Welcome to the University of Pittsburgh's School of Information Sciences

Ronald L. Larsen

Dean & Professor

Information. *The Power to Transform Our World.*

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Our Leadership

- **Associate Dean**
  - Martin Weiss
- **SIS Council Chair**
  - Stephen Hirtle
- **Program Chairs**
  - Bob Perkoski (Undergrad)
  - Paul Munro (Grad IS)
  - Rich Thompson (Tele)
  - Richard Cox (LIS)

Our Degree Programs

- **Undergraduate program in Information Science**
- **Three Masters programs**
  - ❑ Library & Information Science (also available online)
  - ❑ Information Science and Technology
  - ❑ Telecommunications and Networking
- **Two Ph.D. programs**
  - ❑ Library & Information Science
    (+ concentration in Archives)
  - ❑ Information Science (+ concentration in Tele)

Undergraduate Information Science

BUILD information systems

DESIGN user interfaces

SECURE the digital environment

- **Information Systems**
  - enables students to use object-oriented design tools to design, build, implement, and test web-based information systems.

- **User Centered Design**
  - provides the visual and human-computer interaction skills needed to design and build prototypes of information systems interfaces, as well as to perform usability testing of these systems.

- **Networks and Security**
  - offers skills needed to design, build and test LANS, WANS, Wireless, Internet and Web-based networks.

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Graduate Information Science & Technology

- **Tracks of Study**
  - Database and Web Systems
  - Information Security
  - Geoinformatics
  - Telecommunications & Distributed Systems
- **Areas of Focus**
  - Cognitive Systems
 - Human Computer Interaction
  - Technology and Society

Telecommunications

- Telecommunications Systems
- Computer Networks
- Policy & Management
- Wireless
- Security

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Library & Information Science

- Academic Libraries

- Archival Studies

- Preservation Mgmt

- Digital Libraries

- School Library Certification Program

- Medical Librarianship & Medical Informatics

- Services to Children and Young Adults

- Reference Track under consideration
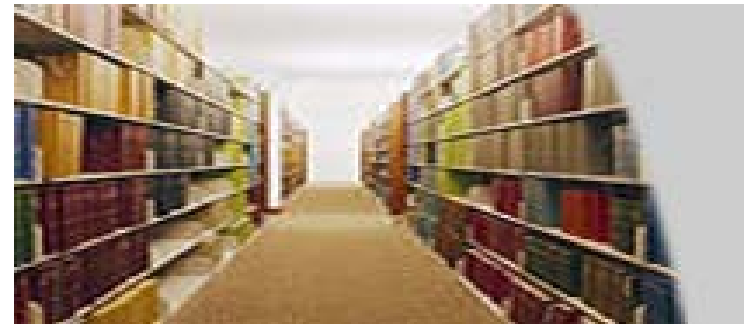
Our Faculty

- **Library & Information Science**
  - 11 tenure-stream (2 open)
  - 3 non-tenure-stream
- **Information Science**
  - 13 tenure-stream
  - 2 non-tenure-stream
- **Telecommunications**
 - 5 tenure-stream
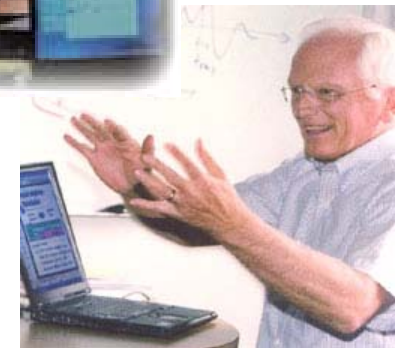
Some faculty news

- **Mary K. Biagini** honored by the Pennsylvania School Librarians Association (PSLA) as the 2007 Outstanding Contributor

- **Toni Carbo** receives 2007 Service Award from the Association for Library and Information Science Education (ALISE)

- **Marek Druzdzel** receives 2007 Chancellor's Distinguished Teaching Award

- **James Joshi** earns Pitt re-designation from NSA and DHS as a National Center of Academic Excellence in Information Assurance Education (CAE IAE)

- **Mike Lewis's** Pitt/CMU team places first in the RoboCup Rescue Virtual Robots competition.

