



**SCHOOL OF INFORMATION SCIENCES**

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UNIVERSITY OF PITTSBURGH

**PLAN FY '07**

(March 1, 2006)

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## **I. Building on the Foundations of the School**

More than one hundred years ago, our School was founded to educate people to work in one type of organization, the public library, and to serve a specific client group, children and their families. Over the years our mission has broadened as we developed new programs in information sciences, telecommunications, digital libraries, and archives, records, and preservation management. Today, we work with information technologies varying from manuscripts and books to computers and routers. Now our vision is to be the premier information school, transforming society through information.

Over time, we have remained committed to our vision and our legacy of transforming society through information in its many forms. However, our departmental structure has made this commitment more difficult to accomplish. In an effort to maximize our resources, to allow for more fluid and agile response to market changes -- while maintaining the integrity of our academic programs -- the faculty voted to transform the School's structure to a single faculty organized around academic programs and research clusters. The faculty voted on February 3, 2006 to reorganize our governance structure, effective July 1, 2006. This reorganization has several goals including

- promoting research collaboration among the faculty,
- enhancing the likelihood and ease of new programmatic initiatives, and
- moving toward more effective resource allocation across the School.

This reorganization forms the context for this plan. Section Two will review our long term goals; Section Three will review our opportunities and challenges of the past year; and finally Section Four will identify objectives for FY2007.

## **II. Long-term Direction**

In this plan, we outline the approach the School is taking to leverage our opportunities and confront our challenges. This plan offers us the ability to continue our leadership in the information professions and the disciplines of the information sciences as well as providing solutions to our challenges in a manner that is consistent with the long term direction of the School and the University.

### ***A. Vision and Mission***

Our vision, adopted in 2005 by the faculty, is:

**The vision of SIS is to be the premier information school, transforming society through information.**

While we are already recognized as one of the leading schools of information sciences by many measures, we are not content with that recognition. We will continue to innovate and lead the profession through our research, education, and service activities. As a professional information school, or I-School, our

activities have a direct and measurable impact on society. We view information as central to the solution of many of the problems our society is facing today and will face tomorrow; thus, we transform society through information. As a part of the University of Pittsburgh, SIS seeks to help the University achieve its vision and missions, so our mission is:

**The Mission of the School of Information Sciences is to support and advance the broader education, research and service mission of the University by educating students, furthering knowledge and contributing our expertise to advance humankind's progress through information.**

This mission is achieved through specific actions:

- Provide a high-quality undergraduate program in Information Science
- Offer superior graduate programs in Library and Information Science, Information Science, and Telecommunications
- Engage in research and scholarly activities that advance learning through the extension of the frontiers of knowledge and creative endeavor
- Cooperate with industry and government to transfer knowledge
- Extend our expertise to local communities and public agencies to contribute to social, intellectual and economic development in the Commonwealth, the nation and the world.

## ***B. Who We Are***

The research, teaching and service performed by the School are based on a grounding in, and a blending of, information and knowledge, cognitive and social science, and systems and technology. These values are elaborated in the marketing plan in the Appendix.

**Extending people's capacity to respond to information and knowledge through technology.**

Our work, always informed by high ethical standards and nurtured by our multi-cultural, intellectual environment, will be used for the betterment of society and the advancement of human potential. We will do this through leading edge research, innovative teaching, and exemplary service to the community.

We define "people" and "technology" in expansive ways. "People" includes individuals, groups, institutions, and society at large. "Technology" is any tool that augments human capacities, and includes books, physical and electronic storage and retrieval systems, and systems and networks built using electronic information systems.

## **C. Goals**

Several years ago, we proposed three primary long-term goals for the School. We continue to believe that we must be successful in each of the following three areas if the School is to achieve its vision.

### **1. Provide Strategic Leadership for our Professions**

A premier I-School will be known by its peers, the professions, and by industry for its production of seminal research, curricular leadership, superior professional and PhD students, and its service to the professional and regional communities. It is largely in this dimension that we will be recognized as the premier I-School.

### **2. Foster Intellectual Vitality for Our Community**

A premier I-School is one that has a vibrant intellectual community, one in which research and pedagogy are closely linked. Students, faculty and staff are nurtured and stimulated in such an environment, which fosters the strategic leadership of the school.

### **3. Build Financial Strength for our future**

A premier I-School is one that is able to allocate resources to support its goals. The reality is that we will not be able to achieve our goals without adequate financial resources. Thus, we must create a strong fiscal base that is appropriately aligned with our goals.

## **III. State of the School**

This year has been rich in both achievements and challenges for the School of Information Sciences. We highlight the year's achievements in the three broad areas of teaching, research and publication as well as service to the School, the University and the larger community. All of these relate to our overarching goals of strategic leadership, intellectual vitality, and financial strength.

## State of SIS

### Accomplishments

- Developed tracks of study in the MSIS curriculum that align with the most promising professional specializations.
- Restructured the BSIS program, to be implemented in the Fall 2006 semester.
- Completed the Program Presentation for the re-accreditation of the Master of Library and Information Science degree by the Committee on Accreditation of the American Library Association.
- Developed a new specialization in Digital Libraries for the MLIS program that incorporates courses and faculty in both LIS and IS.
- Two SIS faculty were awarded prestigious CAREER awards by the National Science Foundation.
- The lead educator in Archives/Preservation Management won the Waldo G.Leland Award from the Society of American Archivists for the third time, the only person ever to do this.
- Awarded major research contracts from DARPA, NSF, AFOSR, and IMLS.
- Signed a Memorandum of Understanding with the University of Mysore (India) and with the International Institute of Information Technology – Bangalore to initiate development of an International School of Information Management (i-SIM).
- Hosted the First annual campus-wide “i-Fest” to raise the visibility of the School and its programs.
- Became a founding member of the I-Schools Consortium, which held its inaugural “i-Conference” in Fall 2005 at Penn State
- Presented successful seminar series in Digital Libraries, Security Assured Information Systems, and Policy, Ethics and Accountability. These series brought in national and international experts, and drew audiences from across the University and community
- Initiated a school-wide Peer Evaluation of Teaching process.

### Environment

- The information industry continues to define appropriate roles for the area of offshore outsourcing of functions and capabilities.
- Demand for research and education in information security continues to increase.
- The market for information systems professionals appears to be strengthening.
- The federal funding levels appear to be improving for agencies with an interest in information science research.
- Rapid changes in networked information systems continue unabated.

### Opportunities

- Leverage the I-School initiative
- Engage a newly re-formed Board of Visitors
- Create renewed interest in revised IST programs

### Challenges

- Discovering how information professionals can operate more effectively in today’s enterprises and developing educational programs accordingly
- Discovering ways in which existing courses and expertise can supplement existing degree programs effectively.
- Developing a broader awareness of funding opportunities among all faculty
- Developing a richer mutual understanding of the capabilities of each faculty member
- Increasing our willingness to work in new domains or on newly-discovered problems

Today, SIS is an academic organization that has not yet met its long term objectives. We need to strengthen our financial position by increasing enrollment in our degree programs, by increasing external research funding, and by increasing gift and endowment income. We must create a more vital intellectual environment by stimulating new engagement among the faculty and with the community. We need to assert greater leadership by expanding our research programs and innovating in our educational programs.

These changes require a change in the culture of the organization. The first step in that direction involved abandoning our traditional departmentalization and reorganizing the School under a unified faculty. Another step was instituting a new approach to the assessment of faculty productivity that is more rigorous and more attuned to the performance needs and requirements of the entire School. These actions are designed to foster new, more productive relationships among faculty and degree programs in an efficient and effective manner. These steps also move toward providing incentives for faculty to align their activities with the School's and the University's goals.

