



2009 IACIS Conference Program



**49th Annual IACIS International Conference
September 30—October 3, 2009
Pittsburgh, Pennsylvania, USA**

Information Systems – The Bridge To All Business Functions





PREFACE

Welcome to the 49th Annual Conference for the International Association for Computer Information Systems!

Pittsburgh, the City of Bridges, is certainly a fun and exciting city to visit. The theme, “Information Systems – The Bridge To All Business Functions”, has been embraced by this year’s authors with many presentations discussing business intelligence, enterprise resource planning, and effects of information systems in a foreign environment.

The two keynote speakers will present on two popular topics, data mining and computer forensics. Thursday keynote speaker E. Scott Larsen says that data mining is something he can talk all day about -- the data mining, the machine learning, the infrastructure details, auction theory, etc. Mr. Larsen will also address the question, “how do I get my ad to the top of the list” in a Google search.

Friday keynote speaker Ms Karen Paulett will certainly peak your interest when she discusses computer forensics. We have all been fascinated by the current TV shows using sophisticated computer systems to solve a crime. As an employee for Allegheny County District Attorney’s office she will have lots to share on the CSI effect.

Papers selected for publication in Issues in Information Systems can be accessed online at www.iacis.org. IIS is registered with the U.S. Library of Congress as a serial publication and is listed in Cabell’s Directory of Publishing Opportunities in Management. Only complete, accepted papers appear in IIS; accepted abstracts appear in the Conference Proceedings.

Special thanks go to Thom Luce and Ohio University for their continued support of the IACIS conference database site for online submission and review and conference management activities. Thom maintains and updates our system each year, based in large part on your suggestions. Conference management is quite smooth thanks to this system. Please continue to provide input for ways we can improve your submission and review experience.

You all continue to make the IACIS International Conference an excellent conference. With increased travel costs and decreased college budgets, we appreciate your making this conference your home conference. Thank you for presenting your best work here. We look forward to continued lively and meaningful presentations and discussions.

Lorraine (Lori) Willoughby
IACIS Vice President and Conference Chair

Richard McCarthy
IACIS Secretary and IIS Editor

**Make Plans to Attend the
50th Annual Conference
Las Vegas, Nevada, USA
October 6-9, 2010
Golden Nugget Hotel**

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49th Annual Conference International Association for Computer Information Systems

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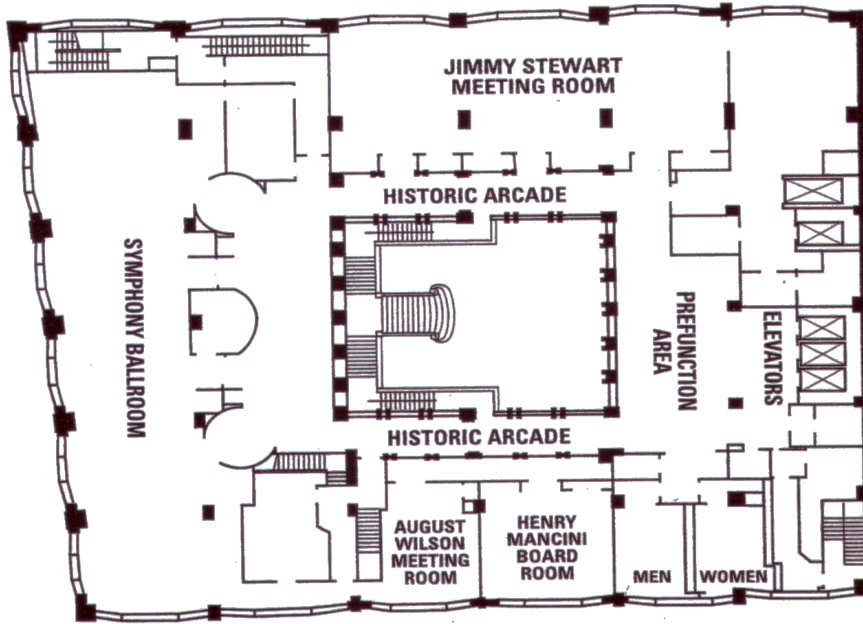
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SESSION TIMETABLE

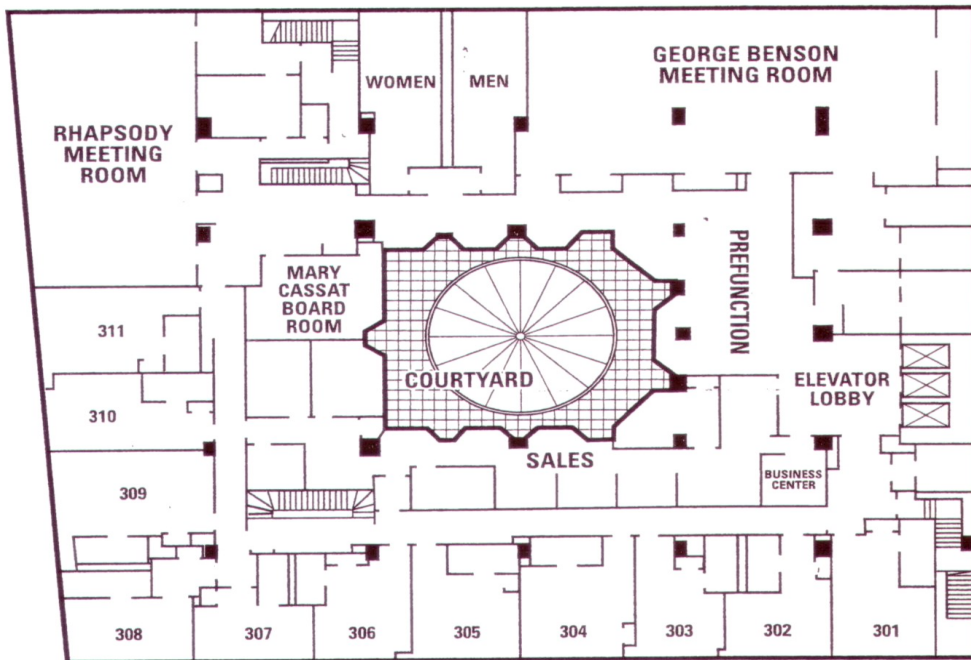
Thursday, October 1	10:00—11:00	Symphony A	01A	01B	01C	01D
	11:10—12:10		02A	02B	02C	02D
	2:00—3:00		03A	03B	03C	03D
	3:20—4:20		04A	04B	04C	04D
	4:30—5:30		05A	05B	05C	05D
Friday, October 2	8:40—9:40	Jimmy Stewart	06A	06B	06C	06D
	10:00—11:00		07A	07B	07C	07D
	11:20—12:20		08A	08B	08C	08D
	2:10—3:10		09A	09B	09C	09D
Saturday, October 3	8:30—9:30	Symphony A	10A	10B	10C	10D
	9:40—10:40		11A	11B	11C	11D
	11:00—12:00		12A	12B	12C	



2ND FLOOR



3RD FLOOR



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CONFERENCE PROGRAM

PROGRAM OVERVIEW

Wednesday, September 30, 2009

6:00 - 8:00 p.m. Reception/Registration Symphony AB

Thursday, October 1, 2009

7:30 a.m. – 5:00 p.m.	Registration	Symphony Foyer
7:30 - 8:30	Continental Breakfast	Symphony Foyer
8:30 - 8:40	Welcome and Announcements	Symphony Ballroom
8:40 - 9:40	Keynote Scott Larson, Ph. D. Senior Software Engineer Google	Symphony Ballroom
9:40 - 10:00	Networking Break	Symphony Foyer
10:00- 11:00	Session 1A Curriculum Design/Development #1 Session 1B Electronic Communication #1 Session 1C Software Development #1 Session 1D Database/Data Modeling #1	Symphony A Jimmy Stewart Rhapsody II (Third Level) George Benson (Third Level)
11:10 - 12:10	Session 2A Curriculum Design/Development #2 Session 2B E-business/E-commerce/E-government #1 Session 2C Software Development #2 Session 2D Database/Data Modeling #2	Symphony A Jimmy Stewart Rhapsody II (Third Level) George Benson (Third Level)
12:10 - 2:00	Lunch (on your own)	
2:00 – 3:00	Session 3A Curriculum Design/Development #3 Session 3B E-business/E-commerce/E-government #2 Session 3C Software Development #3 Session 3D Database/Data Modeling #3	Symphony A Jimmy Stewart Rhapsody II (Third Level) George Benson (Third Level)
3:00 - 3:20	Networking Break	Symphony Foyer
3:20 - 4:20	Session 4A Curriculum Design/Development #4 Session 4B SAP Session 4C Accounting Session 4D Collaboration #1	Symphony A Jimmy Stewart Rhapsody II (Third Level) George Benson (Third Level)
4:30 - 5:30	Session 5A Curriculum Design/Development #5 Session 5B Medical #1 Session 5C Programming Session 5D Collaboration #2	Symphony A Jimmy Stewart Rhapsody II (Third Level) George Benson (Third Level)
6:00 – 9:30 p.m.	Fun Night – Buffet dinner at the Senator John Heinz History Center	



PROGRAM OVERVIEW

Friday, October 2, 2009

7:30 a.m. – 5:00 p.m.		Registration	Symphony Foyer
7:30 - 8:30		Continental Breakfast	Symphony Foyer
8:30 - 8:40		Announcements	Symphony Ballroom
8:50 - 9:50	Session 6A Session 6B Session 6C Session 6D	Security #1 Business Intelligence #1 Assessment Knowledge Management	Jimmy Stewart August Wilson Rhapsody II (Third Level) George Benson (Third Level)
10:00 - 11:00	Session 7A Session 7B Session 7C Session 7D	Security #2 GIS/GPS ERP #1 Medical #2	Jimmy Stewart August Wilson Rhapsody II (Third Level) George Benson (Third Level)
11:00 - 11:20		Networking Break	Symphony Foyer
11:20 - 12:20	Session 8A Session 8B Session 8C Session 8D	Security #3 Curriculum Design/Development #6 Business Intelligence #2 ERP #2	Jimmy Stewart August Wilson Rhapsody II (Third Level) George Benson (Third Level)
12:30 – 2:00		Business Luncheon and Award Presentations	Symphony Ballroom
2:10 – 3:10	Session 9A Session 9B Session 9C Session 9D	Security #4 Networks #1 ERP #3 Curriculum Design/Development #7	Jimmy Stewart August Wilson Rhapsody II (Third Level) George Benson (Third Level)
3:10 – 3:30		Networking Break	Symphony Foyer
3:30 – 5:00		Karen Paulett, Ph. D. Forensic Evidence Specialist District Attorney's Office	Symphony Ballroom
5:00 – 5:30		JCIS Editorial Board Meeting	August Wilson

PROGRAM OVERVIEW

Saturday, October 3, 2009

7:30 - 11:00 a.m.		Registration	Symphony Foyer
7:30 - 8:30		Continental Breakfast	Symphony Foyer
8:30 - 9:30	Session 10A Session 10B Session 10C Session 10D	Business Intelligence #3 Security #5 Foreign #1 Ethics	Symphony A Symphony B Symphony C Jimmy Stewart
9:40 - 10:40	Session 11A Session 11B Session 11C Session 11D	Networks #2 Fraud Project Management Internet #1	Symphony A Symphony B Symphony C Jimmy Stewart
10:40 - 11:00		Networking Break	Symphony Foyer
11:00 - 12:00	Session 12A Session 12B Session 12C	Internet #2 Curriculum Design/Development #8 Cloud Computing	Symphony A Symphony B Symphony C
12:10 - 12:40		Conference Debriefing	Jimmy Stewart

KEYNOTE PRESENTATIONS

Thursday, October 1

8:40—9:40 a.m.

Symphony Ballroom



Speaker: *E. Scott Larsen*, Senior Software Engineer, Google

E. Scott Larsen has been playing with computers since he discovered that his dad's printer had more memory than his Commodore128. He got a BS and MS from Brigham Young University, and PhD from the University of North Carolina at Chapel Hill. While in grad school, he helped pioneer usage of commodity graphics hardware for non-graphics applications, while studying computer vision and graphics, while dabbling in parallel processing. Before landing at Google he did internships at Orangatango and NVIDIA. He is currently a Senior Software Engineer working in the Ads Quality group.

Presentation Title: Extreme Data Mining: The Google AdWords and AdSense Data Mining Infrastructure

Presentation Abstract: In order to show only the ads that are helpful to our users, the data mining we do here at Google works on extremely high data volumes and needs to provide data throughput that is global, continuous, and very high. The scale of this data mining, and our highly responsive usage patterns, imply significant challenges to all levels of the software stack: from low-level infrastructure to high-level application design. In this talk I will discuss challenges of data mining with data volumes so high that even simple computation problems rapidly become non-trivial. I will also discuss some algorithmic, statistical, and data mining challenges that accompany these domains.

Friday, October 2

3:30—5:00 p.m.

Jimmy Stewart



Speaker: *Karen Paulett*, Allegheny County District Attorney's Office

Karen L. Paulett is employed with the Allegheny County District Attorney's Office. She has worked in the criminal justice system for over 12 years. In 2003, she was the first to implement courtroom technology in Allegheny County, Pennsylvania. Her duties include working with prosecutors, law enforcement, and crime lab technicians to digitize and prepare evidence for trial. She has worked on over 2000 criminal trials. As part of her job duties she has spoken to over 100 schools and organizations throughout Pennsylvania on the CSI Effect, Cyberbullying, Cyberstalking, and the Dangers of Social Network Sites. Since May 2007, Karen has been an adjunct instructor at Robert Morris University in the Department of Computer and Information Systems. She is also an adjunct instructor at American Public University System (APUS) in the Department of Information Technology. Karen holds a DSc. in Information Systems and Communications, a M.S. in Communications and Information Systems and a B.S. in Information Systems from Robert Morris University.

Presentation Title: *Computer Forensics: A new profession*

Presentation Abstract: The increased number of crimes committed with the aid of sophisticated technology indicates that computer forensic professionals will need to understand the tools, technology, and methods employed by criminals. Computer forensics is the process of using scientific knowledge for collecting, analyzing, and presenting evidence to courts. Computer forensics is a relatively new discipline in which there has been little standardization across the courts and industry. Since the number of computer related crimes is growing exponentially university computer science programs should address the need for computer forensics professionals.

IACIS RECOGNITION AWARDS

Computer Educator of the Year

The **Computer Educator of the Year** is the highest award given by the Association, and competition for the award is keen. Candidates show exceptional research and teaching skills, have made significant contributions to IS and IS education, and enjoy a national or international reputation for their outstanding work throughout the IS community. Recent recipients have included curriculum innovators, leaders in the field of artificial intelligence and IS management, and publishers of learning materials that have significantly impacted the IS educational community. Nominations for the Computer Educator of the Year are accepted from September until March, with selection made in June or July for awarding at the annual conference in the fall.

Ben Bauman Award for Excellence

Ben Bauman was a long time member, officer, Director and contributor to IACIS, and a member of the faculty at James Madison University. Ben made it his life's work to contribute to his profession and university, and to mentor junior faculty and help them realize their potential. He passed away suddenly, and in recognition of his years of service and contributions, IACIS has established an annual award in his honor.

The **Ben Bauman Award for Excellence** recognizes faculty excellence and service. Candidates for the Ben Bauman Award include senior faculty with significant service to their profession, university and community. Service would include taking a leadership role in professional organizations, assuming significant committee responsibilities and serving the community through civic, church and other activities. While research and scholarship are important activities for all faculty, the major emphasis when reviewing senior faculty nominations for the Ben Bauman Award will be on reviewing their significant and long-term service.

A second category of candidates includes junior faculty showing outstanding scholarship, service and great promise. It is expected that candidates in this category will not have a long record of scholarship and service, but will have recognizable achievements. The major emphasis when reviewing junior faculty nominations for the Ben Bauman Award will be on the candidate's potential and promise for a significant academic career.

Nominations will be accepted for both junior and senior faculty, with one candidate from all nominations selected each year to receive the award. Nominations for the Ben Bauman Award for Excellence are accepted from September until March, with selection made in June or July for awarding at the annual conference in the fall.

