



Twenty-Second Annual International Conference on Information Systems

New Orleans, Louisiana

December 16-19, 2001

ICIS Conference Committee 2001

Conference

Joey George, Florida State University
Blake Ives, University of Houston

Program

Sumit Sarkar, University of Texas at Dallas
Veda C. Storey, Georgia State University

Doctoral Consortium

Peter Todd, University of Virginia
Dov Te'eni, Bar Ilan University

Junior Faculty Consortium

Laurie Kirsch, University of Pittsburgh
Fred Niederman, Saint Louis University

Sponsors

Ed Watson, Louisiana State University
Eph McLean, Georgia State University

Placement

Gabe Piccoli, Cornell University
Ken Walsh, Louisiana State University

Exhibits

Mysore Ramaswamy, Southern University
Lisa Murphy, Louisiana State University

Finance

Tom Clark, Louisiana State University

International Liaisons

John Mooney, University College Dublin
Michael Vitale, Australian Graduate School
of Management
Rick Watson, University of Georgia

Local Arrangements

Ye-sho Chen, Louisiana State University
Michael Dickey, Florida State University

Doctoral Consortium Local Arrangements

Andrea Houston, Louisiana State University

Publications

Janice I. DeGross, University of Minnesota

Wireless & Proceedings

Reagan Ramsower, Baylor University

Executive Director

Ephraim McLean, Georgia State University

ICIS Administrative Support

Samantha Spears, Georgia State University

2001:

A Digital Odyssey

Exploring How Information Technology Has Transformed Our Lives and Organizations

In association with



Special Interest Group on Management Information Systems,
Association for Computing Machinery



College on Information Systems,
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Association for Information Systems



The Society for Information Management



Technical Committee 8: Information Systems,
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Welcome to ICIS 2001 and New Orleans

On behalf of the entire ICIS 2001 conference committee, we would like to welcome you to ICIS and to New Orleans. Welcome and

Bienvenue! New Orleans is an attraction in itself, and we hope those of you who are new to the city get the chance to explore and

experience it. The food, the beverages, the people, the atmosphere of New Orleans—all are unique in a North American city, and maybe even in the world. We hope you will enjoy New Orleans while you are here, and we have worked hard over the past few years to ensure that you will enjoy ICIS 2001 as well. We are especially glad that you have come to ICIS in 2001, a year quite unlike any most of us has ever seen. Thank you for making the trip to New Orleans to support ICIS and your community of information systems academics.

The ICIS 2001 Executive Program Committee has been worked non-stop from May until October to put together what we believe is one of the best ICIS programs ever. The letter from the program co-chairs, Sumit Sarkar and Veda Story, included in this program, explains the processes they used to put together the program. The letter also includes statistics on acceptance rates. Even though we had a record number of submissions this year, the acceptance rate remained low, as has been ICIS's tradition, ensuring that the quality of the program is again high.

The program reflects our theme of *2001 A Digital Odyssey: Exploring How Information Technology Has Transformed Our Lives and Organizations*. For the first time ever, ICIS has created a special track to focus on the theme, and this track will be recognized with a best paper award.

Ancillaries and pre-conference activities continue to grow and flourish at ICIS, and this year is no exception. Several associated groups, including IAIM, WITS, WISE, IRAIS, IFIP 8.2 OASIS, and SIM, are holding their annual meetings just prior to ICIS. This year, with ICIS being part of AIS, ICIS is also providing space for one of the new AIS special interest groups, IS-CORE. And the traditions of special breakfasts for department heads and center directors and women in IS continue this year in New Orleans. We also have two special events on Sunday afternoon, special presentations by two of our sponsors, Microsoft and IBM.

The two days before ICIS have become as busy as ICIS itself, and we welcome all of those who are also involved in these ancillary activities.

One of our goals for ICIS 2001 was to move to an even more electronically based conference. There are several steps we have taken in this regard. The most radical is the elimination of written and CD-based proceedings. For the first time ever, ICIS proceedings are available only on the web. Another step we took toward modernizing ICIS is the introduction of wireless access in the exhibits and PC salon area of the conference. Those who want to can still access their e-mail and the Internet through the PCs that ICIS has provided, but those with wireless cards for their laptops can sit anywhere in the exhibits area and access their e-mail. Thanks to Enterasys Networks for making the wireless network available. Finally, we have made the program and hotel maps accessible for those who want to view them on their PDAs. We still have this paper program, but maybe this will fade away as well at future ICIS meetings.

As we close, we would like to take this opportunity to thank our corporate sponsors: Microsoft Research, Microsoft, IBM, ExxonMobil, and SAP. We would like to equally thank our academic and institutional sponsors: AIS, Florida State University, Gartner, Georgia State University, INFORMS, Louisiana State University, ACM SIGMIS, SIM, and the University of Houston. We would not have been able to plan and carry out the same high quality ICIS meeting without their support.

We especially want to thank all of the many people who worked hard to make this conference a reality. We were able to put together a first rate Conference Committee, and we believe their commitment shows in the way this conference has come together. If you should see any members of the Conference Committee during the course of ICIS, please thank them for their efforts.

And now, it is time for ICIS 2001 to begin. As they say in New Orleans, "Laissez les bons temps roulez!"

Joey George & Blake Ives
Conference Co-Chairs

Letter from the Program Chairs

We are pleased to bring to you this program for the 22nd *Annual International Conference on Information Systems*. The program represents leading research that is being carried out throughout the world in information systems. The selected papers and panels address diverse research issues using a wide range of methodological approaches. We hope you will find the program to be interesting and the papers to be of high quality on a variety of topical issues.

a little from pronouncements made by Arthur C. Clarke many decades ago) we chose as our theme: *2001 A Digital Odyssey: Exploring How Information Technology Has Transformed Our*

Conference Theme

Recent advances in information technology are transforming our lives and our organizations. The emergence of Internet technologies has led to the evolution of the digital economy and the information society. Information technology and particularly the various technologies of the Internet are significantly shifting the boundaries of many industries. In light of these developments (and borrowing

Lives and Organizations. While ICIS papers addressing the conference theme have received special recognition in the past, this year we took the extraordinary step of creating a special track for

papers relating to the conference theme. Our purpose was to draw attention to the degree to which information technology is bringing about transformations in organizational processes, and individual work and social life. While we were initially somewhat apprehensive regarding whether this track would generate a sufficient number of submissions, we were most gratified to discover that eventually 80 submissions were made to this track alone. We hope that our decision to dedicate a track to the theme will provide stimulus for research on the above issues for some time to come.

Program Structure and Review Process

The program is organized into four major tracks: *Theme-Related Research*, *Completed Research*, *Research-in-Progress*, and *Panels and Debates*. It was developed with the assistance of our track co-chairs, a Program Committee of over ninety people, and many hundreds of reviewers. The list of participants was truly international, with the entire review process conducted across several geographic borders. This was particularly well-embodied by our track co-chairs themselves. Anitesh Barua and Malcom Monroe were in charge of the Theme-Related Research track and carried out their work across the Canadian and United States borders. Debabrata Dey and Lars Mathiassen managed the papers for the Completed Research track between the United States and Denmark. Roger H. L. Chiang and Christina Soh diligently coordinated their work for the Research-in-Progress track between the United States and Singapore. Finally, Yolande Chan and John Mooney selected an exciting line-up of Panels and Debates while coordinating their work between Canada, Ireland, and the United States.

The track co-chairs recommended members of the IS community who could serve on our Program Committee. As last year, the Program Committee members served in a role analogous to Associate Editors. For each submission they were asked to handle, they first identified and assigned appropriate reviewers. Then, based upon the submitted reviews, they provided their own report for the authors and their recommendation for the track co-chairs. The track co-chairs made the final recommendations.

The Program

We received a record number of 418 submissions from 34 countries, which marks the third successive year that the number of submissions has reached a record level. This is a very good indicator of the growth of our research community, and their intellectual contributions. Of these 418 submissions, 80 were to the Theme-Related Research track, 148 to the Completed Research track, 170 to the Research-in-Progress track, and 20 to the Panels and Debates track.

We received many high quality submissions, and the Program Committee faced the difficult task of identifying submissions that were more deserving of presentation at the conference than others. After much deliberation among the track co-chairs and ourselves, and based on the recommendations of the Program Committee members, we selected a total of 88 submissions for the final program. This included 14 Theme-Related Research papers (18% acceptance rate), 32 Completed Research papers (21% acceptance rate), 33 Research-in-Progress papers (19% acceptance rate), and nine Panels and Debates (45% acceptance rate). The acceptance rates are indeed low; however, this is in keeping with ICIS's reputation as the premier academic conference in Information Systems.

Three papers were nominated for best paper awards from each of the Completed Research and Theme-Related Research tracks. We chose to have one discussant for each paper in the Completed Research and Theme-Related Research tracks.

In a move from the past, and in keeping with the conference theme, we are not producing physical proceedings for the conference (either in printed form or as CD-ROMs). For the first time, the papers themselves are posted on a web site (the AIS Digital Library) in advance of the conference. This will give participants the flexibility to print selected articles to bring to the conference, while providing access to other articles, either at the conference site or their home institutions.

Acknowledgments

Putting together a program for a conference such as ICIS is a monumental task. We are grateful to many people who helped in various ways over the past couple of years. First and foremost, we would like to thank our track co-chairs who worked tirelessly for the last year. These people spent endless hours working on this program, ensuring that every submission was carefully dealt with. The Program Committee members deserve special thanks for carrying out their assignments in a professional and timely manner. In addition, many members of our research community served as referees, and some eminent members served as judges for the best paper awards. All of these individuals contributed significantly in ensuring that the quality of the program be truly outstanding.

Izak Benbasat and Sirkka Jarvenpaa, in their capacity as advisors, provided us with guidance on many program related issues. Hasan Pirkul, Dean of the University of Texas at Dallas, and Richard Baskerville, Chair of the Computers and Information Systems Department at Georgia State University, provided their whole-hearted encouragement and supported our prolonged involvement with the conference. Munir Mandviwalla and Deepika Gaurie provided valuable support for the submission and review system. Cynthia Beath helped in the panel selection process. Jan DeGross, once again, produced the proceedings with great care. Blake Ives and Joey George (the Conference Co-Chairs) provided much appreciated advice and guidelines to keep the process on track.

