

Communications of the Association for Information Systems

Volume 3

Article 11

May 2000

Innovative Ways to Connect Information Systems Programs to the Business Community

Hugh J. Watson

University of Georgia, hwatson@terry.uga.edu

Mark W. Huber

University of Georgia, mhuber@terry.uga.edu

Follow this and additional works at: <https://aisel.aisnet.org/cais>

Recommended Citation

Watson, Hugh J. and Huber, Mark W. (2000) "Innovative Ways to Connect Information Systems Programs to the Business Community," *Communications of the Association for Information Systems*: Vol. 3 , Article 11.

DOI: 10.17705/1CAIS.00311

Available at: <https://aisel.aisnet.org/cais/vol3/iss1/11>

This material is brought to you by the AIS Journals at AIS Electronic Library (AISeL). It has been accepted for inclusion in Communications of the Association for Information Systems by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.



Communications of the **I**nformation **S**ystems
Association for **I**nformation **S**ystems

Volume 3, Article 11
May 2000

**INNOVATIVE WAYS TO CONNECT INFORMATION
SYSTEMS PROGRAMS TO THE BUSINESS COMMUNITY**

Hugh J. Watson
Mark W. Huber
Terry College of Business
University of Georgia

hwatson@terry.uga.edu

PROFESSIONAL

INNOVATIVE WAYS TO CONNECT INFORMATION SYSTEMS PROGRAMS TO THE BUSINESS COMMUNITY

Hugh J. Watson
Mark W. Huber
Terry College of Business
University of Georgia

hwatson@terry.uga.edu

ABSTRACT

A question was posted on ISWorld, asking: “Do you or your IS program have any unique, interesting ways that you are interacting with the business community?” Over 50 people responded with interesting and successful activities. The activities can be grouped into six categories: (1) student-centered initiatives, (2) instruction-centered initiatives, (3) externally funded, high tech laboratories, (4) research-centered initiatives, (5) faculty/student/practitioner interactions, and (6) new business ventures. The activities in each of these categories are described.

KEYWORDS: IS support, business community interactions

I. INTRODUCTION

The IS academic community has a long history of working with the business community. Advisory boards link most IS programs to the world of practice. Research centers provide many programs needed funding for research and other activities. Our field’s leading journal, *MIS Quarterly*, was supported and

partially funded by the Society for Information Management, a leading professional organization for senior IS executives.

The opportunities for developing “win-win” relationships with the business community are greater than ever because of the importance of information technology in the contemporary business world. Companies look to us for expertise, training, and especially the opportunity to hire our students. Add to this our graduates’ interest in their alma maters, and their desire to give something back to the field, and the stage is set for developing strong relationships with industry.

II. LEARNING WHAT INFORMATION SYSTEMS PROGRAMS ARE DOING

A great characteristic of the IS academic community is the willingness of its members to share information. Whether it is over the phone, at conferences, or through ISWorld, people are quick to offer research ideas and help, discuss curriculum innovations, and share what they are doing with industry. The last was strongly brought home when we posted a message on ISWorld asking: “Do you or your IS program have any unique, interesting ways that you are interacting with the business community?” We were seeking examples for a presentation to be given at the 2000 AACSB Deans Conference. Within five minutes the first response came in, and ultimately over 50 people contacted us. Some people sent lengthy descriptions while others suggested that we call them. From these messages and follow-up phone calls, we learned that a large number of great activities are in place.

The purpose of this article is to share what we learned. We included those activities that illustrate the breadth of what is being done and are, in our opinion, the most interesting and successful. We hope you will discover some ideas for your program. The different activities are organized into six categories:

1. Student-centered initiatives
2. Instruction-centered initiatives
3. Externally funded, high-tech laboratories
4. Research-centered initiatives
5. Faculty/student/practitioner interactions
6. New business ventures

We provide the names and e-mail addresses of the people who supplied the information so that you can easily obtain more details.

III. INITIATIVES WITH THE BUSINESS COMMUNITY

STUDENT CENTERED INITIATIVES

Student Internships

Many internship opportunities are available for students majoring in IS. Schools structure them in a variety of ways. An interesting and highly successful internship program is at the University of Pittsburgh (Bill King: oharris@katz.pitt.edu). Pitt's master of science in IS program is taken by students who completed the MBA. As part of the program, students are required to complete a paid internship in one of the sponsoring companies (e.g., IBM, Federal Express). For their internships, students are often assigned to specific projects that are important to the company but have been on the "backburner." Each student has a faculty advisor who they call for advice and reviews the academic component of their work. The academic requirement has two parts:

- (1) making presentations (to the company and to the business school faculty) that describe the work that was done, and
- (2) writing and presenting a paper (to the faculty) that puts the work experience in an academic context.

Approximately 80 percent of the students receive job offers from the companies in which they intern. The internships are demanding of faculty time but the work counts as part of the faculty's teaching load. Another return to faculty is that having students in companies sometimes provides entrée to research opportunities.

Student Projects

Many IS programs require students to complete a systems development project for a company, either as part of a course (e.g., systems analysis and design) or as a separate course. This requirement depends on the availability of companies that are receptive to student project teams, but with the backlog of IS projects in many firms, it is a requirement that is easy to satisfy, especially in metropolitan areas. For example, the University of Auckland in New Zealand (Felix Tan: ftan@auckland.ac.nz) successfully placed project teams in industry since the mid-1980s. The process begins with sending a formal document that invites companies to participate. It spells out

- the objectives for the company sponsors, the students, and the IS department at Auckland;
- the characteristics of the students, companies, and projects that will be selected;
- a timetable for the project;
- how the projects will be supervised;
- project copyright information;
- funding requirements;
- the responsibilities of the students, sponsors, and the IS faculty; and
- references.

The students are undergraduate IS majors who work in groups of two to four depending on the scope of the project. Under the direction of the sponsoring companies and IS faculty, the student teams work for approximately two days per week for eight months on the projects. In addition to providing students with the

resources to work on the projects (e.g., computers, office space), the sponsoring companies make a \$500 contribution to the IS department at Auckland upon the successful completion of each project. This year, around 25 companies are vying for the 16 student project teams – a nice supply and demand situation.