The aim of establishing SIS as the premier "I-School" is a process that will take at least 5 more years. We have made significant progress toward our vision in the past year, but much work remains to be done. The realization of this goal will require an extraordinary commitment from the faculty and staff of the School. In the following sections, we summarize our most significant successes and describe the context for the particular goals that we hope to achieve in the coming year.

## ***A. Highlights of Our Accomplishments***

As we noted above, the most notable accomplishment this year was a decision by the faculty to reorganize itself so that the School is more effectively positioned to take advantage of the future. This reorganization creates a unified faculty by eliminating the departmental structure that has characterized the school for many decades. This change has been under discussion sporadically since the early 1970s and has been recommended by several Boards of Visitors.

### **1. Strategic Leadership**

SIS faculty members continue to influence their professions in many ways. Faculty members have published widely, producing books, journal papers, and attending conferences. Several faculty members have served on conference committees, and as journal editors and editorial board members; still others have served as keynote or plenary speakers at significant international conferences.



The new 36 credit MLIS specialization in digital libraries is establishing a new standard among similar programs by emphasizing both collection development and management skills in addition to providing unsurpassed technological depth.

Dean Larsen has long been engaged in federal initiatives to define research directions in digital libraries. He co-chaired an NSF workshop in 2004 to develop a federal research agenda in this area. This year, he worked with the NSF, IMLS, the Getty Trust, the Mellon Foundation and the Bibliotheca Alexandrina (Egypt) to develop a plan for a Digital Library of the the Middle East that would ultimately offer the scholarly community an integrated digital collection of Middle Eastern artifacts and manuscripts dating back to 2500 BCE.

## **2. Intellectual Vitality**

The SIS community grows more vital as new faculty and staff members join us. In the past year, SIS attracted two exceptional new faculty members, and we are currently searching for two faculty members to fill MLIS positions opening with the departure of one faculty member to accept an endowed chair in Australia and with the retirement of Prof. Kimmel, the Chair of the department.

Our graduate programs present both opportunities and challenges. There has been an explosion in demand for both the on-campus and on-line versions of the MLIS degree program. Enrollment in LIS programs is now at an all time high. This trend, also experienced by our peer institutions, is taxing some LIS faculty who now cope with large class sizes. It also stresses the School's adaptability; it limits our ability to accommodate shifting demand for education and research among the programs the school offers, which have become all too apparent.

Our vision demands that we continue innovating. We have added a 36 credit specialization in Digital Libraries to the MLIS degree. While this program is currently targeted only to full-time on-campus students, we plan to expand the target population in the future as we gain experience with this offering. We also believe that significant opportunities exist to develop a post-MLIS Certificate of Advanced Study (CAS) for practicing librarians, archivists, and preservation managers who wish to supplement their previous education.

The MSIS program faculty members defined seven program tracks in the MSIS degree:

- Database and Web Systems,
- Information Security,
- Cognitive Systems,
- Human Computer Interaction,
- Telecommunications and Distributed Systems,
- Geoinformatics, and
- Technology and Society

These tracks allow students to choose well defined courses of study that are connected to popular career opportunities. We expect that these tracks will make recruitment and placement more effective.

Similarly, the BSIS program faculty members completed a revision of the BSIS degree program. This revision updates the content of the curriculum to better match market needs and gives students the option to pursue an area of focus. The curriculum is designed to allow the specializations to change relatively easily to respond to student interests and marketplace needs; the initial focus areas are:

- user-centered design
- information systems
- networks and security.

After many years of inconsistent action, we have initiated a school-wide Peer Evaluation of Teaching (PET) process. The faculty services team is developing templates for teaching dossiers and is working with faculty members to build the dossiers. The PET committee has successfully evaluated several faculty members, and is on schedule to complete the evaluation goals set forth in the SIS Policy on Peer Evaluation of Teaching.

Finally, we have had several interesting and well-attended seminar series that were funded by the Dean's Entrepreneurial Initiatives Fund. The first is an ongoing series in Digital Libraries that is hosted jointly by SIS, Carnegie Mellon University and its Libraries, the University Library System, and the Carnegie Library of Pittsburgh. Another is the second year of the Security Assured Information Systems lecture series. Finally, a new series on Policy, Ethics and Accountability was presented in partnership with the Johnson Institute for Responsible Leadership in the Graduate School of Public and International Affairs. The series has already received considerable interest from within and outside the School.

### **3. Financial Strength**

A previous plan called for strengthening our financial resources through increasing enrollments. In particular, it focused on building a stronger team of professionals for recruiting. AY2005 was the first full year with our newly-created recruitment team in place. The efforts of this team resulted in a slight upturn in new students in the information science and telecommunications programs. If this trend continues, we believe it will provide an opportunity for growth in the School. One new member of the recruitment team was the Director of Diversity Initiatives. Her efforts resulted in a measurable increase in minority enrollments. Unfortunately, she has left SIS for other career opportunities and we have not been able to fill this position.

SIS faculty continued to produce competitive research proposals, seeking new avenues for research support. Up to this point in FY06, the SIS faculty has submitted 40 proposals. We have focused on providing the infrastructure to

support proposal research and preparation. The most notable successes in this area have been NSF CAREER awards for both Dr. Peter Brusilovsky and Dr. James Joshi. In addition, we were successful in joining a project team on the DARPA GALE project, taking advantage of the expertise of Dr. Daqing He and Dr. Peter Brusilovsky. This trend reflects the growing research strength and adaptability of an already strong faculty.

## ***B. Environmental factors***

Historically, political, social and environmental factors have challenged the School's faculty members. Early in our existence, classrooms were constructed in the basement of the Carnegie Library in space clearly not intended to further an educational mission. Faculty had to lead both students and the community in identifying elements of service that could change lives. They developed plans and strategies for meeting these challenges, such as building curricula and innovative teaching methods and acquiring the diverse resources they needed to carry out the mission of the School. While the challenges are different today, we bring the same dedication to respond to change as did those early pioneers. Engaging in and responding to these environmental factors as an agile organization is an important part of the intellectual vitality of the school.

### **1. The Rise of Offshore Outsourcing**

Decreases in the costs of electronic communications has enabled domestic firms and organizations to transfer information handling and processing functions to firms located overseas (primarily in India and China). In recent years, this trend has also begun to include software development functions, a fact that was highly publicized in the 2004 presidential elections. This has exacerbated concerns among potential students and their parents about the long term viability of careers in the information sciences and telecommunications.

Offshore outsourcing is also fertile ground for faculty engagement. For example, questions about the mobility of services arise in light of the capabilities of existing technologies, human needs, and concerns such as the need for accountability and privacy when government services are sent overseas. Thus, offshore outsourcing is a phenomenon that affects us in many ways.

### **2. Apparent Strengthening of IT Employment Market**

The market for graduates of our information science and telecommunications programs appear to be improving nationally and locally. We are see increasing numbers of applicants, increased interest in hiring student interns, and increasing inquiries for graduates. As these trends strengthen and are reported by the media, we expect the attractiveness of career opportunities in the information sciences and telecommunications to improve. We expect that this will result in an increase in enrollments in our programs in these areas.

Part of this strengthening is due to the overall improvement in employment conditions in the local and national labor markets. We believe that another

component of this revived interest is related to the curricular changes we have made, particularly with respect to the information security area. This area has received increased interest from public and private sector employers in the years since 9/11/2001.

### **3. Continuing Innovations in Information Technologies**

Information technology is changing many aspects of society, and this trend will accelerate in the future. In a short period of time, the Web has become a society-changing force and ubiquitous computing is no longer the stuff of science fiction. Such fast-paced technological developments require as much attention to cognitive issues (e.g., human computer interfaces, modeling cognitive processes, and the integration of such technology in human life) and policy issues (e.g., ethics, privacy and the roles of different players - individuals, private organizations, government) as to the technological challenges. SIS, with its emphasis on cognition, ethics, and policy as well as technology is well-positioned to contribute to the development of such technologies.