"Best Paper" Awards

Up to three awards for "Best Paper" are conferred at the annual conference. Reviewers for the conference nominate papers based on demonstrated excellence of specific criteria. The Conference Chair submits the nominated papers to a panel of experts for another round of blind reviews. The Conference Chair confers the "Best Paper" awards at the annual conference in the fall. Not all categories are awarded each year. The Conference Chair may also recognize "Honorable Mention" awards for excellent papers.

Papers may be nominated for one of the following categories:

- Best Pedagogy Paper Award: the best paper treating pedagogical issues
- Best Research Paper Award: the best paper reporting original research
- Best Technical Paper Award: the best paper regarding technological innovations

»» IACIS RECOGNITION AWARDS

2009 Computer Educator of the Year Alex Koohang



During his more than twenty years in the academic community Alex Koohang has served as Lecturer, Program Coordinator, Program Director, Division Head and Academic Dean. Dr. Koohang has also served as a Visiting Professor at the Polish University Wyzsza Szkola Biznesu-National-Louis University. During his academic career he has assembled a remarkable record of accomplishment.

In addition to an active teaching schedule Professor Koohang is the co-author of six books, and author or co-author of more than 60 international publications and academic proceedings, has made more than 50 national and international presentations, serves as editor-in-chief of the *Interdisciplinary Journal of E- Learning & Learning Objects* and past editor-in-chief of the *Interdisciplinary Journal of Information, Knowledge & Management* , as an editorial reviewer for the *Journal of Computer Information Systems*, *International Journal of Innovation & Learning*, and many others.

In recognition of his outstanding achievements and dedication to computer, technology, and management education, he has been recognized as a FELLOW of the **Informing Science Institute**.

Professor Koohang has truly made a significant impact on the world of Computer Information Systems through his teaching, his scholarship, his commitment to editing professional and technical journals reaching throughout the globe, and his academic leadership as a University Administrator. We congratulate Professor Alex Koohang on being selected as the 2009 IACIS Computer Educator of the Year.

2009 Ben Bauman Award for Excellence Monica Holmes



Ben Bauman had an outstanding career as a computer specialist in the Air Force before retiring and joining the faculty of James Madison University. He devoted his second career to supporting and mentoring faculty and contributing to the growth of IACIS. He died unexpectedly after retiring from JMU and this award was established to honor his memory.

We recognize Dr. Monica Holmes, Central Michigan University, as the recipient of the 2009 Ben Bauman Award for Excellence. Professor Holmes has fifteen years of teaching, service, and administration experience at Central Michigan University, currently serving as the Associate Dean of the College of Business Administration. During her career Professor Holmes has participated in specialized technical training provided by Six Sigma and SAP, and has been active in providing leadership to AITP. In 2007, she co-chaired the AITP National Collegiate Conference in Detroit, with more than 650 participants. In 2008 and 2009, she co-chaired the annual conference of the Michigan American Council on Education for Women Leaders in Higher Education. She has also served as Consultant-Evaluator for the Higher Learning Commission, Director of the MS in IS program, Chairperson of the MBA Advisory Board, Chairperson of the BIS Department, and is currently serving as the College of Business Administration Associate Dean. Professor Holmes has authored or co-authored more than 30 published manuscripts, participated in numerous grant proposals and fundraising activities, served on many university committees, and contributed to the development and delivery of numerous online courses.

Dr. Holmes is clearly on track for an outstanding career as a university faculty member and administrator, and we congratulate her on being selected to receive the 2009 Ben Bauman Award for Excellence.

CURRICULUM DESIGN/DEVELOPMENT #1

Thursday, October 1
Session Chair: Lisa Bain

10:00—11:00 a.m.

Symphony A

STUDENT APPROACHES TO LEARNING: AN EXPLORATORY STUDY

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Nenna Muoghalu, Bethune Cookman University, nenna.muoghalu@cookman.edu

In this study, the partial least square approach (PLS) is applied to investigate students' approaches to learning in the framework of online or hybrid courses. A total of 140 valid responses from students who have finished or are currently enrolled in at least one MIS online or hybrid course were analyzed using a structural equation model and the results are presented herein.

DESIGN, IMPLEMENTATION, AND ASSESSMENT OF AN INFORMATION TECHNOLOGY SENIOR CAPSTONE COURSE

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Kevin Floyd, Macon State College, kevin.floyd@maconstate.edu
Richard Spiers, Macon State College, richard.spiers@maconstate.edu
Liz Riley, Macon State College, liz.riley@maconstate.edu

This paper describes the design and implementation of an IT senior capstone course. The design takes into account the inclusion of various unique characteristics of a capstone course reported in the literature. The structure of the course is explained and the unique characteristics are emphasized within the design. In addition, the design gives attention to the use of the capstone course as a means for overall program assessment and evaluation.

ASSESSMENTS AND OUTCOMES OF AN ERP/SAP FUNDAMENTAL COURSE

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This paper presents a comprehensive approach to teaching ERP/SAP with the course assessments and learning outcomes. The course emphasizes on teaching SAP implementation as the whole process of transforming ERP business procedures to organization wide requirements. The learning outcomes were assessed via the course assessment exam and the course survey questionnaire at the end of the quarter. SAP is utilized as an ERP software tool in the course. Although both graduates and undergraduate students who took the course achieved positive learning outcomes, the significant difference in learning outcomes was identified between graduate and undergraduate students. The paper concludes with several suggestions to those who seek to teach enterprise system integration course.

ELECTRONIC COMMUNICATION

Thursday, October 1

10:00—11:00 a.m.

Jimmy Stewart

Session Chair: Paul Kovacs

EMPLOYERS AND EDUCATORS WANT INFORMATION SYSTEMS GRADUATES TO BE ABLE TO COMMUNICATE

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Computer and Information System students must be able to communicate effectively with their peers, supervisors, users and technical personnel. Attaining outstanding communication skills at the time of graduation can give the College graduate an edge up in the competition for employment. This paper documents what the employers are looking for in terms of communications skills in the entry level CIS position. Also explored are various techniques that are being used in some institutions of higher Education to insure communications skills are incorporated into all CIS courses.

COMPARING THE EFFECTIVENESS OF PUBLIC VS. PRIVATE BLOGGING IN A MANAGEMENT INFORMATION SYSTEMS STRATEGY COURSE

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This paper reports on a study of the use of blogs to support a Management Information Systems Strategy class requiring higher level thinking skills. Comparison of the use of private vs. public blogs showed that public sites were more effective in providing students with the skills to assess the potential of emerging technologies and to integrate blogs into their daily activities.

THE IMPACT OF COMMUNICATION STRUCTURE ON ISSUE TRACKING EFFICIENCY AT A LARGE BUSINESS SOFTWARE VENDOR

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Software development's organizational design is often characterized by geographical dispersion and virtual team work. In this setup, communication is an essential task. We study this task by analyzing the association between communication structure and efficiency of the issue tracking process. This key process within software development is primarily carried out digitally and thus provides a suitable data set for analysis. We find that communication structure is associated with issue tracking efficiency in a case study at a large business software vendor.

SOFTWARE DEVELOPMENT #1

Thursday, October 1

10:00—11:00 a.m.

Rhapsody II (Third Level)

Session Chair: Stevan Mrdalj

AN EMPIRICAL METHOD FOR MEASURING THE EFFECTIVENESS OF AN OBJECT-ORIENTED DESIGN PROCESS

Stevan Mrdalj, Eastern Michigan University, smrdalj@emich.edu

The effectiveness of a design process can be critical to the success of information system development projects. There have been very few empirical studies on the effectiveness of design processes that use unified modeling language (UML). This paper establishes a model for measuring the effectiveness of diagram derivation as a way of measuring the effectiveness of the object-oriented design (OOD) process. It utilizes the defect density approach to evaluate an OOD process in terms of how correct the results are that it produces, how consistent those results are and how scalable the process is. To demonstrate how applicable the proposed methodology is, we conducted an empirical evaluation to determine the effectiveness of the user interface driven design process. This study calculated the defect densities for four UML diagrams and measured the effectiveness of the design process on three levels: individual type of defect, type of diagram and the entire project. The results show that the proposed methodology can be reliably used to evaluate an OOD process.

PROCESS MODELS AND DISTRIBUTION OF WORK IN OFFSHORING APPLICATION SOFTWARE DEVELOPMENT

Karl Kurbel, European University Viadrina Frankfurt (Oder), kurbel.bi@eu-frankfurt-o.de

Common process models for the development of application software (AS) are examined regarding their suitability for offshoring projects. Such projects require communication and interaction among onsite and offshore project stakeholders to be well supported. Process models applied by organizations using offshore services are discussed, and a generalized offshoring life cycle model is presented. We also discuss the distribution of work between the organization that outsources AS development and the offshore organization that carries out the major share of the development work. Software development tasks performed onsite and offshore are identified.

THE INFORMATION SYSTEMS ANALYST EXAM AS A PROGRAM ASSESSMENT TOOL: PRE-POST TESTS AND COMPARISON TO THE MAJOR FIELD TESTS

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This paper describes a pre-post test study using the Information Systems Analyst (ISA) exam at a small college. It shows the exam appears to measure CIS learning and also appears to be comparable to the Major Field Test (MFT) in Business in terms of how it assesses. Thus the ISA exam arguably should be considered on an equivalent footing as the MFT, in terms of program assessment. The article advocates that the Institute for Certification of Computer Professionals ICCP conduct further research on a broader scale so that users of the ISA exam can count on its relevance as a program assessment tool.

ON THE UTILITY OF SECOND LIFE AS A PLATFORM FOR BUSINESS ADMINISTRATION EDUCATION

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Second Life (SL) is a virtual world (VW) environment populated by residents (avatars) accessible in most nations of the world. It offers its residents the three classic factors of production: land (virtual real estate), labor (the residents), and capital (an in-game currency known as Linden Dollars [L\$]). Second Life would appear to hold promise as a platform for many aspects of business administration education. SL operates on a highly sophisticated technology platform. Educators in the field of Information Systems should become familiar with its capabilities and limitations so they may better address the questions sure to come from their colleagues in the business school. In this paper we address the major factors of the SL platform and provide our insights on how the simulation might support topics across the business curriculum

DATABASE/DATE MODELING #1

Thursday, October 1

10:00—11:00 a.m.

George Benson (Third Level)

Session Chair: Hae-Yeon Choi

A FOLLOW-UP STUDY OF SAP CERTIFICATION GRADUATES

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The purpose of this study was to determine the impact of the SAP Academy and SAP Certification for Central Michigan University's past undergraduate and graduate participants. Data was collected through a survey which asked participants about their satisfaction with the Academy and how it has impacted their careers and professional life. While there has been research done regarding the impact of SAP courses, little research has been done on the effects of the certification Academy. Students were very satisfied with the Academy and felt that it broadened their career opportunities and better prepared them for various job tasks. Employers were impressed with the Academy, and many students felt that their participation gave them the confidence to pursue other certifications and trainings. The SAP Certification Academy was also highly recommended for future CMU students, and the majority agreed that it had a positive impact on their careers

A STUDY ON DESIGN AND DEVELOPMENT OF FXDB SYSTEM FOR SEMANTIC SEARCH

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With rapidly increasing number of web users and web contents on the net, intelligent information system and semantic web services are getting more important. In this paper, we propose FXDB (Fuzzy XML Database) system design techniques for semantic information retrieval and suggest a method to generate semantic information, giving it to users in real time through the web search service. This paper also attempts to apply XML and fuzzy techniques to intelligent information system and web service so that users can interpret metadata in the database semantically and automatically. Thus this is a web service tool whose purpose is to automate the interpretation of metadata of products or services more efficiently and intelligently. As a result, web users can make a better and faster semantic web searching along with its rich semantic information provided.

A COMPARISON OF THE RELATIONAL DATABASE MODEL AND THE ASSOCIATIVE DATABASE MODEL

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This paper compares the relational database model with the associative database model. This paper briefly summarizes the relational and other familiar data models. The remainder of this paper will introduce and describe the associative database model. The associative model is less known because it is relatively new and does not have a large software supplier base. While it seems to offer a number of benefits and advantages over other database structures, it has yet to become a commercial success in the mainstream database market.

»» Notes

CURRICULUM DESIGN/DEVELOPMENT #2

Thursday, October 1

11:10 a.m.—12:10 p.m.

Symphony A

Session Chair: David Wood

A COMPARISON OF STUDY ABROAD AND GLOBALIZATION ATTITUDES AMONG INFORMATION SYSTEMS, COMPUTER SCIENCE, AND BUSINESS STUDENTS: RECOMMENDATIONS FOR IS CURRICULUM DESIGN

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The objectives of this study were to identify IS students' (1) study abroad desires, (2) study abroad beliefs, (3) study abroad preferences, (4) globalization beliefs, and (5) the factors that predict study abroad desires, and provide IS educators with recommendations for increasing student participation in study abroad programs. In a regression analysis, study abroad career beliefs and major were significant predictors of desire to study abroad. Upper class majors approached significance in being less likely and upper income students approached significance in being more likely to desire studying abroad. Globalization beliefs and gender were not significant predictors of desire to study abroad. Conclusions include the following: (1) IS majors' study abroad destination choices are not strategic; (2) IS majors report that parents have more influence than friends, instructors, and advisors; (3) IS majors express strong agreement that studying abroad and working effectively with members of other cultures is important to their careers; and (4) beliefs about the impact of globalization on the economy and gender are not predictors of desire to study abroad.

SELECTING A FIRST PROGRAMMING LANGUAGE TO TEACH PROSPECTIVE TEACHERS — CASE EXAMPLES FROM TWO PROGRAMS

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The purpose of this paper is to identify the factors that influence the decision to select a programming language to teach students enrolled in a graduate level course in education. The paper illustrates the experience of two degree programs: The master degree of business education (M.Ed.) at Eberly College of Business and Information Technology – Indiana University of Pennsylvania (IUP), and the master of education (M.S. Business Education) at Robert Morris University (RMU). The paper reviews literature regarding factors that make learning to program a difficult task. It then introduces a programming language named Alice and discusses how this language is able to address the difficulty with learning to program. It then illustrates the experience of both programs at IUP and RMU in selecting a programming language for their students enrolled in their respective education master degree programs.

A FRAMEWORK OF LEADING TOWARDS LEARNING THROUGH ACTIVE ENGAGEMENT OF STUDENTS

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Pedagogical research shows that engagement of students in the classroom and other course-related activities can lead to motivation. Students also learn more and retain their knowledge when actively involved in their educational process - passive learning is ineffective and of short duration. Research also suggests that the art and practice of engaging students is principally the responsibility of the teacher. This paper reviews some theories of motivation and engagement as well as pedagogies of student engagement that provide significant learning. Based on the findings and from our own experience, we propose a Leading-Learning Framework that outlines the principles and practices for an instructor that can be applied to engage students in-and-out of the classroom and lead them towards the development of an end product, which should be the principal outcome of a course. Finally, we present some initial results of applying the Framework in an undergraduate programming course in Visual Basic.

E-BUSINESS/E-COMMERCE/E-GOVERNMENT #1

Thursday, October 1

11:10 a.m.—12:10 p.m.

Jimmy Stewart

Session Chair: Leila Halawi

A CRITICAL ANALYSIS OF USING 3-D VIRTUAL WORLD ENVIRONMENTS IN E-COMMERCE STRATEGY

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E-commerce has been a rapidly expanding component of many organizations' corporate strategies. As part of this expansion, companies are exploring alternative and more non-traditional approaches for growing sales and expanding brand awareness. Commensurate with the growth in e-commerce is the rapid growth of the computer gaming industry. This contribution of this paper is the synthesis of the union of a specific type of computer game environment—the metaverse and how it is being employed by organizations as part of their e-commerce strategies. The authors look critically at both the potential advantages and drawbacks of this union as well as articulate the role of corporate IT in managing this ambitious union.

