Master Plan

June 2003

Sinclair Community College

Information Technology Division

Information Technology

Master Plan

June 2003

Information Technology Division

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Executive Summary

Executive Summary

Information Technology at Sinclair Community College is becoming more complex every day. This complexity is growing at a compounding rate because:

- enrollment is accelerating;
- students demand more attention;
- students rely on technology-influenced processes such as distance learning for flexibility ;
- more and more emphasis is placed on Information Technology to resolve space and scheduling issues;
- faculty need continual training to stay abreast of the constantly changing Information Technology landscape; and
- student expectations regarding incorporation of Information Technology into their classes continues to escalate.

In the fourth annual EDUCAUSE Information Technology Current Issues survey, the top ten issues across all four questions and relevant to all sizes of institutions were:

- IT Funding Challenges
- Administrative/ERP/Information Systems
- Security and Identity Management
- Maintaining and Upgrading Network and IT Infrastructure
- Faculty Development, Support, and Training
- IT Strategic Planning
- Web Services/Web-based Systems
- Distributed Learning/Teaching and Learning Strategies
- Enterprise-level Portals
- Online Student Services

In reviewing the EDUCAUSE article, one of the more significant observations is that we have the same needs and priorities as other higher education institutions (large and small). Furthermore, it appears that we are on the right path with the major projects we have completed or have planned for next year.

Sinclair, when compared to most community colleges (and many universities), is implementing leading-edge technologies. In some areas we are slightly behind; however, we are rapidly gaining ground. This plan not only specifies the Information Technology needs of the college, but recognizes the need to align with the Sinclair strategic initiatives and the learning college principles.

The Information Technology Division organization structure (shown in Figure 1-1) consists of three departments and two direct reports. Each department consists of two or more sections.

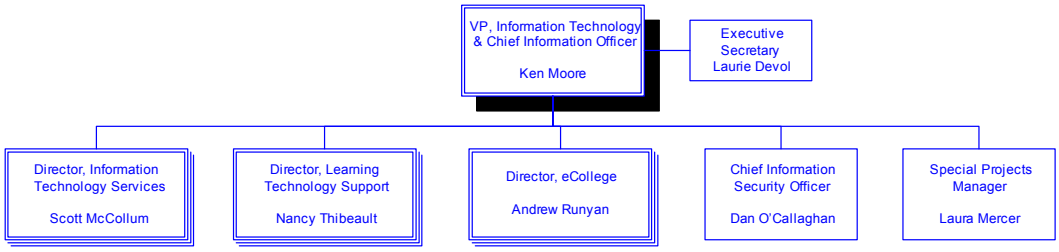


Figure 1-1. Information Technology Division Organization Structure.

Major Accomplishments for FY 2002-2003

The following four projects are examples of the Major Accomplishments for FY 2002-2003.

Implementation of the my.Sinclair portal

The my.Sinclair portal (http://my.sinclair.edu) provides a platform on which the college can offer web-based services and information. The system has a customizable initial page to which students and staff can add "modules" providing information of interest. These include options such as the Tartan Marketplace menu, a listing of their courses, lists of applicable Internet links, local weather, a calculator, horoscopes and other information. A sample webpage is shown in Figure 1-2.

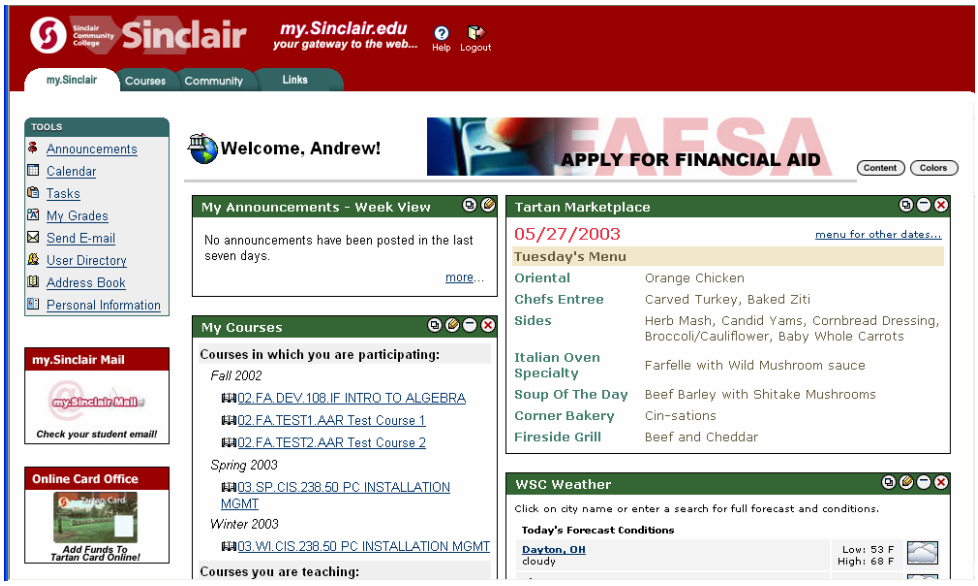


Figure 1-2. Sample my.Sinclair Webpage.

Another major goal of the my.Sinclair portal is to provide a set of easily accessible online tools, which faculty members and students can use to supplement instruction. Enrollment data is extracted from the Colleague administrative system nightly and loaded into the portal. From that data, each course is established, and students and faculty are linked to their respective courses. Tools available within the system include announcements, discussion boards, course rosters (accessible to faculty only), chat rooms, course calendars, related Web links, and others. Figure 1-3 illustrates the chat room functionality that faculty members can use for online discussions or online office hours.

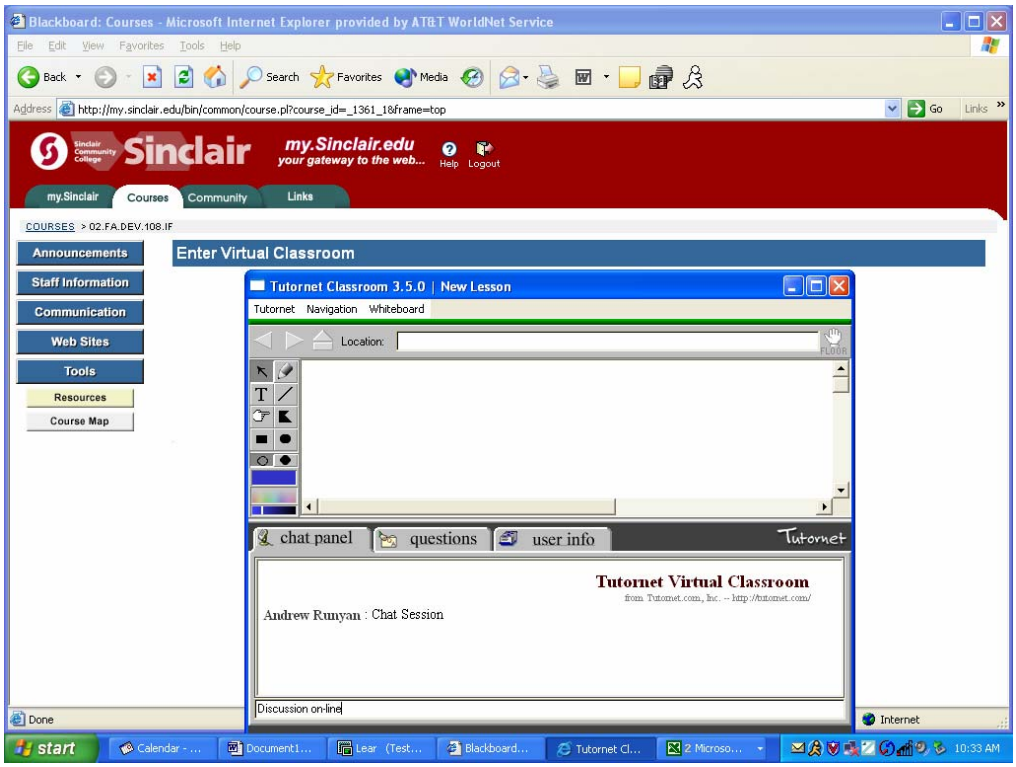


Figure 1-3. Sample Chat Room.

As the chart in Figure 1-4 illustrates, use of the my.Sinclair portal has been increasing each term since implementation. Fall term 2002 averaged 3,540 page views per day, while Winter 2003 was 12,467 and Spring term (through 5/21) has averaged 14,442 page views per day. These figures demonstrate that my.Sinclair has become a significant tool which the college's students are using on a daily basis to obtain information related to their courses and the college.

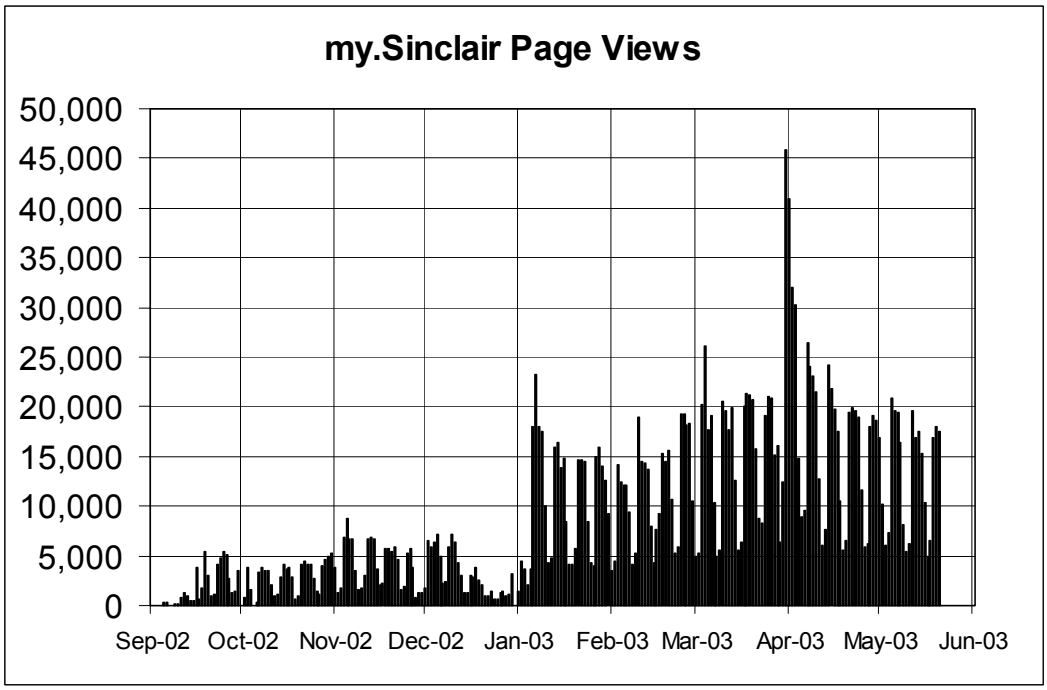


Figure 1-4. my.Sinclair Statistics.

Another of the advantages of the portal is its ability to serve as a platform for the delivery of information to faculty and staff. By simplifying the process for obtaining course rosters within the portal, the college has been able to eliminate three of the previous four roster printing/distribution processes each term. Savings from that capability include both the paper required for printing those rosters (for over 3,500 course sections each term) and the staff time required to distribute those rosters to departments and faculty.

Estimated Completion Date: 9/16/2002

Actual Completion Date: 9/16/2002 for access to faculty
9/18/2002 for access to students

Web access to Sinclair network resources via the Internet

One of the department's strategies is to make as many services as possible available via the Internet using standard web technologies. This means our customers can access these resources from off-campus by dialing into their Internet Service Provider or connecting via some other provider's network and accessing services on the Sinclair network via their web browser. Examples of this type of access that have been previously made available are the Intranet and Outlook Web Access. This newest offering of web access to campus network resources is the availability to access a person's

individual network storage space or departmental network storage space via the Internet. The main use of this service is for individuals to access their H: drive; however, they are also able to access any other network file stores that they have access to on campus. While this will be an obvious productivity enhancement for anyone who wants to work from off-campus, we believe it also holds great benefit for the large number of part-time faculty who have had network storage space but no practical way of using it. Figures 1-5 and 1-6 show examples of the dialogs provided when the user accesses the Remote File Access facility from the my.Sinclair portal.

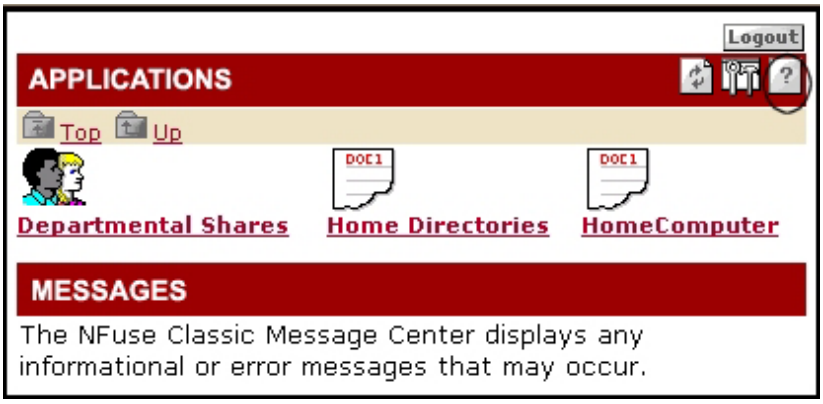


Figure 1-5. Remote File Access Directories Dialog.

Figure 1-6. Remote File Access Windows Dialog.

Actual Completion Date: 3/17/2003

MAN 105: Introduction to Business

The MAN 105 Introduction to Business video course is an introductory management course covering the American business system and basic principles of the free market system. The course is a high-enrollment distance learning course. This project replaces a previously produced version of MAN 105 taped at the joint vocational school in 1991.

The video course was produced using a "business is a game" theme. The studio set (see Figure 1-7) and graphic design were totally designed and created in-house, and reflect a game board and its pieces. The script was also developed in-house and made use of gaming jargon. Color was used as an element of the instructional design to designate the various business topics. Real world examples are introduced through the use of interviews with a number of "experts' from local businesses. The video interviews will also be repurposed for use in the web class enhancement and web course. Graphic design and animation was developed for both video and DVD delivery. PowerPoint was used for content graphics resulting in useable video graphics, as well as, a tool for the instructor to use in a traditional classroom setting or class enhancement.

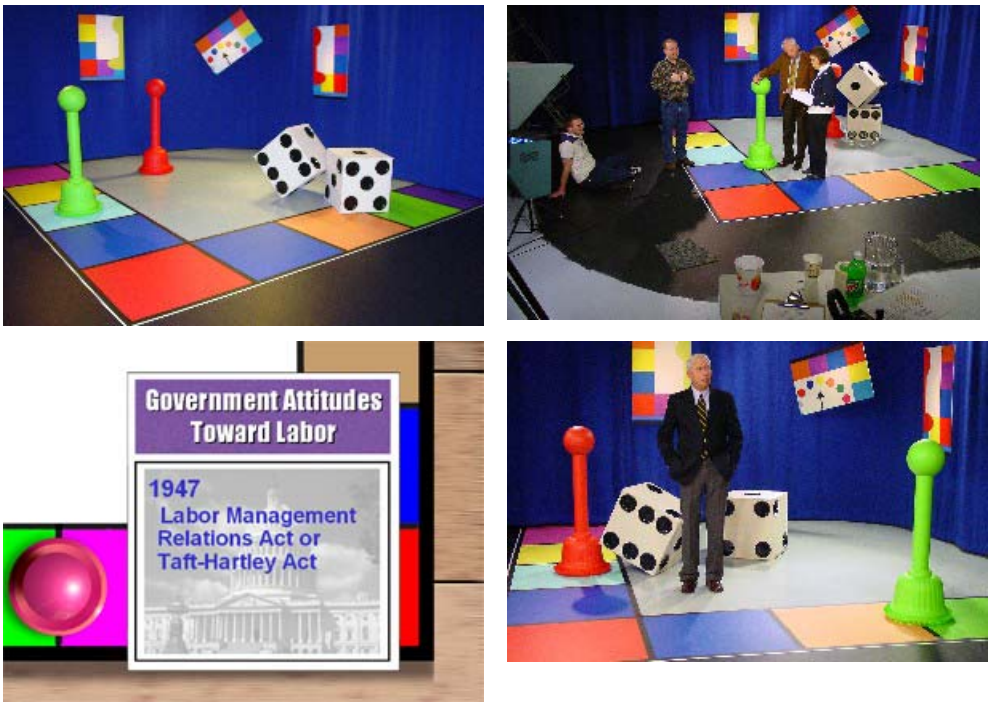
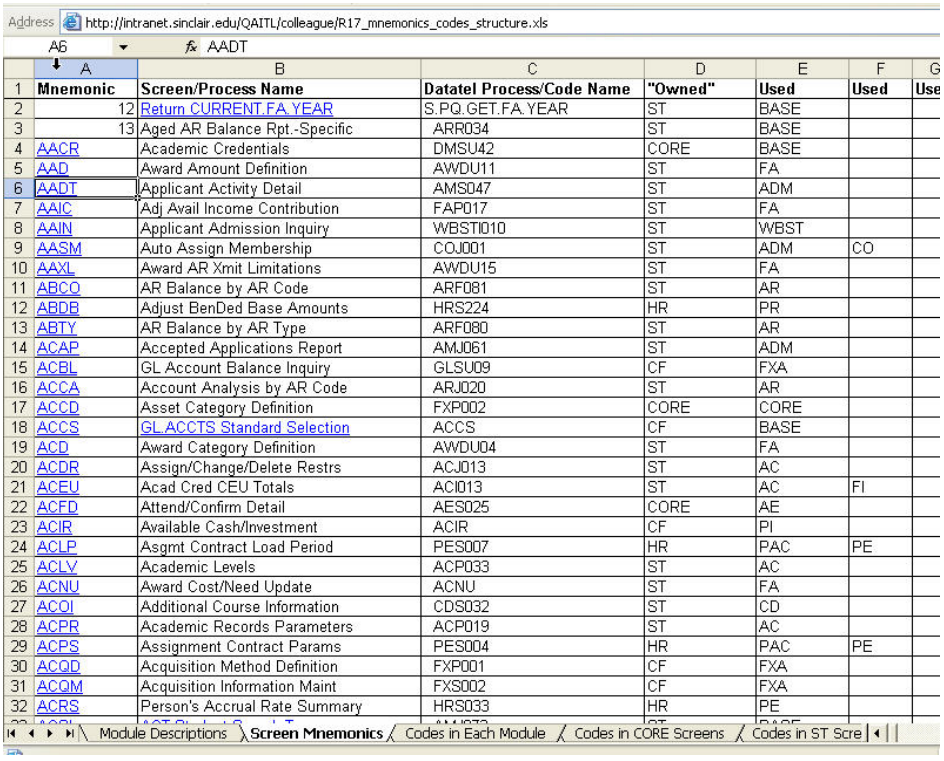


Figure 1-7. Set for MAN 105.

Actual Completion Date: 2/28/2003

Colleague Code, Screen, and Structure Documentation

QA&ITL has developed centralized documentation (data, VAL codes, modules, screens, and fields) for Colleague. This documentation details the four applications Sinclair uses within Colleague (CORE, Student System, Human Resources, Financial), the modules within each application, screens in each module, and fields/codes within each screen or process-over 2740 mnemonics. This documentation is essential for effective security planning/ implementation and will assist Information Technology staff and end users to determine how changes made in one area of the system potentially effect other departments or divisions. It is available via the intranet from the Colleague page, URL http://intranet.sinclair.edu/QAITL/colleague/info.htm (shown in Figure 1-8).



	A	B	C	D	E	F	G
1	Mnemonic	Screen/Process Name	Datatel Process/Code Name	"Owned"	Used	Used	Use
2	12	Return CURRENT.FA.YEAR	S.PQ.GET.FA.YEAR	ST	BASE		
3	13	Aged AR Balance Rpt.-Specific	ARR034	ST	BASE		
4	AACR	Academic Credentials	DMSU42	CORE	BASE		
5	AAD	Award Amount Definition	AWDU11	ST	FA		
6	AADT	Applicant Activity Detail	AMS047	ST	ADM		
7	AAIC	Adj Avail Income Contribution	FAP017	ST	FA		
8	AAIN	Applicant Admission Inquiry	WBSTI010	ST	WBST		
9	AASM	Auto Assign Membership	COJ001	ST	ADM	CO	
10	AAXL	Award AR Xmit Limitations	AWDU15	ST	FA		
11	ABCO	AR Balance by AR Code	ARF081	ST	AR		
12	ABDB	Adjust BenDed Base Amounts	HRS224	HR	PR		
13	ABTY	AR Balance by AR Type	ARF080	ST	AR		
14	ACAP	Accepted Applications Report	AMJ061	ST	ADM		
15	ACBL	GL Account Balance Inquiry	GLSU09	CF	FXA		
16	ACCA	Account Analysis by AR Code	ARJ020	ST	AR		
17	ACCD	Asset Category Definition	FXP002	CORE	CORE		
18	ACCS	GL ACCTS Standard Selection	ACCS	CF	BASE		
19	ACD	Award Category Definition	AWDU04	ST	FA		
20	ACDR	Assign/Change/Delete Restrs	ACJ013	ST	AC		
21	ACEU	Acad Cred CEU Totals	ACI013	ST	AC	FI	
22	ACFD	Attend/Confirm Detail	AES025	CORE	AE		
23	ACIR	Available Cash/Investment	ACIR	CF	PI		
24	ACLP	Asgmt Contract Load Period	PES007	HR	PAC	PE	
25	ACLV	Academic Levels	ACP033	ST	AC		
26	ACNU	Award Cost/Need Update	ACNU	ST	FA		
27	ACOI	Additional Course Information	CDS032	ST	CD		
28	ACPR	Academic Records Parameters	ACP019	ST	AC		
29	ACPS	Assignment Contract Params	PES004	HR	PAC	PE	
30	ACQD	Acquisition Method Definition	FXP001	CF	FXA		
31	ACQM	Acquisition Information Maint	FXS002	CF	FXA		
32	ACRS	Person's Accrual Rate Summary	HRS033	HR	PE		

Figure 1-8. Colleague Documentation.

Estimated Completion Date: 10/31/2002

Actual Completion Date: 10/31/2002

Major Projects for FY 2003-2004

The following four projects are examples of the Major Projects planned for FY2003-2004.

Web Registration and Supporting Processes

Datatel's WebAdvisor system is being implemented to allow students to register, add, drop and pay for classes (using a credit card) on line. This will be included as functionality within the my.Sinclair portal by linking the portal with the WebAdvisor homepage.

The system is available in the test system and being reviewed by the various departments of the college. Issues with the registration process are being resolved as they are identified. Webpage changes are being made to clarify the process for the student and to identify implications of the processes on a student's financial aid, such as the potential impact of dropping classes. Figure 1-9 shows the WebAdvisor homepage for the online registration process.

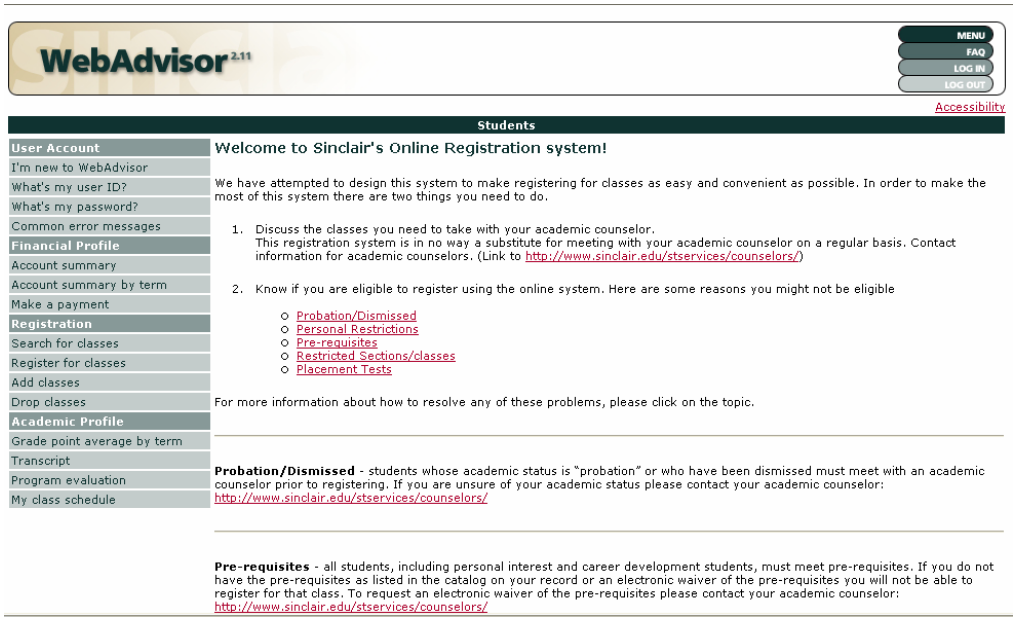


Figure 1-9. WebAdvisor Homepage.

We plan to pilot test registrations in the live system during the Summer 2003 registration period. The system should be live during the Fall 2003 registration period.

We intend to closely monitor the use of the Web-based registration system during the implementation phases. We currently monitor the number of students using the telephone registration system versus those registering by mail or onsite in the Registrar's office. The distribution of those two methods for Spring 2003 is shown in Figure 1-10.

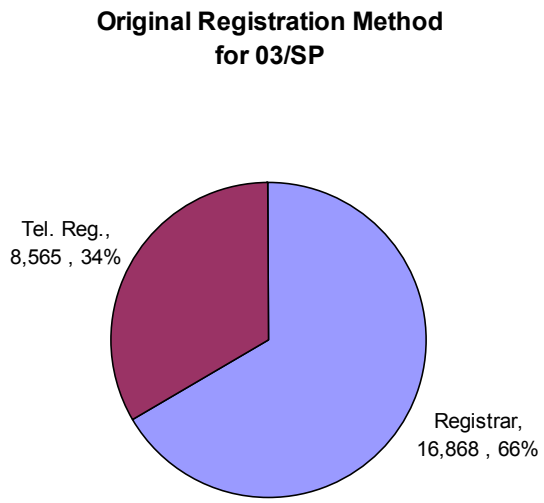


Figure 1-10. Distribution of Registration Methods.

Web registrations will be tracked similarly and added to this data as the system becomes active.

Estimated Start Date: In Process

Estimated Completion Date: 9/1/2003

Individualized Learning Plan (ILP)

Student Services requested the development of an Individualized Learning Plan (ILP) process that will be used by counselors and students to retrieve and store information to support the success of the student at Sinclair. The system will capture and maintain personal information, placement test scores, counseling notes, and other information useful to the counseling staff. The Web Systems staff has worked with the ILP team to define the requirements of the system and are planning a phased implementation. The first phase is Web-based collection of the data in an SQL Server database with security measures in place to ensure that only appropriate counselors have access to student information. The first draft of that system has been turned over to the counselors for testing. A sample webpage from the system is illustrated in Figure 1-11.

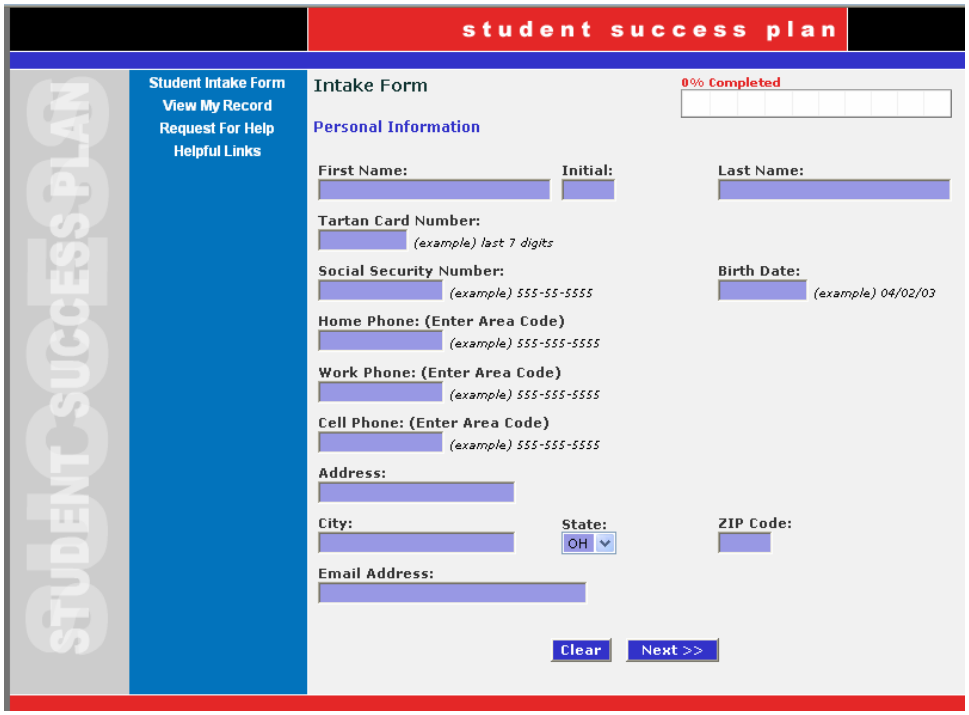


Figure 1-11. Sample ILP Webpage.

The second phase of the project will be to define the specifications for an interface between the SQL Server database and the Colleague system, which will eliminate the duplication of data entry.

The third phase will encompass the actual development, testing, and implementation of the database interfaces.

Other functionality for later stages of development will be identified as the project continues.

Estimated Start Date: In Process

Estimated Completion Date: Phase I – 6/23/2003
Phase II – 2/28/2004
Phase III – 6/30/2004

Storage Area Network (SAN) backup

Sinclair's Storage Area Network (SAN) is a dedicated network for data storage devices (i.e., disk drives, tape drives, etc.). Figure 1-12 contains a diagram of the current SAN configuration. It is separate from the Local Area Network (LAN) that connects the workstations and servers. This separation allows high-speed access to data and applications by the servers without impacting LAN traffic.

Currently, data and applications stored on the college's servers and SAN totals approximately 4 terabytes. This data is backed up to tape devices on a daily basis over the LAN. In order to minimize LAN traffic, and maximize user access to applications and data, all backups are performed in the evening. With the expansion of services, and growth in the volume of data, the ability to complete file backups during times that will not affect users is rapidly decreasing.

The objective of this project is to migrate large portions of the backup process to the SAN, providing the following benefits:

- Increased performance due to the higher speed available on the SAN;
- Increased network resource availability to users due to the use of a separate network for backups; and
- Increased scalability due to both the increase in speed and the separation of LAN and SAN network traffic.

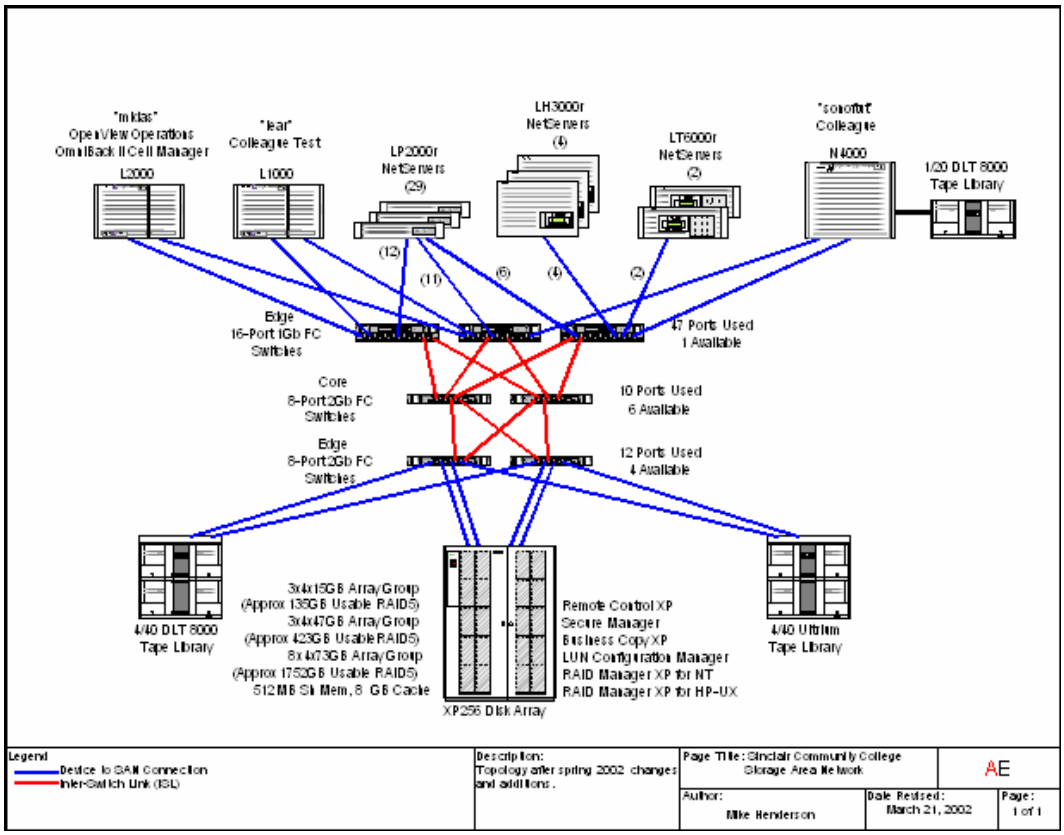


Figure 1-12. Current SAN Configuration.

Estimated Start Date: In Process

Estimated Completion Date: 10/31/2003

Learning Objects Investigation

A major change may be coming in the way educational materials are designed, developed, and delivered. An instructional technology called "learning objects" currently leads other candidates for the position of technology of choice in the next generation of instructional design, development, and delivery, due to its potential for reusability, generatively, adaptability, and scalability. Learning objects are elements of a new type of computer-based instruction grounded in the object-oriented paradigm of computer science. Object-orientation highly values the creation of components (called "objects") that can be reused in multiple contexts. This is the fundamental idea behind learning objects: instructional designers can build small (relative to the size of an entire course) instructional components that can be reused a number of times in different learning contexts.

Several standardization initiatives are underway to facilitate the widespread adoption of the learning objects approach. The Learning Technology Standards Committee (LTSC) of the Institute of Electrical and Electronics Engineers (IEEE) was formed in 1996 to develop and promote instructional technology standards. A similar project called the Alliance of Remote Instructional Authoring and Distribution Networks for Europe (ARIADNE) had already started with the financial support of the European Union Commission. Another venture called the Instructional Management Systems (IMS) Project was just beginning in the United States, with funding from Educause. Each of these and other organizations began developing technical standards to support the broad deployment of learning objects. The Advanced Distributed Learning (ADL) Shareable Content Object Reference Model (SCORM) is attempting to knit together the interests of these groups. The resultant reference model will coordinate emerging technologies with commercial and/or public implementations. The SCORM timeline is shown in Figure 1-13. The standardization initiatives and current learning objects projects will be reviewed by LTDC staff in order to develop a direction for Sinclair.

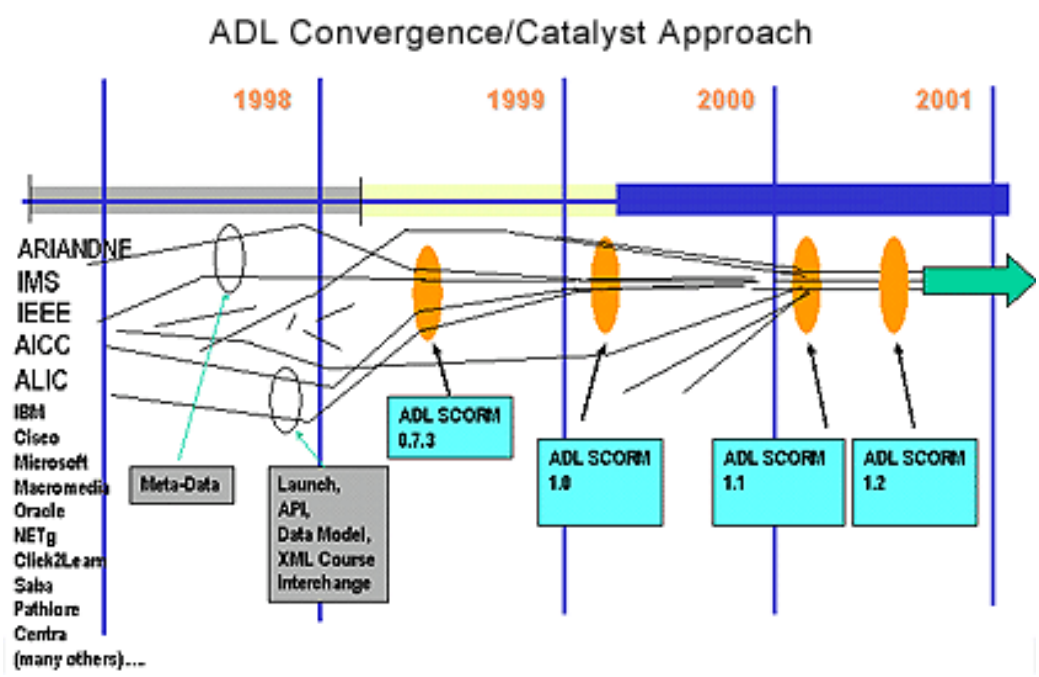


Figure 1-13. SCORM timeline.

Section 2

Introduction

Introduction

Information Technology at Sinclair Community College is becoming more complex every day. This complexity is growing at a compounding rate because:

- enrollment is accelerating;
- students demand more attention;
- students rely on technology-influenced processes such as distance learning for flexibility ;
- more and more emphasis is placed on Information Technology to resolve space and scheduling issues;
- faculty need continual training to stay abreast of the constantly changing Information Technology landscape; and
- student expectations regarding incorporation of Information Technology into their classes continues to escalate.

We must keep adapting to new realities – we must keep changing – and Information Technology is a primary catalyst for change. But these changes must be structured and consistent. A major thrust must be to ensure the proper alignment of Information Technology projects with the strategic initiatives defined by the Board of Trustees and the executive management team. Furthermore, these projects must be implemented in concert with the priorities established by the President's Cabinet.

This Information Technology Master Plan is predicated on our Mission and Vision delineated below.

Information Technology Mission

To continuously improve our delivery of affordable, quality, lifelong learning opportunities by providing and leveraging an effective set of Information Technology tools which enhance student learning and facilitate student success.

Information Technology Vision

Sinclair's information technologies will provide a comprehensive platform of high technology tools that are easy to understand and use, and facilitate processes so that any student, faculty, or staff can perform all of his/her academic and administrative functions in a highly productive and efficient manner, and where students can actively explore and personalize their educational experiences.

In the fourth annual EDUCAUSE Information Technology Current Issues survey, the top ten issues across all four questions and relevant to all sizes of institutions were:

- IT Funding Challenges
- Administrative/ERP/Information Systems
- Security and Identity Management
- Maintaining and Upgrading Network and IT Infrastructure
- Faculty Development, Support, and Training
- IT Strategic Planning
- Web Services/Web-based Systems
- Distributed Learning/Teaching and Learning Strategies
- Enterprise-level Portals
- Online Student Services

Following is a brief synopsis of how these issues are being addressed at Sinclair:

- **IT Funding Challenges**
  As noted in the article, "IT organizations must find new, cost-effective ways to deploy technology and support the existing infrastructure". This Information Technology Master Plan includes several projects which focus on this aspect. Examples include:
  - Network Print Management – finding methods of improving cost, reducing waste, and creating process efficiencies.
  - Systems Management Server – finding improved methods for managing the configuration of PCs, deploying hardware and software upgrades, and managing servers.
  - Network and System Management – using new tools to prevent service disruptions, to monitor network traffic, and maintain established network response time expectations.
  - Room Scheduling/Space Management – to ensure that instructional facilities are utilized with optimum effectiveness, to provide all departments with equitable access to instructional spaces, and to present a more professional, learner–friendly environment.

- **Administrative/ERP/Information Systems**
  Major emphasis over the past three years has been on upgrading our administrative (ERP) system, Colleague. We are ahead of the curve in terms of ERP implementation, and even though we have hit some snags along the way, we have put ourselves into a position where we can concentrate on building interfaces and/or extensions to the system rather than installing and learning a totally new system.

- **Security and Identity Management**
  An integral part of our Web Strategy is to provide a single point of authentication (single sign-on) with role-base access to all applications. We have chosen Microsoft's Active Directory (which is LDAP compliant) as our centralized directory service, and we are in the process of upgrading/modifying all existing and future applications to utilize this facility. Since we have over twenty applications to consider, this process will take considerable time to complete. Additionally, we have made the necessary organization changes to allow for the creation of the position of Chief Information Security Officer in order to respond effectively to the potential security threats.

- **Maintaining and Upgrading Network and IT Infrastructure**
  As noted in the EUCAUSE article, "the technological foundation that supports an institution's business and academic processes is its network and IT infrastructure. Many take for granted the infrastructure's existence and abilities ….". The Information Technology Services Department continuously works to improve our infrastructure, as indicated by the many accomplishments during FY 2002-2003 and the projects planned for FY 2003-2004. The emphasis is always on providing the best price/performance services possible to all constituents.

- **Faculty Development, Support and Training**
  The Learning Technology Support Department is always looking for new ways to help faculty learn and incorporate Information Technology into the learning environment. This is evidenced by the many programs provided, such as:
  - Spring, Summer, and Winter Institutes
  - Support for the 3 Ds of Distance Learning Project
  - Multimedia Madness
  - Faculty Mentoring
  - Learning Technology Development Center
  - Learning Technology Productions

- **IT Strategic Planning**
  This document, which is the second annual Information Technology Master Plan, is proof that IT Strategic Planning is a fundamental part of our overall philosophy. The next step is to develop a comprehensive Information Technology governance process to ensure that all constituents are involved in the planning and decision-making. A major project will be initiated during FY 2003-2004 to fulfill this need.

- **Web Services/Web-based Systems**
  Web services are still more conceptual than real. Considerable effort relative to standards, security, and re-development of existing products is required. Although we must pay close attention to the evolution of this concept, it is too early in the development life cycle to adopt Web Services as part of the Institutional framework.

- **Distributed Learning/Teaching and Learning Strategies**
  We have been involved in various modes of distributed learning for several years. We will continue to support faculty in the development of distance learning courseware, hybrid courses, and other forms of distributed learning, incorporating multimedia and other emerging technologies. As noted previously under Faculty Development, Support, and Training, many of the programs are relevant to the distributed learning format.

- **Enterprise-level Portals**
  Again, we are leading-edge, especially with respect to community colleges. The implementation of the my.Sinclair portal in FY 2002-2003 was a major milestone. The portal will become the central point for access to all Sinclair information and services. The portal will also play a major role in achieving the goals:
  - Single point of authentication
  - Role-based access control

- **Online Student Services**
  Online student services is a major component of our Web Strategy. Many of the major projects planned for FY 2003-2004 have to do with providing online student services such as:
  - Web Registration and payments
  - Admissions application
  - Financial Aid information
  - Individualized Learning Plan

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Sinclair, when compared to most community colleges (and many universities), is implementing leading-edge technologies. In some areas we are slightly behind; however, we are rapidly gaining ground. This plan not

only specifies the Information Technology needs of the college, but recognizes the need to align with the Sinclair strategic initiatives and the learning college principles.

Plan Contents

In this 2nd Annual Information Technology Master Plan the objectives are:

- To briefly describe the Information Technology Division's revised organization structure, including the responsibilities of each department and direct report;
- To delineate the major accomplishments for FY 2002-2003;
- To identify the major projects planned for FY 2003-2004 (including those projects which were started in FY 2002-2003 and will continue into FY 2003-2004); and
- To provide insight into some of the potential future projects.

Organization Structure

The Information Technology Division organization structure (shown in Figure 2-1) consists of three departments and two direct reports. Each department consists of two or more sections. The three departments and two direct report offices and their respective areas of responsibility are as follows:

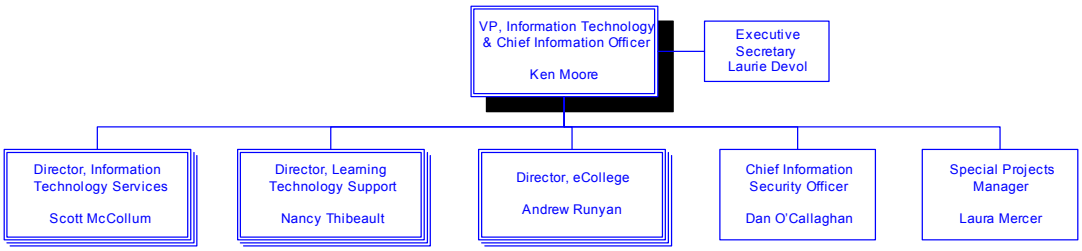


Figure 2-1. Information Technology Division Organization Structure.

eCollege (Applications Development & Maintenance)

Responsibilities and Functions Performed

The eCollege Department is responsible for directing the creative design, development, and execution for all business and web systems, which support the academic and administrative processes of the institution. These responsibilities are achieved by:

- Fostering and maintaining effective working relationships with development, application, and consultant vendors;
- Collaboratively developing, marketing, and implementing

Information Technology policies and procedures that ensure the effective delivery of IT services to all users in order to achieve the learner-centered goals of the institution;

- Participating in building the branding strategy and synergies with other types of media advertising campaigns of the organization;
- Leading the initial product development meetings, helping to identify overall goals and messages to meet the project needs;
- Conceptualizing and creating overall design concept including estimates, assumptions, scope, and creative designs;
- Communicating design goals and messages to creative team, ensuring integration of design requirements into all phases of production;
- Leading creative ideation sessions to ensure highest creative quality is met for each project;
- Developing out-of-the-box ideas and helping identify the ideas with the best solutions; Overseeing and guiding activities of design team members;
- Developing or refining the design process to reflect technical requirements of delivery platform;
- Executing the design of all major components of the business and web systems, including enterprise business applications, interactive student services, eCommerce, educational portals (for students and faculty), authentication/access control, etc;
- Researching and analyzing industry trends and maintains knowledge of emerging technologies and creative techniques;
- Interfacing with both internal and external customers to build strong working relationships;
- Participating in new product development and all phases of the design process to ensure a high level of creativity;
- Managing subordinates to effect optimum customer utilization and access for all business and web systems;
- Creating budgets, allocating resources, and recommending

schedules of product releases or project deadlines;

- Analyzing new technologies and performing feasibility studies to determine applicability for the institution; and
- Establishing and maintaining an effective system of communications throughout the organization.

Information Technology Services (ITS)

Responsibilities & Functions Performed

The Information Technology Services Department is responsible for managing and directing the development and production activities for all hardware, software, and telecommunication service and support components which facilitate the effective distribution and operation of Information Technology functions in support of the learner-centered mission of the institution. These responsibilities are achieved by:

- Fostering and maintaining effective working relationships with development, application, and consultant vendors;
- Collaboratively developing, marketing, and implementing Information Technology policies and procedures that ensure the effective delivery of IT services to all users in order to achieve the learner-centered goals of the institution;
- Consulting with management to analyze computer system needs, to determine scope and priorities of projects, and to discuss system capacity and equipment acquisitions;
- Recommending and developing plans for systems development and operations, hardware and software purchases, budget, and staffing;
- Developing, implementing, and monitoring systems policies and controls to ensure data accuracy, security, and legal and regulatory compliance;
- Negotiating and contracting with consultants, technical personnel, and vendors for services and products;
- Providing support to end users in the selection, procurement, usage, and maintenance of hardware, software, and

telecommunications equipment;

- Overseeing the installation and maintenance of hardware, software, and network components in all offices, teaching spaces, and computer labs, centralized application network servers, and telecommunications network infrastructure for data, voice, and video;
- Establishing current and long range objectives, plans, and policies, subject to approval by Board of Trustees;
- Helping to create a technical vision for the institution and plans for implementation of new technical projects or product lines;
- Dispensing advice, guidance, direction, and authorization to carry out major plans and procedures, consistent with established policies and Board approval;
- Working with other Information Technology managers and other departments to discern competitiveness of new technologies;
- Monitoring operational performance, comparing it to established objectives, and taking steps to ensure that appropriate measures are taken to correct unsatisfactory results;
- Establishing and maintaining an effective system of communications throughout the organization;
- Creating budgets, allocating resources, and recommending schedules of product releases or project deadlines;
- Analyzing new technologies and performing feasibility studies to determine applicability for the institution; and
- Developing, maintaining, and testing the Business Continuation (disaster recovery) plan.