We hope you enjoy the program. Welcome to New Orleans.

Sumit Sarkar
University of Texas at Dallas
Richardson, Texas, USA 75083-0688
sumit@utdallas.edu

Veda C. Storey
Georgia State University
Atlanta, Georgia, USA 30302-4015
vstorey@gsu.edu

ICIS 2001 Program Co-Chairs

Letter from the AIS President

Dear ICIS Delegate:

At the Brisbane ICIS last year there were a few old gray heads running about trying to determine just how many had actually been at all the past ICIS conferences. I believe the number they eventually came up with was seven. I was one of them (and now apparently an unwitting party to this bizarre tontine). As one of the original seven, it is thus a particular pleasure for me to welcome the attendees, so many of whom I have come to know and like through our many year mutual association at ICIS. But ICIS, through its doctoral consortium, doctoral student reception, and junior faculty workshop, also provides a rich environment for starting your career in the academy. It is at ICIS that will see many of the well-known scholars who wrote the papers you read in your doctoral programs. It is at ICIS that you can bump into the editors of the field's leading journal and pitch your newest paper. It is at ICIS that you can test your ideas in front of some of the best and brightest. But it is also at ICIS that you can chat with some of the nicest folks you will ever meet.

Thanking the organizers is a special delight. I hesitate to start naming people as there are so many who have contributed so much. But there are special people I must single out. Veda Storey and Sumit Sarkar, have taken on perhaps the hardest job in conference design, putting together a first-rate program. They recruited the program committee, organized the reviewers, interfaced with a new reviewing system, identified qualified discussants, assembled the sessions, and did the hundreds of other things required of program chairs. Peter Todd and Dov Te'eni have similarly served admirably

in putting together a doctoral consortium that, like all ICIS consortiums before, will long be remembered fondly by the attendees.

But I reserve my greatest appreciation to Joey George, my co-chair, who took on this responsibility after a previous co-chair had to withdraw. While both Joey's and my name appear side by side as conference co-chairs, let there be no question about who did the bulk of the work and who had made the conference the success I feel certain it will be. That was Joey. While I wrestled with the Presidency of AIS, the merger of AIS and ICIS, a move, a new job, and, in recent days, a bedazzling new daughter (and her web site at julieives.info), Joey, with lots of help from his wife Karen, meticulously, tirelessly, and patiently worked to organize the conference. Thanks Joey!

A professional society can be and should be an essential element in the life of any professional. So too should be attendance at events such as the International Conference on Information Systems. First ICIS, and now AIS, have richly embellished my career. They have done so as much by what I have enjoyed giving as by that that I have hungrily taken away. I hope that each of you will consider seriously getting more involved in ICIS, AIS, or the other major conferences of our field. We need you!

Cordially,

Blake Ives
President

Association for Information Systems

Letter from the Chair of the ICIS Executive

Dear Colleagues,

On behalf of the ICIS Executive Committee and the ICIS 2001 Conference Committee, I would like to welcome you to ICIS2001. As you will see from this Conference program, the ICIS2001 Conference Committee has done an outstanding job in putting together a first-class conference. Once again, the quality of the academic program illustrates why ICIS is regarded as the premier international conference in the information systems discipline. There will be many opportunities for you to meet with colleagues, to relax, to share your ideas, and to learn from others. We also have a wonderful venue. Please engage fully with the conference so you obtain maximum professional and personal benefits from attending the Conference.

ICIS2001 marks an auspicious event in the history of the International Conference on Information Systems. It is the first occasion on which the Conference has been held under the formal alliance arrangements put in place early this year with the Association for Information Systems. We now have the premier

international conference in the information systems field working hand in hand with the premier international association of information systems scholars. I am confident the result will be improved services to and improved status for all of us who are in the information systems discipline. If you are not a member of the Association for Information Systems, I urge you join and to engage actively with the Association and ICIS.

Finally, I would like to thank Joey George, Blake Ives, and their colleagues on the ICIS2001 Conference Committee for the outstanding work they have done to put the arrangements for ICIS2001 in place. A major conference like ICIS does not occur without the dedication and hard work of many colleagues. We are indebted to them for all their efforts. Please take advantage of the wonderful opportunities they have provided to us and enjoy the Conference!

Ron Weber
Chair, ICIS Executive Committee

Keynote Speakers

in Northbrook, Illinois; Palo Alto, California; and Sophia Antipolis, France. Under his leadership, R&D experts work with emerging technologies to envision and develop high value business applications and to creatively solve longstanding business challenges, from creating the first viable Web ShopBot, back in 1995, to the recently developed Online Wardrobe. In addition, Ferguson is responsible for shaping the firm's uCommerce strategy. Founded on his insights, the strategy helps clients understand the business benefits of untethered, ubiquitous and unbounded commerce, enabling them to lead in the new economy.

Few people are better qualified to talk on such a wide array of new and emerging technologies as Ferguson. He has shared his technical wisdom and his unequaled business concepts in publications such as *Fortune Magazine*, *The Economist*, *Financial Times*, *The Journal of Business Strategy*, *National Public Radio*, *MSNBC*, *the Wall Street Journal*, *the Economist*, *Information Week*, *Time Magazine* and *CEO Magazine*. Ferguson has given dynamic and informative presentations at events and venues, such as CNN's Futurewatch; IDC's annual IT European Forum; the Telecommunications Managers Association's annual conference; Sun's International Internet Associates Symposium; Internet Word; Comdex Asia; and the European Gartner Symposium.

Ferguson joined Accenture in 1974. Ferguson received a bachelor's degree in economics from Claremont McKenna College in 1973 and received both a bachelor's and master's degree in industrial engineering from Stanford University in 1974.

Glover Ferguson Chief Scientist, Accenture

Glover T. Ferguson is an industry luminary and sought after speaker, with more than 26 years of experience in developing groundbreaking technology solutions that help our clients change the way the world lives and works. As Chief Scientist at Accenture, Ferguson holds one of the top strategic roles and is the driving force behind the firm's Technology Research and Innovation initiatives.

Ferguson is responsible for creating business opportunities from technology innovation. He is known for his unparalleled ability in identifying emerging technologies and articulating the next wave of cutting-edge business applications.

Ferguson oversees Accenture's technology Research & Development organization: Accenture Technology Labs which are located

About Accenture

Accenture is the world's leading provider of management and technology consulting services and solutions. More than 70,000 people in 46 countries deliver a wide range of specialized capabilities and solutions to clients across all industries. Under its strategy, Accenture is building a network of businesses to meet the full range of client needs—consulting, technology, outsourcing, alliances and venture capital. Accenture's home page address is

<http://www.accenture.com>.

Ferguson's talk on Monday is titled "uCommerce: A Vision of the Next Wave."

until mid-1997). On May 24, 1996, with the creation of the Cap Gemini Group, he was appointed member of the Directoire. Since the creation of Cap Gemini Ernst & Young Consulting in May 2000, he is Group Managing Director, more specifically in charge of Professions.

Pierre Hessler started his career in 1965 as IBM sales representative in Switzerland, held several managerial posts there until he was named director of operations in 1980 for IBM Europe in Paris. He subsequently held high level management responsibilities in Europe and in the United States. He became IBM Corporate Vice President in November 1990 and his last position in this company was IBM Vice President, Directeur Général du Marketing, des Services et des Opérations, IBM Europe.

Mr. Hessler is a Swiss citizen, aged 57, married with two children, a graduate of the University of Lausanne with degrees in law and economics.

About Cap Gemini Ernst & Young

Cap Gemini Ernst & Young is one of the largest management and IT consulting firms in the world. The company offers management and IT consulting services, systems integration, and technology development, design and outsourcing capabilities in the new economy. The organization employs about 60,000 people worldwide and reports global revenues of 8.5 billion euros (2000 pro forma). For more information, visit their web page at:

www.capgemini.com

Hessler's talk on Tuesday is titled "Towards the Adaptive Enterprise."

Pierre Hessler
Group Managing Director
Cap Gemini Ernst & Young

Pierre Hessler joined the Cap Gemini Sogeti Group in September 1993, serving as Deputy Chief Operating Officer, CGS, and Deputy General Manager, Sogeti. In July 1995, he was named Chairman and interim CEO of Gemini Consulting (holding the latter position

Conference Information

Doctoral Student Reception

The doctoral student reception will be held from 5:00 to 6:30 p.m. in the Grand Ballroom of the Fairmont Hotel. We encourage all doctoral students registered for ICIS to attend this reception. It is a great opportunity to meet your peers.

Opening Reception

All conference registrants are invited to attend the traditional in-hotel Opening Reception on Sunday night, December 16. The reception will be held in the Grand and International Ballrooms from 7:00 to 9:00 pm.

Social Event

This year's social event will take place at the Audubon Aquarium of the Americas, on the banks of the Mississippi River, at the foot of Canal, on Monday, December 17, from 7:00 p.m. to 10:00 p.m. If weather permits, we will march down Canal from the Hotel to the Aquarium in a gala Mardi Gras parade, with marching bands and jazz bands and Mardi Gras festivity. For those who cannot walk, transportation will be provided. Buses will also be provided for those who prefer to ride back to the Hotel rather than walk back through the French Quarter.

Special Events

Microsoft Presentation: Speakers from Microsoft Corporation will provide a special presentation at 3:00 p.m. on Sunday, December 16, in the Emerald Ballroom (2nd level). The presentation topic is to be determined.

IBM Presentation: Speakers from IBM Corporation will present a talk on “Using Web Services to Achieve Dynamic E-Business” at 4:30 p.m. on Sunday, December 16, in the Emerald Ballroom (2nd level).