COGNITIVE DIFFERENCES IN SERVICE QUALITY BETWEEN E-GOVERNMENT USERS AND ADMINISTRATORS

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After Taiwan governments implement it's e-government portal (MyeGov, www.gov.tw) in 2002 as a means of delivering better information services and resources, building quality service that encourage citizen uptake is becoming an increasing challenge. This paper addresses this issue and examines the quality divide cause by the cognitive difference between users and administrators of the e-government portal. To understand what governments need to do to secure successful implementation of comprehensive government service that are relevant to citizens, the services quality of e-government portals are scrutinized through a survey on both its users and administrators. The investigation instrument is based on the conceptual model of service quality proposed by Parasuraman, Zeithaml and Berry. The research finds that the user's intention of re-use the e-Government portal is highly associated with their service quality factors. The research also provides insights for government officials and practitioners to understand and improve e-Government practice by identify major cognitive difference between e-government portal's users and its administrators that cause the low usage rate of the e-government portal.

E-BUSINESS IMPACTS AND OBSTACLES FROM THE PERSPECTIVE OF EUROSTAT AND STUDENTS

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In the paper, firstly, the comparison of e-business among SMEs in Slovenian and some other EU countries and regions is presented. Even if the broadband access to the Internet in Slovenia is not a problem anymore, B2B e-business is not that common among Slovenian SMEs as it is in the EU countries. Secondly, the e-business impacts and obstacles among Slovenian SMEs are discussed from two perspectives – from the point of view of SMEs and students. Among Slovenian SMEs implementing e-business was done mostly due to management demand and has an impact on communication inside and outside enterprises. The e-business implementing or maintaining cost and the lack of staff could be a serious obstacle for e-business implementation and usage.

SOFTWARE DEVELOPMENT #2

Thursday, October 1

11:10 a.m.—12:10 p.m.

Rhapsody II (Third Level)

Session Chair: Queen Esther Booker

DESIGNING A NEW TOOL FOR MODELING AND SIMULATION OF DISCRETE-EVENT SYSTEMS

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This paper talks about design, development, and application of a new Petri net simulator for modeling and simulation of discrete event system (e.g. information systems). The new tool is called GPenSIM (General purpose Petri Net Simulator). Firstly, this paper presents the reason for developing a new tool, through a brief literature study. Secondly, the design and architectural issues of the tool is given. Finally, an application example is given on the application of the tool.

PROTOTYPING FOR THE HOLY GRAIL OF RFID: RETURN ON INVESTMENTS

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The suitability of application Radio Frequency Identification (RFID) Systems in the supply chain has been discussed since the late nineties. Like any new innovation, there are advantages (in operational efficiencies), and disadvantages (in its implementation). The hype created by this innovation suggests that advantages outweighed the disadvantages. Yet, adoption has lagged most predictions. This paper makes the case that one of the key causes of this is the lack of expected returns on investment (ROI). ROI is treated as cost-benefit factor, which can take many forms, and therefore can be measured in different ways by different parties. The paper goes on to discuss various intricacies of achieving ROI and attempts to frame the circumstances under which it is most likely to be found. The paper identifies combinations of closed loop versus open loop and item level versus pallet level circumstances for manufacturers, suppliers, and retailers in the supply chain, and evaluates ROI opportunities for each. Based on the resulting misaligned interests of supply chain partners, a three stage “natural” RFID adoption process is proposed.

A STUDENT PROGRAM RECOMMENDATION SYSTEM PROTOTYPE

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Recommendation systems have emerged as a useful e-commerce tool to assist customers in making purchases based on similarities and preferences of others. However, their potential has not been highly utilized to help in one area that could assist both professors and students - student advising. Using a recommender system has potential risks such as lower student retention if the system makes poor recommendations but it also has the potential of helping to guide potential students to a wider range of majors and courses that they may not have otherwise considered. This paper discusses a prototype recommender system for advising pre-applicants on probable courses of study at a university.

DATABASE/DATA MODELING #2

Thursday, October 1

11:10 a.m.—12:10 p.m.

George Benson (Third Level)

Session Chair: Lynn Heinrichs

A THEORETICAL FRAMEWORK FOR UTILIZING DATA WAREHOUSING TO PREDICT INFORMATION SECURITY THREATS

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Many organizations have implemented information security countermeasures to detect, minimize, and defend against information security threats, or breaches. Most of these countermeasures have traditionally adopted a passive approach to securing corporate data. This paper proposes a theoretical framework for utilizing an information security data warehouse to identify security breach patterns, in order to predict when potential breaches are most likely to occur, thus taking a more proactive approach to securing information assets.

APPLYING AN ENHANCED UNIFIED DATABASE-MANAGEMENT QUALITY EVALUATION TOOL

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The objective of this study is to enhance and apply a uniform database quality evaluation measuring tool that is based on the Southern California Online Users Group (SCOUG) model. The SCOUG model was originally developed to evaluate the quality of on-line research databases. This study, however, adds to the SCOUG model and applies SCOUG to internal company databases from a systems application (front end) or from a database/developer (backend) perspective. The results can aid in the understanding of database configuration, setup, integration, and pre-analysis for evaluation purposes.

WILL YOU BE MINED? ETHICAL CONSIDERATIONS OF OPT-IN LOYALTY PROGRAMS AND PRICE DISCRIMINATION

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The use of loyalty programs in retailing permeates the modern shopping experience. Program members are rewarded with benefits for simply providing purchase information to the retailer. In exchange, retailers hope to use the information in conjunction with data mining to make better business decisions. While many of the uses are common knowledge to consumers, not all are. Unfortunately, some uses have raised ethical concerns among consumers. This paper discusses the interplay of data mining and loyalty programs with the potential ethical implications of price discrimination as a result of the synergy.

CURRICULUM DESIGN/DEVELOPMENT #3

Thursday, October 1

2:00—3:00 p.m.

Symphony A

Session Chair: Allen Truell

THE IMPACT OF COMPUTER SCREEN RESOLUTION SETTING ON STUDENT COMPUTER-BASED HANDS-ON TASK PERFORMANCE IN AN INTRODUCTORY INFORMATION SYSTEMS COURSE

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Over the past several decades, considerable research has been completed exploring the possible influence various computer-based testing formats could have on student performance. Indeed, a simple search of the ERIC database using the descriptor “computer assisted testing” dated 1988 through 2008 returned over 1,800 citations. The thrust of many early studies was on assessing the consistency of student performance on computer-based and paper-and-pencil versions of the same test. Most recently researchers have expressed the need for studies exploring the potential impact computer-based test interface configurations on student performance. Thus, the purpose of this posttest only experimental control group design study was to determine if there was a significant difference in student hands-on task performance based on computer screen resolution setting. Study results indicate that student hands-on task performance is not significantly impacted by computer screen resolution setting. These same results were found when the variable gender was included in the analysis.

TEN SIMPLE MAXIMS FOR THE SYSTEMS ANALYST BRINGING THE IT COMMUNITY INTO THE CLASSROOM

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One of the challenges when presenting a Systems Analysis and Design course is finding a way to bring feedback from the IT community into the classroom. In the following, ten (simple) maxims, which have been compiled from suggestions and concerns voiced by the local IT community, are presented. Each maxim is given with topics for class discussion and review. There are, of course, many other maxims possible. But because it can honestly be stated that these ten maxims come from the local user-community, they have a special relevance. At the same time, it is an interesting way to bring young analysts to look at and prepare for their craft.

AN EXPLORATORY ANALYSIS OF FACTORS INFLUENCING STUDENTS DECISIONS TO TAKE ONLINE COURSES

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This study attempts to examine the perceptions of college students regarding online/hybrid education, the criteria used for decision making and the drawbacks that may keep students from enrolling in online education. Studies by Thomerson and Smith [15], and by Leonard and Guha [7] demonstrate that there are various characteristics that affect students’ perceptions which were the basis for this study. The main factors collected from previous studies that were analyzed included effectiveness, convenience, and social interaction, and level of difficulty. Data were collected by distributing surveys through the internet. 146 usable questionnaires were returned. Factor analysis was performed based on the surveys returned and significant factors were found. These results lead to the proposal of a research model.

E-BUSINESS/E-COMMERCE/E-GOVERNMENT #2

Thursday, October 1

2:00—3:00 p.m.

Jimmy Stewart

Session Chair: Timothy Kelly

M COMMERCE: TECHNOLOGIES AND CHALLENGES

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With the rapid growth of technology, the increasing use of the Internet, and the advancement in information and communications technologies in general, and mobile communication in particular, businesses around the world are increasingly changing the way they do business. Furthermore, with the emergence of the Global Economy, electronic commerce, e-commerce, in general, and mobile-commerce, m-commerce in particular are fast being regarded as the way to go global at the touch of a button. Mobile-commerce, m-commerce, represents a subset of all e-commerce transactions, both in the business-to-consumer and the business-to-business area. M-commerce will be able to increase the overall market for e-commerce, because of its unique value of providing easily personalized, localized products and services anytime and anywhere. This new development is faced with many challenges that include the use of the new technology and communication medium, and the flow of information from enterprise to enterprise, from enterprise to consumers, and also within the enterprise. This paper discusses the different technology and conceptual components of the e-commerce in general, and the m-commerce in particular, addresses the key advantages and disadvantages of m-commerce, and identifies and classifies the different types of challenges facing m-commerce businesses.

EXAMINING THE UNDERPINNINGS OF ORGANIZATIONAL CULTURE AND ORGANIZATIONAL SYSTEMS: A LITERATURE REVIEW

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Through a literature review, this paper examines the underpinnings of organizational culture and organizational systems, as well as the ways in which these organizational systems and cultures have morphed into a new entity by virtue of the influence of the Internet. The Internet is a catalyst for change, and within successful business practices, these imposed changes must be recognized, respected, and anticipated.

E-GOVERNMENT IN JORDAN

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According to the Jordanian Ministry of Information and Communications Technology's (MoICT) strategy document the vision that "E-Government in Jordan is dedicated to delivering services to people across society, irrespective of location, economic status, education or ICT ability. With its commitment to a customer-centric approach, e-Government will transform government and contribute to the Kingdom's economic and social development. (1)" MoCIT further states that the mission of Jordan's e-Government initiative is "To manage the transformation of the government towards a more 'customer-centric' approach in the delivery of services by means of appropriate technology, knowledge management and skilled staff to implement e-Government initiatives and programs that are relevant and affordable to the citizens of Jordan (2)." This paper examines the goals of Jordan's e-Government program as envisioned in 2000, some of the obstacles and challenges the country has faced in attempting to reach those goals and what has been achieved since the year 2000. The paper briefly reviews one program offered at the University of Jordan and aimed at helping prepare government employees to work within with the e-Government initiatives of the country. The paper concludes with examples of current e-Government programs in Jordan including programs at the Queen Rania Center, Jordan Customs and efforts at MoCIT.

SOFTWARE DEVELOPMENT #3

Thursday, October 1

2:00—3:00 p.m.

Rhapsody II (Third Level)

Session Chair: Dennis Mott

AN EMPIRICAL STUDY OF THE DETERMINENTS OF SOFTWARE PRODUCTIVITY AND DEVELOPMENT TIME

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In this paper, we identify a set of factors that may be used to forecast software productivity and software development time. Software productivity was measured in function points per person hours, and software development time was measured in number of elapsed days. Using field data on over 130 field software projects from various industries, we empirically test the impact of team size, integrated computer aided software engineering (ICASE) tools, software development type, software development platform, and programming language type on the software development productivity and development time. Our results indicate that team size, software development type, software development platform, and programming language type significantly impact software development productivity. However, only team size significantly impacts software development time. Our results indicate that effective management of software development teams, and using different management strategies for different software development type environments may improve software development productivity.

AN ANALYSIS OF CRITICAL THINKING AS IT APPLIES TO BUSINESS DECISIONS AND COMPETITIVENESS

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Thinking is often casual or routine and that separates it from critical thinking that deliberately evaluates the quality of the thinking. As such, it involves an attitude of being committed to thinking in a careful manner as it relates to problems and or items within the range of a manager's experience. Thus, critical thinking requires an ability to do the following: to recognize unstated assumptions and values, to properly comprehend and use information and inference with accuracy, clarity and discrimination, and to appraise evidence and evaluate arguments in a logical and warranted manner.

CACHE VALLEY BICYCLES: DESIGN AND DEVELOPMENT OF A BICYCLE REPAIR SHOP SOFTWARE

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The bicycle repair shop software teaching case is designed to be used in a variety of different classes related to web/software development. The database section can be used in a database design and implementation course, the web design section can be used in a human-computer interface design class and the programming section can be used in a PHP programming class. In addition, the complete case could be used in a systems analysis and design class. Using the same case in different courses makes it easier for the student to comprehend the different aspects of a web development project and how they fit together.

Database/Data Modeling #3

Thursday, October 1

2:00—3:00 p.m.

George Benson (Third Level)

Session Chair: Kara Gust Rawlins

RELATIONAL DATA MODELING TO ENHANCE GIS-BASED VISUAL INFORMATION SYSTEMS

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Data mining and very large databases offer a great deal of promise for business and government alike. Unfortunately, due to the ever changing data needs of the modern organization, as evidenced by the growing number of petabyte data applications, the task to efficiently extract data in a timely manner becomes more difficult. The research described herein presents some encouraging findings in regard to using indexing to improve upon the ETL process. Specifically, a decrease of about 3 times in run time was observed when moving from a flat table to an indexed table function logic. The business value of this decrease may be realized in terms of less wait time when end-user queries are executed.

MAKING SENSE OF SIMMONS: UNDERSTANDING AND USING SIMMONS MARKET DATA AND OTHER MARKETING DATABASES

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For business students and faculty, especially those engaged in marketing decisions, it is crucial that they have an understanding of the essential marketing tools and information systems available to them. This paper will feature the methodology and use of one of these tools, Simmons Choices3, and its integration into a graduate level marketing research course at Michigan State University. It will provide a background of the Simmons National Consumer Study and highlight the collaboration between a marketing faculty member and a business librarian in presenting the Simmons Choices3 program to marketing students and teaching them how to make marketing decisions from its data.

WEB IMAGE INFORMATION MINING SYSTEM USING UUP FOR E-BUSINESS INTELLIGENCE

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Recently, the web sites such as e-business sites and shopping mall sites deal with a lot of image information. To find a specific image from these image sources, we usually use web search engines or image database engines which rely on keyword only retrievals or color based retrievals with limited search capabilities. This paper presents an intelligent web e-catalog image retrieval system using metadata and user log. We propose the system architecture, the texture and color based image classification and indexing techniques, and representation schemes of user usage patterns. The query can be given by providing keywords, by selecting one or more sample texture patterns, by assigning color values within positional color blocks, or by combining some or all of these factors. The system keeps track of user's preferences by generating user query logs and automatically adds more search information to subsequent user queries. To demonstrate the usefulness of the proposed system, some experimental results showing recall and precision are also explained.

Curriculum Design/Development #4

Thursday, October 1

3:20—4:20 p.m.

Symphony A

Session Chair: Petter Lovaas

STUDENT PERCEPTIONS OF ELECTRONIC TEXTBOOKS

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Electronic books traditionally haven't been popular with the public but electronic textbooks have been starting to gain traction on college campuses. Textbook publishers and faculty have been experimenting with using them in the classroom with mixed success. Students seem less than enamored with electronic textbooks. This research uses a survey to examine student preferences regarding paper textbooks and electronic textbooks. We find that students overwhelmingly prefer paper textbooks. But, there are fundamental differences between students who prefer paper textbooks and those who prefer e-texts regarding the advantages of each format. We explore student perceptions of electronic textbooks, differences in student perceptions, and how these perceptions might impact the development and use of electronic textbooks in the classroom.

BLENDED LEARNING AND USER SATISFACTION

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Increasingly, e-learning is gaining popularity and acceptance both in academic as well as in corporate environments. With the rapid increase of online instruction, many experts predict that e-learning may at some point become the largest source of higher education. A significant factor related to the acceptance and success of e-learning involves students' perceptions of and attitude towards online learning. In addition, past experiences with actual online instruction can be an important factor in students' perceptions of e-learning. This study surveys students' experience with an online unit in a traditional face-to-face course. Included also are student evaluations of several online components of a web-based course management software used in the course. Additional research can provide greater insight into the factors that promote the acceptance of and success with online instruction.