A similar example from “down under” comes from Anthony Stiller at the University of the Sunshine Coast in Australia (santhony@ozemail.com.au). In his forthcoming paper, "Challenging Students to live E-Business," he describes an e-commerce course where final year IS students study real-world problems and implement e-business solutions for area businesses. The university formalizes a tripartite contract, outlining the roles and responsibilities of the university, the students, and the business organization. Ultimately, students must work very closely with a subject matter expert (SME), often the business owner, and must customize the deliverables to the specifications of the SME. Project teams make extensive use of shareware software and free web hosting services.

Arik Ragowsky (aragowsky@aol.com) at Wayne State University adds a high-level corporate twist to traditional graduate and undergraduate Systems Analysis and Design class student projects. As part of their projects, students must perform the information and requirements gathering process but they must include at least one interview with the company president or CEO. They also must interview as many senior-level managers and other employees as possible. The students then prepare a request for proposal that the company can use to better understand its corporate IT needs. Arik feels that requiring the students to interview top management provides the students with a big-picture view of their projects and forces them to think and communicate from a “bottom-line” business perspective. Most importantly, the students gain poise and confidence that comes from interacting with the highest levels of a corporation. He points out that faculty can also benefit. As a direct result of one project, Arik received a \$27,000 grant to support his efforts to establish industry and academic partnerships.

Student Run Programs

Many IS programs have student groups associated with them. These student groups typically are strongly job placement oriented (e.g., job fairs, recruiting dinners, field trips), and also sponsor programs that support students professional development. The contacts that these student groups make in the business community can also be useful to IS departments (e.g., candidates for advisory board membership).

In addition to weekly speakers and other learning/networking opportunities, the Terry College of Business' Society for Management Information Systems, an undergraduate professional business organization, hosts an annual IT Vision Forum (Mark Huber: mhuber@terry.uga.edu). The forum is managed entirely by students and involves a panel discussion on a "hot" topic. This year's topic was E-commerce. Panelists included representatives from IBM, Sun Microsystems, McCall Technology Group, KPMG, Chick-fil-A, UPS, Quixtar.com, and Nexgenix. In addition to the discussion itself, participating companies provided reference materials and suggested readings to all in attendance.

John Gallagher (john.gallaugh@bc.edu) cites the MBA Hi-Tech Club (HTC) at Boston College (BC) as the driver behind their speakers program. Sponsored by Anderson Consulting, BC's HTC provides a forum for prominent local and national speakers such as the Chief Technology Officers of the New York Stock Exchange and Federal Express. John emphasizes that many of BC's alumni are eager to pursue lifelong learning yet are unable to attend these lectures. HTC's therefore offers alumni a chance to "attend" these lectures at their convenience as a way BC strengthens its ties with the business community. The HTC provides a digital archive of the lectures and makes the lectures available on the Web at (<http://techclub.bc.edu>). Videos are available to anyone with a browser and are in Real Media format. Recent additions to the collection

include lectures by Jeff Taylor, CEO of Monster.com and by LOpht, the hacker guild that testified before the U.S. Senate.

INSTRUCTION CENTERED INITIATIVES

Company Sponsored Courses

Like many IS programs, the University of Georgia (Hugh Watson: hwatson@arhces.uga.edu) no longer emphasizes mainframe architecture, CICS, and COBOL, preferring instead, to focus on technologies that are more forward looking. Among the companies that recruit Georgia's students, however, are a number of "big iron shops" that still want students trained to meet their mainframe needs. These companies' interest was such that they were willing to bring considerable resources to the table to make it happen. In particular, SunTrust took the lead to assemble a group of companies that want students trained in mainframe technologies. These companies provide their own instructors to teach an intensive mainframe-oriented course between the end of the spring semester and the beginning of the summer session (the 'Maymester'). They also provide the computing resources (mainframe access) for the course. The students in the course are on a paid internship while they take the course and also during the summer when they work for one of the sponsoring companies. A University of Georgia faculty member organizes the course and receives summer compensation (paid by the companies) for doing so. It's a "win-win-win" situation for all parties. Students get paid training, experience, and the inside track on jobs. Faculty expand their IS program offerings at no cost. Companies gain access to students trained on the technologies that they use.

Bob Brookshire of James Madison University (JMU: brooksrg@jmu.edu) faced a significant challenge as he tried to create an IS-consulting course. Although IS-consulting firms hire many IS programs' graduates, few business schools offer a course directly focused on consulting (Brookshire and Smith, 2000). So Bob turned to the consulting firms for advice on how to develop the course and for the resources needed to implement it. Nine consulting firms

agreed to participate and thirty students were enrolled in the class. The consulting firms provided mentors for student teams, lecturers for almost all the classes, and additional resources when needed. Each team of three students had a mentor firm that provided two contacts although other members of the firms interacted with the students as needed. The mentors provided IS consulting knowledge, knowledge about the firm, and leverage within the firm. The mentors also facilitated each team's response to an actual RFP (provided by one of the participating firms) and helped evaluate the student's implementation of their proposed solution. The program was highly successful from both student and consulting firm perspectives (Brookshire and Smith, 2000).

This first consulting class generated considerable excitement. Several additional firms offered to participate in the next class and student interest is high. However, coordinating the schedules of the many mentors, as well as numerous faculty and student schedules, proved to be a significant challenge. JMU plans to limit the number of consulting firms to ten and the number of students to 30. Yet, small enrollment does not equate to small returns: the course led to a \$225,000 grant from PricewaterHouseCoopers to endow further development of the course.

Specialized Masters Degrees

Capitalizing on the demand for IS education, many schools introduced specialized masters degrees. An example is at Florida International University (Steve Simon: simons@fiu.edu), which rolled out a Master of Science in MIS this fall. The curriculum was developed by FIU and its business partners (e.g., IBM, Ryder) and emphasizes supply chain management, SAP, and e-business. It is a 12-month, 10-course program for part-time students in the Miami area who attend classes on Saturday. It emphasizes hands-on experiences (e.g., building an e-commerce front end to an Oracle database) in addition to covering concepts. Like many programs of its kind, it's a "tuition plus" program, where students pay a surcharge on top of regular tuition. At FIU, the 45 students

currently enrolled pay an additional \$650 per course on top of regular graduate tuition. The regular tuition goes to the university, the business school receives FTE credit for the students, and the business school and the IS department receive nearly all of the additional revenue, from which direct costs are paid, such as faculty salaries. Faculty that teach in the program receive a \$4,000 supplement if the course is “on-load” and \$7,500 if it is “off-load.” Faculty particularly enjoy working with the highly motivated students in the program.