Libraries and archives are similarly undergoing technological challenges and changes which SIS is ideally positioned to address. The public, especially students, are increasingly perceiving and using the Internet and the Web as their primary information source. How to maximize the advantages and minimize the disadvantages of such developments is a critical social issue. Libraries are themselves increasingly making their resources available in digital formats over digital delivery systems, and there is an increasing expectation that digital access systems (e.g., search engines), whether in library settings or on the web, will be more accurate, offer access to a wider variety of resources (e.g., images), and offer answers to a wider range of query types (e.g., true question answering rather than just concept identification). The gradual transformation of a library from a public place to a set of resources that are accessed through computer networks and other technological intermediaries presents challenges and opportunities to future librarians. This trend provides for rich fodder for discussions about the future of the profession; it also provides challenges for our professional education programs.

Digital storage capabilities have expanded so dramatically in recent years that an individual can now afford several terabytes of capacity, an amount that until recently was thinkable only for national agencies and the largest corporations. This enhanced storage capacity raises as many issues as it solves, however; and many of these issues again involve elements of policy and human cognition. For instance, determining what is worth saving in terms of its potential future use, and how to migrate materials over generations of technological changes are challenges facing everyone from individual families to national governments. A very basic challenge is providing the information needed for a particular purpose in light of such vast accumulations of data (as seen, for instance, in the attempts by the federal government to find the terrorist-indicating "needle" in the vast and heterogeneous "haystacks" of data that it collects) while maintaining appropriate standards for personal privacy and civil rights.

All these changes and challenges involve the intersection of people, society, technology and policy. The School itself is challenged by such developments as it attempts to evolve and to prepare its students for such a changing world. These changes are intellectually engaging for research even as they pose challenges to the future of professional and academic education. SIS, with its diverse faculty and faculty expertise spanning many cognitive, policy, and technical spheres, both within the world of libraries and the broader worlds of information science, is well positioned to aid society in making the best of these challenges.

#### **4. Changes in Federal Funding Patterns**

Early indications are that the National Science Foundation budgets will be increasing in the coming fiscal year. The Institute for Museum and Library Services has also indicated an increased interest in supporting research. While these trends may not immediately point to an increase in external research funding, they portend improvements in this area.

### ***C. Opportunities***

SIS has created for itself a significant opportunity: the governance and programmatic reorganization. This reorganization will allow us to more effectively and efficiently address all three strategic goal areas. In taking this initiative, the faculty is embracing the opportunity to create a new future, opening new avenues for strategic leadership, stimulating the intellectual life of the School, and forming a firmer financial foundation for the future.

## **1. Strategic Leadership**

### I-School initiative

For the past decade, the deans of the major schools offering degree programs in the information sciences have met periodically and informally to share information and experiences. In the past few years, these meetings have focused on sharing benchmark data, creating opportunities for collaboration, and a growing recognition that the lack of “brand recognition” is hampering growth and opportunities. Investigation into the causes of falling enrollment has revealed how little knowledge student prospects have of the career opportunities in information science. Indeed, very few even know that the discipline exists.

To build broader appreciation for the discipline, the deans have supported an initiative managed by MBS Associates to develop a national public awareness campaign for “I-Schools”. We have observed that people think they know what a business school (or B-school) is and why they would attend one, even though there are significant differences between these schools. Information Schools, or I-Schools, have a similar relationship to one another as do “B-Schools”, but without the public understanding of what they can and do offer.

To further a shared culture among I-Schools, the first I-Conference was held at Penn State University in the Fall of 2005. This conference began a dialog among more than 270 I-School faculty and administrators that served as a promising first step in creating this new shared culture. A second I-Conference is scheduled for October 2006 at the University of Michigan to further this dialog.

### Accreditation in IST

Accreditation has never been a factor in IST. In recent years, however, the Accreditation Board for Engineering and Technology (ABET) has become interested in accrediting undergraduate programs in information systems and graduate programs in telecommunications. The former is a fairly close match to our Bachelor of Science in Information Science program, while the latter, to our Masters of Science in Telecommunications program. Accreditation is an important vehicle for student recruitment and curriculum planning. The revised BSIS curriculum was designed to be consistent with ABET criteria. While it is not our intention to seek this accreditation in the coming year, we plan to engage in this process within three years.

In the telecommunications area, accreditation criteria are still under development. The Director of the MST program, is working with ABET and peer institutions to define a set of criteria that would be applied to the MST in the future. We view this as strategically important because it will help set the shape and direction of graduate telecommunications education for many years to come.

### Engagement of new BOV

The Dean, Provost and Chancellor have been working to reconstitute the SIS Board of Visitors. After considerable consultation, the members of this board have been identified and invited to participate. This board is expected to meet for the first time in Fall 2006.

### Learning from Workforce Study

One of the significant research projects being conducted at SIS has been a study of the future workforce needs of the library profession, which has been funded by the Institute of Museum and Library Services (IMLS). While this research is still in progress, we have an opportunity to respond to its results through curricular and research initiatives as the results are being discovered. We expect that this will give us a competitive advantage with respect to our peers.

### Embracing Offshore Outsourcing

Our expectation is that the phenomenon of offshore outsourcing that has emerged in the past decade will continue to take shape as companies and organizations discover its most effective and appropriate uses. Thus, we are moving to prepare our students for this emerging environment by simultaneously focussing on skills and capabilities that are less likely to be moved as well as by providing learning and practical experiences to our students with peers at select

international institutions. We are in active discussions to strategize and formalize such opportunities with faculty at Beijing Institute of Technology and the newly created International School of Information Management (i-SIM), a joint project between Mysore University (India) and the International Institute of Information Technology in Bangalore (India) in which we are also a partner.

## **2. Intellectual Vitality**

### Faculty Searches in DLIS

The Department of Library and Information Science is currently searching for two faculty members to replace Dr. Amanda Spink, who resigned to accept an endowed professorship in Australia, and Dr. Margaret Kimmel, who will retire in June 2006. The faculty is also engaged in a discussion about filling the Doreen Boyce Chair in Library and Information Science, which has been vacant since Dr. Jose Marie Griffiths left in 2005. The process of hiring new faculty members requires a broad engagement of the faculty, which stimulates discourse on future directions for the program.

## **3. Financial Strength**

### Revitalization of CAS

A component of positioning the MLIS program for future changes in demand is the revitalization of the Certificate of Advanced Study programs. Especially when offered using distance technologies, the CAS provides a mechanism to deliver educational programs to mid-career professionals. An early focus will be digital libraries. We believe the opportunities here are significant given that many libraries now have digital collections, and that many librarians have little or no education to develop and support these collections.

In a similar vein, faculty members in the information sciences are considering a series of executive and management workshops. Our belief is that these must be quite different from our traditional academic programs as the marketing, objectives, and delivery formats are quite different.

### Fundraising

A key component of financial strength is building stronger relationships with our partners: alumni, friends, foundations and corporations. A development plan is included in the appendix that provides us with a plan and goals for the coming year.

## ***D. Challenges***

The vision of SIS is to be the premier I-School: transforming society through information. In Section I, we claim that we will achieve our vision if we are strong financially, have an intellectually vital environment, and are recognized as strategic leaders in our field and in our professions. While we believe this to be true, we also recognize that achieving our long term goals and therefore our

vision begins with an assessment of our current state, the development of a roadmap that moves us toward our vision, and a set of achievable steps along that road in the coming year.

Every organization faces environmental factors that challenge its ability to achieve its vision; SIS is no exception. However, exceptional organizations are able to leverage their internal resources and partnerships to respond to their environments in a way that helps them reach their goals. So, it is more useful to consider what how we can organize the resources and partnerships we have to move toward our vision.