Learning Technology Support (LTS)

Responsibilities and Functions Performed

The Learning Technology Support Department is responsible for managing, planning, and directing research and development activities in support of the learning mission of the institution. These responsibilities are achieved by:

- Fostering and maintaining effective working relationships with development, application, and consultant vendors;
- Collaboratively developing, marketing, and implementing Information Technology policies and procedures that ensure the effective delivery of IT services to all users in order to achieve the learner-centered goals of the institution;
- Developing professional relationships with faculty to help monitor emerging technologies and to identify strategies for implementation of those technologies;
- Identifying, in conjunction with faculty, promising areas of instructional technology that address unsatisfied needs and have large potential impact on the learner-centered environment;
- Planning and formulating aspects of instructional technology proposals such as objective or purpose of project, applications that can be utilized from findings, costs of project, and equipment and human resource requirements;
- Establishing and maintaining a hands-on faculty learning environment to support the integration of information technology in the classroom or distance education courses, including course-authoring software, instructional websites, video conferencing, discussion forums, chat rooms, email, and other technology-based functions;
- Managing the media services and media production functions to ensure effective distribution and utilization throughout the institution;
- Facilitating the development and delivery of workshops in instructional computing and pedagogy;
- Reviewing and analyzing proposals submitted to determine if benefits derived and possible applications justify expenditures;
- Approving and submitting proposals considered feasible to management for consideration and allocation of funds, or allocates funds from department budget;
- Developing and implementing methods and procedures for monitoring projects, such as preparation of records of expenditures and research findings, progress reports, and staff

conferences, in order to inform management of current status of each project;

- Negotiating contracts with consulting firms to perform research and development studies;
- Tracking industry trends for potential project relevance;
- Creating budgets, allocating resources, and recommending schedules of product releases or project deadlines; and
- Establishing and maintaining an effective system of communications throughout the organization.

Manager of Special Projects

Responsibilities and Functions Performed

The Manager of Special Projects provides project development and support for large-scale complex projects having campus-wide impact. The office's project portfolio varies throughout the year; current focus is related to room scheduling and space management. In addition, Special Projects is providing assistance related to implementation of the next batch of multimedia podium classrooms and the upgrading of the 63 existing podium rooms' control systems.

The office is staffed by one professional Project Manager; however, additional resources required to plan or complete projects are secured through the development of cross-functional project teams and the engagement of outside resources.

Chief Information Security Officer

Responsibilities and Functions Performed

The Chief Information Security Officer (CISO) provides specialized consulting, materials, programs, and analysis related to the areas of information security. The primary responsibility is to develop and implement a campus-wide security program that supports the academic and administrative use of Information Technology. Some of the specific functions of the CISO include:

- Developing and maintaining a comprehensive, documented information security plan;

- Developing a detailed information security emergency response procedure, including establishing and coordinating the activities of the Computer Security Incident Response Team (SCC CSIRT) and collaborating with the campus judiciary system and law enforcement agencies;
- Coordinating the development, implementation, and administration of security policies, practices, standards and programs;
- Coordinating the development and execution of effective security awareness programs and training;
- Providing pertinent security information and input to strategic and tactical planning, budget preparation, initiatives and projects planning, internal and external reporting, and other management activities;
- Facilitating and directing the timely dissemination of security information;
- Coordinating the assessment of computer systems and network security risks and participating in evaluation and implementation of security-related technologies to mitigate these risks; and
- Investigating and developing contingency plans by undertaking risk analysis, security investigations, audits, and threat assessments.

With the escalating concern over information security due to potential terrorist or hacker attacks, as well as with the increased emphasis and mandates on information security issues imposed by Federal and State entities, the CISO's mission is to increase the College focus on providing a stable and secure Information Technology environment.

Section 3

Major Accomplishments for FY 2002-2003

Major Accomplishments for FY 2002-2003

Great progress was made during FY 2002-2003. Overall, 173 projects were completed:

49% completed on or before the target date
19% completed 30 days or less beyond the target date.

A complete listing of the projects completed during FY 2002-2003 is provided in Appendix A. Please note that this is not an exhaustive list of Information Technology projects. Many of the on-going tasks, tasks which require less than ten person days of effort, and emergency tasks (unplanned tasks) have been omitted.

eCollege Department

Following are the Major Accomplishments for FY2002-2003 for the eCollege Department:

Resolution of Colleague R16 Issues

In September 2002, concerns with Colleague processes that were operating incorrectly and a growing list of issues prompted the eCollege staff to meet with each of the user departments and obtain a list of priority issues. That process resulted in 101 issues being prioritized and placed on a "visibility list" to help improve tracking of these issues. The Provost Work Group decided that activity on other new initiatives should be stopped to allow adequate resources to be dedicated to this activity. In the months since, nearly all of these issues have been resolved.

Estimated Completion Date: 4/11/2003

Current Status: 7 of the original 101 issues are open. Of those, the single "A" priority item is awaiting review of the final reports by the affected department, two other issues are expected to have programming from vendors delivered by 5/31/2003, and the remaining four issues are expected to be completed by 6/30/2003.

Colleague R17 Upgrade

Release 17 is the latest version of Datatel's Colleague product that powers our administrative system handling: registration, admissions, financial aid, financials, and various instructional division tasks. Release 17 has been out for sometime, and therefore, boasts a more stable environment over its predecessor. With the new release comes increased performance and enhancements to the Human Resource and Financial Aid applications.

The software vendor provided support for the prior release of Colleague (R16) until the end of FY 2002-2003. After that time, support for earlier versions will only be provided at additional cost. Also, new technologies generally exist in the latest release. In order to take advantage of these advancements, the system had to be upgraded to the latest release (R17).

The implementation team requested that the live date be shifted to the original “rain date” to allow additional time for testing.

Estimated Completion Date: 4/22/2003

Actual Completion Date: 5/5/2003

Resource 25 Implementation

eCollege staff is assisting with implementation of databases and software associated with the Room Scheduling/Space Management project. This includes Web-based software such as the R25 Web Viewer (illustrated in Figure 3-1) as well as an interface to the Colleague system to facilitate classroom scheduling.

The database and software installation, including Web Viewer functionality has been completed. Installation of the Colleague interface has been completed on the test system.

Figure 3-1. R25 Web Viewer.

Estimated Completion Date: 6/23/2003

Actual Completion Date: 6/23/2003

In-house hosting of WebCT

In March 2000, the college entered into an agreement to have Eduprise, Inc. remotely host its course management system, WebCT, and to provide help desk services to distance learning students. In April 2002, Sinclair notified Eduprise of its intent to return hosting and help desk services for that application to the college. As of 7/1/2002, all hosting of WebCT was taken in-house and is being administered by eCollege and ITS staff.

Annual cost of the Eduprise agreement was $102,000. The help desk did add two staff members to assist in covering the additional hours required by distance learning students. This offsets the cost savings by $78,000 ($62.4 K in salaries plus 25% for benefits and other costs) for a total annual savings of $24,000.

Estimated Completion Date: 7/1/2002

Actual Completion Date: 7/1/2002

Upgrade of WebCT to version 4.0

In order to take advantage of some of the performance enhancements in the latest version of our WebCT software, it was decided to upgrade to Campus Edition version 4.0. This transition was reviewed with Distance Learning Staff and communicated to the faculty.

Estimated Completion Date: 5/30/2003

Actual Completion Date: 5/30/2003

Creation of user account information for all students

In order to implement many of the planned Web-based services, a system for establishing usernames and passwords had to be developed that provides all students, faculty, and staff with a unique username and associated password that can be used to authenticate. Microsoft's Active Directory was selected as the central authentication source because of its adherence to the standard Lightweight Directory Access Protocol (LDAP) and because of the current system of usernames and passwords for staff available with the system. eCollege and ITS staff worked together to develop a process in which usernames are created by Datatel's Colleague upon hire for new staff members and upon first registration for students. That account information is then passed to Active Directory and used for authentication to systems including the college network, Microsoft Outlook, the my.Sinclair portal, student e-mail, and WebAdvisor. This system was first used with the my.Sinclair portal in Fall 2002.

Estimated Completion Date: 9/16/2002

Actual Completion Date: 9/16/2002

Implementation of the my.Sinclair portal

The my.Sinclair portal (http://my.sinclair.edu) provides a platform on which the college can offer web-based services and information. The system has a customizable initial page to which students and staff can add "modules" providing information of interest. These include options such as the Tartan Marketplace menu, a listing of their courses, lists of applicable Internet links, local weather, a calculator, horoscopes and other information. A sample webpage is shown in Figure 3-2.

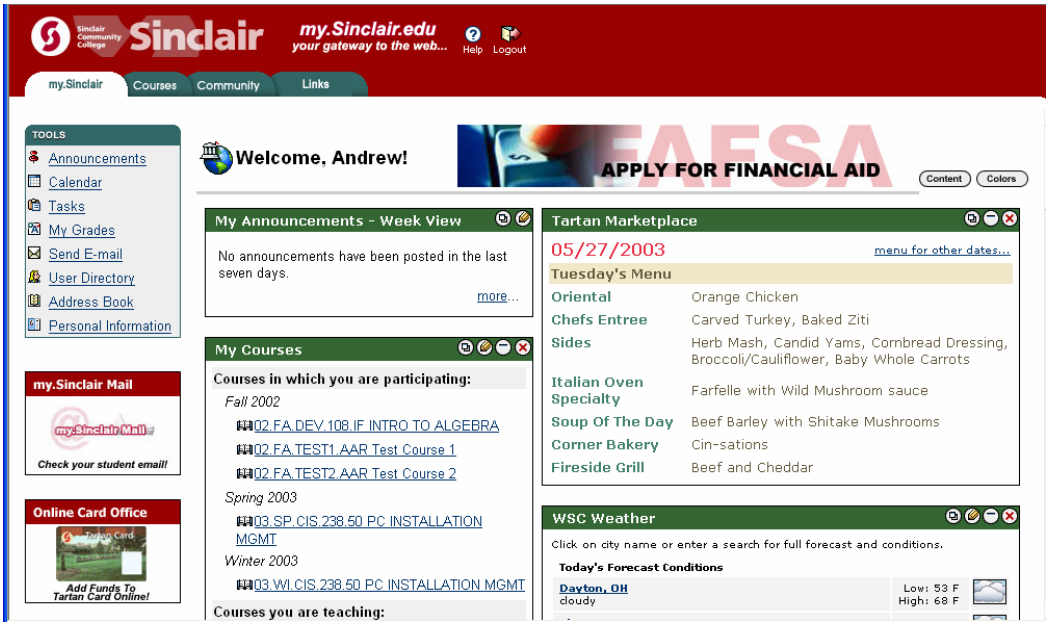


Figure 3-2. Sample my.Sinclair Webpage.

Another major goal of the my.Sinclair portal is to provide a set of easily accessible online tools, which faculty members and students can use to supplement instruction. Enrollment data is extracted from the Colleague administrative system nightly and loaded into the portal. From that data, each course is established, and students and faculty are linked to their respective courses. Tools available within the system include announcements, discussion boards, course rosters (accessible to faculty only), chat rooms, course calendars, related Web links, and others. Figure 3-3 illustrates the chat room functionality that faculty members can use for online discussions or online office hours.

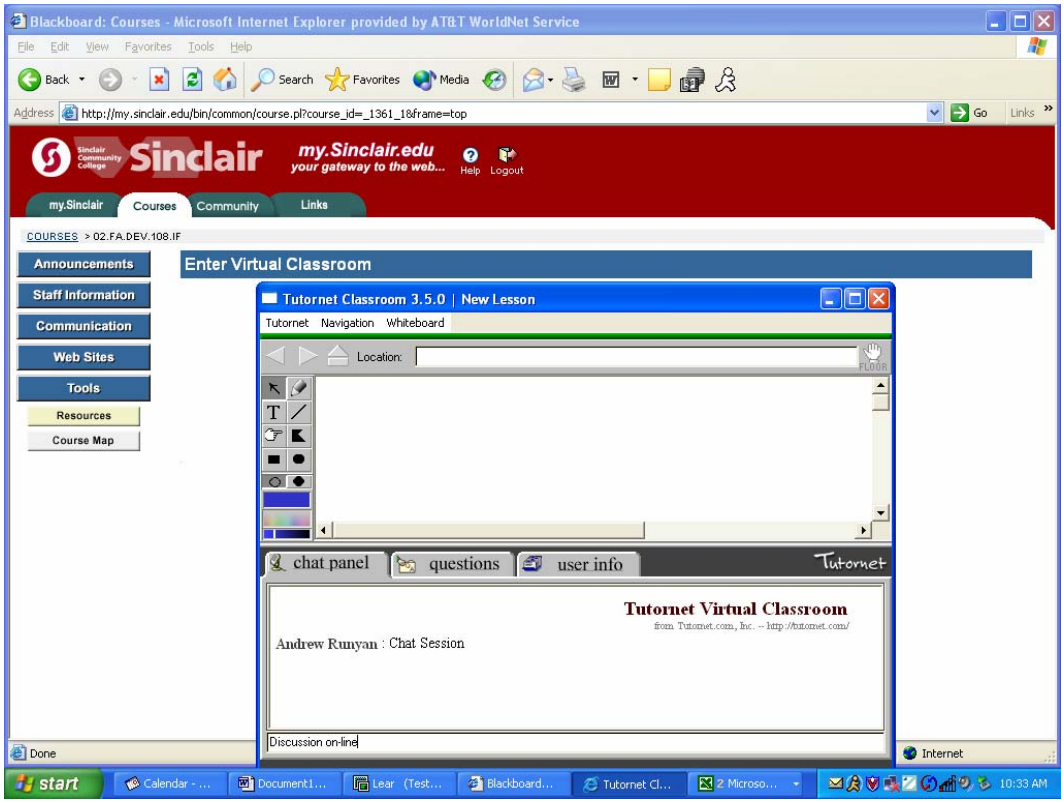


Figure 3-3. Sample Chat Room.

As the chart in Figure 3-4 illustrates, use of the my.Sinclair portal has been increasing each term since implementation. Fall term 2002 averaged 3,540 page views per day, while Winter 2003 was 12,467 and Spring term (through 5/21) has averaged 14,442 page views per day. These figures demonstrate that my.Sinclair has become a significant tool which the college's students are using on a daily basis to obtain information related to their courses and the college.

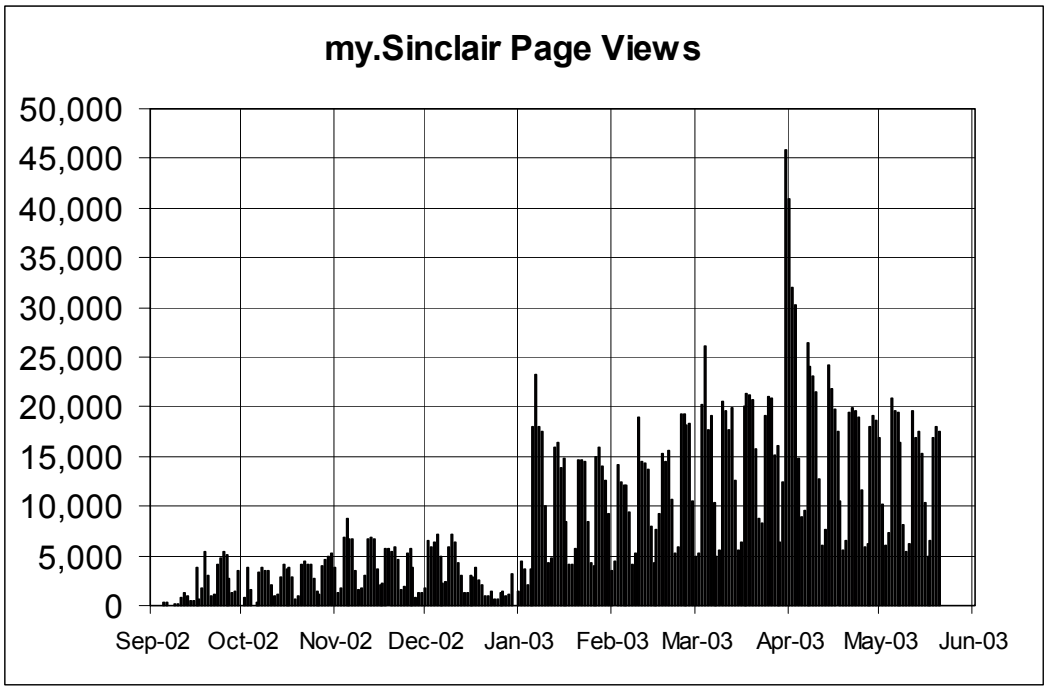


Figure 3-4. my.Sinclair Statistics.

Another of the advantages of the portal is its ability to serve as a platform for the delivery of information to faculty and staff. By simplifying the process for obtaining course rosters within the portal, the college has been able to eliminate three of the previous four roster printing/distribution processes each term. Savings from that capability include both the paper required for printing those rosters (for over 3,500 course sections each term) and the staff time required to distribute those rosters to departments and faculty.

Estimated Completion Date: 9/16/2002

Actual Completion Date: 9/16/2002 for access to faculty
9/18/2002 for access to students

Implementation of student e-mail

An additional service implemented along with the my.Sinclair portal was my.Sinclair mail. This system provides an e-mail account to every registered student. Figure 3-5 contains the main entry page of the e-mail system where students can retrieve their messages, add folders for managing their mail, and perform other functions.

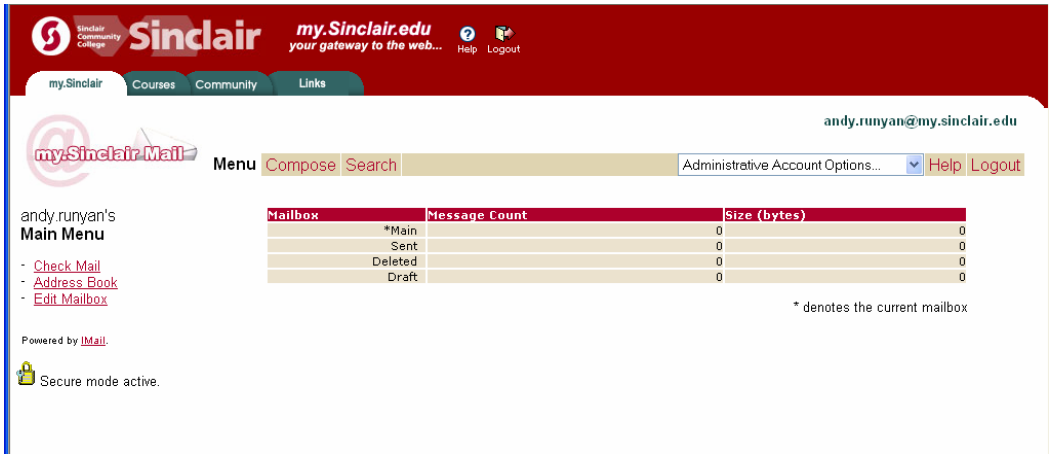


Figure 3-5. Student Email Entry Page.

One important criterion for the selection of the system was the ability for students to forward mail coming into their my.Sinclair account to any other email address they choose. We realize that many students may have established e-mail accounts provided by their employer or their Internet Service Provider. The college wants to be able to use a consistent e-mail address scheme for each student while still giving the student the option to use whatever system they choose. By providing a forwarding mechanism to students, the college ensures that students have access to the messages it is sending to their my.Sinclair accounts, but it also provides students with a means of electing to use any e-mail system they choose. Statistics from early May 2003 indicate that 1,237 students have taken advantage of this forwarding capability. Other statistics on the use of the system by students are shown in Figure 3-6.

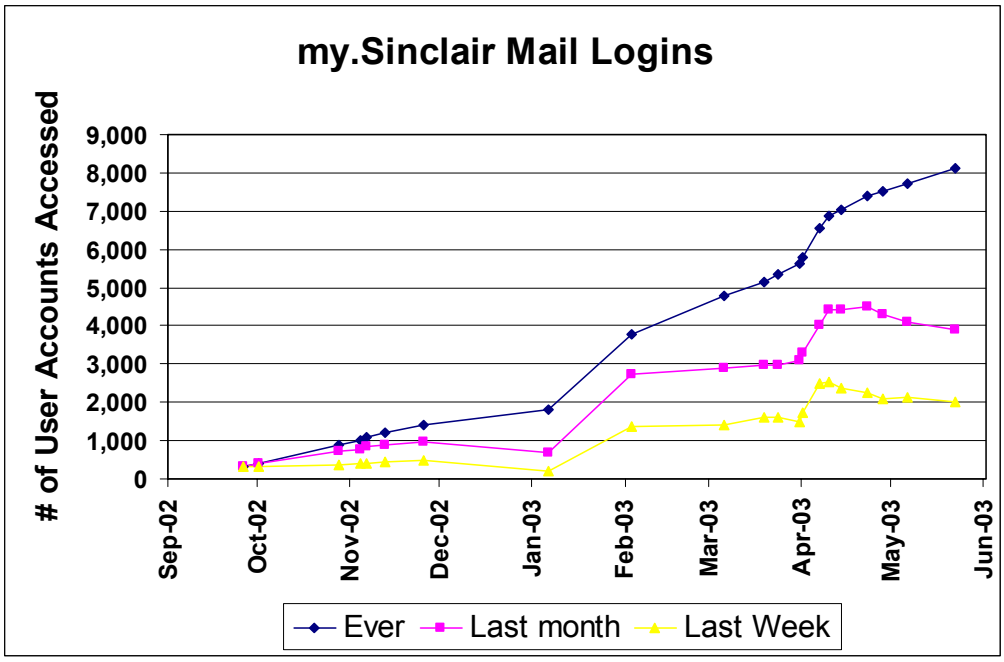


Figure 3-6. my.Sinclair Email Statistics.

We have seen a growth trend in the number of students accessing their my.Sinclair mail accounts and using those accounts on a weekly basis.

The Registration office is currently sending course cancellation notices out through my.Sinclair mail accounts in addition to regular mailings. As the use of my.Sinclair and my.Sinclair mail grows, we plan to increase the number of communications that go out through this means, and eventually reduce the number of physical mailings.

Estimated Completion Date: 9/16/2002

Actual Completion Date: 9/18/2002

Implementation of a database-driven Website using web content management

The entire Sinclair Website was redesigned and updated this year through the efforts of the Web Systems group and volunteers on the Web Advisory Team and its sub-teams. The website features a new and consistent navigation scheme, a consistent layout, advanced search capabilities, and a site index that automatically finds and includes new pages as they are added by the users. Graphics on the new college home page rotate to provide users with a dynamic experience each time they visit the site. A sample of the new home page is shown in Figure 3-7.

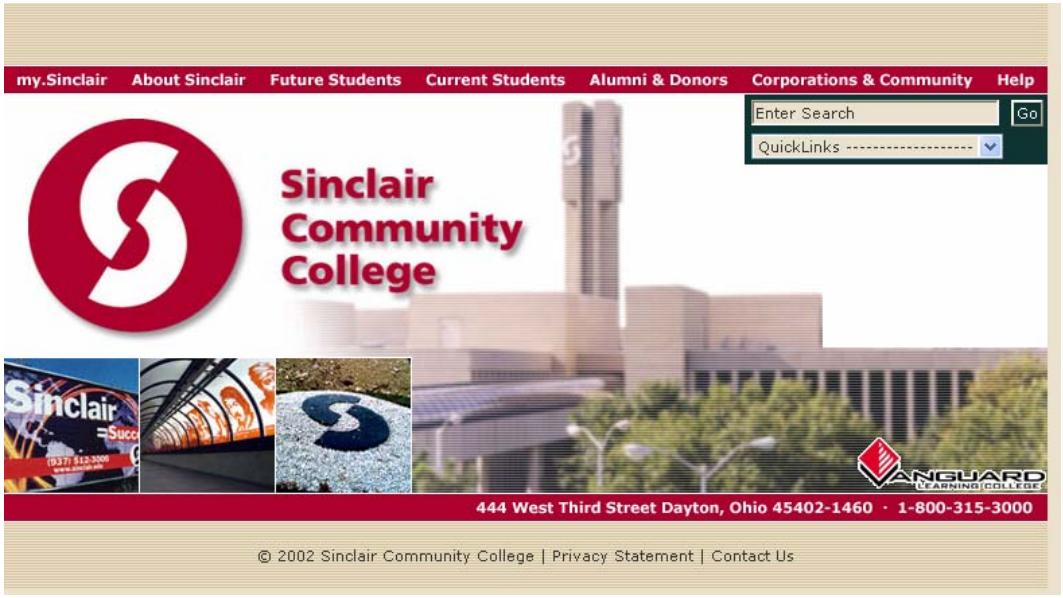


Figure 3-7. www.sinclair.edu Homepage.

Two important features of the new site are:

- Utilization of database-driven technology
- Utilization of a web content management system

Referring to the site as database-driven means that pages are not stored as "static HTML", but rather each element of the page (graphic images, text, buttons, etc.) are stored in a database and "assembled" into a finished page by plugging those database elements into a standard template when the page is requested by a user. This use of templates gives us great flexibility in making site-wide changes without having to redesign individual pages. A database "backend" allows us to use the data for other purposes such as the creation of publications, and allows us to link our Website with other databases on campus, such as the Colleague administrative system. This system greatly expands our ability to increase the online services we can provide students.

A "web content management system" is significant for the new Website because it allows the maintenance of content on the site to be completed and controlled by those directly responsible for the information, and not by the IT staff.

Figures 3-8 and 3-9 illustrate how this concept works. By entering the "edit" mode, a content provider obtains a template, which defines the type of information that can be added to a given page. Word-processor-like tools

can then be used to complete the information, format text, add graphics, or perform other functions to make desired modifications to the page.

Figure 3-8. Sample Web Content Management Edit Page.

Once the user completes the edits and “updates” the page, the changes are immediately made to that page and published to the site, resulting in the creation of a “live” web page.

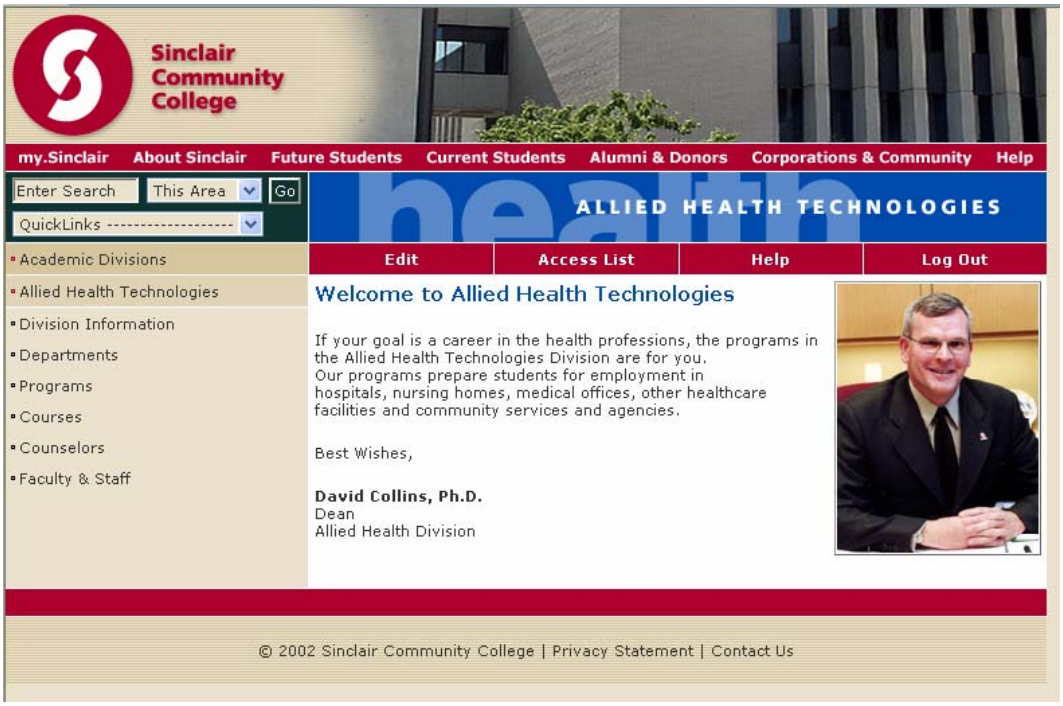


Figure 3-9. Sample Modified Webpage.

The data the user enters is actually stored in a database. The system extracts the information from the database, loads it into the proper template, and builds the finished webpage. This use of templates allows us to change color schemes, navigation techniques, or other "layout" features of the entire Website by changing the templates rather than having to edit each individual page.

Statistics obtained on the new website indicate that since going live, we have experienced an average of 38,212 page views every day. The usage trend is shown in the graph in Figure 3-10.

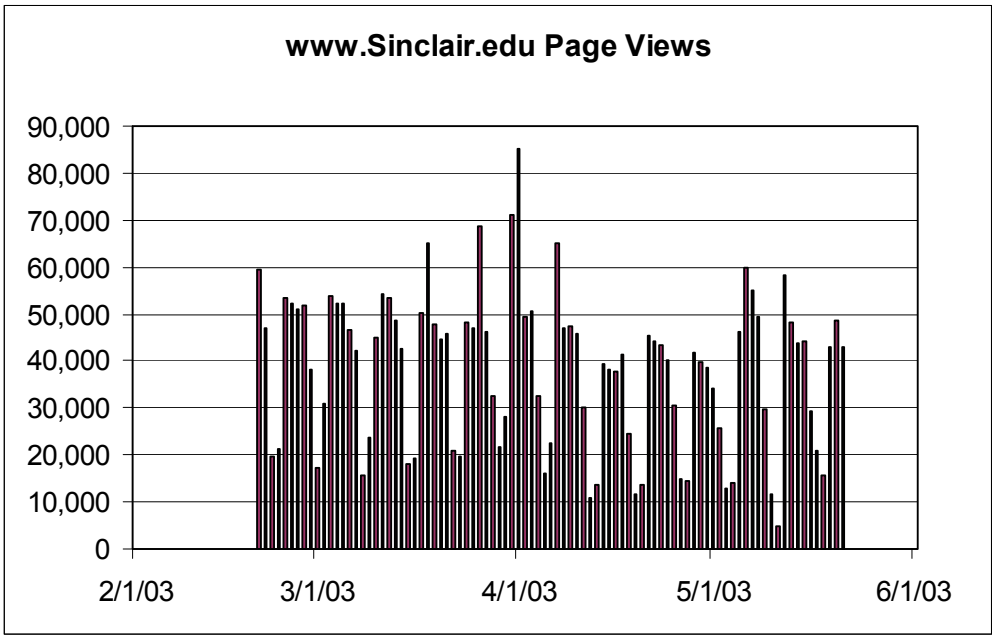


Figure 3-10. Sinclair Website Statistics.

This illustrates that the site is a vital part of providing information and services to constituents of the college, and stresses the need to continue to ensure that the information presented is current and in a format that is easily accessed by the user.

To date over 200 content providers have been trained in the offices across campus and are responsible for maintaining the content in templates that have been established for their respective departments.

Estimated Completion Date: Implement Fall 2002, with two main departments included - expand in subsequent terms, with all departments converted by Fall 2004.

Actual Completion Date: 2/20/2003 - included information from over 70 campus departments.

Replacement of all Web servers (hardware)

The creation of the new Web system and the implementation of the my.Sinclair portal provided the opportunity to upgrade the hardware that these systems use. It was decided that all systems supporting the Web strategy project should be Windows-based servers. Procurement and implementation of those systems began shortly after the approval of the project in February 2002. With the implementation of the new site in February 2003, all of the former Unix-based servers have been phased out of service.

Estimated Completion Date: 2/20/2003

Actual Completion Date: 2/20/2003

Implementation of people.sinclair.edu for individual websites

With the shift in strategy from an institutional Website consisting of separate departmental websites, to a strategy of a common look and feel for the entire website, with content provided by departments, there was concern that the institution still needed a mechanism for faculty and staff to publish information on the Web outside of the "standard" institutional website. Our response was to create a system through which users can request their own Web space and develop materials to publish to that space using tools of their choice. The address for this "individual" Web space is http://people.sinclair.edu. The homepage for this server is shown in Figure 3-11.

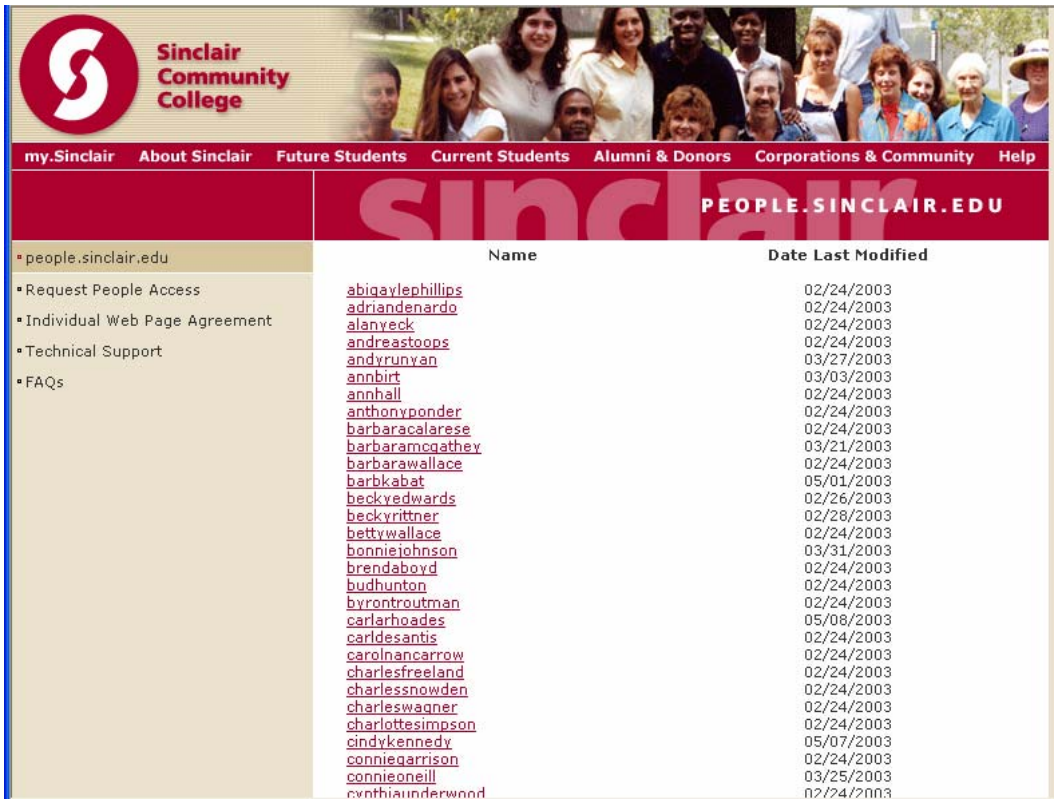


Figure 3-11. people.sinclair.edu Homepage.

To date over 150 faculty and staff have requested and have been provided space on this server. Statistics on page views for this server are shown in Figure 3-12.

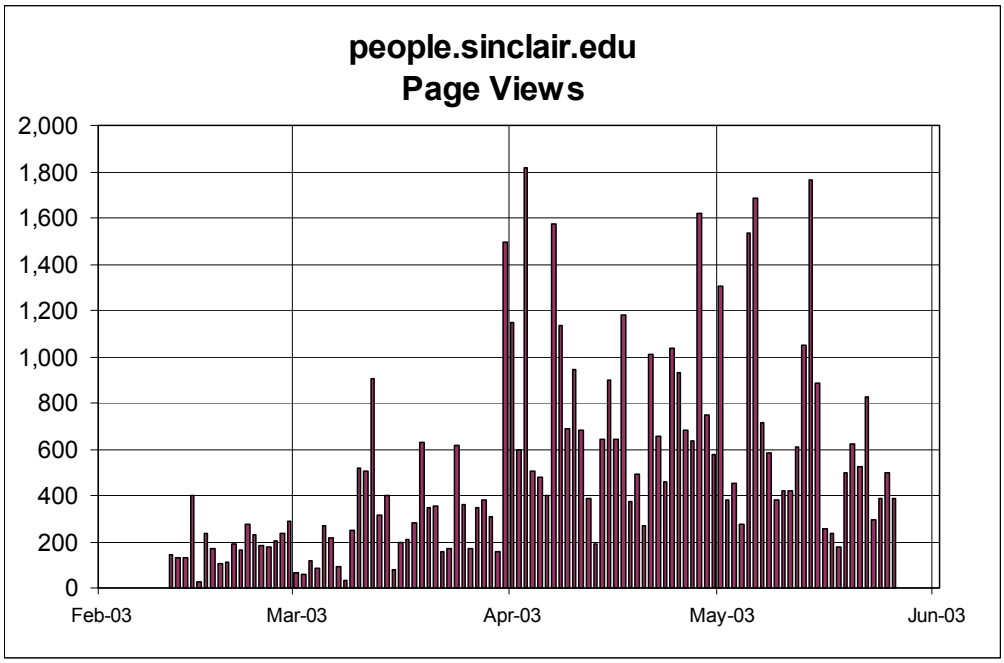


Figure 3-12. people.sinclair.edu Statistics.

While use of the system is still relatively low, it is expected to grow as faculty and staff post information related to courses and their activities at the college.

Estimated Completion Date: 2/20/2003

Actual Completion Date: 2/20/2003

Institutional copiers connected to the Tartan Card system

The previous method of allowing access to institutional copiers, located in each of the departments, required that a staff member go around to each of those machines and collect usage information. By connecting these copiers to the Tartan Card system, we have placed the copier reporting information on the network and increased the functionality of the Tartan Card.

Estimated Completion Date: 9/9/2002

Actual Completion Date: 9/9/2002

Web-based systems standardized on Microsoft SQL Server database management system (DBMS)

With the shift in Web-based systems to Windows servers, we also are shifting all supporting databases to the Microsoft SQL Server Database Management System (DBMS). This allows us to standardize methods

for extracting data from our administrative system and improves our ability to present information on the Web.

The quarterly course bulletin was one of the first online services to be converted to SQL Server. We also added a status for each course within the bulletin, which defines if that class is still open, has been closed for enrollment, or cancelled. That information is currently updated nightly. A sample of the current bulletin is illustrated in Figure 3-13.

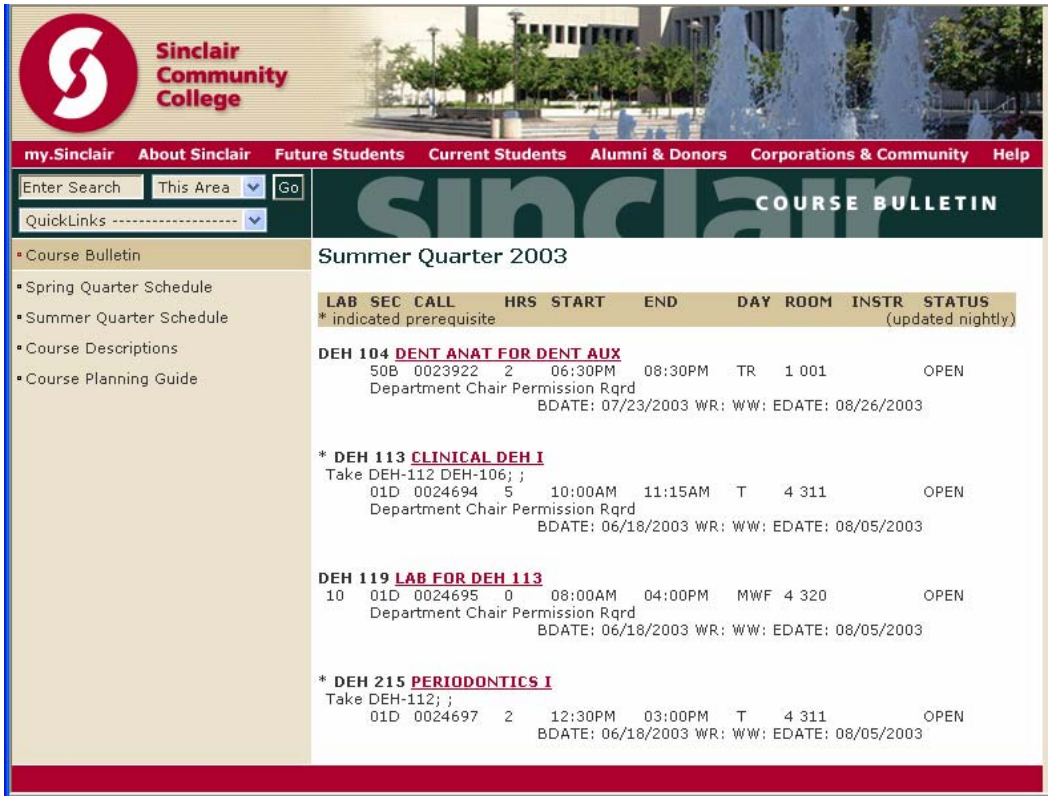


Figure 3-13. Sample Course Bulletin.

Course descriptions were also shifted into the Microsoft SQL Server database for presentation on the Web. Likewise, these descriptions are updated with data from the Colleague administrative system. Figure 3-14. provides an example of the course description option on the Website.

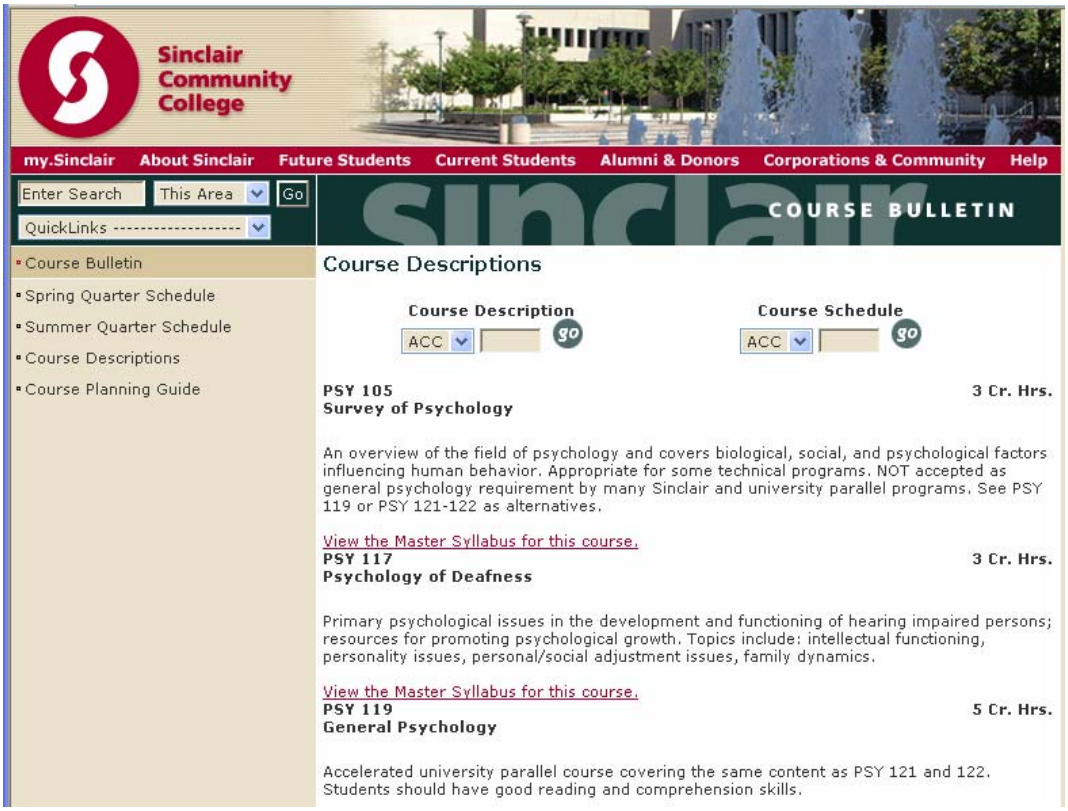


Figure 3-14. Sample Course Descriptions.

Estimated Completion Date: As new systems are developed

Actual Completion Date: As new systems are developed

Implementation of Raiser's Edge

The Foundation and Alumni office decided to shift their supporting administrative system from Datatel's Benefactor to Blackbaud's Raiser's Edge. eCollege staff supported those offices during the transition.

Estimated Completion Date: The project completion date shifted many times due to data conversion issues with the vendor and availability of Foundation/Alumni staff to test the system.

Actual Completion Date: 1/31/2003

Automation of the Colleague Deregistration Process

Student Services requested that the process for deregistering students be automated in order to compress the time required for completion. It was

anticipated that this would allow for more frequent deregistrations and reduce the number of student complaints related to the deregistration process.

Estimated Completion Date: Winter 2003 registration cycle

Actual Completion Date: 12/1/2002

Interactive Online Application for Admission

The former process allowing students to submit an application for admission online consisted of having the student fill out a lengthy single-page form. On completion of the form, the system automatically e-mailed the information to the Registrar's office, where the data was re-keyed into the Colleague administrative system. The purpose of this project is to redesign the online application process to simplify data entry for the student, to improve consistency of the information obtained, and to minimize the data entry requirements for the Registration staff. The Web Systems group has developed a new Web-based application form and Business Systems and Programming staff are implementing a review/upload process whereby data submitted will not have to be re-keyed by the Registration staff. The new online Admission Application is shown in Figure 3-15.

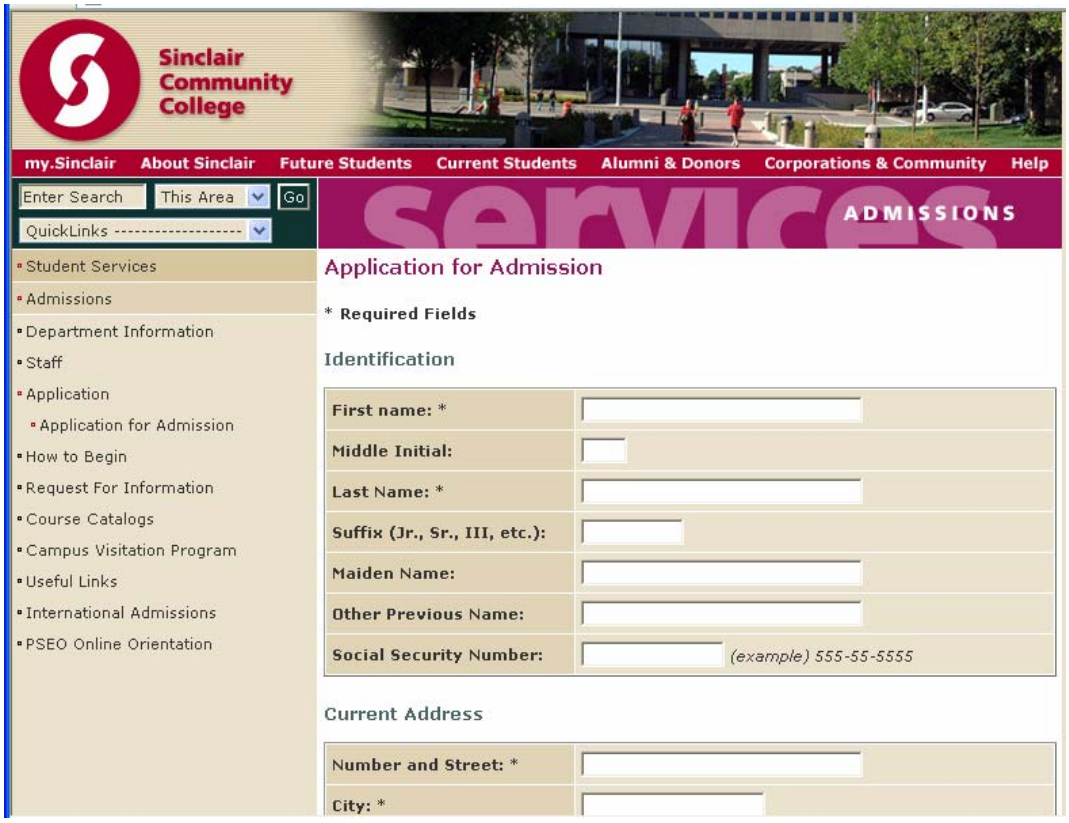


Figure 3-15. New online Admissions Application.