Linda Volonino (lvolonino@aol.com) at Canisius College is the director of a new Master of Science degree in Telecommunications Management (MTM) at the Wehle School of Business. Linda was asked to put together an applied telecom graduate program by Bell Atlantic (formerly NYNEX), MCI, and other companies in the Buffalo business community. Working with Bell Atlantic and MCI, Linda designed the MTM curriculum to prepare individuals for careers in telcos, as well as telecom-dependent businesses, such as contact management centers, utilities, financial institutions, and manufacturers. The program’s emphasis is on providing in-depth knowledge of telephony and computer networks, legal-regulatory and marketing issues, and emerging telecom trends. The 36 credit-hour MTM program began in Fall1998. Its enrollment of 50 exceeded expectations by 60 percent. The program is divided into 12 MBA credit hours (which are waived for those with an MBA) and 24 credits in telecommunications courses. It is a part-time, AACSB-accredited, evening program taught by Canisius faculty, telecom professionals, or team-taught by a faculty with an industry expert, sometimes using videoconferencing. In the capstone course, students work in teams to develop business solutions using telecommunications for their clients, which have included commercial real estate developers, Roswell Park Cancer Institute, Buffalo Medical Group, and a city teleport. A 12-member MTM Advisory Council helps ensure the success and relevance of the curriculum content.

Training Programs

Training programs that provide technical and other IT skills are in high demand. While there are many providers of training programs, universities and IS departments in particular, are logical sources. They have the faculty, experience, and facilities to easily offer them. Some training programs are sponsored by companies that want either to attract new employees or further train or retrain existing employees. Other programs offered by universities are open to anyone who meets the entrance requirements. The revenues generated from these programs can be used to augment faculty salaries and provide “soft” money for departmental activities.

The IS faculty at the University of Wisconsin, Milwaukee (Dave Haseman: daveh@csd.uwm.edu) has considerable experience with training programs. Their first program was for M and I Data Services (M and I), a large financial services software development and outsourcing firm. Working with M and I, a six-month program with a mainframe emphasis was developed for people with no IT background (e.g., teachers, nurses). After completion of the 16-course program, the students went to work for M and I. The students paid for the program, but M and I made loans available, and partially forgave the loans if the students stayed with the company a specified length of time. Three years after the first program, nearly all of the students are still M and I employees. Three classes of 30 to 40 students successfully went through the program. Program graduates also receive 15 credits toward the completion of a masters degree in MIS. Eight of the students in the first class have recently completed their degrees. Another program with M and I will start this summer. However, it will be for current M and I employees (they will still be on the payroll) to provide either client/server or Internet skills. The program will be full time and require nine courses, half of which can be applied to a master’s degree. Students will be required to stay with M and I for two years or they will have to repay the company for some of the costs of the training. Yet a third program is planned with M and I that is similar to

the first except that it will give non-IT people client/server or Internet rather than mainframe skills.

In 1997, Sri Narasimhan (sri.narasimhan@mgt.gatech.edu), Saby Mitra (saby.mitra@mgt.gatech.edu) and their colleagues at the Dupree College of Management at Georgia Institute of Technology met with CIOs and Human Resource managers of Atlanta area firms to discuss the educational needs of their mid and high-level IT executives. The outcome was an educational program called the IT Management Partnership. This 60-hour program focuses on IT management challenges and is organized around three major themes:

- (1) IT in the modern business enterprise,
- (2) managing the IT resource, and
- (3) leading and managing IT professionals.

Between 20 and 25 companies sponsor and provide students for the program, including AFLAC, BellSouth, and Coca-Cola. An advisory board meets twice a year to critique the program and make sure that it continues to meet the students and sponsors' needs. The program runs four times a year with 35-40 students in each class. Twice a year, the program starts with a team building session on a Saturday and classes are held on Mondays. A modified version of the program for non-Atlanta area residents meets every two weeks. The tuition for the program is \$4100 per student. As with other executive development programs at Georgia Tech, the teaching is off-load and for extra compensation.

The University of Colorado at Denver (Jahangir Karimi: jkarimi@carbon.cudenver.edu) is helping US West strengthen its pool of high-tech job candidates through its IT Professional Program. The program, which started in October 1999, is open to all US West employees who are not part of the IT career structure. One hundred-fifty US West employees are expected to complete the program within the first 36 months. Students continue to work at

their current jobs while attending evening and weekend classes, which are held in the U S West Computer Lab/Training Facility. The eight-course, 24-week certificate program prepares graduates for positions as Associate Engineer, Associate Analyst, and Associate IT specialist. The eight courses include Introduction to Information Systems, Introduction to Business Programming, Database Management, Object Oriented Programming, Systems Analysis and Design, Data Communications, Client Server Development, and Software Project Management. Graduates may be able to apply credits toward CU-Denver's Master of Science in Information Sciences degree.

G. "Prem" Premkumar (prem@iastate.edu) and three other faculty members at Iowa State University recently completed a one-year training program for employees of the John Deere Corporation. The program targeted IS and other functional area managers. Designed to be an intensive program, the curriculum consisted of five topics: Visual Basic, Database, Client-Server Networking, E-Commerce, and Systems Design and Analysis. Students attended eight-week seminars on each topic and were in-class for three and one half hours per week. At the end of the program, students earned a Certificate in IT/IS. John Deere's managers praised the program and considered it to be a valuable experience although some felt that the eight-week modules could have been shorter. Another issue being addressed is how to maintain commitment and focus for an entire year. The fatigue factor impacts participants and faculty alike, especially since the seminar was a teaching overload for participating faculty. Shorter seminars, both in weekly class time and length of the modules, may allow for greater flexibility for Iowa State's corporate clients and for the faculty.