One of the principal goals of the faculty reorganization was to improve our ability to respond to our current environment. This response may come in many forms, including:

- A greater ability to innovate in academic programs
- New research initiatives
- More fluid internal resource reallocation

As an academic institution, our activities have traditionally been focussed on developing knowledge through research, communicating knowledge through educational programs and publications, and serving the community with our expertise. While these activities could be open to change, doing so must be consistent with our mission as well as the University's. Thus, we consider the challenges we face in the context of these activities.

## **1. Academic Programs**

SIS currently offers six degree programs and several tracks and concentrations within them. These degree programs are largely geared toward professional education and form the framework in which our curricular innovation takes place. Historically, these degree programs have been aligned with the academic departments within the school with relatively little crossover of students or faculty. Changes in our environment suggest that educational opportunities exist at the intersections of our traditional programs. While we have taken some steps in this direction with our new digital libraries concentration in the MLIS degree, we do not fully appreciate what other opportunities might be out there. Thus, some challenges we face are:

- Discovering how information professionals can operate more effectively in today's enterprises and developing educational programs accordingly
- Discovering ways in which existing courses and expertise can supplement existing degree programs effectively

## **2. Research Activities**

As described above, the federal agencies that have traditionally supported research in SIS have faced declining budgets. Not surprisingly, the annual externally funded research expenditures of the school have fallen by approximately 50% in the past years as a result. As the competition for such



funding increases, we have discovered that relationship-building is key to success. There is some indication that new opportunities may exist for interdisciplinary project teams. Thus, our future success in this area depends on our ability to nurture appropriate relationships with potential funders and flexibly form project teams that meet potential funder's interests. The challenges that we face to be successful in this area are:

- Developing a broader awareness of funding opportunities among all faculty
- Developing a richer mutual understanding among the faculty of the capabilities of each faculty member
- Increasing our willingness to work in new domains or on newly-discovered problems

### **3. External Impact**

Universities are information-centric institutions. Furthermore, the solutions to most problems that society faces today intimately involve information systems. Thus, the School of Information Sciences should play a prominent role on campus. Since this is not the case today, a major challenge for us is to communicate with our colleagues so that they can become more aware of the resources available at SIS to help them with their problems. We believe that we will accomplish this by creating an intellectually vital environment and by promoting faculty who are widely recognized as leaders in the profession.

#### **FY07 Objectives**

- Optimize Student Enrollments (Intellectual Vitality, Financial Strength)
- Enhance Diversity Initiatives (Intellectual Vitality)
- Enhance Research Productivity (Strategic Leadership, Intellectual Vitality)
- Foster a High Quality of Life for Students, Staff, and Faculty (Intellectual Vitality)
- Strengthen Each Program's Curriculum (Strategic Leadership, Intellectual Vitality)
- Promote the School and Its Programs (Strategic Leadership, Intellectual Vitality, Financial Strength)

## **IV. FY07 Objectives**

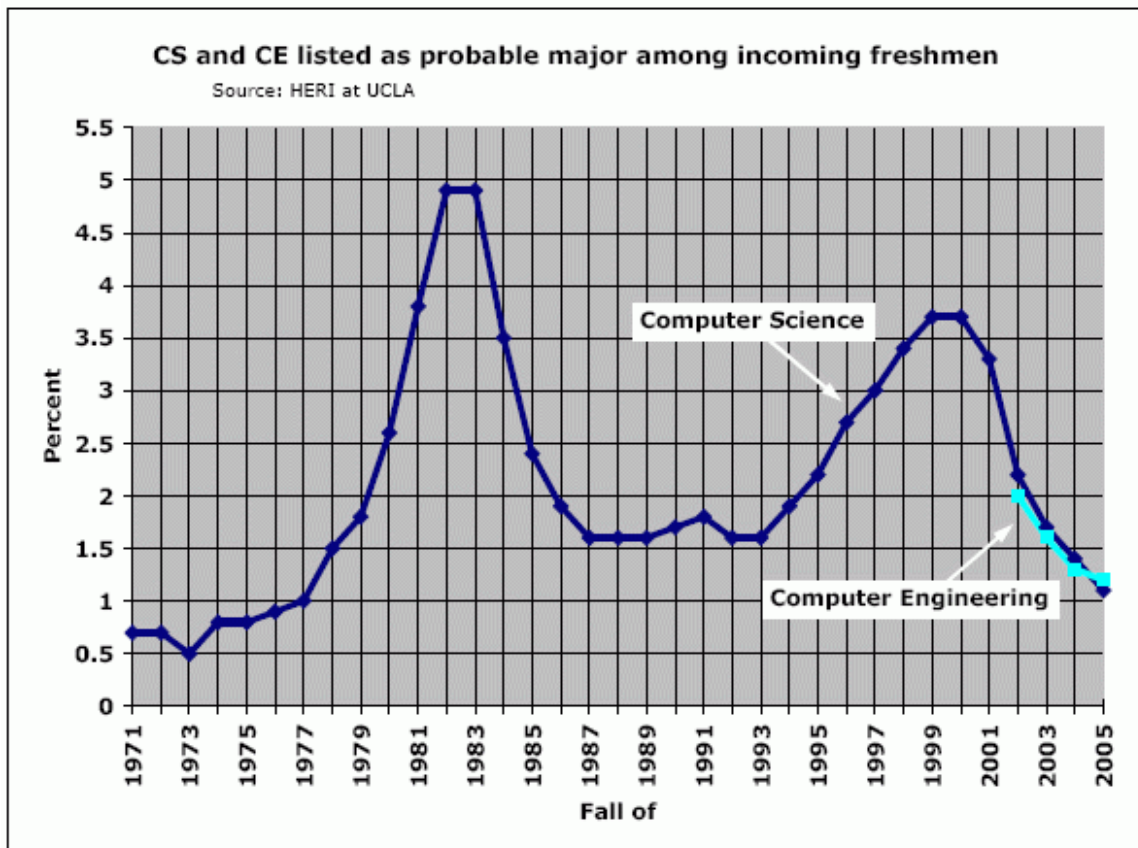
### ***A. Optimize Student Enrollments (Vitality, Strength)***

The SIS budget is still heavily tuition-driven so that our financial strength depends on our ability to meet appropriate enrollment targets. In the IS and

Telecommunications programs, this means increasing the number of students, while in the LIS programs, it means finding and sustaining an appropriate balance between enrollments and faculty and staff resources.

### 1. Enrollment Targets

The Provost’s Office asks each School to project enrollments each year, and SIS has historically included these projections in its annual plan to the Provost. SIS’s projections typically reflected the School’s optimism tempered by national data regarding student demand for such programs as offered by SIS. After three years of falling enrollment in the Information Science and Telecommunications degree programs, last year the School mounted a major marketing campaign, including hiring a full-time Director of Recruitment, Admissions, and Financial Aid and a part-time Director of Diversity Initiatives. The enrollment projections submitted last year anticipated short-term success in that campaign. While the employment picture for graduates in these disciplines is beginning to improve, the optimism we projected in last year’s plan was premature. National data reported by the Computing Research Association indicates a continuing drop in student interest in computer science and computer engineering, the fields most closely aligned with Information Science and Telecommunications programs for which broadly-based demographic data is routinely collected.



Accurate enrollment projections can be generated when student demand (measured by applications submitted) substantially exceeds supply (measured by offers of admission extended). Thus, SIS is able to forecast with substantial confidence enrollment in its Library and Information Science (LIS) program. When student demand is below supply, as is the case in the Information Science and Telecommunications programs, targets can be set, but predictions cannot be rendered with any confidence.