Placement

On-site placement services will be provided in collaboration with AIS who provides online vita and job posting services. On-site facilities for conducting interviews will be available to participants who are registered in the AIS online placement system and registered for the ICIS conference. For more information on the online system, see the AIS Placement Web site at

(<http://aisnet.org/placement/>)

or the ICIS registration booth for onsite registration. The ICIS on-site service will include a sign-in table and interview tables in the Bayou Rooms. Those schools conducting interviews in locations other than the Bayou Rooms may leave their information at the placement sign-in table so that candidates can be directed to the correct location. Interview table space will be allocated on a first-come first-served basis on each day of the conference. Space permitting, a school may be able to occupy the same table for the duration of the conference, although peak periods may force the re-issuance of tables not in active use. Placement bulletin boards will be available near the sign-in table. On-site interview tables will be available during the following hours:

Sunday, December 16	1:00 p.m. – 5:00 p.m.
Monday, December 17	8:00 a.m. – 5:00 p.m.
Tuesday, December 18	8:00 a.m. – 5:00 p.m.
Wednesday, December 19	8:00 a.m. – 12:00 noon

E-mail/Internet/Wireless

E-mail and Internet services are available for the duration of the conference in the International Ballroom. In addition to the traditional wired wall of PCs, we are also providing wireless service, courtesy of Enterasys Networks. So, bring your laptop and your 802.11b compatible wireless card, and access your e-mail and the Internet over our wireless access point(s).

Exhibits

Exhibitors, including textbook publishers and information technology vendors, will display materials for use in teaching, research, and business in the International Ballroom. Hours are:

Sunday, December 16	10:00 a.m. – 6:00 p.m.
Monday, December 17	8:00 a.m. – 5:30 p.m.
Tuesday, December 18	8:00 a.m. – 5:30 p.m.
Wednesday, December 19	8:00 a.m. – 12:00 noon

Future Conferences

ICIS 2002 will be held in Barcelona, Spain, 15-18 December. The conference co-chairs are Josep Valor, IESE, and Francesc Miralles, ESADE. The conference theme is “**Meeting the Challenges in a Global Networked Economy.**” Visit the conference website at

<http://www.icis2002.org/>

The location of ICIS 2003 will be decided during the meeting of the ICIS Executive Committee in New Orleans, as will the site of ICIS 2005. ICIS 2004 will be held in Washington, D.C. The conference co-chairs are V. Sambamurthy, University of Maryland, and Rick Watson, University of Georgia.

Proceedings

This year, there are no proceedings to carry away from ICIS, neither paper nor CD. Instead, the proceedings are available to AIS members at

<http://aisel.isworld.org/proceedings/>

The proceedings have been available for two weeks before the opening of ICIS. There are instructions on the website for making a CD of the proceedings, if desired.

Awards

This year, ICIS continues its tradition of hosting the presentation of two prestigious AIS awards. The first is the AIS Fellows, recognizing colleagues who have made outstanding contributions to the development and maintenance of the international community of Information Systems academics. The second is the LEO Award, for Lifetime Achievement in Information Systems. The awards will be presented at lunch on Monday, in the Imperial Ballroom.

Conference Schedule

Sunday, December 16	
8:00 a.m.–3:00 p.m. Grand Ballroom	Junior Faculty Consortium (preregistration required)
10:00 a.m.–6:00 p.m. International Ballroom	Exhibits
12:00 noon–7:00 p.m. International Foyer	Conference Registration
1:00 a.m.–5:00 p.m. Bayou Rooms	AIS/ICIS Placement
3:00 p.m. Emerald Ballroom (2 nd Level)	Microsoft Presentation
4:30 p.m. Emerald Ballroom (2 nd Level)	IBM Presentation: “Using Web Services to Achieve Dynamic E-Business”
5:00 p.m.–6:30 p.m. Grand Ballroom	Doctoral Student Reception
7:00 p.m.–9:00 p.m. Grand & International Ballrooms	Opening Reception Sponsored by ICIS and AIS
Monday, December 17	
7:00 a.m.–8:30 a.m. International Ballroom	Continental Breakfast
7:00 a.m.–4:00 p.m. International Foyer	Conference Registration
8:00 a.m.–5:00 p.m. Bayou Rooms	AIS/ICIS Placement
8:00 a.m.–5:30 p.m. International Ballroom	Exhibits
8:30 a.m.–10:00 a.m.	
Session M1.1 Grand Ballroom	Panel/ Debate Using Information Technology to Transform Unstructured, Creative Work Chair Gordon B. Davis University of Minnesota Panelists Lynne Cooper, Jet Propulsion Laboratory, California Institute of Technology Steven Orla Kimbrough, University of Pennsylvania Ann Majchrzak, University of Southern California M. Lynne Markus, City University of Hong Kong
Session M1.2 Emerald	Completed Research IT Strategy and Use in the Context of Organizational Learning Chair Jan Damsgaard, Aalborg University Paper “Strategic IT Alignment: A Model for Competitive Advantage,” Grover S. Kearns, University of South Florida, St. Petersburg, and Albert L. Lederer, University of Kentucky Discussant Paper Jeremy Rose, Aalborg University “Exploring Media Influences on Individual Learning: Implications for Organizational Learning,” Nicole Haggerty, University of Western Ontario, Scott Schneberger, Georgia State University, and Peter Carr, Athabasca University Discussant Carol Pollard, University of Tasmania

Session M1.3 University	Theme-Related Research	Virtual Communities
	Chair	Abhijit Gopal, University of Western Ontario
	Paper	“Virtual Communities as Platforms for Product Development: An Interpretive Case Study of Customer Involvement in Online Game Development,” Helena Holmström, Umeå University
	Discussant	Kathy Chudoba, Florida State University
	Paper	“An Empirical Investigation of Virtual Communities and Trust,” Lai Lai Tung, Puay Leng Jennifer Tan, Pei Jin Tartrice Chia, and Yeow Leng Koh, Nanyang Technological University
	Discussant	Shaila Miranda, Florida Atlantic University
Session M1.4 Explorers	Research in Progress	Organizational Innovation
	Chair	Ilze Zigurs, University of Nebraska at Omaha
	Paper	“What Drives Waves in Information Systems? The Organizing Vision Perspective,” Ping Wang, University of California, Los Angeles
	Paper	“The Quad-Core Model of Information Systems Innovation: Identifying and Confirming the Role of Novel Technological Frames as a Supra-Innovation Core—The Case of Internet Induced IT Innovation,” Gregory Rose, California State University, Chico, and Kalle Lyytinen, Case Western Reserve University
	Paper	“An Empirical Study of Electronic Commerce Intrapreneurship Within the IT Units of Large Organizations,” Jasbir S. Dhaliwal, Norwegian School of Management
Session M1.5 Rex/Gold	Completed Research	Improving Performance of Software Users/Teams
	Chair	Arun Sen, Texas A&M University
	Paper	“The Relationship of Software System Flexibility to Software System and Team Performance,” Kay M. Nelson, The Ohio State University, and Jay G. Coopridge, Bentley College
	Discussant	Brian Fitzgerald, Cork University
	Paper	“Improving Relevance Feedback with Unbiased Estimate of User’s Information Need,” Yunjie Xu, Syracuse University
	Discussant	David Paradise, Florida State University, Tallahassee
Session M1.6 Creole	Research in Progress	Systems Development: Advanced Methods
	Chair	Jeffrey Parsons, Memorial University of Newfoundland
	Paper	“Metaphor Analysis for Improved Information Systems Design,” Bec Neill, University of South Australia
	Paper	“Determinants of Inspection Effectiveness in Software Development: An Empirical Analysis,” Sunil Mithas and Ramanath Subramanyam, University of Michigan
	Paper	“The Complexity of Unified Modeling Language: A GOMS Analysis,” Keng Siau and Yuhong Tian, University of Nebraska–Lincoln
10:00 a.m.–10:30 a.m. International Ballroom	Break—Refreshments	
10:30 a.m.–12:00 noon Grand Ballroom	Keynote:	Grover Ferguson , Chief Scientist, Accenture, “uCommerce: A Vision of the Next Wave”
12:00 noon–2:00 p.m. Imperial Ballroom	Lunch	

2:00 p.m.–3:30 p.m.	Session M2.1 Grand Ballroom	Research in Progress	Web-Based Retailing and Advertising
		Chair Paper	Kwok Kee Wei, National University of Singapore “Shopping as Experience and Web Site as a Social Actor: Web Interface Design and Para-Social Presence,” Nanda Kumar and Izak Benbasat, University of British Columbia
		Paper	“The Impact of Streaming on Advertising Websites,” Carol Saunders, University of Central Florida, Steven D. Anderson, James Madison University, and Sue Conger, University of Dallas
		Paper	“Hybrid Genetic Algorithms for Scheduling Advertisements on a Web Page,” Subodha Kumar, University of Washington, Varghese S. Jacob and Chelliah Sriskandarajah, University of Texas at Dallas
	Session M2.2 Emerald	Theme-Related Research	Enterprise Resource Planning Systems
		Chair Paper	Sid Huff, Victoria University of Wellington “Knowledge Integration as a Key Problem in an ERP Implementation,” Shan L. Pan, National University of Singapore, Sue Newell, Royal Holloway, University of London, Jimmy C. Huang, The University of Nottingham, and Alvin Wan Kok Cheung, National University of Singapore (<i>Nominated for Best Theme-Related Research Paper Award</i>)
		Discussant Paper	Carol V. Brown, Indiana University “Demystifying the Rhetorical Closure of ERP Packages,” Marlei Pozzebon, École des Hautes Études Commerciales and McGill University
		Discussant	Mike Chiasson, University of Calgary
	Session M2.3 University	Completed Research	Empirical Analysis of Mobile Internet Services and Call Centers
		Chair Paper	Atish Sinha, University of Wisconsin, Milwaukee “Information Quality for Mobile Internet Services: A Theoretical Model with Empirical Validation,” Minhee Chae and Jinwoo Kim, Yonsei University
		Discussant Paper	Dianne Strong, Worcester Polytechnic Institute “Business Value of IT-Enabled Call Centers: An Empirical Analysis,” Ramanath Subramanyam and M. S. Krishnan, University of Michigan
		Discussant	Yoris Au, University of Minnesota
	Session M2.4 Explorers	Panel/ Debate	IS Research Relevance Revisited: Subtle Accomplishment, Unfulfilled Promise, or Serial Hypocrisy?
		Chair	Ned Kock, Temple University
		Panelists	Paul Gray, Claremont Graduate University
			Ray Hoving, SIM International
			Heinz Klein, Temple University
			Michael Myers, University of Auckland
			Jack Rockart, Massachusetts Institute of Technology
	Session M2.5 Rex/Gold	Research in Progress	User Acceptance of IT
		Chair Paper	Ritu Agarwal, University of Maryland “The Role of Personal Innovativeness and Self-Efficacy in Information Technology Acceptance: An Extension of TAM with Notions of Risk,” Rajiv Kishore, The State University of New York at Buffalo, Jungwoo Lee, Yonsei University, and Ephraim R. McLean, Georgia State University
		Paper	“IT-Induced Adaptation and Individual Performance: A Coping Acts Model,” Anne Beaudry, Concordia University, and Alan Pinsonneault, McGill University
		Paper	“The Social Effect of Self Identity and Social Identity on Technology Acceptance,” Younghwa Lee, University of Colorado, Boulder, Jintae Lee, University of Colorado, Boulder, and Zoonky Lee, University of Nebraska at Lincoln

