



Position title	Technical Officer – National Collaboration in Higher-Level Mathematics Instruction using the Access Grid
Faculty	Science
Occupant	New position – Collaboration and Structural Reform (CASR) grant
Reports to	Executive Officer, CASR project, School of Mathematics and Statistics
Manages	The technical administration and support for the CASR grant project: “ <i>National collaboration in higher-level mathematics instruction using high-speed high-bandwidth internet-based communication technology</i> ”
Internal work contacts	Head – <i>School of Mathematics and Statistics</i> CASR Executive Officer – <i>School of Mathematics and Statistics</i> Finance officer – <i>School of Mathematics and Statistics</i> Computer Systems Manager – <i>School of Mathematics and Statistics</i> Network Manager – <i>ICT</i>
External work contacts	Technical Working Group – <i>ICE-EM Access Grid Room Project</i> Peers in other grid room projects nationally and internationally

Overall purpose

To provide technical assistance and support for the CASR project, including research into new collaboration technologies, software and hardware support for collaboration infrastructure, training academic staff, data collection for the evaluation of the CASR project.

Position context

The University of Sydney is the lead institution for a CASR grant to develop, implement and evaluate learning and teaching systems for advanced and honours-level mathematics education by sharing the capabilities of several Australian universities through the novel use of high-speed internet-based communication technology.

The need for this project was identified in the December 2006 National Strategic Review of the Mathematical Sciences Research in Australia conducted under the auspices of the Australian Academy of Sciences and funded by the ARC Special Research Initiatives Scheme. The report (<http://www.review.ms.unimelb.edu.au/>) outlines a national strategy to rebuild and re-invigorate the mathematical sciences in Australia. Chapter 5 of the Review identifies the honours year as the precursor to becoming a mathematical sciences researcher and notes the need for a wide availability of honours mathematics and statistics courses.

This project aims to fully utilize the most advanced high-speed and high-bandwidth network technologies to establish the national collaborative teaching infrastructure. The proposed network system heavily relies on the multicast network communication and other Audio and Visual communication technologies. This infrastructure will connect all participating universities (Macquarie University, the University of Wollongong, the Australian National University, La Trobe University and the University of South Australia). The Technical Officer will work collaboratively with the Executive Officer and other technical officers from the participating universities to ensure the stable deployment of collaboration technologies and to train technical staff as well as academic staff.

The ideal candidate will have an experience in computer and network administration. They will also be self-motivated with the ability to test out new collaboration technologies in order to improve remote lecture delivery processes and be able to prioritise tasks within given deadlines. As the first point of contact for the CASR project's technical support, good communication skills are essential.

Key result areas

1. Establishment of CASR technical support processes

- Identifying all the technical personnel at participating universities, and creating a network of technical support team.
- Creating on-line technical support procedures (utilizing advanced collaboration technologies such as blogs, wiki and issue tracking system) to assist both technical officers and academic staff.

2. Establishment of CASR technical training process

- Provision of both technical and user guide documentations of software tools used for CASR project.
- Design and provision of technical support training program.
- Design and provision of user training program.

3. Consultation, evaluation and reporting

- Consulting with technical officers from the participating universities with regard to the evaluation of latest advanced collaboration technologies and the provision of evaluation documents.
- Collecting and aggregating evaluation data through consultation with participating academic staff and technical staff.
- Making technical recommendations based on the technical evaluation of the CASR project.

Key Performance Indicators

The Technical Officer will

1. Ensure the all software and hardware is appropriately installed.
2. Ensure the all systems are operational at the specified level of quality.
3. Ensure the user guides for all software and hardware used in the CASR project are properly documented and made available through the on-line system.
4. Create an on-line technical support system.
5. Provide technical training materials.
6. Provide user training materials.
7. Collection of electronic evaluation data (including online questionnaires) for project/system evaluation.
8. Provision of technical evaluation/recommendation reports to the Executive Officer.

Selection criteria

Essential

Selection criteria outline the qualifications, skills, knowledge and/or experience that the successful candidate would need to demonstrate for successful discharge of the responsibilities of the post. Applications will be assessed on the basis of how well candidates satisfy these criteria.

The Candidate should have:

- Undergraduate degree in the field of Information Technology, Networking or Computing.
- Appropriate knowledge and the ability to produce technical and user documentation.
- Ability to work and operate well in a team environment.

- Excellent written and verbal communication skills.

Desirable

- Experience in Unix (or equivalent) system administration including network administration (such as setting up a DNS server, web server, wiki/blog server).
- Experience in multicast-based video conferencing systems.
- Familiar with various network protocols.
- Experience in network programming.
- Experience in word processing (such as Microsoft Word) and spreadsheet (such as Microsoft Excel) applications.
- Familiar with telecommunication tools such as Instant Messaging and Videoconferencing tools.

Signature

Head of Department / Unit



Date 1 April 2008