Last year, SIS's marketing campaign included four months of targeted advertising on Google. Extensive lists of disciplinary search terms were provided to Google. Users who used any of these terms were then provided with the opportunity to "click through" to the relevant program at SIS, where they were given the opportunity to begin an online application process. Data collected over the four months during which our recruitment campaign was in full swing indicated that inquiries into SIS programs were relatively proportional to the current enrollment in those programs. We received the largest number of inquiries for the LIS program, with less for IS, and fewer still for Telecommunications. These data strongly suggest that School-specific marketing is likely to have only a small influence on enrollment, since the broad demographic is already represented in the composition of our students.

This year, SIS has adopted a broader array of approaches to address enrollment in Information Science and Telecommunications. Ultimately, what is needed is a growth in student demand fueled by an improved employment market. But SIS has no direct influence over either of these. We do have the opportunity, however, to position ourselves appropriately to benefit from increased demand when it appears. We are taking four pro-active steps.

1. *Internal agility:* The faculty has voted to re-organize governance of the School through a unified faculty, removing the historic barriers to agility and adaptability encountered by departmental structures. The new governance structure will become effective on July 1, 2006. This reorganization opens up new modes and possibilities for collaboration among faculty members. We expect that the full benefits of this reorganization will take several years to emerge.
2. *Marketing:* We will continue aggressively marketing our programs in anticipation of recovery in student demand. Our annual I-Fest is the most visible local outreach event, and we have markedly increased our media exposure through the efforts of our new Director of External Relations.
3. *I-School collaboration:* Sixteen schools in the US and two in Canada have organized the I-Schools Consortium. The consortium was originally organized to develop a national branding campaign for information schools, but is also providing a forum for a broader marketing campaign than any of the individual schools could afford. The dean of SIS was one of the founders of this consortium and is chair of its committee working on promotion of the information field.

4. *Curricular reform:* The curricula for the BSIS and the MSIS degree have been restructured to provide well-defined areas of focus and tracks (respectively) for which our market analysis indicates there is potential demand and where we have substantial strength. The MLIS curriculum has had several longstanding tracks, including one in School Librarianship and another in Archives and Records Management. A Digital Libraries concentration has been added to the MLIS curriculum to attract those potential LIS students who have an interest in the technological aspects of librarianship.

While there are no guarantees that student demand will return to historic levels, there are indications that employment opportunities may be increasing for students with strong technical foundations who also have skills in project management and an appreciation for the increasingly complex policy space. These are the types of positions for which SIS educates its students. We remain optimistic that by positioning ourselves strategically, including the steps described above, the School will be prepared for student demand as it returns.

In that context, our near-term as well as long-term enrollment projections are in the tables below. We include a table for new students because that is where the effect of our recruitment efforts will show up first.

<b>New Students</b>	<b>Fall 2005 (06-1) (Actual)</b>	<b>Fall 2006 (07-1)</b>
<b>BSIS</b>	<b>28</b>	<b>41</b>
<b>MSIS</b>	<b>24</b>	<b>25</b>
<b>MLIS</b>	<b>145</b>	<b>130</b>
<b>MST</b>	<b>11</b>	<b>15</b>
<b>PhD – IS</b>	<b>3</b>	<b>5</b>
<b>PhD – LIS</b>	<b>5</b>	<b>5</b>
<b>PhD – Tele</b>	<b>0</b>	<b>2</b>

Our overall enrollment targets are in the table below. While it is clear that our three year enrollment targets are optimistic, we believe that these long term enrollment levels will provide the appropriate balance for the School in terms of revenues and resource allocation. We will continue to try an array of approaches, detailed below, to reach these goals. A more detailed outline of our marketing efforts for AY 2007 is attached in an Appendix.

<b>Total Enrollment</b>	<b>Fall 2005 (06-1) (Actual)</b>	<b>Fall 2006 (07-1)</b>	<b>3-Yr Target</b>
<b>BSIS</b>	<b>118</b>	<b>100</b>	<b>130</b>
<b>MSIS</b>	<b>73</b>	<b>74</b>	<b>100</b>
<b>MLIS</b>	<b>393</b>	<b>399</b>	<b>350</b>
<b>MST</b>	<b>39</b>	<b>40</b>	<b>54</b>
<b>PhD – IS</b>	<b>34</b>	<b>35</b>	<b>≤40</b>
<b>PhD – LIS</b>	<b>36</b>	<b>34</b>	<b>≤30</b>
<b>PhD – Tele</b>	<b>26</b>	<b>34</b>	<b>≤25</b>

## **2. FY07 Recruitment Plans**

As a professional school, many of our students are highly focussed on the career opportunities that are available after completing their degree. This will continue to be one of the primary messages that we will communicate through all of our materials. A detailed recruitment plan is in Appendix I. The paragraphs below highlight the features of that more detailed plan.

As the recruitment and marketing professionals that we have hired do their work, it is important that we improve the internal infrastructure for recruiting. The primary goals for the coming year are:

- Gather information and competitive intelligence needed for recruitment planning and activities.
- Make active, positive and regular connections with identified constituencies: prospective students, current students, alumni, faculty and staff, actual and potential employers, and professional organizations
- Create an information system, instrument our recruitment tools, and gather data that will measure our progress; use this data to consistently refine our recruitment strategies and techniques.
- Develop baseline data to monitor year-to-year improvements in SAT or GRE scores (as appropriate) and undergraduate GPAs for entering students.

### **BSIS**

Recruitment for the BSIS program differs significantly from recruitment in the professional master's and PhD programs. As an upper-level undergraduate program, the BSIS has historically drawn the majority of its students from those already enrolled as undergraduates in the Oakland campus. Other significant sources of students have been transfer students from other local colleges. Thus,

the following activities are expected to be most effective at recruitment into this program:

- Host highly visible SIS promotional events on campus aimed at undergraduate students, especially women, such as:
  - An annual I-Fest that includes a variety of activities and experiences for community building and learning.
  - Outreach sessions in selected dormitory lobbies.
- Provide more targeted story opportunities to the *Pitt News*, with the goal of expanding SIS coverage.
- Target the recruitment of transfer students from other regional colleges (including out of state)

In the longer view, future BSIS enrollments will depend on building an infrastructure that reaches on-campus students earlier in their studies (eg. freshmen), high school students, and students from other colleges in the region, including Pitt's regional campuses. By participating in the regional SciTech Festival (held annually at the Carnegie Science Center), we hope to begin reaching high school juniors and seniors who already have an interest in science and technology.

### **Professional Masters Degree Programs**

Recruitment into the professional master's programs (MLIS, MSIS and MST) requires a diverse set of strategies, as the career goals of the students for each of the three programs are quite different, as are the content of the curricula. As with the BSIS program, we focus on career opportunities. The MSIS and MST programs suffer from a public belief in poor employment prospects (as does the BSIS). Unlike the BSIS, the MSIS and MST programs have traditionally enrolled a greater percentage of international students. The post 9/11 changes in US immigration policies for international students wishing to study in the information technology fields have created greater risk of enrollment declines in these programs. Thus, elements of the recruitment strategy for IST include:

- Developing a long-term marketing strategy that targets attracting more domestic students to the IST Master's programs
- Developing a structured program through which we can reach out to large corporate recruiters such as IBM, Lockheed etc.
- Scheduling campus visits and graduate advisor informational programs.
- Employing financial aid resources more effectively and more directly toward recruitment objectives
- Visiting the human resources departments of local and regional firms to introduce them to graduate programs offered by SIS

To counteract the negative perception of career prospects in IST, we propose the following strategies:

- Utilizing members of the Recruitment Cadre to identify and secure practicum jobs for our students.
- Strengthening the role and impact of the Industrial Advisory Council around the development of recruiting strategies.
- Creating a visual career path/map and/or mapping tool that illustrates the path from School admission to career beginnings.
- Focusing on putting out positive information about employment prospects to interested communities and the media to create a positive “buzz” about the IST professions.
- Utilize alumni in the Recruitment Cadre to identify and secure practicum jobs for our students.

