

Message from the Chair

Welcome to the annual Information Systems Department's Newsletter. In the Newsletter, you will find stories about our undergraduate and graduate programs, faculty research, and industry outreach. We hope these stories will provide a sense of some of the exciting and varied activities our students, graduates, and faculty are engaged in. Moreover, the Newsletter provides an opportunity to acknowledge our many industry partners who support our educational programs and who recruit and hire our graduates.

Anne P. Massey,
Chairperson, IS Department

IS Faculty



Left to right: Brad Wheeler, Anne Massey, Vijay Khatri, Roberto Mejias, Carol Brown, Manju Ahuja, Dong-Gil Ko, Brad Crisp, Raja Sooriamurthi, Alan Dennis, Ramesh Venkataraman. Not Pictured: Dwight Worker, Sr Lecturer.

IS Staff



Kelly Shifflett



Gina Rogers

An Eye on Industry ... Open Source to the Rescue!?

From *Forbes* to *Fortune* to *Information Week*, the Open Source model for developing and sustaining software has captured the world's attention. Venture capital firms are investing. Multi-billion dollar companies, like Oracle, Microsoft, Seibel, are seeing their core products successfully challenged by open source projects like MySQL, Linux, and SargarCRM. What does this mean for business leaders?

Brad Wheeler, IS faculty member and IU Assoc VP for IT, is on the front line of these decisions for IU's \$100M IT budget and corporate executive programs. According to Wheeler, "This is a time for strategic thinking about the cost of IT, supporting business process innovation, and the forces of commoditization. Sensible enterprises will source software solutions that support an aligned IT strategy. The open source model is a credible tool to balance sustainable economics with IT flexibility."

Wheeler is at the center of \$15M of pooled investments from universities to build open source teaching and learning software (Sakai Project), student portfolios, and a new financial system (Kuali Project) for higher ed. Wheeler observed, "Universities tried to build all their software, and then tried to buy all their software. Neither approach worked well as we are under extreme pressure to do more with less. With Open Source software communities, we are building together, sharing the cost, learning from each other, and leveraging the considerable investments of the world."

The Sakai Project already has a world-wide following and flow of investment to enhance the software. IU is a beneficiary of the work of that world-wide community, and pays no license fees to use and extend this software. "No one can force us to pay for an upgrade to meet their sales objectives. IBM, Sun, Unisys, and several small companies have become Sakai Commercial Affiliates to sell support services for the software. Open Source is capitalist friendly for those who understand the economic forces of creative destruction," says Wheeler.

Like universities, companies are exploring a number of new models to bring down the cost of software licenses. Everyone can use Open Source Linux and Apache for infrastructure, but there is also a need bring down the costs of industry-specific application software. The Avalanche "co-op" is a corporate club for sharing software. Some firms are pooling resources to build together. Whatever the details, the macro trend is leverage of shared code, collaboration, and scalable communities as another way to manage IT costs and innovation.

Undergraduate News

What's New with Our Undergraduate Programs?

For undergraduates interested in integrating technology and business skills and knowledge, we offer the Computer Information Systems (CIS) major. CIS majors complement their business degree with skills and knowledge in technology and systems. Recruiters have long recognized the CIS major as one of the best in the country and CIS grads typically receive the highest starting salaries of all business school majors.

Given that nearly all aspects of business today are supported by systems, in fall 2004, we introduced a new co-major – Business Information Systems (BIS). The BIS is designed for students whose primary major is in another business area (marketing, finance, accounting etc), but who would like to gain a deeper understanding of the role of systems play in functional business areas. Kelley students are excited about the BIS co-major and a number of recruiters have indicated it will help differentiate Kelley grads in the marketplace.

For more information on our undergraduate programs, see www.indiana.edu/~isdept/ugrad/ugrad.html.

Undergraduate Case Competitions

Case competitions provide students the opportunity to showcase their systems, business, and communication skills to our industry partners. The cases are “messy” with limited and sometimes conflicting information. Under a tight schedule (2 days!), student teams develop their solution and present it to judging panels consisting of industry experts. Eli Lilly and Accenture – two key recruiters and IS partners – have sponsored competitions in recent years. The CIS Club plays a key role in working with our sponsors and marketing the events.

The 2nd Annual Lilly Case Competition took place October 2004. Fourteen teams participated in the competition wherein they evaluated the strategic options of a small health care company and offered guidance about how to design and implement systems to support their recommended solution. Lilly awarded over \$7000 to four finalist teams. We look forward to the 3rd Annual Lilly Competition in fall 2005.