<p>Session M2.6 Creole</p>	<p>Completed Research</p>	<p>Hybrid Approaches in Classification and Optimization</p>
	<p>Chair Paper</p>	<p>Mike Mannino, University of Colorado, Denver “A Hybrid-Based Framework for Constraint Satisfaction Optimization Problems,” Wee-Kit Ho and Andrew Lim, National University of Singapore</p>
	<p>Discussant Paper</p>	<p>Ming Fan, University of Notre Dame “Hybrid Approaches for Classification Under Information Acquisition Cost Constraint,” Parag C. Pendharkar, Pennsylvania State University at Harrisburg</p>
	<p>Discussant</p>	<p>Raj Sharman, Tulane University</p>
<p>3:30 p.m.–4:00 p.m. International Ballroom</p>	<p>Break—Refreshments</p>	
<p>4:00 p.m.–5:30 p.m.</p>		
<p>Session M3.1 Grand Ballroom</p>	<p>Completed Research</p>	<p>Economics of Electronic Goods and Markets</p>
	<p>Chair Paper</p>	<p>Terence M. Barron, University of Toledo “Mixed Versioning of Information Goods Under Incomplete Information,” Thomas A. Weber, University of Pennsylvania (<i>Nominated for Best Completed Research Paper Award</i>)</p>
	<p>Discussant Paper</p>	<p>Shunkar Sundaresan, Pennsylvania State University, College Park “Transaction Costs and Market Efficiency,” Bin Gu and Lorin M. Hitt, University of Pennsylvania</p>
	<p>Discussant</p>	<p>Kerem Tomak, University of Texas at Austin</p>
<p>Session M3.2 Emerald</p>	<p>Research in Progress</p>	<p>Digital Economy and E-Commerce Strategy</p>
	<p>Chair Paper</p>	<p>Raghunathan Srivasan, University of Texas at Dallas “Exploring the Role of Information Systems Resources in Dynamic Environments,” Michael Wade, University of Western Ontario</p>
	<p>Paper</p>	<p>“Surging Volatility: An Internet Effect?,” Deepak Agrawal, New York University, Sreedhar T. Bharath, New York University, and Siva Viswanathan, University of Maryland, College Park</p>
	<p>Paper</p>	<p>“The Impact of Fluctuating Financial Markets on the Signaling Effect of E-Commerce Announcements,” Michael J. Dardan and Antonis C. Stylianou, University of North Carolina at Charlotte</p>
<p>Session M3.3 University</p>	<p>Panel/ Debate</p>	<p>Divergent Practices for Software Development at Internet Speed</p>
	<p>Chair Panelists</p>	<p>Richard Baskerville, Georgia State University Linda Levine, Carnegie Mellon University Jan Pries-Heje, IT University of Copenhagen Balasubramanian Ramesh, Georgia State University Sandra Slaughter, Carnegie Mellon University</p>
<p>Session M3.4 Explorers</p>	<p>Panel/ Debate</p>	<p>Documenting Across Time and Space: Diverse Approaches and Organizational Implications</p>
	<p>Chair Panelists</p>	<p>Richard Boland, Case Western Reserve University Wanda Orlikowski, Massachusetts Institute of Technology Michael Barrett, University of Cambridge Carsten Østerlund, Massachusetts Institute of Technology</p>

Session M3.5 Rex/Gold	Theme-Related Information Processing and Sharing
	Research
	Chair Phillip Ein-Dor, Tel-Aviv University Paper “Anomaly Reconciliation in Electronic Discussion Groups,” Peter H. Gray and Darren B. Meister, Queen’s University
	Discussant Larry Seligman, University of Cincinnati Paper “Finding Information Just for You: Knowledge Reuse Using Collaborative Filtering Systems,” Il Im, New Jersey Institute of Technology, and Alexandar Hars, University of Southern California
	Discussant Ravi Bapna, University of Connecticut
Session M3.6 Creole	Completed Database and Knowledge-Based Systems
	Research
	Chair Ramayya Krishnan, Carnegie Mellon University Paper “Measuring the Return of Knowledge Embedded in Information Technology,” Thomas J. Housel, Naval Postgraduate School, Omar El Sawy, University of Southern California, Jiangfan J. Zhong, University of Southern California, and Waymond Rodgers, University of California, Los Angeles
	Discussant Akhilesh Bajaj, Carnegie Mellon University Paper “Syntactic and Semantic Understanding of Conceptual Data Models,” Cheryl L. Dunn, Florida State University, and Severin V. Grabski, Michigan State University
	Discussant Jim Nelson, The Ohio State University
7:00 p.m.	Social Event—Aquarium of the Americas
Tuesday, December 18	
7:00 a.m.–8:30 a.m. International Ballroom	Continental Breakfast
7:00 a.m.–4:00 p.m. International Foyer	Conference Registration
8:00 a.m.–5:00 p.m. Bayou Rooms	AIS/ICIS Placement
8:00 a.m.–5:30 p.m. International Ballroom	Exhibits
8:30 a.m.–10:00 a.m.	
Session T1.1 Grand Ballroom	Completed E-Commerce: Technology Adoption and B2B Marketplace
	Research
	Chair Olivia Sheng, University of Arizona Paper “On the Explanation of Factors Affecting E-Commerce Adoption,” Dongwon Lee, University of Minnesota, Jinsoo Park, University of Minnesota, and Joongho Ahn, Seoul National University
	Discussant Alina Chircu, University of Texas at Austin Paper “Neutral Versus Biased Marketplaces: A Comparison of Electronic B2B Marketplaces with Different Ownership Structures,” Byungjoon Yoo, Vidyanand Choudhary, and Tridas Mukhopadhyay, Carnegie Mellon University (<i>Nominated for Best Completed Research Paper Award</i>)
	Discussant Bing Jing, New York University

Session T1.2 Emerald	Panel/ Debate Co-Chairs Speakers	Real Options Analysis Is Entirely Appropriate for Evaluating Uncertain IT Investments Paul Tallon, Boston College Yossi Lichtenstein, University College Dublin (nonparticipating) Robert Kauffman, University of Minnesota Henry C. Lucas Jr., University of Maryland, College Park Andrew Whinston, The University of Texas at Austin Kevin Zhu, University of California, Irvine
Session T1.3 University	Research in Progress Chair Paper Paper Paper	Open-Source Development: Trust, Coordination, and Optimality Kwok Kee Wei, National University of Singapore “An Exploratory Study of Ideology and Trust in Open Source Development Groups,” Katherine Stewart and Sanjay Gosain, University of Maryland at College Park “Shared Mental Models and Coordination in Large-Scale, Distributed Software Development,” J. Alberto Espinosa, Robert E. Kraut, Javier F. Lerch, and Sandra A. Slaughter, Carnegie Mellon University, and James D. Herbsleb and Audris Mockus, Lucent Technologies “Opening the Code: How Open Is Optimal?,” Geoffrey Parker, Tulane University, and Marshall Van Alstyne, University of Michigan
Session T1.4 Explorers	Completed Research Chair Paper Discussant Paper Discussant	Electronic Repositories and Effectiveness in Knowledge Management Susan Winter, University of North Carolina at Charlotte “Seeking Knowledge in Electronic Knowledge Repositories: An Exploratory Study,” Atreyi Kankanhalli, Bernard C. Y. Tan, and Kwok-Kee Wei, National University of Singapore Michael Gallivan, Georgia State University “An Integrative Framework for Knowledge Management Effectiveness,” Mohamed Khalifa, Rinky Lam, and Matthew Lee, City University of Hong Kong Rens Scheepers, Swinburne University
Session 1.5 Rex/Gold	Research in Progress Chair Paper Paper Paper	Human-Computer Interface and Information Search Ting Peng Liang, National Sun Yat-Sen University “Frame-of-Reference Effects on the Accuracy of Self-Assessed User Competence,” Jane I. Gravill, The University of Western Ontario, Deborah R. Compeau, The University of Western Ontario, and Barbara L. Marcolin, The University of Calgary “Understanding Successive Searches Across Multiple Sessions Over the Web,” Shin-Jeng Lin, LeMoyné College “A Model for and the Effects of Information Request Ambiguity on End-User Query Performance,” Micheal Axelsen, University of Queensland, A. Faye Borthick, Georgia State University, and Paul L. Bowen, University of Queensland
10:00 a.m.–10:30 a.m. International Ballroom	Break—Refreshments	
10:30 a.m.–12:00 noon Grand Ballroom	Keynote:	Pierre Hessler , Group Managing Director, Cap Gemini Ernst & Young, “Towards the Adaptive Enterprise”
12:00 noon–2:00 p.m. Imperial Ballroom	Lunch	