Universities in metropolitan areas have obvious advantages when it comes to interacting with industry. At Georgia College & State University (Harry Glover: hglover@mail.gcsu.edu), the school's rural location is specifically what led to a specialized program. Tony Tan, the CEO of ISP Alliance, decided to move his development organization out of the congested Atlanta area to a relatively

economically depressed area of Georgia (i.e., Gordon, Georgia in Wilkinson County). Clearly, there are societal benefits and business advantages to this move such as lower taxes, low-cost facilities, and high quality of life for employees. As long as the area provides a good telecommunications infrastructure, the physical location of the business is of no consequence. A major obstacle to the move, however, was a shortage of qualified technical people -- e-commerce designers, developers, and network administrators -- to perform the work. In response, a six-month training program was designed to meet the need for skilled personnel. Students in the program are screened and approved by ISP Alliance and meet GC&SU's college entrance requirements. The program has three tracks, one for each of the sets of technical skills needed, and students attend classes six hours per day, five days per week. At least 50 percent of class time is spent hands-on with different technologies they were carefully selected to meet the needs of ISP Alliance. To help staff the program, people from the business community with teaching abilities were hired. The program is designed to train 30 students every six months for the next two years. It is funded by the State of Georgia with a \$398,000 grant this year, and a \$230,000 grant next year.

Mary Prescott (prescott@admin.usf.edu) at the University of South Florida provides a variation on the typical training program. She is currently running Oracle classes through USF's Educational Outreach program. The classes are taught on Saturdays in a computer lab in the downtown Tampa Port Authority Building where USF teaches a number of its business classes. Mary turned to an unusual source of instructors for the courses:

- (1) parents who (at least temporarily) dropped out of the workforce to raise their children, but want to remain actively professional (no long holes in their resumes); and
- (2) startup entrepreneurs who have the skills, time, and desire to share what they know. In both cases, teaching generates additional family income.

The challenge for Mary is that many of these instructors do not have teaching experience; consequently, Mary is developing “teach the teacher” courses.

The SAP University Alliance

Over 100 schools joined the SAP University Alliance to train students on SAP’s enterprise resource planning (ERP) software package. As members of the SAP Alliance, schools receive free software, faculty training, and educational materials. In return, SAP expects schools to integrate SAP throughout the curriculum. The job market for people with SAP skills was strong in 1999, although it slowed with the end of Y2K concerns.

Schools in the SAP University Alliance took different approaches to introducing SAP into the curriculum (Steve Simon: simons@fiu.edu). Some revamped their entire curriculum around SAP. Others worked SAP into their existing curriculum. Still others introduced one or two courses on SAP.

The benefits to students and employers are obvious, but the benefits must be considered in light of the costs to business schools and faculty. While it only costs \$5,000 to join the University Alliance, SAP is costly in other ways. Because SAP is a highly complex software package, faculty can spend months in SAP’s classes mastering the details. Schools can also expect to spend thousands of dollars on travel costs for faculty training, new hardware, networks, and support personnel. Some schools found “a claim to fame” with SAP, but it is an initiative that requires considerable thought and commitment before being undertaken.

Secondary School Programs

Drexel’s (Scott Overmeyer: Scott.Overmeyer@cis.drexel.edu) involvement with the Pennsylvania Governor’s School Program places it at the forefront of a nationally recognized secondary school student education program. Drexel is one of two Pennsylvania Governor’s School’s of Excellence for Information Technology. This summer program provides accelerated IT education to gifted

10th and 11th graders from across the state. Local industry is fully integrated into the program and Drexel supplements the state funding with contributions from local companies such as BlueStone Software and CDNOW. In addition to funding, local companies provide instructors, guest lecturers, technical support personnel, and host student tours of area businesses. The curriculum consists of a core course plus application-oriented specialty tracks including Digital Media (animation), Digital Publishing and Graphics, Medical Informatics, and E-Commerce. The program reinforces the ties between the IT program at Drexel and industry. Perhaps more importantly, the Pennsylvania Governor's School's of Excellence for Information Technology program gives both Drexel and local companies a chance to work with some of the best and brightest IT-oriented high school students in the state.

EXTERNALLY FUNDED HIGH-TECH LABORATORIES

Multi-Media Development Centers

The IS faculty at Georgia College & State University (Harry Glover: hglover@mail.gcsu.edu) set up a multi-media development center to serve area industry, and help promote tourism and trade. A faculty member directs students in the development of Web pages, virtual walk-throughs, and interactive (CD-based) magazines. It is operated on a non-profit basis, but they charge clients enough to support small salaries for the students, and keep the center equipped with the latest technology. Students use digital camcorders, digital cameras, scanners, CD-burners, and some of the very latest (3-D) software systems to create the media based on client specifications. The development efforts are usually iterative.

Web Technology Laboratories

A challenge for universities is to find the funding necessary to operate high-tech, state-of-the-art laboratories for students. At the University of Wisconsin-Whitewater (Bob Horton: hortonb@uwwvax.uww.edu), six regional

companies work together to set up a Web-based n-tier application development lab. They pledged \$100,000 to cover the hardware, software, support, and training costs. In addition to providing these resources, faculty and students will be hired full time during the summer by the companies to learn the technology and work on projects along with the companies' staffs. The faculty and students are responsible for installing the new technology in the lab (with the help of the supporting companies) and integrating the technology into the curriculum. At present, the consortium splits itself into three working groups:

- (1) Architecture, which recommends the specific technologies for the lab;
- (2) Membership, which recruits additional companies for the consortium;
and
- (3) Content, which reviews and prioritizes projects.

The companies' motivations in forming the consortium include:

- (1) enhancing the labor pool of prospective employees;
- (2) providing support for an external, academic resource to jointly explore technologies and participate in projects; and
- (3) providing a neutral focal point for the cross industry exchange of technical skills, knowledge, personnel, research findings, and project results.