Estimated Completion Date: 6/19/2003

Actual Completion Date: The Registration office is now projecting that they will be ready to implement the new system by 7/15/2003. The delay is primarily due to their availability to test the system as it is developed.

Implementation of Source Control for Web Systems

Source control software provides a means for tracking programming code (instructions). It tracks changes made to code, places version numbers on different revisions, and allows comparisons between different versions for troubleshooting and development support. It also provides a means for documenting changes made to the code. The purpose of this project was to migrate program code for the current Web applications into the PVCS source control system.

Estimated Completion Date: 5/27/2003

Actual Completion Date: 3/3/2003

EdVerify Implementation

EdVerify is a vendor with a system that allows employers to verify degrees, enrollment periods, and current enrollment at the institution. Data uploads are generated by the college and sent to the EdVerify system for their customers (generally employers) to access.

eCollege staff continues to negotiate between the vendor and Registration staff to ensure that accurate and understandable data are provided to the system. The Registrar staff is in the process of providing written specifications on dates used for enrollment verification and program codes to be supplied.

Estimated Completion Date: 8/15/2002

Actual Completion Date: unknown

Information Technology Services Department

Following are the Major Accomplishments for FY2002-2003 for the Information Technology Services Department:

Virtual Private Network (VPN) access to Sinclair network via the Internet

ITS staff are responsible for providing service and support to almost 80 servers and a complex network infrastructure. In the past, most of the support that has been required involved working mainly within the hours of 8 to 5, Monday through Friday. As the college has increased the use of technology in its educational programs, and with the expansion of services that are offered via the web, and therefore, have no fixed hours of availability, the need to provide extended support hours has increased drastically.

This system provides technical staff with the ability to access internal network resources securely over the Internet for the purpose of troubleshooting problems. They have the ability to connect with the same kind of access that they do from their office. This ability greatly reduces the time that it could take to solve problems if staff were required to come on site outside of normal working hours.

Actual Completion Date: 3/14/2003

Web access to Sinclair network resources via the Internet

One of the department's strategies is to make as many services as possible available via the Internet using standard web technologies. What this means is that our customers can access these resources from off-campus by dialing into their Internet Service Provider or connecting via some other provider's network and accessing services on the Sinclair network via their web browser. Examples of this type of access that have been previously made available are the Intranet and Outlook Web Access.

This newest offering of web access to campus network resources is the availability to access a person's individual network storage space or departmental network storage space via the Internet. The main use of this service is for individuals to access their H: drive; however, they are also able to access any other network file stores that they have access to on campus. While this will be an obvious productivity enhancement for anyone who wants to work from off-campus, we believe it also holds great benefit for the large number of part-time faculty who have had network storage space but no practical way of using it. Figures 3-16 and 3-17 show examples of the dialogs provided when the user accesses the Remote File Access facility from the my.Sinclair portal.

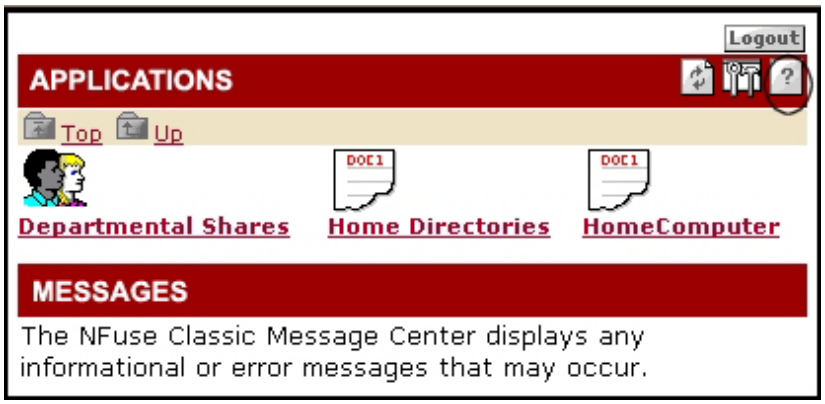


Figure 3-16. Remote File Access Directories Dialog.

Figure 3-17. Remote File Access Windows Dialog.

Actual Completion Date: 3/17/2003

IP Multicasting

The network equipment that has been installed as part of the Telecommunications Infrastructure Project has a capability known as IP Multicasting. IP (or TCP/IP) is the communication protocol that the computers on our network use to communicate. IP Multicasting is a capability of TCP/IP to stream data (in a single stream) from a server to a large number of computers, thus greatly reducing the bandwidth requirements.

If an individual computer requests a video file to be played from the network to his PC, this creates a 'stream' of data. As an example, let us say that this stream requires 2.5 megabits/second of bandwidth. If 30 people in the same class request this same file, they will consume 30 times 2.5 or 75 megabits/second of the total bandwidth from the server on which the file exists. Since most of the servers today have 100 megabit/second connections to the network, this type of exercise is not very feasible.

Using IP Multicasting, the 30 machines mentioned above would logon to the server, request the stream, and the server would send a single stream over the network to the network devices between the server and the requesting PCs. Once the stream reaches the final network device before the PCs, this device breaks the stream into the individual streams required by each PC.

IP Multicasting has benefits in video streaming as demonstrated in the previous example. Another area that ITS is using IP Multicasting, is in the process of deploying software to academic lab computers. The computers in Sinclair's academic labs have a large number of applications for use by the instructional program that uses the lab. During the course of the quarter, students change computer configurations and in some cases computers become unusable. The process of re-installing a lab full of computers could take days in order to get the computers back into a usable state. IP Multicasting provides an efficient way to send the same bundle of software to every computer in a lab by only sending a single stream of said software from the server. This will expedite the process of reinstalling the software applications and, at the same time, minimize the time required for User Support Technicians, thus providing more time for them to work on reported problems.

Actual Completion Date: 11/15/2002

Student Help Desk implementation

The function of the Help Desk has traditionally been to provide support for Sinclair's faculty and staff. Students were given support by academic lab support staff, their faculty, and in some cases through outsourced Help Desk services. With the implementation of the portal, it has become more important to provide students with technical support than ever before.

This year ITS was given two additional staff positions to integrate student support functions into the existing Help Desk. A lot of work has been done over the last year to provide students with the same level of support that has been provided to faculty and staff for many years. This has involved working with many staff within the IT division to document procedures and communicate information to students. An example of the documentation provided is shown in Figure 3-18.

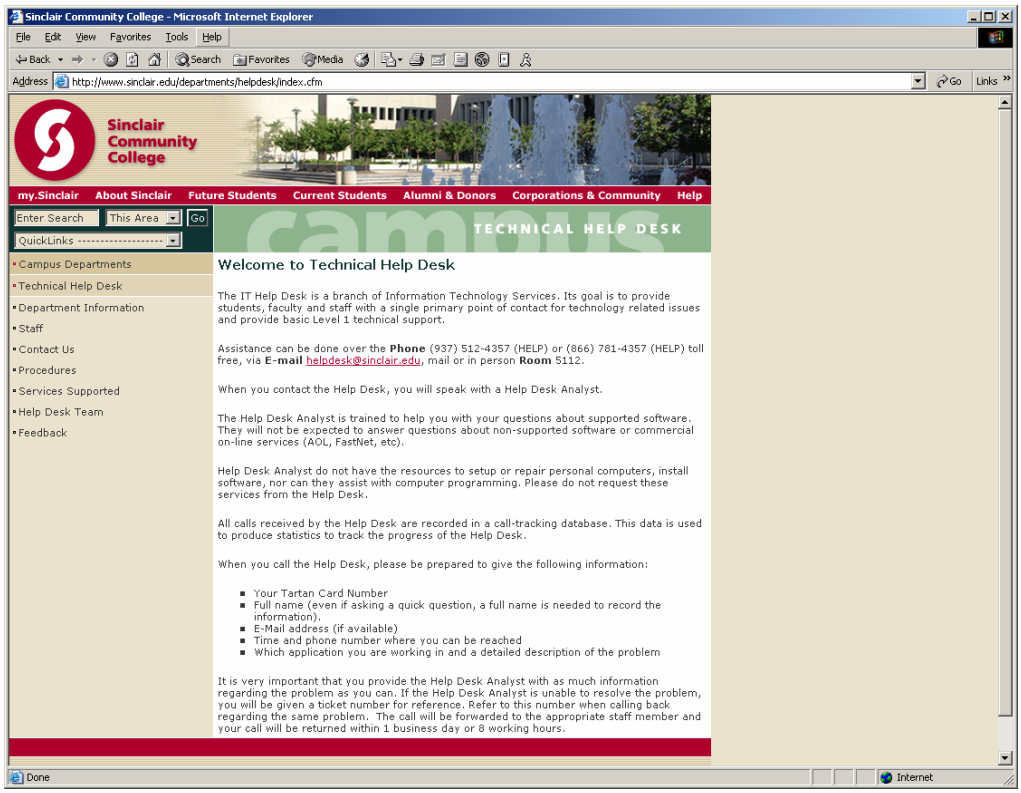


Figure 3-18. Help Desk Documentation.

Actual Completion Date: 9/30/2002

Infrastructure for Web Strategy

Sinclair's web strategy calls for a three year project to implement a range of web-based services which includes re-engineering the college's web site to be based on a content management model, creating a portal system which presents information to individuals based on their role within the college, and web transaction capabilities including registration, admissions, grade reporting, etc.

While much of the external focus of the project has been on the functionality that the system will provide, it is not possible to provide these capabilities without a complex infrastructure. The infrastructure that is required to support the web strategy project includes 16 additional servers, several network switches and firewall server, and approximately 800 gigabytes of storage in the Storage Area Network. Most of these servers have already been implemented, but there will continue to be changes made as further enhancements in services are made. Figure 3-19 contains a diagram of the current servers used to support the Web Strategy Project.

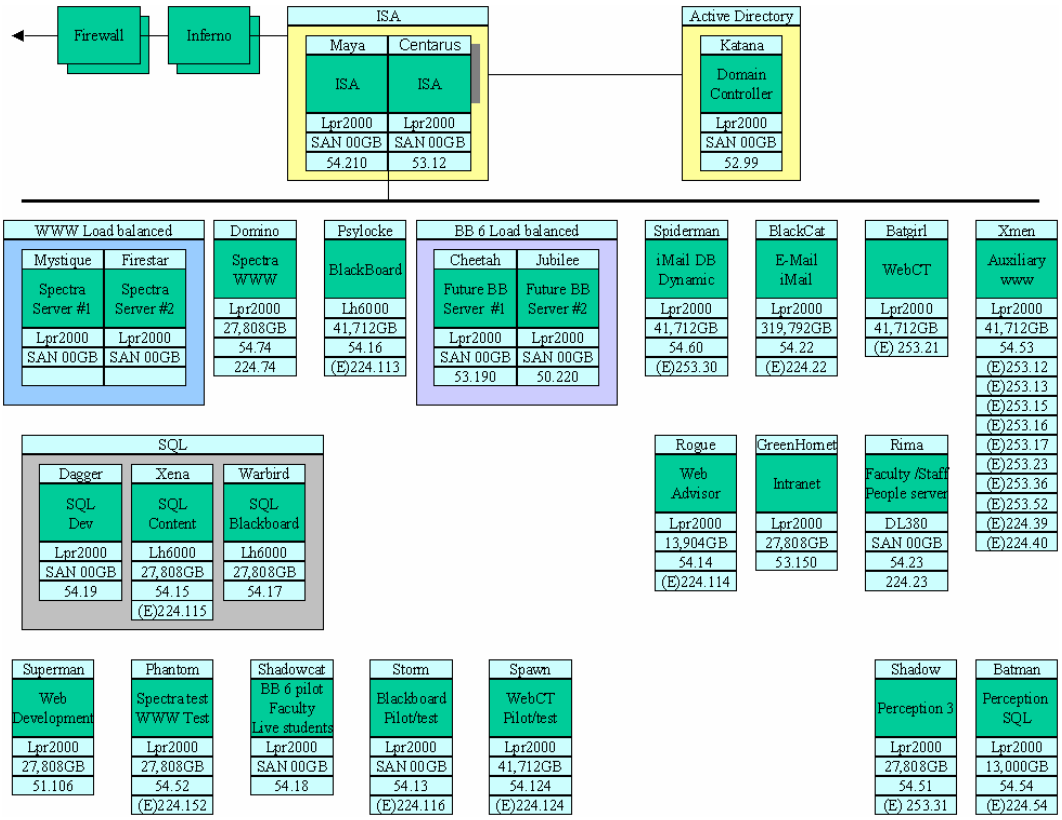


Figure 3-19. Web Strategy Project Server Diagram.

Actual Completion Date: 12/20/2002

Magic Self-Service Help Desk external access

The software that is used by the Help Desk to track problems reported by users is called Magic. In December 2001, we upgraded Magic and implemented a new self-service capability that allows faculty and staff to submit problems and to later check on the status of those problems via a web interface. Magic Self Service Help Desk is an easy-to-use system to help solve or track an individual's Help Desk problems.

With Magic Self Service Help Desk users are able to check to see if problems exist with IT services via a "whiteboard" to which ITS posts information about system problems. Users may also view incidents that they've reported to the Help Desk and review the status. This service has improved the quality of service provided to users while also reducing the number of calls to the Help Desk.

In August 2002 this self-service capability was made available externally so that faculty and staff who experience problems accessing resources from off-campus can submit problems via this application. This will reduce the wait time for problem resolution, and thereby constitute another form of productivity enhancement. Figure 3-20 shows the Magic Sign-in screen and Figure 3-21 shows the Magic Self Service Desk Homepage.

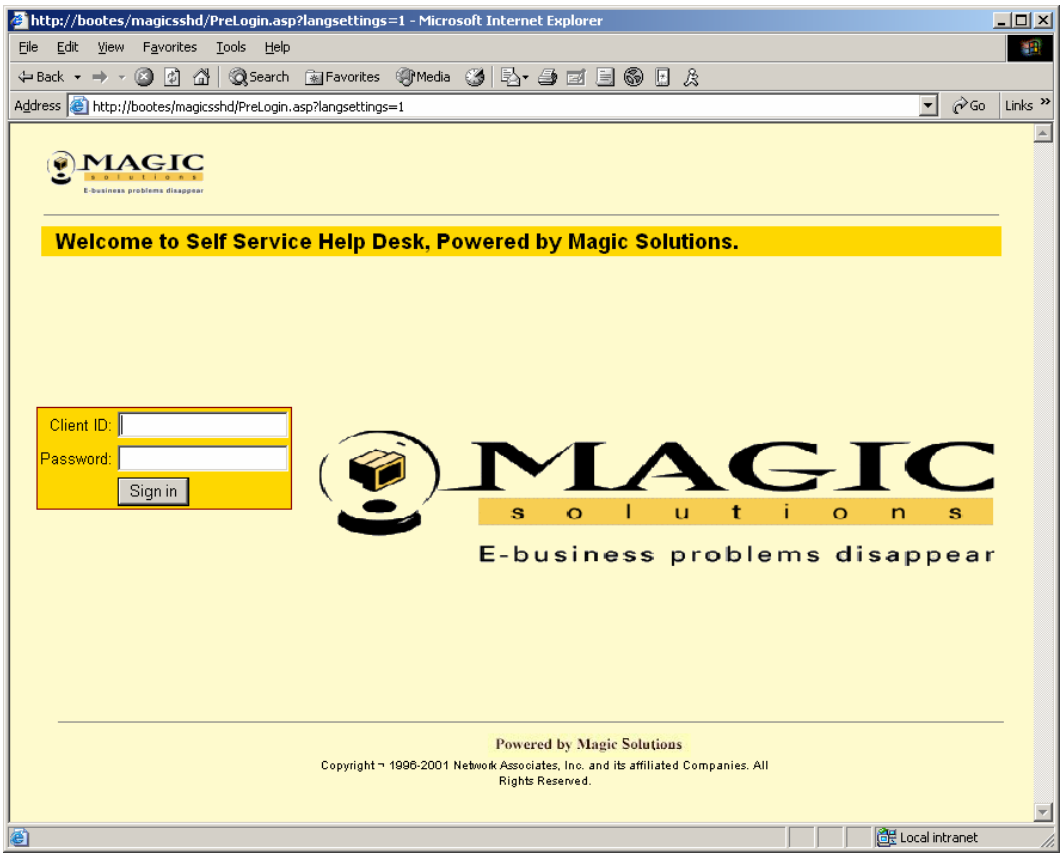


Figure 3-20. Magic Sign-in Screen.

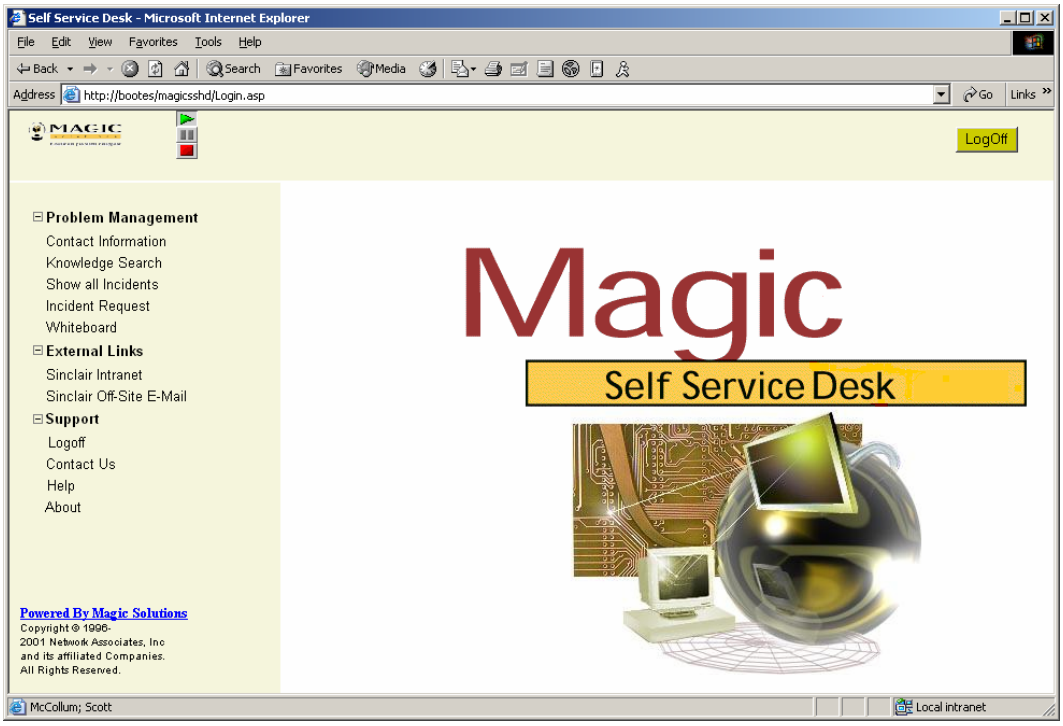


Figure 3-21. Magic Self Service Help Desk Homepage.

Actual Completion Date: 9/1/2002

Telecommunications Infrastructure Project

The Telecommunications Infrastructure Project focused on the design and building of infrastructure to provide for instructional delivery of voice, data, and video throughout the Sinclair campus. The project addressed the pathways, cabling, electronics, and processes required to bring these instructional resources to all teaching and learning spaces.

The final phase of this 2-year project to upgrade the entire campus network was completed in October 2002. The new backbone consists of a highly available, fault-tolerant design where every building's switch is plugged into two routers, which are located in different buildings. This mesh network is illustrated in Figure 3-22.

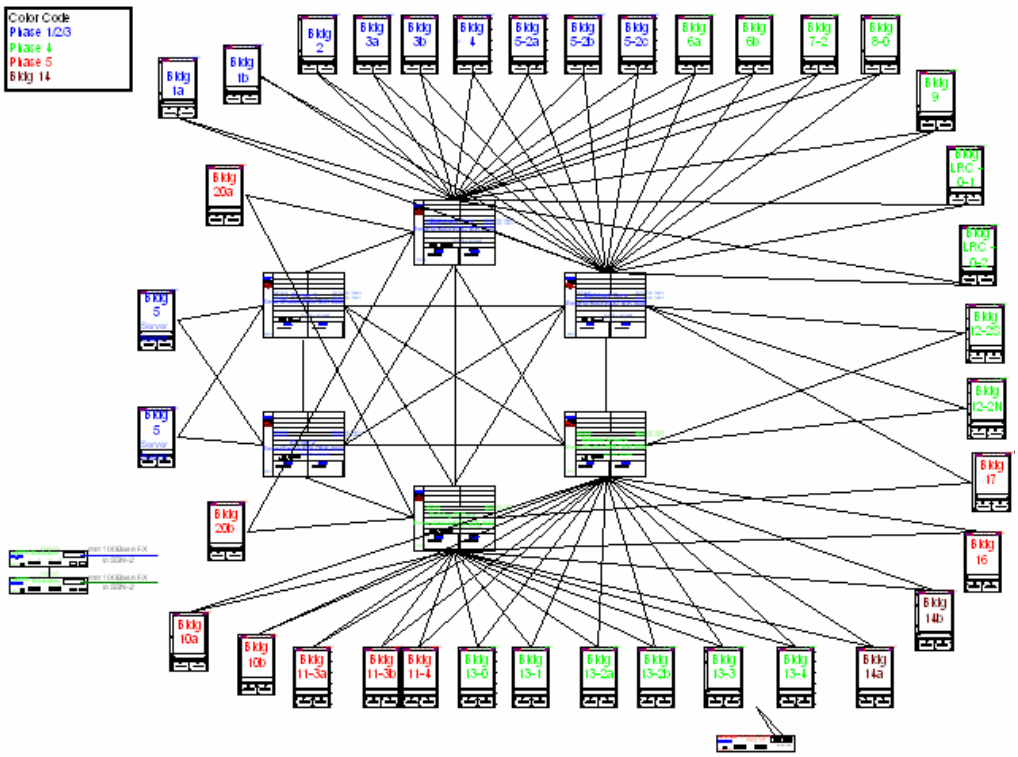


Figure 3-22. Telecommunications Infrastructure Network Diagram.

Actual Completion Date: 10/31/2002

Windows 2000 image rollout

The "Windows Image" is the term used for the Windows software and core set of applications that are installed on all PCs at Sinclair. It is called an “image” because the software that is installed is an exact copy of an installation that is moved from a network file server (or CDs) to the user's PC at the time of installation. This method of building the user desktop ensures that all of the applications, as well as Windows itself, are setup exactly alike for all users. Additionally, it saves hours of time that it would normally take to install the applications individually for each user.

We have successfully migrated all computers on campus that can make use of the Windows image to the new Windows 2000 version of the image. With this change, we have dramatically increased the dependability of the software that users are provided. This migration included approximately 1200 faculty and staff workstations and close to 2000 lab workstations.

Actual Completion Date: 3/15/2003

Corporate & Community Services Internet connection

The requirements of the Corporate & Community Services division for Internet connectivity are very different than the normal campus user. Many of the division's corporate clients rent space in Building 12 and have the need to connect devices to the network that could potentially cause problems for the rest of the campus. These needs have been met in the past by disconnecting a room from the campus network and only providing connectivity within the room. While this has met a good percentage of customers' needs, it hasn't provided the ability to also have access to the Internet.

In order to provide Corporate & Community Service's clients with a networked space that provides access to the Internet without putting the Sinclair network at risk, we have implemented a dedicated Internet connection. This connection has no restrictions like those that would need to be imposed to minimize the risk to campus systems, and therefore, allows the division the ability to expand the types of services offered to clients.

Actual Completion Date: 12/15/2002

Server reboot schedule

As mentioned in previous project descriptions, the college has a major investment in Microsoft Windows servers. One of the best practices that many organizations running Windows servers have adopted is the regular reboot of the servers to clean up any problems that failed applications or bugs in software can leave behind. Actually, scheduled reboots are a necessity in order to limit the occurrence of unplanned downtime.

ITS has worked with eCollege staff to identify a schedule whereby servers are rebooted at a minimum of once per month, and in some cases, once per week depending on the function the server provides. The servers are rebooted using automated scripts wherever possible; however, in some cases operator initiated reboots must be used. In all cases, the Network Operations Center staff visually verify the successful re-initialization of any server that is rebooted.

Actual Completion Date: 3/13/2003

Spam filtering

ITS researched available products for performing Spam filtering and narrowed the decision to two systems. One of the systems was a commercial product, and the other was a public domain application. Both systems were installed and an evaluation was performed by ITS and user staff. The free

product, SpamAssassin, was selected as the winner.

SpamAssassin filters run on the incoming mail relay server, and they tag possible Spam messages with the following line in the header section of an email message: “SpamAssassin says this is SPAM”. Headers aren’t shown in the normal Outlook display so users that don’t care to filter their mail will see absolutely nothing different in the way their mail looks or is treated by Outlook. If someone does want to view the header of a mail message it is accomplished by right clicking on a message and selecting Options in the drop down menu, as depicted in Figure 3-23.

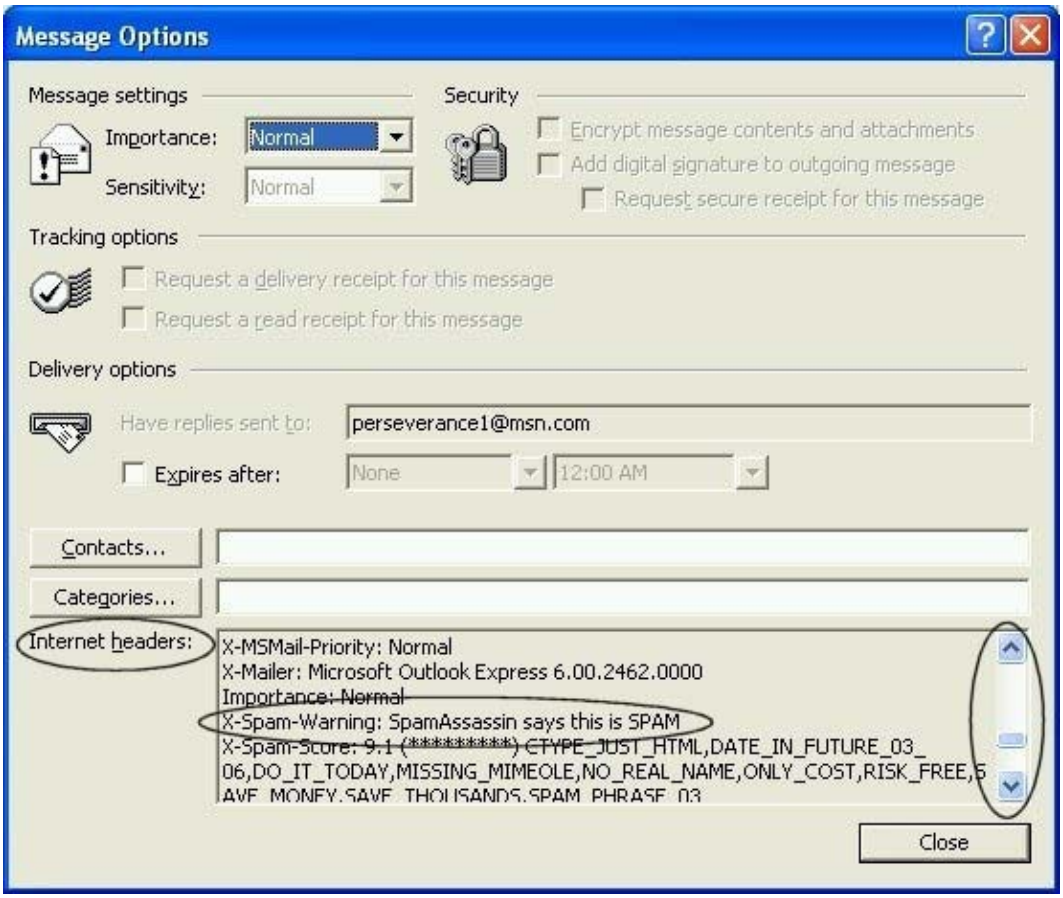


Figure 3-23. SpamAssassin Message Options.

Users who want to filter their mail can create a rule in Outlook (as shown in Figure 3-24) that handles any message which contains the SpamAssassin message in the header. All messages containing the phrase above will be forwarded to the folder of your choice. You can then open that folder, review the messages, and dispose of them or handle them in any manner desired.

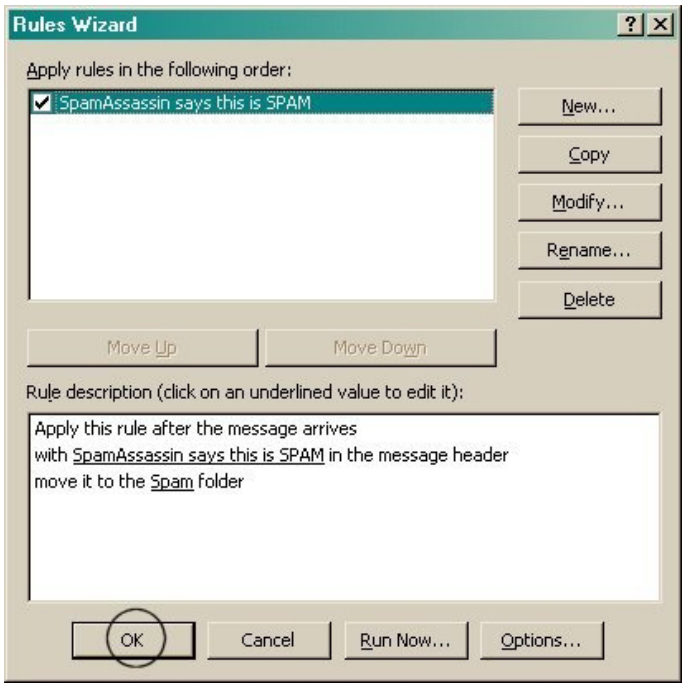


Figure 3-24. Outlook Rules Wizard.

Actual Completion Date: 12/15/2002

Upgrade of network hardware

The campus network that links the 3200 PCs, 460 printers, and nearly 80 Windows and Unix servers is created through the interconnection of close to 40 network switches. Each switch chassis holds between 5 and 7 modules, each supporting 12 to 48 individual connections. Because the chassis only provides the power and connectivity between the modules, newer generation modules can be placed alongside older ones. Pictures of the chassis and the network boards are provided in Figure 3-25.

This year 43 network switch modules, which were present prior to the start of the Telecommunication Infrastructure Project, and which utilize obsolete technology, were replaced in accordance with the college's Renewal & Replacement plan. This upgrade increases the capabilities of the network to support higher speed transmission as well as functions such as IP Multicasting that was mentioned previously.

Figure 3-25. Network Switch Chassis and Boards.

Actual Completion Date: 12/18/2002

HP multi-year contract

A significant portion of the ITS annual budget is spent with Hewlett-Packard Company for the maintenance of hardware and software. This maintenance covers the repair and/or replacement of failed system components, reactive support for hardware and software issues, and the free upgrade of operating system and applications that are covered under the agreement.

In the past, we have estimated the cost of renewing our maintenance agreement during the planning and budgeting process and renewed the agreement for a 12 month period. Due to the amount of business that the college does with HP, we had the opportunity in 2002 to take advantage of a significant savings in our annual maintenance expense. This year, we entered into a 3-year agreement that resulted in an additional 15% discount, or $22,000 less annual expense.

Actual Completion Date: 7/31/2002

Enhanced toll-free access to voice mail

Prior to the implementation of the Voice Mail toll-free number, when Sinclair Community College employees were out of town, they did not have an easy or practical way of calling Sinclair to check voice mail messages, or to contact support staff. If someone was going out of town on business (or on vacation), he could request a loaner long-distance calling card and have the usage charged back to his department. There were many negative aspects to the old process: users had to remember to get a card, keeping track of who had a card and if it was returned, ensuring timely charge backs, and the review of charges to make sure they were accurate.

Calling card charges are much more competitive on a per-minute basis than calling from a hotel, but they are not the best. Formerly, if employees lived outside of Dayton, they could not check voice mail as frequently as they should (or wanted to) due to the associated expenses. This is especially true during the summer months, when faculty may not be here. An easy solution was to establish a toll-free number that points to Sinclair's Voice Mail system. The number can be accessed from anywhere in the 50 states and Canada.

When this service was made available, the necessary security measures were taken to prevent unauthorized use. Now a caller can check messages frequently, and, if he wants to, can exit the system to talk with other employees—and do so "real time". Or, if an employee wants to talk to someone at Sinclair, he can use the menu function in voice mail to contact colleagues (24 x 7). The per-minute cost is less than the calling card rate. A wallet-sized "tips" card (shown in Figure 3-26) was created and distributed to all employees on how to use the toll-free number and various voice mail features.

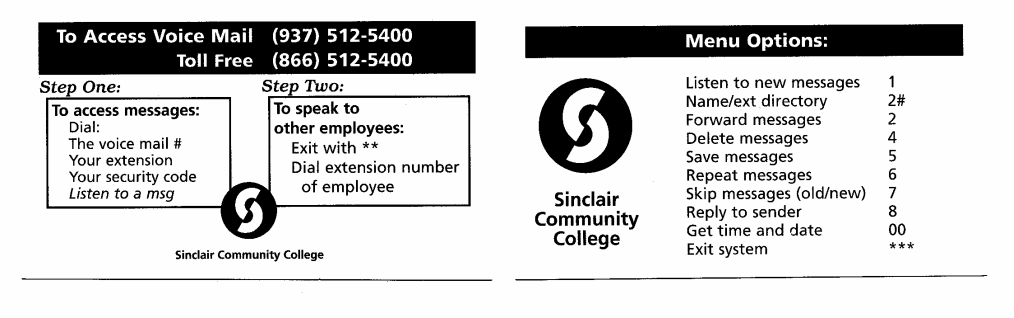


Figure 3-26. Voice Mail "Tips" Card.

The outcome of this new service is that the need for loaner long-distance cards is almost nil, our expenses have stayed the same for a significantly greater number of minutes of talk time, and the entire Sinclair community can access the voice mail system. We are using a fundamental voice technology to enable all employees to "stay connected", while traveling or simply away from campus—a win-win!

Actual Completion Date: 7/15/2002

Student email implementation

Communication between faculty and students was identified as one of the areas that the portal project needed to address. In order to improve the communication process, it was determined that the college should provide all Sinclair students with an email account when they initially register.

The current plan is to continue to provide access to email accounts even when students are no longer registered, as long as they continue to be accessed.

This project included the evaluation and testing of multiple applications for providing email to students. Functionality and cost of the various systems were evaluated, and it was determined that iMail from Ipswitch, Inc. would be the best fit. After selecting iMail, the process of implementation included developing standard processes for creating accounts and producing information for the Help Desk to be able to provide support to students. The Logon screen for the student email application, my.Sinclair Mail, is shown in Figure 3-27.

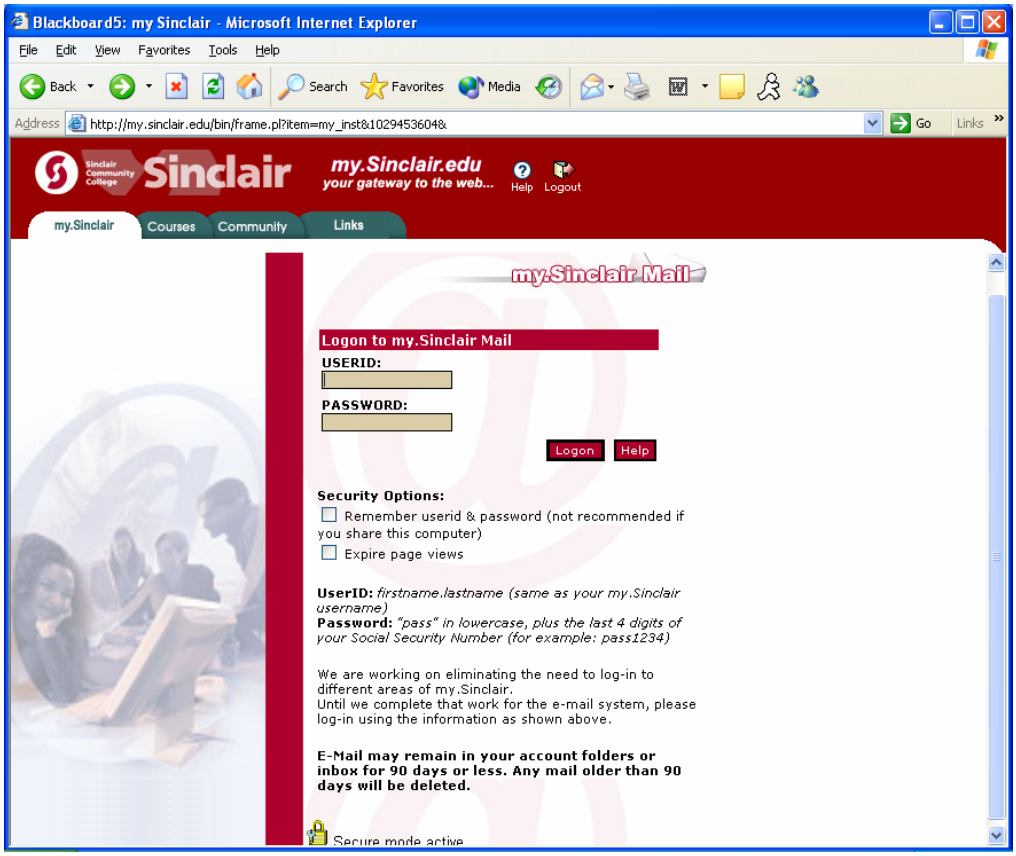


Figure 3-27. my.Sinclair mail Logon Screen.

Actual Completion Date: 2/15/2003

Automated account creation

Network accounts have been generated automatically at Sinclair since the implementation of Microsoft Exchange two years ago. Since that time there have been several changes that have required modifications to these processes.

The first modification provides tighter control of accounts held by part-time employees. The college's HR and payroll processes don't require part-time employees to be terminated so the only information that was available to identify active employees was the date that they received their last paycheck, creating problems because of the infrequency with which some part-time employees are paid. The only solution that was previously available was to give accounts to everyone paid in the last six months. In 2002, a process for part-time faculty to be assigned to courses was created, and this data is now used in creating accounts for faculty. Other part-time positions are now given accounts if they have been paid in the last month. This change significantly reduced the risk of having non-employees with network access.

The second change made with regards to automated account creation processes was for student employees. When Microsoft Exchange was implemented, it was decided that employees of all types should be given Exchange accounts. While this was a good decision at the time, with the implementation of the portal and the previously mentioned iMail system, students who become employees would be given Exchange accounts until they are no longer employees, which would cause the Exchange account to be removed and an iMail account created. This process could go on indefinitely if the student took multiple positions on campus. To minimize the confusion, Exchange accounts are no longer provided to student employees.

Actual Completion Date: 1/15/2003

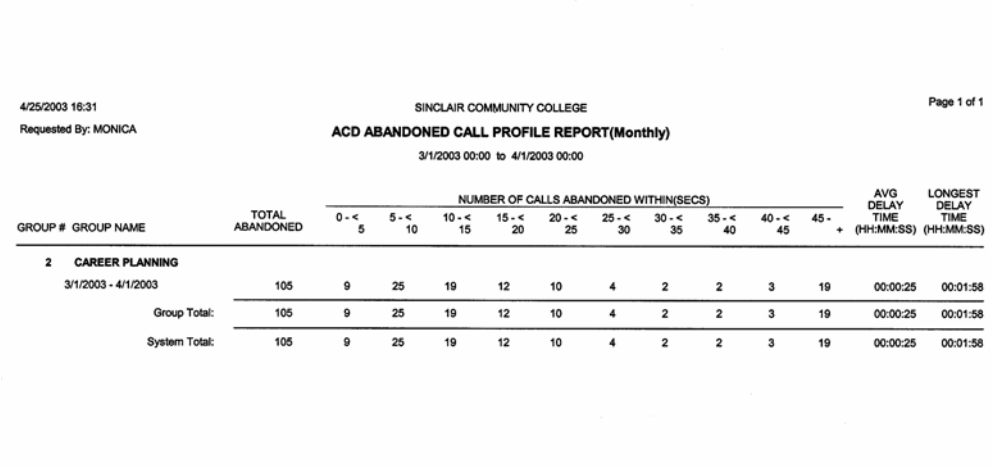
Analysis of relevant Automatic Call Distribution (ACD) reports requested for Call Center

Sinclair's first Call Center was opened in August 2002. Sinclair's Call Center takes all incoming calls that used to route to the Admissions, Registration, Financial Aid and Bursar Departments. It is the first point of contact for all new, potential, or existing students. Since start up, it has matured into an information resource for many employees as well.

The software that makes calls route to a Customer Service Representative (CSR) is called Automatic Call Distribution (ACD) software. Through this software, voice messages are generated which assure callers that they are still connected to the Call Center, and to provide general information about a current situation (i.e., we are closed due to a snowstorm). A caller will hear these voice prompts only if a CSR is not available to take the call. Through call routing design, we determine how long a caller will hear the messages until he is informed that no CSRs will be available due to heavy call traffic.

In order to provide good customer service, performance statistics are constantly reviewed to make sure the route design and staffing are correct. The ACD system generates many statistical reports at different levels: by CSR, by group, by function, and by type of call. A critical statistic is the "abandoned call percent." An abandoned call means that the caller was "on hold" for some period of time and hangs up before a CSR can take the call. A high abandoned call rate equals dissatisfied customers. Figure 3-28 contains a sample ACD Abandoned Call Profile Report.

When the Call Center opened, various reports were analyzed to find the most useful one. There were differences of opinion on "when has a call been delivered to a CSR." Depending on which report you analyzed, the statistics were either very good or very bad. After many discussions with the Call Center managers, the support vendor, and in-house telecom staff, consensus was finally achieved. The outcomes were: (1) the call flow design was modified, (2) the statistics are exceptional for a new Call Center, and (3) this new understanding is being used with other ACD groups.



4/25/2003 16:31 SINCLAIR COMMUNITY COLLEGE Page 1 of 1

Requested By: MONICA

ACD ABANDONED CALL PROFILE REPORT(Monthly)

3/1/2003 00:00 to 4/1/2003 00:00

GROUP #	GROUP NAME	TOTAL ABANDONED	NUMBER OF CALLS ABANDONED WITHIN(SECS) 0 - < 5	5 - < 10	10 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - +	AVG DELAY TIME (HH:MM:SS)	LONGEST DELAY TIME (HH:MM:SS)
2	CAREER PLANNING													
	3/1/2003 - 4/1/2003	105	9	25	19	12	10	4	2	2	3	19	00:00:25	00:01:58
	Group Total:	105	9	25	19	12	10	4	2	2	3	19	00:00:25	00:01:58
	System Total:	105	9	25	19	12	10	4	2	2	3	19	00:00:25	00:01:58

Figure 3-28. Sample ACD Abandoned Call Profile Report.

Actual Completion Date: 10/18/2002

Network based printing

Network printing at Sinclair has been a problem for some time. With over 450 printers connected to two print servers, the average daily load over the course of a quarter was very low. However, during the first and last week of the quarters, printing demand is so high that servers often fail under the load. To resolve this problem we evaluated several alternatives that appeared to have promise, but ended up being no better than our previous situation.

We have determined that the reason why the print servers cannot handle the load is not because of the print servers' CPU performance or the amount of available memory. The problem is due to the server having a single 100mb network connection over which it transmits the print jobs to the printer. To solve the problem we have installed a piece of software on one of the print servers that allows two copies of Microsoft Windows on a single physical server. Each of these two virtual servers have their own network connection with 100mb capacity. In addition to creating an additional server, we have balanced the academic lab printers across the servers.

Part of the problem in determining the appropriate solution for our printing experiences has been the lack of good information on the volume of printouts and which printers are used the most. While we have successfully resolved our current printing problems, we need to have a process for monitoring usage to avoid problems in the future. These issues will be addressed with a printer management project in the next fiscal year.

Actual Completion Date: 4/11/2003

Service Availability reports

As a prerequisite to providing outstanding customer service, it is imperative that we fully understand system availability and recognize related impacts. Over the past year much effort has been placed on creating a process for recording the occurrence of downtime for services that are provided by ITS. The information that is generated from this process has helped to improve the availability of services by ensuring that all necessary personnel are made aware of downtime events and that any necessary corrective actions are taken.

A database has been created which contains information on all servers and the services that they provide. Downtime events are recorded in this database and monthly reports (as shown in Figure 3-29) are generated, which report the total planned and unplanned downtime and the overall availability percentage for each service. The reports are posted on the Intranet every month. Also, a team within ITS reviews the monthly reports in a regularly scheduled meeting and documents actions that need to be taken in order to prevent problems from recurring.

Service Availability

Period: 3/1/2003 thru 3/31/2003

Total time this reporting period: 720 hours

Application services

Service	Planned Down-time Hrs/Min	%	Unplanned Hrs/Min	%	Planned Hrs/Min	%	Availability** Hrs/Min	%
8e6 Proxy Service	0:10	0.023%	0:00	0.000%	719:50	99.977%	719:50	100.000%
Academic Image Profiles	0:00	0.000%	0:05	0.012%	720:00	100.000%	719:55	99.988%
Academic shares	0:40	0.093%	0:05	0.012%	719:20	99.907%	719:15	99.988%
Amicus (Legal Assisting)	0:00	0.000%	0:05	0.012%	720:00	100.000%	719:55	99.988%
Automotive Terminal Serve	0:00	0.000%	0:00	0.000%	720:00	100.000%	720:00	100.000%
Benefactor - Foundation	0:00	0.000%	0:00	0.000%	720:00	100.000%	720:00	100.000%
Blackboard (Portal)	0:00	0.000%	0:00	0.000%	720:00	100.000%	720:00	100.000%
BlackBoard (Test)	0:10	0.023%	0:00	0.000%	719:50	99.977%	719:50	100.000%
Calendar Scheduling	1:06	0.153%	0:00	0.000%	718:54	99.847%	718:54	100.000%
CD Server	0:10	0.023%	0:00	0.000%	719:50	99.977%	719:50	100.000%
CISWin	0:10	0.023%	0:00	0.000%	719:50	99.977%	719:50	100.000%
Citrix	0:30	0.069%	0:00	0.000%	719:30	99.931%	719:30	100.000%
Colleague R13	0:00	0.000%	0:00	0.000%	720:00	100.000%	720:00	100.000%

*Planned up-time = total time in reporting period minus planned down-time
**Availability = Planned up-time minus unplanned down-time

Thursday, April 17, 2003 5:30:09 PM Page 1

Figure 3-29. Sample Service Availability Report.

