Report on Consulting Provided by Angus-Hamer Networking

July 2002 – May 2003

Angus-Hamer Networking has been providing excellent network consulting services for City College since 1996, both in the area of operational technical consulting to the Information Technology Services Department (ITS) on the college’s wide area network (WAN), and in designing and managing construction of the college’s new network infrastructure. Over the last three years, Angus-Hamer has provided technical/consultant/engineering services at the level of $979,380 (2000-2001), $589,170 (2001-2002), and approximately $101,000 for 2002-2003.

In 2002-2003, Angus-Hamer Networking provided technical assistance to CCSF Information Technology Services in the operation of the current network system and deployment of new and enhanced network tools and services.

Under the direction of CCSF Information Technology Services Network and Systems Managers, Angus-Hamer staff provided technical assistance in the UNIX, networking and Wintel server (NT, Windows 2000) technologies. This assistance focused on the key project areas and system migrations necessary to maintain the uptime, support and performance of the CCSF network.

Angus-Hamer Consultants assisted ITS staff in accomplishing three major network systems upgrades during 2002-2003, including:

1. Firewall Migration – Angus-Hamer assisted in the successful migration of the ITS Firewall from a Raptor/HP platform to a new Nokia/Checkpoint system.
   a) Review the architecture of the new Firewall solution.
   b) Analyzed and documented Raptor Firewall rule sets.
   c) Converted Raptor Firewall rule sets to the new Checkpoint environment.
   d) Customized the Checkpoint environment for CCSF security and operational needs.
   e) Implemented a simulation test lab for prototype testing of the new Firewall environment.
   f) Provided onsite coverage for response to immediate issues during the cut over to the new Checkpoint system.
   g) Conducted a performance review of the new Checkpoint system under CCSF production load.
   h) Made sure that the new system configuration is appropriately tuned for optimal performance.
   i) Documented the new Checkpoint Firewall environment.

2. Windows 2000 Migration- Angus-Hamer Networking provided technical resources to support the migration to Windows 2000 including:
a) Planning and refining the architecture of the domain model for the Windows 2000 migration.
b) Review of CCSF’s use of Directory Services Structures (AD, LDAP, NDS, etc.)
c) Review and testing of the interoperability and compatibility with non-Microsoft DNS and directory servers.
d) Formulating detailed technical architecture, covering server purpose, technical components, application services, and systems location.
e) Migrating CCSF servers to a new domain/services model and providing cut over coverage.
f) Monitoring performance of new servers.
g) Documenting servers and network architecture.

3. Angus-Hamer worked to enhance and optimize the CCSF network environment. Specific projects assigned to Angus-Hamer included implementation and configuration of:

a) DNS and DHCP
b) HP Open View
c) MRTG and monitoring tools
d) HP switch and Cisco router operation

With Angus-Hamer’s help, ITS completed a complete redesign of network domains, installed and configured new network servers and implemented a new Windows 2000 environment. Overall, Angus-Hamer provided the expertise necessary to increase performance of the College network and to improve system and network security. These specialized services are critical to prevent outside hackers from gaining access to confidential student, employee, and college data.