California Lutheran University (CLU)—one of twenty-eight colleges and universities of the Evangelical Lutheran Church in America—is a young liberal arts university (founded in 1959) with an enrollment of 2,600 students, 1,600 of whom are undergraduates. Located primarily on a 290-acre campus in Thousand Oaks, California (14 miles inland from Malibu), CLU also has graduate centers in Woodland Hills, Oxnard, and North Hollywood. The University offers undergraduate and graduate programs through its College of Arts and Sciences, School of Business, and School of Education and Continuing Education.

Recent, rapid technological change

When CLU President Luther Luedtke took office in the fall of 1992, two grants had recently enabled the University to provide 486-level desktop computers for the majority of faculty. However, there was very little network connectivity for these computers (one or two small local area networks were in place), the University was operating with an antique phone switch, administrative software was homegrown and running on a couple of IBM 36 machines, and most administrative users were using dumb terminals.

Today, the CLU main campus is fully networked, an integrated suite of administrative systems has been purchased, a new digital phone system has been installed, and a major restructuring of the library and technology organizations has led to the creation of a single department responsible for managing the University’s information resources. All of these changes were the result of the implementation of the CLUnet Project. What is impressive is not just the scope of the project, but also the short timeframe—less than three years—in which it was accomplished.

What caused such rapid and major technological change at CLU, and what made it possible? According to Vice President for Academic Affairs Pamela Jolicoeur, “While these changes were not prompted by a written strategic plan—which didn’t exist at the time we initiated them—it was certainly strategic thinking that led us to implement both the network and the reorganization. The concept of viewing information and technology together as a set of strategic resources was both cause and effect in our experience; it prompted us to create the new organization, but in creating such a dramatically restructured organization we also made the campus community aware that we are really talking about one thing—information and the processing of information—and this understanding now underlies our current strategic planning efforts.”

As for what made it possible, in Jolicoeur’s estimation, “As a small and relatively new university, we have the luxury of being flexible. We simply capitalized on some circumstances that provided an opportunity to change—a new administration led by a president who ‘got it,’ a community of administrators and faculty with a positive attitude toward change, a visionary library director, and a receptive board.” When the CLUnet Project proposal was presented for funding to the board, one regent’s simple but powerful statement effectively summed up the situation: “If we say no to this proposal, we’re saying no to the future of the institution.”

The “visionary library director” to whom both Jolicoeur and Luedtke attribute much of the success of the project was Kenneth Pflueger, now head of the new Information Systems and Services (ISS) organization. A brief white paper circulated by Pflueger raising questions about the future of the library also raised consciousness about the need for a campus network, and eventually prompted the appointment of a working group by the president to define a set of mission statements for the project.

Among the goals identified for the CLUnet Project in the fall of 1993 were:

- supporting CLU’s quest for a highly competitive teaching and learning environment, by establishing a campuswide network to enable the distribution and submission of course assignments and to provide universal access to e-mail, shared applications, course material, and the library catalog and other information databases;
- equipping students for meaningful lives and successful careers in the twenty-first century within a context of technological change, by training them on network use and information management;
streamlining administrative procedures to increase efficiency, reduce costs, and better serve faculty and students, by selecting and implementing a new hardware platform and a commercial administrative application that will allow network access to administrative information in an “open systems” environment.

When the network was completed nine months later, the Thousand Oaks campus had implemented a 10-Base-T Ethernet network, running TCP/IP, IPX, and AppleTalk protocols over 58 miles of fiber optic cable and linking all campus buildings—including residence halls. Computing resources on the network include six dedicated file servers and two DEC Alphas.

CLU in cyberspace

Even more rapid than CLUnet’s implementation was its acceptance by the campus community as a new way of doing business. Students, faculty, and staff alike quickly and enthusiastically embraced the new campuswide information system and the easy access it provides to a wealth of information and applications (see graphic below).

According to Luedtke, when students found they could get online from their residence halls they were euphoric. As president, he regularly receives e-mail from students and is disappointed, he says, “if there are no e-mail messages from students when I log on in the morning.”

It didn’t take the campus community long to realize that a university-wide committee would be needed to address the many questions that arise in a networked information environment. The Internet and World Wide Web Committee was established with a membership of about fifteen people including faculty members, administrators, traditional library professionals, and publications and public information staff. This committee worked initially to plan an ideal “prototype” of CLU’s Web site and to establish policies with respect to use of networked computing resources.

While the technical services unit of ISS is responsible for the technology that supports the Web development, design and organization of the content have been primarily the responsibility of CLU’s publications director, working closely with the public information office. Departments are responsible for their own home pages, and the committee continues to function in an advisory capacity as needed.