Actual Completion Date: 9/30/2002

Learning Technology Support Department

Following are the Major Accomplishments for FY2002-2003 for the Learning Technology Support Department:

Summary of Workshop Offerings for FY 2002-2003

The Learning Technology Development Center (LTDC) coordinates faculty professional development workshops covering popular pedagogical techniques and the current technology tools used to support learning. In the past, the majority of the learning opportunities have occurred during the Spring and Summer Faculty Institutes which have been offered since 1995. The timing of these institutes frequently conflicted with the vacation and personal plans of many faculty members, preventing them from taking advantage of these learning opportunities. Several new programs were added in FY 2002-2003 to better accommodate the schedules of the faculty. Workshop offerings were expanded to cover the entire year. A Winter Institute, added at the beginning of Winter break was well-attended. The workshops that were added during the academic break was well-attended.

The workshops that were added during the academic term were also very popular with the faculty. These new programs helped increase the number of participants from 465 in 2001/2002 to 1110 in FY 2002-2003 – a 139 percent increase and a four-fold increase in the number of participants since 1999 (the first year for which complete records are available). The details of the FY 2002-2003 attendance can be found in Table 3-1, and the summary of workshops and participants since 1999 are shown in Figure 3-30.

A great deal of work is required to coordinate these workshops. Workshop topics must be selected with input from the faculty so that their needs are met. Once the topics have been selected, facilitators must be recruited, the details of the content defined, the scope of work must be agreed upon, and compensation determined. The workshops must be scheduled at a time when the facilitator and appropriate classrooms are available. A brochure must be developed and distributed along with follow-up email announcements, and the Web-based registration forms must be updated and monitored. Arrangements must be made to install any needed software, materials must be duplicated, and snacks ordered. Reminders must be sent to both facilitators and registrants a week prior to the event.

As can be seen in Table 3-1, there has been a high “no show” rate – 412 out of 1522 registrants, 27 percent, did not attend after registering for the workshops. This is a problem because many workshops are filled to capacity – when someone registers and does not show up, it prevents someone else from participating. An email reminder system has been put in place to help alleviate this problem. One week prior to the workshop, email reminders are sent to each registrant.

Learning Technology Development Center

- Professional Development -

2002-2003	Workshops	Registration Requests	Seats Filled By (Tenure-Track/ACF Faculty	Seats Filled By Part-Time Faculty	Seats Filled By Professional/ Support Staff	Participation #'s (Seats Filled)
Summer Institute - 2002	45	586	95	25	55	434
WebCT: Faculty Development Workshops – Fall 2002	9	134	31	15	5	83
Web Portal: Faculty Development Workshops – Fall 2002	8	98	50	15	5	70
Winter Institute – 2002	13	175	70	20	7	129
Web Portal: Faculty Development Workshops – Winter 2003	7	127	33	12	4	80
Web Portal: Part-Time Faculty Development Workshops – Winter 2003	6	18	0	14	4	18
Multimedia Madness (3M's) Faculty Development Workshops – Winter 2003	5	55	13	0	0	55
Spring Institute – 2003	22	283	81	12	13	213
Faculty Development Workshop – Spring 2003	8	40	12	4	1	22
Multimedia Madness (3M's) – Faculty Development Workshops "Video Editing" - Spring 2003	1	6	6	0	0	6
TOTALS:	124	1522	391	117	94	1110

Table 3-1. Summary of 2002/2003 Workshop Participation.

Information Technology Division

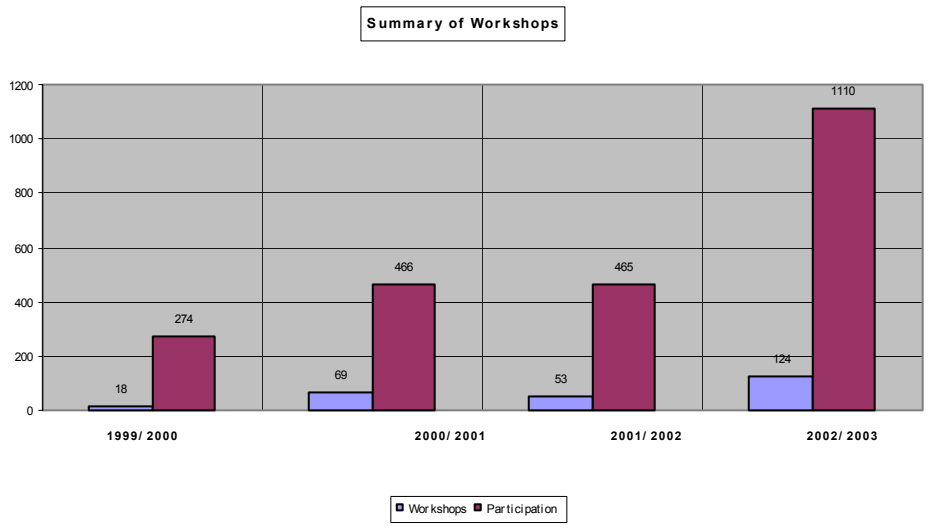


Figure 3-30. Summary of Workshop Participation from 1999 to 2003.

Summer Institute 2002

The 8th Annual Faculty Summer Institute was the biggest and best ever! The institute provides faculty with the opportunity to upgrade their skills in off-contract time, and is also open to professional and support staff on a space available basis. As can be seen in Figure 3-31, faculty members really enjoy the small group interaction and camaraderie at the summer workshops. The workshops are facilitated by Sinclair faculty and staff, and external facilitators when the expertise is not available in house. Over 430 seats were filled in 45 workshops that spanned the entire summer from June 20 to August 13, 2002. The workshops were attended by a record number of faculty members. Ninety-five individual full-time and 25 individual part-time faculty members attended the workshops. In addition, 55 professional and support staff participated in the sessions. As shown in Figure 3-32, the number of participants doubled from last year, and there has been a four-fold increase since 1995.

The Summer Institute workshops are developed to cover the up-to-date technical and pedagogical topics needed by the faculty. This year's workshops covered a variety of technical and non-technical topics, including: Pocket PC, my.Sinclair, Problem Based Learning, WebCT, Learning Communities, PhotoShop, Dreamweaver, Flash, Perception, Creating a Positive Learning Environment, Developing Learning Outcomes, and Selecting Teaching Strategies.

Figure 3-31. Faculty at Summer 2002 Institute workshop

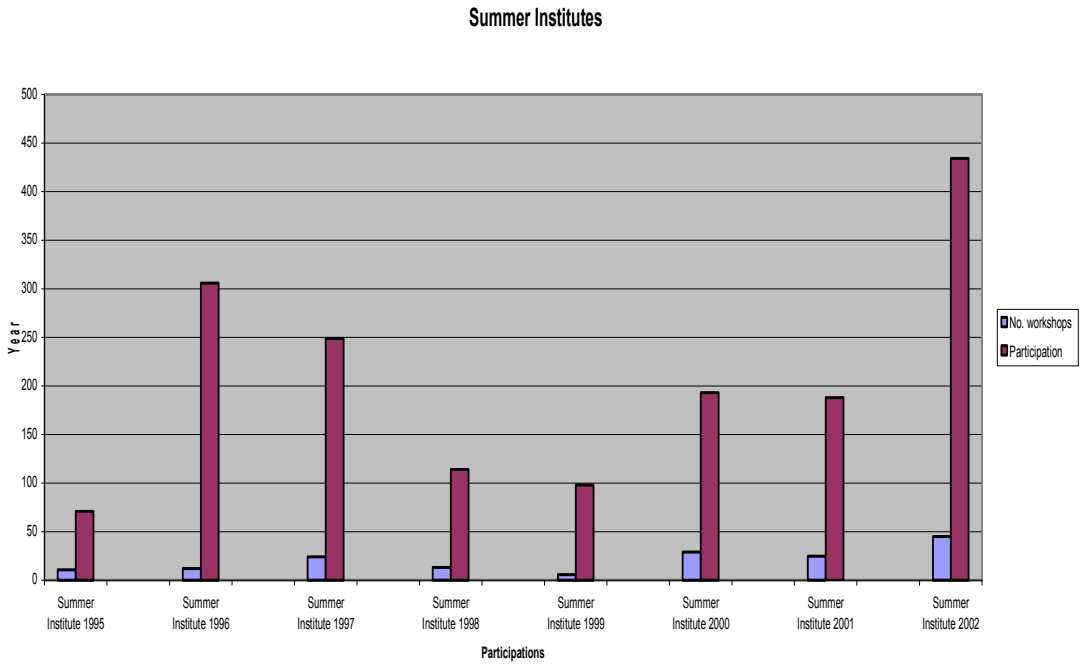


Figure 3-32. Statistics for the eight annual summer institutes.

Actual Completion Date: 8/13/2002

3Ds for Distance Learning Project Support

The LTDC staff provided planning and technical support assistance to the Distance Learning Division for the 3Ds program, a summer long initiative funded by an Ohio Board of Regents grant. The LTDC staff participated on the committee to develop competencies, ordered the equipment and software, installed the software on the laptop computers, coordinated and distributed the equipment, assisted faculty in learning to use the equipment, developed the equipment loan and personal services agreements, coordinated faculty requests for assistance, scheduled and coordinated workshops and the kick-off and wrap-up sessions, and provided on-going technical support throughout the summer for the 21 faculty chosen to participate in the program. LTDC staff also developed the online application form, defined the application selection process, and participated in the review and selection of the applicants. Figure 3-33 shows faculty at the wrap-up session celebrating the completion of their projects.

Figure 3-33. Faculty at the 3D's wrap-up session.

Actual Completion Date: 9/12/2002

Fall 2002 Workshop Series

Fall 2002 faculty development offerings included a series of Web Development workshops and eight sessions of the Introduction to the Web Portal workshops. The Web Development series included nine workshops featuring the various WebCT tools plus Web Design Basics, Dreamweaver, and PhotoShop. Over 80 seats were filled in the Web Development

workshops. The workshops were attended by 31 individual full-time and 15 individual part-time faculty, plus five professional staff. Eight workshop sessions were offered to provide an overview of features of the new portal plus logging in and navigating the portal. Over 70 seats were filled in the eight workshops. Attendees included 50 full-time faculty, 15 part-time faculty and 5 professional and support staff. The workshops were offered on Fridays, Saturdays, and in the early evening. The announcement for the Web Portal Workshops can be seen in Figure 3-34.

Figure 3-34. Fall Web Portal workshop announcement.

Actual Completion Date: 11/22/2002

Winter Institute 2002

The first Winter Institute held at the start of Winter break, December 11 – 13, was very well received by faculty. Thirteen workshops were offered covering technical and professional development topics, including: Creating a Positive Learning Environment, Process Learning, Assessment Outcomes, Learning Outcomes, Creative Approaches to Classroom Teaching, Selecting Teaching Strategies, Flash MX, Datatel (Colleague R16), Perception, Intermediate PowerPoint, Microsoft Producer, Intermediate Dreamweaver, and Covey's Seven Habits. One hundred thirty seats were filled by 70 individual full-time and 20 individual part-time faculty plus 19 professional and support staff. The Winter Institute announcement is shown in Figure 3-35.

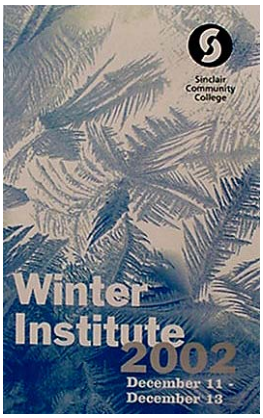


Figure 3-35. Winter institute announcement.

Actual Completion Date: 12/13/2002

my.Sinclair Web Portal Workshops

A series of six workshops covering the various functions of the my.Sinclair web portal were planned and offered to faculty and staff during Winter quarter to coincide with the roll-out of the portal. Topics included: Introduction to my.Sinclair, the Digital Drop Box, Discussion Forums and the Virtual Classroom, Online Assessment, Online Gradebook, and Courses and Organizations. Eighty seats were filled in seven workshop sessions by 33 full-time and 12 part-time faculty, and four professional staff members. The announcement for the Web Portal workshops can be seen in Figure 3-36.

In addition, introductory hands-on workshops covering the basic features and functions of the my.Sinclair Web Portal were scheduled in the part-time faculty office. Six one-hour long sessions were attended by 14 part-time faculty and 4 professional staff members. The staff members in the part-time faculty office were also taught to use the portal so that they can now assist part-time faculty with portal access on an as-needed basis.

Figure 3-36. Web portal workshops announcement.

Actual Completion Date: 3/14/2003

Spring Institute 2003

A record number of faculty members attended this year's Spring institute, which was held March 24–28, 2003. Over 210 seats were filled by 81 full-time and 12 part-time faculty members, and 13 professional and support staff. Twenty-two workshops were offered covering various technical and classroom skills topics including: a series of six Web Portal Workshops, a series of six WebCT workshops, a series of three Perception workshops, a series of two multimedia workshops, Computer Fundamentals, Copyright and Legal Issues, Data Analysis in the Classroom, and Conflict in the Classroom. The workshop announcement is shown in Figure 3-37. Spring Institute enrollment has been steadily increasing over the last few years as indicated by the graph in Figure 3-38.

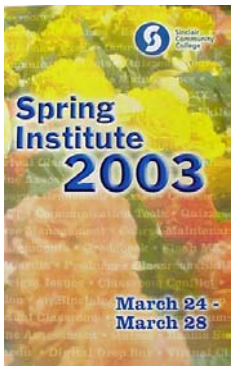


Figure 3-37. Spring Institute workshop announcement.

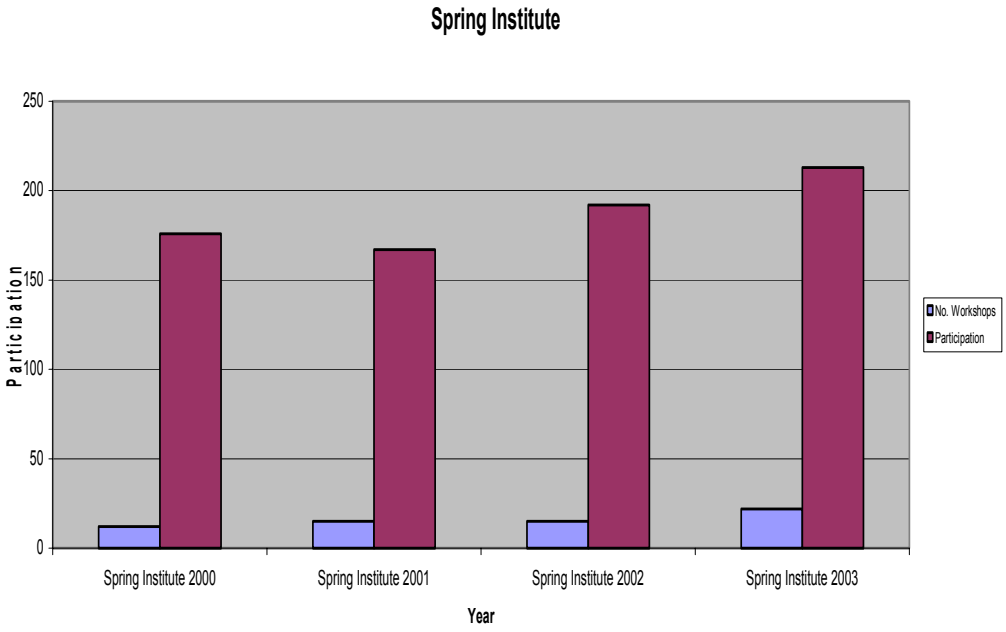


Figure 3-38. Spring institute enrollment history.

Actual Completion Date: 3/28/2003

Multimedia Tools Investigation

The demand for new multimedia tools has increased significantly since the installation of the new multimedia classrooms. Faculty wanted easy to use tools that could be used to develop applications for the new classrooms. Several tools were investigated and tested by LTDC staff and pilot tested by selected faculty. The tools that were found to be the most useful were Microsoft Producer, Camtasia, Snag It and Vox Proxy. Microsoft Producer is

used to quickly add sound, video and animation to PowerPoint 2002 presentations. Camtasia is a tool that can be used to create screen movies that are useful in demonstrating how to use various software tools. Snag It is a companion tool to Camtasia that allows the user to quickly capture a small section of the computer screen and copy it into a document or presentation. Vox Proxy brings PowerPoint to life through 3D talking, animated characters. After researching the products and demonstrating and testing by faculty, these products have been incorporated into workshops and will be integrated into a new multimedia series for FY 2003-2004. The logos for the selected products can be seen in Figure 3-39.

Figure 3-39. Multimedia tools selected for faculty use.

Actual Completion Date: 11/22/2003

Media Repository Tools Investigation

The LTDC, Learning Technology Productions, and Distance Learning Departments have developed many graphics, animations, and backgrounds for the many courses and presentations that they have developed. Many of these materials could be reused by faculty and staff if easy access to the materials was provided. A team from the three departments assisted by a group of CIS Capstone students searched for and investigated tools that could be used to share these media assets. Figure 3-40 provides a screen shot of the Cumulus product. The team selected Cumulus as the product that best meets these needs. Cumulus provides a client/server interface that allows the developers to catalog and store the assets in the database. A Web interface allows users to search for and use the existing assets.

Figure 3-40. Screen shot of Cumulus (left) and Cumulus software box (right).

Actual Completion Date: 5/9/2003

Spring Quarter Workshops

Eight workshops covering WebCT, my.Sinclair, Creating a Web Presence, and the Multimedia Educational Resource for Learning and Online Teaching (MERLOT) were offered on Fridays during the Spring quarter. Only 22 faculty and staff members attended these workshops, with the majority of the attendance in the two new workshops. The low attendance is an indicator that the majority of the campus community is feeling comfortable with their level of knowledge of WebCT and the portal, and is interested in new topics.

Actual Completion Date: 5/30/2003

Multi-Media Madness (3Ms) Faculty Development Program

The 3Ms project was designed to provide faculty with an in-depth understanding of the multimedia project development process. Participants have the opportunity to acquire all the skills needed to plan, design, and create an interactive computer application that incorporates text, video, graphics, animation, and sound. The completed applications can be pressed to CD and used in the multimedia classrooms and distributed to students to use outside the classroom. The project ran from December 11, 2002 through June 20, 2003. Six faculty members, one from each division, were selected by their Deans to serve as mentors. After an open application process, 14 applicants were selected to participate in the project. The 3Ms participants were provided with a notebook computer, laser printer, and scanner for their use during the project. After attending the two-day kickoff session in December that included a workshop on instructional design and demonstration of multimedia projects, the faculty participants worked with their mentors to design a project to complete for this program. In February, after reviewing the designs, a series of six workshops was developed to provide the training needed by the participants to develop their multimedia

projects. The workshop topics included: Macromedia Flash Animation, Microsoft Producer, PowerPoint with Multimedia, Video Production Basics, Macromedia Flash with Video, and Video Editing. Following the workshops, the participants worked on their projects with assistance from their mentors and LTDC staff. The participants demonstrated their projects at the wrap-up session on June 20, 2003. Overall, the faculty members found it to be a productive learning experience. The 3M's logo, used to promote the faculty development program, can be seen in Figure 3-41.

Figure 3-41. 3Ms logo.

Actual Completion Date: 6/20/2003

Faculty/Staff Support

The LTDC staff members provide development assistance and one-on-one training to faculty who are developing technology-based projects for use in the classroom. Many requests are received for assistance with scanning, PowerPoint, Web page development, Blackboard, and WebCT. Figure 3-41 shows a faculty member signing into the LTDC and another faculty member receiving one-on-one assistance from an LTDC staff member. As shown in Figure 3-42, demand has increased significantly, from less than 25 requests for support in Fall 2001 to almost 400 requests per quarter in FY 2002-2003.

Figure 3-42-A. Faculty member signing-In to LTDC (left) and LTDC staff member assisting faculty (right).

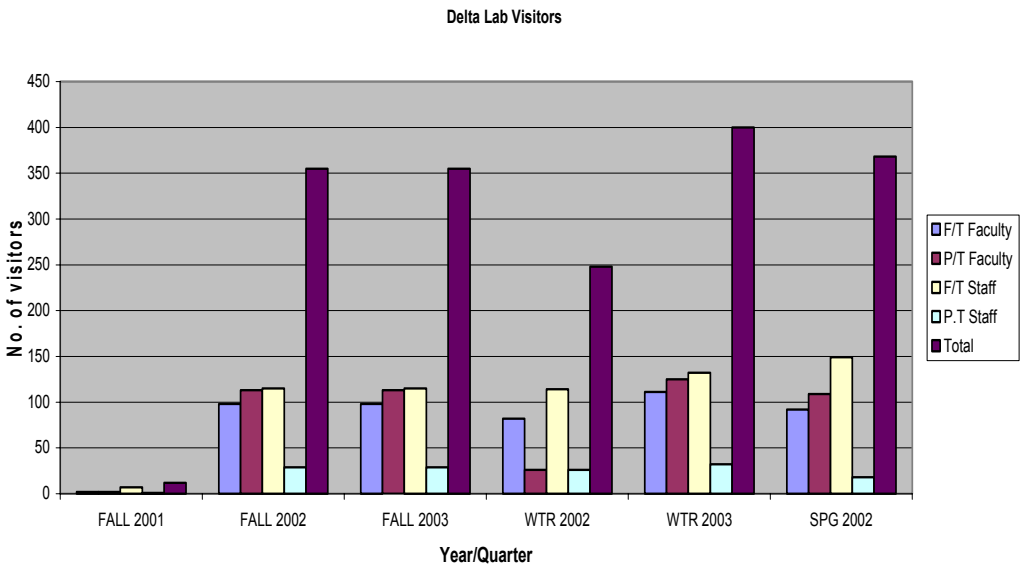


Figure 3-42-B. Requests for LTDC staff assistance.

Actual Completion Date: ongoing

Technology Equipment and Professional Development Materials Loan

Technology equipment and professional development materials are available for short-term loan to faculty and staff for skills enhancement, project development, and use at conferences. Equipment available for loan includes: notebook computers, digital cameras, external zip drives, TV/VCR units, digital and VHS camcorders, tripods, and a Perception analyzer. LTDC staff members provide training and direction in the use of the

equipment when it is checked out. A library of professional development materials is maintained in the LTDC. Materials include tapes, videos, and books. The materials are available to all faculty and staff. Figure 3-43 shows some of the professional development materials and equipment available for loan from the LTDC. The increased use of technology to support learning has increased the demand for equipment and professional materials loan. Approximately 750 professional development materials and equipment items were loaned out June 1, 2002 through May 30, 2003. As shown in Figure 3-44, the number of equipment and materials loans have increased significantly since 1999.

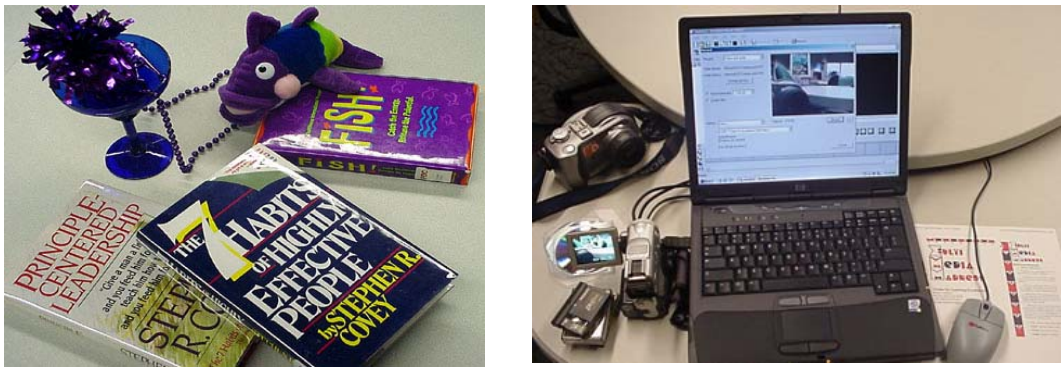


Figure 3-43. Professional Development Center materials and equipment available for loan at the LTDC.

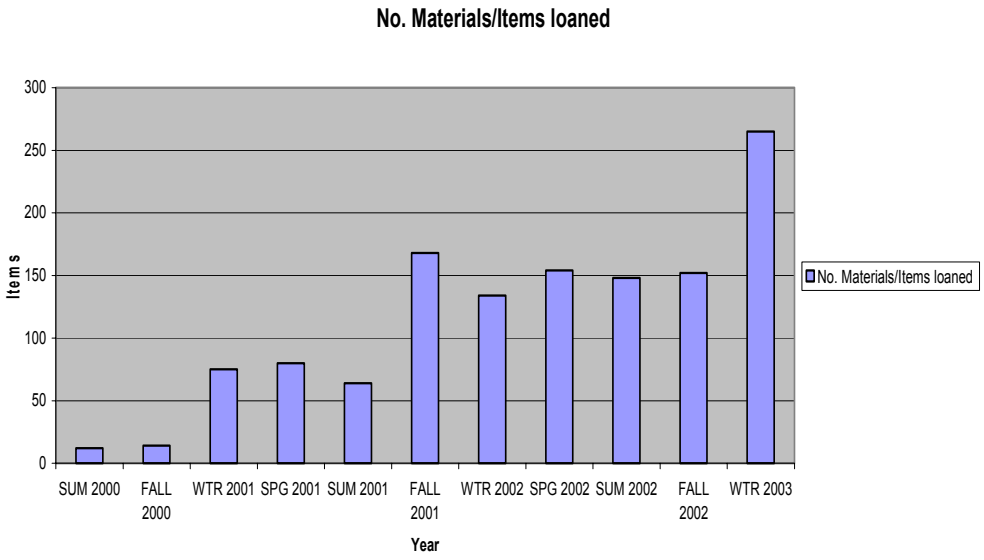


Figure 3-44. Materials and equipment loans.

Actual Completion Date: ongoing

Building 7 Media Services Classroom Support

Building 7 Media Services provides and delivers media equipment and material to faculty and staff in classrooms and conference rooms across campus. The Building 7 staff also provides maintenance and support for media equipment in the multimedia classrooms and for media equipment purchased by various college departments. The Building 7 staff responds to help desk calls relating to media equipment across the campus. With the installation of the 55 new multimedia classrooms in 2001, it was expected that the number of requests for portable equipment would decrease; however, the rooms had the opposite effect. Faculty increased their use of multimedia materials after they started teaching in the multimedia classrooms. When they didn't get assigned to a multimedia room, they still wanted to use their materials, so they requested the delivery of portable equipment. Table 3-2 shows the number of deliveries by quarter from Spring 2002 through Winter 2003. The most frequently requested equipment is pictured in Figure 3-45.

Term	Deliveries
Spring 2002	1149
Summer 2002	506
Fall 2002	866
Winter 2003	1049
Year Total	***3570***

Table 3-2. Equipment deliveries by Building 7 Media Services.

Figure 3-45. Equipment that is delivered to classrooms by Building 7 Media Services.

Actual Completion Date: ongoing

Building 12 Event and Classroom Support

Building 12 Media Services provides media support primarily in Building 12 for clients who have scheduled use of the facility through the Corporate and Community Services Department. The support required for these events can be as simple as flip charts or a data projector for meeting rooms, or may involve using multiple microphones, multiple data projectors, simulcast video and audio, VCR, and DVD playback for an event in one of the auditoriums.

The Building 12 staff also provides support for the cable head end and media equipment delivery and support for Sinclair academic classes meeting in Building 12. Support is also provided for Sinclair departments and organizations that schedule events in Building 12. The number of events supported in Building 12 for the year 2002 is shown in Table 3-3. The cable head end and a Building 12 corporate meeting room are pictured in Figure 3-46.

	Classroom	C & CS Events	Totals
Jan-Mar 2002	100	440	540
April-June 2002	59	512	571
July-September 2002	70	220	290
October-December 2002	85	382	467
Totals	*314*	*1554*	*1868*

Table 3-3. Events supported by Building 12 Media Services.

Figure 3-46. Cable head end (left) and a Building 12 conference room (right).

Actual Completion Date: ongoing

Building 14 Interactive Classroom Support

Building 14 Media Services provides media support for all two-way videoconferencing Distance Learning classes, and to faculty who teach in the interactive classrooms. The Building 14 staff are also responsible for the support and maintenance of all multimedia equipment and exhibits in Building 14.

This unit provides instructional and technical support for nine fully equipped media classrooms, two video conferencing equipped interactive learning rooms, the Forum, several media equipped conference rooms, and the various technology exhibits located in Building 14.

Over twenty interactive class meetings are supported each week. For each meeting, a call must be scheduled to the remote site, the connection must be made, and the meeting must be monitored for any special needs of the instructor. Table 3-4 shows the number of videoconferencing events supported in a one-year period. Figure 3-47 shows a typical videoconferencing classroom.

Quarter	Events
Spring 2002	156
Summer 2002	34
Fall 2002	281
Winter 2003	328
Year Total	***799***

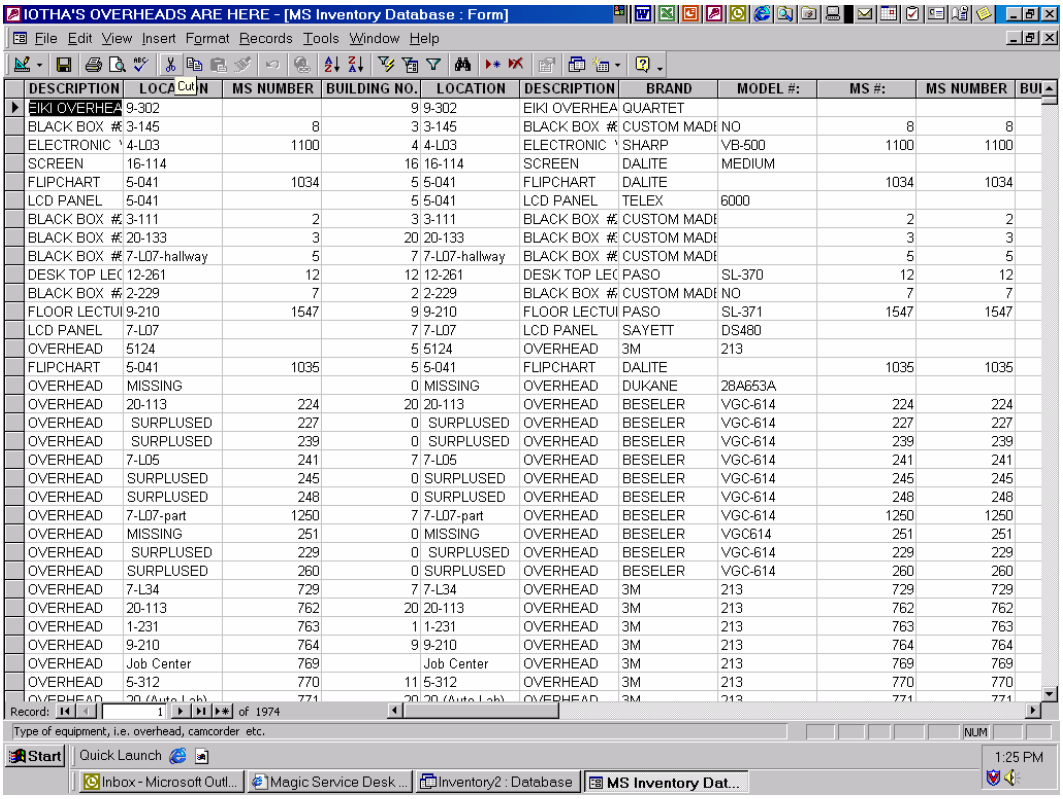
Table 3-4. Distance Learning Classes Supported by Bldg 14 Media Services.

Figure 3-47. Building 14 interactive classroom (14-108).

Actual Completion Date: Ongoing

Campus-Wide Inventory of Media Equipment

Media Services has maintained a database of its own equipment for several years; however, there has been no inventory of the media equipment acquired by individual departments across campus. This year, in conjunction with the Room Scheduling project, Media Services added all college-owned media equipment into that inventory to allow better tracking of the equipment for routine maintenance and for Renewal and Replacement (R&R). As the equipment was added to the inventory, it was also added to the R&R budget. Figure 3-48 shows a screen shot of one of the tables in the inventory database.



DESCRIPTION	LOCATION	MS NUMBER	BUILDING NO.	LOCATION	DESCRIPTION	BRAND	MODEL #:	MS #:	MS NUMBER
EIKI OVERHEA	9-302		9	9-302	EIKI OVERHEA	QUARTET			
BLACK BOX #(	3-145	8	3	3-145	BLACK BOX #(	CUSTOM MADI	NO	8	8
ELECTRONIC '	4-L03	1100	4	4-L03	ELECTRONIC '	SHARP	VB-500	1100	1100
SCREEN	16-114		16	16-114	SCREEN	DALITE	MEDIUM		
FLIPCHART	5-041	1034	5	5-041	FLIPCHART	DALITE		1034	1034
LCD PANEL	5-041		5	5-041	LCD PANEL	TELEX	6000		
BLACK BOX #(	3-111	2	3	3-111	BLACK BOX #(	CUSTOM MADI		2	2
BLACK BOX #(	20-133	3	20	20-133	BLACK BOX #(	CUSTOM MADI		3	3
BLACK BOX #(	7-L07-hallway	5	7	7-L07-hallway	BLACK BOX #(	CUSTOM MADI		5	5
DESK TOP LEC	12-261	12	12	12-261	DESK TOP LEC	PASO	SL-370	12	12
BLACK BOX #(	2-229	7	2	2-229	BLACK BOX #(	CUSTOM MADI	NO	7	7
FLOOR LECTUI	9-210	1547	9	9-210	FLOOR LECTUI	PASO	SL-371	1547	1547
LCD PANEL	7-L07		7	7-L07	LCD PANEL	SAYETT	DS480		
OVERHEAD	5124		5	5124	OVERHEAD	3M	213		
FLIPCHART	5-041	1035	5	5-041	FLIPCHART	DALITE		1035	1035
OVERHEAD	MISSING		0	MISSING	OVERHEAD	DUKANE	28A653A		
OVERHEAD	20-113	224	20	20-113	OVERHEAD	BESELER	VGC-614	224	224
OVERHEAD	SURPLUSED	227	0	SURPLUSED	OVERHEAD	BESELER	VGC-614	227	227
OVERHEAD	SURPLUSED	239	0	SURPLUSED	OVERHEAD	BESELER	VGC-614	239	239
OVERHEAD	7-L05	241	7	7-L05	OVERHEAD	BESELER	VGC-614	241	241
OVERHEAD	SURPLUSED	245	0	SURPLUSED	OVERHEAD	BESELER	VGC-614	245	245
OVERHEAD	SURPLUSED	248	0	SURPLUSED	OVERHEAD	BESELER	VGC-614	248	248
OVERHEAD	7-L07-part	1250	7	7-L07-part	OVERHEAD	BESELER	VGC-614	1250	1250
OVERHEAD	MISSING	251	0	MISSING	OVERHEAD	BESELER	VGC614	251	251
OVERHEAD	SURPLUSED	229	0	SURPLUSED	OVERHEAD	BESELER	VGC-614	229	229
OVERHEAD	SURPLUSED	260	0	SURPLUSED	OVERHEAD	BESELER	VGC-614	260	260
OVERHEAD	7-L34	729	7	7-L34	OVERHEAD	3M	213	729	729
OVERHEAD	20-113	762	20	20-113	OVERHEAD	3M	213	762	762
OVERHEAD	1-231	763	1	1-231	OVERHEAD	3M	213	763	763
OVERHEAD	9-210	764	9	9-210	OVERHEAD	3M	213	764	764
OVERHEAD	Job Center	769		Job Center	OVERHEAD	3M	213	769	769
OVERHEAD	5-312	770	11	5-312	OVERHEAD	3M	213	770	770

Figure 3-48. Screen shot of Media Services inventory database table.

Actual Completion Date: Spring, 2002

Building 19 Multimedia Rooms

As part of the Building 19 project, eight multimedia rooms were installed. Media Services worked with Planning and Construction, the architect, and instructional staff to specify equipment for these rooms and oversee the installation of media equipment.

These rooms were also the first multimedia rooms to be equipped with Crestron control systems. Media Services staff worked with Industrial Video and Crestron to ensure that these rooms were installed properly and to develop a prototype for the conversion of the remainder of the college's multimedia rooms to Crestron systems. This prototype included the user interface for the remote control device and the programming for control of the various media devices. One of the new Building 19 multimedia classrooms is shown in Figure 3-49.

Figure 3-49. Building 19 multimedia classroom.

Actual Completion Date: 4/1/2003

Wireless Microphones in Room 14-130

Barrier surface (table) microphones, wireless microphones (both handheld and lapel), and microphone mixers were purchased and installed in the Forum (room 14-130). The reason for this purchase was two-fold. One, the existing wireless microphones were overdue for replacement and were low quality. They did not present the professional image that the college would like in the Forum. And two, the existing wireless microphones all operated on the same frequency which made it impossible to use more than one at a time. This presented a problem in situations where multiple speakers needed to talk simultaneously.

The types of equipment that would be needed to make all events in Building 14 successful were tracked over a two-year period, noting instances of equipment failure and lack of requested equipment. Given the demand for wireless microphones and requests for multiple presenters in the Forum, it was decided that an initial investment for the equipment could be justified. This equipment allows for up to six speakers to use wireless microphones in the Forum simultaneously, four lapel and two handheld. Use of a wireless microphone is shown in Figure 3-50

Figure 3-50. Presenter using wireless microphone.

Actual Completion Date: 6/16/2003

Data Projector Replacement

This year nine data projectors were replaced in Building 14 under the college's R&R schedule. The Hughes JVC projectors were over five years old and the brightness and resolution were unsatisfactory. They were also expensive to maintain – lamp replacement was costing over $14,000 per year plus an additional maintenance charge of $3,000 per year. The new Panasonic PT-L720U projectors are brighter, have higher resolution and a sharper image, plus have up-to-date video source connectivity. The lamp replacement cost has dropped to $9,000 per year and a 3-year hardware warranty with 24-hour service eliminates the annual maintenance fee – a total savings of $8,000 per year. These new projectors are not only saving money, there is less downtime for repair and maintenance, increasing the availability rate of our classrooms. The old and new projectors are pictured in Figure 3-51.

Figure 3-51. Old JVC projector (left) and new Panasonic projector (right).

Actual Completion Date: 9/1/2002

Learning Technology Productions Facilities Usage

Learning and administrative projects have kept the Learning Technology Productions' (LTP) facilities very busy in FY 2002-2003. Figure 3-52 represents actual production days utilizing studio production, field production, audio production, animation, editing, or DV production. These are LTP's major systems. It does not include Presentation / PowerPoint development, scripting, graphic design, pre-production, or instructional design. LTP averages over a 75% facilities usage rate, for comparison, a commercial production company would consider 50% to 60% facility usage as a good target.

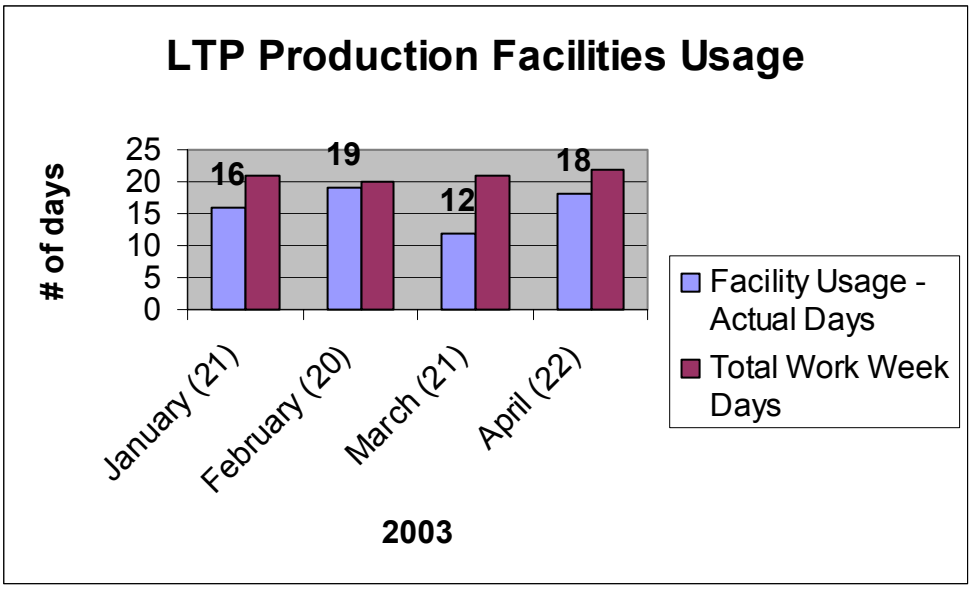


Figure 3-52. LTP production facilities usage.

Actual Completion Date: Ongoing

Learning Technology Productions Project Development

LTP develops all types of multimedia projects for a wide range of clients. LTP's clients include faculty and staff in every instructional division, administration, student services, public information, human resources, and the part-time faculty committee - even the campus police have requested assistance from LTP. Previous to the Information Technology reorganization, approximately 80% of production facility usage consisted of distance learning projects with the remaining 20% being internal / administrative projects. Since the reorganization, LTP has seen a marked increase in the development of class enhancements and internal projects while continuing media development for distance learning. Figure 3-53 provides an insight into the distribution of projects for the 1st quarter of 2003.

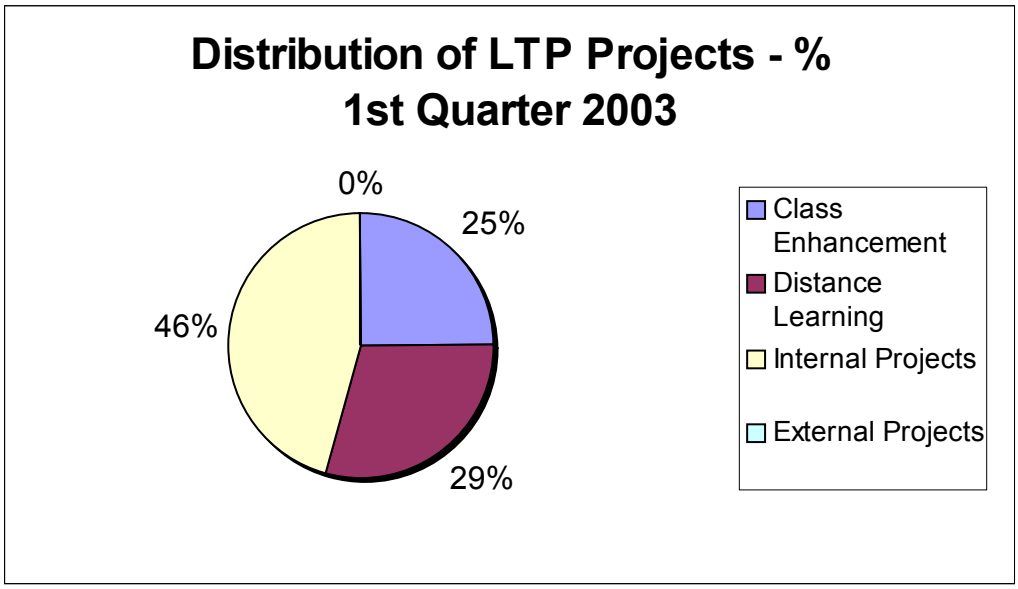


Figure 3-53. LTP projects distribution.

Actual Completion Date: Ongoing

Learning Technology Support Intranet Site

The Learning Technology Support Department (LTS) intranet site (shown in Figures 3-54 and 3-55) navigation and design features were developed by a cross-functional team consisting of members from each of the LTS Sections. The primary focus of the design is to provide Sinclair faculty and staff with a one-stop location to learn about LTS, its departments, how to work with each department, and LTS current events. The site features an overview and description of services offered by each of the LTS departments and a staff directory for each department. A link provides access to the current Professional Development programs available on campus. Another link provides access to an online Project Support Request form, where faculty can submit proposals for assistance with a project that they are developing.

Figure 3-54. Learning Technology Support Intranet Site.

Figure 3-55. Learning Technology Productions Intranet site.

Actual Completion Date: 10/31/2002

MAN 105: Introduction to Business

The MAN 105 Introduction to Business video course is an introductory management course covering the American business system and basic principles of the free market system. The course is a high-enrollment distance learning course. This project replaces a previously produced version of MAN105 taped at the joint vocational school in 1991.

The video course was produced using a "business is a game" theme. The studio set (see Figure 3-56) and graphic design were totally designed and created in-house, and reflect a game board and its pieces. The script was also developed in-house and made use of gaming jargon. Color was used as an element of the instructional design to designate the various business topics. Real world examples are introduced through the use of interviews with a number of "experts' from local businesses. The video interviews will also be repurposed for use in the web class enhancement and web course. Graphic design and animation was developed for both video and DVD delivery. PowerPoint was used for content graphics resulting in useable video graphics, as well as, a tool for the instructor to use in a traditional classroom setting or class enhancement.

Figure 3-56. Set for MAN 105.

Actual Completion Date: 2/28/2003

ALH 103: Introduction to Health Care Delivery

Learning Technology Productions completed the development of a new Introduction to Health Care Delivery video course for Distance Learning utilizing aspects of constructive learning in the instructional design. This course is an introduction to the health care delivery system including history, economics, medical/legal issues, and wellness concepts. The instructor portions of this course were taped in the field in order to put the instructor into real world settings. A number of scenarios were produced that provided students with critical thinking opportunities based on authentic learning situations. Graphics were produced using PowerPoint for the video, which also provided the instructor with a traditional classroom-learning tool. Sample screen shots are shown in Figure 3-57.

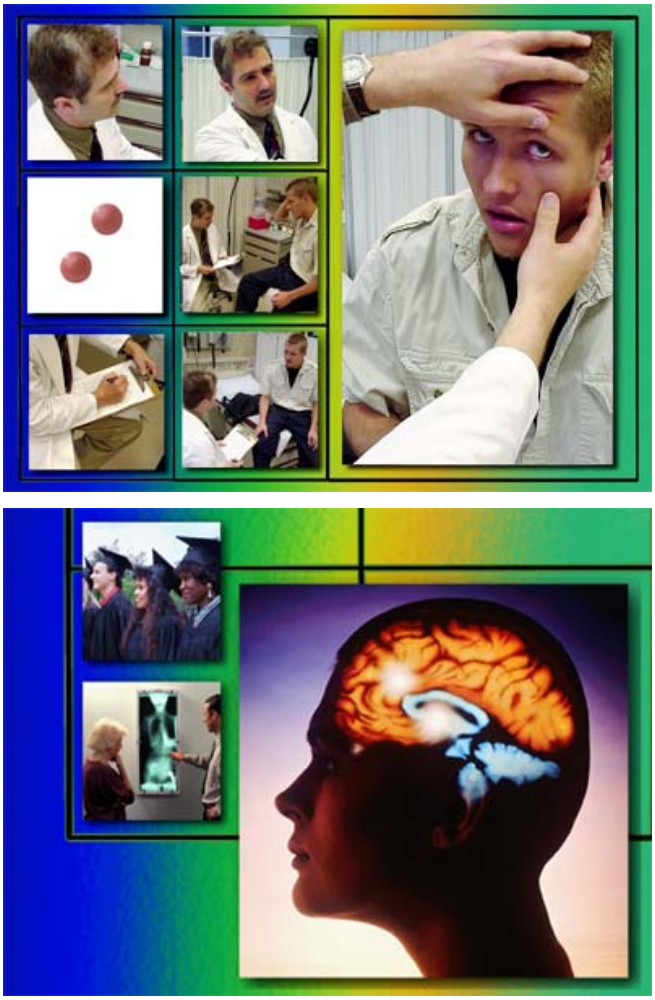


Figure 3-57. Screen shots of ALH 103 PowerPoint .