While the urgency of implementing an effective recruitment program for the MSIS and MST programs is of highest priority, it is important that we sustain recruitment efforts for the MLIS program. Recruitment efforts include the following activities:

- Initiating and expanding the use of “virtual chats” with faculty and current students to attract potential applicants from around the country
- Increasing awareness and recruitment efforts aimed at employers and alumni at regional, state, and national professional conferences
- Building upon our history of alliances with public libraries by expanding the Partners Program with academic, special and school libraries that offers students limited financial aid from the School and an hourly stipend from the employer.
- Expanding the efforts of the Recruitment Cadre at the monthly Info Sessions, which are heavily attended by MLIS prospects
- Continuing the successful active collaborations with employers and alumni members of the Recruitment Cadre, including hosting alumni events at professional meetings and conferences and hosting meetings with the officers of professional associations.
- Continuing recruitment efforts in the MLIS specializations through the continued use of special brochures and ads in professional journals.

## **PhD**

The PhD programs are investments in the future. They are also a central component of the research mission of the school. Recruitment for the PhD programs is based on sustaining the current numbers of students (approximately 30-35 active students in each of the IS, IS/Tele and LIS doctoral programs). Successful recruitment of outstanding students is much more dependent on the availability of financial aid and external research funding than for the professional degree programs, as well as on more subjective factors such as raising the profile of faculty through their research and publications, which attracts

prospective students. IMLS has recently asked us to work with the American Library Association to develop a proposal that would increase financial support for minority doctoral students. We expect to take full advantage of this new support in the coming years.

Overall, our strategies include:

- Gradually shifting the investment and emphasis of our PhD recruiting from international to domestic candidates.
- Aggresively promoting the quality of our faculty
- Hosting information sessions for master's level students.
- Monitoring the effect of the new single term of admission instituted by the IS and LIS programs.
- Assuring that high quality new students are admitted each year to replace those graduating and those who are at the Full Time Dissertation stage in the IS, IS/Tele and LIS doctoral programs
- Revising LIS3000, the introductory course for PhD/LIS students.
- Improving the preparation of PhD students to do research by differentiating academic from professional education.

### ***B. Enhance diversity initiatives (Vitality)***

The SIS community believes that a diverse community will provide the best learning environment. Diversity is important in the students, faculty and staff, and includes racial, ethnic, intellectual, gender and age diversity. A focus on diversity may also help us broaden the pool of potential students to support our enrollment targets. Diversity in faculty and staff depend on resignations and retirements, so it is difficult to meet goals in this area on a short term basis. Thus, our near term goals for diversity will be focused on students.

As with recruitment, the diversity objectives vary by program. The recruitment of African American students is a high priority in the MLIS and PhD LIS programs, which have historically been the most successful in recruiting and graduating African American students. Continuing to increase the number of men in the MLIS program is also a priority, and efforts have been successful in doubling the number of men in the program over a five-year period. This is most evident in the increase in the number of men enrolled in the on-campus program to 69 (26%) in Fall Term 2005.

The undergraduate and graduate degrees in information science provide opportunities for women to enter the information technology field, yet we have been less successful than we wish in this regard. Thus, improving gender balance in all IST programs is a priority for the coming years, as will be improving the racial and ethnic diversity in these programs. In every program we are attempting to raise the number of African American students to approximately 10-13 percent to match the overall percentage within the University.



Intellectual diversity refers to the prior educational backgrounds of students in the graduate programs. Historically, the graduate programs at SIS have done well in this regard, as the professional programs facilitated career changes for students. It is important to the culture of the school that this diversity be maintained. To do so, we will pursue the following strategies:

- Increase the number of students with undergraduate science degrees who matriculate into all SIS graduate programs
- Increase the intellectual diversity of the SIS student body by encouraging admission of students from various backgrounds and promoting interdisciplinary research.
- Intellectual diversity is also achieved when students focus their studies. Thus, an additional goal is to increase the proportion of DLIS students who matriculate in specializations (e.g., Archives/Preservation, Medical Librarianship, Digital Libraries and Information Management). The number of students in the School Library Certification Program has expanded over the past five years and now represents approximately 21 percent of the MLIS student body.

A more detailed plan outlining our Diversity initiatives is attached.

### ***C. Enhance Research Productivity (Leadership, Vitality)***

Situated in a research university, SIS is a research school. The goals of the school require that the research performed here has as much impact and is as effective as possible. For students to see this value, the school's research must be evident to students at all levels, through participation in projects or classroom activities.

#### **1. Environment**

The first step in improving the quality, quantity, and impact of research is to foster an environment for research. In a good research environment, faculty and students at all levels must be engaged together in addressing the key research questions of the information professions. Engagement can be strengthened through collective research planning, a tactic that fosters discussion and collaboration, and preparation to take advantage of opportunities as they present themselves. Finally, the impact of research is a function of not only its quality but also of publicity. In that context, we plan the following activities for the coming year.

- Engagement
  1. Encourage student research at all levels through student research symposia, joint projects with faculty members, and mentoring students. The poster session at last year's I-Fest is an example of this.
  2. Bring research into the classroom at all levels by specifically discussing research advances and questions in courses.
  3. Encourage unfunded research as well as funded research

4. Work with faculty who have developed sustained research and publication programs in recent years to seek their advice in strengthening the SIS culture in this area.
- Planning
    1. Continue to hold a research retreat to discuss current activities, future directions, and strategies
    2. Continue to foster informal discussions when relevant RFPs are released
  - Publicity
    1. Increase visibility of research at SIS
    2. Highlight successful proposals
    3. Develop and distribute an annual research report
    4. Publish in diverse, high quality venues

We expect the faculty reorganization to improve the research environment. Since the dialog among faculty members will increase in a unified faculty, we expect new collaborations to occur. We further expect our students to become more aware of the breadth of research activities at SIS.

## **2. Publications**

The number and quality of publications are an effective way to measure the fruit of research activities. As a benchmarking tool, we will track the quantity of books, book chapters, peer reviewed journal articles, and conference papers. We will also develop a benchmarking datum by which we can assess the overall impact of the School's research. We have begun this task as evidenced in the list of faculty publications in the appendix.

## **3. Proposals**

While papers are a good way to assess past research activities, proposals are an effective method to measure prospective research. Proposal preparation requires a significant investment by faculty members in time and effort. Thus, it is an important goal for that effort to be as significant a contribution to the school as possible.

Successfully funded proposals depend not just on the quality and presentation of the proposal but also on exogenous factors, such as the budgets of the funding agencies. In the areas traditionally pursued by SIS, these budgets have been declining in recent years as the number of proposals submitted by faculty has been increasing. Thus, it is important to measure not just annual research expenditures, but also the ratings of proposals. Thus, we set the following goals for SIS:

- Increase the annual external funding expenditures by 20% by:
  - Developing benchmarks for proposal competitiveness

- Diversifying the agencies to which proposals are submitted
- Increasing the number of funding sources to the School
- Refining our research funding strategy
- Improve the quality of proposals by:
  - Enhancing professional staff support for proposal preparation
  - Develop a voluntary peer review process for research proposals, beginning with new faculty
- Provide backup professional staff support for research administration

### ***D. Foster a High Quality of Life for Students, Staff, and Faculty (Vitality)***

The research and learning environment depends in no small measure on fostering a high quality of life for students, faculty and staff. Quality of life depends on many factors, including building and sustaining an engaging community and focusing on smooth and predictable operations so that all community members can focus on their priorities.

#### **1. Community**

A vital intellectual environment depends on an engaged community of faculty, students, staff and alumni. To this end, we are planning a number of community building activities for the upcoming year. A central part of this is to repeat the successful "I-Fest" on the Oakland campus and to expand the use of RAPAI, an innovative communication medium for local, just-in-time information. It is our expectations that the faculty reorganization will provide new opportunities for faculty to engage in discussions and collaborative efforts with each other. The lecture series that the school sponsors provide these opportunities as well.