AN EMPIRICAL STUDY OF THE RELATIVE IMPORTANCE OF SPECIFIC TECHNOLOGY SKILLS, GENERAL BUSINESS SKILLS, AND GENERAL TECHNOLOGY SKILLS

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A large volume of anecdotal research suggests that for today's information technology (IT) and information systems (IS) professional, the importance of technology skills has been superseded by the importance of business, teamwork, and general application skills. This manuscript studies the importance of a variety of specific technology skills, as well as, general technology skills, and general business skills. The study is the start of a concerted attempt to empirically determine whether general technology skills are deemed more important than specific technology skills and also how general technology skills compare to general business skills. A detailed survey of professionals in the Pittsburgh metropolitan area was performed and specific hypotheses related to these skills were tested. Generally, it was found that for information technology professionals; general technology skills were found to be the most significant expertise desired by today's information technology professional community. General technology skills were found to be significantly more important than specific technology skills. Further, general business skills were found not to be significantly more important than general technology skills. General technology skills were found to be more important than general business skills, but this difference was not statistically significant.

Student Involvement

Thursday, October 1
Session Chair: Gerald Kohers

3:20—4:20 p.m.

Jimmy Stewart

.CHALLENGES WITH IMPLEMENTING DATA WAREHOUSING OFFSHORE IN A FLAT WORLD: ISSUES FOR STUDY

Lisa A. T. Nelson, Robert Morris University, ltnst1@mail.rmu.edu

Thomas Friedman, in his 2007 book, The World Is Flat: A Brief History of the 21st Century (New York: Picador), discusses offshoring as a “flattener.” As a business strategy enacted to attain high levels of competency while reducing cost, offshoring is not a new idea, especially in information technology. The strategy of offshoring data warehousing and business intelligence (BI), however, is relatively new. In fact, there is little industry and trade literature on the topic, and virtually is no research available in the management, decision sciences, and information systems academic literature. This dearth of research persists despite recognition that business intelligence and data warehousing activities are gaining credence as competitive differentiators for companies. This paper highlights this research void, offering a review of the very limited literature available on the topic. Additionally, the paper sketches a picture of the challenges and risks companies face when deploying their data warehousing offshore; these challenges involve complexity, cultural communication, and data security. A discussion of outsourcing and offshoring in the context of Friedman’s “flat world” illustrates the social ramifications of offshoring and reinforces the call for increased research in the field.

WHO IS CHEATING? WHAT IS CHEATING? HOW ARE THEY CHEATING? A SURVEY OF COLLEGE OF BUSINESS STUDENTS

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Numerous studies have been conducted that look into various aspects of academic dishonesty by college students. Different studies have looked at the potential effect of various factors that may have an impact on cheating; such as, age, gender, classification, major, GPA, marital status, class size, and source of tuition payments, the WHO is cheating? Other studies have reported on student’s perception of cheating, the WHAT is cheating? While other studies have looked at the method of cheating, the HOW are they cheating? This research expands on these previous studies by combining many of the aspects from previous studies.

THE IMPACT OF STUDENT RESPONSE SYSTEMS ON STUDENT BEHAVIOR AND PERFORMANCE IN A MANAGEMENT INFORMATION SYSTEMS COURSE

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Student Response Systems are an instructional technology that allows instructors to display questions on a screen in the classroom and students to respond using a handheld device called a clicker. There are numerous academic research studies and surveys documenting the benefits in terms of student enjoyment, interest, attendance, participation, comprehension, and preparation. This research study conducted a survey asking students their perceptions of how Student Response Systems influenced their behavior inside and outside of the classroom. In addition to the survey, student performance was analyzed by comparing the final grades in two semesters of a Management Information Systems course, one in which clickers were used and one in which clickers were not used. Most students agreed that clickers increased their interest during class, helped them understand the material, encouraged them to listen, and helped them prepare for exams. Students overwhelmingly enjoyed using the clickers but not all aspects of their use. There were mixed opinions about several features of the system and the students did not necessarily agree that clickers encourage some of the behaviors preferred by instructors. However, student performance significantly increased during the semester with clickers compared to the semester without clickers. Instructors should carefully examine their teaching style and the nature of the course before using a Student Response System. There are many, positive and proven reasons to use clickers, but instructors need to carefully plan the implementation and incorporate the desired benefits into their course.

Accounting

Thursday, October 1

3:20—4:20 p.m.

Rhapsody II (Third Level)

Session Chair: Eugene Calvasina

DATA QUALITY PROBLEMS IN RESPONSIBILITY ACCOUNTING

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Innovations in information technology have affected all aspects of business including financial and managerial reporting. The quantity of information available is increasing exponentially. Simultaneously, it is becoming much easier to access these vast amounts of information. Unfortunately, in some cases, this information explosion has also made it harder to get the relevant and accurate information needed for good decision-making. The present day transactional engines generate abundant information. But we still observe problems in decision-making at higher levels of management. In spite of the tremendous increase in the available information for decision makers, some decisions at the strategic level turn out to be of poor quality. At the macro level, we find senior managers failing to seek answers for critical questions. At the micro level, we have not fully succeeded in monitoring the quality of the components that make the data-information-decision chain. In this paper, we analyze some of the factors that are responsible data errors due to mistakes in coding procedures critical for financial and managerial reporting. We propose a data representation methodology that addresses this problem.

ACCOUNTING PROFESSIONALS' VALUE ASSESSMENT OF IT SKILLS AND TOPICS

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Current accounting professionals were surveyed regarding their perceived value of information systems classes for preparing accounting students for the work place. The respondents were requested to identify relative importance, in terms of depth of coverage of IS topics in university courses. The topics and skills included programming languages, hardware, office software, database, networks, operating systems, project management, web design and others. The results will be useful in developing IS curriculum content for accounting information courses and information systems courses that support accounting majors.

A COMPREHENSIVE RISK-BASED AUDITING FRAMEWORK FOR SMALL- AND MEDIUM- SIZED FINANCIAL INSTITUTIONS

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Information technology audits are vital information management programs for banks and financial institutions. A plethora of laws and regulations exists, requiring financial institutions to develop an information technology audit program to support its information technology infrastructure and keep non-public customer information secure. Furthermore, banks are required to complete a risk-based audit on an annual basis to comply with regulators. This research combines two previously identified frameworks, the Comprehensive Risk-Based Auditing Framework (CRBA) and Small to Medium Entity Risk Assessment Model (SMERAM), to further develop the audit process. Combining these two frameworks will create a critical component of a risk-based audit, allowing critical audit resources to focus more on essential areas and assets. Having a sound risk-based audit program will improve the overall information security posture for banks and financial institutions, and is part of critical regulatory requirements. Furthermore, this research utilizes an example to demonstrate the process, and concludes with testing of the framework.

Collaboration #1

Thursday, October 1
Session Chair: Harry Benham

3:20—4:20 p.m.

George Benson (Third Level)

IT GROUP WORK: UNDERGRADUATE STUDENT PERCEPTIONS

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This article describes a quantitative study of university students' perceptions of collaborative learning opportunities. Two cohorts of university students were surveyed: students enrolled at a US institution, and students enrolled at a German university. Results indicate that German students value collaborative learning experiences more than their US counterparts.

USING "TALKING ALOUD PAIR PROBLEM SOLVING" TO ENHANCE STUDENT PERFORMANCE IN PRODUCTIVITY SOFTWARE COURSE

Dr. Harry Benham, Montana State University, hbenham@montana.edu

This paper looks at the impact of "Talking Aloud Pair Problem Solving" (TAPPS) on student performance in a productivity application course. The argument is that success working with productivity applications involves success solving problems. By enhancing students' problem solving skills, TAPPS enhances student performance. The empirical evidence presented indicates that those students who followed the TAPPS process did indeed perform better.

A WEB DEVELOPMENT FRAMEWORK FOR TEAM-BASED PROJECT COURSES

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The complexities of team-based web development make it challenging for student teams to deliver solutions that may be sustained over multiple semesters. A web development framework based on open source tools and Agile practices may be combined to create a standardized development environment. Use of the framework may provide students with rich system development experiences and deep knowledge of software design principles and patterns. Interactive features may be developed each semester for inclusion in an evolving web application used by nonprofit organizations.

CURRICULUM DESIGN/DEVELOPMENT #5

Thursday, October 1

4:30—5:30 p.m.

Symphony A

Session Chair: Sylvia Ann Bembyr

COMPUTER LITERACY AND THE DEVELOPING WORLD: THE BRIDGE TO INFORMATION

Dr. Winston Tellis, Fairfield University

The widespread use of the Internet for knowledge acquisition is commonplace in the developed world. However, in developing countries, where resources are limited, the infrastructure to support networking could be scarce. This pilot project is a design for implementing a program to train teachers to use laptops in their classroom instruction, and for students to have access to the laptops for assignments. Senegal is a peaceful country, but resources to introduce computers in elementary education are not available. This project will address teacher training, and wireless Internet access in one school, and will ensure the sustainability of the project by engaging trained teachers to train future teachers.

INTRODUCING A CONCENTRATION IN INFORMATION ASSURANCE INTO A COMPUTER SCIENCE PROGRAM

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The purpose of this paper is to illustrate the experience of one department at introducing a program in information assurance. The department of Computer science (COSC) at Indiana University of Pennsylvania (IUP) has been offering a Bachelor of Science degree (B.Sc.) in Computer Science Information Assurance Track for several years. The development of this degree and their contents has been implemented to respond to various demands including the nation's needs for trained security professional as well as the Information Technology (IT) sector market. The content of this program has taken different factors regarding to faculty availability, technological need and market demand. The experience of this computer science department in developing the Bachelor of Science degree in information assurance is illustrated in this paper. The paper first reviews literature regarding the evolving information assurance over all and in academic programs in particular. Then, it focuses on the experience of the Computer Science department at Indiana University of Pennsylvania in introducing a track in information assurance within their program.

ADDING AUDIO AND VIDEO TO A MICROCOMPUTER APPLICATIONS CLASS TO IMPROVE STUDENT LEARNING

Dr. Sylvia Ann Bembyr, Winston-Salem State University, bembrys@wssu.edu

Dr. Carolyn Anderson, Winston-Salem State University, andersonc@wssu.edu

This article discusses audio and video use in a microcomputer applications course to improve student learning. In the past, the traditional lecture method of teaching was used in this course. The course was team taught where many technological devices were used to bring about instant learning opportunities. More effective learning is the result from several years of using this method of teaching

Medical #1

Thursday, October 1

4:30—5:30 p.m.

Jimmy Stewart

Session Chair: William Roach

PRIVACY UNDER HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT (HIPAA) OF 1996: THE IMPACT OF RFID

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The Health Insurance Portability and Accountability Act of 1996 (HIPAA) includes the Privacy Rule. The Privacy Rule creates a national standard for the protection of Protected Health Information (PHI). Radio Frequency Identification (RFID) chips have expanded the size and scope of files that contain PHI. Because the size and scope of the databases containing PHI is so much larger, policing the Privacy Rule needs to be automated.

BUILDING A BIOINFORMATICS BRIDGE ONE COURSE AT A TIME

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The enrollment downturn faced by today's information systems programs is serving as a catalyst for change. Faculty members are seeking ways to re-chart their curricula and broaden their potential student audiences. One opportunity for reaching new audiences is building bridges with other programs. This paper describes the experience of one information systems program in forging a partnership with biology to develop a bioinformatics course for non-majors in an honors curriculum. The partnership is unique in its involvement of information systems instead of computer science and its target audience of non-majors.

DESIGNING AND DELIVERING A MEDICAL INFORMATICS COURSE TO GRADUATE HEALTH MANAGEMENT STUDENTS

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Medical Informatics is a rapidly growing field that lies at the intersection of patient care, the healthcare system environment, and information and communication technologies. In this paper, we report on the development of a required graduate course in Medical Informatics. The overall objective of the course is to provide the students with knowledge of: a) the organization of health information to support action, c) how IT creates value, and 3) managing change within the IT project management environment. The students will use project management and decision analysis software to gain a better understanding of tools and techniques needed to function productively within a healthcare environment.

Programming

Thursday, October 1

4:30—5:30 p.m.

Rhapsody II (Third Level)

Session Chair: Dana McCann

A HYBRID SOFTWARE DEVELOPMENT METHOD FOR LARGE-SCALE PROJECTS: RATIONAL UNIFIED PROCESS WITH SCRUM

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Conventional software development methods have gradually been replaced by lightweight agile software development methods since the mid-1990s. This phenomenon is mainly due to the conventional methods' shortcomings, including a slow adaptation to rapidly changing business requirements, and a tendency to be over budget and behind schedule. This paper analyzes characteristics, strengths, and weaknesses of both conventional and agile methods. This paper also explains the four major phases and nine disciplines of the Unified Process, and the common elements of the Scrum process. Finally, this paper suggests a new hybrid software development method that combines the Rational Unified Process with the Scrum process to accommodate the strengths of both methods while suppressing their weaknesses. The hybrid method can be utilized in the software industry, particularly, in the business sectors that deal with large-scale projects.

VIRTUALIZATION AND SECURITY: A PERSPECTIVE

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Extensive attention has been given to the topic of virtualization. Every aspect of IT has been affected by some form of virtualization. It also has another side – that of the virtual enterprise. We constructed and discussed a map of the facets of virtualization. We created a second diagram of the IT infrastructure containing three parts: computer hardware and software; the mobile worker activities; and internal operations of the organization. This formed the basis for discussion and related security problems. We described and commented about the IT infrastructure and the virtual organization. We noted that security has not holistically been addressed across the infrastructure and addressed some of the shortcomings and suggested ways to address these issues.

USING SAP ERP AND ORACLE DBMS TOOLS TO DEMONSTRATE AUTHORIZATION CONCEPTS

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This paper discusses our development and use of course material to demonstrate database management systems concepts to students by using enterprise resource planning (ERP) system software to augment their learning. The purpose of our paper is to share our experience with other universities interested in using ERP software as a tool to supplement students' learning of information technology (IT) concepts as they may apply to an organizational setting. This paper describes the course material and tutorial we developed to facilitate students' understanding using a hands-on approach. We used Oracle as our relational database management system (DBMS) and SAP R/3 as our ERP system. Students first learn the structure of SQL syntax and the specific commands that would enable them to create users and roles, and grant permissions. They then practice the SQL syntax that they learned by executing the commands in an actual DBMS. Then the students learn how to create user accounts and grant transaction authorization by using the tools provided by the Oracle DBMS system. And finally the students learn how to create user accounts and grant transaction authorization by using the tools provided by the ERP system. These same concepts can be applied to other relational DBMS such as Microsoft SQL Server and other ERP systems. Experiential learning theory provides the guiding framework for our approach

THE ADVANTAGES OF VIRTUALIZING A UNIVERSITY COMPUTING INSTRUCTIONAL/RESEARCH DOMAIN

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The advent of distributed processing has drastically increased the number of hosts required to support an enterprise level computing domain. Often, each application such as accounting, DNS or WWW service is allocated its own dedicated host for performance and security reasons. While this scenario is effective from an enterprise computing perspective, it poses several disadvantages. These disadvantages include: high hardware cost, significant 110 volt power consumption, significant cooling costs and a complex computing environment to manage. To combat these disadvantages the concept of virtual hosts has been suggested. This paper explores, through a case study, how virtualization could be employed in a live computing domain to reduce the number of physical host by a factor of 9 while still maintaining adequate performance/security metrics. Further, while offering the advantages of ease of management, reduced power/space/cooling requirements and improved fault tolerance/backup.

Collaboration #2

Thursday, October 1

4:30—5:30 p.m.

George Benson (Third Level)

Session Chair: Lisa Kovalchick

GLOBALIZATION, COLLABORATION, AND SOCIAL NETWORKING: AN EXPLORATORY STUDY

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Individuals utilize a variety of tools to collaborate and communicate as part of a global organization. Social networking tools such as wikis, blogs, and MySpace are increasingly being used both on a personal basis and within corporations, while collaboration tools such as Microsoft's Sharepoint services are being used to meet corporate information needs. With the expanding adoption of these tools, this study investigates their usage by conducting a survey of 785 individuals in a professional services firm. In addition to understanding the frequency of use of the various tools, this study evaluates if the usage is influenced by age, gender, or geographic operating location (i.e. U.S., India, China, and Europe).

