Meeting of the Executive Committee

Munich Airport Conference Centre

Friday 30th March 2007

NOTES

Participants: David Vernon, Bill Sharpe, Tom Ziemke, Fred Cummins

Apologies: Jürgen Jost, Markus Vincze, Christoph von der Malsburg, Andreas Engel, Matthias Scheutz, Peter Ford Dominey, Erik Hollnagel, Guy Tiberghien

The following is a summary of the main issues discussed at the third meeting of the Executive Committee.

First Periodic Activity & Management Reports

Having walked quickly through these reports, it was agreed to use these as the basis of the material to be presented at the first review on June 30th.

Change in people responsible for activities

Given the small number of people at the meeting, it was not possible to reassign the responsibilities for the three areas of Outlook, Outreach, and Education. In the event, Fred Cummins agreed to continue to take responsibility for the Outreach brief (focusing on cognition briefings), Bill Sharpe agreed to continue to take responsibility for the Outlook brief (focusing on the roadmap), and it was agreed to ask Matthias Scheutz to continue to take responsibility for the Education brief.

It was agreed that it we should begin a pro-active recruiting campaign for members over the next three months, initially. This will involve targeting people who work in areas that are currently not well-represented in the network. DV will email the Executive Committee to seek volunteers to take charge of this.

Third Six-Monthly Meeting: 29 June 2007, Munich

It was agreed that the format of the meeting should be the same as the Inaugural Meeting in Nice, i.e., four leading researchers representing different views on cognitive systems. Each will be asked to present their views on the theme of the meeting: cognitive architectures. DV agreed to give a short overview of cognitive architectures at the outset. A short-list of invited speakers was drawn up and DV will follow up with the invitations.

There will also be a poster session and wine reception. Each cognitive systems project will be invited to contribute a poster and a 2-4 page description of their architecture. Any member that wants to present a

poster will also be welcome to do so. These descriptions will be made available on the euCognition website. DV will contact all cognitive system projects to ask them to be present.

The invited speakers will be asked to give their impression of the architectures presented in the poster session in a closing session after the reception.

First Review: 30 June 2007, Munich

The activities of the Network will be reviewed by Jim Little (http://www.cs.ubc.ca/~little/) and Edwina Rissland (http://www.cs.umass.edu/~rissland/). The review will start at 9:00 am and finish at 1:00 pm approximately. All members are welcome to attend. Members of the Executive are strongly encouraged to attend. DV will present the work of the network at the review. This will be based on an updated version of the material contained in the Periodic Activity Report and Periodic Management Report. Members of the Executive Committee will give their perspective during the subsequent Q&A session.

Fourth Six-Monthly Meeting: 11 January 2008, Venice

The fourth six-monthly meeting will be held on the 11th January 2008 in Venice. We are looking at two options at present: the island venue of San Servolo Servizi (www.sanservolo.provincia.venezia.it/english/centro/default.asp) and the Molino Stuckey Hilton (http://www.molinostuckyhilton.com/)

The theme of the meeting will be "Social Cognition". A student competition will be held on the previous afternoon.

The main meeting will follow the normal format of a small number of invited speakers. We plan to host a network dinner on the evening of the 11th January and we will invite an after-dinner speaker.

Research Roadmap

We had an extensive four-hour discussion on the roadmap. It is becoming increasingly clear that the magnitude of the roadmap exercise we launched at the second six-monthly meeting in Munich is much greater than we had first thought, in terms of scope, complexity, and the effort required to complete it.

The ultimate goal of the roadmap exercise is to identify the research questions that need to be answered if we are go be able to build well-engineered cognitive systems and to identify them at quite fine levels of detail. This is challenging for many reasons: the people working in the discipline of cognitive systems are a very diverse group and this diversity is reflected in the scientific approaches they adopt as the basis for their research. It is crucial that a roadmap must not alienate sections of the community but it is equally crucial that the roadmap should be focused: the community doesn't have infinite resources (funding, effort, and time) and we need to channel energy into the areas that show the greatest promise. The difficulty lies in identifying what these areas are, but to do so in a way that avoids polarization and that doesn't further entrench existing positions. We need instead to highlight possible linkages: mutually relevant concerns that may allow the integration of ideas.