#### **2. Operations Focus**

Focus on operations and infrastructure that enable students to learn more effectively and faculty and staff to work more productively.

#### Faculty

Interviews with faculty members indicated that staff support for proposal preparation and support for routine and repeating tasks, such as teaching dossier preparation, photocopying, travel, etc. was most helpful for them. For faculty members using distance delivery, this includes providing technical support so that they can focus on pedagogy.

More significantly, faculty members were interested in exploring an alternative performance evaluation model that would enable them to focus on their areas of strength and would enable them to plan their activity mix over a multi-year period. Such a model has been under development, so the goal for FY 2007 is to complete the development and deploy the program.

A continuing goal is to develop systems and to work with staff to minimize the faculty reporting requirements. At present, faculty members are required to fill out numerous reports, often with the same or similar data, and often with data that is contained in University databases, such as PeopleSoft. We will continue to streamline these processes while maintaining appropriate levels of accountability.

### Staff

Interviews with staff indicate that they would be more effective if they a greater awareness of the various activities taking place in the School. In addition, several staff members found that they spent an inordinate amount of time on scheduling meetings, which could be resolved if technical support (such as common calendaring) were implemented throughout the School. Staff members also felt that they could benefit from additional training opportunities and improved support for desktop computing, including technical support and maintaining up-to-date hardware and software. Thus, we plan the following activities in the coming year:

- Implement a shared calendaring system for SIS administrators, staff members, and willing faculty members;
- Use the recently implemented Performance Impact Workplace (PIW) system to improve communications, clarify expectations, and assess training needs.

### Students

The matriculation and retention of SIS students depends in significant measure on a reliable student services operation and timely and focused information dissemination. The SIS Student Services team has made significant strides in streamlining the admissions, registration, and graduation processes, which supports matriculation. In addition to streamlined processes, continual training of the staff that interacts regularly with students is necessary, particularly as the University's student tracking system continues to evolve.

The School's web pages, improved over previous years, require constant attention to ensure that they contain correct and consistent information and are as usable as they can be. Predictable course scheduling has been implemented inconsistently across the degree programs, which makes it difficult for students to plan their studies. Thus, the following are the objectives for the coming year in this area:

- Use RAPAI more effectively to disseminate timely information.
- Regularly review the SIS web site for out-of-date information, dead links, and errors.
- Develop two year "best guess" course schedules for all programs.
- Regularly review the student services processes from the point of view of the students.

## ***E. Strengthen Each Program's Curriculum (Leadership, Vitality)***

Curriculum is one of the key "products" that SIS can offer to students. A compelling and up-to-date curriculum is one way in which exogenous pressures on student enrollments can be mitigated. Such a curriculum will engage students and faculty, which will promote the vitality of the community. Further, curriculum is also a way in which the School can exercise the leadership expected from a premier I-School. Each program has its own curricular objectives, as described below.

### **1. BSIS**

One goal of last year's plan was to develop a proposal for a re-designed BSIS curriculum. That re-design process has taken place and now requires implementation. Longer term plans for the BSIS include:

- Explore the expansion of the BSIS to 3 or 4 years to avoid the course compression problems currently experienced by students and to meet the expanded credit requirements in the ABET standards.
- Explore opportunities for engaging MLIS faculty in the BSIS curriculum
- Begin the ABET accreditation process
- Implement marketing plan for the new curriculum
- Implement the new curriculum for the Fall 2006 term.

### **2. MSIS**

The MSIS curriculum committee has developed defined plans of study for each of the new the tracks of study. The principal goals for the coming year include:

- Re-design the basic core course INFSCI 2000 (Introduction to Information Science)
- Complete the implementation of the courses necessary for the tracks, and monitor their success
- Identify appropriate courses for web-based delivery and deliver at least three courses in this mode.
- Create and implement a marketing plan that promotes the "tracks" of study and burgeoning career opportunities in the information sciences

### **3. MLIS**

For the MLIS program, a key activity for the next year is the re- accreditation of the MLIS degree program. In April 2006, the Committee on Accreditation of the American Library Association will conduct a site visit. To support this process, the faculty prepared an extensive program presentation that identifies how our program complies with the *Standards*: mission and goals, faculty, curriculum, students, administration and financial support, and physical resources and facilities.

While the COA visit clearly dominates the objectives for the year, the following objectives have been planned as well:

- Expand the offering of "blended" courses with FastTrack MLIS students and on-campus students that use online techniques and traditional classroom practices and evaluate their effectiveness
- Focus on improving and expanding methods of course delivery both on campus and in FastTrack MLIS courses and expand technical support to faculty revising and offering courses
- Implement and evaluate the offering of distance education programs outside the continental US, using the Virgin Islands partnership as an example
- Evaluate experiments with service learning and determine if they should continue.

#### **4. MST**

The MST faculty has recently completed the development of a joint program in information security in collaboration with the MSIS program. The remaining curricular objectives are:

- Revising and updating the computer networking curriculum;
- Developing a set of learning objectives for the MST program;
- Working with ABET and ITERA to develop accreditation criteria for telecommunications programs, and develop the documentation for the accreditation of the MST by ABET;

#### **5. School-wide Initiatives**

In addition to the program-specific initiatives described above, several faculty members have expressed interest in several School-wide curricular initiatives. Of particular interest is:

- Building on the current effort in Peer Evaluation of Teaching to provide regular and consistent feedback to faculty with the long term goal of improving teaching at SIS
- Exploring the possible structure and feasibility of a common graduate Introductory course for all master's level students in the School

#### **6. IT in the Curriculum**

Virtually all full-time and part-time SIS faculty members make extensive use of IT in their courses. This ranges from using CourseWeb, to using individually customized course web pages, to using specialized software in computing labs for teaching novel concepts in information science. Such use is expected of faculty in an I- School.

Even in courses that are closely related to traditional (often non-computational) courses such as cognitive psychology, or linguistics, SIS courses have a

computational side demonstrating, for instance, how psychological and linguistic theories are embodied in computational formalisms and software, and/or how these theories can inform and guide the development of technology.

In this section, we highlight the next generation of IT systems to support the curriculum that are being developed at SIS.

### Blended courses

DLIS faculty have implemented the concept of "blended" classes that combine students in the on-campus MLIS program and students in the online FastTrack MLIS program who are enrolled in the same class into one curricular enterprise that uses CourseWeb as the IT support for the class. Nine LIS courses over the Fall Term 2005 and Spring Term 2006 have been offered using a combination of CourseWeb for mounting course documents, virtual chat, and threaded discussion and CourseCast for providing digitized video of on-campus course sessions to FT MLIS students.

In addition, several faculty members have experimented using CourseCast for distance education. The courses offered using this technology include core courses in Understanding Information, competency-based courses in the School Library Certification Program, Database Design and Applications, and Interactive Systems Design. Evaluations indicate a high degree of student satisfaction with this instructional mode, and with the development of online collaborations. SIS faculty members use a variety of IT resources to support teaching. These include support for remote students as well as specialized learning experiences for on-campus students. To ensure that these locally-maintained and operated resources pose no significant security risk to University networks, SIS has invited CSSD to perform a security review of its computing and networking facilities. While this review is not yet complete, early indications do not identify serious risks to the campus environment from these specialized capabilities. We will continue to work with CSSD to ensure a secure and cooperative operating relationship between our respective infrastructures.

Some notable SIS educational IT resources are:

*CourseCast.* In 2006, a group of faculty explored advanced technologies to support our growing web-based educational programs. After an extensive search, the committee recommended partnering with Carnegie Mellon University to beta test their CourseCast technology in an operational environment. This technology was used on a pilot basis in the Fall 2005 (2061) term, and is being used in a production mode in the Spring 2006 (2062) semester to increasing demand and great success. Eleven courses are using CourseCast in the Spring Term 2006; 10 in LIS and one in IS. Funding for equipment and technical support comes from the Dean's Entrepreneurial Initiatives Fund.