- **Stuart Shulman** becomes Director of the Sara Fine Institute (SFI)

- **Richard Thompson** awarded a Career Research Award by the International Telecommunications Education and Research Association (ITERA)
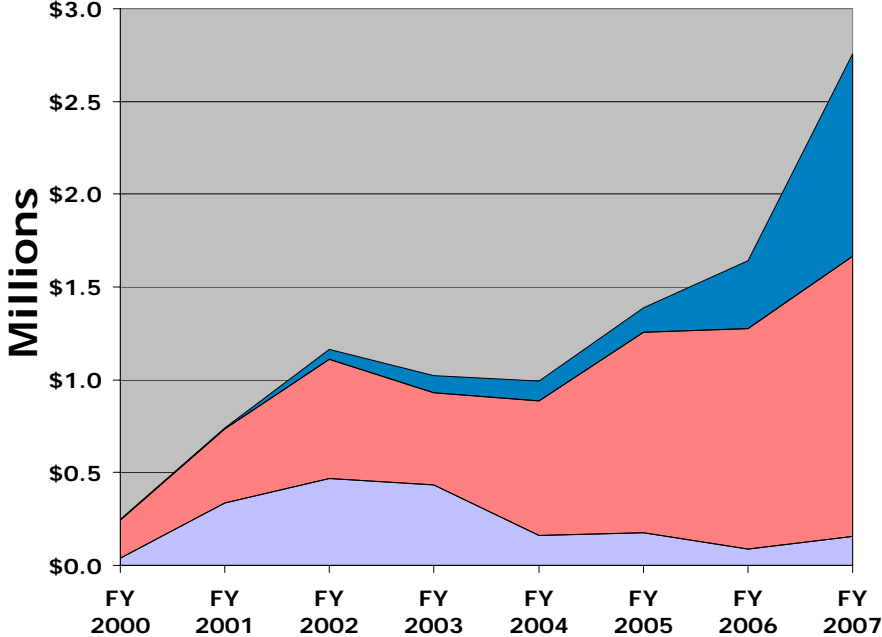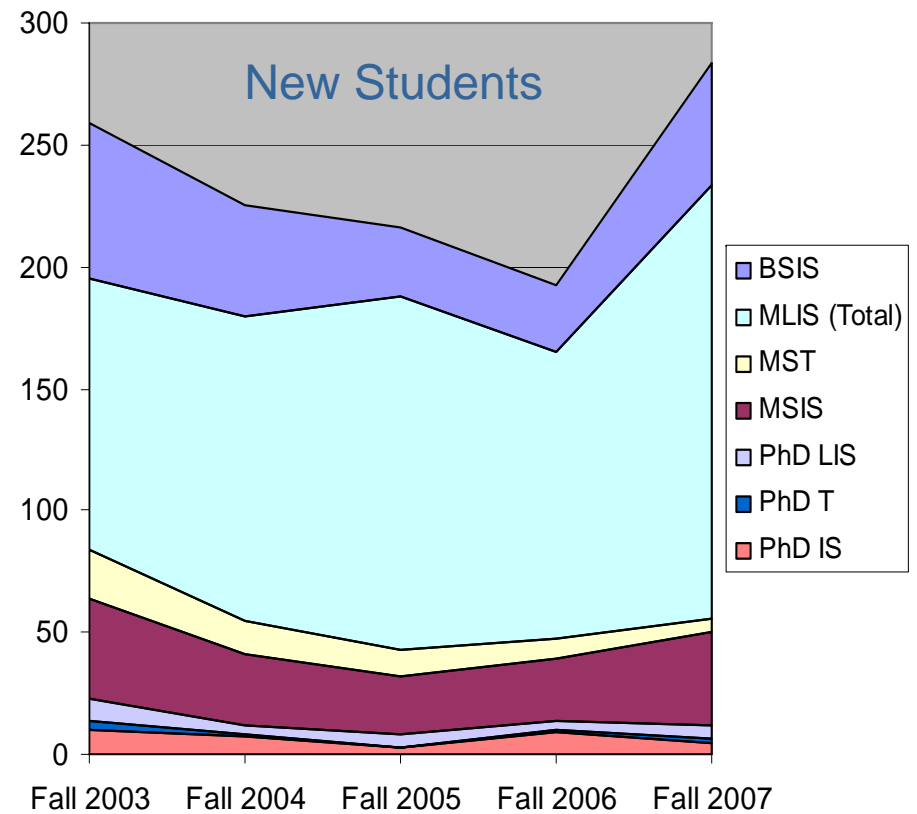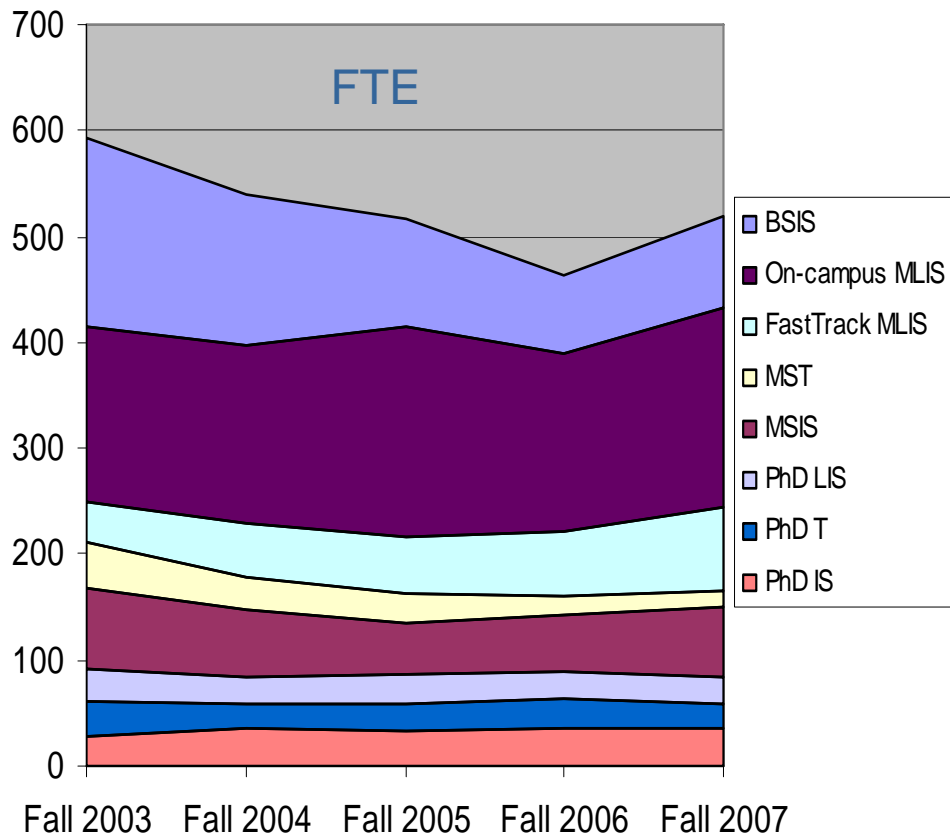
Our Federal Funding