Actual Completion Date: 8/31/2002

Hartzell Propeller - Propeller Care and Maintenance CD

A good example of Sinclair's community involvement is the Hartzell Propeller project. A Propeller Care and Maintenance Video CD targeted for pilots was designed and developed for Hartzell Propeller. The Video CD consists of an html page created in Fireworks with links to the video, an informational flyer in pdf format, and a link to the Hartzell website. Learning Technology Productions edited the script, directed and shot the video, created the graphics, and edited/authored the final product. A picture of the onsite filming is provided in Figure 3-58. The CD was distributed free to pilots and schools around the world. All costs for this project were totally funded by Hartzell with an additional $7,887 paid to Sinclair by Hartzell for services.

Figure 3-58. Filming for Hartzell Propeller CD.

Actual Completion Date: 8/31/2002

Fall Conference Presentation and Video on Demand

Working with President Sifferlen, LTP designed and developed the Fall Conference PowerPoint Presentation. A sample PowerPoint slide can be seen in Figure 3-59. Development of the presentation was reliant upon the ability to understand and translate Dr. Sifferlen's ideas into eye-catching original graphics and animations. Midway through the project it was decided to videotape the Fall Conference presentation and to offer it as Video on Demand (VoD) for those unable to attend the event. This meant consideration of video delivery needed to be included in the development of the PowerPoint. The development of the VoD required videotaping of the event, postproduction to add the PowerPoint to the event video, and Digital Video (DV) encoding enabling delivery of a Windows Media video file via the Sinclair Intranet for viewing by all SCC employees. Developing this project

in-house saved the college an estimated $12,000 - $14,000 over the cost of development by an external supplier.

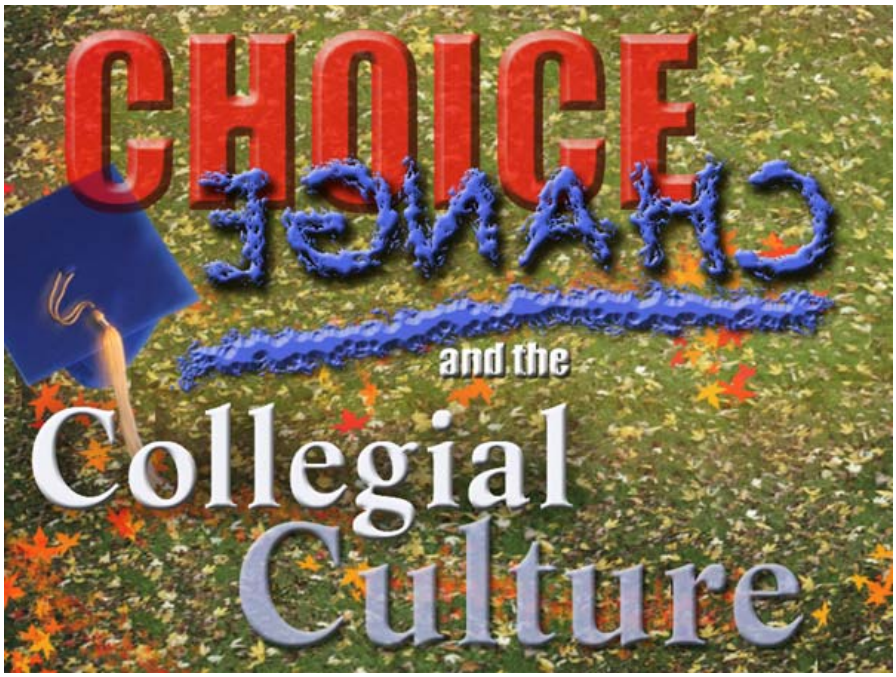


Figure 3-59. PowerPoint introduction screen.

Actual Completion Date: 9/30/2002

Photo Montage for Sculpture – *Pathway to Excellence*

Pathway to Excellence is the brainchild of Tess Little a Professor of Art at Sinclair and the project coordinator. The idea went through many stages of development and was successfully brought to completion through months of dedication, coordination, and collaboration between three faculty members in the Art department, 25 advanced sculpture students, and the LTP staff. The project elements provided by LTP included digital photography, and design and layout of a three panel montage, to scale, to be used as reference templates for the creation of *Pathway to Excellence,* a bas relief bronze sculpture, by ART 133 and ART 251 advanced sculpture students. This collaboration between Sinclair faculty, learners, and professional staff provided the learners with an authentic learning opportunity to create a bas relief bronze sculpture made up of three panels each measuring 6 feet by 27 inches, that will be seen by all who visit the student activities center in Building 8. A picture of the clay sculpture and completed bronze sculpture can be seen in Figure 3-60. Developing the photomontage in-house saved approximately $3,500 - $4,000.

Figure 3-60. Student working on clay sculpture (top) and completed sculpture in Building 8 (bottom).

Actual Completion Date: 9/30/2002

HIM 278 – Capstone

In conjunction with the students in the HIM capstone course, LTP produced a public service half-hour television show titled, “Confidentiality and Your Medical Record.” This program is the students’ final project. With LTP’s assistance, the learners developed the objective, synopsis, and script for the program. LTP provided the directorial and production services. The final version of this program will be aired on area public access outlets as a public service. Screen shots of the video can be seen in Figure 3-61.

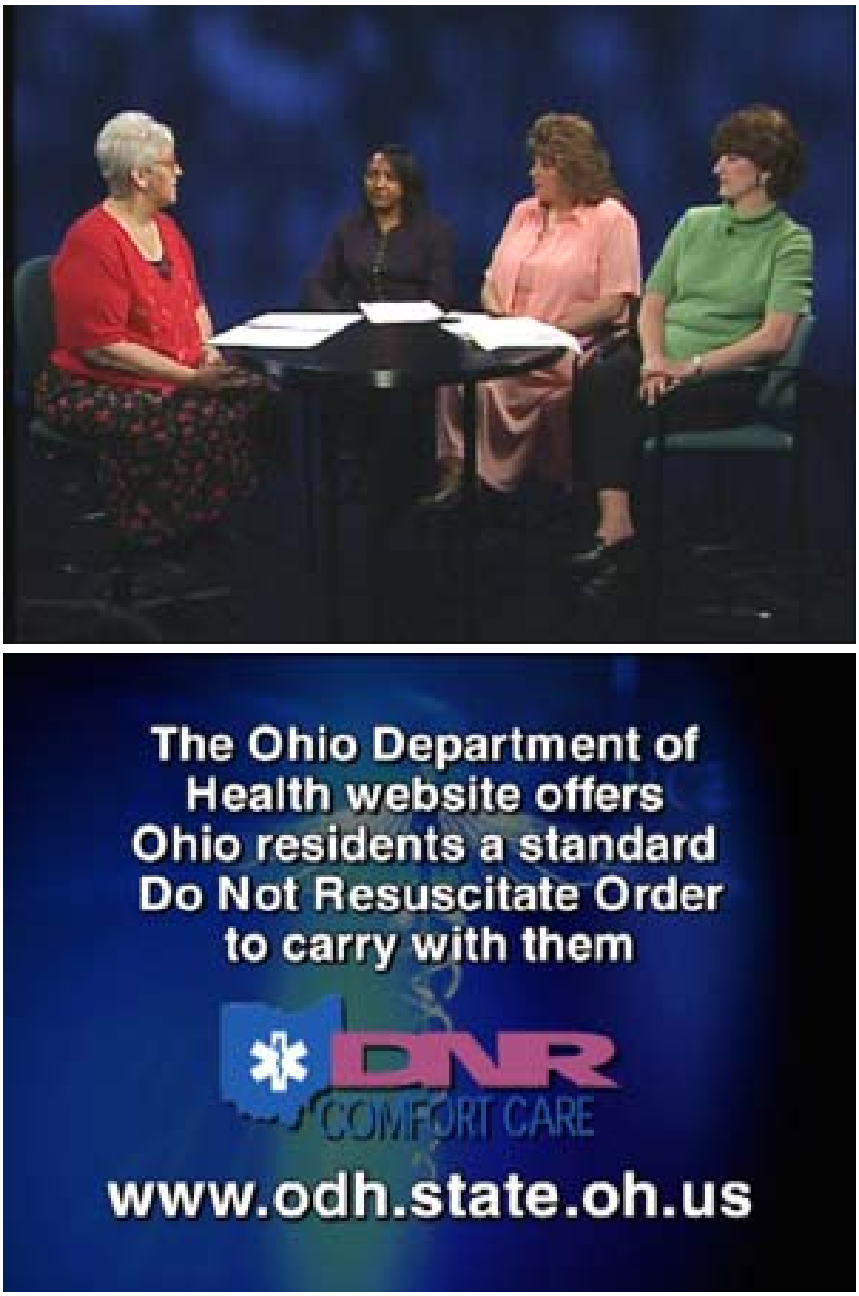


Figure 3-61. Taping of the HIM capstone.

Actual Completion Date: 6/30/2003

Prescription Labels for ESL Students

This project provides ESL (English as a Second Language) students with a self-paced learning tool to learn about prescription medicines and to understand their directions. LTP developed a PowerPoint presentation with

original graphics for ESL learners to download from the ESL web site (see Figure 3-62). The students are able to view the slides and learn to recognize prescription labels and their directions. Actual USPC graphics were used along with the word translation of the visual image. Additional graphics and photos were used to enhance and reinforce the meanings.

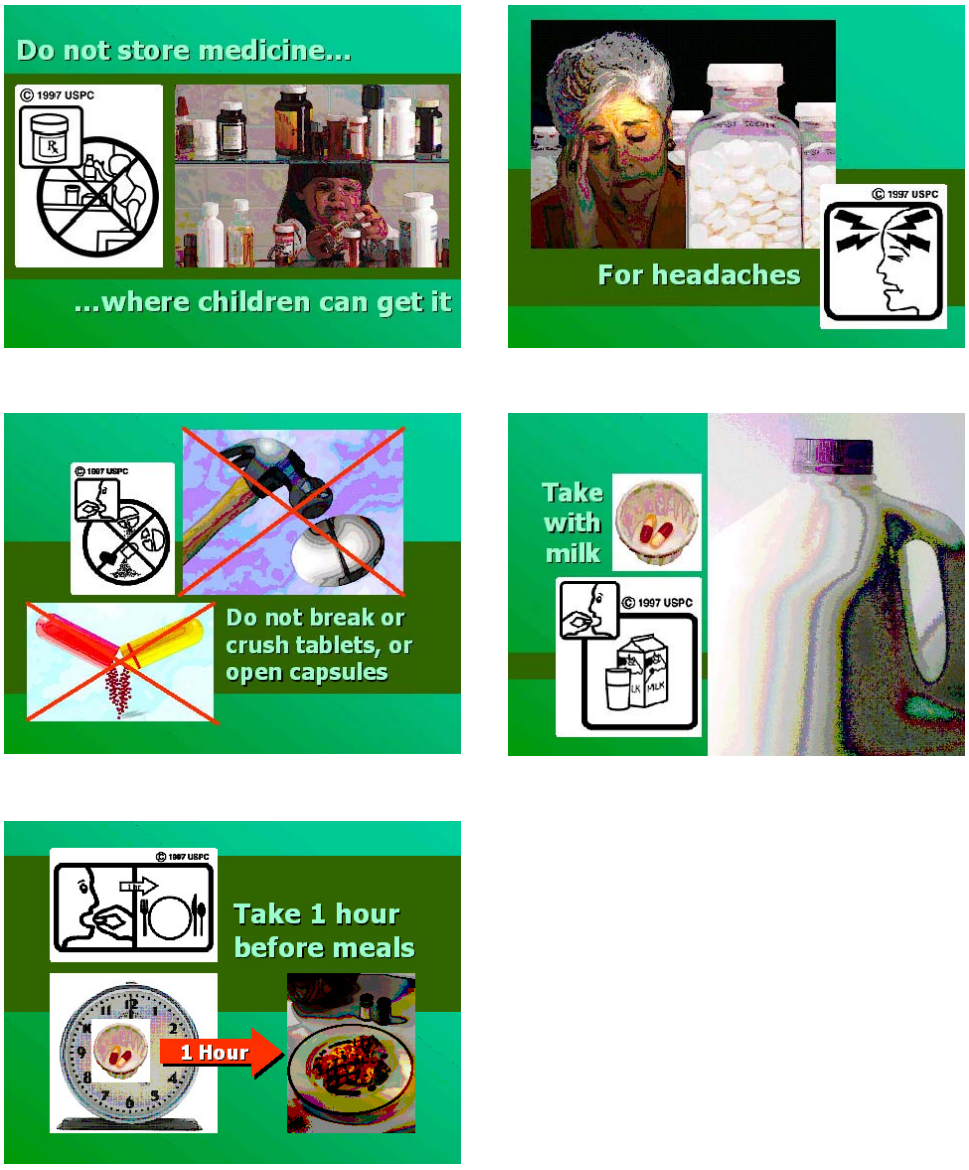


Figure 3-62. ESL Prescription PowerPoint .

Actual Completion Date: 3/31/2003

Sinclair Recruiting Video

The new Sinclair recruiting video titled “Sinclair Means” received a Silver Medallion Award from the **National Council for Marketing and Public Relations.** The video targets high school juniors, seniors, and their parents. “Sinclair Means” was produced by the Sinclair Marketing / Communications and LTP offices. The video was written, directed, videotaped and edited by the LTP staff. “Sinclair Means” is designed to provide prospective students with an upbeat, positive feeling about Sinclair as the place where they will receive the full college experience in an environment devoted to their learning and support. The LTP staff focused on developing all the elements of the creative concept, such as the script, shooting style, graphics, music and post-production techniques, to engender a feeling of learning in an exciting, friendly, supportive environment. A sample screen of the “Sinclair Means” video is shown in Figure 3-63.

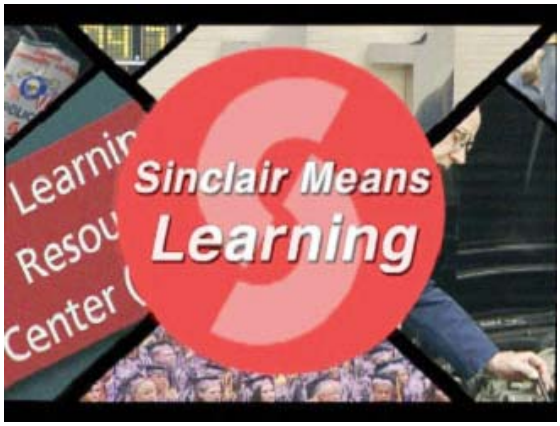


Figure 3-63. Video / graphic montage from Sinclair Recruiting video.

Actual Completion Date: 8/31/2002

Quality Assurance and Information Technology Learning Department

Following are the Major Accomplishments for FY 2002-2003 for the Quality Assurance and Information Technology Learning Department (QA&ITL):

New Employee Orientation Revision

QA&ITL initiated programs to introduce new Sinclair employees to Information Technology systems and services by representing the Information Technology Division in the biweekly orientation sessions offered by Human Resources for new employees. As an adjunct to these sessions,

QA&ITL also offers orientation sessions in a hands-on environment to acquaint new employees with the technology tools available to them. The orientation topics routinely covered can be accessed for review via URL http://intranet.sinclair.edu/QAITL/itl/orientation/orientation.htm (shown in Figure 3-64). These orientation sessions are available as web-based tutorials or in a manual that can be printed.

Figure 3-64. Orientation Topics.

Estimated Completion Date: 4/30/2003

Actual Completion Date: 3/31/2003

Security Awareness Training and Education/Information Security (SATE/INFOSEC)

As legislative requirements for protecting sensitive information and privacy increase, all users of information technology resources must be aware of basic risks and understand basic information security practices. QA&ITL has added information security and security awareness training to the new employee Information Technology orientation sessions, and has also developed web-delivered training modules to provide a basic overview and

introduction to these critical issues. The modules can be accessed via URL: http://intranet.sinclair.edu/QAITL/itl/orientation/orientation.htm#Protecting_College_Information (shown in Figure 3-65).

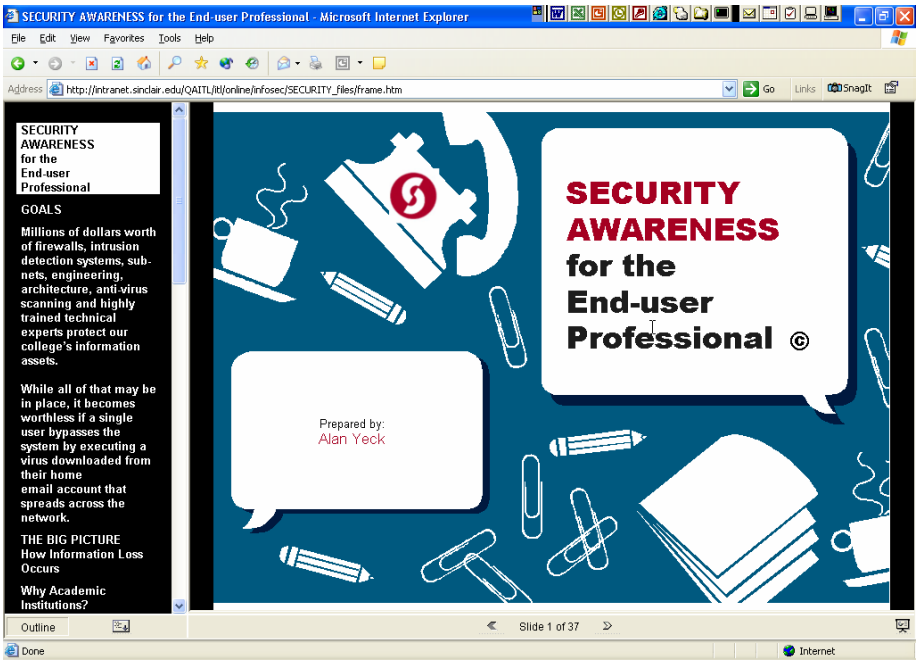


Figure 3-65. Security Awareness Training & Education/Information Security Webpage.

Estimated Completion Date: 1/31/2003

Actual Completion Date: 1/31/2003

Hay-McBer/HR Competency Pilot

Staff members from various departments within the Information Technology Division participated in the Human Resource/Hay-McBer competency pilot program. QA&ITL facilitated training and implementation of this pilot project within the division. Feedback from pilot members was consolidated and resulting changes were added to the training, which is being implemented campus-wide in July 2003.

Estimated Completion Date: 9/30/2002

Actual Completion Date: 9/25/2002

Division Training Plan Development and Implementation

To assist Information Technology Division staff with attaining and maintaining technical skills and knowledge, as well as to help them develop and

strengthen the competencies identified for outstanding performance, QA&ITL consolidated all technical training requirements identified in the Competency pilot group Individualized Learning Plans, as well as input from volunteer non-pilot members, and constructed a matrix to assist in planning for division training. The matrix provides a snapshot of the current state of Information Technology training requirements and assists management to prioritize resources required to meet these needs. Next steps are to include non-pilot group members.

Estimated Completion Date: 6/30/2003

Actual Status: ~50% complete

Microsoft Office Training Self-Assessments

To assist Sinclair employees in determining their level of expertise and assess their training requirements, QA&ITL developed self assessment tools for each of the Microsoft Office applications. These assessments allow the trainee to select the appropriate level of training session to match their skill set and increase the effectiveness of the sessions as all attendees are receiving targeted training. The assessments are available via the URL http://intranet.sinclair.edu/QAITL/itl/selfassessment/index.htm (shown in Figure 3-66).

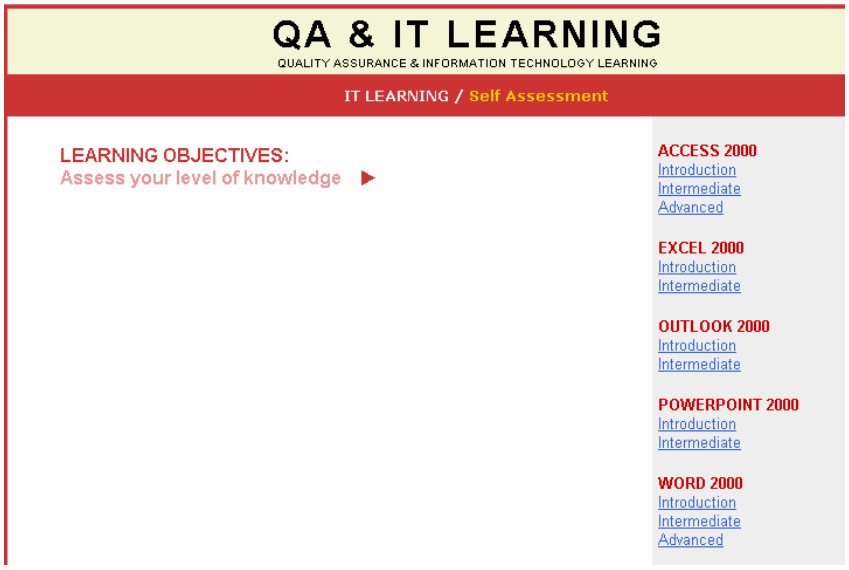


Figure 3-66. Self-Assessment Webpage.

Estimated Completion Date: 10/31/2002

Actual Completion Date: 7/31/2002

Microsoft Office Training migration to MOS Certification

Beginning with the transition to Microsoft Office XP, QA&ITL has revised its training curriculum to reflect the requirements for passing the Microsoft Office Specialist (formerly Microsoft Office User Specialist) certification exams for each application. This change ensures that we are training Sinclair employees to meet the most current application requirements, thereby assisting them to help students utilize these applications efficiently. A secondary benefit is that employees who successfully complete these workshops are prepared to challenge the certification exams. The transition was completed for the Word, PowerPoint, and Excel sessions in FY 2002-2003; Access and Outlook transition is scheduled for FY 2003-2004. MS Office training sessions currently offered include:

- MS Outlook 2000 Introduction
- MS Outlook 2000 Intermediate
- MS Word 2000 Introduction
- MS Word 2000 Intermediate
- MS Word 2000Advanced
- MS Word 2002 Core
- MS Word 2002 Expert
- MS PowerPoint 2000 Introduction
- MS PowerPoint 2000 Intermediate
- MS PowerPoint 2002 Comprehensive
- MS Excel 2000 Introduction
- MS Excel 2000 Intermediate
- MS Excel 2000 Advanced
- MS Excel 2002 Core
- MS Access 2000 Introduction
- MS Access 2000 Intermediate
- MS Access 2000 Advanced

A chart depicting the training hours provided is contained in Figure 3-67.

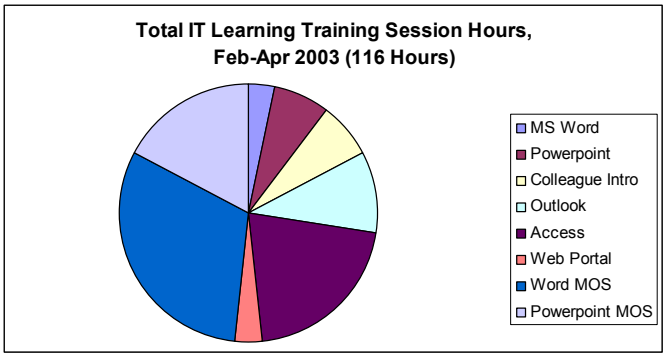


Figure 3-67. Training Session Hours.

Training sessions being developed include Excel 2002 Expert, Access 2002 Core, and Outlook 2002 Core. Office 2000 training sessions are projected to be phased out in Fall 2003.

Estimated Completion Date: 10/31/2002

Actual Status: ~75% complete

Training session schedule/registration process

To enhance communication and improve resource allocation, QA&ITL revised the registration processes for employees requesting training sessions. The schedule of upcoming sessions is now maintained on the intranet at URL http://intranet.sinclair.edu/QAITL/itl/workshops/index.htm (shown in Figure 3-68), and is also published in various other communications such as the Intranet "Headlines" section, the President's Bulletin, and the Know IT newsletter. We also established an email registration method that allows users to register via email and receive a confirmation message. The training session is subsequently added to their Outlook Calendar, and a reminder message is sent the day prior to the session. This has reduced the number of "no show" registrants and has allowed QA&ITL to more efficiently utilize training resources.

JUNE 2003

Monday	Tuesday	Wednesday	Thursday	Friday
2 Introductory EXCEL 1:00 - 4:30	3	4 Intermediate EXCEL (Part I) 1:00 - 4:00	5	6 Introductory POWERPOINT 1:00 - 4:00
9	10 Intermediate POWERPOINT 1:00 - 4:00	11 Intermediate EXCEL (Part II) 1:00 - 4:00	12	13
16 Orientation to IT 1:30 - 3:00	17	18	19	20
23	24	25	26	27

Figure 3-68. Training Schedule.

Estimated Completion Date: 12/31/2002

Actual Completion Date: 9/30/2002

Acceptable Use Policy

QA&ITL has facilitated the collaborative development of a proposed "Acceptable Use of Information Technology Policy" that has been distributed to various organizations college-wide. The draft policy has been reviewed by the College attorneys and approved by administration. It will be implemented as an interim policy during Summer 2003 and will be presented to the Board of Trustees for approval at the September 2003 meeting. The policy can be accessed via the IT Policies and Procedures page, at URL http://intranet.sinclair.edu/QAITL/it_policies/policy.htm.

Estimated Completion Date: 4/30/2003

Actual Completion Date: 6/1/2003 – implemented as an interim policy pending approval by the Board of Trustees in September 2003

Disaster Recovery Policy/Procedure Revision (Business Continuity Plan)

The disaster recovery plan contains staff contact information, recovery priorities, and recovery procedures to follow in the event of a major disaster to College information systems. It is an essential document that must be current to ensure adequate recovery of all Information Technology services in a manner that meets Sinclair's most critical needs in priority order. QA&ITL worked closely with Information Technology Services to facilitate the revision and ensure the accuracy of this plan.

Estimated Completion Date: 10/31/2002

Actual Completion Date: 12/31/2002

Web Portal Documentation

QA&ITL assisted the eCollege Department with Quick references, instructions, and other end-user documentation as Sinclair launched the http://my.sinclair.edu Web Portal in Fall 2002.

Estimated Completion Date: 9/30/2002

Actual Completion Date: 9/30/2002

Faculty/Staff Individual Web Space Policy and Procedures

A server has been designated as a centrally located area for faculty and staff to develop individual websites to support the learning, research, and

community/public service mission of the college and all administrative functions that support this mission. To ensure these resources meet users needs and facilitate academic freedom as effectively as possible while still meeting the college's ethical and legal responsibilities, QA&ITL and Web Services have developed guidelines and procedures for accessing and utilizing these individual websites. These guidelines can be found by pointing your browser to URL http://www.sinclair.edu/people/agreement/index.cfm (shown in Figure 3-69).

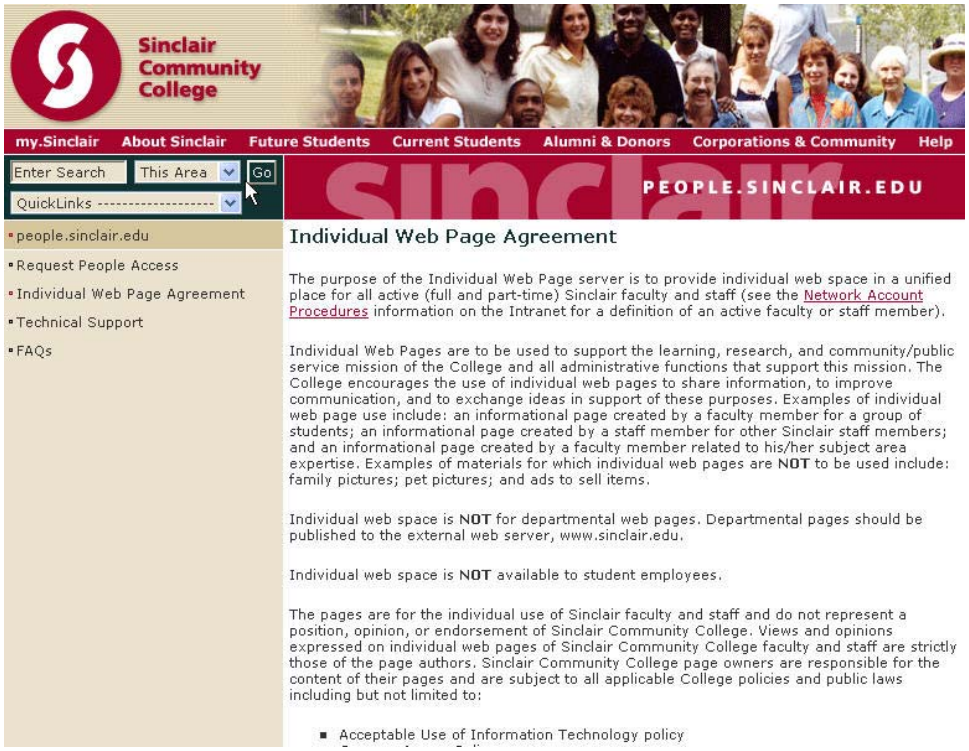


Figure 3-69. Individual Web Space Agreement.

Estimated Completion Date: 1/31/2003

Actual Completion Date: 3/31/2003

Off-Campus File Access Procedures

Information Technology Services has implemented a service that allows all Sinclair network users to securely access their individual network home directory (H:\Drive) and any authorized network departmental share directory via the Sinclair web portal, http://my.sinclair.edu from any PC with internet access. QA&ITL developed the installation procedures, user instructions, and usage guidelines to implement this service. This service allows all employees and other authorized network account holders to access their network

saved files while away from the office. The URL to access the instructions for using this service is http://intranet.sinclair.edu/QAITL/it_policies/procedures/Citrix2/CitrixInstructions.htm (shown in Figure 3-70).

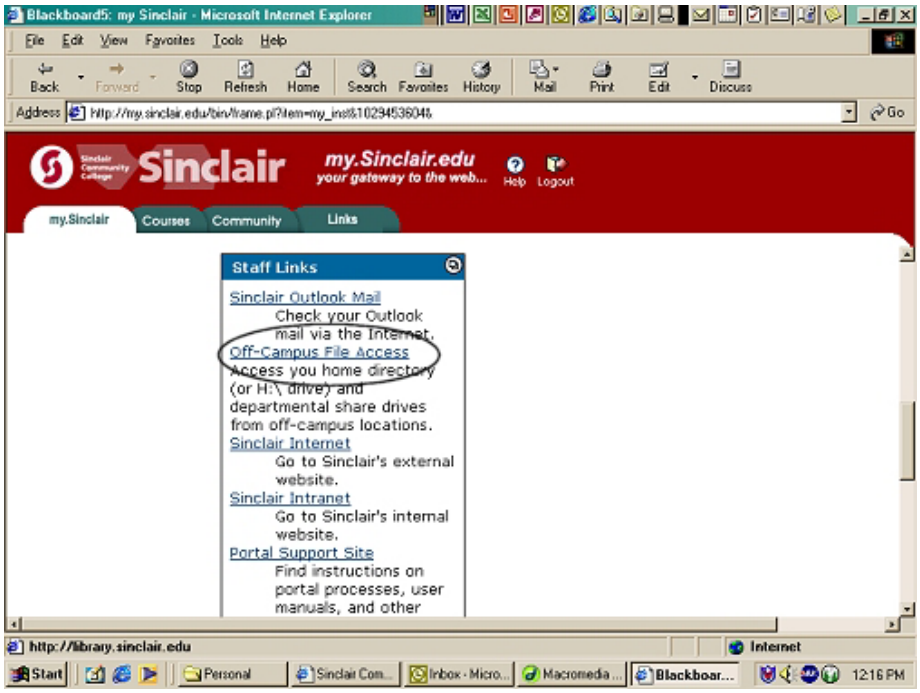


Figure 3-70. Instructions for Off-Campus File Access.

Estimated Completion Date: 3/31/2003

Actual Completion Date: 3/31/2003

Colleague Code, Screen, and Structure Documentation

QA&ITL has developed centralized documentation (data, VAL codes, modules, screens, and fields) for Colleague. This documentation details the four applications Sinclair uses within Colleague (CORE, Student System, Human Resources, Financial), the modules within each application, screens in each module, and fields/codes within each screen or process – over 2740 mnemonics. This documentation is essential for effective security planning/ implementation and will assist Information Technology staff and end users to determine how changes made in one area of the system potentially affect other departments or divisions. It is available via the intranet from the Colleague page, URL http://intranet.sinclair.edu/QAITL/colleague/info.htm (shown in Figure 3-71).

Address http://intranet.sinclair.edu/QAITL/colleague/R17_mnemonics_codes_structure.xls

A6 AADT

	A	B	C	D	E	F	G
1	Mnemonic	Screen/Process Name	Datatel Process/Code Name	"Owned"	Used	Used	Use
2	12	Return CURRENT.FA.YEAR	S.PQ.GET.FA.YEAR	ST	BASE		
3	13	Aged AR Balance Rpt.-Specific	ARR034	ST	BASE		
4	AACR	Academic Credentials	DMSU42	CORE	BASE		
5	AAD	Award Amount Definition	AWDU11	ST	FA		
6	AADT	Applicant Activity Detail	AMS047	ST	ADM		
7	AAIC	Adj Avail Income Contribution	FAP017	ST	FA		
8	AAIN	Applicant Admission Inquiry	WBSTI010	ST	WBST		
9	AASM	Auto Assign Membership	COJ001	ST	ADM	CO	
10	AAXL	Award AR Xmit Limitations	AWDU15	ST	FA		
11	ABCO	AR Balance by AR Code	ARF081	ST	AR		
12	ABDB	Adjust BenDed Base Amounts	HRS224	HR	PR		
13	ABTY	AR Balance by AR Type	ARF080	ST	AR		
14	ACAP	Accepted Applications Report	AMJ061	ST	ADM		
15	ACBL	GL Account Balance Inquiry	GLSU09	CF	FXA		
16	ACCA	Account Analysis by AR Code	ARJ020	ST	AR		
17	ACCD	Asset Category Definition	FXP002	CORE	CORE		
18	ACCS	GL ACCTS Standard Selection	ACCS	CF	BASE		
19	ACD	Award Category Definition	AWDU04	ST	FA		
20	ACDR	Assign/Change/Delete Restrs	ACJ013	ST	AC		
21	ACEU	Acad Cred CEU Totals	ACI013	ST	AC	FI	
22	ACFD	Attend/Confirm Detail	AES025	CORE	AE		
23	ACIR	Available Cash/Investment	ACIR	CF	PI		
24	ACLP	Asgmt Contract Load Period	PES007	HR	PAC	PE	
25	ACLV	Academic Levels	ACP033	ST	AC		
26	ACNU	Award Cost/Need Update	ACNU	ST	FA		
27	ACOI	Additional Course Information	CDS032	ST	CD		
28	ACPR	Academic Records Parameters	ACP019	ST	AC		
29	ACPS	Assignment Contract Params	PES004	HR	PAC	PE	
30	ACQD	Acquisition Method Definition	FXP001	CF	FXA		
31	ACQM	Acquisition Information Maint	FXS002	CF	FXA		
32	ACRS	Person's Accrual Rate Summary	HRS033	HR	PE		

Module Descriptions | Screen Mnemonics | Codes in Each Module | Codes in CORE Screens | Codes in ST Scre

Figure 3-71. Colleague Documentation.

Estimated Completion Date: 10/31/2002

Actual Completion Date: 10/31/2002

Colleague user HR action notification procedures

To ensure the privacy and confidentiality of student and other sensitive information, only authorized employees should have access to the Colleague system. To help monitor access, QA&ITL, Information Technology Services, and Human Resources collaborated to develop a process for notifying Information Technology of all employee status change actions. QA&ITL has evaluated/processed Colleague security assessments on an average of 27 employee actions per month since implementation of this procedure.

Estimated Completion Date: 8/31/2002

Actual Completion Date: 9/30/2002

Colleague user/supervisor notifications

As identified during the financial audit, all users and their supervisors must be aware of their individual responsibility when accessing student or other

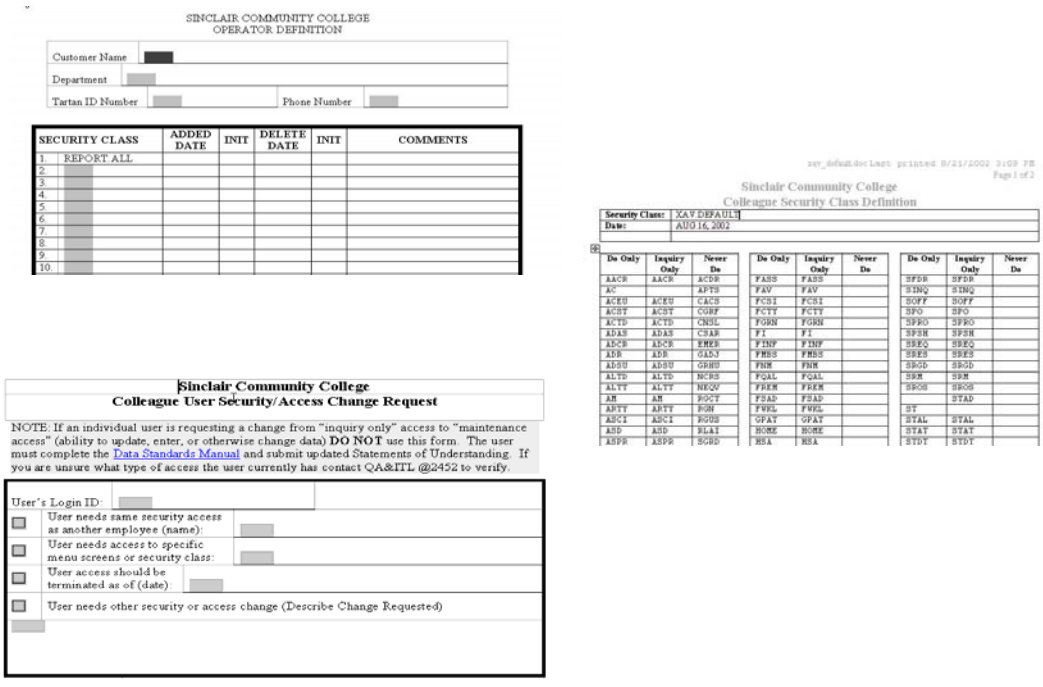
sensitive information. To remind them of this responsibility, QA&ITL verifies that the access requested is appropriate and approved by the supervisor and security committee. After notification that the account is created, QA&ITL verifies that the security assigned is accurate and notifies the individual and supervisor of the access granted, and of their individual responsibilities. As part of the message, QA&ITL lists some reporting tools supervisors may use to verify the access of their employees and/or access to data primarily "owned" by them is accurate.

Estimated Completion Date: 10/31/2002

Actual Completion Date: 10/31/2002

Colleague Security Class and User Access Documentation

Colleague access is controlled via security classes based on the individual duties and role within the campus. QA&ITL developed and documented over 220 role based security classes and over 790 operator definition records. All security access has been reviewed and approved by the designated security authorities of the respective data owners. In addition to developing and documenting initial security access, QA&ITL processed an average of twelve new user requests, eight security class changes, and twenty user security change requests each month. Sample forms used for this process are shown in Figure 3-72.


SINCLAIR COMMUNITY COLLEGE
OPERATOR DEFINITION

Customer Name
Department
Tartan ID Number
Phone Number

	SECURITY CLASS	ADDED DATE	INIT	DELETE DATE	INIT	COMMENTS
1.	REPORT ALL					
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

Sinclair Community College
Colleague Security Class Definition

Security Class: XAVDEFAULT
Date: AUG 16, 2002

Do Only	Inquiry Only	Never Do	Do Only	Inquiry Only	Never Do	Do Only	Inquiry Only	Never Do
AACR	AACR	ACDR	FASS	FASS		SFDR	SFDR	
AC		APTS	FAV	FAV		SINQ	SINQ	
ACEU	ACEU	CACS	FCSI	FCSI		SOFF	SOFF	
ACST	ACST	CGRF	FCTY	FCTY		SPO	SPO	
ACTD	ACTD	CNSL	FGRN	FGRN		SPRO	SPRO	
ADAR	ADAR	CRAR	FI	FI		SPSN	SPSN	
ADCR	ADCR	EMES	FINF	FINF		SREQ	SREQ	
ADR	ADR	GADJ	FMBS	FMBS		SRES	SRES	
ADSU	ADSU	GRNU	FNM	FNM		SRGD	SRGD	
ALTD	ALTD	NCRS	FQAL	FQAL		SRN	SRN	
ALTT	ALTT	NEQV	FREM	FREM		SROS	SROS	
AM	AM	POCT	FSAD	FSAD			STAD	
ARTT	ARTT	PON	FWKL	FWKL		ST		
ASC1	ASC1	PONS	GFAT	GFAT		STAL	STAL	
ASD	ASD	RLAI	HOME	HOME		STAT	STAT	
ASPR	ASPR	SCRD	HSA	HSA		STDT	STDT	

Sinclair Community College
Colleague User Security/Access Change Request

NOTE: If an individual user is requesting a change from "inquiry only" access to "maintenance access" (ability to update, enter, or otherwise change data) **DO NOT** use this form. The user must complete the Data Standards Manual and submit updated Statements of Understanding. If you are unsure what type of access the user currently has contact QA&ITL @2452 to verify.

User's Login ID:

- ☐ User needs same security access as another employee (name):
- ☐ User needs access to specific menu screens or security class:
- ☐ User access should be terminated as of (date)
- ☐ User needs other security or access change (Describe Change Requested)

Figure 3-72. Sample Colleague Security Forms.

Estimated Completion Date: 8/31/2002

Actual Completion Date: 9/30/2002

Colleague Release 17 Migration

QA&ITL filled various roles as Sinclair migrated to Colleague Release 17, including:

- Creation and/or revision of over 40 Colleague Security Classes;
- Review/revision of all Colleague training materials to reflect changes;
- Review/revision of all user reference materials and technical documentation;
- Review/revision of Sinclair Web pages for obsolete references and links; and
- "Brown-bag" User Training Sessions for end-users.

Estimated Completion Date: 5/31/2003

Actual Completion Date: 5/31/2003

Password Distribution/Reset Procedure

Previous procedures required users to physically visit to the IT Help Desk for password issues such as initial Colleague access and for password reset due to forgotten or corrupted passwords. QA&ITL and Information Technology Services developed procedures to allow individual users to authenticate their identity via the telephone to help resolve password-related issues.

Estimated Completion Date: 10/31/2002

Actual Completion Date: 10/31/2002

QA&ITL Website Standardization/Redesign

QA&ITL staff developed and published a website on the Sinclair Intranet for disseminating information about Colleague, Information Technology learning opportunities, policies and procedures, software manuals, and other documentation and information. The site has been redesigned and restructured in an effort to provide information from a user's perspective as opposed to a departmental or hierarchical one. The URL is http://intranet.sinclair.edu/QAITL/index.htm.

Estimated Completion Date: 11/30/2003

Actual Completion Date: 11/30/2003

Special Projects

The major activity for the Special Projects office for FY2002-2003 was initiation of the Room Scheduling/Space Management Project (RSSM). Please refer to Section 4 for a complete description of this project.

Section 4

Major Projects for FY 2003-2004

Major Projects for FY 2003-2004

Although we have made significant progress in all areas of Information Technology over the past few years, we still have much to do. Working with the executive management team and our various advisory teams, we have established a prioritized set of major projects for FY 2003-2004.

eCollege Department

Following are the Major Projects for FY2003-2004 for the eCollege Department:

Web Registration and Supporting Processes

Datatel's WebAdvisor system is being implemented to allow students to register, add, drop and pay for classes (using a credit card) online. This will be included as functionality within the my.Sinclair portal by linking the portal with the WebAdvisor homepage.

The system is available in the test system and being reviewed by the various departments of the college. Issues with the registration process are being resolved as they are identified. Webpage changes are being made to clarify the process for the student and to identify implications of the processes on a student's financial aid, such as the potential impact of dropping classes. Figure 4-1 shows the WebAdvisor homepage for the online registration process.

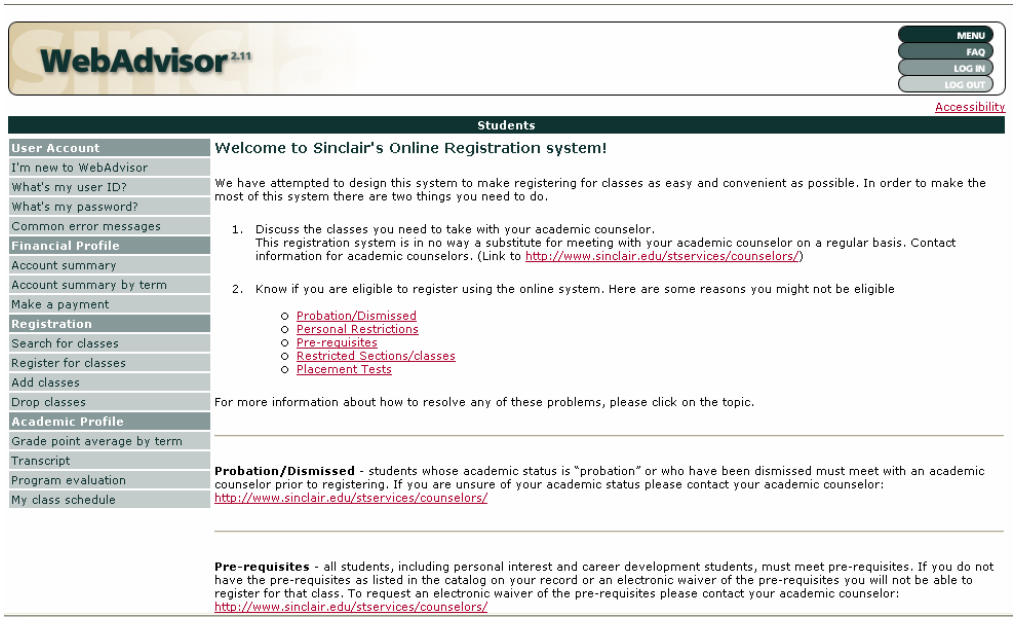


Figure 4-1. WebAdvisor Homepage.

We plan to pilot test registrations in the live system during the Summer 2003 registration period. The system should be live during the Fall 2003 registration period.

We intend to closely monitor the use of the Web-based registration system during the implementation phases. We currently monitor the number of students using the telephone registration system versus those registering by mail or onsite in the Registrar's office. The distribution of those two methods for Spring 2003 is shown in Figure 4-2.

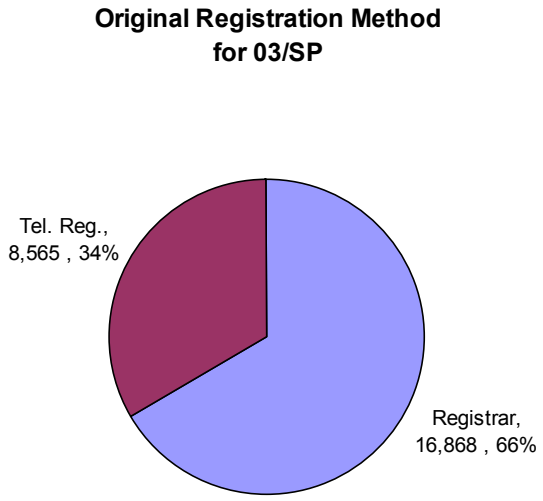


Figure 4-2. Distribution of Registration Methods.