Cognitive systems display the common characteristic that they interact, they adapt, and they anticipate. However, every cognitive system is different, if only because cognition is effectively a means to an end: a way of overcoming the intrinsic uncertainty that accompanies interaction with a world that is not completely pre-specified whilst maintaining the integrity of the system (e.g. its autonomy) and still succeeding in achieving the systems purpose. It seems that it is these two issues that cause the greatest problem when it comes to building a roadmap: the purpose-specific (or goal/context/application/agent-specific) nature of cognition and the degree to which we would like the system to be independent of pre-specified knowledge. Depending on where you set the desired mark in these two dimensions, you will allow a certain type of cognition and, more importantly, a certain variety of possible underlying approaches.

The approach we had decided to adopt to address this challenge was to focus on the requirements of cognitive systems and then do some backward chaining to identify the gaps in our scientific and engineering knowledge which, if filled, would allows us to progress from where we are now to the point where we can build robust cognitive systems. This approach contrasts with the (normal) approach of focusing on our current capabilities and seeking to extend them, often quite incrementally. While there is clearly great merit in the backward chaining approach, the worry is that it can become an extremely large task, for example, by surveying the requirements of all possible applications areas and backward chaining to the complete set of underlying scientific principles. Indeed, we would need to answer almost all the questions posed in the Challenge 2 document to do this job properly and there was a feeling that this would be an enormous task, more befitting a Network of Excellence than and euCognition Outlook action.

In order to keep the exercise tractable, we have decided at this meeting to consider adopting an alternative three-pronged approach.

First, a series of interviews could be conducted with key researchers to establish what they see as the key challenges facing them in their work and to identify any recent breakthroughs. These interviews would be used as the basis of a catalogue of pressing research issues.

Second, a series of immersion days on selected topics could be organized. These would take the form of ‘conversations’ between two leaders in the field. These two people will have complementary positions on the topic in questions. The goal of the event will be to debate the issues underpinning the topic and try to tease out what it is we should be doing to make deepen the scientific foundations of the area and extend our current capabilities.

Third, a survey of all members of euCognition could be conducted, seeking answers to three questions.

- What do we learn about human cognition from your work?
- What new tools, capabilities, gadgets do you hope to develop in the next 5, 10, 20 years?
- Why can’t you build them now?

These answers should be framed in a way that allows them to be understood by an educated non-specialist (e.g. a reader of New Scientist or Scientific American).

This three-pronged approach might be seen as a sort of middle ground between the forward-chaining and backward-chaining approaches to road-mapping.

It was agreed to cancel the roadmap meeting that was planned for the 18th May and instead hold a follow-up meeting on the same date to progress these ideas further; all members of the Executive Committee are welcome.

Date of Next Meeting

DV will propose to the Executive Committee three dates in October for the next meeting.

Any Other Business

euCognition Website

We agreed that a set of buttons should be added to the home page to allow quick access to:

- Wiki
- Roadmap
- Next meeting
- Network Actions
- Cognition Briefings

Cognition Briefings

There is a possibility of the cognition briefings being published by Springer. If this possibility is realized, we will announce this to the members on the understanding that only the best briefings will be selected for editing and publication. This should help encourage more contributions.

Time Sheets

DV reiterated the need for contractors to keep timesheets detailing the time expended on euCognition activities. It is not sufficient to report the global effort figures that are contained in the Periodic Management Report. DV undertook to clarify this requirement with reference to Commission guidelines.

To Do

- Ask Matthias Scheutz to continue with the Education brief.
- Email Executive Committee to seek volunteers to lead the membership recruitment campaign.
- Invite speakers for June meeting.
- Invite CogSys projects to present a poster and short paper at the June meeting.
- Invite speakers for the January meeting.
- Clarify requirements on recording time and effort.
- New buttons on the website home page.
- Clarify timesheet requirements.
- Propose dates for the next meeting of the Executive Committee.
- Cancel and re-organize the next roadmap meeting.