2:00 p.m.–3:30 p.m.		
Session T2.1 Grand Ballroom	Panel/ Debate	Confessional Research in Information Systems
	Co-Chairs	Rudy Hirschheim, University of Houston Wynne Chin, University of Houston (nonparticipating)
	Panelists	Ulrike Schultze, Southern Methodist University Dan Robey, Georgia State University Geoff Walsham, Cambridge University
Session T2.2 Emerald	Theme-Related Research	IT and Strategy
	Chair	Dennis Galletta, University of Pittsburgh
	Paper	“Open Standards, Information Systems Strategy, and Adoption of Innovative Technology: The Case of the Recording Industry and the MP3 Standard,” Robert F. Easley and John G. Michel, University of Notre Dame (<i>Nominated for Best Theme-Related Paper Award</i>)
	Discussant Paper	Sabyasachi Mitra, Georgia Institute of Technology “IS–Organization Coevolution: The Future of Information Systems,” Dubravka Cecez-Kecmanovic and Robert Kay, University of Western Australia
	Discussant	Duane Truex, Georgia State University
Session T2.3 University	Completed Research	IT Investment and Productivity Paradox
	Chair	Sanjeev Dewan, University of California, Irvine
	Paper	“The Effects of Firm Characteristics on Investor Reaction to IT Investment Announcements,” Wonseok Oh, McGill University, and Joung W. Kim, Concordia University
	Discussant Paper	Mani Subramani, University of Minnesota “Enterprise Resource Planning Systems and Firm Value: An Event Study Analysis,” C Ranganathan, University of Illinois at Chicago, and Imad Samarah, Southern Illinois University, Carbondale
	Discussant	Arun Sundarajan, New York University
Session T2.4 Explorers	Completed Research	Decision Support and Expert Systems in Organizations
	Chair	Vijay Mookerjee, University of Texas at Dallas
	Paper	“Building Credit-Risk Evaluation Expert Systems Using Neural Network Rule Extraction and Decision Tables,” Bart Baesens, Catholic University of Leuven, Rudy Setiono, National University of Singapore, Christophe Mues, Stijn Viaene, and Jan Vanthienen, Catholic University of Leuven
	Discussant Paper	Yong Tan, University of Washington “Group Support Systems: The Effects of Mixing Support Systems on Information Pooling, Decision Time, and Decision Quality,” Joram Ngwenya, Athabasca University, and Robert Keim, Arizona State University
	Discussant	Peter Axel Nielson, Aalborg University
Session T2.5 Rex/Gold	Research in Progress	Information and Knowledge Sharing
	Chair	Dan O’Leary, University of Southern California
	Paper	“The Relationship between Demand, Product, and Information Sharing Strategies,” Gek Woo Tan and Bei Wang, National University of Singapore
	Paper	“Organizational Knowledge Sharing in ERP Implementation: A Multiple Case Study Analysis,” Mary C. Jones, University of North Texas, and R. Leon Price, University of Oklahoma
	Paper	“Sense-Making of Empirical Knowledge Management Through Frames of Reference,” David Yuh Foong Law and Joo Eng Lee-Partridge, National University of Singapore

3:30 p.m.–4:00 p.m. International Ballroom	Break—Refreshments	
4:00 p.m.–5:30 p.m.		
Session T3.1 Grand Ballroom	Completed Research	Technology Fear and Deception in the Internet Age
	Chair	Jane Fedorowicz, Bentley College
	Paper	“Technology Fears: Barriers to the Adoption of Business-to-Business E-Commerce,” Rueylin Hsiao, National University of Singapore
	Discussant	Ola Henfridsson, University of Umeå
	Paper	“Looking Without Seeing: Understanding Unsophisticated Consumers’ Success and Failure to Detect Internet Deception,” Stefano Grazioli and Alex Wang, University of Texas at Austin (<i>Nominated for Best Completed Research Paper Award</i>)
	Discussant	Ellen Christiaanse, Amsterdam University
Session T3.2 Emerald	Panel/ Debate	Knowledge Management: Challenging Assumptions
	Chair	James D. McKeen, Queen’s University
	Panelists	John C. Henderson, Boston University Clyde Holsapple, University of Kentucky Larry Prusak, IBM Global Services
Session T3.3 University	Completed Research	Design of Web-Based Systems
	Chair	Amitava Dutta, George Mason University
	Paper	“Web Design in E-Commerce: A Theory and Empirical Analysis,” Jaeki Song, Texas Tech University, and Fatemeh “Mariam” Zahedi, University of Wisconsin, Milwaukee
	Discussant	Nirup Menon, University of Texas at Dallas
	Paper	“Visualization Support for Managing Information Overload in the Web Environment,” Ozgur Turketken, Temple University, and Ramesh Sharda, Oklahoma State University
	Discussant	Sudip Bhattacharjee, University of Connecticut
Session T3.4 Explorers	Research in Progress	Managing the IS Function
	Chair	Vivek Choudhury, University of Cincinnati
	Paper	“Value-Focused Assessment of Information System Security in Organizations,” Gurpreet Dhillon and Gholamreza Torkzadeh, University of Nevada, Las Vegas
	Paper	“The Threat-Rigidity Model of Professional Obsolescence and Its Impact on Occupational Mobility Behaviors of IT Professionals,” Damien Joseph and Soon Ang, Nanyang Technological University
	Paper	“An Assessment of Information Technology Outsourcing Risk,” Bouchaïb Bahli, Concordia University, and Suzanne Rivard, HEC– Montreal
Session T3.5 Rex/Gold	Theme-Related Research	IT and Organizational Transformation
	Chair	Sal March, Vanderbilt University
	Paper	“From Doing to Thinking in Meteorological Forecasting: Changing Work Practice Paradigms with Knowledge Management,” Henry Linger and Frada Burstein, Monash University
	Discussant	Gina Green, Baylor University
	Paper	“Paradise Delayed: The Impacts of IT on Performance and Workers,” Kevin Kobelsky, University of Southern California
	Discussant	Anne-Marie Croteau, Concordia University

Wednesday, December 19

7:00 a.m.–8:30 a.m.
International Ballroom

Continental Breakfast

7:00 a.m.–12:00 noon
International Foyer

Conference Registration

8:00 a.m.–12:00 noon
Bayou Rooms

AIS/ICIS Placement

8:00 a.m.–12:00 noon
International Ballroom

Exhibits

8:30 a.m.–10:00 a.m.

Session W1.1
Grand Ballroom

**Panel/
Debate**
Chair
Panelists

What I Think About Reviewing: Confessions of a Panel of Expert Reviewers

Trevor Moores, University of Nevada, Las Vegas
Wynne Chin, University of Houston
Deborah Compeau, University of Western Ontario
Izak Benbasat, University of British Columbia

Session W1.2
Emerald

**Completed
Research**
Chair
Paper

Electronic Markets

Sridhar Narasimhan, Georgia Tech University
“Brand Awareness and Price Dispersion in Electronic Markets,” Pei-Yu (Sharon) Chen and Lorin M. Hitt, University of Pennsylvania
Wei T. Yue, University of Texas at Dallas
“Assessing Promotion Performance of Pure Online Players: A Two-Stage Model with Sample Selection,” Jianan Wu, Victor J. Cook, Jr., and Edward C. Strong, Tulane University
Anurag Agarwal, University of Florida, Gainesville

Session W1.3
University

**Research in
Progress**
Chair
Paper

IT Adoption: Organization, Country, and Culture

Anath Srinivasan, The University of Auckland
“Technology Adaptation: The Case of Large-Scale Information Systems,” Bongsug Chae, Texas A&M University
“The Mechanics of Internet Diffusion in India: Lessons for Developing Countries,” Amitava Dutta, George Mason University, and Rahul Roy, University of Northern Iowa
“Facilitators and Inhibitors for Deploying Business-to-Business E-Commerce Applications: A Multi-Method, Cross-Cultural Study,” C Ranganathan, University of Illinois at Chicago, Thomas S. H. Teo, National University of Singapore, Jasbir S. Dhaliwal, Norwegian School of Management, James S. K. Ang, National University of Singapore, and Micki Hyde, Belmont University

Session W1.4
Explorers

**Completed
Research**
Chair
Paper

IS Research Based on the Theory of Planned Behavior

Andrea Houston, Louisiana State University
“Client Versus Consultant Influence on Client Involvement in Computer System Selection Projects: A Two-Actor Model of the Theory of Planned Behavior,” Guy G. Gable, Queensland University of Technology, and Wynne W. Chin, University of Houston
Aris Ouskel, University of Illinois at Chicago
“An Investigation of Volitional Control in Information Ethics,” Feng-Yang Kuo, National Sun Yat-Sen University, and Meng-Hsiang Hsu, National Kaoshiung First University of Science and Technology
Sandeep Puro, Georgia State University

Session W1.5 Rex/Gold	Theme-Related Research	The Rural Systems Challenge
	Chair	Jane Webster, Queen's University
	Paper	"Booktowns on the Internet: Rural Enterprises Enter the Network Society," Ingjerd Skogseid, Western Norway Research Institute, and Arild Jansen, Western Norway Research Institute and Finnmark College
	Discussant	Nancy McKay, Simon Fraser University
	Paper	"On the Sustainability of Rural Information Systems: An Analysis of Preliminary Experimental Evidence," Shivaraj Kanungo, George Washington University
	Discussant	Fang Yin, University of Texas at Austin
10:00 a.m.–10:30 a.m. International Ballroom	Break—Refreshments	
10:30 a.m.–12:00 noon		
Session W2.1 Grand Ballroom	Panel/ Debate	E-Business Autopsy: What Have We Learned?
	Chair	Detmar Straub, Georgia State University
	Panelists	Peter Weill, Massachusetts Institute of Technology Jeanne Ross, Massachusetts Institute of Technology Michael Vitale, Australian Graduate School of Management
Session W2.2 Emerald	Theme-Related Research	The Virtual Environment
	Chair	Fred Riggins, University of Minnesota
	Paper	"Dot-Com Deals: An Empirical Investigation of Value Creation in Internet Related Acquisitions," C Ranganathan, University of Illinois at Chicago, and Peter Dadalt, Georgia State University
	Discussant	T. Ravichandran, Rensselaer Polytechnic Institute
	Paper	"Sense of Virtual Community: Determinants and the Moderating Role of the Virtual Community Origin," Joon Koh and Young-Gul Kim, Korea Advanced Institute of Science and Technology (<i>Nominated for Best Theme-Related Research Paper Award</i>)
	Discussant	Sung Kim, University of Wisconsin at Madison
Session W2.3 University	Completed Research	Risk in Online Systems
	Chair	Ram Kumar, University of North Carolina, Charlotte
	Paper	"Perceived Risk and Escrow Adoption: An Economic Analysis in Online Consumer-to-Consumer Auction Markets," Xiaoru Hu, Saint Louis University, Zhangxi Lin, Texas Tech University, Andrew B. Whinston, The University of Texas at Austin, and Han Zhang, Georgia Institute of Technology
	Discussant	Joni Jones, University of Michigan
	Paper	"Assessing the Risk in E-Commerce," Michael Ettredge and Vernon J. Richardson, University of Kansas
	Discussant	Starling Hunter, Massachusetts Institute of Technology
Session W2.4 Explorers	Research in Progress	Web-Based Services: User Satisfaction, Acceptance, and Loyalty
	Chair	Patrick Chau, University of Hong Kong
	Paper	"Satisfaction with Internet-Based Services: A Longitudinal Study," Mohamed Khalifa and Vanessa Liu, City University of Hong Kong
	Paper	"User Acceptance of a Web-Based Information System in a Non-Voluntary Context," Luis L. Martins and Franz Willi Kellermanns, University of Connecticut
	Paper	"Customer Loyalty to an Online Store: The Meaning of Online Service Quality," David Gefen and Pat Devine, Drexel University