AN INVESTIGATION OF CULTURAL INTELLIGENCE AS AN ANTECEDENT TO VIRTUAL SOFTWARE DEVELOPMENT TEAM SUCCESS

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Globalization spurred the rise of virtual software development teams. The complexity of managing a virtual team is rooted in the diverse cultural makeup of the team. Research increasingly recognizes that culture has significant implications for information systems. We propose in this study that the success of virtual software development team is influenced by cultural intelligence, a recent concept that relates to a person's capacity to recognize, understand, and utilize culture. Based on our review of existing literature on cultural intelligence and virtual teams, a research model is developed and corresponding methodology are discussed. We offer discussion on implications for this research.

SAP ERP TECHNOLOGY IN EDUCATION CURRICULUM AND THE UNIVERSITY ALLIANCE PROGRAM

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SAP Enterprise Resource Planning is the new solution to the business systems and these provide comprehensive business functionality using Information Technology. They have the significant impact on the Information Systems (IS). Most IS curriculum does not provide significant coverage of ERP concepts, nor do they graduate students who are knowledgeable about these systems and the impact that these systems have on industry. This paper explains the importance of incorporating the SAP ERP body of knowledge into education program for the students before they get into the work. The general spirit of the paper is to make understand the need for SAP in curriculum and its implementation challenges in an educational institution. That is, this paper focuses on curriculum that is enriched through the hands-on experience gained by students working on a real SAP ERP system.

»» Notes

Security #1

Friday, October 2

8:50—9:50 a.m.

Jimmy Stewart

Session Chair: Jensen Zhao

A SECURITY VULNERABILITY AUDIT OF FORTUNE 500 E-COMMERCE NETWORK SYSTEMS

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This study examined the security vulnerability of the Fortune500 corporations' retail e-commerce network systems. The findings indicate that most e-commerce portals had their network information, such as network's IP address, physical address, and network range, publicly available on the Internet through the Google search. However, these e-commerce portals had their most ports closed, filtered, or behind firewalls with very few open ports. The Fortune 500 commercial banks' portals were most secure as none of their operating systems information was detectable. To further reduce the security vulnerability of the e-commerce network systems, this paper provided recommendations such as how to secure network information, how to hide portal's IP address, and how to secure operating systems.

IDENTITY THEFT RECOVERY: USING EQUITY THEORY TO EXPLORE THE NEED FOR VICTIM ADVOCACY

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Identity theft is one of the fastest growing crimes in the United States. After victimization, there is a high price for the victim to pay in both effort and money, while the perpetrator of the crime often receives high compensation from the crime. According to equity theory, if an individual judges the output of a relationship to be unequal to a related relationship, the individual becomes increasingly distressed. Equity theory has been applied in previous IS research to examine areas such as users' satisfaction and software piracy. In the case of identity theft, we see a relationship between the victim and society being compared to the relationship between the perpetrator and society. Our study seeks to capture both quantitative and qualitative data through a case study of a victim to explore the effects of the perceived inequity by the victim and its effect on their productivity. Further, this study suggests future research for exploring the cost benefit of offering subsidized advocacy in the workplace.

THE IMPACT OF COMPUTER AND INTERNET SECURITY TRAINING FOR UNDERGRADUATE STUDENTS: ATTITUDINAL CHANGES

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This study compares changes in attitudes of students towards organizational security policies and procedures at various institutions that have implemented information security policy training as part of the orientation and on-going training for students. The results indicate that those institutions that provide multiple venues to discuss security policies and procedures during the student careers have greater improvements in attitudes than institutions with orientation only training for the general student body.

Business Intelligence #1

Friday, October 2

8:50—9:50 a.m.

August Wilson

Session Chair: G. Kent Webb

INTERNET SEARCH STATISTICS AS A SOURCE OF BUSINESS INTELLIGENCE: SEARCHES ON FORECLOSURE AS AN ESTIMATE OF ACTUAL HOME FORECLOSURES

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Historical search data, describing the volume of searches by topic and region, have recently become freely available. This provides a potentially valuable source of data useful for business intelligence about conditions external to the organization where data is sometimes sparse. As an experiment for a business application, Google searches on the keyword “foreclosure” were correlated with actual U.S. home foreclosures over the past 4 years. The resulting regression analysis shows a very good correlation, indicating that searches on “foreclosure” provide a very accurate estimate of trends in actual U.S. home foreclosures and may provide an early warning system. In a related non-business experiment, Google has recently reported success in showing that searches on the term “flu” track closely with worldwide outbreaks of flu.

BUSINESS INTELLIGENCE — AT THE SPEED OF LIGHT

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It has been previously stated that Business Intelligence has a reciprocal relationship with Technology (delivery) and Business (information). Due to this relationship, technologies are deployed with greater speed, features, and functionality; and, business users are challenged to implement new practices faster to support strategic objectives. In addition BI, by its very nature, is an ever evolving concept defined by the competitive marketplace and leading-edge technologies. This paper, defines and explicates the notion of business intelligence, identifies some of the major players in the business intelligence arena and discusses their offerings. This paper also illustrates the computing, operational, and productivity issues facing BI as well as presents frameworks that may offer new delivery mechanisms for business intelligence.

TOWARD INTELLIGENT BUSINESS INTEGRATION: THE SEMANTIC WEB

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The semantic web allows a flexible exchange of trustworthy content representations across heterogeneous platforms by explicitly formalizing knowledge rather than embedding it in program codes. This paper formulates the conceptual framework from technology, the recursive self-organizing architecture. It is not merely for the world of the semantic web, but it also envisions the directions that we are heading for communication integration through communication instantiation. New communication technology will provide new business opportunities by integrating knowledge, formalized on the front-end arsenals, and rendering autonomous and intelligent business integration. Thus, the focus of systems designers is shifted from standardizing how to connect pre-designed systems with centralized control to institutionalizing how systems interact in an ad hoc manner without centralized control.

Assessment

Friday, October 2

8:50—9:50 a.m.

Rhapsody II (Third Level)

Session Chair: Bryan Marshall

COURSE MAPPINGS: A CRITICAL STEP IN ASSESSMENT

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Due to the national trend of declining MIS majors, many IS programs are adjusting their curriculums to produce more competitive IS professionals and thus attract more students. The curriculum revision process is a critically important part of the assessment cycle. Before any revision should take place, the first step is to gain a precise accounting of what is presently being taught. Many programs create a course map – a relational table that lists the main curriculum topics being taught in various course offerings. We have devised a method for mapping out the course objectives across the Information Systems curriculum that allows for a deep and synthesized understanding of content provided in various courses, relationships between prerequisites, and potential learning shortfalls that may exist.

EFFECTIVENESS OF REMOTE ACCESS LABS VERSUS TRADITIONAL LABS

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This study compared undergraduate information technology (IT) students' (N=67) learning outcomes and student preferences for two different lab formats at a Midwestern university. The lab formats that were evaluated included traditional hands-on labs and remote access labs. Results indicate that there is no significant performance (grade) difference between the two lab formats. In response to qualitative survey questions, many students praised the ease of use, reliability, and availability of the remote access labs. One advantage revealed during a student focus group discussion was the opportunity for students to repeat exercises when they were unclear or struggled with concepts or procedures.

A THEORETICAL FRAMEWORK FOR GOVERNMENT 2.0 IN DEVELOPING AND EMERGING ECONOMIES

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This paper focuses on the global and country level implications of government 2.0 initiatives. Government 2.0 focuses on the interactive components of e-government. Government 2.0 interaction ranges from message board entries to more sophisticated options such as polls and electronic voting. The implications of the government 2.0 phenomenon can be far-reaching particularly for emerging and developing regions of the world. This paper presents a theoretical framework for a country level context of government 2.0 initiatives, with specific attention to emerging and developing economies. There are several factors that can drive the growth of an emerging government 2.0 platform. This paper specifically focuses on e-participation and mobile technology, which arguably are key issues separating government 1.0 from government 2.0. The paper further examines the specific challenges of implementing government 2.0 initiatives.

Knowledge Management

Friday, October 2

8:50—9:50 a.m.

George Benson (Third Level)

Session Chair: Mohammad Rob

EFFECTIVE KNOWLEDGE MANAGEMENT USING AN ONTOLOGY-BASED APPROACH

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Effective management of knowledge requires the seamless creation and exchange of information. Using artificial intelligence techniques, ontologies were developed to increase software reuse and knowledge sharing among application users. This paper describes a group of freely available technologies and tools that the authors have used to develop and field knowledge-based applications. The authors then describe the Comprehensive OWL Military Ontology (COMO): a military operations ontology that has been developed using these technologies and tools. Finally a brief outline is provided of two of the applications that have been implemented using COMO. These are the Military Analogical Reasoning System (MARS) and the Planning for Urban Terrain Operations (PLUTO) system.

SERVICE LEARNING INTEGRATION USING INFORMATION SYSTEM COURSES

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This paper details the experience of integrating service learning projects into technology oriented courses for the Computer Information Systems (CIS) program at California University of Pennsylvania (CUP) and the Communications and Information System Department at Robert Morris University (RMU). The paper entails the steps undertaken by faculty members at CUP to inquire, select and implement service projects in their technology courses and an example of one successful project for a non-profit organization. It also notes the findings and overall conclusions for the service learning initiatives that have occurred at RMU.

KNOWLEDGE MANAGEMENT MATRIX AS AN AUDIT TOOL FOR IMPROVING PROFESSIONAL TRAINING CURRICULUM

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Even in the economic downturn, U.S. corporations spent more than \$56 billion dollars in 2008 on employee training and development (Bersin & Associates, 2009). It is noted that most professional training program design and redesign efforts to date emphasize the interaction between learning outcome and instructional method. Such a training approach relies on summative assessment methods to determine a trainee's mastery or nonmastery of the subject matters strictly based on a pre-determined set of performance objectives derived from Bloom's taxonomy of performance objectives. This "test-them-out" approach in assessing "snap shots" of a trainee's achievement, though efficient, often assumes a singular type of knowledge is transformed and lacks the insight of how learning actually happens. By and large, it is agreeable that the best trainer and teachers always possess "something special" as tacit quality to facilitate trainees and students in realizing their potentials. The notion of human potential implies the acquisition of more than the well-defined skill sets, which is mostly the core of all performance objectives focus on. There is a plethora of literature focusing on how to write performance objectives. How are we sure that the objectives were written properly? What if there are more than one type of knowledge exists? It is apparent that the audit tools to ensure the quality of the training objectives for various types of knowledge is urgently needed.

Security #2

Friday, October 2

10:00—11:00 a.m.

Jimmy Stewart

Session Chair: Stanley T. Schuyler

A MUTIVARIATE ANALYSIS OF IT SECURITY RISK AND THREAT PATTERNS IN ORGANIZATIONS

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IT security risk is an area that is presently intensely researched. This study through multivariate analysis, attempts to identify spatial patterns and variations of network risk-related problems across industries. The results should among others, serve as possible elucidation of patterns of complaints-driven systems service requests and their resolution

AN EMPIRICAL STUDY OF CYBER SECURITY PERCEPTIONS, AWARENESS AND PRACTICE

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 Janet J. Prichard, Bryant University, prichard@bryant.edu

This paper examines the perceptions, knowledge, and experience of security practices of users. A survey instrument was developed and administered to undergraduate students at a small private university. The results of this survey are presented, and the implications of these result discussed.

USING ENTERPRISE MASHUPS AS A BUSINESS INTELLIGENCE SITUATIONAL APPLICATION

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A review of recent literature highlights that web 2.0 technologies are enabling a new programming approach. Business end users are able to analyze disparate data to aid in time sensitive decision-making that was traditionally performed by data warehouse and business intelligence infrastructures. The Internet has enabled the consumer to become aware of the possibility of situated software. Data is no longer purely controlled by enterprise IS organizations. Mashup platforms allow users to create an ad-hoc composition of data sources into a new representation to serve as a business intelligence report. By making all data available, business end-users can aggregate the data that they deem important, not just the data that was made available in existing data warehouse dimensions.

GIS/GPS

Friday, October 2
Session Chair: Peter Wu

10:00—11:00 a.m.

August Wilson

GLOBAL PARTITIONING AND SCHEDULING FOR RECONFIGURABLE COMPUTING SYSTEMS

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Dynamic reconfigurable processors can cope with both flexibility and high performance. They can also simultaneously process functions that are not executed with only one dynamic reconfigurable processor, enabling system design with lower hardware cost. Scheduling for such Dynamically Reconfigurable processors have huge impact on final performance. The concept of Global Partitioning and Scheduling has been proposed so as to partition and schedule a given application in the target dynamically reconfigurable architecture in the best possible way.

**THE SKILL SETS FOR GEOGRAPHIC INFORMATION SYSTEM FOCUS: COMPETITIVE INTELLIGENCE
IN THE INFORMATION SYSTEMS CURRICULUM**

Peter Y. Wu, Robert Morris University, wu@rmu.edu
Frederick G. Kohun, Robert Morris University, kohun@rmu.edu

Geographic Information System (GIS) is becoming more and more widely used in many different areas of application, but the workforce skilled in the technology is still in short supply. GIS courses to provide the needed training are becoming available at various levels in colleges and universities. We share our experience in the design and development of new GIS courses, including a brief survey of the equipment and sources of data needed to launch a GIS course. We then analyze the course syllabus design to focus on the skill sets needed to meet the demands of the going trends in the IS/IT market place. The skill sets include: (1) skills in data and files manipulation, (2) spatial analysis and statistical reasoning, and (3) graphic arts design in map presentation. We also discuss the on-going development of GIS technology, and how the IS curriculum may plan to prepare students for these future trends.

**“ROMAN 41, ROGER...WHAT IS YOUR POSITION?”:
THE INFOSCAPE OF AIR TRAFFIC CONTROLLERS**

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The essay is a report of research carried out in an air traffic control environment. It is a description and analysis of the ethnosemantics of air traffic controllers and their social cultural environment of information flows and uses of information. Using Skovira's infoscape model and Hall's contexts of communication model, the paper analyzes air traffic controllers' communication contexts and situations.

ERP #1

Friday, October 2

10:00—11:00 a.m.

Rhapsody II (Third Level)

Session Chair: Adnan Chawdry

A STUDY OF ERP SUCCESS FROM 2003 TO 2006 AS VIEWED BY TOP FINANCIAL EXECUTIVES

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The issue of success or failure of enterprise resource planning (ERP) systems has been under discussion for many years. This manuscript reviews the current status of ERP implementation success. In addition, it reviews progress made over the last several years on ERP. Variables that influence financial executive views on ERP success over time are explored. In general, ERP projects are viewed as moderately successful in 2006, a view that has not changed significantly since 2003. Areas that currently correlate with ERP success include on-budget performance and limited modifications. These influences have changed somewhat since 2003.

DELIVERING ERP LEARNING TO STUDENTS IN A UNIVERSITY BUSINESS PROGRAM

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This paper discusses the university ERP curriculum development process, based on industry ERP employment training models, resulting in recommended guidelines for the effective delivery of ERP learning at a higher education institution, aimed at teaching business students the fundamentals of ERP systems. This paper focuses only on delivering ERP to the students in a business program, but can also be considered when thinking about CRM, Logistics Systems, and SCM Systems. By considering this process, university faculty and students will be better informed about ERP systems and become a better asset to any organization that employs them.

ERP IN AN INTEGRATED BUSINESS COURSE

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Enterprise resource planning (ERP) system solutions are currently in high demand by both manufacturing and service organizations because they provide a tightly integrated solution to an organization's information needs. This paper explains what ERP is, how it is evolved and the importance of ERP in an organization. The integration of ERP in the business courses provides with a broader view of the business systems. One more important thing in the business courses is the Marketing Simulation. It provides the idea of working with the local and global markets and how the markets respond to different managerial decisions. A survey is also done on to how much extent is the integration of ERP in the Business courses is beneficial. It is concluded based on the results of the survey and provides the advantages of Integration of ERP

Medical #2

Friday, October 2

10:00—11:00 a.m.

