



Final Report

Capacity & Community | Cotton Research & Development Corporation

Final Reports

Part 1 - Summary Details

CRDC Project Number: CSP173

Project Title: **ACRI Computing and Network Support**

Project Commencement Date: 01/07/2005 **Project Completion Date:** 30/06/2006

Research Program: Capacity & Community

Part 2 – Contact Details

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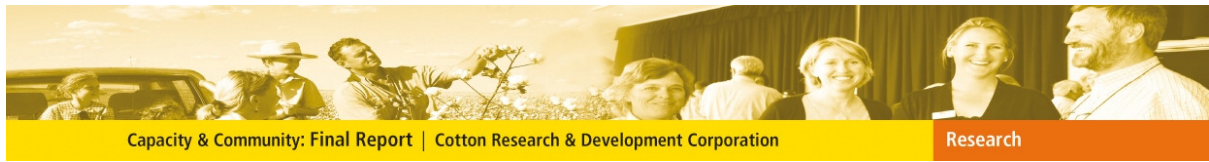
Researcher 2

Organisation:

Postal Address:

Ph: **Fax:** **E-mail:**

Signature of Research Provider Representative: _____



Part 3 – Final Report

Background

The CRDC for many years has supported operation of computing capabilities at ACRI. This support is additional to that provided by CSIRO and NSW DPI at ACRI and this investment has made the facility world class in terms of its ability to deliver cotton research. The project specifically supports cotton research endeavours at ACRI and would not be available otherwise through host institutions without industry support. Key activities include: network and computing capabilities for ginning, HVI and cabling for insectaries; development of computing infrastructure for the Cotton CRC and decision support efforts (e.g. internet servers and technical advice); and personal assistance that enables ACRI have a dynamic IT and research environment.

Tony Pfeiffer is funded through this project and he has been instrumental in championing and accessing over \$1.3 M in additional investment from CSIRO and NSW DPI for computing infrastructure at ACRI. This project has also enabled the site to function as one institute rather than separate institutions requiring separate and inefficient duplicate investment in IT infrastructure. Host institutions provide resources for computing infrastructure which include network wiring, access to discount software and hardware, software and hardware for email, access to corporate software and hardware for financial and human resources.

Tony Pfeiffer is an experienced network manager and is permanently based at ACRI to provide network and computing support. He is available to all people at ACRI to provide computing assistance when necessary. He works closely with CSIRO IT and NSW Department of Primary Industries to coordinate further investment in computing services and infrastructure at the site. Tony supports 63 CSIRO, 49 NSW DPI and 10 other users (including the Cotton CRC). The total number of computer terminals is around 150. Tony's service role, and the operating provided by this project supports:

- Backup of research data
- Support ACRI phone system
- Installing and configuring new notebook and desktop computers
- Support of specialised scientific equipment link to computers and network (e.g. weather station, HVI, scales at gin)
- Implement CSIRO and NSW DPI IT policies
- Network and data security
- Integration of CSIRO and NSW DPI computing infrastructure (e.g. data servers, printers)
- Evaluation of new IT technologies
- Supports video conferencing facilities
- Occasional support for local growers and CRDC

In a science role Tony is also contributing to the development of decision support mainly by providing:

- Testing hardware for delivery of decision support. For example he is involved in testing handheld technologies utilising broadband wireless technologies.
- Configuring servers for testing. Tony sets up operating systems in different computers so that decision support software can be tested in different computing environments



- Installing servers for websites (eg. Cotton CRC). Tony has been instrumental in keeping costs low in the setup and continual delivery of the CRC website through the CSIRO network.

Objectives

The aims of the project were:

1. To provide full time direct support for computer hardware and network services at ACRI, Narrabri.
2. To facilitate the connection of industry users to on-line services developed by the CRC.
3. To provide ACRI researchers with essential computer resources and network.
4. To facilitate the introduction of new technology to improve communication and information management among the cotton research community and industry users.

Objectives that were to be achieved in each year of the grant were:

1. Monitor ACRI network performance on a daily basis
2. Support communications infrastructure at ACRI
3. Explore opportunities to upgrade network performance at ACRI
4. Facilitate adoption of new computing technology at ACRI
5. Participate in the development of network infrastructure of host organisations
6. Provide ACRI with computing support

All project objectives were achieved specific details are provided below.

Methodology

Tony Pfeiffer is an experienced Network manager and is permanently based at ACRI to provide network and computing support. He is available to all people at ACRI to provide computing assistance when necessary. He works closely with CSIRO IT and NSW Department of Primary Industries to coordinate further investment in computing services and infrastructure at the site. In fact Tony's position has been highly successful in leveraging additional resources for computing and the network

Results

All project objectives have been achieved with a high degree of success. This project is supporting a reliable and functioning computer network and general computing services at ACRI which is benefiting all research and extension staff. Specific achievements that Tony Pfeiffer (Network Manager) has achieved for the past year include:

- Improved remote support for PABX. The PABX is ACRI's phone system.
- Setup presentation equipment for CRC reviews and major forums.
- Improved overall security of the network.