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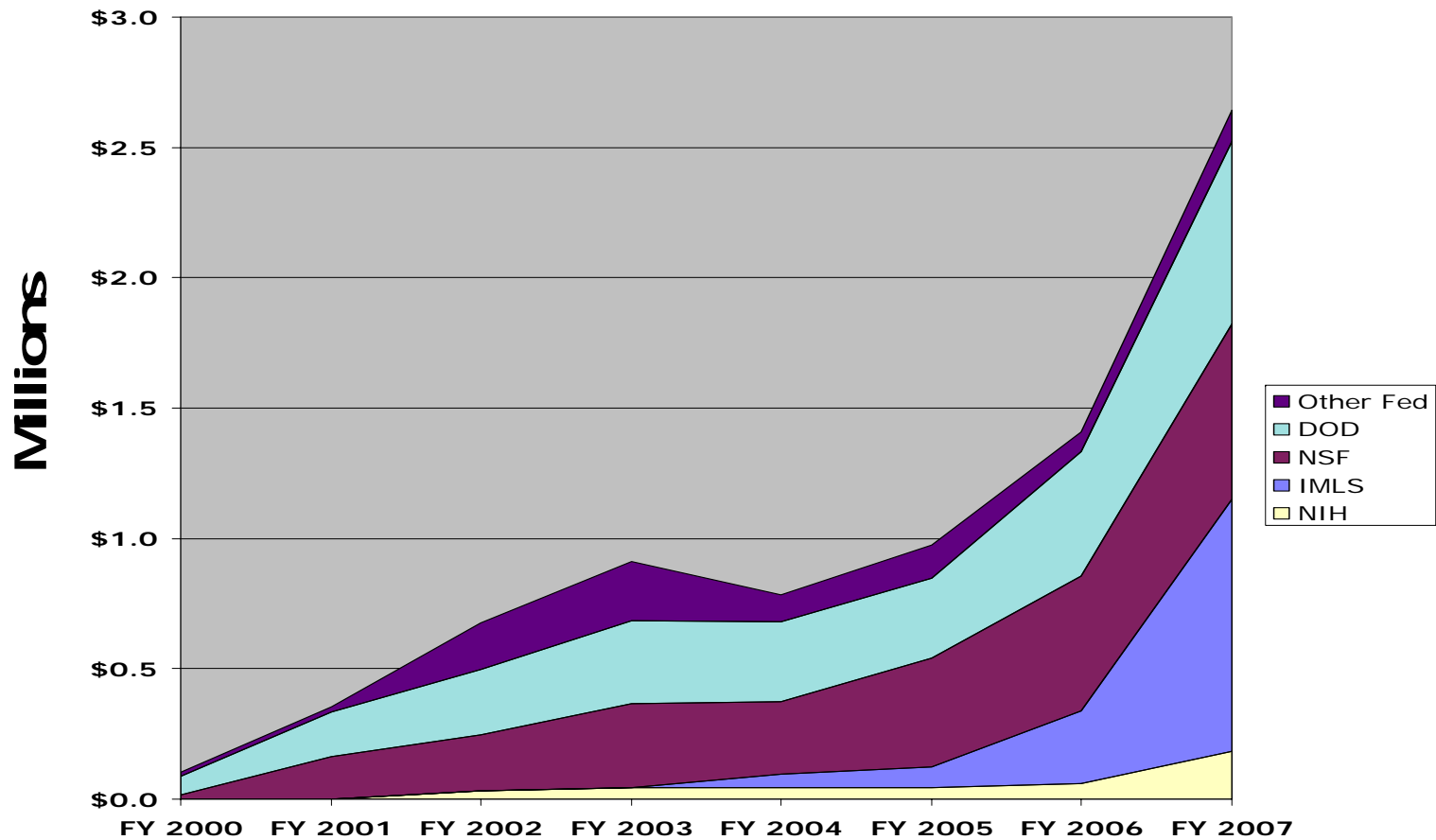
External Funding by Program