Session W2.5 Rex/Gold	Completed Research	Turnover and Transition of IT Personnel
	Chair	Manju Ahuja, Indiana University
	Paper	“Information Technology Worker Turnover: An Integrative Model and Empirical Test,” Jason Bennett Thatcher and Lee P. Stepina, Florida State University
	Discussant	Edgar Whitley, London School of Economics
	Paper	“Identifying the Enablers and Barriers of Information Technology Personnel Transition,” Karin M. Darais, University of Utah, Kay M. Nelson, Ohio State University, Sarah C. Rice, Ohio State University, and Mari Windsor Buche, University of Kansas
	Discussant	Michael Dickey, Florida State University

End of Conference

Completed Research Papers

Monday, December 17
8:30 a.m.–10:00 a.m.
Session M1.2
Emerald

“Strategic IT Alignment: A Model for Competitive Advantage,” Grover S. Kearns, University of South Florida, St. Petersburg, and Albert L. Lederer, University of Kentucky

This study examines how and why strategic IT alignment can be used to create competitive advantage and to what extent information intensity affects this process. A model is tested to examine how and why strategic IT alignment can produce enhanced organizational knowledge that yields competitive advantage. The model differentiates between alignment between the business plan and IT plan (BP-ITP alignment) and alignment between the IT plan and business plan (ITP-BP alignment). Results support six of the eight hypotheses and conclude that information intensity is an important antecedent to strategic IT alignment, that strategic IT alignment is best explained by multiple constructs which operationalize both process and content measures, and that ITP-BP, but not BP-ITP, alignment is significantly related to the use of IT for competitive advantage.

“Exploring Media Influences on Individual Learning: Implications for Organizational Learning,” Nicole Haggerty, University of Western Ontario, Scott Schneberger, Georgia State University, and Peter Carr, Athabasca University

Individual learning in organizations is an important activity to be nurtured for corporate procedures, policy, and knowledge sharing. One essential mechanism for individual learning is communication, increasingly occurring via multiple media environments. Understanding individual learning effectiveness depends on our ability to understand and predict media effects. Since recent research on media richness theory suggests that its central proposition does not hold, we explore why this may be. Within the context of communications among individuals in three media environments (asynchronous online, synchronous video conferencing, and face-to-face), this research explores individual perceptions of media and outcomes through individual cognitive communication processes. We link cognitive learning theories and their influence on individual learning and media perceptions to media theories. Results suggest that asynchronous media allow time to pause and reflect during learning, playing an important role in determining an individual’s perceptions of media and learning outcomes. This study presents an important contribution to studies of media, technology mediated learning, and individual learning in organizations.

Monday, December 17
8:30 a.m.–10:00 a.m.
Session M1.5
Rex/Gold

“The Relationship of Software System Flexibility to Software System and Team Performance,” Kay M. Nelson, The Ohio State University, and Jay G. Coopridge, Bentley College

Organizations are evolving at an ever-increasing rate due to economic changes, globalization, and technology enabled changes such as e-business. These changes require existing and new software systems to be flexible enough to support rapid change while still being reliable and cost effective. Software flexibility has previously been studied only from a structural perspective with little attention to the people and processes that support the software, especially in the maintenance environment where most changes occur. This research builds on a previously validated technology flexibility model with two dimensions: structural and process flexibility (Nelson and Ghods 1998). We empirically test the relationship of flexibility to the performance of the software system and the IS support team. The relationships between

flexibility and performance are analyzed using a “fit” analysis to fully understand the complexity of the relationships. Our findings indicate that software flexibility is related to both system and team performance, and is characterized by the amount of interaction, or “fit,” between structural and process flexibility.

“Improving Relevance Feedback with Unbiased Estimate of User’s Information Need,” Yunjie Xu, Syracuse University

Relevance feedback is an effective and widely accepted method in information retrieval to improve performance. Relevance feedback generally uses an adaptive learning method to estimate the user’s information need. In this research, we propose an alternative two-stage sampling method to obtain an unbiased estimate of the user’s information need. Our estimate shows not only improved retrieval performance, but also better prevention of query drift, which troubles traditional relevance feedback. We also give theoretical justification and empirical support for this method.

Monday, December 17 2:00 p.m.–3:30 p.m. Session M2.3 University
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“Information Quality for Mobile Internet Services: A Theoretical Model with Empirical Validation,” Minhee Chae and Jinwoo Kim, Yonsei University

Providing customers with high quality of information is a key determinant for the success of the mobile Internet. This study aims at identifying the important dimensions of information quality in increasing user satisfaction and customer loyalty for mobile Internet services. In order to achieve this goal, we propose a general model of information quality with four dimensions. The dimensions were constructed by expanding prior research in information quality in order to reflect the characteristics of the mobile Internet. We hypothesize that the four dimensions are positively related to user satisfaction and customer loyalty, and that their relative importance varies according to user goals. To validate the hypothesized model, we conducted a large-scale Internet survey with mobile Internet users. The results indicate that some dimensions are more important than others in increasing user satisfaction and loyalty, and relative importance of the dimensions varies according to the intended goals of mobile Internet contents.

“Business Value of IT-Enabled Call Centers: An Empirical Analysis,” Ramanath Subramanyam and M. S. Krishnan, University of Michigan

Corporate information technology (IT) investments in customer support and service such as CRM systems have been on a steady rise. Of late, the primary interest has shifted toward assessment of returns on these investments. This research attempts to assess the value of IT investments in a customer support setting using a process-level analysis. Given the lack of academic IS research in the area of customer support and value of IT in the service context, this study aims to bridge this gap by building on prior business value of IT literature. In order to identify the contribution of IT in the context of our study, we explicitly control for personnel-specific factors and customer-specific factors. Our findings indicate that IT enabled call centers significantly improve the performance of the customer support process. Further, we also find that the benefits from IT enabled call centers may be higher when the customer-reported problems are complex and difficult to resolve. In addition, we find that both personnel-specific factors and customer-specific factors significantly influence the business benefits from IT in call center and customer support applications.

Monday, December 17 2:00 p.m.–3:30 p.m. Session M2.6 Creole
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“A Hybrid-Based Framework for Constraint Satisfaction Optimization Problems,” Wee-Kit Ho and Andrew Lim, National University of Singapore

Scheduling and timetabling are commonly faced problems in most businesses and organizations. Both of these problems fall under the domain of constraint satisfaction optimization problems (CSOP), which involves finding a solution that satisfies all hard constraints, while at the same time maximizing some weighted sum of the soft constraints. Current constraint satisfaction techniques fare poorly in terms of soft constraints satisfied, while optimization techniques cannot ensure the feasibility of the final solution. In this paper, we propose a framework for CSOP that combines both constraint satisfaction and optimization techniques into a hybrid algorithm, called the combined method (CM). We test our framework on an exam-timetabling problem (ETTP) using actual data. Our results show that CM can be expected to produce better results than using a single technique alone.

“Hybrid Approaches for Classification Under Information Acquisition Cost Constraint,” Parag C. Pendharkar, Pennsylvania State University at Harrisburg

The practical use of classification systems may be limited because the current classification systems do not allow decision makers to incorporate cost constraint. For example, in several financial applications (loan approval, credit scoring, etc.) an applicant is asked to

submit a processing fee with the application (Mookerjee and Mannino 1997). The processing fee may be used to validate the information entered in the application. From an economic standpoint, it is important that the cost of validating the information not exceed the processing fee. Traditional classification systems do not allow the decision maker to incorporate information acquisition cost constraint. We term the problem of designing a classification system, where information acquisition costs are considered, as the problem of classification with information acquisition cost constraint (CIACC). The CIACC problem is a NP hard problem and is very difficult to solve to optimality.

Current computer-based medical diagnostic methods use neural networks, discriminant analysis and other machine learning approaches for medical diagnosis (Pendharkar et al. 1999). Most of these approaches do not allow the decision maker to incorporate the information acquisition cost constraints. For example, Turney (1995) argues that “the problem of cost-sensitive classification is medical diagnosis, where a doctor would like to balance the costs of various possible medical tests with the expected benefits of the tests for the patient.” Turney proposed a hybrid genetic algorithm and decision tree induction algorithm to develop a classification system that minimizes information acquisition and mis-classification costs. The objective of Turney’s study was to simultaneously minimize information acquisition and mis-classification costs.

Monday, December 17
4:00 p.m.–5:30 p.m.
Session M3.1
Grand Ballroom

“Mixed Versioning of Information Goods Under Incomplete Information,” Thomas A. Weber, University of Pennsylvania

Information goods such as computer software or electronic newspapers can be provided by firms at a low marginal cost, while in many cases large capital outlays are required to produce their first unit. The substantial setup cost is thereby mainly driven by the cost of developing the top quality product. Having established this “flagship” product, a firm can degrade it or in other ways modify it, and in this way create a multitude

of products at a small “versioning” cost. Finding *optimal* versioning strategies for information goods is becoming increasingly important for Internet commerce, as low distribution costs and newfound customer intimacy render intricate second-degree price discrimination strategies feasible.