- Redesigned computer and PABX room for upgraded security. Room for expansion has been accommodated for as well as complying with OH&S standards. Installed backup air conditioners with automatic start up if main air conditioner fails.
- Tony negotiated with CSIRO IT to fully fit out the ACRI conference room with state of the art video conferencing and audio-visual facilities. Tony has purchased the equipment and has begun installation. This project is being funded by CSIRO.
- Purchased (CSIRO funded), and built a new Internet server for Cotton CRC website to improve client access speeds.
- Tony liaised with CSIRO IT to justify the inclusion of ACRI in major fibre link upgrade. This will allow for offsite backups, state of the art video conferencing and high speed data transfer. Cable has been installed and awaiting active equipment to complete.
- Installed 35 (CSIRO funded) new computers for Windows and CSIRO compliance.
- Relocated CRC computing equipment Technology Resource Centre as well as providing sperate functionality (eg. unique email addressing). This allows CRC to operate more identity.
- Initiated the replacement of some analogue phones with digital phones. This will bring site in line with NSW DPI phone policy (DPI funded).
- Liaised with NSW DPI and contractors for renovation of parts of the main building at ACRI. Tony will be supervising contracting for installation.
- Tony has liaised with CSIRO ONE IT in obtaining “Secret” classification via ASIO to allow high level IT access to maintain services at ACRI with CSIRO help.

Conclusions

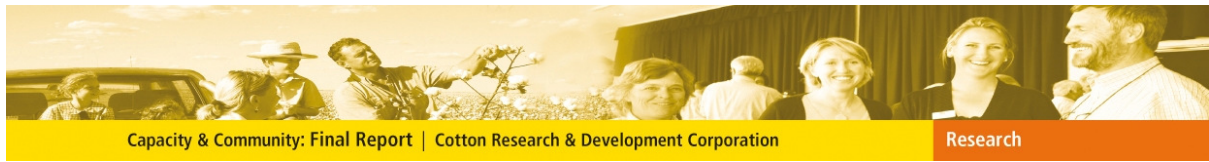
An efficient and world standard computing system at ACRI has benefited all research programs through their use in data processing, storage, statistical analysis, modelling and the development of end-user packages. In addition the network services located at ACRI provide printing services and communication which includes e-mail and website.

The provision of these services has underpinned the quality of research conducted at ACRI and personnel rely heavily on continued and uninterrupted access to computing support. In many instances many initiatives for the cotton industry instigated by researchers and extension officers rely solely on access to computing support provided by this project.

Detail how your research has addressed the Corporation’s three Outputs - Economic, Environmental and Social?

This project assists all research and extension activities conducted at ACRI which ultimately contribute to all outputs nominated by the CDRC.

This project assists all research and extension activities conducted at ACRI which ultimately contribute to all outputs nominated by the CDRC. In fact researchers at ACRI have access to computing facilities that are of the highest standard available.



Detail a plan for the activities or other steps that may be taken:

This project ceased in June 2006. A new project titled ‘Enhancing Cotton Research Capacity at ACRI through Superior IT Support’ was submitted to CRDC which also aims to enhance and maintain the important and crucial computing support at ACRI. Increasing reliance on computing technologies will necessitate ongoing and direct support of computing services at ACRI. Dedicated support becomes more important in regional areas where help is sometimes limited and untimely. In addition in an environment such as ACRI services are more efficient when shared. This project enables all these aspects to be implemented at ACRI.

This project will continue to directly support the activities and operation of researchers located at the Australian Cotton Research Institute.

Part 4 – Final Report Executive Summary

An efficient and world standard computing system at ACRI has benefited all research programs through their use in data processing, storage, statistical analysis, simulation modelling and the development of end-user packages. In addition the network located at ACRI provides printing services and communication which includes e-mail and website. These services have underpinned the quality of research conducted at ACRI and personnel rely heavily on continued and uninterrupted access to computing support to this IT. In instances many initiatives for the cotton industry instigated by researchers and extension officers rely solely on access to the computing support provided by this project. These services are imperative to the proper functioning of ACRI institute and are separate to IT overheads provided by CSIRO and NSW DPI.

This project enabled ACRI to operate its computing services as a whole. Supporting IT in this way is the most efficient and cost effective means for the cotton research effort at ACRI. This support:

- provides ACRI with cutting edge IT technologies making it a world class research facility for dedicated cotton research.
- goes beyond generic services provided by research institutions based in capital cities
- ensures timely access to IT services at ACRI.
- avoids duplication and fragmentation of IT resources for research activities by different institutions based at ACRI.
- ensures that ACRI has an IT champion in place leveraging significant resources from the CSIRO and NSW DPI.
- enables cotton researchers at ACRI to focus on research alone and not on IT issues.

This project employed Tony Pfeiffer, an experienced Network manager permanently based at ACRI to enhance operation of IT at ACRI. While Tony is employed by CSIRO he is available to all people at ACRI to provide immediate computing assistance. He works closely with CSIRO IT and NSW Department of Primary Industries to coordinate further investment in computing services and infrastructure at the site. With the increase in computing power and staff at ACRI, the need for sustained technical support directly to the user has expanded. The systems manager now supports 63 CSIRO, 49 NSW Ag and 10 others computer users. The computer systems manager also supports the network servers (backup and communication) and phone system at ACRI.