Total
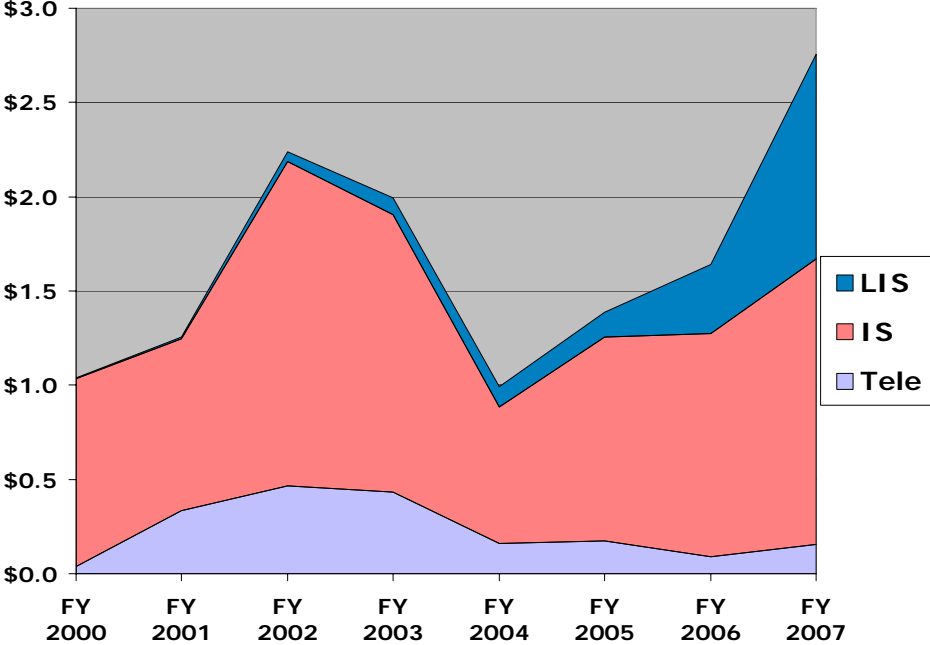
Total less Penn CRADA

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Our Enrollment

2006 BOV Recommendations

- **Build on historic and strategic strength**
  - Emphasize human interaction with information
- **Evolve toward integrated iSchool**
  - Develop common introductory graduate course ☑
  - Foster interdisciplinary research ☑
  - Work with Provost's office on image and marketing ☑
- **Adapt programs to changing market**
  - Expand online program to 20-40% of SIS students ☑
- **Increase gifts and endowments**
  - Build endowments to support student scholarships
  - Develop strategies with IA to attract major gifts

BOV recommendations, cont'd

- **Raise profile of undergraduate program**
  - Recognize it as strategic to long-term success of school ✅
  - Consider a 4-year version of program
  - Use the IS introductory course for recruiting ✅
  - Broaden the content to reflect breadth of iSchools' scope
  - Offer a minor in information studies to other degree programs
- **Selectively refine graduate programs**
  - Develop leadership training for mid-career professionals
  - Expand certificate programs to upgrade professional skills
  - Target specialized markets ✅
  - Comprehensively review Telecommunications curriculum ✅
  - Redirect financial aid to PhD students (LIS) ✅
    - Corollary expansion of Partners Program for MLIS students

SIS Progress

- ## Undergraduate
  - Task force formed to assess 4-yr version of program
  - Integrated survey course now offered as service course for the "quantitative" undergraduate course requirement
  - Provost-supported marketing is producing results
    - 89% increase in new BSIS students

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SIS Progress, cont'd

- Graduate
  - **SIS 2K course syllabus developed and approved in principle**
    - First offering targeted for Fall 2008
  - Two new online courses developed
    - Geoinformatics
    - Telecommunications (with lab)
  - Telecommunications program reviewed
    - **Curriculum revised in collaboration with industry & alumni**
  - Invest in facilities and infrastructure supporting online education
    - Office with staff and studio established
    - 24% of current SIS students are distance learners

"SIS 2K"
Graduate Introduction

A thought-provoking examination of information issues shaping the human experience, …

■ **Multidisciplinary perspective**

■ **Rich history and intellectual diversity**

- ❑ Library science
- ❑ Archives and records management
- ❑ Ethics
- ❑ Cognitive psychology
- ❑ Social and natural sciences
- ❑ Telecommunication networks
- ❑ Informatics
- ❑ Computer science

… providing an integrated foundation for creative solutions to contemporary information challenges.