George Benson (Third Level)

Session Chair: Sumana Sharma

**INVESTIGATING A HYBRID MINING APPROACH TO AID HEALTH INSURANCE DECISION MAKING:
THE CASE OF NATIONAL HEALTH INSURANCE IN TAIWAN**

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This study investigates the characteristics of data mining methods to show how they can aid in claims review processing and provide policy information for insurance decision making vis-à-vis the Taiwan National Health Insurance database. In order to obtain the best payment management, a hybrid mining approach, which has been based on the existent knowledge of data mining projects and health insurance domain knowledge, is proposed. Through the integration of data warehousing, online analytical processing, data mining techniques and traditional data analysis in the healthcare field, an easy-to-use decision support platform, which will facilitate the health insurance decision-making process, is built. Based on two case studies, results showed that not only is hybrid mining approach a reliable, powerful, and user-friendly platform for strategic health insurance decision making, but that it also has great relevance for the practice and acceptance of evidence-based medicine.

**HOSPITAL ADMINISTRATORS' PERCEPTION ON THE ADOPTION OF RFID:
EMPIRICAL STUDY INCLUDING PRIVACY/SECURITY**

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Dal Sang Chung, Governor State University, D-Chung@govst.edu

Various areas including retail, manufacturing, healthcare, service, and government have used RFID. Hospitals have adopted RFID technology to improve management of medical equipment and patient service. Even though the technology has provided various benefits, privacy/security issues on patients have been involved. The paper is to empirically study on hospital administrators' perception of RFID and related issues, and their adoption decision.

CUSTOMER PRIVACY CAN BE COSTLY: THE CASE OF HIPAA

Wallace A. Wood, Bryant University, wwood@bryant.edu

The Health Insurance Portability and Accountability Act (HIPAA) was originally intended as a vehicle to protect patients with long term illnesses or injuries. It was designed to provide protection from insurance plan to insurance plan so that individuals could not be denied insurance based on pre-existing conditions and could not be subjected to waiver periods. This paper examines the privacy rules (one of five sets of rules) established under HIPAA with regard to their complexity, degree of compliance by healthcare organizations, cost of compliance and their impact on medical research. It was found that patient (customer) privacy has been partially achieved at a high cost.

»» Notes

Security #3

Friday, October 2

11:20—12:20 a.m.

Jimmy Stewart

Session Chair: Ewuuk Lomo-David

PERCEPTIVE PROFILES OF STUDENTS COMPUTER SECURITY & SAFETY COMPETENCIES: IMPLICATION FOR BUSINESS CURRICULUM

Dr. Ewuuk Lomo-David, North Carolina A&T State University, lomoe@ncat.edu

The frequency with which intruders successfully breach and create havoc on computer systems and networks seems to indicate that information technology (IT) personnel and other employees whose duties are to protect these systems are either ill-prepared for their jobs, unfamiliar with information technology security measures (ITSM) or just not savvy enough for the industry. This issue seems to suggest that employers should seek to recruit student applicants (prospective employees) whose profiles relate to familiarity with ITSM. The profiles (gender, academic classification, academic majors, and experience with computers) have significant relationships with familiarity with ITSM (passwords, scan of computer systems and email attachments, functions of anti-virus software, placements of passwords on email attachments, functions of biometric authentication, firewalls, intrusion detection systems, and multifaceted authentication systems). Multiple regression analysis of data from a survey of 867 Nigerian university students revealed that engineering and business majors; and students with very good computer experience tend to be familiar with all ITSM except sophisticated passwords and functions of multifaceted authentication systems. Students who possess documentable familiarity with ITSM may make better information security-savvy employees that can engender much needed trust in the IT industry and profession.

WIRELESS (IN)SECURITY: AN OVERVIEW IN THE HEALTHCARE INDUSTRY

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The installment of HIPAA solidifies regulations of protecting patient records, especially private information against unauthorized access. However, the increasingly popular wireless network devices used in healthcare facilities, though convenient and time-saving, exacerbates the administration difficulty of network security. This paper provides an overview and guide to healthcare managers with limited IT Staff yet need to deal with the information security treats through wireless communication.

A CLUSTER ANALYSIS OF WIRELESS WEB SERVICES ADOPTERS

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This study identifies four types of wireless web services adopters (power users, entertainment users, information users and starters) based on a two-stage cluster analysis. The differences among the four groups were assessed based on gender, age and perceptions of wireless web services. No significant differences were found among the four groups in terms of gender, perceived ease of use and perceived usefulness. However, the results indicate that the groups differ by age, price sensitivity, wireless trust and attitude toward technology. It was found that age was significant in that older respondents tended to use more information services than younger respondents. In addition, information users demonstrated the lowest wireless trust and starters perceived the price of using wireless web services to be the highest and held the least favorable attitude toward technology.

Curriculum Design/Development #6

Friday, October 2

11:20—12:20 a.m.

August Wilson

Session Chair: Thomas Hilton

FACTORS INFLUENCING CHOICE OF INFORMATION TECHNOLOGY-RELATED MAJORS

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Three factors have been identified as influencing the decline in technology-related majors at US universities over the past decade [11]. Over the past few years the outsourcing of IS/CS (Information Systems and Computer Science) jobs has gained significant public attention. For example, industry research firm Gartner Group estimated that one out of every ten IT (Information Technology) jobs would be outsourced overseas by the end of 2004 [7]. During the same time, media coverage created negative perceptions amongst the general public that many IT jobs would be increasingly outsourced to low-wage economies. To conduct this study, students at five universities in five Midwest states completed a web-based survey. The proposed presentation will describe what factors were found to be the most salient influences on college student decisions of whether to choose an IT-related major.

APPROPRIATE PENALTIES FOR ACADEMIC DISHONESTY AS PERCEIVED BY STUDENTS IN AN INFORMATION SYSTEMS CLASS: AN ANALYSIS BY CLASS LEVEL

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This focus of this study was to identify appropriate penalties for situations involving academic dishonesty (cheating) as perceived by college student. A secondary purpose was to document any differences in perceptions based on class level. A total of 266 students in introductory information systems courses completed an 18-item instrument at the end of the college semester. Results of the study revealed that the penalties perceived as appropriate for cheating differ among freshman, sophomores, and upper classmen (juniors and seniors). Areas of further research are suggested.

IMPROVING STUDENT EMPLOYABILITY BY EMBEDDING MARKETING CONCEPTS IN INFORMATION SCIENCE AND TECHNOLOGY COURSES

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The Department of Business and Information Technology at the Missouri University of Science & Technology (Missouri S&T), formerly the University of Missouri - Rolla, focuses on providing students with both business and information technology skill sets, particularly in its Information Science and Technology degree program. Students take business courses in addition to their technical courses, but it is believed that incorporating business concepts (especially marketing) directly into the technical courses will lead to better student retention of business and information technology concepts by the student. The goal is to meet employer desires and needs for new employees with a more rounded, holistic approach to business and information technology. Two courses taught at Missouri S&T are described herein which include this merging of concepts and which illustrate possible approaches to meeting the goal.

Business Intelligence #2

Friday, October 2

11:20—12: 20 a.m.

Rhapsody II (Third Level)

Session Chair: Christopher G. Jones

INFORMATION TECHNOLOGY INNOVATION: IMPLEMENTING AN ELECTRONIC MEDICAL RECORD (EMR) AT BLOCKER MEDICAL ASSOCIATES

Elaine Winston, Hofstra University, acserw@hofstra.edu

This case study is based on the implementation of an electronic medical record (EMR) in a multi-specialist practice. The quotations included in the case were taken from interview transcripts. Additionally, the use of secondary data plays a significant role in developing the main ideas that are critical for the case method of teaching. These issues include EMR implementation rationale, diffusion of innovation, and software selection.

SIX SIGMA MEETS INFORMATION SYSTEMS

Roger L. Hayen, Central Michigan University, roger.hayen@cmich.edu

This research examines a relationship between Six Sigma methodology and a business problem that emerges with an information technology (IT) solution as the best alternative. The derived knowledge set of Six Sigma is compared to the content of the systems analysis and design (SA&D) and accounting information systems (AIS) courses typically offered by colleges of business. The purpose is to identify potential areas whereby there is a match between Six Sigma and these IT courses. Six Sigma and IT touch points range from Six Sigma IT tools supported by IT to a Six Sigma result that is achieved by an IT solution. When IT is included in the solution, the Six Sigma project may take a detour (identified herein as a “speed bump”) while the IT solution is prepared and implemented. The Six Sigma, process owner team loses much of the control of the project, when a speed bump is encountered. One advantage of an IT solution is that control is instantiated that makes it very difficult to deviate from the new solution. Six Sigma and traditional IT business problem solutions share many techniques that are compatible with one another. Where these intersections occur, IT courses can include a Six Sigma view to better prepare future systems analyst to work in this environment. The Six Sigma and IT synergies should undergo further examination to provide additional direction on how these two methodologies can better support future IT education.

PROBABILITY OF SPREADSHEET PROGRAM USAGE FOR DIFFERENT JOB TASKS IN ORGANIZATIONS —AN EMPIRICAL INVESTIGATION

Joseph S. Mollick Ph.D., Texas A&M University-Corpus Christi, Joseph.Mollick@tamucc.edu

The technology acceptance model and the task-technology fit model are used as the underlying theoretical base for generating hypotheses about spreadsheet program usage for different tasks for which computers are used. Data collected from businesses in South Texas are used to test hypotheses about the probability of spreadsheet program usage for different job tasks for which computers are used by individuals working in organizations.

ERP #2

Friday, October 2
Session Chair: Winston Tellis

11:20—12:20 a.m.

George Benson (Third Level)

POLYGLOT: A MULTILINGUAL GROUP SUPPORT SYSTEM

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This paper describes a new, locally developed Internet-based electronic group support system that automatically translates among 34 languages through a linkage with Google Translate. The overall accuracy rate was only 86%, but near perfect accuracy might not be needed for informal, information gathering group meetings in which ideas are often redundant and can be rephrased. Further, the translation speed advantage might offset this weakness.

THE IMPACT OF THE BALANCED SCORECARD ON GOVERNMENT-TO-GOVERNMENT E-SERVICE DELIVERY

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The application of the Balanced Scorecard (BSC) in the private business sector is well known and documented. But, very little research has been reported regarding the adaptation or the application of the BSC to e-government service delivery performance. This paper addresses the issue of delivering e-government services using the concept of an accepted management tool, the BSC. A research model, based on government-to-government (G2G) is developed to match potential benefits of the usability of website-supported BSC's four dimensions (innovation and learning, internal business process, customer, and financial) in improving e-government service delivery performance. The study used content analysis to analyze the data obtained from a sample of 19 county veteran service officers (CVSOs) to test the hypotheses. The results show that website-supported BSC three perspectives (learning and innovation, internal process, and veteran value proposition) have a positive impact on e-government service delivery performance. The effectiveness of website-supported financial perspectives has a negative impact on e-government service delivery performance in the early stage of the implementation of the websites. However, as time goes by, that impact becomes positive because the high initial cost decreases over time. The implications of the results are discussed.

THE EXPLORE OF THE "BIG FIVE" AND TASK TECHNOLOGY FIT IN A WEB- BASED DECISION SUPPORT SYSTEM

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Although the "Big Five" model has been discussed a lot in behavioral fields, there has been little research on the impact of personality traits with regards to technology on web-based DSS decision. In this paper, we apply task technology fit theory to explore how individual characteristics affect task technology fit and how task technology mediate between personal characteristics and decision-making. One of geographic information systems, Google Earth is used as geographic information system to find support for Internet users' web-based decision support systems. Data was gathered via a survey after an experiment of web-based decision making using Google Earth, which was completed by 192 undergraduate college students, and analysis was conducted utilizing structural equation modeling

Security #4

Friday, October 2
 Session Chair: Kevin Streff

2:10—3:10 p.m.

Jimmy Stewart

**AN INFORMATION SECURITY MANAGEMENT SYSTEM MODEL
 FOR SMALL AND MEDIUM-SIZED FINANCIAL INSTITUTIONS**

Dr. Kevin Streff, Dakota State University

Information security breaches continue to rise at disturbing rates. Financial institutions are required to have a documented information security program commensurate with their size, complexity and use of technology. However, small and medium-sized financial institutions struggle to complete this task as no information security management system model exists that meets their unique needs. This paper outlines the existing information security management program models in the marketplace, develops an innovative information security program model honed to the specific needs of small and medium-sized financial institutions, and discusses the feedback from rolling out this model in several pilot small and medium-sized financial institutions.

EXPLORING THE NATURE OF SECURITY AWARENESS: A PHILOSOPHICAL PERSPECTIVE

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Security awareness is acknowledged as one of the true culprits in many failures in information security management, yet very limited amount of literature has explored the nature of security awareness. Although few studies have proposed guidelines of how to study and measure it, the power of those approaches appears to be inherently limited. To fill such gaps, the objectives of this paper are (1) to explore the nature of security awareness based on the theory of learning outcomes, (2) to develop a philosophical conceptualization of security awareness based on the philosophy of scientific realism, and (3) to suggest that multiple methodologies help researchers learn better the nature of security awareness. By resorting to scientific realism, this paper not only provides a richer understanding of the multidimensional nature of security awareness, but points out that researchers should triangulate multiple methodologies to study it. In addition, the application of scientific realism in this paper should alleviate the incorrigible debates around the polarization of positivism and anti-positivism in the field.

CRITICAL SUCCESS FACTORS FOR OPEN-SOURCE INNOVATION

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With the advances in information technology (IT), open-source innovation (OSI) plays an increasingly important role for virtual teams to engage in online innovative activities. Based on the theory of knowledge creation, this study builds a theoretical framework to examine the critical success factors of OSI. It is argued that, to achieve OSI success, virtual teams need to go through an iterative process of IT-enabled and community-based knowledge creation, and correspondingly four critical success factors are identified for the success of OSI: strong knowledge base, intensive team communication, abundant social capital, and effective use of IT artifacts. The proposed framework is further tested using the open source software development dataset. The results strongly support the framework, and bear important implications on the success of OSI.

Networks #1

Friday, October 2

2:10—3:10 p.m.

August Wilson

Session Chair: Joon-Yeoul Oh

REPLACING TRADITIONAL TELEPHONY WITH VoIP

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Voice-over-Internet protocol (VoIP) is an emerging technology that is beginning to replace traditional telephone services because it is much more cost effective for the consumer and businesses. Long distance charges are relatively a thing of the past, and in general there are more feature-rich services available over a VoIP line than traditional phone services. VoIP is an enhancement to our traditional ways of communicating via the telephone; users can combine voice and video in a single call, share data, and accomplish many other tasks that are impossible over traditional phone lines. Businesses can utilize Session Initiated Protocol (SIP) over VoIP to eliminate the need for large PTSN trunk lines and wasted space. VoIP is the future and its features will eventually far exceed traditional landline phone services. But with any new technology there are also disadvantages in utilizing leading edge services such as VoIP. Some disadvantages include dropped calls, poor voice quality, or even cost a business more than traditional systems in regards to outages and lost production time. If the Internet connection goes down, so does your phone access. Access to 911 emergency services may not function correctly at critical times.

USER MULTI-INTEREST MODELING BASED ON SEMANTIC SIMILAR NETWORK IN PERSONALIZED INFORMATION RETRIEVAL

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People spend far more time searching information over the Internet than using it, because the desired information is often buried within a long list of searched results. Personalized internet access is a feasible solution to solve this search vs. use dilemma, which helps identify the web documents users truly need. A user's interests are usually represented by a profile. In this research, an improved vector space model representation is proposed to improve the user interests management efficiency. Based on this, the research further proposes a method for user multi-interest modeling integrated with semantic similar network (SSN). It studies the feature selection in user modeling, and proposes a feature selection method combining TF and TF-IDF that is proved a better performance in the test. Finally a complete module design is presented, which provides a personalized recommendation system for practical applications.

GETTING CONNECTED IN EVERYWHERE – BROADBAND POWER LINE TECHNOLOGY IN MEXICO

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Broadband Power Line technology can provide the various telecommunication services, such as internet, landline phone and IPTV with a low cost and wide coverage area by avoiding connection costs and using the existing power lines. Since the existing telecommunication service providers charge an expensive usage rate and the service covering area is concentrated on densely populated locations, some citizens in Mexico have no or incomparable telecommunication services. The broadband power line technology can be an alternative to provide the communication services in Mexico. This paper describes the broadband power line technology and the market needs on the telecommunication services. With over 28 million potential subscribers, the telecommunication market in Mexico has still an enormous potential to grow. The paper is concluded with concrete remarks based on the demand for the broadband power line technology.