RESEARCH CENTERED INITIATIVES

Research Centers

Many IS programs created research centers to garner support for research. Jack Becker (becker@vm.acs.unt.edu) estimates over 200 centers worldwide. The directors of the centers meet for breakfast at ICIS each year. The focus and activities of the centers varies considerably. Some focus on a specific topic such as the FedEx Center for Cycle Time Research at the University of Memphis (Bob Otondo: rotondo@memphis.edu) while others are broad in their

coverage. Some centers undertake an extensive set of activities such as conducting company sponsored research, having a speaker series, and promoting faculty and student internships, while other centers focus on only a few deliverables for its sponsors.

The Joe Ricketts Center in Electronic Commerce and Database Marketing at Creighton University (Ravi Nath: Nath@creighton.edu) is an example of a highly focused research center. It also illustrates the potential synergy from integrating the activities of a research center with a specialized masters degree program. The Center began with a \$1.46M endowment from Joe Ricketts, the CEO of Ameritrade Holding Corporation. Ten additional business partners (e.g., Oracle, IBM) signed on to sponsor the Center, each committing up to \$40,000 per year for three years. For the business partners benefits include access to students in Creighton's new masters degree in e-commerce. The business sponsors sit on the program's advisory council, employ the students as interns, are future sites for end-of-the-program student projects, and are in a good position to hire the students after graduation. Gaining access to the e-commerce students is a significant motivation for sponsoring the Center. Being a Center sponsor also provides access to Joe Ricketts and other people in the e-commerce community.

Company Sponsored Faculty Research

Faculty adding value to companies through research is the hallmark of Dave Chatterjee's (dchatte@wsu.edu) research program at Washington State University (WSU). Dave engages area companies through a formal case study research proposal. Based upon his experiences as a Boeing Fellow, Dave found that area companies are willing to support the faculty of WSU and developed an effective way to formalize this support. First, he targets his proposals at companies that recruit WSU's IS students. A key component of the proposal is managing the corporations' expectations regarding deliverables. Dave highlights the potential contributions to the business practices of the companies involved. In addition, he discusses the benefits to students and faculty that will flow from his

research. Dave believes that as important as it is to mention how the company benefits, most area businesses support his research efforts and are genuinely interested in supporting the educational process at WSU.

Once he has approval to conduct the research, data collection usually takes place on-site at the host company. Over a period of about three days, he interviews eight to nine executives each day. By following this model Dave generated five case studies in about two years. Recently, one of his colleagues used Dave's model to gain entree to a local firm to study the integration of the firm's information systems with the information systems of a company it recently acquired. As word of his success spreads, the teaching cases and insights into area businesses will reinforce the cooperation between area businesses and WSU and will provide greater opportunities for faculty research.

It is the desire to hire students that motivates most companies to work with IS programs. It is often more difficult to interest them in funding IS research. The University of Oklahoma (Bob Zmud: rz mud@ou.edu) developed a model for gaining industry participation and funding for research. The starting point is to identify projects that are of interest to the business community. A far less successful strategy is to "sell" faculty-driven projects. At a day and a half workshop in the fall, companies discuss the issues and problems that they face. Based on the workshop discussion, a list of potential research projects (about eight) is developed and taken to a steering committee. The list of projects is then refined and reduced, and then taken to the faculty to see if they generate interest. A challenge is to identify projects that have both scholarly potential and are of interest to companies. At a half-day meeting in the spring, the two or three projects that the faculty wants to do are presented. Researchers only receive funds once the project is underway (to cover research costs) and after it is completed. Money is given on the results, not the promise, of research.

SIM Advanced Practices Council

The Society for Information Management (SIM) (<http://www.simnet.org>) is an international organization for IT professionals. Established in 1968, it is a not-for-profit organization of information technology experts, including CIOs, CTOs, and emerging technology leaders, as well as key professionals within the IT community, such as academicians and consultants. A subset of SIM is the Advanced Practices Council. Organized in 1991, it strives to build long-term relationships between IS executives and IS researchers to develop comprehensive, practical recommendations for addressing important current and future issues. The Council identifies issues that merit study, and through a competitive proposal process, faculty researchers are selected to study the issues. The researchers are given the financial resources and access to companies that are necessary to complete the research. Members of the Advanced Practices Council receive practical deliverables at project milestones, and have access to researchers and their findings while the projects are underway. Since its beginning, about 14 projects have been supported by the Council. Recently completed projects include:

- (1) coping with labor scarcity in IT: strategies and practices for effective recruitment and retention (by Ritu Agarwal and Tom Ferratt);
- (2) repositioning the organization to enable business transformation (by Carol Brown and V Sambamurthy); and
- (3) crossing boundaries: the deployment of global IT solutions (by Rosann Collins and Laurie Kirsch).

SIM PAPER COMPETITION

Another activity that SIM supports is a paper competition. Its purpose is to recognize those companies that do exceptional, innovative, high impact IS work. While companies perform the work, the papers are usually written by academicians who are aware of or participated in what was done. Publication of the winning papers (modified for an academic audience) in *MIS Quarterly* is

unique, at least in business school academic disciplines. The winning papers are excellent for classroom use because they describe best practices.

FACULTY/STUDENT/PRACTITIONER INTERACTIONS

Industry Advisory Boards

Many IS programs have an industry advisory board whose primary purpose is to provide a link between academia and practice. These boards are very important to IS programs because they provide a mechanism for insuring that the IS curriculum meets the needs of the marketplace. At the University of Georgia (Hugh Watson: hwatson@arches.uga.edu), the board represents over 30 companies. The typical board member is a senior IS manager or professional, is interested in IS education and the university, and represents a company that hires Georgia's students. Board meetings are held on a regular basis to discuss the curriculum, faculty research (with the hope of finding research partners), student internships, and current IS developments. In most cases, the major motivation for serving on the board is to enhance access to students who are potential hires. After the board meeting in the spring, there is a banquet, to which all IS majors are encouraged to attend. There is no fee for being on the board, but voluntary contributions are solicited to cover board operating costs, the banquet, and student scholarships. Over \$20,000 is collected each year and approximately 60 percent of it is given out in scholarships at the banquet. The student IS group is actively involved in the spring board meeting and helping with the banquet.