This article is based on a visit to California Lutheran University by editor Julia Rudy. The magazine’s Campus Profile department regularly focuses on the information resources environment—information, technology, and services—of a CAUSE member institution, to promote a better understanding of how information resources are organized, managed, planned for, and used in colleges and universities of various sizes and types.

A dramatic information services reorganization

In the midst of planning and implementing the CLUnet project, a major restructuring took place that brought together the staffs and responsibilities of five distinct departments—Library Services, Academic Computing, Data Processing, Telecommunications, and Instruction Media—into the new Office of Information Systems and Services. The plan to restructure these departments grew out of discussions of the University Information Services Committee, prompted by Pflueger’s white paper mentioned above. This committee had essentially been functioning as a focal point for planning and budgeting for information resources, since there were so many diverse units with related re-
sponsibilities throughout the University reporting within different line organizations. The goal of the restructuring effort was to define staff positions based on function rather than on organizational entity within the University. All positions in the five departments were reconfigured and placed into two departments in the new organization: Technical Services and User Services.

Technical Services is responsible for administrative information systems, telecommunications, network management, and hardware/software maintenance and installation; for maintaining and developing local information databases; and for providing and organizing access to remote databases. This unit encompasses functions previously covered by the telecommunications unit, the library's technical services and systems function, technical aspects of academic computing, and data processing.

User Services is responsible for providing assistance to users of the network, including but not limited to helping users find needed information and use software applications and/or computer assisted instructional software, training users of network resources, providing a help desk, providing equipment reservations and delivery, and offering document/information delivery services. This unit encompasses the training and user support aspects of academic computing and data processing; the library's reference, bibliographic instruction, collection development, interlibrary loan, and circulation functions; and functions performed by media services and the Multimedia Instructional Design Center.

A key to making the restructuring work was having the right person available to lead the new organization. Pflueger's educational background includes masters' degrees in both library science and educational technology, and he understood (indeed, had articulated) the rationale for the new organization: (1) to provide a fully integrated and coordinated approach to planning and budgeting for information systems and services at CLU; (2) to facilitate the use of technology and sharing of information across all University divisions, and (3) to focus on supporting and maintaining a singular, core team of information specialists, knowledgeable about all aspects of information services in higher education.

Two other critical success factors in the reorganization were being open and upfront about the changes that were going to occur, and employing human resources experts from a local corporation to conduct a structured interview process similar to one that had been used successfully in their company. All personnel in the various units involved were invited to apply for new positions, with new job descriptions. Pflueger believes that going through that interview process caused staff to rethink their skills and to buy into the new organization. Clearly, staff were not expected to already possess the needed skills for the newly defined positions, but CLU was willing to provide the training to make it possible for them to qualify for those positions, and staff were expected to demonstrate their willingness to change and to learn the new skills. In all, four staff members did not continue with the new organization.

The division of services into technical and user components represented a traditional structure for libraries that Pflueger believed would work in a broader organization as well. Has that proven to be the case?

Evolving structure and culture

After nearly two years in operation, Pflueger believes the new structure is working very well on the user services side, but some changes may need to be made in technical services. One of these will be taking some of the technical services that relate to the library and moving them to the resource development area of the user services unit. Eventually, Pflueger also would like to see a merger of the reference and help desks in user services, as the reference desk function becomes more technical in nature, but he admits that this will be a challenge since traditionally reference desk skills have not been technical.

Like other reorganizations of this kind, a tremendous cultural change had to occur for the merger to work. Each "camp" of professionals had to give a little to promote synergy and discussion.

One of the most difficult aspects of the new organization is the submersion of old cultures into a single new one. This is still taking place. As recently as a few months ago, Pflueger says, staff were asking, "When are we going to have a library meeting?" Of course, the library continues to be a physical location within the University, but in terms of personnel, there are no longer "library" staff and "computing" staff.

Impact of CLUnet on teaching and learning

According to Luedtke, the implementation of CLUnet has provided "an opportunity fundamentally to re-envision the way we teach and learn." An increasing number of faculty at CLU agree, thanks to a prevailing commitment to teaching and learning and an effective approach to training and mentoring in the new technologies.

Through a task force on teaching and technology (now called the Teaching and Technology Committee), the University set a goal to establish a skill level among full-time faculty relative to a basic set of computer competencies, including e-mail, operating systems, and the Internet. The goal is being met through a mentoring program in which an early-adopter faculty member commits to mentoring two faculty colleagues to provide each of them with individualized instruction in these competencies in their own offices on their own computers.

In addition, a series of workshops was held for faculty to provide additional training in core competencies. These workshops were held in conjunction with other faculty development activities under the auspices of the University's Teaching and Learning Center, a mechanism established two years ago to encourage general faculty development.