ERP #3

Friday, October 2

2:10—3:10 p.m.

Rhapsody II (Third Level)

Session Chair: Wei Sha

ENABLING SUPPLY CHAIN INFORMATION SHARING WITH ENTERPRISE RESOURCE PLANNING SYSTEMS

Gary Baker, Sam Houston State University, garybaker@shsu.edu

As organizations adopt a supply chain management strategy, the sharing of operational information between supply chain partners is critical. The focus of enterprise resource planning (ERP) systems has evolved from reducing internal inefficiencies to supporting the integration and coordination of interorganizational business processes. When successfully implemented, ERP systems provide the necessary operational, tactical, and strategic information to supply chain partners on a real-time basis.

EXAMINING MEDIATORS OF STRUCTURAL ASSURANCE CONSTRUCTS IN BUSINESS-TO-CONSUMER E-COMMERCE

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This study examines the influence of different types of structural assurance on consumer purchasing intentions in business-to-consumer (B2C) electronic commerce. Prior research findings regarding how different types of structural assurance impact consumer purchasing intentions has been limited. Based on the institution-based trust theory, perceived trust theory and the psychological contract theory, this study proposes that perceived vendor guarantee and perceived seals of approval would have positive influence on consumer intentions through psychological contract and perceived trust. Results of this study confirmed the significance of perceived vendor guarantee and perceived seals of approval and the importance of perceived trust in the nomological network.

AN INSTRUMENT FOR MEASURING THE EFFECT OF ELECTRONIC INTER-ORGANIZATIONAL CUSTOMER RELATIONSHIP MANAGEMENT (CRM) ON B2B CUSTOMER LOYALTY

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Lori Willoughby, Minot State University, Lori.Willoughby@minotstateu.edu

MIS literature has not adequately addressed the measurement of electronic commerce dimensions. Measures are yet to be proposed to assess the effect of electronic inter-organizational customer relationship management (CRM) on customer loyalty. This paper presents the results of a study that was a first effort toward this end. The goal of this paper is to describe the theoretical underpinnings of three critical dimensions of electronic commerce and to develop instruments to measure each one. The dimension are: CRM, Internet's web tools, and customer loyalty. Data from 170 information technology (IT) firms were used to assess the measures using the PLS (Partial Least Squares) techniques and SPSS software.

Curriculum Design/Development #7

Friday, October 3

2:10—3:10 p.m.

George Benson (Third Level)

Session Chair: Betty Kleen

BEYOND THE IMPACT FACTOR: UPDATES ON A CITATION STUDY FOR INFORMATION TECHNOLOGY JOURNALS

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Dr. Dale D. Gust, Professor Emeritus, Central Michigan University, gust1dd@cmich.edu

When the Institute for Scientific Information (ISI) incorporated the use of the “impact factor” through its Journal Citation Reports, citation data for articles and journals became an essential component in the arena of scholarly publication and especially in the promotion of faculty in the tenure system. However, with today’s advances in Web publishing, open access journals, and influence of Google Scholar, does the impact factor really carry the same weight as in the past? Is ISI’s Journal Citation Reports thoroughly collecting and reporting a journal’s true scholarly influence? What exactly still constitutes the “impact factor” and how are impact factors being used in the U.S. to evaluate journals, especially those in the world of information technology? This paper will build upon a previous citation study for information technology journals, with special attention to the Journal of Computer Information Systems: Gust, K. (2005). Evaluating the impact factor: a citation study for information technology journals, Issues in Information Systems, 7(2), 197-203. It will analyze how ISI’s Journal Citation Reports traditionally measures a journal’s impact in its disciplines: citation and article counts, impact factor trends and graphs, immediacy index (how quickly an article is cited), source data (types of articles), cited journal listings (those journals that cite a journal most frequently), etc. It will also focus on how the Journal of Computer Information Systems rates among its relative journals—has its impact factor increased or decreased in the past four years? It will also explore whether Web publishing and other citation data providers are playing a role in rising or falling impact factors for technology journals.

YOUTUBE FOR THE 21ST-CENTURY CLASSROOM: MAINTAINING INSTRUCTIONAL PURPOSE

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Lynn Heinrichs, Elon University, lheinrichs@elon.edu

Only rarely have researchers attempted to mathematically model the complex interrelationships of variables within an electronic meeting. Here, we show how topic-related measures can be used by an artificial neural network to accurately forecast the number of relevant comments generated by each person in these automated meetings. In comparison, naïve and multi-linear regression forecasts were significantly different from the actual numbers of comments.

Bridging the Gap from Education to Business with Experiential Learning Opportunities: An Information Systems Student Organization Case Study

Rebecca J. Giorcelli, Fairmont State University, Rebecca.giorcelli@fairmontstateu.edu

Joseph C. Blankenship, Fairmont State University, joe.blankenship@fairmontstate.edu

This presentation reports experiences and lessons learned from the current ISSO efforts at FSU. Specifically, this presentation includes an overview of: (1) the student computer resource center business model; (2) the chapter benefits from national Information Systems-related professional organizations as related to this effort; and, (3) the development of industry collaborations.

»» Notes

Business Intelligence #3

Saturday, October 3

8:30—9:30 a.m.

Symphony A

Session Chair: Malu Roldan

CYBERSTALKING: AN EXPLORATORY STUDY OF STUDENTS

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The Internet has become a medium for people to communicate locally or globally in the course of business, education and their social lives. The increase use of the Internet has created an impact on the number of online harassing/cyberstalking cases. This exploratory study of 302 undergraduate and graduate students at a mid-Atlantic university found that 13% of students were a victim of cyberstalking. This study argues that cyberstalking and harassment will only decrease when the extent of the problem is fully understood and potential victims and law enforcement understand the protections necessary under the law.

DATA WAREHOUSING AND BUSINESS INTELLIGENCE SKILLS FOR INFORMATION SYSTEMS GRADUATES:

ANALYSIS BASEDON MARKETPLACE DEMAND

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In an effort to keep information systems (IS) curriculum current with emerging technologies, this research reports the result of a survey of marketplace demand for database, data warehousing and business intelligence skills. Sample job and skills data were obtained from Dice.com's online postings for jobs that required a bachelor's degree in IS or equivalent qualifications. Cluster analysis revealed some skill overlap among the three job categories. Significant skills for each category of jobs, along with skill and vendor rankings, are reported.

BLENDING DECISION AND DESIGN SCIENCE WITH INFORMATION SYSTEMS DESIGN

AS A MEANS TO OPTIMIZING BUSINESS DECISIONS

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While information systems are bridges that connect functional areas of an organization, the underlying purpose and value in that connectivity is to improve decision making on all levels of the organization. It stands to reason that if organizational decision makers were afforded the use of more intelligent information systems, that decision making would improve, and thrust the organization into a position of competitive advantage. Based on analyses conducted in 2004, in which investigators blended similar disciplines in order to build a conceptual framework and guidelines to ensure research quality and rigor, this proposition for further research purports an integration of these same disciplines to be used in the design of organizational information systems. The premise is that a more intelligent design could offer a higher level of pragmatic effectiveness in the system that is implemented [18]. Intelligence in design, here is twofold; one being a more naturalistic (the way decisions are actually made as opposed to how they should be made) presentation of information offered; and second, that the presentation is in a higher level of context (less information but more closely related to the actual decision at hand) [19, 14].

Security #5

Saturday, October 3
Session Chair: Janis Warner

8:30—9:30 a.m.

Symphony B

“GIVE ME CONVENIENCE OR GIVE ME DEATH”: INVESTIGATING THE ROLE OF CONVENIENCE PERCEPTIONS ON IT (IN)SECURITY

Janis Warner, Sam Houston State University, jaw022@shsu.edu

Information system security importance is growing exponentially as organizations open their information systems to share their information and data assets with employees, partners and customers via the Internet, intranets and extranets. IT security research has begun to recognize the importance of understanding user practices and behavior as being foundational for the protection of an organization’s information assets. Perceptions of convenience have been investigated and linked to technology acceptance, however only productive technology has been investigated to date. Recent research categorizes IT security as a protective technology distinct from productivity technology, providing evidence that there is a need to develop a facet specific framework for studying IT security that is distinct from the productive technology literature. This paper will provide a synthesis of existing convenience perception knowledge and develop a framework for IT security. The framework can then be used to develop and test a multivariate model.

DRAFTING INFORMATIONAL PRIVACY LAWS: INFORMATION SCIENCE PERSPECTIVE

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In this paper, we describe an information science approach to drafting information privacy laws. Information scientists can contribute to the design of these laws not as mere technical experts, but rather as collaborators in design and construction of the legal text. Specifically, this paper concentrates on rules governing the handling of personal identifiable information (PII). First, we develop a systematic definition of PII and then identify five generic acts of handling it. A flow model is utilized to build complete scenarios where this type of information is involved. The results are applied to the proposed USA Personal Data Privacy and Security Act of 2005 in order to build a basic framework for drafting legal texts in the context of information privacy.

IS RISK ANALYSIS: A CHAOS THEORETIC PERSPECTIVE

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In this era of rapid globalization information is regarded as a valuable asset. Protection of information through appropriate risk analysis methods and risk management strategies has gained huge momentum. A survey of IS risk management literature reveals that most risk analysis techniques are grounded in the classical probability theory. The scope of the theory is evident from its fundamental assumption that the past is an indication of the future. This makes the theory appropriate for the prediction of known risks, i.e. risks that have already occurred in the past. Nevertheless, the theory has been wrongly applied even to the prediction of unknown risks, i.e. those that have never occurred in the past. We argue that the misapplication of classical probability theory also points to the glaring lack of an alternative theory which in fact addresses the issue of prediction of unknown risks. This paper introduces chaos theory as a means of predicting of such unknown risks to computer based systems, which frequently occur in the IS security landscape.

Foreign #1

Saturday, October 3

8:30—9:30 a.m.

Symphony C

Session Chair: Reggie Davidrajuh

TOWARDS A FRAMEWORK FOR INFORMATION TECHNOLOGY GOVERNANCE IN PUERTO RICO

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Mysore Ramaswamy, Southern University, Baton Rouge, LA, mysore@acm.org

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Everybody in today's highly networked corporate world is aware of the need for information security, since information is undeniably among an enterprise's most valuable assets. Therefore having a sound protection and data integrity infrastructure is paramount for corporate survival. In Puerto Rico, there are no regulations or formal standards regarding Information Technology (IT) governance for government agencies or small companies. Only companies which have their headquarters in the continental U.S., banking and pharmaceutical industries that are required to comply with Sarbanes Oxley (SOX) regulations are enforcing relevant control management models. Even though SOX compliance at first may seem to be an accounting and auditing matter, IT is at the heart of the issue. This is because the accuracy of financial reports relies in large part on decisions made by IT professionals. In this paper, we develop a framework for information technology governance even in organizations that are not specifically required to comply with SOX in Puerto Rico.

THE ROLE OF E-GOVERNMENT IN COMBATING CORRUPTION IN TRANSITION COUNTRIES

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Improving the enforcement of rules is clearly the best way to combat corruption. The introduction of e-Government can play a major role in this context as it automates several processes. However, in the case of post-communist transitioning countries such as Armenia, the challenges are unique. These countries are struggling with the transformation of their legacy bureaucratic and administrative processes. In addition, almost every post-Soviet country has inherited systemic corruption that is built in to the 'modus operandi' of both the public and private sectors. Without some method of categorization, assessment and modification of existing administrative processes, the formation of good policy and planning capable of leveraging the current capacity of institutions to deliver public service in a more transparent and efficient way is simply not feasible. Automating existing bureaucratic processes that are defective will not yield results. In this paper, we propose a methodology to combat corruption using information and communication technologies (ICT) that entails process restructuring.

DESIGNING AN ASSESSMENT TOOL FOR MEASURING E-READINESS OF IRANIAN ICT COMPANIES

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This paper proposes an e-readiness assessment model for evaluating the e-readiness of ICT Companies of Iran. The proposed e-readiness model consists of dimensions and indicators which are selected by a multilateral survey of existing frameworks and models of nations and SMEs in e-readiness assessment area. The results of this research show that the two dimensions, networked applications and services, are at a low level among the Iranian ICT companies whereas electronic infrastructure dimension is at the highest level.

Ethics

Saturday, October 3

8:30—9:30 a.m.

Jimmy Stewart

Session Chair: David Taylor

COMPUTER ETHICS: GENDER EFFECTS AND EMPLOYEE INTERNET MISUSE

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This article reports the findings of an empirical survey examining whether gender differences influence the degree to which individuals recognize unethical conduct in the use of information technology at work. Early research has primarily been limited to student samples and this study offers one of the first to examine the general population of Internet users. The results show no significant gender differences in the perception of unethical behavior in Internet use among the six ethical dilemmas presented. The ethical scenarios included personal use of the Internet, downloading music, viewing online pornography, visiting chat rooms, electronically sending jokes, and participating in cybersex. However, results suggest a disconnect between indicated degree of misuse and actual behavior in the workplace. This questions the effectiveness of Internet use policies. As a result, companies may need to do more to enforce or communicate policies, especially with regard to college graduates who enter the workforce, to mitigate the potential for employee Internet misuse

EXPLORING ETHICAL CODES AND MORAL BEHAVIOR IN TODAY'S CLASSROOM

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G.M. Marakas states [20] "Suggesting that ethics are an important element in any business endeavor seems intuitive. In systems analysis (IS), however, personal integrity and ethics are often at the center of the conduct of a development effort." At Edinboro University of PA the Computer Science (CS) program specifies that CS courses contain a section on ethical issues related to the course topic. At Robert Morris University (RMU), an entire course in the IS program is devoted to a study of global, social, economic and ethical issues in computing. As ethical and behavioral issues are of growing concern in business, so too are they in today's classroom. The access and exchange of electronic documents among students and their ability to be opaque as to the use of these materials on assignments increasingly raises concerns regarding plagiarism and authorship across educational institutions. A key question addressed in this essay is "What are the drivers (factors) that account for the decisions today's university students make to either engage in, or refrain from, actions that are considered immoral?" Can we determine and depict where students stand on ethical drivers as well as on the behavioral choices each makes? This paper introduces concepts for representing ethical drivers as dimensions in social-cultural and ethical frameworks; further, techniques for placing a student within these multidimensional frames are introduced. An initial survey instrument has been piloted that demonstrates one of the dimensions related to ethical framing. The design of a target study to demonstrate both ethical and moral frames, along with associated survey instruments, is presented.

SOFTLIFTING – HOW THINGS HAVE CHANGED: A LONGITUDINAL STUDY OF ATTITUDES

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The illegal duplication or sharing of computer software, referred to as softlifting, can be an expensive proposition for software developers, denying them the revenue that legal sales or leases would afford them. A study by Goles et al. (2008) explored the determinants of attitude towards softlifting utilizing data gathered from students at a State supported University in Houston, Texas. This data was gathered in 1998 and 1999 and reflected the attitudes of college students at that time. Since those years the environmental factors affecting student attitudes have been severely impacted. The tragedy of 9/11, a war in Iraq and Afghanistan, the Enron scandal, steroid abuse in baseball; and more recently the Bernie Madoff and Stanford Financial ponzi schemes are all molding our students' value systems. The proposed study will replicate the Goles research using students at another State supported University in the same geographic area. This new data can then be compared to the previous research and the influences of the environmental drivers can be measured.

Networks #2

Saturday, October 3

9:40—10:40 a.m.

Symphony A

Session Chair: Gary DeLorenzo

SENIORS' PERCEPTIONS OF THE WEB AND SOCIAL NETWORKING

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This is an examination of social networking and the elderly. Interviews were conducted with seniors and staff of senior care centers to identify current social network usage patterns by the elderly and to understand their perceptions and attitudes towards the Web and social networks. Results revealed that seniors were unfamiliar with social networking and in particular Facebook, but would be open to learning more about this application. Common themes and challenges elders face when using the web and online social networks were identified. The interviews also provided insight into developing a plan of action to help increase the use of online social networking communities by elders.