"SIS 2K" - 15-week sequence
Each one a mini-service course

Human Context

1. Introduction
2. Economics
3. Ethics
4. Policy
5. Requirements

Information organization

6. Abstraction
7. Bridging space & time
8. Information Structures
9. Digital Information

Information Access

10. Cognition
11. Information Retrieval
12. Visualization
13. Networks
14. Information Assurance

15. **The Future**
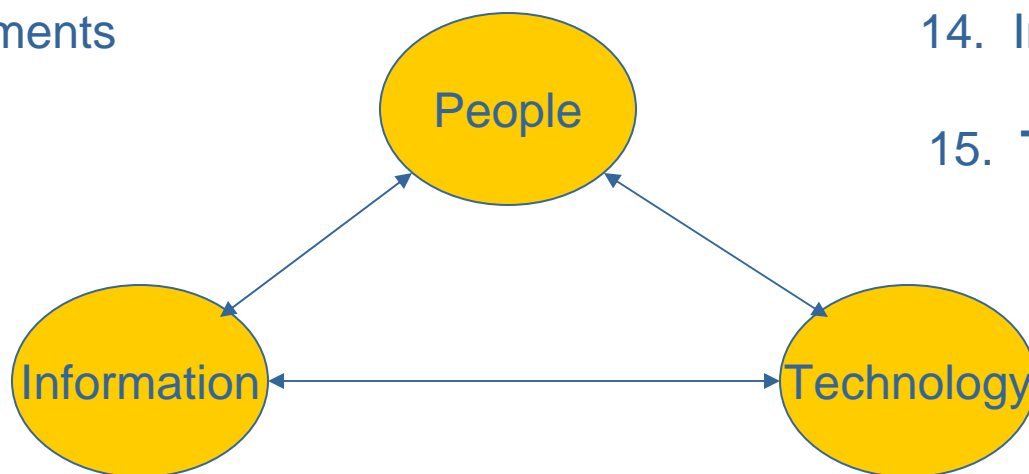
Digital Libraries proposed as common thread throughout course.

Telecommunications & Networking Curriculum Revision

Objectives

- Orient to today's market

    - Integrating and troubleshooting complex, heterogeneous networked information systems

    - Employ strong programming throughout curriculum

    - Increase and enhance laboratory experience

- Differentiate (academic) Ph.D. courses from (professional) Master's courses

- Leverage academic partners' curricula

Revised MST - network design perspective

Prerequisite

Core

Tracks & Electives

Faculty

Admission Prerequistes:
TELCOM 2000 or INFSCI 1070, Statistics, Programming

Required Courses: PHY Fund, Network Perform., Comp. Networks or INFSCI 1071, Real-time and streaming app., Tel. Ind. & Reg., SIS 2000

Electives:

Technology Focus: Wireless Networks, Sensor Networks, Photonics, Network Design, Special Topics, Adv. PHY

Networking Focus: Network Design, Network Mgt., Network Security, Sensor Networks, Client-Server, Adv. Comp. Net

IA Focus: Intro to Security, Crypto, Network Security, Infrastr. Protection, Security Mgt., Web Services

Software Focus: Java II, Database, Client-Server, Software Eng., Web Services, Devel. Secure Soft.

Management Focus: Project Mgt., IT in Org., Inf. Policy, Mgt. Inf. Systems, E-Bus, Inf. Ethics

Telecom/Networking   Information Science   Management/LS

Updated Ph.D. - network analysis perspective

- **Required**
  - Advanced computer networks (new)
  - Stochastic Processes (EE or IE)
  - Telecom Industry and regulation
  - Optimization (IE)

- **Electives**
  - Advanced Physical Layer
  - Queuing Theory
  - Advanced network design (new)
  - Algorithms (CS or IS)
  - Simulation (new)

Development/Alumni Update

- **Gift amounts up for FY 2007 by 4%**
  - $395K (up from $381K)
- **Number of actual donors down 21%**
  - 764 (down from 966)
  - Chronicle of Philanthropy reports national trend down
- **Capital Campaign goal raised to $10M**
  - $6.8M raised since beginning of campaign
- ***New efforts for FY 2007:***
  - Annual Appeal
  - Increased number of social events
  - SIS Alumni Society attained Gold Banner Status

Challenges to SIS fundraising

- Very few major gift prospects
- Faculty typically neglect foundation RFPs, giving preference to federal solicitations
- Low active participation in alumni society
  - Increase awareness of alumni society
  - Foster communication and engagement
 - Replace lost donors with new

FY 2008 Priorities

- **Increase giving from each donor type**
  - Foundation
  - Corporate
  - Individual
- **Increase outreach efforts to alumni**
  - cultivate a new generation of donors
- **Raise awareness of foundation opportunities**
  - Increase the number of proposals submitted