Symposiums with the Business Community

For three years, Jack Hogue (jthogue@unccvm.uncc.edu) has coordinated an undergraduate business symposium (<http://www.uncc.edu/ubs>) with the Charlotte business community. Its purpose is to bring Charlotte's business leaders to the UNC Charlotte campus and to give students and faculty an opportunity to interact with the leaders. Jack was also looking for an activity that honors students could take ownership and run. Funding for the symposium is

provided by four sponsors who contribute \$5,000 each. The symposium begins with a dinner Thursday evening, followed by an all day program on Friday. The dinner recognizes the sponsors and the 10 honors students (who are selected from a pool of applicants) who organize the program. The Friday program has an opening keynote speaker, followed by seven concurrent sessions, a lunch with a keynote speaker, seven concurrent sessions, and a closing reception. All of the sessions involve panelists from the business community who discuss a specific topic related to the symposium's overall theme (e.g., Technology's Global Role). The symposium is attended by about 375 undergraduate business juniors and seniors, honors students in the business school, business school faculty, and Charlotte business leaders. It has increased UNC Charlotte's presence in the business community and given students leadership opportunities.

IS Executive Roundtables

Several years ago, when Eph McLean (emclean@gsu.edu) moved to Georgia State University from UCLA, he joined with Bruce Myers, a McKinsey & Co. partner, to found an IS Executive Roundtable in Atlanta, featuring regular dinner meetings for Atlanta-area CIOs. After awhile, he assumed sole responsibility for planning and running the meetings. Over the years, 20 to 30 firms have paid \$5,000 a year to have their CIOs and direct reports attend the bi-monthly meetings. A social hour runs from 5:30-7:00, dinner from 7:00-8:00, and a speaker from 8:00-9:30. Some of the speakers come from the Atlanta business community, while others are nationally known, such as Tom Davenport, Warren McFarland, Paul Strassmann, and Peter Keen. While the program is successful, the current high-velocity business world is creating challenges. The frequent turnover of CIOs makes retention and recruitment of companies a constant issue. Also, the job demands on CIOs make it difficult for many of them to attend regularly. Eph is exploring the possibility of offering an expanded set of services -- access to students, faculty and student internships, joint research, executives in residence, and others initiatives -- to create a more comprehensive relationship with sponsoring companies, at an enhanced price.

Executives in Residence

Occasional an opportunity arises to hire a senior IS manager onto an IS faculty. It occurred at the University of Dayton (Jeff Hoffer: hoffer@udayton.edu) where a CIO who had served on their advisory board for 10 years wanted a change of pace before transitioning to another job in industry. After coming onboard, the CIO not only taught classes but also helped the college develop a strategic IS plan. These “CIOs in Residence,” as the University of Dayton calls them, can also potentially help with contacts in the business community. The potential risks in hiring IS executives are that they typically have limited teaching experience, may not teach classes in the ways that regular faculty do (especially, in terms of content), and may not understand the unique culture and norms of universities. On the other hand, the practical perspectives that they bring to the classroom are often very well received by students.

Faculty Internships

In addition to students, faculty can benefit from internships in companies. It can expand their knowledge base, make them much more aware of practical and organizational issues, lead to research and publications, and provide examples for use in the classroom. Jeff Hoffer’s (hoffer@udayton.edu) experience is that the greatest long-term benefits are realized by the school. It can lead to student employment opportunities, sites for student projects, case studies, sites for faculty data collection, and joint research projects. The way that faculty internships are handled at the University of Dayton is that the faculty member remains on the university payroll and continues to receive all university benefits. The only change is where the faculty member goes to work each day. The company reimburses the university for the faculty member’s time.

Faculty Participation in Practitioner Organizations

For six years, one of the authors (Hugh Watson) has been involved in multiple ways with The Data Warehousing Institute (TDWI), the leading educational and professional organization for data warehousing managers and professionals (<http://www.dw-institute.com>). Hugh (hwatson@arches.uga.edu) speaks

at its conferences, runs “birds of a feather” sessions, coordinates the best practices competition, conducts institute-sponsored research, and serves as Senior Editor of the *Journal of Data Warehousing*. This involvement generates many benefits: (1) an in-depth understanding of a complex area, (2) access to the most knowledgeable people in the world, (3) knowledge of best practices, (4) access to research sites and study participants, (5) research funding, and (6) recognition as a leading figure in data warehousing. As an example of how participation with TDWI is beneficial, a couple of years ago, Ron Swift at NCR, who is active in TDWI, asked Hugh (and Barbara Wixom and Dale Goodhue) to prepare a series of case studies on several of NCR’s leading customers. NCR arranged the interviews in the companies and financially supported the research. The customer-centric warehouse developed at First American Corporation was so innovative and successful that Hugh and his team entered it into the 1999 SIM Paper Competition, and won first place in the competition.

NEW BUSINESS VENTURES

Creating Software for the Marketplace

IS faculty often have the business and technical skills needed to develop software products. The best known of these efforts is the group support systems software developed by Jay Nunamaker (nunamaker@bpa.arizona.edu) and others at the University of Arizona. Their software development efforts started in the 1980s as an attempt to support the information requirements definition phase of the systems development life cycle, but as work progressed, they realized that the tools could be used with virtually any kind of group meeting. Supported by funding from a large number of firms (Jay says that he is like a NASCAR driver with the logos of many sponsors on his shirt), the software evolved over the years and was integral to a large number of theses and dissertations, research grants and contracts, consulting engagements, and executive development programs. In 1989, the software was licensed and taken to market by IBM. Working in collaboration with the University of Arizona, Jay started a company (now called GroupSystems.com) that, to this day, continues to develop and

market GroupSystems (the current name of the product). This initiative generated resources, facilitated research, created a valued product, and greatly enhanced the reputation of the IS department at the University of Arizona.