*Virtual Theater.* A project supported by the Dean's Entrepreneurial Initiative Fund, the School repurposed laboratory space to develop a fixed

virtual reality “cave”. In addition to being a core research resource and an impressive recruiting aid, this resource has been useful in support of several courses taught in the School.

The SIS faculty has long felt that hands-on experiences are a key component of students’ education. These experiences vary widely by educational program and can include field placements, service learning, and prepared laboratory experiences. Some of these laboratory environments include:

*Telecommunications* The telecommunications labs have been an integral part of the professional education in telecommunications at SIS. The faculty continues to update the labs through equipment donations and by laboratory learning experiences for students. With funding from the Commonwealth of Pennsylvania, these labs were upgraded to include wireless technology several years ago. More recently, equipment grants from Cisco made laboratory experiences in Voice over IP possible. The telecommunications faculty continues to look for opportunities to expand the depth and breadth of student experiences in these labs.

*G/S.* Like the wireless lab, the Geographic Information Systems lab was founded with the support of the Commonwealth of Pennsylvania. This lab has helped SIS build a teaching and research profile in this high growth area. Recently, Dr. George Klinzing has identified GIS as one of the focus areas for the campus.

*SAIS.* The Security Assured Information Systems laboratory was established to support rapidly growing teaching and research needs in information assurance. Currently, this laboratory environment shares space with the GIS lab, and provides students with off- and on-line opportunities to experiment with modern computer and network security systems.

### ***F. Promote the School and Its Programs (Leadership, Vitality, Strength)***

As mentioned above, SIS utilized the services of MBS Associates to develop a strategic plan focused on supporting the three long term goals of the School. The combined role of all of these activities is not simply to “market” the school, but to move target audiences to *change their attitude or to modify their behavior* (for example having prospective applicants select our School as a first choice). The major goals are:

- Build upon our reputation as one of the top “1” schools in the world.
- Be recognized for overall academic excellence and ranked among the top three “1” schools in research.
- Increase the level of undergraduate enrollment In BSIS
- Increase the level of graduate enrollment across the board and improve the ratio of domestic to international students



- Support the University goals of increasing excellence in undergraduate education; building upon the University's reputation for excellence in research, and raising the level of public service and community involvement.
- Increase the visibility and reputation of SIS, (particularly among referral sources and those upon whom we rely for recruitment services)
- Increase the numbers of women and minorities attracted to SIS and meet or exceed the University demographics in this area.
- Increase the top-of-mind awareness of SIS and its programs for members of the University community
- Develop a process for measuring the outcomes of SIS initiatives and tools

## ***G. Measuring Our Progress***

Consistent with the recommendations of our consultants and the University PBC, SIS is committed to measuring the effectiveness of our activities. The SIS PBC engaged this challenge and developed some goals and objectives for the benchmarking program. To this end, the SIS PBC identified a set of peer schools that would be suitable for comparison to the School and its constituent programs.

### **1. Benchmarking Goals**

Our primary task in benchmarking is to establish a set of internal and external measures by which we can measure our progress in achieving our goals. While many things can be measured, the critical factor is how the actual data collected and monitored relates to the achievement of the School's goals in strategic leadership, intellectual vitality, and financial strength. We realize that measures that are collectable with reasonable cost (or effort) are likely to be imperfect, but we believe that these approximate indicators will be useful nonetheless, when interpreted within the bounds of their measurement.

### **2. Preliminary Work**

Our benchmarking efforts in the past year have focussed on understanding previous experience in higher education benchmarking. Our literature survey has uncovered a corpus of literature on the subject. This literature has helped us clarify our goals and processes. The questions we seek to address include:

1. External benchmarks:
  - a. How do we compare with our peer schools demographically?
  - b. How do we compare with our peer schools on external funding and publications? (These are proxies for measuring strategic leadership)
2. Internal benchmarks
  - a. How are we doing in meeting our long term goals of Financial Strength, Intellectual Vitality, and Strategic Leadership?
  - b. How is the quality of our students changing over time?

External measures:

Demographics:

- Number of degrees offered
  - Number of faculty
    - Full time
    - Adjunct
  - Number of students
  - Tuition rates
  - Financial aid budget (total)

Comparative leadership

- External funding (annual expenditure)
- Number and type of publications

Progress toward goals (Internal)

- Intellectual vitality
  - Number of collaborative papers with SIS coauthors
  - Number of collaborative papers with non-SIS coauthors
  - Number of colloquia
  - Number of joint proposals
- Strategic leadership
  - Number of conference presentations
  - Number of citations (last 3 years)
- Financial strength
  - Size of budget
  - Research expenditures per year
  - Gifts
- Student Quality
  - Average GRE of matriculating students (if applicable)
  - Average undergraduate GPA of matriculating graduate students
  - Average SAT of matriculating undergraduate students
  - Admission and matriculation rates

### **3. Peer Schools**

Developing a useful set of peer schools is a challenge for SIS because of the diversity of its programs. In developing the set of schools, the SIS PBC followed the following principles:

- Wherever possible, choose a university for which Pitt also collects benchmarking data.
- Wherever possible, choose one of the members of the Dean's I-School Group.

- Wherever possible, choose schools that have reasonable similarities to more than one SIS program.

The set of peer universities in the table below meets most of those criteria, and will initially be the set of peers to whom we will compare ourselves.

	<b>SIS</b>	<b>BSIS</b>	<b>MLIS</b>	<b>MSIS</b>	<b>MST</b>
<b>Michigan</b>	x		X		
<b>UNC</b>	x	x	X	x	
<b>Maryland</b>	x		X	x	x
<b>UIUC</b>	x		X		
<b>Penn State</b>	x	x		x	
<b>Syracuse</b>	x	x	X	x	x
<b>Drexel</b>		x	X	x	
<b>UMKC</b>					x
<b>Colorado</b>					x
<b>Washington</b>	x		X		

#### **4. Next Steps**

We are currently assessing the data that are readily available and trying to find measures on that data that correlate with our goals. We have examined the data routinely collected by the University and made available to the schools, have begun to scrutinize data that is collected annually by professional associations such as the Association of Library and Information Science Education (ALISE) and initiated more focused discussions with the deans of a few of our peers. We anticipate having a baseline of benchmark data established by the beginning of the fall 2006 term.

#### **5. Operationalizing Benchmarking Plan**

Demographic data

- Collect program specific data where possible
- Aggregate for school-wide data where appropriate

Progress toward goals

- Collect Paper authorship and conference publication data from annual publication report
- Collect SIS budget data

- Develop citation data
- Review schedule for colloquia
- Collect SIS proposal data

Review initial benchmarking process

- Did the data collected help us?
- Did we have the right goals?
- What would be useful in future?

## **V. Summary**

It is clear that SIS's goals are ambitious and its challenges daunting. We have struggled within our departmental structure to foster research and teaching efforts, but these clearly have historically remained the province of each department and/or specialization. With the vote to restructure our governance, practice, and procedures, we have committed ourselves to change. Even as this plan has taken shape, issues and questions have arisen which challenge our thinking but not our resolve. While it would be easier to sustain the status quo, that is neither our tradition nor our mandate. Our focus is on the future, and that future is one in which society, in all its functions and dimensions, will become increasingly information-intensive.

I-Schools educate professionals for information-intensive careers, regardless of whether these careers unfold in public libraries, educational institutions, the halls of government, or Fortune 100 corporations. The structural changes SIS is putting in place position the School to be a dynamic force among information schools and to be a leader for the 21st century.

## **VI. Appendices**