THE BUSINESS TRADEOFFS WITH THE FINAL – FOUR MODELS OF CONVENTIONAL TELEPHONY SYSTEMS

Timothy V. Kelly, Elizabeth City State University, tvkelly@mail.ecsu.edu

Several factors become apparent when a business is compelled to evaluate the decision to go with VoIP and a unified communications model or continue with one of the four conventional telephony systems model solutions. VoIP brings with it high start-up costs typically coupled with a multi-month payback period. However, these costs are followed by an on-going total cost of operation (TCO) savings. These costs and savings impact the operations of the computer network which now would include, data; and operation of telephony and video-conferencing systems. VoIP supports unified communications across the enterprise. The purpose of this exploratory research is to examine the system tradeoffs and the cost differences among the Final-Four Models of conventional telephony systems in relation to converting to VoIP.

BUSINESS CONTINUITY AND DISASTER RECOVERY PLANNING

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Disaster Planning involves everyone and everything in a business or organization. This includes: determining which potential disasters might happen to the business, planning how to stay in business should one of these disasters occur, and deciding what employees will need to know in order to make the recovery process as painless as possible.

Fraud

Saturday, October 3

9:40—10:40 a.m.

Symphony B

Session Chair: J. Packy Laverty

MANAGERS' PERSPECTIVES ON EMPLOYEE INFORMATION TECHNOLOGY FRAUD ISSUES WITHIN COMPANIES/ORGANIZATIONS

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Information Technology can be used to positively impact the development and growth of an organization, but also presents significant opportunities for fraud. In an effort to better understand these fraud issues a survey was conducted with members of the Association for Information Technology Professionals. The study found no sense of urgency to combat fraud, and from a list of 10 common fraud activities, no issue was described as critical by a majority of the respondents. Respondents also reported fraud policies are not clearly defined, fraud monitoring and detection tools are not effectively used, and fraud policies are not evenly enforced.

COMPUTER INFORMATION SYSTEMS AS A CATALYST FOR FRAUD, EXPLOITATION AND ECONOMIC UPHEAVAL IN WORLD FINANCIAL MARKETS

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The investment world is increasingly connected through knowledge, capital and information. The financial crisis of 2008 has its roots in the real estate boom in the United States with banks and brokers making risky mortgage loans. As these loans were pooled and used to support collateralized debt, the risk was transferred to the investor, and trillions of dollars of mortgage backed securities were sold around the world. Computer Information Systems were an unintended catalyst, nexus and an enabler of the misdeeds and poor decisions made by managers at many levels. The increased sophistication of technology contributed to the financial meltdown through facilitating: 1) information mismanagement; 2) the creation of complex and risky securities; 3) ineffective investment risk management; 4) unsound securities credit ratings; 5) excessive management compensation; 6) instantaneous Communication; and (7) rogue traders. Some Wall Street brokers and management were aware of the enormous risks they were taking with their firms and client's funds, but most, however, were lulled into a false sense of security with the reassuring blanket of sophisticated analysis made possible by the latest technology. Their self-serving decisions to enhance their personal income at the expense of sound business and risk management judgments has put the world into the most severe financial turmoil and downslide it has seen in more than eight decades. A study conducted in the northeast United States shows that managers from a variety of firms include greed, mismanagement, and government policy as contributors and IT as a nexus and enabler of the financial crisis.

WEB APPLICATION SECURITY INSTRUCTIONAL PARADIGMS AND THE IS CURRICULUM

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This document provides an overview of the growing importance of web application security threats and its role in the IS security curriculum. Two alternative instructional paradigms designed to present web application security were reviewed. Secure Programming curricula have been used to present detailed coverage from a software coding perspective. However, the Secure Programming Paradigm may present challenges in the choice of programming language or the required level of programming prerequisites that may not be appropriate for an Information Systems curriculum. As an alternative, the Automated Web Application Testing Paradigm using IBM's AppScan web security testing tool presents web application security from a quality assurance and testing perspective that may be integrated within the Software Development Life Cycle (SDLC). Recommendations for the integration of web application security in context of an Information Systems curriculum will be discussed

Project Management

Saturday, October 3

9:40—10:40 a.m.

Symphony C

Session Chair: James Cappel

AN EXPLORATORY ANALYSIS OF PROJECT MANAGEMENT COURSES IN IS PROGRAMS AT ACCREDITED BUSINESS SCHOOLS

James J. Cappel, Central Michigan University, james.cappel@cmich.edu

Project Management is of great importance to the information systems (IS) profession, as systems are commonly developed in a team-based project environment that requires planning, coordination and control. It is not surprising therefore that the IS 2009 Model Curriculum identifies IS Project Management as one of seven core (required) courses for inclusion in an Information Systems program. Based on a literature review, no prior studies have examined the extent to which IS programs have implemented this recommendation. The focus of this study is to assess Project Management courses in the IS curriculum based on a website analysis of a sample of AACSB-accredited IS programs. The results raise questions about whether the current coverage of Project Management in the IS curriculum is adequate in light of the provisions of the IS 2009 Model Curriculum.

ONLINE MENTORING ACCEPTANCE BY WOMEN PROFESSIONALS

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Lloyd G. Gibson, Seton Hill University, gibson@setonhill.edu

Online mentoring, also known as cybermentoring or e-mentoring, is an emerging phenomenon and information system improving the communication and behavior of women professionals, who cannot avail themselves of traditional modes of mentoring. However, like other new technology, online mentoring programs can be expensive to develop and implement. Thus, determining what acceptance factors related to online mentoring are important to women professionals can improve the chances that programs will be developed that appeal to these women. This study used a 2007 survey of 312 women professionals in the Southwestern Pennsylvania area and examined both demographic factors and attitudinal factors suggested by the Davis technology acceptance model and the Rogers diffusion of innovations theory. Results showed that demographic factors, such as age, education and profession, were statistically significant and that women who were younger, less educated, and self-employed were most accepting of online mentoring. In addition, analysis of two attitudinal factors suggested by Davis and Rogers, respectively, perceived usefulness and trialability were both positively correlated with online mentoring acceptance. These two factors may have implications with regard to the marketing and development of online mentoring programs for women professionals.

AN INVESTIGATION INTO THE TOOLS AND TECHNIQUES WITHIN THE PMBOK (4TH EDITION) THAT SUPPORT TRANSACTIVE MEMORY SYSTEMS

Mark E. Thorogood, Nova Southeastern University, thorogoo@nova.edu

Transactive memory is the process of using other people as external memory aids. Research indicates that transactive memory enhances several functions that improve project performance, such as knowledge transfer, knowledge integration, and knowledge coordination. The PMBOK is a leading text used to train and inform project managers. Surprisingly, a content analysis found that only 2 of 179 tools and techniques listed in the PMBOK (4th ed.) support the development and utilization of transactive memory systems. Based on an analysis of similar studies, it is argued that the practitioner literature for project managers should provide greater support for transactive memory systems. Accordingly, a process is proposed to develop personalized and codified transactive memory systems within project teams.

Internet #1

Saturday, October 3

9:40—10:40 a.m.

Jimmy Stewart

Session Chair: Lloyd Gibson

CHINESE AMERICAN ONLINE BANKING: MULTICULTURAL ACCEPTANCE OF INFORMATION TECHNOLOGY

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Regina Ann Gibson, Robert Morris University, gibsonfamily01@comcast.net

Technology acceptance research can be used to develop global strategies for e-commerce/service industries with market segments having multiple cultural identities. For banks to attract the fast-growing Chinese American population, knowing the factors influencing Internet banking adoption is important. The survey (N=254 Chinese Americans) used demographic and attitudinal factors from the Technology Acceptance Model and the Diffusion of Innovations Theory. Recommendations for online banking implementation are based on analysis supporting the significance of gender, language, and attitudinal factors.

A STUDY OF THE ROLE OF PERCEIVED INTERACTIVITY IN ONLINE CONSUMER'S INITIAL TRUST

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An interdisciplinary model for initial online trust is developed to examine how consumers' perceived interactivity of the Web site, their perceived Web assurance from the Web site, and their disposition to trust affect their initial online trust. In the model, perceived interactivity is theorized as an interpersonal-based antecedent, disposition to trust as a personality-based antecedent and perceived Web assurance as an institution-based antecedent to initial online trust. A series of hypotheses are tested. Results indicate that both perceived interactivity and perceived Web assurance have a positive impact on consumer's initial online trust. This research confirms the positive impact of third-party Web assurance seals on addressing consumers' trust concerns as well as provides important implications for e-vendors to strive toward enhancing online shoppers' perceived interactivity of its Web site.

»» Notes

Internet #2

Saturday, October 3

11:00 a.m. —12:00 p.m.

Symphony A

Session Chair: Alan Peslak

THE NEXT GENERATION INTERNET PROTOCOL, IPV6: AN OVERVIEW

Mohamad Ladan, Ph.D., Haigazian University, Beirut LEBANON, mladan@haigazian.edu.lb

The current Internet Protocol, IPv4, is the original standard Internet Protocol set up for handling IP addresses when the Internet was initially developed by DARPA (Defense Advanced Research Projects Agency) in the early 1970s. The IPv4 uses a 32 bit address field which provides for 4,294,967,296 unique Internet addresses. This number was deemed to be more than enough to last beyond any foreseeable requirements because in the early 1970's the population of the earth was less than 4 billion people and personal computers did not exist. Now, the rapid explosion of the Internet fueled by the vast number of personal computers attaching to it, made it clear that the IPv4 address space was already consumed to the point that a replacement had to be found. The next generation IP, IPv6, was developed in response to this situation. In this paper, I will try to give a complete overview of this new protocol. I start by giving a history of the internet and its current protocol. Then I will describe the main features of the new protocol, IPv6, and how they have solved the current limitation of the current protocol.

ONLINE SHOPPING PERCEPTION OF OFFLINE SHOPPERS

Manouchehr Tabatabaei, Georgia Southern University, b@georgiasouthern.edu

Recent advancements in technology have facilitated commerce around the globe. The online medium of commerce has provided and will continue to provide great opportunities for consumers and businesses. However, there are a number of issues that need to be addressed before the advantages of online shopping can be fully realized. One significant aspect is consumer perception of online shopping. The purpose of this paper is to examine the online shopping perception of consumers who shop from traditional stores. A survey was conducted in shopping malls in the southeastern region of the United States. The results show a positive perception of offline consumers toward online shopping. In addition, the results coincide with national trends for online shopping which show many traditional shoppers gather information on products and services online, but still make the purchase onsite in a traditional setting by visiting a store.

A REVIEW OF INTERNET SHOPPING FACTORS: DO THE TECHNOLOGY ACCEPTANCE MODEL OR THEORY OF REASONED ACTION MODEL APPLY?

Alan R. Peslak, Penn State University, arp14@psu.edu

Neelima Bhatnagar, University of Pittsburgh at Johnstown, bhatnagr@pitt.edu

Internet shopping (IS) is an important form of transacting business exchanges between business and consumers and has become extremely popular among teens and young adults as well as the population at large. Internet shopping offers unique advantages over brick and mortar stores and other forms of commerce but still has not gained complete support among all demographics. The elderly and minorities are less likely to use electronic commerce than other groups. This study reviews Internet shopping (IS) and its use, and attempts to determine factors that influence its success. The Technology Acceptance Model (TAM), based on Davis's work [7], is first tested to model IS behavior. Perceived usefulness was positively associated with intention to use Internet shopping but perceived ease of use was not. This manuscript also explores Internet shopping using the Ajzen and Fishbein [1] model of human behavior known as Theory of Reasoned Action (TRA). Specifically, findings reveal that attitude towards Internet shopping was positively associated with intention to use IS but subjective norm was not. Generally, the study finds that neither TAM nor TRA models IS behavior, but does find that perceived usefulness and attitude do affect behavioral intention. This study has important implications for researchers to further explore these relationships and for practitioners who can use these findings to influence and popularize an important method of commerce. The two factors which do influence "intention to use" Internet shopping are usefulness and attitude.

Curriculum Design/Development #8

Saturday, October 3

11:00 a.m.—12:00 p.m.

Symphony B

Session Chair: Azad Ali

Successful Efforts in Recruiting Women into Technology Courses – A Case Study

Azad Ali, Indiana University of Pennsylvania, azad.ali@iup.edu

This purpose of this paper is to describe efforts of recruiting women into computer technology courses. It illustrates the experience of one technology program in a university located in Western Pennsylvania and their successful efforts into recruiting women into a technology course. The Technology Support and Training (TST) program at Eberly College of Business (ECOBIT) - Indiana University of Pennsylvania (IUP) teaches a technology capstone course for their students in a graduate program. This course was successful in attracting more female students to the course, and changing the perception of women enrolled in it about technology courses, thus the experience of this program is illustrated in this paper. The paper begin by describing the problem of low enrollment of women in technology courses, it gives reasons and suggest remedies for this problem. It then describes the experience of the TST department at IUP in recruiting women into their course.

REENVISIONING “INFOSCAPE” AS A RESEARCH METAPHOR OF INFORMATION SYSTEMS

Robert Joseph Skovira, Robert Morris University, skovira@rmu.edu

The essay is a recapitulating of a research metaphor, “Infoscape”. The paper is a rethinking of a conception [12], as a frame for doing research of ecologies [5] of informing systems and their contextualizing social cultural environments. It redefines and clarifies grounds for doing informing systems research and foundation of teaching discipline-centered courses.

WORDLESS QUICK START GUIDES:TEACHING SOFTWARE SKILLS USING INFORMATION GRAPHICS

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Sarah Pels, Ohio University, spels1614@gmail.com

A lexicon is proposed to teach software skills almost entirely without words. The lexicon is used to develop information graphics. The information graphics are designed to answer questions normally directed to the professor in the computer lab. The diagrams are very visual and intuitive. Unlike Help Screens, these diagrams strip the concept to its bare essentials. Their usability is tested with hundreds of students. Because the diagrams are quick to comprehend, students actually refer to them. This dramatically reduces questions in the classroom and better serves online students as well.

Cloud Computing

Saturday, October 3

11:00 a.m.—12:00 p.m.

Symphony C

Session Chair: Marguerite Barta

COLLABORATION USING CLOUD COMPUTING AND TRADITIONAL SYSTEMS

Barbara Jo White, Western Carolina University, whiteb@email.wcu.edu

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Cloud-computing is quickly becoming a useful collaboration tool in businesses and universities. This paper is one of the first empirical studies comparing collaboration using cloud computing and traditional collaboration systems. For collaboration tasks, participants ratings for cloud computing systems were significantly higher than ratings for traditional collaboration systems.

AN EMPIRICAL STUDY OF EMERGING TRENDS IN ON-LINE SOCIAL NETWORK USAGE

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The objective of this research-in-process is to model the use of On-line Social Networks (OSNs), with the goal of understanding how OSN users repurpose and redesign the technology based on their individual and group objectives. Toward this end, we survey high school and college students in the United States and Mexico in order to determine the emergent structures evolving from use of the technology over time.

MOBILE INTERNET AND CLOUD COMPUTING: OPPORTUNITIES AND CHALLENGES

Ruidong Zhang, University of Wisconsin – Eau Claire, zhangr@uwec.edu

Mobile Internet is emerging and becoming an industry trend. One recent industry move is the availability of Internet services on the airplane. Delta Airline has announced recently to provide Wi-Fi Internet access throughout its entire domestic fleet, enabling travelers to work or surf at 33,000 feet. However, a full mobile Internet needs multiple technologies to work together to enable it. One area will be the wireless networking infrastructure. The 3G cellular networking and integrated Wi-Fi hotspot are providing a solution in this area. Another area is that the Internet must supplement the shortcomings of portable devices not having a huge storage capacity and processing power. One movement is forming to deal with this problem, which is generally called cloud computing. Cloud computing has the potential to change the way we store, process and distribute. Cloud computing is about making the Internet a storage network, a computing network, and a service network. A new type of data service industry based on the concept of Cloud computing, is emerging. To a minimum level, cloud computing could help eliminate a company's need for its own data center. To a large degree, cloud computing can empower mobile Internet and portable and small-screen devices to enable us to have a mobile office with us no matter where we are. Opportunities are being braced by companies such as Google, AT&T, Verizon and Amazon.com who have announced initiatives to offer cloud computing based services. And the industry giant IBM is forming a coalition led by IBM that's pushing something called the "Open Cloud Manifesto."

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