The 1st Annual Accenture Security Case Competition took place in April 2005. Organizational security is a very hot topic and has led to increasing demand for graduates with security skills. Senior Lecturer Dwight Worker developed a case that addressed technical, human, managerial, legal, and ethical issues. Eight teams participated in the inaugural competition. Accenture awarded over \$6000 to three finalist teams.

Lilly and Accenture representatives have been unanimous in their praise for our students. Participation has led to job interviews and placement. We also would like to thank Eli Lilly & Co. and Accenture for their support. We look forward to the next round of competitions in 2005-2006.

CIS Club News

Many of our students are members of the CIS Club (www.indiana.edu/~cis/home.php4), mentored by Prof Raja Sooriamurthi. The Club organizes a number of extracurricular activities (e.g., industry/recruiter events, field trips) and provides a great venue for students to develop and demonstrate leadership skills, collaborate with each other, and engage industry partners.

Last year, among other activities, the CIS Club organized the CIS-ODT Fall Career Fair and played an active role in organizing student case competitions. In the spring, Club officers and members visited several IT companies in Chicago, including CNA, Accenture, Hitachi, and Deloitte. In April, an industry panel on corporate versus consulting careers was held to cap off the year's events. Representatives (many Kelley grads!) from Eli Lilly, Deloitte and Discover Financial led a lively discussion comparing and contrasting different career options.

Did you know that.....

-  Our CIS grads have consistently had the highest starting salaries for Kelley Undergrads
-  Our MSIS grads had 100% placement in 2005
-  US News & World Reports ranks our CIS program 9th nationally
-  US News & World Reports ranks our MBA IS program 11th internationally
-  IS Faculty have received numerous teaching awards and honors
-  IS Faculty have been ranked 2nd internationally in research productivity

A Student's Perspective

It is critical that future business leaders arm themselves with the education and degrees necessary to compete in this marketplace. One recent example of this is Ryan Pfenninger. Ryan received his CIS degree in 2001 and his MSIS degree in 2005. After his CIS degree, Ryan helped build a healthcare informatics company, and worked as a buy-side analyst covering the financial sector. After looking at various graduate programs, Ryan chose the MSIS degree for its technical curriculum and ability to take electives from Kelley's MBA program – thus providing him the balance of business and technology. According to Ryan, “I had a wonderful experience taking classes from world-class Kelley faculty as an undergrad. The ability to take classes from some of the same professors a second time around was a key factor in my decision to come back to IU for grad school”. Ryan is currently working for Infosys Consulting, a truly global IT company, and is utilizing resources and relationships from his home in the San Francisco Bay Area to Bangalore, India.

Graduate News

Innovative Kelley MSIS Program Bucks National Downward Trend in IS Enrollment

In just a few short years, the Master of Science in Information Systems (MSIS) Program has experienced tremendous growth with students having much success in finding great job opportunities after graduation. Under Prof Ramesh Venkataraman, the program has experienced significant growth with 55 fresh faces arriving in fall 2005 from around the US and world.

The MSIS program offers students breadth in business and depth in technology *above and beyond* what is covered in undergrad programs (e.g., CIS/MIS, CompSci, Informatics etc). The MSIS is also rich with experiential learning delivered through an emerging technologies competition and a Capstone Project Experience. The program has enjoyed a very high job placement rate at graduation. Since many of the graduates have little or no work experience, most start their careers as systems analysts or IT consultants. However, our graduates typically have the advantage of starting at a higher pay scale and being on a faster promotion track than their bachelor's degreed colleagues.

The curriculum continues to evolve as the business world around us changes. In fall 2005, a course on IT General Controls will be introduced into the curriculum by Prof Venkataraman, who is excited to roll out this new course since it "opens up new career opportunities for MSIS students in the growing area of IT auditing to support of Sarbanes-Oxley compliance". We have also recently introduced courses on Information Security/Risk Management and Data Warehousing Management.

We still have room to grow! Stay tuned for what lies ahead! For more information, see kelley.iu.edu/sagp/.

Emerging Technologies Competition

To create future technology leaders and advanced users, we must immerse students in current and emerging technologies with opportunities to explore their potential and understand the associated technological and managerial challenges. Via a collaborative effort with industry sponsors, a graduate-level course called *Mobile Applications Development*, affectionately referred to as going "MAD" by students, has been developed. Each MAD offering culminates in an industry-sponsored competition wherein student teams present their solution to a panel of expert judges.

MAD has been sponsored and supported by HP, Toshiba America, Microsoft, and the Office of the Vice President for IT at IU. In one offering, teams were tasked with developing the next generation of learner-centric pedagogical environments using the pen-based writing ability of Toshiba's Tablet PC and the collaboration ability of Microsoft's Conference XP. Across three competitions, nearly \$25000 in prizes has been awarded to students.

