

Overview of the PASCAL Management Structure

The Coordinator of the new network, John Shawe Taylor, had previously coordinated two Working Group Networks, NeuroCOLT and NeuroCOLT2, involving up to 16 partners. This meant that he was personally acquainted with all of the project partners to be involved with PASCAL, greatly simplifying the management process. The NeuroCOLT2 network to some extent formed the core of PASCAL, but with the inclusion of a wide range of new partners, the number of members was increased to over 50.

From an organisational point of view one of the main changes that the increased size of network created was the potential breakdown of management based on personal knowledge of all the participants. It therefore became necessary to formalise the procedures and processes that controlled the operation of the network. A further and perhaps more important change was the recognition that it would not be possible for one or even a small group of people to foresee or control the research direction that would be followed by network partners.

Consequently, in order to maintain their engagement with the project there would need to be significant bottom-up organisation allowing groups to propose and develop novel ideas and directions. Indeed being open in this way was seen as crucial if the network were to generate dynamic and cutting edge research. However, just letting individual groups 'do their own thing' would undermine the whole purpose of creating new European synergies.

The conclusion reached was that the mechanisms should nurture and be responsive to bottom-up initiatives but that the relevance and quality of major initiatives should be assessed and funding allocated through a peer-review process.

Two main funding procedures were introduced: one to

provide nurture of basic research and the second to regulate larger scale activities. It was imperative that both should not be allocated a priori, but be moderated by checks on activity levels and the quality of any proposed initiatives.

Base-line funding was allocated to each site year on year to ensure that they could participate in the network through attending events, visiting other sites, hosting visits, etc. With active sites it was also intended to give them the freedom to be creative in advancing PASCAL's objectives by allocating them funds that they can use at their own discretion.

For the first year the base-line funding level was proportional to the number of researchers and PhD students registered at the site. At the end of each year the activity of the sites was assessed and the base-line funding adjusted to reflect their level of participation and contribution to the network. In this way the funding works was based on delayed feedback - those that forward PASCAL's objectives are rewarded with additional funding in the following year. The Steering Committee were able to affect how the money was used through its determining of the criteria used in the assessment of sites. These were adjusted in later years to offset identified weaknesses or to effect desired changes in the attention paid to different activities. Hence, the Steering Committee could exercise its management responsibilities through a relatively transparent adjustment of weightings for different activities together with the possible introduction of additional criteria addressing new issues identified by reviewers or the committee members.

The proportion of the overall funding allocated through the base-line formula was approximately 40% in each year. The remaining 60% was held back to support specific targeted activities through a series of programmes, such as the Conference and Workshop Organisation Programme, and the Infrastructure Programme.



Funding Programmes

Each programme had its own entry point through which PASCAL members could apply for funds for the activities supported by that programme. These could either be set to be continuously open or against specified deadlines. The application would automatically land on the programme manager's in-tray.

He or she would then have the option of either approving the funds themselves (for small and clearly useful activities), or to pass the proposal to referees for independent assessment. The resulting referee reports could either be used by the programme manager to reach a decision on their own, or inform the discussions of a committee formed around the programme manager.

If accepted the advance for the funds would be allocated to the site and the researcher could begin to implement the particular action. By ensuring that the level of refereeing was commensurate with the level of funding requested, the system was able to ensure fast processing of small applications. Even for larger programmes such as the Conference and Workshop Organisation Programme the turnaround for an application would typically be around 1-2 weeks.

Such a flexible and adaptable response ensured that the network could react very rapidly in a bottom-up fashion to emerging novel research directions arising from any member of the network.

The level of the funding for the different programmes was monitored at the six monthly Steering Committee meetings and where necessary adjustments between programmes were made. These typically were not contentious as high spending programmes were generally the ones most clearly advancing PASCAL objectives, while those that were not attracting significant numbers of requests were happy to release their funds.

Two aspects of the programme organisation that were important in creating a successful system are worth highlighting.

- Firstly, the fact that programmes were run independently by a programme manager with visible rotation of managers taking place meant that the funding decisions were to a large extent decentralised from the coordinating site.
- Secondly, the coordination through the Steering Committee was at a level that enabled a strategic view of the whole network to be formed and the adjustment of funding between programmes gave the committee levers that they could adjust to respond to perceived needs without becoming embroiled in too many details.

Some examples of different programmes follow.

Knowledge Dissemination Programme

This programme was tasked with managing the software infrastructure to enable the coordination and research dissemination of the network. At the beginning of the project a small working party was formed to discuss aspects of the network and prioritise the tasks for the software infrastructure.

The main decisions reached at this meeting were:

- The budget would be relatively small and hence the option of outsourcing the whole task was rejected.
- The system should take the form of a web portal, providing a single entry point to the project, both for members and visitors.
- The portal should be browser independent.
- Where possible open source software should be used.
- The server systems would be co-located with the Network Project Management Office at Southampton.
- The system should be as simple as possible to use.
- A spiral-based approach to development would be used to get fast feedback from members of the network, and enable changes to be accommodated as the network evolved.
- Enable delegation of tasks to appropriate network members and managers.

The success of PASCAL was going to be critically dependent on the delivery of this infrastructure. To this end the majority of the work was undertaken intensively by a single individual who was familiar with the technologies and system requirements.

The development and deployment of the core mechanisms were all completed within the first year of the project, and the latter years saw refinements to the operation of the portal and the introduction of new dissemination mechanisms.

The main technologies adopted for the Portal were a database (SQL) to store the data of the network, a web programming language (PHP) to provide dynamically generated views of the network and to "glue" the miscellaneous systems together, and style sheets (CSS) to provide a uniform appearance to the portal. If suitable, stable open source packages existed they were used to implement the requirements of the portal, such as using the Eprints electronic document archive. Otherwise, bespoke systems were developed in PHP to meet the requirements, such as the programme management process.

The aesthetic design of the portal used style sheets to enforce a simple clean interface, where the emphasis was on conveying information clearly and quickly. To facilitate navigation and to mirror the network structure a two-level tab-based design was used throughout the site.

In hindsight the portal provided a catalyst to the network and its early adoption was essential. In its embryonic phase its primary focus was to inform the members and managers about the nature, geography and workings of the network. As the network evolved it took on a more outward facing role with members using it to promote their research, through workshops, challenges, papers, lectures and software.