

Bond Planning Process:

As part of the Measure B Bond program, the Information Technology staff developed the Information Technology Master Plan (ITMP) based on input from the colleges on the institutional needs and plans for improvements in the classrooms and labs. The focus for the institutional advancements on campus include converting all classrooms to smart classrooms, upgrading computer equipment and audio visual equipment on a 4-year cycle, bandwidth expansion to accommodate future streaming video capabilities and online learning applications, and supplemental wireless access points in strategic locations on campus. The ITMP was drafted in conjunction with the Bond Facilities Master Plan to accommodate the data infrastructure installations and upgrades to support new construction and renovations at the colleges.

The ITMP identified the technology improvements to be implemented and prioritized the technology projects based on critical needs for the students and faculty. The immediate priority was to complete PC upgrades and replacements in computer labs, general student areas such as the library, and office areas for faculty and administrators supporting the student activities. The next priority was updating all classrooms to smart classrooms with full Internet and network access and a comprehensive audio visual suite of equipment. These smart classrooms were implemented in conjunction with the facility renovations or new constructions. Another important priority besides the major equipment installations was the network infrastructure for bandwidth expansion and realignment of the underground conduit to support the facilities plans.

The bond improvements will allow the development of a new architecture and acquisition of equipment that can provide the colleges and district with a high-bandwidth, state-of-the-art network capable of supporting the current and future network connectivity needs. The overall network design goal is to replace the aging hubs and switches with state of the art 10/100 switching to the desktop, Gigabit (copper) connectivity to the servers and Gigabit (fiber) backbones to each building on campus. All connections between the colleges and the District will be upgraded to a minimum of DS-3 or Opteman. Redundant lines will also be provided at all links between the sites.

Another significant network infrastructure upgrade completed in phases is the replacement of the Cisco switches and routers at all sites. The new network infrastructure now provides a faster and more reliable network with several years' growth allowance. For advancements in our security environment, all PIX firewall hardware and software was replaced and improved network monitoring tools were installed to identify intrusions, proactively resolve outages, and track performance.

Hardware and software for servers that support the District and College critical applications are being replaced with District-wide standard configurations that provide expanded capacity and meet new stringent performance specifications. Servers that support applications that require a 24/7 operation will also be mirrored using redundant servers when failures occur.

The District ITS established a Network Cabling Infrastructure Standard, which clearly details the cabling design, materials, spaces and workmanship required during the design and installation of new and renovated buildings. The cabling infrastructure installed at all sites provides sufficient data bandwidth and connectivity as needed by the particular building and room, allow the incorporation of other TCP/IP-based signaling and monitoring systems, incorporate the addition of new IP technologies such as VOIP and video, and enable efficient support through standardized appearance, testing and acceptance criteria.