Brad Wheeler (bwheeler@gsob1.bus.indiana.edu) recently was involved in a software development project. As background, Ivor Davies, a professor emeritus at Indiana University, continues to be a highly sought after consultant on the design of work systems in organizations. Among his contributions, he has developed a process and a set of tools and documents for developing corporate strategies and plans. Companies can select from among 12 processes and tools (e.g., SWOT analysis, Balanced Scorecard) and through a series of questions appropriate for the process chosen, create a strategic planning document appropriate for the desired outcomes. Because of Brad's interest and experience in collaborative technologies, he was invited to develop software to operate in a local or distributed environment that would automate the previously paper-based system. Working with a graduate assistant, a Web/Lotus Notes system was developed and is in its second year of successful use with a client company. Ivor's strategic planning process plus Brad's tool created a powerful means for distributed teams to work on tough strategic planning challenges. It is not certain how they will proceed with the software, but it provides another good example of the potential for IS faculty developing software that has business value.

.Com Startups

Most IS programs include faculty with e-commerce interests and expertise. It is common for schools to offer an e-commerce course, concentration, or degree. Many students who take e-commerce courses envision starting their own .com companies and look to IS faculty for guidance. Working with these e-commerce entrepreneurs can create considerable value for IS departments and business schools.

Rick Watson (rwatson@terry.uga.edu) at the University of Georgia, with e-commerce research and teaching interests, is working with several companies. His involvement with one began with a call from a former student, Bryan Munday, who received his MBA from Georgia in the mid 1990s. Bryan started ezgov.com (<http://www.ezgov.com>), a company that serves as a portal for access to government information and a site for making payments to government organizations (e.g., parking tickets, property taxes). Bryan was grateful for the education that he received at the Terry College of Business and wanted to become involved with students and the College in some way. As a starting point, Rick invited him to make a presentation to his MBA MIS class about the issues facing the company. Rick then had the class work on the issues and Bryan came back to hear a presentation on what might be done. This led to an invitation for Rick to form an academic advisory board to work with Bryan's company. It also led to Rick writing "a living case" that is updated every few months (the case is not available yet because of the amount of confidential information that it contains). Students can read part of the case, indicate what should be done next, and then read what was actually done.

It is possible to envision a scenario where students take e-commerce courses, enter an incubator program to develop their ideas, and then receive help in taking their companies to venture capitalists. In return, if the university receives a small percentage of the returns from .com startups, it would only take one or two successful companies to create a significant financial windfall.

IV. CONCLUSIONS

The two fundamental drivers behind academic/industry partnerships appear to be

- problem solving and
- resource acquisition

They exist on both sides of the partnership. For IS academics, interacting with practitioners helps solve problems such as ensuring that research is relevant and that what is taught in the classroom meets the needs of the marketplace. It helps provide resources in ways such as funding faculty research and providing laboratories to train students on state-of-the-art technologies. For industry, the partnership help solve problems such as the need to update the skills of employees and to provide human resources for the IT function.

Some kinds of interactions with the business community are unique to the IS field (e.g., SIM paper competition) while others are available to other disciplines as well (e.g., specialized masters programs). It does seem, however, that proportional to its numbers, IS is taking a leadership role in the variety and quantity of interactions. Among the reasons why this may be the case are:

The demand for IS knowledge. Companies' demand for people with IS skills is exceptionally high. At most schools, the undergraduate IS major is one of the largest in the business school, and IS graduates have the highest placement rate and starting salaries. Because of our role as the leading supplier of IS talent, the business community has a strong incentive to work with us. This incentive is seen in the desire to serve on advisory boards, and to a lesser extent, to be research center sponsors.

The pervasiveness of IS. For years, economics described itself as the "mother" discipline because other business school disciplines were either spawned from it (e.g., finance) or relied heavily on its theories and teachings. Today, IS is critical to all other business schools disciplines. As a result, many of the activities of these disciplines contain a strong IS component, whether it be specialized masters degrees, training programs, or company sponsored research, and IS faculty and programs are involved heavily.

The interest of business school deans. Over the years, the support for IS as an academic field varied considerably from school to school. Some of the leading business schools did not appear on the IS map because deans and faculty at these schools did not put resources there, while lesser schools became leaders in the field. Today it is hard for deans (but not all of them) to ignore the importance of IS. Advisory councils, corporate recruiters, and the press all stress the importance of IS. As a result, deans recognize the opportunity for IS to lead interactions with the business community.

The practical nature of the IS field. IS is a practical field. What we teach and research (augmented by theory) is very much driven by practice. It is in the world of practice where we often learn about new technologies and the issues that are important to organizations (and, hence, meriting study). Many IS faculty members feel that they are at a disadvantage if they are not connected to practice. If faculty members are not up to date with the latest developments in the field, they are potentially embarrassed by students.

The entrepreneurial nature of IS faculty. Most IS faculty like to “build things,” whether it be systems, programs, or interactions with the business community. It may be related to the engineering – like nature of the field. Many IS faculty members have a practical orientation, and even enter the field because of perceptions that it is very applied.

The need to generate revenues. Many IS programs must engage in revenue producing activities, because as “the new kid on the block,” they do not have the accumulated resources of more established disciplines such as accounting and finance. To gain creditability and resources, they have to work with the business community. To illustrate, revenue generation is a driving force behind many research centers.

In our research, we found that little has been published on activities between IS programs and the business community. A more common, but related, topic is the relevance of IS research. In the bibliography, we provide the best and most relevant of what was found.

Editor's note: This article was received on April 17, 2000 and published on May 9, 2000.

REFERENCES AND BIBLIOGRAPHY

EDITOR'S NOTE: The following reference list contains hyperlinks to World Wide Web pages. Readers who have the ability to access the Web directly from their word processor or are reading the paper on the Web, can gain direct access to these linked references. Readers are warned, however, that

1. these links existed as of the date of publication but are not guaranteed to be working thereafter.
2. the contents of Web pages may change over time. Where version information is provided in the References, different versions may not contain the information or the conclusions referenced.
3. the authors of the Web pages, not CAIS, are responsible for the accuracy of their content.
4. the author(s) of this article, not CAIS, is (are) responsible for the accuracy of the URL and version information.