“Transaction Costs and Market Efficiency,” Bin Gu and Lorin M. Hitt, University of Pennsylvania

Previous research suggests that a decline in transactions costs leads to improved economic efficiency. In this paper, we show that such a decline will introduce increasingly uninformed consumers into established markets. Using a model of financial market inefficiency, we show that this increase in uninformed individuals can increase market risk (volatility), can decrease efficiency, and may reduce social welfare even when market participants are perfectly rational. We then test the predictions of our model using data on the retail equities market. Our results suggest that securities that have a large proportion of small trades (presumably disproportionately from small, online retail investors) tend to be less efficient by conventional measures, consistent with our model predictions.

Monday, December 17
4:00 p.m.–5:30 p.m.
Session M3.6
Creole

“Measuring the Return of Knowledge Embedded in Information Technology,” Thomas J. Housel, Naval Postgraduate School, Omar El Sawy, University of Southern California, Jiangfan J. Zhong, University of Southern California, and Waymond Rodgers, University of California, Los Angeles

We propose a methodology for measuring the return on knowledge in company processes. We argue that one promising approach is to formulate the problem within the context of a knowledge management framework. That is, we will demonstrate that it is possible to measure the impact of knowledge embedded

in information technology (IT) deployed in an organization’s core processes. In this sense, the core process knowledge embedded within IT is a particular instance of knowledge used to produce core process outputs. We provide a case example of the application of the knowledge value-added (KVA) methodology to provide a “proof-of-concept” example of how measuring the value added by IT might be approached. We discuss the implications in terms of the generic requirements for any methodology attempting to solve this problem as well as how the results of the use of KVA can be applied to analyze the potential value added by IT.

“Syntactic and Semantic Understanding of Conceptual Data Models,” Cheryl L. Dunn, Florida State University, and Severin V. Grabski, Michigan State University

This study investigates decision makers’ syntactic and semantic understanding of conceptual data modeling from the perspectives of text-centered theory (Faris and Smeltzer 1997) and schema theory (Anderson 1983, 1990; Mandler 1984; Rumelhart 1980). Text-centered theory posits that meaning is contained in the syntax and core word meanings of the written text and readers are passive recipients of the

text; understanding based on text-centered theory is syntactic understanding. Schema theory contends that users assimilate text information into existing knowledge structures and sets of expectations (schemas) to derive meaning. How a user interprets a written (or other) communication depends on the information presented and on the user's schema. Understanding based on schema theory is semantic understanding. Semantic understanding is examined in both low and high information load contexts. When asked *what* the entity-relationship diagram portrays, the participants responded as predicted by text-centered theory, that is, they only looked at the syntax. When asked *what* the entity-relationship diagram *should* portray, the participants responded as predicted by schema theory, assimilating their pre-existing knowledge with the depicted information. These results were consistent across domains (general, acquisition, and revenue business processes). People apply different types of understanding based on their interpretation of different types of questions. This provides an alternative explanation for the results obtained by Siau et al. Participants' interpretation of the question asked, and the corresponding syntactic or semantic response, rather than cognitive bias, may have driven their results.

Tuesday, December 18
8:30 a.m.–10:30 a.m.
Session T1.1
Grand Ballroom

“On the Explanation of Factors Affecting E-Commerce Adoption,” Dongwon Lee, University of Minnesota, Jinsoo Park, University of Minnesota, and Joongho Ahn, Seoul National University

The Internet has grown at a remarkable pace since the emergence of the World Wide Web in the early 1990s. While electronic commerce (e-Commerce) has become an important issue with the growth of the Internet, there has been insufficient empirical research concerning its adoption by Internet users.

In this paper, we propose the e-Commerce Adoption Model (e-CAM), which attempts to examine important factors that predict a consumer's online purchasing behavior. e-CAM integrates the technology acceptance model with the theories of perceived risk to explain the adoption of e-Commerce. Specifically, we examine the impact of the following factors on the consumer's purchasing behavior: perceived ease of use, perceived usefulness, perceived risk with products/services, and perceived risk in the context of online transaction. We test the e-CAM model using the structural equation modeling technique. Most of the causal relationships between the constructs postulated by our model are well supported, accounting for 33.4% of the total variance in e-Commerce adoption.

In sum, our study finds that all of the antecedent constructs directly and/or indirectly affect the consumer's adoption of e-Commerce. Therefore, the findings suggest that firms providing products/services through e-Commerce should consider these contextual factors in order to facilitate consumers' adoption behavior.

“Neutral Versus Biased Marketplaces: A Comparison of Electronic B2B Marketplaces with Different Ownership Structures,” Byungjoon Yoo and Vidyanand Choudhary, Carnegie Mellon University

Despite the tough environment dot-com firms are facing, electronic business-to-business (B2B) marketplaces are becoming an important and growing part of electronic commerce. An important question in the context of electronic B2B marketplaces concerns the ownership structure of B2B marketplaces. At the advent of electronic B2B marketplaces, “neutral marketplaces,” independent of buyers and suppliers, were commonplace. Later, incumbent companies (suppliers or buyers) came together to create “biased marketplaces.”

Both structures have their strengths and weaknesses in creating successful B2B marketplaces. Independent intermediaries who own neutral marketplaces claim that they have expertise in information technology and credibility in terms of neutrality. But they also have some problems, an important one being the lack of commitment of buyers or suppliers. Since they are independent from both suppliers and buyers, there is no guarantee that they will adopt such a marketplace. There is a high risk of failure when a neutral marketplace does not attract suppliers and buyers. The second problem is that once buyers and suppliers adopt a neutral marketplace, the intermediary is free to charge high prices from both buyers and suppliers. Biased marketplaces claim that they are in a better position to make successful marketplaces since they are guaranteed to receive a larger volume of their owner's transactions to achieve liquidity. Also, they claim their marketplaces are better because of their industry-specific expertise. But, as observed in the case of marketplaces for airline tickets and automobile parts, there is a great deal of concern about the fairness of these biased marketplaces. Buyer or supplier owned marketplaces raise the possibility that the owners of such marketplaces could devise rules or use proprietary market information to gain unfair advantage. For example, the Federal Trade Commission investigated the automobile parts marketplace proposed by major automobile manufacturers about the possibility of a price cartel and other oligopoly-related issues (*Los Angeles Times* 2000). However, the owners of the biased marketplaces claim that they only wish to reduce their processing cost and derive profits from transaction fees.

Tuesday, December 18
8:30 a.m.–10:30 a.m.
Session T1.4
Explorers

“Seeking Knowledge in Electronic Knowledge Repositories: An Exploratory Study,” Atreyi Kankanhalli, Bernard C. Y. Tan, and Kwok-Kee Wei, National University of Singapore

Knowledge is a critical resource that sustains strategic advantage in highly competitive organizational environments. Many organizations are turning to knowledge management (KM) initiatives and technologies to leverage their knowledge resources. A common form of such technologies is the electronic knowledge repository (EKR). Although EKRs have been in use for some time, there has been little empirical evidence about factors that affect usage of EKRs. This exploratory study formulates and tests a theoretical model that explains seeking behavior in an EKR. The data was collected through a survey of 128 knowledge workers. Results show that technology-related factors and organization-related factors directly impact seeking behavior, while task factors play a moderating role. Implications for research and practice are discussed.

“An Integrative Framework for Knowledge Management Effectiveness,” Mohamed Khalifa, Rinky Lam, and Matthew Lee, City University of Hong Kong

This study identifies the main elements of knowledge management structures and examines their effects on knowledge management adequacy and subsequently on knowledge management effectiveness. A path model representing the antecedents of knowledge management structure adequacy and the consequence on knowledge management effectiveness is developed and tested empirically. The results indicate that knowledge management strategy, technology fit, leadership, and culture all significantly affect the adequacy of knowledge management structures and, subsequently, knowledge management effectiveness. Strategy had the strongest effect followed by technology fit and leadership. Surprisingly, culture had the weakest effect.

Tuesday, December 18
2:00 p.m.–3:30 p.m.
Session T2.3
University

“The Effects of Firm Characteristics on Investor Reaction to IT Investment Announcements,” Wonseok Oh, McGill University, and Joung W. Kim, Concordia University

This paper examines the effects of firm characteristics measured by price-to-book (PB) ratio, free cash flow (FCF), and variability of daily stock return (VDR) on investor reaction in the stock market to IT investment announcements. In contrast to previous studies, which focused exclusively on whether or not IT investment announcements led to an abnormal return in the market, this study investigates the extent to which firm characteristics influence the direction and magnitude of cumulative abnormal returns (CARs). Although these firm characteristics critically affect investor reaction to IT investment announcements, existing event studies in the IT literature pay scant attention to them. In spite of the same IT investment (say, developing an ERP system) announcement, the market reaction would vary due to the heterogeneity in financial situations under which the firm operates before the announcement.

Contrary to previous studies, the results suggest that IT investment announcements result in significant abnormal returns around the event announcement date when only the announcements made by investing firms were considered. We provide some empirical evidence that investments in IT can have a great impact on firm value. With regard to the firm characteristics in relation to CARs, PB ratio, and variability of daily stock returns significantly affect the investors’ reaction to IT investment announcements. Finally, this study shows IT investment decision makers the implications of drawing greater attention from investors when making IT investment announcements.

“Enterprise Resource Planning Systems and Firm Value: An Event Study Analysis,” C Ranganathan, University of Illinois at Chicago, and Imad Samarah, Southern Illinois University, Carbondale

There is considerable debate on the contributions of IT investments to firm value. Over a decade of research on the business value of information technology has produced mixed findings. This study focuses on the business value generated by a specific kind of IT systems, namely enterprise resource planning (ERP) systems. Studying the value created by ERP systems is appropriate and important for four reasons. First, ERP systems are being widely used by corporate community. Given the widespread adoption of ERP applications, it becomes essential to assess the contributions of these systems. Second, ERP systems typically encompass a wide spectrum of organizational functions. Given the wide functional coverage of ERP systems, they are likely to have a larger impact on firm performance than those information systems focusing on a specific function. Third, ERP systems require considerable investments in hardware, software, networking, and complementary organizational changes. Since ERP investments represent a critical IT expense for firms, it becomes important to assess the returns from ERP spending. Fourth, the reported failures of ERP systems by companies such as FoxMeyer Drugs, Applied Materials, Hershey, Mobil Europe, and Dow Chemicals have questioned the very viability of ERP systems. This is another compelling reason to ascertain the true contributions of ERP systems.