Direct industry involvement has allowed us showcase our graduate students and facilitate recruitment and placement opportunities. Here is a quote from one of our industry sponsors:

Joseph Bac (Hewlett-Packard, Director of Engineering): "It was very uplifting to observe first hand a program that makes clear sense. Congratulations for doing something of value that makes a difference."



Mr. Hideo Ito (far right), Chairman of Toshiba America Inc, and a winning team of students in the Emerging Technologies Competition.

MSIS Capstone Projects Help Organizations

Students in the MSIS graduate degree program are engaged in semester-long projects with a diverse set of host organizations under the supervision of our graduate faculty. The projects provide hands-on technology-focused opportunities for the students in real business settings. The projects help the host organizations as well. Host organizations have included: Authorhouse, Eli Lilly, Hewlett-Packard, Kelley Direct, Nextel, State of Indiana Supreme Court (JTAC), and University Information Technology Services (UITS). The host organizations report that the student projects not only met but exceeded their expectations and will be looking forward to future capstone project opportunities.

Thomas Sherfick (a recent MSIS grad), led a project team through a full-cycle development and implementation of a system that developed with Nextel to deliver a web-enabled process animation application. Tom observed: "I gained exceptional experience managing a real-life project and team in a very fast paced and demanding business environment. The exposure to business leaders at Nextel and the demands of the project were critical in the development of my skills." Tom was offered an internship and then a full time job as a Senior Manager at Nextel.

Research and Practice

IS Research

Do virtual teams with members from many locations experience more or less conflict than virtual teams with members from only two locations? Who benefits more from using a knowledge management system, novice or veteran employees? Does formal management of offshore software development projects lead to more or less knowledge transfer?

These are just some of the research projects IS faculty are engaged in. We do research in many areas and also publish *MIS Quarterly Executive* (www.misqe.org), a research journal devoted to improving information systems management, but six research areas are of primary interest to us:

- **Virtual Teams** research examines the use of online communication by teams working together in the same place and time as well as those working from different places at different times. (Manju Ahuja, Brad Crisp, Alan Dennis, John Galvin (Indianapolis Campus), Anne Massey, Ramesh Venkataraman)
- **Knowledge Management** research examines both the impact of knowledge management systems as well as ways to better design systems and organizational processes to improve knowledge transfer. (Alan Dennis, Dong-Gil Ko, Anne Massey)
- **Management of the IS Function** research examines how firms manage information systems, such as IS governance, ERP implementation, and mergers and acquisitions (Carol Brown, Brad Wheeler)
- **IS Sourcing** research examines the role of outsourcing and off-shoring, as well as the creation of new models for information sourcing such as community sourcing. (Manju Ahuja, Carol Brown, Brad Wheeler)
- **IS Design and Development** research examines information modeling techniques in developing applications, and includes the development of methodologies for designing applications that need to be organized with respect to space and/or time. (Vijay Khatri, Ramesh Venkataraman)
- **Internet, e-Commerce and m-Commerce** research examines the corporate and consumer use of the wired and wireless Internet for e-commerce, m-commerce, education, information search, grid computing, and a multitude of other applications. (Alan Dennis, Vijay Khatri, Anne Massey, Nolan Taylor (Indianapolis Campus), Ramesh Venkataraman)

For more information about our research, please visit www.indiana.edu/~isdept/research/research.html.

Information Management Affiliates: Partnering with Regional Companies

Now entering its 26th year, the Information Management Affiliates (IMA) is a participative member program administered by the Kelley School of Business (for more information, see www.kelley.indiana.edu/ima). Beginning July 2005, Carol Brown will be the faculty liaison working with Director Jo Basey of the Indiana Business Research Center (IBRC). The mission of the IMA is to provide an educational vehicle for IS/IT professionals in member companies by providing a forum for addressing the nature, applications, and IS/IT management challenges of emerging technologies; facilitating knowledge sharing through selected speakers, seminar participation, and informal networking; and providing mutually beneficial relationships among IS/IT professionals as well as between the IS/IT community and the Kelley School

The 23 current member organizations include service and manufacturing firms competing in a variety of industries. Seminar topics, which are drawn from a “hot” list developed by key contacts in member organizations, were recently held on the future of IT, knowledge management successes, RFID solutions, and open source innovations. This is a sample of what the IMA members have to say:

“IMA provides a unique environment for IT professionals and the Educational community to interact. The benefit derived cannot be found anywhere else in south-central Indiana.”

“The IMA programs always address pressing issues in IT. Best of all, the programs are right here in central Indiana and available to other members of my staff, which makes IMA the most cost effective seminar and educational program available to IT management and professionals.”

Information Systems

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