Web registrations will be tracked similarly and added to this data as the system becomes active.

Estimated Start Date: In Process

Estimated Completion Date: 9/1/2003

Early Alert System

Student Services has requested implementation of a system that faculty members can use to alert counselors and students of unsuccessful progress during the academic term. The initial implementation of this system is intended to be piloted by the Developmental faculty and counseling staff. This system was developed by Western Nebraska Community College to be used with Datatel's Colleague. We will be obtaining the software from them and implementing it within our Colleague system.

Estimated Start Date: 6/18/2003

Estimated Completion Date: 8/31/2003

Accuplacer Test Scores

Student Services staff intend to change the placement testing process from the current Compass system to Accuplacer. Accuplacer is a Web-based system which was intended to allow off-campus testing.

eCollege staff has completed development of the process for on-campus use and are investigating using Citrix for off-campus testing. Student Services staff have decided to delay final implementation of the system until Fall 2003.

Estimated Start Date: In Process

Estimated Completion Date: 9/30/2003

SEVIS Implementation

The Student and Exchange Visitor Information System (SEVIS) has been mandated by the federal government. This system requires us to report information on status changes regarding F, J, and M nonimmigrants. Status changes include things such as address changes, enrollment status changes (full-time vs. part-time) and others. Sinclair must begin additional reporting to SEVIS by Fall 2003. Datatel has designed a system for this reporting that will be implemented for this project.

Preliminary steps such as installing DMI 2.2 have been completed. Due to delays in receiving and installing patches from Datatel, we are now in the process of installing the latest version of Datatel's process. We anticipate completion of the setup in early June which will allow July and August for testing in the Registration office.

Estimated Start Date: In Process

Estimated Completion Date: 8/14/2003

User Interface 1.0 Pilot Testing

User Interface 1.0 (UI 1.0) is Datatel's next generation of user interface to the Colleague system. Future versions of the system will require UI 1.0 to be used to access Colleague. Some of the processes built into the SEVIS project require UI 1.0 to be used to access reports related to SEVIS. We intend to use the SEVIS project as a means to pilot test UI 1.0 for the college.

Estimated Start Date: In Process

Estimated Completion Date: 8/31/2003

Curriculum Development Support System

Web Systems staff are working with the Academic Division to create a new Web-based system for initiating, tracking, and approving changes to courses and programs. The current Keyfile system does not provide all of the functionality needed and stores information in a format that is not easily retrieved by other systems. We are in the process of developing a Web-based system that includes review and approval processes and stores information in a Microsoft SQL Server database, which can subsequently serve as a central repository for information displayed on the Web or used in other ways.

Estimated Start Date: 7/15/2003

Estimated Completion Date: 10/15/2003

Implementation of Source Control in Business Systems & Programming

Source control software provides a means for tracking programming code (instructions). It tracks changes made to code, places version numbers on different revisions, and allows comparisons between different versions for troubleshooting and development support. It also provides a means for documenting changes made to the code. The purpose of this project is to migrate program code for the current administrative systems into the PVCS source control system.

Complexities with implementing PVCS with the Datatel Envision toolkit have prevented us from implementing PVCS with Colleague. We have made inquiries with a vendor (ACS) to assist with implementation as they indicated they are using PVCS with Colleague. We have not yet received a response.

Estimated Start Date: In Process

Estimated Completion Date: 10/31/2003

Replacement of the bookstore Point-of-Sale (POS) system

The bookstore point-of-sale (POS) system is a product supplied by a vendor that went bankrupt. Staff from the original company formed a small company to support the system, but experience with that organization to date indicates

that they may not be capable of supporting the product and making improvements in hardware and functionality. As a result, the bookstore has begun the process of evaluating, selecting, and implementing a new bookstore POS system.

Bids have been returned and are in the review process. Two vendors submitted bids, and the current favorite is Nebraska books; however, they noted an issue with the link to the Colleague system that warrants further investigation.

Estimated Start Date: In Process

Estimated Completion Date: based on vendor selection and availability of resources

Individualized Learning Plan (ILP)

Student Services requested the development of an Individualized Learning Plan (ILP) process that will be used by counselors and students to retrieve and store information to support the success of the student at Sinclair. The system will capture and maintain personal information, placement test scores, counseling notes, and other information useful to the counseling staff. The Web Systems staff has worked with the ILP team to define the requirements of the system and are planning a phased implementation. The first phase is Web-based collection of the data in an SQL Server database with security measures in place to ensure that only appropriate counselors have access to student information. The first draft of that system has been turned over to the counselors for testing. A sample webpage from the system is illustrated in Figure 4-3.

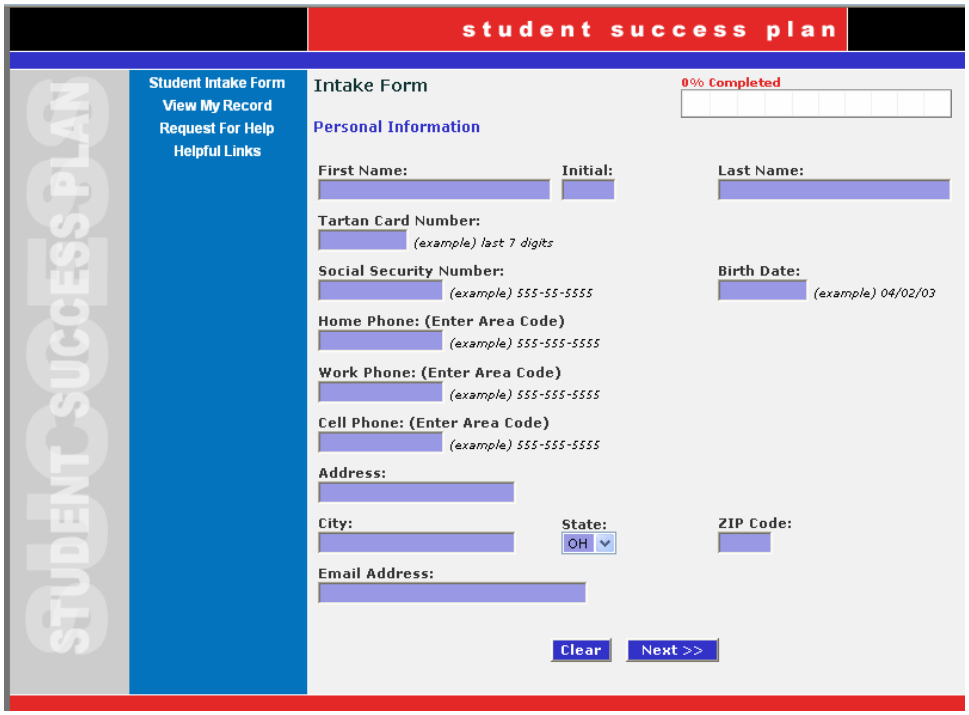


Figure 4-3. Sample ILP Webpage.

The second phase of the project will be to define the specifications for an interface between the SQL Server database and the Colleague system, which will eliminate the duplication of data entry.

The third phase will encompass the actual development, testing, and implementation of the database interfaces.

Other functionality for later stages of development will be identified as the project continues.

Estimated Start Date: In Process

Estimated Completion Date: Phase I – 6/23/2003
Phase II – 2/28/2004
Phase III – 6/30/2004

Improved reporting tools

One of the main concerns we have had from users regarding the Colleague system is the ability to extract data. As a result, eCollege staff has reviewed possible methods for making data more readily available and are in the process of working with the Safari product by ASG. Recent improvements in the product, specifically how it works with Colleague's Unidata database,

seem to overcome technical obstacles formerly experienced with the product. As a result we are running a pilot program with staff from the Purchasing and Registration offices and plan to implement the solution on a wider basis - if that testing is successful.

Estimated Start Date: In Process

Estimated Completion Date: 12/31/2003

Higher Education Information (HEI) Reporting System Redesign

The current processes for reporting to the Ohio Board of Regent's Higher Education Information (HEI) system was designed for Colleague Release 13. The conversions to Colleague R16 and R17 resulted in many of the HEI processes being "broken", and eCollege staff has had to commit significant resources to correcting the system over the past year and a half. We intend to redesign the process to simplify the data "freezes" that must occur on the fourteenth day of each term and thirty days after each term. This will also require re-writes of many of the standard enrollment reports used by Institutional Planning and Research and other departments across the college.

We are in the process of mapping the HEI data fields to fields within the Colleague system and determining the processes used in the current system. From that analysis we will determine the best system to use to accomplish the "freezes" in the future and how to go about reporting off those freeze files as well as off live data.

Estimated Start Date: In Process

Estimated Completion Date: 3/31/2004

Academic Standing Revisions

Student Services and Academic Division staff agreed to revise the academic standing policy of the institution. This change requires a revision to the rules in place for academic standing and a review of the academic standing custom code in Colleague to determine what changes, if any, are required.

We have received a $27,000 quote from Datatel to perform the necessary modifications. We are in the process of reviewing the required rule changes and are interested in programming this without assistance from Datatel. Our timeline is to have the changes all identified by 6/30/2003, programming completed by 7/31/2003, and have the modifications available for testing by 8/1/2003.

Estimated Start Date: In Process

Estimated Completion Date: 9/30/2003

Moving all Sinclair-developed Colleague Code to Envision

Envision is Datatel's latest programming environment, which provides support for moving code between live and test systems, provides standard routines for various programming tasks, and allows the greatest use of some of the advanced functionality within the system. We must begin migrating all of the code Sinclair has developed into this system to take advantage of the latest software features.

Code modules have been identified and prioritized. Those assigned top level priorities are currently being moved into the Envision toolkit.

Estimated Start Date: In Process

Estimated Completion Date: 9/30/2003

Web Advisor Financial Aid Information

Datatel's WebAdvisor has functionality to allow students to view the status of their financial aid at the college. This project will implement that functionality within the my.Sinclair portal.

Estimated Start Date: 8/1/2003

Estimated Completion Date: 9/30/2003

Screen Consolidation for the Call Center

Student Services has requested that data from a variety of existing screens be consolidated onto fewer screens so that the call center can have easier access to student information.

Estimated Start Date: In Process

Estimated Completion Date: 7/31/2003

Options for credit and developmental GPA

The recent change in developmental classes to give letter grades versus pass/fail grades has caused developmental classes to be included in a student's GPA. Student services would like to explore the possibility of creating separate GPA's for students, both with and without developmental coursework.

Estimated Start Date: 10/1/2003

Estimated Completion Date: 3/31/2004

Course Applicability System (CAS) Implementation

The Ohio Board of Regents' sponsored Course Applicability System (CAS) has not yet been implemented at Sinclair. The purpose of this project is to review the Datatel interface currently in place at Cincinnati State Community and Technical College and implement that interface at Sinclair. Before the system could be implemented, however, the Academic Division must resolve issues with currency and accuracy of data in our master course transfer file.

Estimated Start Date: 1/1/2004

Estimated Completion Date: 6/30/2004

Bursar Point-of-Sale (POS) System Implementation

The Bursar point-of-sale (POS) system was designed by the same vendor as the current bookstore system. Concerns with the viability of, and on-going support from, that organization suggests that we should review options for replacing the current POS system in the Bursar's office.

Estimated Start Date: 1/1/2004

Estimated Completion Date: 6/30/2004

Faculty Contracts/Payroll Sheet Process Revision

The current process for assigning faculty to course sections and submitting payroll information is extremely cumbersome and labor intensive. It also does not take advantage of the full functionality provided by the Colleague system. This project will consist of a review and redesign of the current process.

Estimated Start Date: 9/1/2003

Estimated Completion Date: 3/31/2004

Blackboard 6.0 Upgrade

In order to implement some of the planned Web-based functionality within the my.Sinclair portal, and in order to take advantage of performance improvements in the product, we must upgrade from version 5.5 of the software to version 6.0.

Estimated Start Date: 7/1/2003

Estimated Completion Date: 8/31/2003

Web Advisor Grade Input

Datatel's WebAdvisor has functionality to allow faculty to input term grades online. This project will implement that functionality within the my.Sinclair portal.

Estimated Start Date: 8/15/2003

Estimated Completion Date: 11/30/2003

Kiosk Upgrade

The Kiosks across campus use an outdated software application to provide services to students. In addition, those services are being redeveloped within our current website. The purpose of this project is to update the Kiosk functionality to a browser-based system and take advantage of many of the features we are building into the website.

Estimated Start Date: 7/1/2003

Estimated Completion Date: 12/31/2003

Web Advisor Student Grade Access

Datatel's WebAdvisor has functionality to allow students to access their grades for any given term online. This project will implement that functionality within the my.Sinclair portal.

Estimated Start Date: In Process

Estimated Completion Date: 9/30/2003

Sponsor Billing Review and Evaluation

One of the major customizations made to the Colleague system is the custom code implemented to allow sponsorships to be prioritized along with other forms of financial aid. The purpose of this project is to review the functionality provided in that customization and determine if it can be eliminated through policy changes or through modifications in how the system is used.

Estimated Start Date: 8/1/2003

Estimated Completion Date: 11/30/2003

Web Advisor HR Information Access

Datatel's WebAdvisor has functionality to allow faculty and staff to access personal information such as leave balances, stipends, and a summary of their positions at the college. The purpose of this project is to implement that functionality within the my.Sinclair portal.

Estimated Start Date: 9/15/2003

Estimated Completion Date: 12/31/2003

WebAdvisor Budget Information Access

Datatel's WebAdvisor has functionality to allow budget managers to access budget balances and underlying detail. The purpose of this project is to implement that functionality within the my.Sinclair portal.

Estimated Start Date: 11/1/2003

Estimated Completion Date: 1/31/2004

Duplicate entry resolution

Duplicate entries pose a significant threat to the accuracy and integrity of the Colleague database. We need to develop and implement a tool to identify potential duplicate records and resolve them via methods determined by the CORE team.

Estimated Start Date: 1/1/2004

Estimated Completion Date: 6/30/2004

Information Technology Services Department

Following are the Major Projects for FY2003-2004 for the Information Technology Services Department:

Network print management

Sinclair currently has approximately 460 printers that are connected to the campus network, which can be utilized by the college's 3200 administrative and academic lab computers. The current capabilities of our network operating system do not provide information on printer utilization, so most planning for capacity and performance is done without adequate information.

This project will implement a system for monitoring printing to network printers. In addition, we will investigate methods of improving cost, reducing waste, and creating process efficiencies. A print management software package has already been purchased and will soon be installed. Over the course of the next few months, data will be collected on patterns of printing, and evaluations will be conducted to ascertain if there are opportunities for improvement.

Estimated Start Date: In Process

Estimated Completion Date: 3/15/2004

Storage Area Network (SAN) backup

Sinclair's Storage Area Network (SAN) is a dedicated network for data storage devices (i.e., disk drives, tape drives, etc.). Figure 4-4 contains a diagram of the current SAN configuration. It is separate from the Local Area Network (LAN) that connects the workstations and servers. This separation allows high-speed access to data and applications by the servers without impacting LAN traffic.

Currently, data and applications stored on the college's servers and SAN totals approximately 4 terabytes. This data is backed up to tape devices on a daily basis over the LAN. In order to minimize LAN traffic, and maximize user access to applications and data, all backups are performed in the evening. With the expansion of services, and growth in the volume of data, the ability to complete file backups during times that will not affect users is rapidly decreasing.

The objective of this project is to migrate large portions of the backup process to the SAN, providing the following benefits:

- Increased performance due to the higher speed available on the SAN;
- Increased network resource availability to users due to the use of a separate network for backups; and
- Increased scalability due to both the increase in speed and the separation of LAN and SAN network traffic.

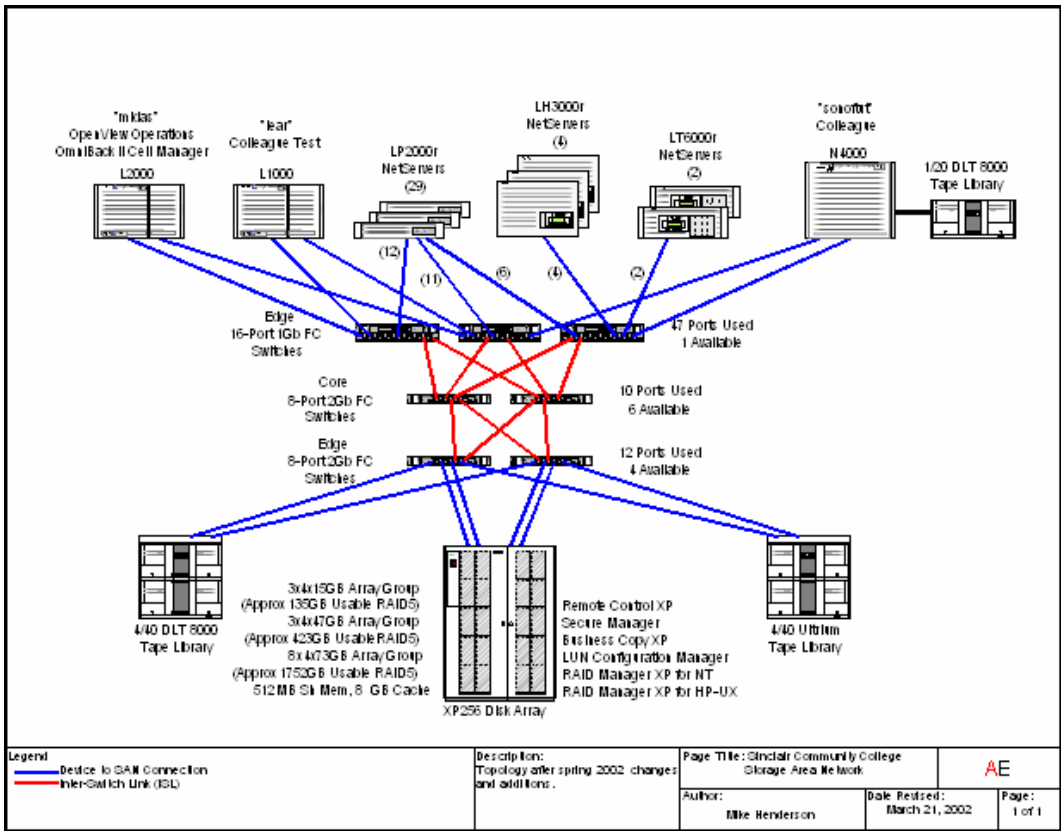


Figure 4-4. Current SAN Configuration.

Estimated Start Date: In Process

Estimated Completion Date: 10/31/2003

Building 13 move

A large portion of the ITS department is housed in space which takes up close to three-fourths of the first floor of Building 5. In order to provide more space for classrooms and faculty offices in the core of the campus, ITS personnel, offices, and the Network Operations Center (formerly the computer room) will be relocated from Building 5 to the basement of Building 13 during the summer of 2003.

In order to keep the cost of this move at a minimum, the network infrastructure of the Network Operations Center will be moved rather than being duplicated in the new location. This will require the complete shutdown of all systems at the beginning of the move. Once the network switches and routers are reconnected to the network in the new Network Operations Center in Building 13, servers will be reconnected.

About half of the servers that are being moved connect into the Storage Area Network (SAN). This isolated, special purpose network connects certain servers to disk arrays that contain 4 terabytes of data. The larger of our disk arrays, which provides storage for a large number of servers, will take a large part of the first day of the move to disconnect, transport, and reconnect. Until this is accomplished, the servers that rely on this storage cannot be brought online.

A major part of the planning for the move involves identifying the priority of systems so that they may be brought back online in the order of their importance and mission criticality. Certain servers that provide “infrastructure services” have to be available before other servers that rely on these services can be turned on. Examples of these types of servers are domain controllers, firewalls and tape backup systems.

The dependencies of systems on data network equipment, storage network devices and disk arrays, and infrastructure services dictate most of the priorities for when servers can be brought back online. Beyond these dependencies, we have identified the systems that have the greatest impact on campus instructional and administrative processes, if they were unavailable. This will be the guideline for the order in which system availability will be re-established.

The shutdown and disconnecting of servers cannot be started until a full backup of all systems is completed. This is necessary in the event that something happens to a server, which would make it unable to be restarted. The backup is planned to begin as early as possible on Wednesday July 2, 2003. Based on the time that it takes for backups to complete, we will begin shutting down servers and moving equipment some time in the afternoon or evening of Thursday July 3, 2003.

After all of the servers are shutdown, the focus will be on moving the equipment that have the greatest number of dependencies, namely the SAN components and the data network equipment. Our goal will be to have all of these components moved by the end of the day on Friday, July 4, 2003. The work on Saturday, July 5, 2003, will entail bringing the highest priority systems online for testing on Sunday, July 6, 2003. The remaining servers will be made available as soon as possible. The target is to have all systems operational and available by 7:00 a.m. on Monday, July 7, 2003.

Estimated Start Date: In Process

Estimated Completion Date: 7/31/2003

Windows 2000 SP3

Information Technology Services (ITS) maintains over 70 Microsoft Windows 2000 servers. One of the ongoing maintenance responsibilities for these systems is to install service packs that contain bug fixes, software enhancements, and security updates that have been developed by Microsoft over a period of time.

The installation of Microsoft service packs requires detailed planning and testing to maximize the probability that problems are avoided. Also, enough time after a service pack's release must be allowed to ensure stability of the service pack.

Currently, after a service pack is deemed stable, deployment involves installation on one or more test servers, thorough testing, and subsequent rollout to the remaining servers. This rollout is a manual process whereby the service pack is installed individually on each server.

This project will develop a process for service pack deployment that takes into account the planning, testing and deployment of the software. Part of this process will include investigation into automated methods for the deployment phase, as well as documenting the planning and testing process. In addition to creating a repeatable process for any service pack, the procedures will be used for deploying Service Pack 3 (SP3) on all production Windows 2000 Servers.

Estimated Start Date: In Process

Estimated Completion Date: 10/15/2003

Wireless networking

Wireless networking is becoming a very important technology for organizations. There are many innovative capabilities that wireless connectivity can enable. Beyond this, more and more computing devices (like the devices shown in Figure 4-5) are being delivered with built-in wireless capability. It will not only be necessary for Sinclair to develop a wireless strategy for the purpose of making use of the capabilities of wireless for a specific purpose, it will also be necessary to be able to address the expectations of students that want to connect their wireless devices to networks in a growing number of public locations.

There are several wireless labs already in place on campus. In addition, there are multiple wireless labs that have been requested in the FY2003-04 budget. Sinclair was awarded a state grant two years ago to create a wireless network in the Learning Resource Center (LRC) and provide 36

wireless notebooks for checkout from the circulation desk to be used within the facility. This capability is planned to be incorporated into the redesign of the LRC, which is currently underway.

As important as it is to position ourselves to be able to meet the future functionality that wireless networking can enable, it is equally important that we design the infrastructure securely. Many organizations have implemented wireless to meet the demands of internal or external customers without regard to the inherent security risks that it brings. Building wireless networks that do not effectively restrict access, or without processes to authorize access and limit the capabilities of users based on their role, puts the entire campus network infrastructure, systems, and data at risk.

The purpose of this project is to develop a comprehensive plan for a secure implementation of wireless networking on campus. Systems and procedures will be put in place that will ensure only devices and individuals that are approved to have access to the network may do so.

Figure 4-5. Wireless Devices.

Estimated Start Date: In Process

Estimated Completion Date11/15/2003

Voice Telecommunications disaster recovery planning

What would happen to Sinclair's day-to-day business operations if telephone services were interrupted? With all the technology enhancements to data and voice networks in the past 20 years, the concern is not only with the

phone system, but systems that are add-ons: Voice Mail, ACD, and Call Traffic Management. All of these services are vitally important to Sinclair and require ongoing review to eliminate or reduce the risk of potential points of failure.

The development of the Voice Telecommunication disaster recovery plan has already begun by identifying all of the voice systems components: their software/hardware, immediate environment, contiguous environment, and all services provided by outside vendors. After this is complete we will identify the probability of any specific component failing, the possible methods of reducing the risk, and the cost of doing so.

Estimated Start Date: In Process

Estimated Completion Date: 10/15/2003

Disk quota management

Every user of the Sinclair data network is provided with file-server based storage space to use for saving data files. These network storage areas are backed up nightly to ensure critical college resources are protected from destruction. As user storage space needs vary greatly, setting space limitations will always result in some users that use all the available space while many others will not use the space assigned. The solution is to intentionally “oversubscribe”, or allocate more space than is actually available, but constantly monitor to determine when a change must be made to the limits or to the total available space.

This project provides for the installation of software that limits the amount of space that an individual can use. Warnings are given to the user when they approach their limit, and file saving is disabled when the limit is exceeded. Monthly reports will be generated to allow ITS staff to stay ahead of problems that can be caused by file server storage space becoming filled.

Estimated Start Date: In Process

Estimated Completion Date: 10/15/2003

Change Control Process

ITS is in the process of implementing additional procedures to insure that change is introduced into the production systems and network environment in a controlled manner. ITS has a certification lab that is used to set-up new servers or other network devices prior to adding them to the Network Operations Center. The certification lab is also configured with a network rack that contains network equipment and cabling separated from the

production campus network. This allows for testing of new network equipment without interruption or impacting performance of the campus network.

Additional measures are being implemented to ensure that all necessary documentation, testing, and user sign-off is in place prior to adding new hardware or software to the network infrastructure. The Network Operations Center (formerly computer operations) will implement a formal production change process that will be followed by all Systems and Network staff, e-College, and Consultants for all changes to the production systems and network environment.

Estimated Start Date: In Process

Estimated Completion Date: 10/15/2003

Web Portal infrastructure

The development and implementation of the my.Sinclair.edu web portal project was a very successful project that is now moving into the final phase. This final phase will focus on building redundancy and fault tolerance for the critical servers housing the my.Sinclair.edu portal software and the external www.sinclair.edu web site. Completion of this project will result in higher performance and dependability for these critical, high profile services.

Estimated Start Date: In Process

Estimated Completion Date: 10/15/2003

Server Renewal and Replacement (R&R)

ITS maintains a model for the annual renewal and replacement (R&R) of information technology infrastructure components. This model is used to project expenditures of these components over a 5 year period to provide the college's leadership with information to aid in budget planning. Each year, during the annual planning and budgeting cycle, the R&R model is updated with any new information that could change expected expenditures for the coming year, as well as the next 4 years.

Each item identified on the R&R plan is assigned a useful life. This useful life along with the total cost of the equipment, determines the funds that must be set aside each year to replace the equipment when it has reached its end of life. In FY2003-2004, ITS is planning on replacing 6 Windows file servers that have reached the end of their 5 year useful lives. This project will provide for the identification of the new server specifications, acquisition, installation,

and re-provisioning of any other servers that are required.

Estimated Start Date: 8/15/2003

Estimated Completion Date: 12/15/2003

Network Security

Given the state of our society, any type of security, especially network security, is garnering more public attention and action that any other aspect of network services. The reason for this attention is not due to speculation, but to the fact that our nation's infrastructure and the various institutions, businesses, and individuals that contribute to this infrastructure are under attack from a variety of sources using a variety of means.

Sinclair's ITS department is highly committed to ensuring a secure network infrastructure while, at the same time, not infringing on the freedoms we enjoy. This project will enhance the security practices already in place and has specific deliverables to enable Sinclair to respond to future threats as necessary. The specific deliverables are:

- Implementation of an Intrusion Detection System (IDS). The IDS is a specific device designed to detect unauthorized users, or programs, from gaining access to a private LAN from the Internet. The IDS also alerts designated individuals of any attempted access.
- Upgrade and replace existing firewall devices in accordance with the college's R&R program. The current firewall devices have a three-year technology life and are scheduled to be replaced in the FY2003-2004 budget year. Due to advances in technology, the new firewall devices offer enhanced security features and increased throughput. This increased throughput is especially important due to the increased number of services Sinclair offers using the World Wide Web as a delivery medium.
- Work with the Chief Information Security Officer (CISO) to prepare a Network Security Policy as an integral part of the Information Security Plan. A team has already been formed to determine the scope of this effort.

Estimated Start Date: In Process

Estimated Completion Date: 12/31/2003

Systems Management Server

ITS supports 3200 PCs connected to the campus network. These PCs require updates of virus definitions, patches to application programs or the operating system, and, at times, full installations of new or upgraded programs. Maintaining inventory data on all campus PCs and the software that is installed on them is not possible without a management tool to assist in the process.

We have been working with Microsoft Systems Management Server (SMS) over the last two years and have had varying degrees of success. We have used the system successfully over a period of time, but have been unable to count on the system to remain stable. Currently the system is working very well, but we will need to monitor the stability of the system closely to determine whether it needs to be replaced.

Over the next year, we will determine whether SMS or a replacement product will provide the functions that are required for managing the configuration of our PCs. Using this product, we will develop methods to help manage and deploy PC's and servers and provide accurate information regarding the current state of all installed systems.

Estimated Start Date: In Process

Estimated Completion Date: 12/31/2003

Windows XP image

Over the last 18 months, ITS has been installing a new version of the Windows image based on Windows 2000. With Windows 2000's improvements in reliability, manageability, performance, and security, we feel it is time to change our strategy for the deployment of new versions of Windows in the image.

Microsoft will continue releasing new versions of Microsoft Windows on a 18-24 months schedule. With the number of computers at Sinclair, a strategy to automatically move to the next version of Windows for all computers would mean we would consign ourselves to a never-ending process of upgrades. We believe the result of this kind of a strategy would be too much of an imposition on users without a fair return from additional functionality.

Our new strategy for rolling out new versions of Windows in the image will start with our migration to Windows XP, beginning July 1, 2003. At that time administrative and academic workstations/laptops will only be provided with the new Windows XP image when:

- Receiving new hardware
- There is a valid business need
- Re-imaging of a PC is required for any reason

As Microsoft continues to roll out new versions of the Windows operating system, it will be ITS's goal to deploy and maintain the latest, stable OS version in the core image while minimizing the complexity of Sinclair's software environment.

Our intent is to limit the number of different OS versions on campus to two. If at any time this goal becomes unattainable, we will decide whether to temporarily relax this requirement or budget for the additional resources necessary to maintain the two OS goal.

Estimated Start Date: In Process

Estimated Completion Date: 10/15/2003

Network and Systems Management

ITS has an on-going project to implement and maintain a system that will monitor all of the Windows and UNIX servers and network equipment. This system is based in most part on Hewlett-Packard's OpenView application. This software can be programmed to capture all of the messages issued from any server and act on messages according to predefined rules. The work of the administrator of the OpenView system is to determine which messages are critical, warnings, or information only. All messages are flagged according to their established severity and are displayed at the NOC (Network Operations Center) console. The NOC center technicians monitor the messages and provide proactive, preventive, and reactive responses as documented in the NOC manual.

All of the UNIX and Windows servers have a resident OpenView agent which collects data from the servers and sends it to the OpenView console. We will begin the second phase of the OpenView implementation this summer. In this phase, all of the network backbone equipment, routers, and hubs will be monitored by a component of HP OpenView, Network Node Manager. Network Node Manager will constantly monitor various statistics that are gathered within the network devices and create messages that are displayed within OpenView to be categorized according to their priority and handled appropriately.

Using the new tools that ITS is implementing will allow the department to prevent disruptions that might prevent users from being able to do their job. This information will also provide statistics on network traffic and enable ITS

to predict whether or not additional network equipment is needed, or if some other change is required to maintain established network response time expectations. Figure 4-6 shows a sample HP OpenView screen, which can be accessed by the appropriate ITS personnel from any location.

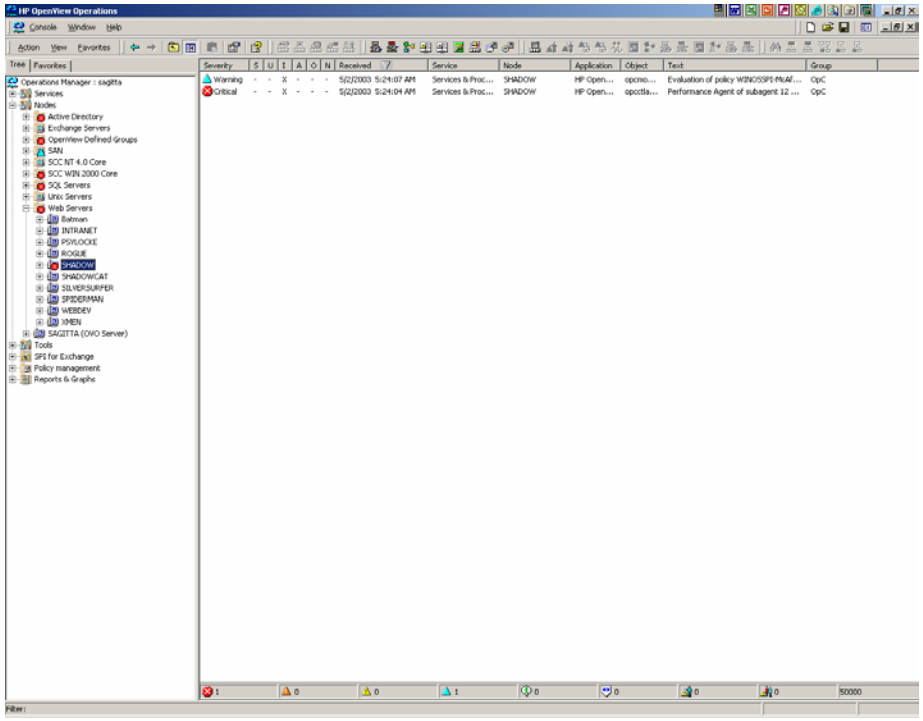


Figure 4-6. Sample HP OpenView Screen.

Estimated Start Date: In Process

Estimated Completion Date: 12/31/2003

Office 2000 SP3 Upgrade

Microsoft Office 2000 is the standard office automation application installed at Sinclair. The Office 2000 suite contains Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Microsoft Access, Microsoft Outlook, and Microsoft Internet Explorer. Occasionally Microsoft will release service packs that contain a number of bug fixes and enhancements to the capabilities of the Office programs. There are a number of bug fixes in the latest service pack that will help to reduce several problems that users have had on campus.

This project will update all campus PCs with Office 2000 SP3 (Service Pack 3), the latest Office 2000 patches. The installation process will be executed automatically when users reboot their computer after the update is released. A script will run that will check whether the PC has Office 2000 installed,

determine if Service Pack 3 is installed, and install Service Pack 3 if it is not there. The script will be tested and piloted prior to campus-wide rollout, and ITS will communicate to the campus community when this will take place. This script will only apply to campus PCs using Office 2000 and not any user who is running Windows XP, since the Windows XP image will have Office XP installed rather than Office 2000.

Estimated Start Date: In Process

Estimated Completion Date: 10/15/2003

Compaq Insight Manager

Hewlett-Packard (HP) is the company that manufactures and assembles the servers used in Sinclair's Data Center. HP has developed a proprietary software package called Insight Manager that monitors the various hardware components inside the server.

This project will use HP OpenView, Sinclair's enterprise network monitoring software, to monitor and capture messages from Insight Manager concerning server hardware problems. This integration of HP OpenView and Insight Manager will allow ITS to monitor hardware health and performance from a single console and respond to hardware failures in a timely and effective manner.

Estimated Start Date: In Process

Estimated Completion Date: 10/15/2003

Automatic Call Distribution (ACD) software/upgrade

The Automatic Call Distribution (ACD) system is an add-on to the PBX which routes calls based on predefined rules that are programmed into the system. This project will upgrade the ACD component of the telephone system according to the predefined 5 year useful life of the system. Part of the new ACD system will be a custom reporting module which will allow Sinclair to create its own reports to provide improved information for users of the ACD function, such as the Call Center and Help Desk.

Estimated Start Date: In Process

Estimated Completion Date: 10/31/2003

Library Design Team

The college is in the process of creating plans for the redesign of the 113,000 square foot space of the Learning Resources Center. The plan has not been finalized as yet, but the expectation is that technology will be present throughout the redesigned space. Examples of areas of the plan that could impact ITS are the possible move of Teleport functions to the LRC, the increase in the number of computers available for students, and the plan to provide wireless laptops for checkout at the circulation desk.

ITS is participating on the design team as a technical consultant. This function will provide continuity between technologies that are planned for installation in the new Library and existing technologies that ITS supports. Installation and testing of the wired and wireless communication facilities of the new space will most likely be performed with a combination of existing ITS resources and contractors.

Estimated Start Date: In Process

Estimated Completion Date: 12/31/2003

Windows Scripting Projects

Scripts are software programs written to automate tasks. ITS uses scripts to automate many of the tasks necessary to manage network resources (e.g., user account creation, software deployment, etc.). The intent of this project is to increase the use of scripts to further automate network management tasks thereby freeing up human resources to perform other tasks.

The first phase of this project will be to identify tasks that might be automated. After these tasks are identified, they will be prioritized and development of the scripts will begin. After testing and documentation, the script will be deployed in the production environment. This project may also make use of the Professional Version Control Software (PVCS) implemented by the eCollege group to ensure quality control.

Estimated Start Date: In Process

Estimated Completion Date: 12/31/2003

Web Based Sabre Project

ITS will be upgrading the Travel and Tourism lab located in Building 13 during the month of June. Currently this lab is only available to Travel and

Tourism via the proprietary network connectivity required by the Sabre system that is utilized for reservations training. The Sabre system lab is currently connected via dial-up communication and requires restricted access to the lab, but Sabre Systems has released a new web based application, which will allow Internet access for the Travel and Tourism class.

The PCs in this lab will be replaced with new HP/Compaq P4 2.4 GHz machines, imaged with the standard academic lab image and connected to the Sinclair network. The Travel and Tourism classes will access the Sabre System via the Sinclair Internet connection, which eliminates the current security requirements. Making this lab more standard will also allow access by other disciplines on campus. This is a win-win for Travel and Tourism and other disciplines, providing a new networked lab and greater use for the students of the college.

Estimated Start Date: In Process

Estimated Completion Date: 8/31/2003

Telephone directory update

Sinclair currently has multiple databases where telephone directory information is stored: Phone System, Colleague, Active Directory (Microsoft Windows' user database), and Magic Total Service Desk (Help Desk application). Although there are some areas of integration between these systems, for the most part, these databases are independent of each other. Therefore, if a change is made in one database not all of the databases are correspondingly updated.

Change information is currently submitted by accessing the Intranet Campus Phone Directory and filling out a "Request for Information Change Form". Upon submission the form is sent to Human Resources, the Voice Telecommunication Administrator, and the Phone Directory Administrator. Each person must access the database he/she manages and make the necessary changes.

The intent of this project is to change the telephone directory database design by creating a process to submit and handle all changes in one area so all databases are synchronized. The objective is to construct the most efficient process for the maintenance of directory information.

Estimated Start Date: In Process

Estimated Completion Date: 9/30/2003

Investigating improvements in payphone services

Payphone usage is decreasing rapidly as more and more individuals are purchasing cell hones. Because of shrinking revenues, the cost of a pay phone call is 50 cents, versus the 25 cents it was three months ago. Our pay phone vendor has informed us that phones which do not meet a certain revenue level/day will have to be removed, or we will be assessed a penalty of $ 50.00 per phone/month. To avoid the cost of maintaining underutilized units, we have already eliminated many pay phones.

We believe that payphones or some alternative are necessary to provide as a service to our customers as a reliable, affordable way of ensuring the safety of visitors and students. Further, not everyone owns a cell phone, or someone's cell phone may not work in a "dead zone." We are exploring possible alternatives in order to find a solution that is best for the potential user and the college.

Estimated Start Date: In Process

Estimated Completion Date: 8/15/2003

Intrusion Detection System

The deployment of an Intrusion Detection System (IDS), previously described within the Network Security project, provides another layer of security to Sinclair's network system. This appliance is deployed in front of the firewall and can detect suspicious network activity, prevent unauthorized access, and assess the damage if unauthorized access should occur.

The IDS uses updateable programs called "signatures" to detect network attacks and misuse. The signature is the pattern of network traffic that can be associated with a particular type of documented attack. The manufacturer of the IDS gathers these attack patterns from actual attacks and creates the signatures that are provided in regular updates, similar to the way antivirus programs on workstations and servers are updated.

This project not only involves the installation, configuration and testing of the IDS, but also the development of a process whereby the IDS reports are monitored and the software updated. In addition, the documentation will address the means by which responses to attacks or misuse of Sinclair's network will be handled and will become a part of the comprehensive Information Security Plan under development.

Estimated Start Date: In Process

Estimated Completion Date: 10/31/2003

Maximo

Maximo is a software application used by Facilities Management that allows Sinclair faculty or staff to enter work requests to report equipment or facility problems and check the status of work requests. Facilities Management also uses Maximo to assign, view and track work requests, run reports, search for and order items or services, check the status of an order, and complete the order process.

Facilities Management has requested that ITS upgrade the Maximo application to the latest version of the software. The new features of Maximo include electronic signature and audit capability, performance enhancement for Maximo Project Managers, and additional standard reports for inventory management.

Estimated Start Date: In Process

Estimated Completion Date: 9/30/2003

Windows Server 2003

Microsoft's newest Windows server operating system (OS) is Windows Server 2003. By all accounts, this OS in not a major rewrite like Windows 2000 server was (compared to NT 4.0), but it is still significant. As Microsoft's server software evolves, so does its complexity, and the need for thorough testing before deploying in a production environment.

A migration plan for this new OS will be developed to provide a process whereby servers and applications will be moved to Windows Server 2003. This plan will also include guidelines for testing the new OS with the various software applications deployed on Sinclair's servers.

Estimated Start Date: In Process

Estimated Completion Date: 12/31/2003

Streaming Media

This project involves determining the feasibility of using streaming media technologies at Sinclair. Streaming media technology is a system of infrastructure, servers, and software whereby audio and video content is created, stored, and published for user access. The files are pulled from the server in a continuous stream while they are viewed or played, rather than being downloaded in their entirety.

A cross-functional team of individuals has already been assembled to explore this technology with the following goals:

- Define streaming media technology and its potential uses at Sinclair;
- Document examples of how the technology can promote student learning;
- Document a generic process to show how streaming media content is developed;
- Evaluate the various streaming media technologies available;
- Develop a pilot using one or two of the technologies identified;
- Develop testing criteria to be used in the pilot; and
- Determine a cost of implementation.

The results of this project will be delivered to the Provost Workgroup for further direction and actions.

Estimated Start Date: In Process

Estimated Completion Date: 12/31/2003

Consulting Services

ITS is continually providing opportunities for the department's staff to improve the technical expertise required for the implementation and support of new technologies. However, the ability of technical staff to provide guidance to its customers in the review of alternatives for addressing their technology needs is an area that we need to develop. In addition, we need to develop project management skills for ensuring that projects are properly scoped and that completion dates for the implementation of systems or processes meet the customer's expectations.

Estimated Start Date: In Process

Estimated Completion Date: 12/31/2003

Voice-over-IP (VOIP) cost/benefit analysis

In most organizations, voice and data telecommunications are accomplished using separate infrastructures, and each is supported by individuals that specialize in one of the areas. Convergence in voice and data telecommunications is starting to occur. In fact, voice telecommunications are being delivered using standard technologies developed in the data networking environment. Voice-over-IP (VOIP) or IP Telephony is a technology that allows voice traffic to be passed over a data network using

TCP/IP, the open standard for transmitting data over the Internet, and over most organizations' internal data networks.

This project will investigate the current state of IP Telephony and determine whether or not there could be benefits for Sinclair to make plans for a migration to this technology. Items to be considered will include the replacement of current voice telecommunication equipment within its useful life and its ability to support VOIP, the maturity of VOIP for delivering services that are expected by campus users, organizational impacts of using VOIP, and associated costs.

Estimated Start Date: 7/1/2003

Estimated Completion Date: 12/31/2003

Server-side email purging

This project will investigate methods of performing Exchange mailbox purges based on the College record retention policy. The current policy states that email will only be saved 13 months (i.e., every month we should purge one month, only leaving the last 13 months on the system). However, Microsoft Exchange, the email server application does not have this functionality.

ITS will be researching third party tools and methods that are available to accomplish the purging of information contained in the Microsoft Exchange system according to rules that may be established. ITS will provide a summary of third party applications for review and will work with a group of faculty and staff to develop a plan for implementation. The plan will include required functions/features of the system, installation requirements, on-going maintenance needs, and cost.

Estimated Start Date: 7/1/2003

Estimated Completion Date: 12/31/2003

Storage Area Network (SAN) changes

This project involves redesigning Sinclair's Storage Area Network (SAN) for improved reliability and reduction of risk. This will be accomplished by integrating new SAN switches, previously purchased in 2002, into a meshed architecture and the implementation of port zoning on the SAN switches. Port zoning is defined as "the isolation of each port in the switch from other ports in the switch". This port isolation allows devices connected to each switch port to operate independently and without interference from other connected devices.

The proposed SAN changes are necessary to allow for future scalability and increased performance. For instance, the SAN Backup project described earlier depends, in part, on this meshed environment for completion. In addition, these changes will facilitate the introduction of additional or enhanced technology into Sinclair's SAN.

Estimated Start Date: In Process

Estimated Completion Date: 12/31/2003

Upgrade Network Operations Center network equipment

ITS maintains a model for the annual renewal and replacement (R&R) of information technology infrastructure components, which is used to project expenditures over a 5 year period. Each year, during the annual planning and budgeting cycle, the R&R model is updated with any new information that could change expected expenditures for the coming year, as well as the next 4 years.

Each item identified on the R&R plan is assigned a useful life. This useful life along with the total cost of the equipment, determines the funds that must be set aside each year to replace the equipment when it has reached its end of life. In fiscal FY2003-2004 we will be replacing networking equipment in the Network Operations Center, which was present prior to the beginning of the Telecommunication Infrastructure Project, and has reached the end of its 5-year useful life.

These devices utilize an obsolete technology; therefore, this upgrade will allow us to provide 10-fold increases in speed between the network backbone and certain critical servers. Servers that require higher communication speeds will be connected to Network Operations Center network equipment using gigabit Ethernet, and this equipment will connect into the network core via 10 gigabit Ethernet connections.

Estimated Start Date: 8/15/2003

Estimated Completion Date: 12/31/2003

Firewall upgrade

In the FY2003-2004 budget cycle, Sinclair's firewalls will be due for replacement per the R&R Schedule. Many advances have been made in firewall technology in the five years since the current devices were deployed. Sinclair has also made significant advances in its use of network resources in

those five years. The current firewall devices have provided five years of reliable service and have reached the end of their projected useful life. Now is the time to project what our needs will be in the next five years, and replace the current devices with devices that will scale with Sinclair's growing needs.

A portion of this project will involve determining what our needs will be for the next five years and choosing a firewall device that will meet those needs. However, we must also provide for a margin of error due to uncertainty while meeting budget constraints. After a suitable device is chosen, then the configuration, testing and implementation phases can begin.

Estimated Start Date: 8/15/2003

Estimated Completion Date: 12/31/2003

Cell/pager antennae

ITS has experienced intermittent problems with pages, two-way messages and cell phone calls not being received by ITS support staff in certain locations on campus. These lost messages are generally traced back to situations where the employee was working in the basement of a campus building. With the upcoming move of ITS to the basement of Building 13, this issue must be addressed since staff will be constantly communicating from the basement of Building 13 to other staff, who are elsewhere on campus.

There are different options available for boosting or amplifying the signal of cell phone or pager communication. ITS is currently in discussions with their current cell phone/two way radio and pager suppliers to determine the optimal and most cost efficient method of ensuring that all critical messages get through. This project will be completed in conjunction with the move to Building 13.