- “AACSB Faculty Leadership Task Force,” (1996)
(<http://www.aacsb.tfprint.htm>), as of 4/4/00.
- Applegate, J. (1999) “Lack of Qualified Grads? Not at These Schools.”
San Diego Business Journal. (20)41, p. 37.
- Applegate, L. M. (1999) “Rigor and Relevance in MIS Research – Introduction,” *MIS Quarterly* (23)1, pp. 1-2
- Applegate, L. M. and King, J. L. (1999) “Rigor and Relevance: Careers on the Line,” *MIS Quarterly* (23)1, pp. 17-18.
- Benbasat, I. and Zmud, R.W. (1999) “Empirical Research in Information Systems: The Practice of Relevance,” *MIS Quarterly* (23)1, pp. 3-16.
- Brookshire, R.G. and Smith, G. T. (2000) ““An Information Systems Consulting Course Using Mentors,” in Dawn E. Woodland, Ed., *Proceedings of the 19th Annual OSRA Research Conference*, Toronto, Canada, February 2000, pp. 13-19.

Davenport, T. H., (1996) "The Second Information Revolution," *Data Base* (27)4, pp. 85-91.

Davenport, T. H. and Markus, M.L. (1999) "Rigor vs. Relevance Revisited: Response to Benbasat and Zmud," *MIS Quarterly* (23)1, pp. 19-23.

Gordon, J., Kiser, K., Lee, C., and Stamps, D. (1999) "Dialing Up a Telecom Degree," *Training* (36)2, p.22.

Kavan, B. (1998) "Profit Through Knowledge: The Application of Academic Research to Information Technology Organizations," *Information Resources Management Journal*, (11)1, pp.17-22.

Lee, A.S. (1999) "Rigor and Relevance in MIS Research: Beyond the Approach of Positivism Alone," *MIS Quarterly* (23)1, pp. 29-33.

Lyytinen, K. (1999) "Empirical Research in Information Systems: On the Relevance of Practice in Thinking of IS Research," *MIS Quarterly* (23)1, pp. 25-27.

Robey, D. and Markus, M.L. (1998) "Beyond Rigor and Relevance: Producing Consumable Research About Information Systems," *Information Resources Management Journal*, (11)1, pp. 7-15.

Saunders, C. (1998) "Editorial Preface – The Role of Business in IT Research," *Information Resources Management Journal*, (11)1, pp. 4-6.

Senn, J. (1998) "The Challenge of Relatine IS Research to Practice," *Information Resources Management Journal*, (11)1, pp. 23-28.

Stiller, A. D. (forthcoming) "Challenging Students to Live E-Business," *2000 IRMA International Conference*.

Watson, H. J., Satzinger, J. W., and Singh, S. K. (1994) "Establishing Viable Programs of Research: The Executive Information System Program at the University of Georgia," *Data Base*, (25)3, pp.40-51.

Westfall, R.D. (1999) "An IS Research Relevance Manifesto," *Communications of the Association for Information Systems*. (2)Paper 14.

ABOUT THE AUTHORS

Hugh J. Watson is Professor of MIS and holder of a C. Herman and Mary Virginia Chair of Business Administration in the Terry College of Business at the University of Georgia. He is the author of 22 books and over 100 journal articles. Hugh's current interest is data warehousing and he is the Senior Editor of the Journal of Data Warehousing and a Fellow of The Data Warehousing Institute. He is very active in AIS and served on the Organizing Committee, was Program Chair for the first AMCIS, and recently completed a term as an America's Region Council Member.

Mark Huber is Assistant Professor of MIS in the Terry College of Business at the University of Georgia. His current research interests include group support systems and MIS education. Mark is also a Lieutenant Colonel in the Air Force Reserve assigned to HQ USAF at the Pentagon where he is involved with information systems integration throughout the Air Force and Department of Defense.

Copyright ©2000, by the [Association for Information Systems](#). Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and full citation on the first page. Copyright for components of this work owned by others than the [Association for Information Systems](#) must be honored. Abstracting with credit is permitted. To copy otherwise, to republish, to post on servers, or to redistribute to lists requires prior specific permission and/or fee. Request permission to publish from: AIS Administrative Office, P.O. Box 2712 Atlanta, GA, 30301-2712 Attn: Reprints or via e-mail from ais@gsu.edu



Communications of the Association for Information Systems

EDITOR
Paul Gray
Claremont Graduate University

CAIS SENIOR EDITORIAL BOARD

Henry C. Lucas, Jr. Editor-in-Chief New York University	Paul Gray Editor, CAIS Claremont Graduate University	Phillip Ein-Dor Editor, JAIS Tel-Aviv University
Edward A. Stohr Editor-at-Large New York University	Blake Ives Editor, Electronic Publications Louisiana State University	Reagan Ramsower Editor, ISWorld Net Baylor University

CAIS ADVISORY BOARD

Gordon Davis University of Minnesota	Ken Kraemer University of California at Irvine	Richard Mason Southern Methodist University
Jay Nunamaker University of Arizona	Henk Sol Delft University	Ralph Sprague University of Hawaii

CAIS EDITORIAL BOARD

Steve Alter University of San Francisco	Barbara Bashein California State University	Tung Bui University of Hawaii	Christer Carlsson Abo Academy, Finland
H. Michael Chung California State University	Omar El Sawy University of Southern California	Jane Fedorowicz Bentley College	Brent Gallupe Queens University, Canada
Sy Goodman University of Arizona	Chris Holland Manchester Business School, UK	Jaak Jurison Fordham University	George Kasper Virginia Commonwealth University
Jerry Luftman Stevens Institute of Technology	Munir Mandviwalla Temple University	M. Lynne Markus Claremont Graduate University	Don McCubbrey University of Denver
Michael Myers University of Auckland, New Zealand	Seev Neumann Tel Aviv University, Israel	Hung Kook Park Sangmyung University, Korea	Dan Power University of Northern Iowa
Maung Sein Agder College, Norway	Margaret Tan National University of Singapore, Singapore	Robert E. Umbaugh Carlisle Consulting Group	Doug Vogel City University of Hong Kong, China
Hugh Watson University of Georgia	Dick Welke Georgia State University	Rolf Wigand Syracuse University	Phil Yetton University of New South Wales, Australia

ADMINISTRATIVE PERSONNEL

Eph McLean AIS, Executive Director Georgia State University	Colleen Bauder Cook Subscriptions Manager Georgia State University	Reagan Ramsower Publisher, CAIS Baylor University
---	--	---