Summary reflections
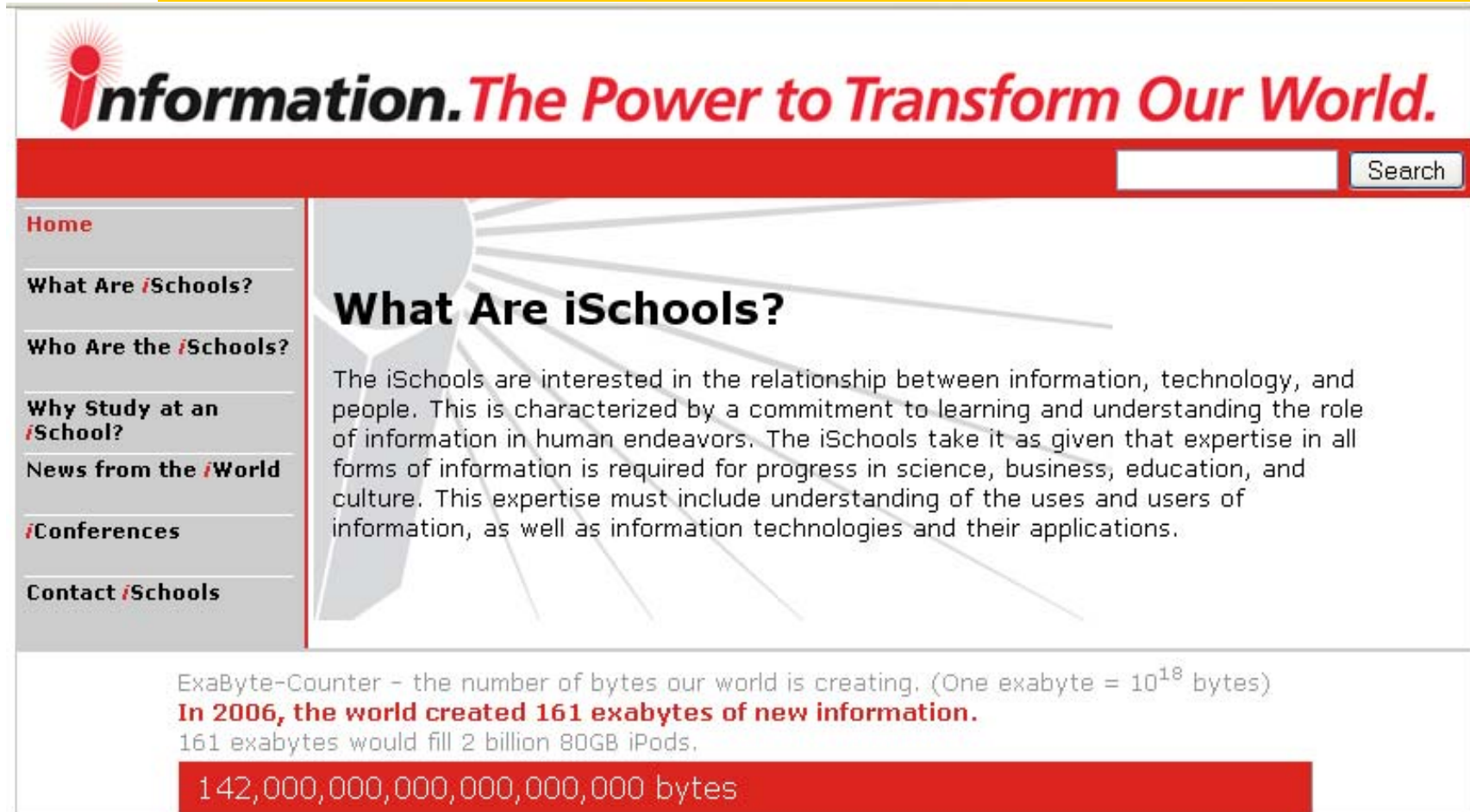
- A unified iSchool remains a stretch goal
  - School-wide peer review of teaching now strong
  - Undergraduate program striving to reposition itself strategically
  - GIST faculty feel more distant from BSIS program
  - Agenda for Tele programs in iSchools is a work in progress
  - LIS faculty coping with unusually large class sizes
  - Free agent faculty model engenders competition and conflict
- Mixed results so far from seed funding of RIGs
  - Interdisciplinary collaboration easier said than done
  - Pre-existing initiatives benefited most
    - LERSAIS admin support proved vital
    - Online education infrastructure and course development progresses
    - Spatial Information Science Symposium successful
  - Truly new directions off to slow start
    - Cyberinfrastructure had to compete with legacy interests
    - Cultural Heritage Repositories had overcommitted leadership