Estimated Start Date: In Process

Estimated Completion Date7/31/2003

Corporate and Community Service (CCS) support plan

ITS provides support for the computing and networking needs of the Corporate and Community Service (CCS) Division. In the past, this support was limited to two computer classrooms in Building 12. Along with the implementation of a dedicated Internet connection, the technology needs for CCS clients throughout Building 12 have increased significantly. ITS now provides assistance assessing new clients' technology needs, performing

configuration of laptops for seminars, installing wireless network setups, and performing software installations.

The purpose of this project is to develop a plan for providing increased support to the Corporate and Community Services Division that levels the expectations and the cost of support.

Estimated Start Date: In Process

Estimated Completion Date: 9/30/2003

Instant messaging

Instant messaging is a technology that allows real-time communication between individuals over the Internet. AOL Instant Messenger and Microsoft Messenger are two instant messaging products that are available for free download. These programs have become widely used for personal use but are being used for valid business purposes as well.

This project will evaluate the benefits of making use of an instant messaging product at Sinclair as a part of our overall communication toolset. Also, the risks of using non-Sinclair servers for providing the interconnection between users will be evaluated. Finally, costs of different options will be reviewed and a plan developed for whether any action should be taken or if ad-hoc usage should be allowed to continue.

Estimated Start Date: 8/15/2003

Estimated Completion Date: 12/31/2003

License metering

The software that is contained in the standard Windows image is purchased by ITS for all administrative and academic lab PCs. There are many software applications on campus that are utilized for instructional purposes and these must be metered to ensure we are not in violation of using more licenses than purchased. Some of the benefits that can be gained through metering of software licenses include eliminating duplication of software purchases, cost savings that can be gained if more labs use the same licenses, and the ability to utilize more labs for providing access to a particular software application.

ITS will be implementing a software application that has the ability to inventory all software applications in use by networked PCs and provide the ability to monitor how many copies are in use at one time. Using this

information, we can identify areas where we might be able to consolidate purchasing and decrease overall cost to the college.

This project will also address the college's need to provide increased lab utilization and sharing. We will work with coordinators of academic labs to identify software that might be able to be used in other labs, thereby increasing the flexibility of scheduling the classes that require this software. Software metering improves the ability of departments to share labs because the software copies are metered (counted) by the server and not by physically segregating the software by room and department.

Estimated Start Date: 8/15/2003

Estimated Completion Date: 1/31/2004

Crestron replacement of Netlinx

When the multimedia classrooms were installed, they were equipped with Netlinx devices that would permit remote control and monitoring of the multimedia equipment. The programming for Netlinx devices was not completed as part of the original project, but was scheduled to be added this summer. In January of this year, Crestron began negotiations with Sinclair to provide control systems to the multimedia classrooms. As part of this deal, Crestron agreed to upgrade the existing multimedia classrooms with Crestron equipment at no cost, including the programming to provide the remote control and monitoring capability. As a result of this deal, all Sinclair multimedia classrooms will be upgraded with the new equipment and programming, saving the College approximately $85,000.

During July, Crestron will remove the Netlinx devices and existing control panels and replace those devices with Crestron equipment. The new system will allow Sinclair's Media Services and Help Desk staff to monitor system components for preventative maintenance, remote power on/off systems to conserve projector bulb life, sense removal of projectors as a theft prevention measure, and allow our staff to take remote control of a room in the event a faculty member experiences difficulty. The new system will help ensure the proper execution of all equipment.

Estimated Start Date: In Process

Estimated Completion Date: 10/15/2003

Remote access for Heating, Ventilation, and Air Conditioning (HVAC) system

The campus' Heating, Ventilation, and Air Conditioning (HVAC) system is

managed via a software application that is connected to various environmental controls located throughout the campus. This application can be used to monitor, manage, troubleshoot, and resolve problems that occur with the HVAC system. During normal work hours, HVAC personnel are available to use the management system; however, if a situation arises when the campus is closed or outside of normal operating hours there might not be anyone present to use the system.

To address this issue, the HVAC Manager has been using dial-up connectivity to access the system from off-campus. The performance of the system over dial-up is unacceptable, and it has been suggested that using broadband Internet connectivity would be more desirable. This project will investigate methods of providing the HVAC Manager with the ability to manage the HVAC system from off-campus via a secured connection over the Internet.

Estimated Start Date: 10/1/2003

Estimated Completion Date: 12/31/2003

Adding a second drive to servers

ITS attempts to build-in as much redundancy and fault-tolerance as is reasonable when purchasing computing systems. One of the capabilities that has been very beneficial is to equip file servers with two hard drives, rather than one, as the system's boot drive. This allows us to run "disk-mirroring" on the disks, which creates an automatic duplicate on a secondary drive of everything written to the other.

Certain servers have been purchased in the past without mirrored boot drives. This project will add the second drives and implement disk-mirroring capabilities to ensure that failure of a single drive will not result in a server failure. The hard drives have already been purchased and the planning for the installation is being completed at this time.

Estimated Start Date: In Process

Estimated Completion Date: 8/31/2003

Student Services mobile communications

Sinclair offers many off-campus locations for students to attend classes. The Student Services mobile communications project is intended to reach out to future students of Sinclair Community College by bringing technology to locations where it would otherwise not be available. Discussions are presently underway for the Student Services division to lease an RV that is

Equipped with a computer lab. This mobile lab will be used at high school locations as a Plato learning lab.

Plato is a learning software application that will test the student, determine in which academic areas he/she is deficient, determine which set of curriculum the student needs to work through, and then test the student. High school students who have completed the Plato coursework will enter Sinclair Community College and be able to start with college level coursework and not need developmental classes first. This lab may require Internet access and satellite options have been submitted to Student Services for review. ITS will be installing and supporting the PCs and printers in this lab.

Estimated Start Date: In Process

Estimated Completion Date: 8/15/2003

Student Services off campus Plato labs

Sinclair uses many off campus labs at area high schools to conduct evening classes. Implementing Plato labs at some of these locations will allow Sinclair to reach out to future students of the college. Plato is a learning software application that will test the student, determine which academic areas he/she is deficient in, determine which set of curriculum the student needs to work through, and then test the student accordingly. By providing the Plato labs at high school locations, we are helping to identify students who are required to complete developmental classes at Sinclair before taking College level classes.

These students are high-risk college students and often drop out of college. By reaching out with Plato, Sinclair will assist the students in identifying the subjects in which they need remediation and supply that learning, all prior to the student graduating high school and entering College. Sinclair gives back to the community, creates a better student for Sinclair, and ensures success for the student's College years. ITS is providing trickle-down PCs, installing the PCs, and maintaining the labs for this outstanding program.

Estimated Start Date: In Process

Estimated Completion Date: 10/15/2003

Out of School Youth - New labs created

ITS works with the Out of School Youth (OSY) program located at the Job Center to provide support for the installation of computer labs at various locations throughout the community. When new labs are being proposed, ITS staff meets with the staff at the proposed locations, reviews proposed

rooms, and receives input regarding what they are trying to accomplish at their site. Once a plan is created, ITS staff develops the required specifications, provides purchase requisitions, arranges for delivery of equipment and services (e.g., telephone, ISP, etc.), and installs the PCs, printers, and network equipment.

ITS also provides training for employees at new OSY lab locations and develops documentation to assist in supporting the labs. ITS staff is available for questions that may arise at the new labs at later dates, but due to limited resources, on-going support is not provided for the labs. At the time of the planning for any of these labs an agreement is formed to define the support which will be provided by Sinclair and the support that will be provided by other non-college personnel.

ITS works with Out of School Youth on upcoming projects throughout the fiscal year as needed.

Estimated Start Date: In Process

Estimated Completion Date: 12/31/2003

Off-campus remote control

Help Desk off campus problem calls have increased with the support of students and the increasing number of faculty and staff accessing information from home. For Help Desk to be successful in resolving problems quickly and effectively there is a need for off-campus remote control. Remote control can enhance Help Desk productivity and give the analyst full functionality on a workstation to watch, share files or control the screen, keyboard and mouse.

This project will investigate alternatives for providing Help Desk staff with the ability to assist off-campus customers by using remote control software.

Estimated Start Date: 7/1/2003

Estimated Completion Date: 12/31/2003

Part-time employee scheduling

Scheduling can be very time consuming and cumbersome. Part-time employees increase the complexity of the task due to changes in their availability and the turnover during the quarter. Supervisors all over campus spend hours upon hours creating and revising part-time employee schedules manually. Currently ITS is subscribing to an online employee application situations.

called Schedule Source which seems to fit the needs for multiple scheduling situations.

We will continue to pilot test the Schedule Source application and provide information to the campus so other departments can take advantage of the system's capabilities.

Estimated Start Date: In Process

Estimated Completion Date: 10/31/2003

Web Advisor Documentation

As Web Advisor is developed/implemented, technical and end-user documentation must be developed and maintained.

Estimated Start Date: In Process

Estimated Completion Date: 6/30/2004

Documentation repository – applications, systems, and network

Technical structures and processes, user instructions, and policies, procedures, guidelines, and other documentation are essential components to effective and efficient use of Information Technology. Currently documentation is stored in various locations and forms throughout the College and is often difficult or impossible to locate when needed. An Information Technology documentation repository must be developed and maintained to allow rapid retrieval and ensure consistent update of key process documents.

Estimated Start Date: In Process

Estimated Completion Date: 12/31/2003

Learning Technology Support Department

Following are the Major Projects for FY2003-2004 for the Learning Technology Support Department:

Planned Workshop Offerings for FY 2003-2004

The Learning Technology Development Center (LTDC) will continue to coordinate faculty and staff professional development workshops covering popular pedagogical techniques, instructional technology applications, and

office applications. Winter, Spring, and Summer institutes will continue to be offered with full-day and half-day workshops. Friday workshops will be offered during the academic quarters. The workshops planned for Fall will include the Web Portal series and the new multimedia series. The interests and needs of faculty and staff will be monitored and new workshops will be developed as new technology becomes available. The planned workshop events are summarized in Table 4-1.

2003-2004 Workshop Plan	
Workshop Series	**Number Workshops**
Fall Quarter	12
Winter Institute	12
Winter Quarter	8
Spring Institute	24
Spring Quarter	8
Summer Institute	30
FETA	Summer long project-based program with 24 faculty participants

Table 4-1. FY 2003-2004 workshop plan.

Classroom Quality Analysis

At the request of the Provost, the Classroom Quality Team was formed and charged with analyzing the condition of each of Sinclair's classrooms. The team developed classroom-grading criteria, generated a room "grade book" to record the information for each classroom (see sample grade sheet in Figure 4-7), and visited over 250 classrooms during Spring break. The grading criteria include lighting, view, availability of multimedia equipment, aisle space, type of seating, table space, and the condition of walls, floors and furniture. Overall the team was very impressed with the quality of the rooms and resources available to Sinclair students. Many of the problems noted during the classroom tour were quickly corrected by the Facilities Department.

The classroom quality data will be incorporated into the classroom inventory, and the information will be analyzed to determine an overall grade for each classroom based on the room condition and the availability and type of resources in each classroom. The team is currently reviewing and analyzing the data and will issue a report later this summer. A typical technology classroom can be seen in Figure 4-8; a typical general classroom is shown in Figure 4-9.

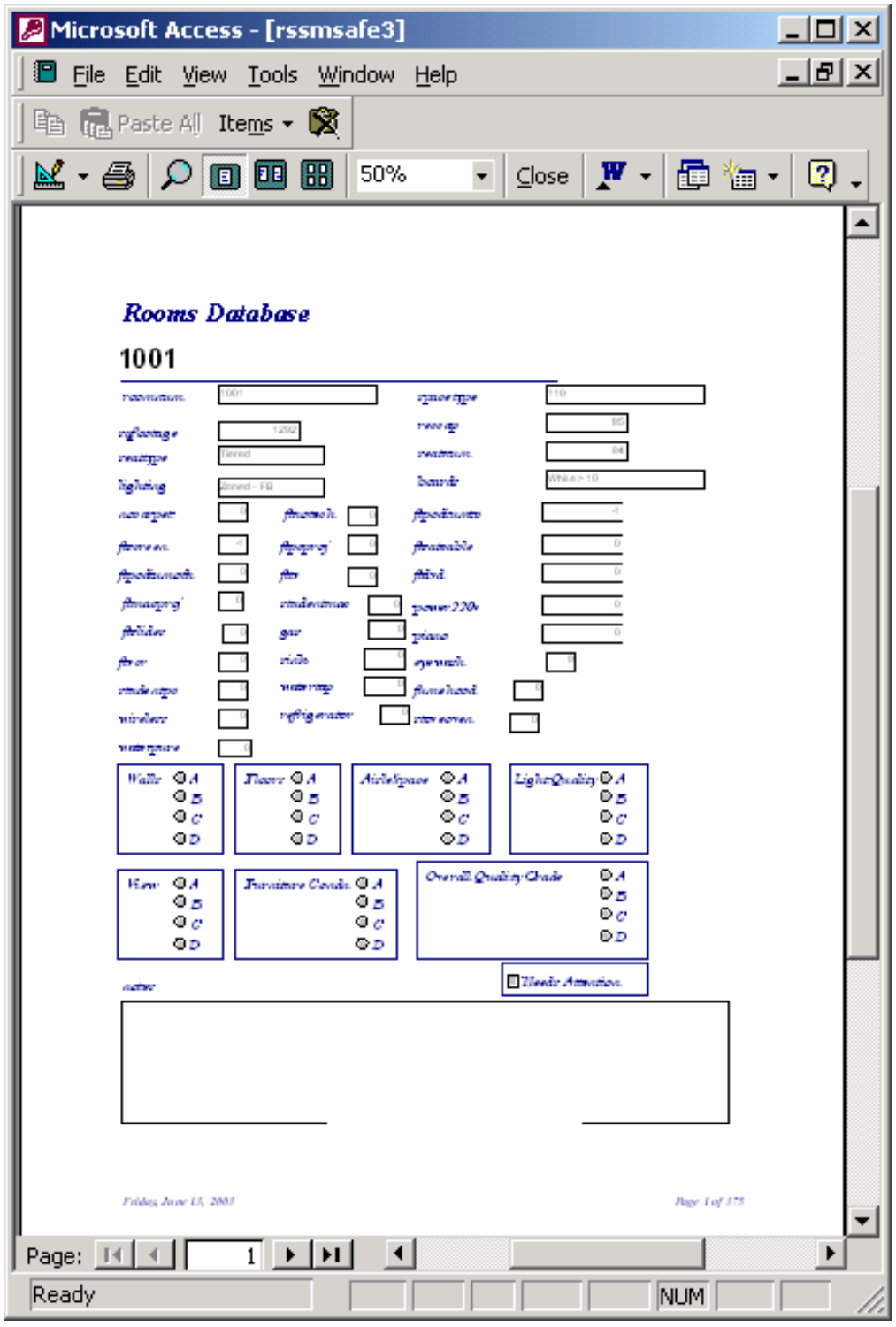


Figure 4-7. Sample Room Grade Sheet.

Figure 4-8. Typical technology classroom.

Figure 4-9. Typical general classroom.

Estimated Start Date: In Process

Estimated Completion Date: 8/31/2003

Summer Institute 2003

The 9th Annual Faculty Summer Institute will be held June 19 – August 28, 2003. The summer institute provides faculty members with an opportunity to upgrade their skills in a relaxed environment during off-contract time. The workshops are also open to professional and support staff on a space available basis. Twenty-three workshops covering technical and classroom skills have been scheduled. Workshop topics include the Web portal series, WebCT series, PowerPoint with Multimedia, Creating a Web Presence, Intermediate Microsoft Producer, Conflict in the Classroom, Team Teaching, Student Services Interventions, Outcomes Assessment, Creating a Positive Learning Environment, Basics of Copyright Legal Issues, Developing Learning Outcomes and Competencies, Seven Habits, and Selecting Teaching Strategies. As of June 13, 2003, registrations have been received for 305 of the 460 available seats. The *PowerPoint with Multimedia* and *Creating a Web Presence* workshops are filled to capacity. The Web Portal series continues to be very popular with 96 of the 100 available seats filled. Additional sections will be added to meet the demand. A copy of the summer institute brochure cover is shown in Figure 4-10. Faculty participating in a Summer 2003 workshop are shown in Figure 4-11.

Figure 4-10. Summer Institute 2003 brochure cover.

Figure 4-11. Summer 2003 faculty workshop.

Estimated Start Date: In Process

Estimated Completion Date: 8/28/2003

Faculty Educational Technology Academy (FETA)

FETA is a summer-long program offered in cooperation with the Staff Development Innovation Committee (SDIC) and Distance Learning. The program provides faculty with the opportunity to develop materials to enhance one of the courses that they will be teaching next year. This year's FETA series offers new and improved versions of the popular 3Ds and 3Ms programs. Both programs were expanded and modified based on the lessons learned from the previous sessions. The 3Ds program is an online course that teaches faculty how to teach online and also provides participants with the opportunity to work through the online course development process with the Distance Learning Web Course Facilitators. The 3Ms participants learn how to develop a multimedia project. They will attend a week long session on the multimedia project development process, video creation and editing, and the tools needed to create a multimedia application. The LTDC and Distance Learning staff will be available throughout the summer to answer questions and assist the participants with their technical questions and needs; experienced faculty will also be available to mentor the participants. Participants will be provided with a high tech tool kit for their use during the project. The toolkits include a notebook computer and software, laser printer, and scanner as shown in Figure 4-12. Additionally, Figure 4-13 shows a workshop session where the equipment is being demonstrated to the participants.

A brochure announcing the program was distributed to all full-time, tenure track faculty in early May. Interested faculty submitted an application outlining their proposed project along with an explanation of how their project would improve learning. Twenty-one faculty were selected to participate in the program – 10 for 3Ms and 11 for 3Ds. After completing the workshops, the faculty participants will develop a project during the summer, and then demonstrate their completed projects to their colleagues at the wrap-up sessions in the Fall.

Figure 4-12. High Tech Tool Kit.

Figure 4-13. High Tech toolkit presentation.

Estimated Start Date: In Process

Estimated Completion Date: 9/12/2003

Blackboard 6 Pilot Project

This summer, the IT Division in collaboration with Distance Learning will conduct a pilot study of the Blackboard 6.0 Course Management System (CMS) to determine if it is a viable alternative to WebCT. Twelve faculty members (two from each academic division) with varying backgrounds have been invited to participate in the study. Participants in the pilot study will develop a course enhancement during the summer, teach a face-to-face class using the enhancement in the fall, then complete an evaluation at the end of the term Faculty participants will receive training in Blackboard 6 (including the content tool), a notebook computer for use during the summer, a stipend for the completion and delivery of a Blackboard 6 course enhancement, and assistance and support from selected LTDC and Distance Learning staff. Figure 4-14 shows a workshop session. The Blackboard pilot courses will not be linked to the portal, students will need a special URL to access the courses; therefore, the pilot will be for course enhancements only.

Preparation activities are underway, including:

- setting up and configuring a special server for this project;
- setting up and configuring notebook computers;
- creating course shells;
- training IT and Distance Learning support staff;
- developing faculty training workshops;
- defining the faculty support process;
- developing student documentation and training materials;
- developing the evaluation process; and
- experimenting with the WebCT to Blackboard course conversion process.

At the end of the fall term, all participants: faculty, students and support staff will evaluate Blackboard for functionality and ease of use. If the evaluations show that Blackboard is a viable alternative to WebCT, a more extensive study involving all constituencies will be conducted. Any decisions about a change in course management systems will not be made without input from all appropriate groups on campus, especially the potential users.

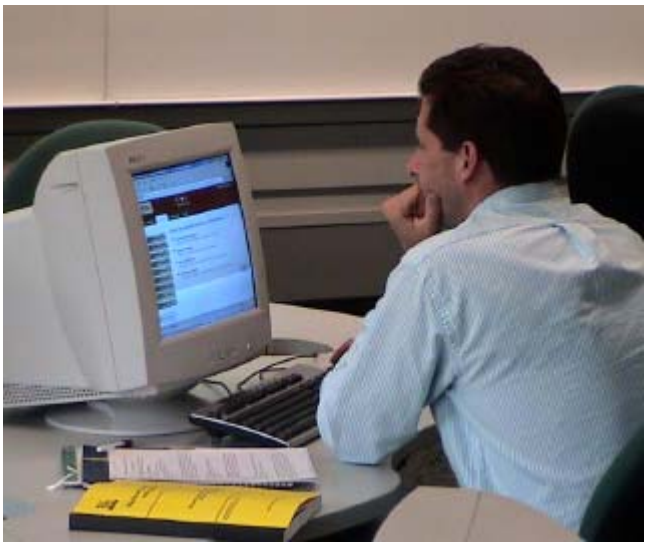


Figure 4-14. Blackboard workshop session.

Estimated Start Date: In Process

Estimated Completion Date: 12/5/2003

Faculty Mentoring Program

The effectiveness of technology in the classroom relies on how successfully faculty members integrate technology with their educational objectives. Several institutions have adopted one-on-one technology mentoring programs to better meet the specific needs of each faculty member. Prior research has shown that one-shot workshops without on-going individual technology support often fail to meet the specific needs of most faculty; instead one-on-one technology mentoring models show promising results on faculty professional development in terms of developing technology integrated curriculum.

A variety of faculty technology mentoring models, used in higher education, have been reviewed. Despite the variety of models, effective programs include common elements. These elements include providing a vision for technology use, individualizing technology support, breaking down hierarchical structure, establishing open dialog and collaborative relationships, and providing mutual benefits for the mentors and those being mentored. Figure 4-15 shows a faculty member being mentored.

During the summer, LTDC will define and design a faculty-to-faculty mentoring program for Sinclair. The pilot implementation will start in the Fall 2003.

Figure 4-15. Faculty working one-on-one.

Estimated Start Date: In Process

Estimated Completion Date: 5/31/2003

Faculty Technology Expo

Faculty interested in integrating technology into their courses will have an opportunity to learn about the services available to them and to see demonstrations of successful projects at the Faculty Technology Expo scheduled during Fall Conference. Summer 2003 FETA and Blackboard pilot program participants will share their experiences with their colleagues. Faculty will have an opportunity to view the completed projects and to learn about the benefits as well as the perils and pitfalls of using technology. LTS staff will host an information booth and be available to answer questions.

Estimated Start Date: In Process

Estimated Completion Date: 9/12/2003

Technology Products Investigation

Software developers continue to release new products that make technology development easier for non-technical faculty. Macromedia has recently released two new products that may be of use to faculty – Contribute and Breeze. Contribute allows the user to update, add, delete, and publish web content in minutes, without knowing or learning HTML. Breeze Presentation fully leverages PowerPoint and the web so faculty of all skill levels can create, deliver and share online presentations with ease. A third tool, Vegas Video by Sonic Foundry enables easy multimedia application development by combining PowerPoint slides, video, and audio. These and other new tools will be investigated for use by faculty. Any tool that appears to have

potential will be piloted by selected faculty members, and then workshops will be developed and offered at the various institutes. Figure 4-16 shows two of the products that will be investigated.

Figure 4-16. Two products that will be investigated.

Estimated Start Date: In Process

Estimated Completion Date: Ongoing

Multimedia Workshop Series

A multimedia workshop series is being developed based on the lessons learned from our experiences with the 3Ms and FETA programs. A series of five workshops will be developed and offered during Fall 2003. The planned workshops include Instructional Design, Creating a Video, Video Editing, Integrating Multimedia into PowerPoint, and Microsoft Producer. The workshops will be offered on consecutive Fridays and will be taught by previous 3Ms and FETA participants. Faculty who complete the workshops will be encouraged to propose a project and apply for one-on-one mentoring assistance.

Estimated Start Date: In Process

Estimated Completion Date: 11/22/2003

Learning Objects Investigation

A major change may be coming in the way educational materials are designed, developed, and delivered. An instructional technology called “learning objects” currently leads other candidates for the position of technology of choice in the next generation of instructional design, development, and delivery, due to its potential for reusability, generatively,

adaptability, and scalability. Learning objects are elements of a new type of computer-based instruction grounded in the object-oriented paradigm of computer science. Object-orientation highly values the creation of components (called "objects") that can be reused in multiple contexts. This is the fundamental idea behind learning objects: instructional designers can build small (relative to the size of an entire course) instructional components that can be reused a number of times in different learning contexts.

Several standardization initiatives are underway to facilitate the widespread adoption of the learning objects approach. The Learning Technology Standards Committee (LTSC) of the Institute of Electrical and Electronics Engineers (IEEE) was formed in 1996 to develop and promote instructional technology standards. A similar project called the Alliance of Remote Instructional Authoring and Distribution Networks for Europe (ARIADNE) had already started with the financial support of the European Union Commission. Another venture called the Instructional Management Systems (IMS) Project was just beginning in the United States, with funding from Educause. Each of these and other organizations began developing technical standards to support the broad deployment of learning objects. The Advanced Distributed Learning (ADL) Shareable Content Object Reference Model (SCORM) is attempting to knit together the interests of these groups. The resultant reference model will coordinate emerging technologies with commercial and/or public implementations. The SCORM timeline is shown in Figure 4-17. The standardization initiatives and current learning objects projects will be reviewed by LTDC staff in order to develop a direction for Sinclair.

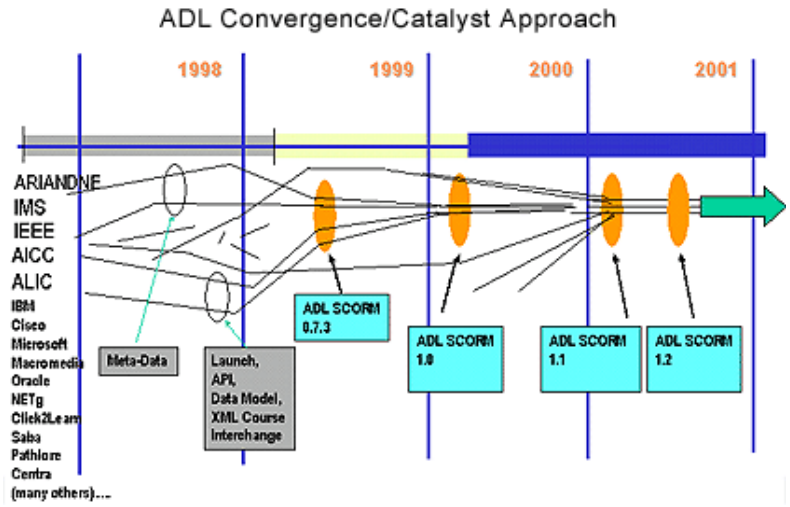


Figure 4-17. SCORM timeline.

Estimated Start Date: 9/1/2003

Estimated Completion Date: 12/31/2004

Media Assets Repository

The LTDC, Learning Technology Productions (LTP), and Distance Learning departments have taken many pictures and have developed many graphics, animations, and backgrounds for the numerous courses and presentations that they have developed. Many of these materials could be reused by faculty and staff if they had easy access to the materials. Last year, a team from the three departments investigated tools for media asset sharing and selected Cumulus as the product that best met their needs. Cumulus provides both client/server and Web interfaces to simplify the storage and retrieval of media assets. This year, the team will learn to use Cumulus, catalog and store the assets in the repository, and make it available to the campus community via the Web interface.

Estimated Start Date: In Process

Estimated Completion Date: 9/30/2004

Departmental Reorganization

In the recent Information Technology Division reorganization, LTDC acquired two new staff members and responsibility for IT Training. The new staff members will provide valuable expertise to LTDC in the areas of instructional design, project planning and management, and training. The LTDC staff will provide additional support to the IT Training staff in the areas of workshop planning, scheduling, and publicity. Some reorganization will be needed in LTDC to eliminate duplicate services and to optimize the skills of each staff member.

Estimated Start Date: In Process

Estimated Completion Date: 12/31/2003

Part-Time Faculty Orientation CD

In conjunction with the Part-Time Faculty committee, LTP is developing an orientation CD for new part-time faculty. The CD will be developed as a web site on CD utilizing HTML. If not for high bandwidth material, such as video, the content would most likely be provided online. By developing the CD in HTML, when it is viable to deliver the high bandwidth material online, we will be able to roll the entire project directly to the Web. The CD will contain an orientation video, instructional video clips, access to handbooks and forms,

and descriptions and links to various support services. The webpage design for the CD is illustrated in Figure 4-18.

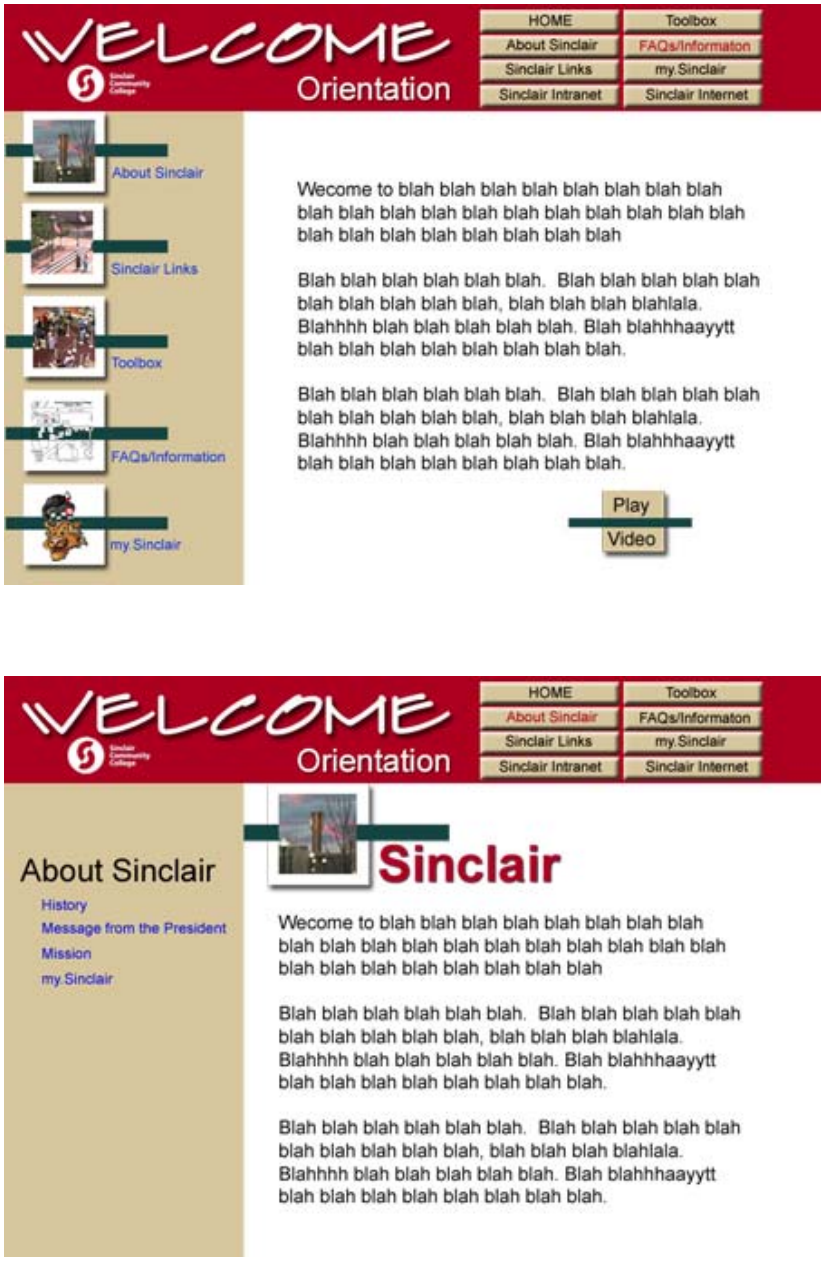


Figure 4-18. Part-time faculty CD template design.

Estimated Start Date: In Process

Estimated Completion Date: 9/30/2003

Nursing Skills Multimedia CD

As part of a Learning Challenge Grant received by Roxann Delaet and Marsha Wamsley, LTP will develop a learner-centered CD that provides an understanding of, and demonstrations of, sterile techniques, nutrition, elimination, oxygenation, circulation, and medication skills. Learners will use the CD as an introduction to, and as a review of, the specific skills required in the noted areas. The webpage design for the CD is shown in Figure 4-19.

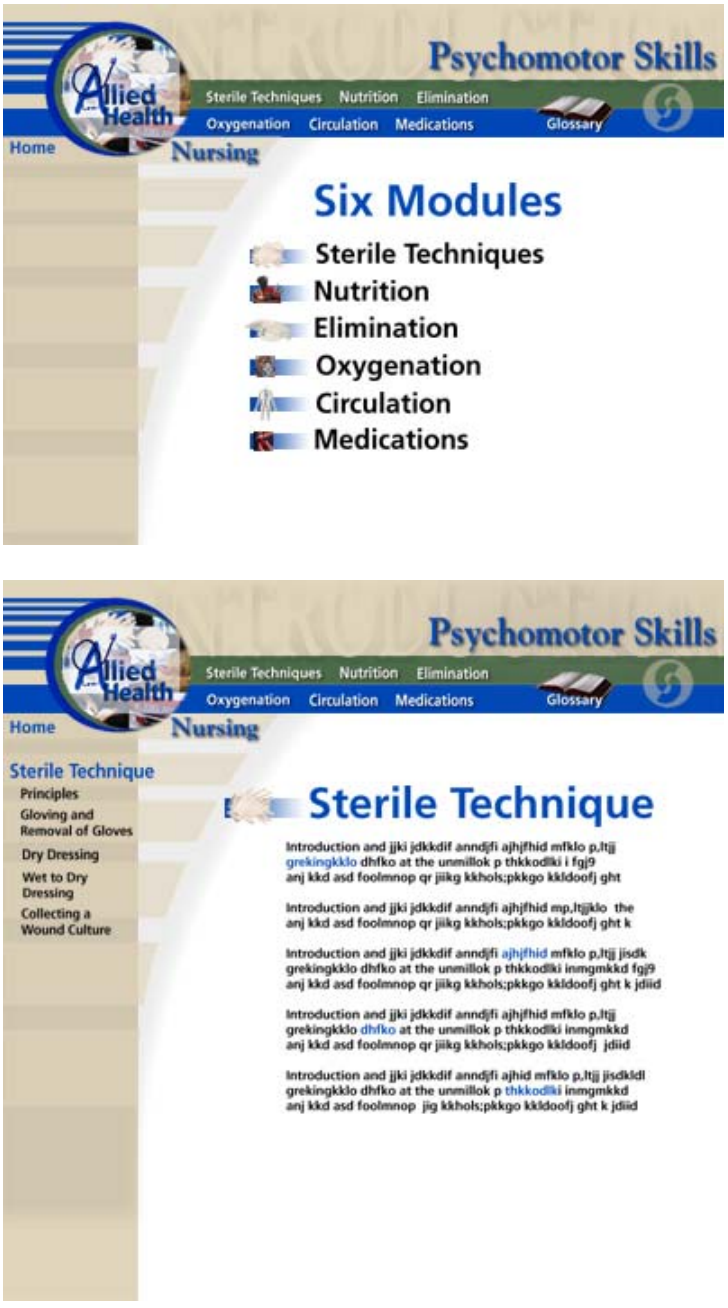


Figure 4-19. Nursing skills CD webpage design.

Estimated Start Date: In Process

Estimated Completion Date: 12/31/2003

Nursing Service Learning Video

Service learning has been a component of Nursing 230, Directed Nursing Practice since the development of the new Nursing curriculum in 1998. All students in this course participate in forty hours of community-based experiences. Of these students, approximately thirty percent are engaged in service-learning projects. The students who have participated in the service learning program have had enriched experiences and have demonstrated deeper understanding of the populations of the community they service. In reflection, students have expressed a desire to continue to perform service, and some have gone on to volunteer at their community agency after graduation. The goal is to have all students in Nursing 230 participate in service learning within their community experience. To facilitate this process additional service learning opportunities need to be developed within community agencies.

Service Learning and LTP will develop a video that captures student experiences, reflection, community partner responses, and faculty critique. The video will be an invaluable tool in recruiting additional service learning opportunities. The video will be shown to prospective service-learning partners to demonstrate the scope of our student activities. A student interview is shown in Figure 4-20.

Figure 4-20. Service learning student interview.

Estimated Start Date: 6/1/2003

Estimated Completion Date: 10/31/2003

DVD Production

In line with the Learning College Principle of creating and offering as many options for learning as possible and the Sinclair strategic initiative that distance learning will be a catalyst for the adoption of learner-centered approaches to instruction, LTP will prepare and provide to distance learning a previously produced video course on DVD. DVD delivery of video courses will provide learners and faculty with random access capability, the ability to provide extra video and print material, and learner controlled interactivity.

Estimated Start Date: In Process

Estimated Completion Date: 2/28/2004

Streaming Media Research and Development

The Streaming Media Team has been assembled to provide research, analysis, and recommendations on how Sinclair can benefit from and engage in the utilization of streaming video. The team has selected three streaming methods for further investigation: Real Media, Windows Media, and Quick Time. Screen shots of each file type can be seen in Figure 4-21. Sample files have been created in each of the selected formats and are being evaluated for speed of download and quality. Beginning in September 2003, projects will be requested and selected in order to test streaming video and its potential for Sinclair learners.

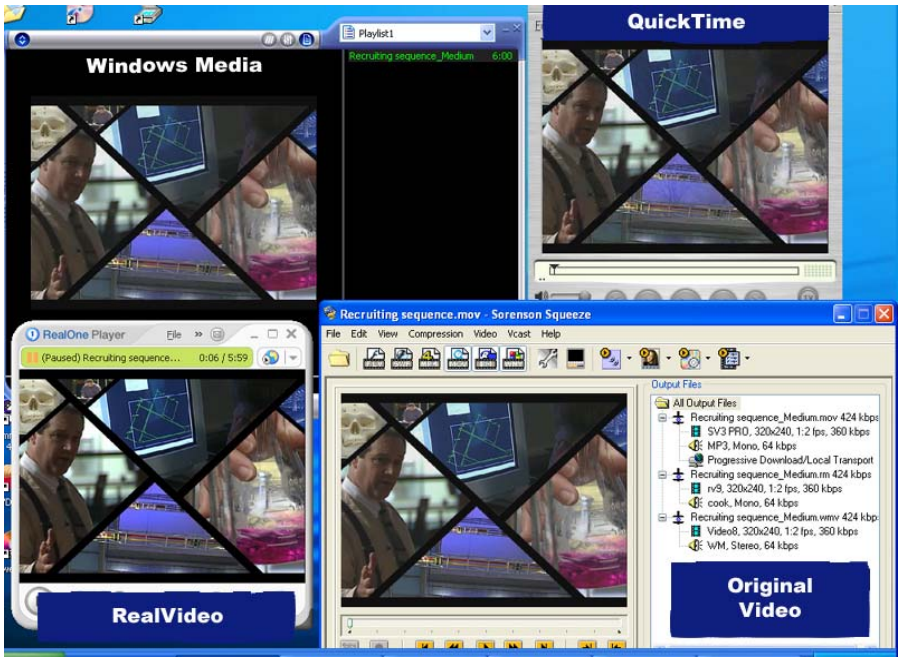


Figure 4-21. Streaming Media Methods.

Estimated Start Date: In Process

Estimated Completion Date: 5/31/2004

Marketing I Video / DVD Course

Marketing I is an introductory marketing course that covers the economic and social impact of the marketing concept, stressing a managerial approach. The course is a high enrollment video course. This project replaces a previously produced version of Marketing I taped at the joint vocational school in 1996.

Production elements planned for this course include field interviews with professionals in the marketing field, studio production on a specially designed set (see Figure 4-22) that reflects marketing principles, graphics and animation that can be used in the video course, a traditional course, and DVD production. The course will be designed for either videotape or DVD delivery.

Figure 4-22. TV studio set for Marketing 201 video course.

Estimated Start Date: In Process

Estimated Completion Date: 12/31/2003

Replacement of Forum Projectors

Data projectors in the Forum (see Figure 4-23) are aging and frequently go out of alignment. Bulbs for these projectors are very expensive, and the maintenance costs for installing bulbs and frequently realigning the projectors is a high ongoing expense. Media Services has requested $75,000 in FY 2003-04 to purchase and install new projectors.

Preliminary investigation indicates that new projectors and installation will cost $20-25,000 each. New projectors are more easily maintained, bulbs cost less, last longer, and may be replaced by our own staff. An estimated cost savings of approximately $7,300 per year for bulbs and maintenance with the new projectors is expected.

Figure 4-23. Existing Forum projectors.

Estimated Start Date: 7/1/2003

Estimated Completion Date: 1/31/2004

Media Control Device Upgrade for Multimedia Classrooms

The multimedia classrooms were originally equipped with AMX media control devices. A decision was made in February 2003 to replace the AMX equipment with Crestron systems. During the summer of 2003, the 63 original multimedia classrooms will be upgraded to Crestron control systems. The new equipment is shown in Figure 4-24. Media Services will work with the vendors to schedule rooms for upgrading, monitor the progress of the project, and verify the correct operation of each room.

Included in the equipment being upgraded will be the remote control touch panel, the control processor, and a wiring harness. The images seen by instructors on the control panel have been custom developed for Sinclair.

Figure 4-24. Podium equipment (left), Crestron control unit (center), and sample touch panel screen (right).

Estimated Start Date: 7/1/2003

Estimated Completion Date: 9/5/2003

Building 12 Sound and Control Equipment Upgrade Planning

The lighting control systems in Building 12 are the original systems from the time of the construction of the building. These systems provide the control for the various light sources and provide varied lighting levels in the two auditoriums and the Great Hall. These systems, including the programmable dimmers, are controlled by a computerized system. Those systems are showing signs of age. In particular, the lighting control systems in room 12-150 are failing and some components are already inoperative. These systems are so old that replacement parts can no longer be obtained, and the vendors have been unable to repair them. Many of the lighting systems in the meeting rooms are also beginning to operate inconsistently and are in need of replacement.

The audio systems in the two auditoriums and the Great Hall are also showing signs of age. These systems, including the amplifiers and speakers, are required to support a variety of events including vocal performances, speech, musical groups, and background music. It is becoming increasingly difficult to adjust the systems for these various requirements.

Figure 4-25 shows the existing lighting and sound control systems. Vendors have provided cost estimates for replacement of the lighting control systems. Funding was requested in the FY 2003-04 budget to evaluate the audio systems and replace the lighting control systems. Media services will work with the vendors to define the replacement systems and ensure correct installation and functionality.

Figure 4-25. Building 12 lighting (left) and sound (right) control equipment.

Estimated Start Date: In Process

Estimated Completion Date: 9/1/2004

Building 14 Media Control System Replacement Planning

The Building 14 media control system (shown in Figure 4-26) provides connectivity from the interactive classrooms to remote sites for the delivery of two-way videoconferencing classes. The current system is over five years old and must be replaced with current technology. In addition, the multimedia equipment in the Building 14 classrooms is different from the multimedia rooms throughout the campus, causing faculty to struggle with major media operational differences, which in turn affects student learning. Consistency of media control systems throughout the college is necessary so that instructors can use all multimedia rooms effectively.

As these systems age, they require more maintenance and the possibility of failure increases. Since we interface every day, via videoconferencing, with other schools throughout Ohio, the United States, and England, a failure of our systems has the potential to be a public embarrassment to the College.

During FY 2003-2004, new control systems will be investigated and a new system will be planned and requested in the FY 2004-2005 budget. The new system will improve the learning environment by:

- Reducing downtime for maintenance;

- Reducing maintenance spending;
- Reducing classroom maintenance time;
- Increasing availability of classrooms; and
- Increasing faculty and student satisfaction.

Figure 4-26. Cyberservice Administrator monitoring an interactive class.

Estimated Start Date: In Process

Estimated Completion Date: February 1, 2004

Campus Wide Information System

Student Services and several other departments have expressed an interest in developing a system to display messages and other information pertinent to students on monitors located in various parts of the campus. The intent was to provide electronic posters with immediate availability of information and reduce the use of conventional paper-based posters.

Media Services is investigating hardware and software systems needed to provide a campus-wide messaging and signage via the network and cable TV system. This system would allow messaging, event announcements, advertising, news bulletins, etc, to the desktop via the Intranet, to TVs connected to the campus cable system, and to employee and student home PCs via the Internet. Departments would be able to generate their own

information to the system and post it through an approval process.

Estimated Start Date: In Process

Estimated Completion Date: 1/31/2004

Media Services Equipment Scheduling with Resource 25

The college will implement a new classroom scheduling system, Resource 25 and Schedule 25 during Summer 2003. This software will provide for the scheduling of rooms according to the instructional needs of the faculty. It will also provide an online method for instructors and others to request the delivery of media equipment from Media Services to those rooms that are not already equipped. Further, this software will be used by Corporate and Community Services to schedule events in Building 12.

In order to take advantage of this scheduling software, Media Services personnel will be trained to access the software, retrieve scheduling information, reply to requests, and update the system as necessary. The media equipment management component is shown in Figure 4-27.

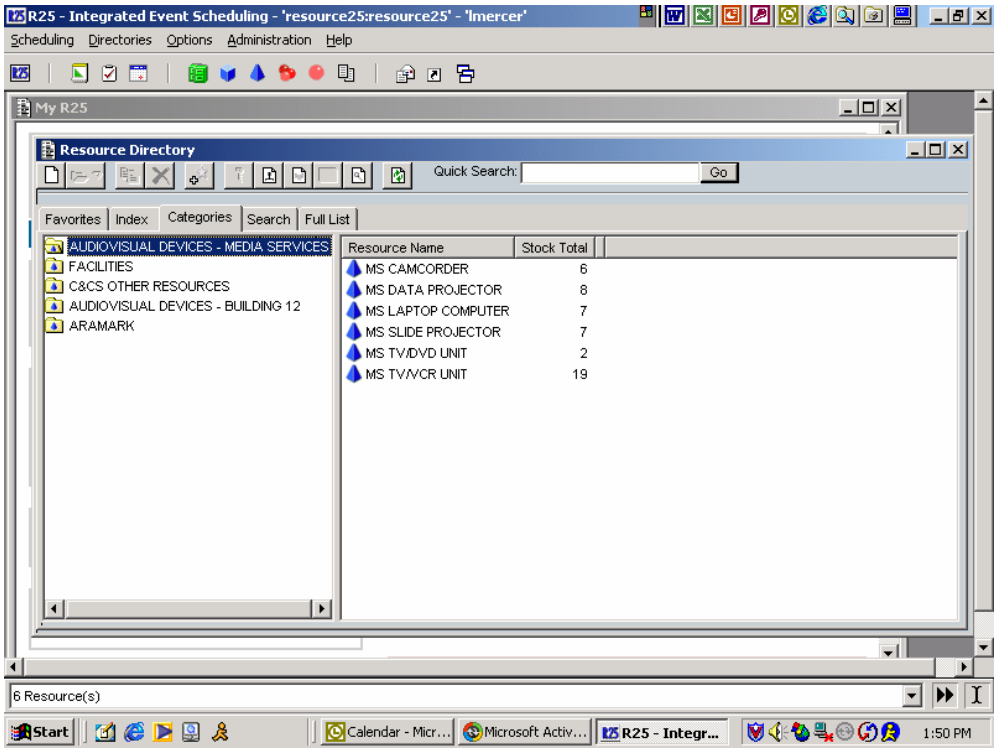


Figure 4-27. Resource 25 media management utility.

Estimated Start Date: In Process

Estimated Completion Date: 9/30/2003

Remote Equipment Monitoring

RoomView software (see Figure 4-28) will be installed in conjunction with the Crestron installations during Summer 2003. RoomView will permit Media Services to monitor equipment usage and bulb life in the multimedia classrooms. It will also permit Media Services to access the control systems in individual classrooms remotely via the Internet. This will permit first level diagnostics to be done without actually visiting the classroom.