The training workshops didn't just address technology as a teaching tool, but emphasized ways in which technology competencies can be applied in the faculty member's discipline. This is a key concept of the program, according to Education Professor Silva Karayan: "U nless faculty can perceive value in using the technology, they won't use it. And the training by ISS has been very effective in that respect; that is, the mentoring has tied the technology to its effective use."

As a result of the training and mentoring program, there is an expectation that nearly all faculty will have attained the desired skill levels by the fall of 1996.

Many CLU faculty have already
grasped the importance of technology in the learning process and are currently using it in their courses. Karayan has had success employing electronic “listservs” for between-class discussions: “This way, students don’t have to wait until the next class to engage in discussion. And I can meet needs of students with different learning styles and different personalities. More-reflective learners now also have an opportunity to participate. I think that use of e-mail has actually created a stronger sense of community for my classes than just being together in a classroom would have.”

Business School Professor Harry Domicone believes CLU net has already enhanced communications tremendously. “At small schools, rather than building moats, we build bridges, and our electronic access to each other makes our relationships with our colleagues in other disciplines and students across disciplines much more seamless than they would be otherwise.”

Impact on administration

Just as challenging as the change occurring on the academic side is the impact the new administrative systems are having on the way business is conducted at the University. The CLU net Project planning committee determined that the most appropriate strategy for CLU was to purchase a set of completely integrated, off-the-shelf commercial modules (from Datatel), which CLU would not customize. This meant administrative processes would have to be adapted to the new system.

Chief financial officer Robert Allison believes that having to modify some of their business processes to accommodate the new system provided a good opportunity to make needed changes. The best thing about moving into a distributed environment, Allison says, is that the network has allowed a different way of doing business by not being spatially bound; now other, more appropriate departments can perform the functions they couldn’t previously.

The networked environment is enabling Registrar Lucy Rodriguez to think in terms of a graphical user interface to the student system (currently in the conversion phase), rather than a phone-based approach. Plans include eventually implementing such an interface so that students can take advantage of the network for services such as registration, advising, using online forms, and accessing grades and course information. As with the financial modules, converting to the new system has enabled some positive process change.

Director of Technical Services Zareh Marselian says one significant lesson CLU learned in its move to commercial software is that the costs were higher than anticipated: “When a school hasn’t spent much on systems in the past, it’s a cultural shift to accept that there will now be ongoing costs.” Also, going from homegrown systems to a new system with a different platform and different software meant a magnitude of change that was very difficult for some users. He believes assigning an ISS member to each user department would have alleviated some of the pain, but with such a small staff, this was simply not possible.

Budgeting for information resources

According to Pflueger, a major benefit of the new ISS organization is that “for the first time, this entire area presents a united front in the planning and budgeting process. As we move through the strategic planning process of the University, the new organization is a strong advantage. It enables one voice for information resources, including representation on the President’s Cabinet, bringing a focus to CLU’s information resources investments and how they support the mission of the University.”

Pflueger adds that while CLU has invested a lot in technology, the harder pill to swallow is the need to continue that investment: “We recognize that we can’t put our information systems, network, and hardware on the same kind of depreciation schedule we have used in the past, but we’re not sure what sort of schedule to put it on yet, or how we will establish or predict the lifespan of the fiber-optic backbone and what kinds of investments we need to make in the operating budget for replacements and enhancements. We’re going to have to threshold these generational steps. Technology is no more of a black hole than anything else that needs to be done at the institution; it will continue to be justified on the basis of how it serves our needs.”

A big step forward ... but questions remain

We are not a heavily endowed institution, yet there was a willingness at the board level to take some risks and try to leverage available resources into a big step forward in technology infrastructure. What other choices did we have? ... If anything was courageous it was the decision to do it all at once, rather than continually try to play catch up, to recognize that we had an opportunity to jump ahead. The effect this has had on the self confidence and image of the University is extraordinary.

The three most ardently argued topics at meetings of college leaders in my recent experience are tuition discounting, productivity, and technology. I’m not sure whether anyone knows whether improved productivity—whatever that is—through technology is a chimera or whether we really are going to break through into a new realm of pedagogy enabled by technology. It’s a critical question for our kind of institution.

We are close to the end of a year and a half of strategic planning, and it’s clear that our intention is to remain a largely liberal arts and residential institution. But if one reads the literature, the winds are in the opposite direction. We are not trying to put ourselves in the position of delivering educational services to masses of people with new media, substituting for the human factor, but we haven’t yet discovered all the ways we can enrich, diversify, or improve the relationship between the mentor/teacher and the student using new technologies.

Meanwhile, technology is becoming a larger and larger part of our operating budget. We haven’t established the kind of protocols and thresholds that I think we need for the University to finally decide what we are not going to do, or cannot afford to do, as well as what we are aspiring to do.

Excerpts from a conversation with Luther Luedtke, CLU President January 1996