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Other news…

- **Student Services enhancements**
  - Office of Human Resources consultations
  - Recruiting Student Services Manager
  - Data Manager will be next recruitment
- **Boyce Chair (endowed by Buhl Foundation)**
  - Search for full professor imminent
- **Completed NSF/JISC report from international workshop on cyberscholarship**
  - Proposal to Andrew W. Mellon foundation for senior scholar
- **Hosting Joint Conference on Digital Libraries (JCDL)**
  - June 2008, Omni William Penn Hotel
- **Chairing iSchools caucus**
  - New logo and brand message
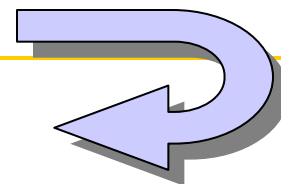
iSchools on the Web - www.ischools.org

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What Are *i*Schools?

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Why Study at an *i*School?

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What Are iSchools?

The iSchools are interested in the relationship between information, technology, and people. This is characterized by a commitment to learning and understanding the role of information in human endeavors. The iSchools take it as given that expertise in all forms of information is required for progress in science, business, education, and culture. This expertise must include understanding of the uses and users of information, as well as information technologies and their applications.

ExaByte-Counter – the number of bytes our world is creating. (One exabyte = 10^{18} bytes)
In 2006, the world created 161 exabytes of new information.
161 exabytes would fill 2 billion 80GB iPods.

142,000,000,000,000,000,000 bytes

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Slide 27

Now, we solicit your advice...

- Are we making sufficient progress on priority issues and areas?

- Is the Telecommunications program positioning itself appropriately for the future?

- How can we accelerate the transition to a more fully integrated information school?

- Requirements for hands-on laboratory experience are becoming more challenging. How can we do better?

- How can we be more effective in securing the resources necessary to support students and transform our infrastructure?

- Are there opportunities (or challenges) we are missing (or avoiding) that affect critical issues confronting contemporary society's increasing dependence on information?

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Break-out Sessions

- Reformulating **Telecommunications** education to prepare **iSchool** graduates for careers in consulting and service industries
    - How can we better prepare and distinguish our telecommunications and networking graduates for emerging career opportunities?

- Identifying emerging societal needs and faculty strengths that provide strategic opportunities for the **SIS iSchool**
    - Where is the strongest resonance between opportunity, capability, and need?

- Providing an appropriate **laboratory environment** to develop practical skills
    - General purpose computing labs are increasingly obsolete, while online programs present new challenges for hands-on experience. With very limited resources to invest in new infrastructure, what will yield the most benefit for our students?

- Developing alternative sources of support for **critical infrastructure and experimental initiatives**
    - What external sources and strategies do you recommend to maximize our return on effort?

Revised Break-out Groups

- **Telecommunications**
  - David Holtzman, chair
  - Al Moyé
  - Bob Kahn
  - Dan Mulhollan
  - Mary Ellen Rodgers
  - Rich Thompson
  - Martin Weiss
  - Paul Munro
  - Tara Czekaj

- **iSchool**
  - Roger Glunt, chair
  - Barbara Spiegelman
  - Clare Zales
  - Gary Byrd
  - Bob Strauss
  - Bill Isler
  - Richard Cox
  - Stephen Hirtle
  - Bob Perkoski
  - Kelly Shaffer
  - Ron Larsen
  - Carolyn Loether

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