Media Services staff will be trained to access RoomView to retrieve data from the system and to access individual room controls via the internet, control the room media equipment remotely, and provide first-level diagnostic support in response to Help Desk calls.

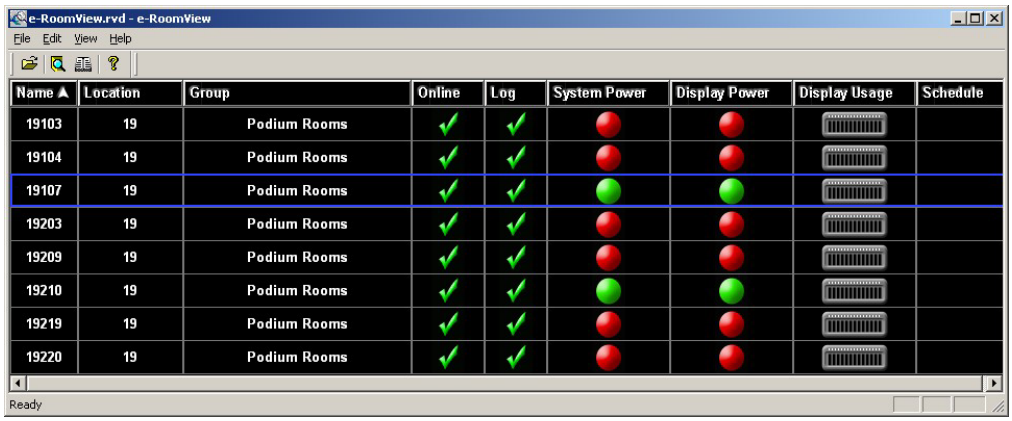


Figure 4-28. Room View Status Monitoring Screen.

Estimated Start Date: 7/1/2003

Estimated Completion Date: 9/30/2003

Colleague Report Generation Tool (Safari) Training

Report generation by end users within Colleague is complex, cumbersome, and requires significant understanding of the database structure and the Uniquery syntax. To facilitate user's ad-hoc reporting capabilities while maintaining data confidentiality and integrity, we have been exploring appropriate reporting tool options. We have decided to revisit the "Safari"

tool based on improvements made to the software and to the structure of Colleague. When the appropriate tool is ultimately decided, we will facilitate end-user training. This will entail identifying area/department "experts" to receive generic training and assisting them to customize training to meet specific needs.

Estimated Start Date: 1/1/2004

Estimated Completion Date: 6/30/2004

Web Advisor Training

As Web Advisor is implemented, we will focus on identifying training requirements and solutions for students, staff, and faculty.

Estimated Start Date: 7/1/2003

Estimated Completion Date: 6/30/2004

Browser-delivered tutorials/user manuals for administrative applications

In many cases an end user needs to perform an obscure function or one they infrequently use in an MS Office Application. Development of modular end-user tutorials and/or publication of training reference manuals for specific tasks or functions within MS Office applications could serve as a self-directed guide to users and reduce the need for help desk assistance as well as the demand for formal MS Office training sessions.

Estimated Start Date: In Process

Estimated Completion Date: 11/30/2003

MS Office Training MOS Certification

Beginning with the transition to Microsoft Office XP, we revised the training curriculum to reflect the requirements for passing the Microsoft Office Specialist (formerly Microsoft Office User Specialist) certification exams for each application. This change ensures we are training Sinclair employees to meet the most current application requirements. A secondary benefit is that employees who successfully complete these workshops are prepared to challenge the certification exams. The transition was completed for the Word and PowerPoint sessions in FY 2002-2003, Excel and Access transition is

scheduled for FY 2003-2004. Sessions under development include:

- MS Outlook 2002 Core
- MS Outlook 2002 Expert
- MS Excel 2002 Core
- MS Excel 2002 Expert
- MS Access 2002 Core

Estimated Start Date: In Process

Estimated Completion Date: 11/30/2003

Knowledge Management Exploration

The purpose of this project is to explore requirements and feasibility of knowledge management applications and processes within the Information Technology Division.

Estimated Start Date: In Process

Estimated Completion Date: 2/28/2004

Security Office

Following are the Major Projects for FY2003-2004 for the Security Office:

Test vs. Production Procedures & Documentation

The need exists to develop and document specific procedures for updating/patching server information, operating systems, applications, custom code, etc. We need to delineate specific types of changes that must be accomplished on the test system before being applied to the production (live) system, and the process steps required to move entities from test to production. Currently exploring numerous options including use of PVCS software and/or modification of commercial test plan.

Estimated Start Date: In Process

Estimated Completion Date: 8/31/2003

Data Standards Manual Revision

The Data Standards Manual is the vehicle Sinclair has chosen to make users aware of their responsibility to keep student data confidential. The manual

must be revised in order to update specific areas and to clarify responsibilities.

Estimated Start Date: In Process

Estimated Completion Date: 8/31/2003

Explore Feasibility/Requirements to Implement Field Level Security within Colleague.

Implementation of field level security would provide a more granular control over individual access to sensitive information within the Colleague system. Field level security would also reduce the requirements for custom coded screens and processes currently developed or requested solely to restrict users' access to data on a standard Colleague screen.

Estimated Start Date: 6/1/2003

Estimated Completion Date: 10/31/2003

Develop a Comprehensive Formal Security Program

The objectives of the Sinclair Information Security Program are:

- To provide an efficient and effective information security program to minimize the risks to Sinclair Community College technology investments and to the information contained within the college's information technology resources;
- To protect the networking, computing, and communications infrastructure;
- To assist in promoting safe and uninterrupted use of the college's technological resources in an equitable manner for all Sinclair stakeholders; and
- To strike a balance between ensuring that the college has the most up-to-date security solutions while consistently taking into account resource constraints, the requirements of academic freedom, intellectual property rights, and other issues related to the college's student-centered higher education mission.

Some specific components of the Information Security Program include:

- Developing a documented tactical plan to meet security goals;
- Developing, maintaining, implementing, and evaluating information security policies, practices, standards and procedures;

- Developing and executing effective security awareness programs to educate the user community on the ethical use of information technology resources;
- Defining and documenting levels of violations of security and required responses;
- Facilitating development of a Computer Security Incident Response Team (CSIRT), including development and documentation of proper responses, responsibilities, and roles;
- Developing internal audit and security testing procedures and processes; and
- Identifying, formulating, and promulgating campus wide "best practices" and standards for security and access control to data and information systems.

Estimated Start Date: 7/1/2003

Estimated Completion Date: 6/30/2004

Special Projects Office

The Major Project for the Special Projects office for FY2003-2004 is the Room Scheduling/Space Management Project (RSSM).

Room Scheduling/Space Management Project (RSSM)

The primary objectives of the Room Scheduling/Space Management Project (RSSM) are:

- To ensure that instructional facilities are best leveraged to meet credit instruction requirements;
- To provide sufficient classroom facilities to meet other campus needs;
- To achieve campus daytime utilization standards for each instructional space;
- To support the pedagogies of the disciplines on campus by matching specific academic requirements with appropriate classroom facilities and resources;
- To provide departments with equitable access to instructional spaces and resources;
- To improve institutional effectiveness and efficiency related to the scheduling of spaces and resources; and
- To provide reliable and accurate data and analysis related to instructional facilities.

This project includes the development and implementation of an integrated scheduling system technical infrastructure; the creation of an accurate central database of information pertaining to Sinclair's instructional spaces and resources; and the development and implementation of processes, policies and procedures related to room and resource scheduling.
Costs savings related to this project will be realized in terms of improved institutional efficiencies in the following areas:

- **Enhanced decision support** – We will have better data on room and resource utilization to support planning activities related to facilities, instructional resources and course scheduling.

- **Better utilization of institutional resources** – The new system, coupled with new processes and procedures, will permit better leveraging of institutional investments in space and instructional resources, as well as the development of instructional materials. Better utilization should also result in cost avoidance related to the development of unnecessary space and instructional resources.

- **Increased faculty and staff efficiency and satisfaction** – The new system will provide staff with the requisite toolsets to effectively manage institutional space and resources; provide integration of facility and resource requests; decrease the manual and multiple processes involved in providing instructional space and resources; and increase overall faculty satisfaction with the services, space and resources they receive.

- **Improvements in student satisfaction and image** – The new system will decrease the number of room changes students experience at the beginning of each quarter, ensure that the resources and facilities match the specific course section requirements, and allow us to present a more professional, learner-friendly environment.

- **Potential for increased access and revenue** – Enhanced room and resource scheduling capabilities, coupled with course scheduling improvements, will allow us to better accommodate increased enrollments.

Accomplishments to date include the development of key components of the Resource 25 technical infrastructure; the physical inventorying of instructional facilities and their resources; the development of a policy draft dealing with a myriad of scheduling related issues; training of key scheduling personnel; and exploration of issues and initiatives related to this project.

Anticipated positive outcomes in place for Fall 2003 include:

- An accurate central database of instructional spaces and their resources, as well as all scheduled activities in these rooms;
- The ability for R&SR to schedule classes into approximately 40 additional instructional spaces that were previously controlled by individual departments;
- Accurate and timely information; and
- Improved utilization of college instructional facilities.

Winter 2004 targets include:

- R&SR scheduling access to additional rooms;
- Implementation of Schedule 25 to perform algorithm based scheduling to match specific course requirements with appropriately equipped spaces;
- a process to evaluate the impact of proposed room changes; and
- The integration of requests for media services resources.

Estimate Start Date: In Process

Estimated Completion Date: 1/31/2004

Additional Special projects are yet to be determined.

Section 5

Future Technologies

Future Technologies

The Information Technology industry has been on an accelerating pace of innovation and change over the last several years, and all indications are that this will continue into the foreseeable future. Although we must be careful to ensure that Information Technology changes are not the strategic driving forces, but rather the means to achieve Sinclair's strategic objectives, Information Technology innovations will surely play a significant role. Additionally, we must keep in mind that it is essential we prepare our students for leadership and service in an "information-driven, service-oriented society".

Some of the Information Technologies which should be investigated to ascertain their potentiality include:

- Business Intelligence
- Wireless Networking
- Electronic Portfolios
- Web Services

Business Intelligence (BI)

Business Intelligence is the reincarnation of Decision Support. BI relies heavily on the existence of a comprehensive Data Warehouse (or set of Data Marts) from which to extract information in order to build a multidimensional database (often called a "cube"). BI is a broad category of applications and technologies for gathering, storing, analyzing, and providing access to data to help enterprise users make better business decisions. BI applications include the activities of decision support systems, query and reporting, online analytical processing (OLAP), statistical analysis, forecasting, and data mining.

Wireless Networking

Wireless Networking goes well beyond installation of wireless access points to which wireless devices can connect. Wireless technology encompasses the areas of telecommunications convergence, voice over IP, and various other concepts. Wireless networks are communications systems in which radio-frequency or infrared waves carry a signal through the air, rather than along a wire. This signal may represent voice, data, or video.

This means that virtually any type of communications can operate in a wireless mode. The potential of this technology in an academic environment is enormous, and the potential cost-savings is likewise significant.

Electronic Portfolios

A portfolio is a purposeful collection of student work that exhibits the student's efforts, progress and achievements in one or more areas. The collection must include student participation in selecting contents, the criteria for selection; the criteria for judging merit, and evidence of student self-reflection.

Artists have maintained portfolios for years, often using their collection for seeking further work, or for simply demonstrating their art; an artist's portfolio usually includes only their best work. Financial portfolios contain a comprehensive record of fiscal transactions and investment holdings that represent a person's monetary worth. By contrast, an educational portfolio contains work that a learner has selected and collected to show growth and change over time; a critical component of an educational portfolio is the learner's reflection on the individual pieces of work (often called artifacts) as well as an overall reflection on the story that the portfolio should tell.

A Student Electronic Portfolio is a web-based system to help students identify educational goals, plan and track their educational program, and document the attainment of skills, knowledge, and competencies. The Electronic Portfolio serves as a personalized data repository for students to gather, store, and distribute personal data and the work products from classes that demonstrate their skills, knowledge, and competencies. The Electronic Portfolio is a systematic tool to document student learning consisting of:

- On-line student resume
- Recommendation letters
- College transcript
- Scanned and digitized examples of student work including: software, artwork, sound recordings of performances, photographs of engineering products, architectural drawings, and traditional written documents.
- Documentation of internships, community service, and leadership experiences.
- An individualized learning plan (ILP) based on an intensive assessment of the student's skills, strengths, weaknesses, and goals.

The Electronic Portfolio is an educational plan, a roadmap to student success, and an assessment of student learning gains resulting from their educational experiences that may be shared with potential employers. Thus students may not only track their improved skills but also enhance their marketability to employers beyond the traditional resume.

Web Services

Web services are self-contained business functions that operate over the Internet. They are written to strict specifications to work together and with other similar kinds of components. Some of the more established functions at this stage are messaging, directories of business capabilities, and descriptions of technical services. But other functions are in the works as well.

Web services are important because they enable systems in different organizations, or different systems in the same organization, to interact with each other, more easily than before.

With businesses needing closer cooperation between suppliers and customers, engaging in more joint ventures and short-term marketing alliances, pursuing opportunities in new lines of business, and facing the prospect of more mergers and acquisitions, companies need the capability to link up their systems quickly with other companies. Thus Web services give companies the capability to do more business electronically, with more potential business partners, in more and different ways than before, and at reasonable cost.

Because Web services are written according to standards, all parties work from the same basic design. Companies then add value and business advantage to the basic design to meet the needs of their customers. For example, a company can offer its suppliers the capability to view inventory levels of products the suppliers provide so they can replenish the stocks without the customer cutting separate purchase orders. Web services provide the basic messaging and service-description functions for this kind of electronic relationship, but the suppliers could build on these basic features to provide better services to the customer. And companies can extend these capabilities to other trading partners, since they are built on standards.

Also, because Web services are built on standards, they make it possible for many systems developers to enter the market, which increases competition and brings down the costs. The competition among vendors also encourages more innovation in the products and services offered to business customers. And basing systems on standards helps prevent being locked-in to a specific vendor or type of computer or software.

Appendix A

Projects Database

Information Technology Division

Information Technology
Completed Projects FY 2002-2003

Page: 1

Department: eCollege

Project Number:	120	**Project Name:**	Financial Aid Registration Credit	**Target Complete:** 12/06/2001	**Actual Complete:** 07/26/2002
Project Number:	121	**Project Name:**	Transmittal (XFAT) Issue	**Target Complete:**	**Actual Complete:** 07/26/2002
Project Number:	123	**Project Name:**	GPA Calculation/Academic Standing	**Target Complete:**	**Actual Complete:** 07/26/2002
Project Number:	124	**Project Name:**	XSC Applications - BUDMAN, Selective Admissions, Nursing App.	**Target Complete:** 11/30/2001	**Actual Complete:** 01/31/2003
Project Number:	127	**Project Name:**	HEI Reporting Testing	**Target Complete:** 07/01/2002	**Actual Complete:** 07/01/2002
Project Number:	130	**Project Name:**	Bookstore POS Issues	**Target Complete:**	**Actual Complete:** 12/15/2002
Project Number:	131	**Project Name:**	Bursar POS Issues	**Target Complete:**	**Actual Complete:** 08/12/2002
Project Number:	132	**Project Name:**	Colleague R17 Upgrade	**Target Complete:** 06/30/2003	**Actual Complete:** 05/05/2003
Project Number:	134	**Project Name:**	Improved Problem Tracking	**Target Complete:** 12/21/2001	**Actual Complete:** 07/26/2002
Project Number:	138	**Project Name:**	Bring WebCT In House	**Target Complete:** 05/17/2002	**Actual Complete:** 07/05/2002
Project Number:	139	**Project Name:**	Web Content Management	**Target Complete:** 06/30/2003	**Actual Complete:** 02/20/2003
Project Number:	142	**Project Name:**	WebCT Account Upload Process	**Target Complete:** 06/17/2002	**Actual Complete:** 07/01/2002
Project Number:	143	**Project Name:**	AIM Center Web Project	**Target Complete:** 01/15/2002	**Actual Complete:** 07/01/2002

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Department: eCollege

Project Number	Project Name	Target Complete	Actual Complete
144	Vanguard Learning Day Registration Site.	02/15/2002	07/15/2002
146	Academic Counselors	01/14/2002	07/26/2002
148	Web Site Development for LRC		07/15/2002
150	IT@ Sinclair Site	12/14/2001	07/15/2002
152	Tartan Card System		11/04/2002
153	Copier Readers-Tartan Card	03/01/2002	09/09/2002
155	Raiser's Edge Implementation		01/06/2003
236	Alumni		01/31/2003
237	Vanguard search features of database	05/15/2002	07/15/2002
239	College for Seniors redeisgn for this years new catalog		07/02/2002
240	Hardware/Software Procurement/Installation		08/12/2002
241	Replacement Web Server Installation		02/20/2003
242	Student Help Desk	07/01/2002	07/01/2002

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Department: eCollege

Project Number:	243	**Project Name:**	Staff Hiring	**Target Complete:**	04/15/2002	**Actual Complete:**	08/26/2002
Project Number:	266	**Project Name:**	Faculty /Staff Web Space	**Target Complete:**	07/01/2002	**Actual Complete:**	03/20/2003
Project Number:	267	**Project Name:**	Automating Course Bulletin Process (converting from Access to SQL)	**Target Complete:**		**Actual Complete:**	01/15/2003
Project Number:	274	**Project Name:**	Student Email	**Target Complete:**	07/01/2002	**Actual Complete:**	09/20/2002
Project Number:	276	**Project Name:**	Staff Hiring - Mgr. Business Systems & Programming	**Target Complete:**	07/01/2002	**Actual Complete:**	07/01/2002
Project Number:	329	**Project Name:**	Parking Readers	**Target Complete:**		**Actual Complete:**	07/15/2002
Project Number:	356	**Project Name:**	Deployment and implementation of automated de-reg process	**Target Complete:**	01/03/2003	**Actual Complete:**	12/13/2002
Project Number:	371	**Project Name:**	Instruction Visibility List	**Target Complete:**		**Actual Complete:**	01/23/2003
Project Number:	374	**Project Name:**	Other Visibility List	**Target Complete:**		**Actual Complete:**	01/30/2003
Project Number:	379	**Project Name:**	Source Control Software Selection	**Target Complete:**	01/06/2003	**Actual Complete:**	01/06/2003
Project Number:	384	**Project Name:**	Pell - Ability to credit back	**Target Complete:**	03/21/2003	**Actual Complete:**	02/28/2003
Project Number:	411	**Project Name:**	Secured Editor for IT use on Live account	**Target Complete:**	01/21/2003	**Actual Complete:**	02/03/2003
Project Number:	505	**Project Name:**	Parking Communication Website	**Target Complete:**	07/25/2003	**Actual Complete:**	04/01/2003

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Department: eCollege

Project Number:	578	**Project Name:**	Upgrade to Preception 3.4	**Target Complete:**	04/25/2003	**Actual Complete:**	04/25/2003
Project Number:	579	**Project Name:**	Automation of Perception upload	**Target Complete:**		**Actual Complete:**	05/26/2003

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Department: Information Security

Project Number:	82	**Project Name:**	Individual Learning Plans	**Target Complete:**	06/01/2002	**Actual Complete:**	02/03/2003
Project Number:	108	**Project Name:**	Position Description QA Analyst	**Target Complete:**	03/01/2003	**Actual Complete:**	03/17/2003
Project Number:	262	**Project Name:**	HR Competencies Pilot - Implementation	**Target Complete:**	09/18/2003	**Actual Complete:**	02/03/2003
Project Number:	287	**Project Name:**	Faculty/Staff web space terms of use procedures	**Target Complete:**	08/01/2002	**Actual Complete:**	03/03/2003
Project Number:	289	**Project Name:**	Password Distribution/Reset procedure	**Target Complete:**	05/01/2002	**Actual Complete:**	09/20/2002
Project Number:	297	**Project Name:**	Training Self-Assessment	**Target Complete:**	07/01/2003	**Actual Complete:**	10/04/2002
Project Number:	303	**Project Name:**	Disaster recovery (policy/procedure)	**Target Complete:**	10/01/2002	**Actual Complete:**	12/02/2002
Project Number:	308	**Project Name:**	Web Portal Documentation	**Target Complete:**		**Actual Complete:**	09/20/2002
Project Number:	311	**Project Name:**	Outreach Initiatives	**Target Complete:**		**Actual Complete:**	07/15/2002
Project Number:	422	**Project Name:**	Citrix rollout	**Target Complete:**	03/01/2003	**Actual Complete:**	03/14/2003
Project Number:	470	**Project Name:**	Process for granting IT write access in Live	**Target Complete:**	02/05/2003	**Actual Complete:**	03/03/2003
Project Number:	473	**Project Name:**	Position Description Questionnaires	**Target Complete:**	03/21/2003	**Actual Complete:**	03/21/2003

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Project Number	Project Name	Target Complete	Actual Complete
22	Research & Development Servers	12/31/2002	12/21/2002
24	VPN Implementation	03/15/2003	03/14/2003
34	IP Multicasting	04/15/2003	04/15/2003
48	Phase 5 Infrastructure	04/01/2002	10/18/2002
49	Phase 5 Workstation Connection	09/30/2002	10/21/2002
50	Network/System Management		03/15/2003
51	Windows 2000 Project	07/01/2002	03/15/2003
54	Windows 2000 Workstation Migration	06/30/2002	12/31/2002
55	PC Repair & Replacement		12/31/2002
56	Academic Lab Windows		03/15/2003
244	Corporate & Comm. Services Internet needs	07/31/2002	12/10/2002
245	Service Level Agreements	06/30/2002	07/15/2002
250	Portal Infrastructure	07/31/2002	12/20/2002

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Department: Information Technology Services

Project Number:	251	**Project Name:**	Vendor Relations	**Target Complete:** 08/15/2002	**Actual Complete:** 10/16/2002
Project Number:	254	**Project Name:**	Typo Building Move	**Target Complete:**	**Actual Complete:** 07/15/2002
Project Number:	256	**Project Name:**	Student Services Call Center	**Target Complete:** 07/19/2002	**Actual Complete:** 07/29/2002
Project Number:	317	**Project Name:**	Student Helpdesk	**Target Complete:** 06/30/2002	**Actual Complete:** 09/23/2002
Project Number:	318	**Project Name:**	Outlook/Exchange issues	**Target Complete:**	**Actual Complete:** 09/30/2002
Project Number:	319	**Project Name:**	Compaq PC Testing	**Target Complete:**	**Actual Complete:** 07/01/2002
Project Number:	321	**Project Name:**	Edverify	**Target Complete:** 08/01/2002	**Actual Complete:** 08/30/2002
Project Number:	323	**Project Name:**	HP multi-year contract	**Target Complete:** 06/30/2002	**Actual Complete:** 07/14/2002
Project Number:	324	**Project Name:**	Equipment Inventory	**Target Complete:** 06/01/2002	**Actual Complete:** 08/30/2002
Project Number:	325	**Project Name:**	Workstation Migration	**Target Complete:** 06/30/2002	**Actual Complete:** 12/31/2002
Project Number:	326	**Project Name:**	Magic Self-Service external access	**Target Complete:** 08/15/2002	**Actual Complete:** 07/24/2002
Project Number:	327	**Project Name:**	Student Email product identifaction	**Target Complete:** 07/17/2002	**Actual Complete:** 07/14/2002
Project Number:	400	**Project Name:**	Print Appliance	**Target Complete:** 04/15/2003	**Actual Complete:** 04/11/2003

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Project Number	Project Name	Target Complete	Actual Complete
401	SSL Appliance	09/15/2002	10/21/2002
402	Outlook/Exchange Issues	09/30/2002	10/21/2002
403	Training	11/01/2002	10/21/2002
405	Centerville High School Support	08/15/2002	08/30/2002
407	Sharepoint	09/15/2002	09/15/2002
408	Student Email Implementation	09/15/2002	08/30/2002
409	Synchronization of 3 voice telecomm databases	10/15/2002	10/21/2002
412	Magic Self Service External Access Communication	09/01/2002	09/05/2002
413	Windows 2000 SP3	11/01/2002	01/19/2003
416	Enerasys Maintenance	09/01/2002	08/30/2002
417	Enterasys 1st to 3rd generation board replacement	09/15/2002	12/27/2002
418	Tut Disposition	09/13/2002	11/08/2002
419	Winqvt Aux Printing	04/15/2003	04/11/2003

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Project Number:	420	**Project Name:**	Old Equipment Removal	**Target Complete:**	10/31/2002	**Actual Complete:**	10/31/2002
Project Number:	423	**Project Name:**	Server/Storage Map	**Target Complete:**	08/15/2002	**Actual Complete:**	08/30/2002
Project Number:	426	**Project Name:**	Automated Account Creation	**Target Complete:**	10/15/2002	**Actual Complete:**	10/16/2002
Project Number:	428	**Project Name:**	Faculty/Staff Web Server	**Target Complete:**	10/31/2002	**Actual Complete:**	11/15/2002
Project Number:	429	**Project Name:**	ARMA Presentation	**Target Complete:**	11/19/2002	**Actual Complete:**	11/19/2002
Project Number:	430	**Project Name:**	Systems Mgt. Server	**Target Complete:**	12/31/2002	**Actual Complete:**	12/20/2002
Project Number:	431	**Project Name:**	Magic CTI and API Wizard Installation	**Target Complete:**	11/15/2002	**Actual Complete:**	12/20/2002
Project Number:	433	**Project Name:**	Library Design Team	**Target Complete:**	06/30/2003	**Actual Complete:**	05/30/2003
Project Number:	434	**Project Name:**	Business Continuity Plans Update	**Target Complete:**	11/30/2002	**Actual Complete:**	12/11/2002
Project Number:	435	**Project Name:**	Analysis of relevant ACD Reports- Call Center	**Target Complete:**		**Actual Complete:**	10/18/2002
Project Number:	436	**Project Name:**	Proecture to refund payphone losses	**Target Complete:**		**Actual Complete:**	10/28/2002
Project Number:	437	**Project Name:**	Off Campus File Access	**Target Complete:**	12/31/2002	**Actual Complete:**	03/17/2003
Project Number:	440	**Project Name:**	Reboot Schedule	**Target Complete:**	03/15/2003	**Actual Complete:**	03/13/2003

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Department: Information Technology Services

Project Number:	441	**Project Name:**	24/7 Operations	**Target Complete:**	01/15/2003	**Actual Complete:**	03/14/2003
Project Number:	442	**Project Name:**	Engineering off-campus SLA	**Target Complete:**	12/31/2002	**Actual Complete:**	01/15/2003
Project Number:	443	**Project Name:**	Disk Utilization	**Target Complete:**	04/15/2003	**Actual Complete:**	03/15/2003
Project Number:	445	**Project Name:**	Student Employee Email	**Target Complete:**	12/15/2002	**Actual Complete:**	02/15/2003
Project Number:	446	**Project Name:**	Magic Upgrade to v7.5	**Target Complete:**	03/15/2003	**Actual Complete:**	03/14/2003
Project Number:	448	**Project Name:**	SPAM Filter Evaluation	**Target Complete:**	12/15/2002	**Actual Complete:**	12/15/2002
Project Number:	452	**Project Name:**	Dayton Typo Building	**Target Complete:**	03/31/2003	**Actual Complete:**	03/31/2003
Project Number:	453	**Project Name:**	Cleo Replacement	**Target Complete:**	05/20/2003	**Actual Complete:**	05/20/2003
Project Number:	454	**Project Name:**	Hotbar	**Target Complete:**	12/06/2002	**Actual Complete:**	12/06/2002
Project Number:	455	**Project Name:**	Resource 25	**Target Complete:**	12/15/2002	**Actual Complete:**	12/11/2002
Project Number:	456	**Project Name:**	Holiday Operations Schedule	**Target Complete:**	12/15/2002	**Actual Complete:**	12/15/2002
Project Number:	457	**Project Name:**	DHCP/WINS Redundancy	**Target Complete:**	01/06/2003	**Actual Complete:**	01/02/2003
Project Number:	458	**Project Name:**	W: drive move	**Target Complete:**	03/31/2003	**Actual Complete:**	03/31/2003

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Department: Information Technology Services

Project Number:	459	**Project Name:**	Eaker Street	**Target Complete:**	01/24/2002	**Actual Complete:**	02/13/2003
Project Number:	460	**Project Name:**	Maranatha Church	**Target Complete:**	04/30/2003	**Actual Complete:**	04/11/2003
Project Number:	462	**Project Name:**	2003-2004 Budget	**Target Complete:**	03/15/2003	**Actual Complete:**	03/11/2003
Project Number:	465	**Project Name:**	Server R&R	**Target Complete:**	06/15/2003	**Actual Complete:**	05/01/2003
Project Number:	466	**Project Name:**	Exhcange loss of mail store	**Target Complete:**	03/15/2003	**Actual Complete:**	03/02/2003
Project Number:	467	**Project Name:**	Bldg 14 loss of connectivity	**Target Complete:**	01/31/2003	**Actual Complete:**	01/31/2003
Project Number:	477	**Project Name:**	Dayton Tooling and Manufacturing Association	**Target Complete:**	02/14/2003	**Actual Complete:**	02/14/2003
Project Number:	489	**Project Name:**	Microsoft Campus Agreement	**Target Complete:**	03/31/2003	**Actual Complete:**	03/25/2003
Project Number:	491	**Project Name:**	Correction of 14 Day Statistics	**Target Complete:**	05/15/2003	**Actual Complete:**	05/09/2003
Project Number:	519	**Project Name:**	Print Server	**Target Complete:**	09/30/2003	**Actual Complete:**	04/15/2003
Project Number:	524	**Project Name:**	Reboot Schedule	**Target Complete:**	04/15/2003	**Actual Complete:**	03/15/2003
Project Number:	557	**Project Name:**	Server R&R- Inventory	**Target Complete:**	05/12/2003	**Actual Complete:**	05/04/2003
Project Number:	558	**Project Name:**	Server R&R - Create 2 server images	**Target Complete:**	05/30/2003	**Actual Complete:**	05/04/2003

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Department: Learning Technology Support

Project Number	Project Name	Target Complete	Actual Complete
162	Assist Faculty Member With Development of PowerPoint	12/31/2001	07/08/2002
163	Investiage Picute Tel Cameras /Video Cards For Video Conf. Use	12/21/2001	09/01/2002
164	Support Faculty Member with PowerPoint	12/31/2001	07/08/2002
165	PED/PAC/Athletics/Intramurals PowerPoint Presentation	12/01/2001	07/08/2002
168	Training Resources Library/Links	04/01/2002	07/08/2002
171	Determine SCC Academic Software Resources	12/06/2001	07/08/2002
175	Converting Computer to Digitizing Capabilities	12/05/2001	07/08/2002
184	Scheduling Student Orientation Winter 02	01/01/2002	07/02/2002
192	MAN 105-T1 Intro to Business	06/01/2003	04/21/2003
193	ALH 103-T1 Intro to Health Care Delivery		07/10/2002
202	ABLE Class Enhancement		02/05/2003
205	Dental Health, Convert Slides To PowerPoint	05/11/2003	05/11/2003
207	Orientation Video		07/20/2002

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Department: Learning Technology Support

Project Number:	208	**Project Name:**	Recruiting Video	**Target Complete:**		**Actual Complete:**	07/20/2002
Project Number:	217	**Project Name:**	CIL Exhibit Upgrade - Cyber Tree lights	**Target Complete:**	10/07/2002	**Actual Complete:**	10/07/2002
Project Number:	223	**Project Name:**	Align Services With Mission	**Target Complete:**	01/04/2002	**Actual Complete:**	07/02/2002
Project Number:	227	**Project Name:**	High Tech Showcase Displays for Bldg. 14	**Target Complete:**	04/26/2002	**Actual Complete:**	03/15/2003
Project Number:	229	**Project Name:**	Develop Instructional Technology Web Site	**Target Complete:**	01/31/2002	**Actual Complete:**	11/01/2002
Project Number:	333	**Project Name:**	Fall 2002 Faculty WebCT Workshops Series	**Target Complete:**	11/22/2002	**Actual Complete:**	11/22/2002
Project Number:	334	**Project Name:**	Multimedia Portable Cart Research	**Target Complete:**	10/25/2002	**Actual Complete:**	03/10/2003
Project Number:	335	**Project Name:**	Portal Workshops for Faculty	**Target Complete:**	11/22/2002	**Actual Complete:**	11/22/2002
Project Number:	336	**Project Name:**	Evaluating multimedia development products	**Target Complete:**	12/31/2002	**Actual Complete:**	12/31/2002
Project Number:	337	**Project Name:**	Spring Institute 2003	**Target Complete:**	03/20/2003	**Actual Complete:**	03/28/2003
Project Number:	338	**Project Name:**	Winter Institute 2002	**Target Complete:**	12/11/2002	**Actual Complete:**	12/13/2002
Project Number:	340	**Project Name:**	Modification of satellite receiver in Bldg. 12	**Target Complete:**		**Actual Complete:**	09/18/2002
Project Number:	343	**Project Name:**	Add Netlinx capability to Multimedia Classrooms	**Target Complete:**	01/06/2003	**Actual Complete:**	03/03/2003

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Department: Learning Technology Support

Project Number:	344	**Project Name:**	my.Sinclair marketing video	**Target Complete:**	10/01/2003	**Actual Complete:**	03/03/2003
Project Number:	345	**Project Name:**	Staff Professional Development Day print design	**Target Complete:**	10/01/2002	**Actual Complete:**	10/01/2002
Project Number:	347	**Project Name:**	Vanguard video clips	**Target Complete:**		**Actual Complete:**	04/21/2003
Project Number:	349	**Project Name:**	NSF ATE National Conference Presentation Materials	**Target Complete:**	10/21/2002	**Actual Complete:**	10/19/2002
Project Number:	350	**Project Name:**	College Wide Learning Day Print Design	**Target Complete:**	10/11/2002	**Actual Complete:**	10/01/2002
Project Number:	355	**Project Name:**	Winter 2003 Portal Workshops	**Target Complete:**	03/31/2003	**Actual Complete:**	03/07/2003
Project Number:	375	**Project Name:**	Bldg. 19 Media Equipment	**Target Complete:**	01/06/2003	**Actual Complete:**	05/19/2003
Project Number:	378	**Project Name:**	Video Tape Check Out Process	**Target Complete:**	06/30/2002	**Actual Complete:**	12/10/2002
Project Number:	381	**Project Name:**	Projector Instructions Project	**Target Complete:**	01/06/2003	**Actual Complete:**	01/16/2003
Project Number:	388	**Project Name:**	Forum Projectors Replacement	**Target Complete:**	02/14/2003	**Actual Complete:**	03/15/2003
Project Number:	390	**Project Name:**	Staff Professional Development Day PowerPoint	**Target Complete:**	12/01/2002	**Actual Complete:**	12/11/2002
Project Number:	395	**Project Name:**	Part-time Faculty Portal Training	**Target Complete:**	03/30/2003	**Actual Complete:**	03/07/2003
Project Number:	425	**Project Name:**	Board Advance PowerPoint	**Target Complete:**	01/24/2003	**Actual Complete:**	01/24/2003

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Department: Learning Technology Support

Project Number:	475	**Project Name:**	HR Competency Role Plays	**Target Complete:** 03/21/2003	**Actual Complete:** 04/21/2003
Project Number:	580	**Project Name:**	Spring Quarter Workshops	**Target Complete:** 06/14/2003	**Actual Complete:** 05/30/2003
Project Number:	582	**Project Name:**	Student Services Awards Video	**Target Complete:** 05/30/2003	**Actual Complete:** 05/30/2003

Appendix B

Glossary

Access: The technology choices available by which users can connect to the public data network at the level they demand or need (dial-up, cable, DSL, ISDN, wireless, etc.)

Anti-virus Software: Programs to detect and remove computer viruses. The simplest kind scans executable files and boot blocks for a list of known viruses. Others are constantly active, attempting to detect the actions of general classes of viruses. Anti-virus software must be regularly updated to be effective against the latest viruses as they are released and discovered.

Authentication: The process of verifying that an electronic identifier is correctly mapped to the person using it. Authentication may take a variety of forms and typically relies on one or more of the following:

- Something you know, such as a password;
- Something you have, such as a smartcard with a public-key certificate;
- Some personal attribute, evidenced by a retinal scan, fingerprint, or photo.

B2B (business-to-business): The exchange of products, services, or information between two or more businesses using networked technologies.

B2C (business-to-consumer): The exchange of products, services, or information between businesses and consumers over the Internet.

Bandwidth: The amount of data that can be transmitted in a given amount of time over a particular connection.

bps: Measurement of transmission speed - bits per second.

Broadband: High speed data transmission over which a single medium can carry several channels at once. DSL and cable modem service are broadband services.

Business intelligence (BI): A broad category of applications and technologies for gathering, storing, analyzing, and providing access to data to help enterprise users make better business decisions. BI applications include the activities of decision support systems, query and reporting, online analytical processing (OLAP), statistical analysis, forecasting, and data mining.

Cable modem: A device that enables a personal computer to be connected to a local cable TV line and receive and send data.

Colleague Application/Database: The application (developed by Datatel, Inc.) used by the College for Enterprise Resource Planning (ERP). It is a collection of software programs that tie all of the various diverse functions (student services, business operations, finance, HR, etc.) into a cohesive database.

Course Management System (CMS): See Learning Management System.

Data Warehouse: A database designed specifically to support decision-making (Business Intelligence). It is a data repository which may be populated from multiple sources, including multiple transaction-oriented databases.

Data Base Management System (DBMS): A complex set of programs that control the organization, storage and retrieval of data for many users; extensively used in business environments. Data is organized in fields, records and files. A database management system must also control the security of the database.

Dial-up access (modem): Refers to connecting to the Internet via a modem and standard telephone line. Maximum speed is 56 Kbps.

Digital Subscriber Lines (DSL): One of many variations of DSL, the most common of which is ADSL, asymmetric digital subscriber line service.

Distributed computing: An industry-standard software technology for setting up and managing computing and data exchange in a system of networked computers.

Domain name: The unique name that identifies an Internet site and its address.

Digital Subscriber Line (DSL): A technology which enables the ordinary copper component of telephone lines to carry data at rates much higher than ISDN. Maximum speed is 8 Mbps.

Electronic business (e-Business): The transformation of key business processes through the use of Internet technologies.

Electronic commerce (e-Commerce): Commercial and noncommercial transactions facilitated through the use of networked technologies, such as over the Worldwide Web.

Electronic Mail Services/System (E-mail): Any messaging system that depends on computing facilities to create, send, forward, reply to, transmit, store, hold, copy, download, display, view, read, or print computer records for purposes of asynchronous communication across computer network systems between or among individuals or groups, that is either explicitly denoted as a system for electronic mail; or is implicitly used for such purposes, including services such as electronic bulletin boards, listserves, and newsgroups.

Electronic Data Interchange (EDI): The transfer of data between companies using computer networks, such as the Internet.

Electronic Mailbox: A file (or folder) designated to a particular user on a particular computer in which received electronic mail messages are stored ready for the user to read them. Using the example firstname.lastname@sinclair.edu, "firstname.lastname" is the name of the user's mailbox file on the mail server.

Email Address: The string used to specify the source or destination of an electronic mail message. A typical college e-mail address format is firstname.lastname@sinclair.edu.

Email Distribution List: A distribution list is a group of recipients, all gathered under one name, or address. A distribution list allows you to send a message to all of the recipients by entering just that one address. There are two common kinds of distribution lists: Personal Distribution Lists (stored on an individual's PC) and Public Distribution Lists (server-based). See their individual definitions.

Email Record/Email Message: Any or several electronic computer records or messages created, sent, forwarded, replied to, transmitted, stored, held, copied, downloaded, displayed, viewed, read, or printed by one or several email systems or services. This definition of email records applies equally to the contents of such records and to transactional information associated with such records, such as headers, summaries, addresses, and addressees.

Email Users: Individual(s) who create, send, forward, reply to, transmit, store, hold, copy, download, display, view, read, or print email (with the aid of College email services). A (College) Email User is an individual who makes use of (College) email services. Receipt of email prior to actual viewing is excluded from this definition of "use" to the extent that the recipient does not have advance knowledge of the contents of the email record.

Encrypted/Encryption: Procedures using algorithms to encode or convert plain text into cipher-text to prevent any but the intended recipient from reading that data. There are many types of data encryption; they are the basis of network security.

Enterprise Resource Planning (ERP): A system that supports the planning and management of all the resources in an enterprise - a multi-module software system that supports enterprise resource planning. An ERP system typically includes a relational database and applications for managing purchasing, inventory, personnel, customer service, shipping, financial planning, and other important aspects of the business.

Frame Relay: Used for connecting local and wide area networks - can support data transfer at T-1 and T-3 speeds.

Gigabits per second (Gbps): A measurement of the rate of speed at which data is transferred (e.g., 1 Gbps equals 1 billion bits per second).

Infrastructure: The communication networks that connect users to a networked environment such as the Internet.

Information Technology (IT): The broad subject concerned with all forms of technology used to manage and process information electronically.

Integrated Services Digital Network (ISDN): A service that allows for higher data transmission speeds over telephone lines and is capable of handling at least two services over one line simultaneously (i.e., voice and fax or voice and data). Maximum speed is 128 Kbps.

Internet Service Provider (ISP): A company or organization that provides users with connectivity to the Internet.

Kilobits per second (Kbps): The rate of speed at which data is transferred (e.g., 1 Kbps equals 1,000 bits per second).

Local Area Network (LAN): A network of interconnected workstations that share the resources of a single processor or server within a relatively small geographic area, such as an office.

Lightweight Directory Access Protocol (LDAP): An online directory service protocol defined by the Internet Engineering Task Force (IETF) which is a simplification of Directory Access Protocol (DAP). An LDAP directory entry is a collection of attributes with a unique identifier, called a distinguished name (DN). The directory system is in a hierarchical structure.

Learning Management System (LMS): A software application or Web-based technology used to plan, implement, and assess a specific learning process. Typically, a learning management system provides an instructor with a way to create and deliver content, monitor student participation, and assess student performance. A learning management system may also provide students with the ability to use interactive features such as threaded discussions, video conferencing, and discussion forums. The Advanced Distributed Learning group, sponsored by the United States Department of Defense, has created a set of specifications called Shareable Content Object Reference Model (SCORM) to encourage the standardization of learning management systems.

Letter or Mail Bomb: An email message containing malicious code intended to do nefarious things to the recipient's computer or network. Also, to send, or urge others to send, massive amounts of electronic mail to a single system or person, with intent to crash or spam the recipient's system. Letter or Mail bombing is a serious offense and is not tolerated.

List Owner: Individual(s) who establish the scope and distribution of and perform the maintenance of email distribution lists.

Malicious Code: Code is a common term used to describe a set of instructions to a computer, also called program or software. Malicious code in general can be defined as "software which interferes with the normal operation of a computer system." Another general definition might be "software which executes without the express consent of the user." Common types of malicious code include viruses, Trojans, and worms.

Megabits per second (Mbps): A measurement of the rate of speed at which data is transferred (e.g., 1 Mbps equals 1 million bits per second).

Mobile e-Commerce (m-Commerce): Commercial and noncommercial transactions facilitated through the use of wireless networked devices.

Microsoft Outlook: The Microsoft "groupware" information management and communication software used by the college for email communication, group planning and scheduling, and contact/task management.

Online Analytical Processing (OLAP): A method of database indexing that enhances quick access to data, especially in queries calling for large quantities of data or viewing the data from many different aspects.

Personal Distribution Lists: These lists are created by individuals for their own use. Personal distribution list files are stored in the individual's Personal Address Book. Personal Address Books usually reside on the individual's hard drive (or a drive of their choice). These lists are called "Personal" as they should be created for personal (one person) use. Sinclair users are permitted to create and share the lists to facilitate group communication.

Point Of Sale (POS): The time and place in which a transaction is made. Point of sale computer systems include cash registers, optical scanners, magnetic card readers, and special terminals. Reading product tags, updating inventory, and checking credit are some of the operations performed at the point of sale.

Privacy policy: A statement by an organization describing the ways in which it collects, stores, and uses personal information gathered from citizens and consumers.

Public Distribution Lists: These are created by IT staff for use by all Sinclair users. The distribution list files are stored on the Exchange Mail server. These lists are called "Public" as they are designed to be available to all users. Use of these lists is for academic and administrative purposes only as misuse wastes system resources and can affect the entire College network.

Role-based Access: After official authentication, access to Information Technology resources is granted based on the individual's role at the institution. As an example, a faculty member would have access to a totally different set of resources than a student, and a Dean might have access to a greater set of resources than an individual faculty member.

Server: A computer that provides some service for other computers connected to it via a network. A mail server has a drive that hosts user electronic mailboxes and receives, stores, and sends email messages via the network.

Spam or Spamming: Electronic junk mail or junk newsgroup postings. Spam is generally email advertising for some product sent to a mailing list or newsgroup. Spamming is sending or transmitting these junk messages. Receipt of Spam is virtually impossible to control; Spamming to or from college email systems is strictly prohibited.

Structured Query Language (SQL - *pronounced SQL or Sequel*): A language used to create, maintain, and query relational databases. It is an ISO and ANSI standard. SQL uses regular English words for many of its commands, which makes it easy to use. It is often embedded within other programming languages.

SQL Server: A relational Database Management System (DBMS) supplied by Microsoft.

T-1: Point-to-point dedicated phone line connection. Maximum speed is 1.544 Mbps.

T-3: Point-to-point dedicated phone line connection. Maximum speed is 44.7 Mbps.

Telecommunications: Refers to all types of data transmission, from voice to video.

Terabits per second (Tbps): A measurement of the rate of speed at which data is transferred (e.g., 1 Tbps equals 1 trillion bits per second).

User Interface (UI): The means by which a user interacts with a computer. The interface includes input devices such as a keyboard, mouse, stylus, or microphone; the computer screen and what appears on it; the way commands are given, etc. With a command-line interface, only text appears on the screen, and the user must type in commands; with a graphical user interface, windows, mice, menus, and icons are used to communicate with the computer.

Usage: The extent to which business, government and household users utilize the Internet access and infrastructure available to them.

User Login/Logon ID: The string that, in conjunction with the password, identifies a user to the network. A typical college user ID consists of the user's first and last name separated by a period. As in "firstname.lastname".

Virtual private network (VPN): A private data network using the public telecommunication infrastructure with security procedures that maintain privacy.

Virus: A program or piece of code that generally executes without the user's knowledge and runs against their wishes. Most viruses are malicious in nature and can also replicate themselves. All computer viruses are man-made and vary in degree of danger. Even a simple virus that replicates itself without actually harming system files is dangerous because it quickly uses available memory and other resources. A more dangerous type of virus is one capable of transmitting across networks and mutating to bypass security systems.

Wide Area Network (WAN): A geographically dispersed telecommunication network.

Web Content Management System (WCMS): A system or set of tools used to manage the content of a Website. Typically, a WCMS consists of two elements: the content management application and the content delivery application. The content management application allows the content manager or author, who may not know Hypertext Markup Language (HTML), to manage the creation, modification, and removal of content from a Website (via an intermediate database) without needing the expertise of a Web Developer. The delivery element uses and compiles that information along with predefined templates to generate web pages. The features of a WCMS system vary, but most include a data repository, format management, revision control, indexing, search, and retrieval.

Wireless access: A communications system in which radio-frequency or infrared waves carry a signal through the air, rather than along a wire.

World Wide Web (WWW): The system of Internet servers and users that support documents formatted in the HTML language.