list can be accessed at:
www.ecvision.info/research_planning/EU_Computer_Vision_Groups.htm

Database of vendors (1)

TA4.2.18

- Objectives
 - Directory of vision vendors, indexed by application, product type, deployed technology, industrial sector.
 - TA4.2.n (month $n = 6, 12, \dots, 36$)
- Methodology and issues
- Current status

Database of vendors (2)

TA4.2.18

- **Methodology and issues**
 - To Whom is the database aimed?
 - End Users, Competitors, Academics, ECVision
 - How / Where to find “vision vendors” ?
 - Supplier companies, integrators, tool suppliers, end users...
 - Projects, Magazines, Address Lists, Exhibitor lists, Web Databases, Personal contacts
 - How to validate their work as cognitive?
 - Company Web site, Articles (archive), Brochures, Company adverts, Survey/questionnaire [outside scope]
 - Is the database complete, unbiased? No!
 - Does it matter? not at this stage

Database of vendors (3) TA4.2.18

- **Current status**

- Websites/addresses/brochures checked 100+
- In database: 10
- Response from survey of 20: 1
- Invitation to members to suggest names, 8 new names proposed

www.ecvision.info/industrial_liaison/Database_of_Vision_Vendors.htm

- **Conclusion**

- A lot of effort for small number names
- Not many players at present
- Entries limited to actually suppliers at present – too narrow ?
- Need to see if database is used

Database of application motivated problems(1) TA4.3.n

- Objective
 - To find news applications of cognitive vision technology
 - To find new problems for cognitive research

- Actions
 - Video content sector
 - Education training sector
 - Transport sector
 - White paper workshop (SA7.1)

- Current status

Database of application motivated problems(2) TA4.3.n

- **Video content sector:**
 - workshop 3/4 July 2002 Paris 51 participants 31 organisations 7 countries
 - meeting 12 July 2002 Sophia Antipolis 7 French participants
 - multimedia, telecommunications, integrators, coding, academic
- **Education training sector:**
 - workshop 29 July 2002 Chiavarri Italy 20 participants 14 organisations 6 countries
 - hospital, aerospace, integrators, academic
- **Transport sector:**
 - workshop 14 January 2003 Paris 124 participants 76 organisations
 - end-users (train, aeroplanes, cars), integrators, academic

Database of application motivated problems(3) TA4.3.n

- **Issues**
 - End-users:
 - too many videos to process manually
 - current systems too far from end-users needs
 - Industrials:
 - only specific systems built from scratch
 - need of low cost and real-time solutions
 - Academic:
 - cognitive vision techniques (ontology, learning, image understanding, video understanding, etc..)
- **Current status**
 - need to reinforce links between the different actors
 - acts as contribution to T4.2 (database) T4.3 (problems)

White paper on industrial Applications (1) SA 7.1

- **Objective**
 - To collate knowledge of existing systems and opinion on future trends in cognitive vision systems in the EU.
 - Existing near cognitive/near future cognitive
- **Concrete outcomes**
 - a report with contributions to TA4.2, 4.3 and recommendations
 - identification of common barrier, trends, R&D challenges
- **Specific action: 10 man-days/€12k**
 - incl. workshop, travel of participants

White paper on industrial Applications (2) SA 7.1

- **Industrial participants: 8**
 - life science, media and entertainment, industrial inspection, photo libraries, surveillance, aerospace, robotics
 - DETECT, LAVA were represented
- **Areas not covered:**
 - manufacturing, telecommunications, automotive, education/training, medical
- **Outcome:**
 - Report available at:
[www.ecvision.info/industrial_liaison/Industrial Applications of Cognitive Vision.pdf](http://www.ecvision.info/industrial_liaison/Industrial_Applications_of_Cognitive_Vision.pdf)
 - Participation in dreams workshop (TA1)
 - Input into research roadmap (TA1)

White paper on industrial Applications (3) SA 7.1

- **Additional technical challenges identified**
 - User Interface
 - human expert
 - visualisation, multi dimensional
 - Vocabulary, ontology
 - databases
 - People detection
 - e.g. TV, robotics (interacting safely), surveillance
 - System design process
 - life cycle, specification, installation, etc.
 - Architecture
 - Modular design
 - Off the shelf components (COTS)
- **B2B decision processes vs B2C**
 - More rational, less cost sensitive, ease of use requirements, reliability requirements

List of techniques useful/not TA4.4.n

- No action so far

Application prize (1) TA4.5.12/SA 7.2

- **Objective**
 - To recognise exploitation of cognitive vision technology
 - To raise profile for the network within application community
 - To raise profile of cognitive vision as a distinct domain
 - To fulfil commitments in TA4

- **Concrete outcomes**
 - Prize awarded to developers at high profile event
 - Press articles on prize and cognitive vision

- **Specific action: 10 man-days/€7k**

Application prize (2) TA4.5.12/SA 7.2

- **Announcement circulated**
 - Closing date: 31 Dec 2002 extended 28 Feb 2003
 - Support from Image Processing Europe
 - Announcement in sept/oct issue
 - Online form
 - Leaflet produced
 - BMVC (120 copies); DAGM (300 copies); Vision (300 copies)
 - EUTIST/EXPANSIV network (20 projects by email)
 - Direct contact/invitation
 - Judging panel: ECVision (3)+Don Braggins+ICVS (2)
 - 3 entries: none appropriate.
 - Deadline re-extended. Personal invitations.
 - Additional entry. Awaiting feedback from panel
 - Hope to award in October 2003

Issues outstanding

- **Highlights**
 - White paper and database of vendors
- **Existing weaknesses in TA4**
 - Initial assumptions over optimistic
 - Community of industrial actors smaller than expected
 - Need to reorient areas work towards
 - Sensitization of players to cognitive vision
 - Non academic players
 - Exchange of basic information about domain
- **Suggested future actions**
 - internal network meeting to identify new actions (with TA1)
 - Broaden database of 'vendors' to include non-academic players
 - Need detailed information on projects and technology
 - Present industrial potential to active projects
 - Especially those without industrial participation