We use event study approach to assess the business value of ERP systems. Event study approach examines the response of stock markets in response to a key corporate event, or release of information about the event. Use of market-measures like stock prices precludes the need to use accounting-based measures that have been criticized for their inadequacies in capturing the real benefits of IT investments.

Tuesday, December 18
2:00 p.m.–3:30 p.m.
Session T2.4
Explorers

“Building Credit-Risk Evaluation Expert Systems Using Neural Network Rule Extraction and Decision Tables,” Bart Baesens, Catholic University of Leuven, Rudy Setiono, National University of Singapore, Christophe Mues, Stijn Viaene, and Jan Vanthienen, Catholic University of Leuven

The problem of credit-risk evaluation is a very challenging and important financial analysis problem. Recently, researchers have found that neural networks perform very well for this complex and unstructured problem when compared to more traditional statistical approaches. A major drawback associated with the use of neural networks for decision making is their lack of explanation capability. While they can achieve a high predictive accuracy rate, the reasoning behind how they reach their decisions is not readily available. In this paper, we present the results from analyzing two real life credit-risk evaluation data sets using neural network rule extraction techniques. Clarifying the neural network decisions by explanatory rules that capture the learned knowledge embedded in the networks can help the human experts in explaining why a particular decision is made. Furthermore, we also discuss how these rules can be visualized as a decision table in a compact and intuitive graphical format. Hence, extracting rules from trained neural networks and representing these rules as a decision table may offer a viable and valuable alternative for building credit-risk evaluation expert systems.

“Group Support Systems: The Effects of Mixing Support Systems on Information Pooling, Decision Time, and Decision Quality,” Joram Ngwenya, Athabasca University, and Robert Keim, Arizona State University

Most group support systems (GSS) laboratory studies compare face-to-face groups with groups assigned to either a synchronous or asynchronous decision support system. Research findings have been inconclusive. A laboratory study that compared face-to-face groups with mixed support mode groups was conducted to determine the effectiveness of selectively using information technology to support the group process and explain some of the variability in research findings. Groups that shared information using a Web-based asynchronous system and discussed the shared information in a face-to-face meeting environment, assembled more information and made higher quality decisions in less time than groups that shared and discussed information in a face-to-face meeting environment.

Tuesday, December 18
4:00 p.m.–5:30 p.m.
Session T3.1
Grand Ballroom

“Technology Fears: Barriers to the Adoption of Business-to-Business E-Commerce,” Rueylin Hsiao, National University of Singapore

This research presents a qualitative study of the difficulties encountered in the adoption of B2B (business-to-business) electronic commerce. It is concerned with an initiative that was intended to help SMEs (small- and medium-sized enterprises) in Singapore adopt an Internet-based electronic marketplace. Drawing on the theory of technological frames, the study traces the case over 13 months and analyzes the early adoption problem in three time periods. Consideration is given to why the technology provider failed to gain the commitment of adopters even though all of the favorable conditions were present. Inductively, the results indicate four key issues that explain the adoption difficulties: lack of familiarity (with B2B e-commerce), risk aversion, lack of trust (among trading partners), and incongruent cultural practice. The results suggest that unless the technology fears of adopters are acknowledged, the technologist’s well-intended programs may be met by adopters’ negative responses and may lead to the failure of IOS (inter-organizational systems) adoption. The proposed conceptual basis has implications for both research and practice as enterprises are rapidly venturing into the evolving forms of B2B e-commerce in Asia.

“Looking Without Seeing: Understanding Unsophisticated Consumers’ Success and Failure to Detect Internet Deception,” Stefano Grazioli and Alex Wang, University of Texas at Austin

Do unsophisticated consumers fall prey to Internet consumer frauds? Why? To answer these questions this paper integrates two streams of empirical research: the process-oriented theory of deception, and the broader deception, trust, and risk (DTR) model of Internet consumer behavior. A laboratory experiment tests several alternative hypotheses about the determinants of failure at detecting Internet deceptions. The findings suggest that Internet consumers process the clues that a site may be deceptive, but are unable to effectively evaluate and combine these clues, i.e., to draw correct conclusions from them. This is good news in the ongoing struggle against Internet fraud because it suggests that consumers lack the knowledge, not the capacity, to detect deceptions and that consumer education programs might be effective in helping consumers to protect themselves.

Tuesday, December 18
4:00 p.m.–5:30 p.m.
Session T3.3
University

“Web Design in E-Commerce: A Theory and Empirical Analysis,” Jaeki Song, Texas Tech University, and Fatemeh “Mariam” Zahedi, University of Wisconsin, Milwaukee

In the Internet market, websites are the main interface between online merchants and their customers. Effective website design plays a critical role in attracting and maintaining customers’ interest and in influencing their purchase behavior. Despite the singular significance of website design, little theoretical knowledge is available regarding how web-design elements impact the purchase behavior of online shoppers. By drawing on the theory of planned behavior and interpersonal influence, we develop and empirically test a conceptual model for the process by which web design elements could influence the purchase intention of online customers. This research provides a theoretical framework for the design decisions regarding websites in order to accommodate the salient features of online shopping.

“Visualization Support for Managing Information Overload in the Web Environment,” Ozgur Turketken, Temple University, and Ramesh Sharda, Oklahoma State University

This research focuses on the information overload problem on the Internet, and proposes a potential remedy to the overload encountered while searching the Web. We developed a system that makes use of clustering and visualization for browsing the results of a typical web search. We built two different (full and fisheye) zooming capabilities into our system, and empirically compared their success with each other as well as with the traditional non-visual presentation method through an experiment. We hypothesize that the visual systems will lead to higher success than the text-based system, and that the fisheye zooming system will lead to higher success than the full zoom system. The results of our exploratory test provide partial support for our hypotheses. This empirical support and the comments made by the participants in the experiments suggest that our design ideas are promising, and it is worthwhile to further investigate the use of clustering and visualization mechanisms for reducing information overload.

Wednesday, December 19
8:30a.m.– 10:00 a.m.
Session W1.2
Emerald

“Brand Awareness and Price Dispersion in Electronic Markets,” Pei-Yu (Sharon) Chen and Lorin M. Hitt, University of Pennsylvania

Price dispersion, the variance in price for identical products across retailers, is a persistent feature of Internet-based markets, even those mediated by shopping agents (shopbots). In this paper, we propose a model for explaining this price dispersion based on limited consumer awareness of competing retailers and brand sensitivity, the willingness to pay a premium to buy from a leading retailer. We show that

full awareness and the absence of brand sensitivity are necessary for markets to be characterized by Bertrand competition. When both of these are not simultaneously true (which is likely for most Internet markets), a number of other pricing strategies become optimal. Branded (high awareness) retailers tend to charge higher prices on average, but in some circumstances will randomize their prices such that they will be lower price than unbranded retailers on some products or some of the time. We also show that even if an unbranded retailer can invest to improve awareness, they have weak incentives to do so as this increases price competition. These observations are consistent with empirical research on pricing in Internet-based markets and may offer a more complete story of Internet price dispersion than some of the leading alternative explanations.

“Assessing Promotion Performance of Pure Online Players: A Two-Stage Model with Sample Selection,” Jianan Wu, Victor J. Cook, Jr., and Edward C. Strong, Tulane University

Firms may be motivated to establish an online presence to achieve many objectives, including image-building, awareness creation, sales lead generation, or direct sales. These ends cannot be fulfilled unless customers know of and visit the firm’s website. Firms with an established offline presence (mixed online players) can generate website traffic by word-of-mouth or may be reached by a consumer guessing a Web address (e.g., www.ford.com). However, pure online players must promote their websites to their targeted audience in various advertising vehicles in online and/or offline media (e.g., www.monster.com). According to *Advertising Age*, in 1999, the golden year for advertising-revenue-driven firms, dot-coms spent \$7.4 billion in various advertising vehicles to promote their websites.

Regardless of their line of business, pure online players in e-commerce follow essentially the same two-stage model of advertising strategy. In the first stage, firms attract customers to their online websites through advertising either in traditional media such as print, radio, and television or online media such as banners, search engines, e-mails, and affiliate programs (Hoffman and Novak 2000). In the second stage, when potential customers visit the websites, firms provide customers with carefully selected website contents and friendly navigation environments to create an environment conducive to the generation of desired outcomes. These outcomes can be sales transactions, sales leads, or other expressions of interest (e.g., registration, membership, etc). For instance, business-to-consumer (B2C) online retailer Amazon.com (www.amazon.com) heavily advertises in both online and offline media to build website traffic and expects customers make purchases at its websites once customers visit the sites. On the other hand, business-to-business (B2B) e-marketplace Ariba.com

(www.ariba.com) also heavily advertises in both online and offline media to build website traffic, but only expects visitors (both buyers and suppliers) to register at its website and join the network. In either situation, the more financially desirable outcome goes beyond merely inducing website visits (e.g., number of visits or number of hits). Going beyond traffic generation is critical to online players in the post-dot-com crash era.

Wednesday, December 19
8:30a.m.– 10:00 a.m.
Session W1.4
Explorers

“Client Versus Consultant Influence on Client Involvement in Computer System Selection Projects: A Two-Actor Model of the Theory of Planned Behavior,” Guy G. Gable, Queensland University of Technology, and Wynne W. Chin, University of Houston

The engagement of external IS professionals to supplement in-house resources is a widespread and growing practice. Limited prior research on consultant engagement suggests client involvement is a key factor of success. With the objective of better understanding the antecedents of client involvement in computer system selection consultancies, several variations on Ajzen and Madden’s theory of planned behavior (TPB) are tested. Appreciating the potential power of the consultant to facilitate or block client involvement, a major variation on perceived behavioral control is the inclusion of the consultant’s attitude toward involving the client. The resultant “two-actor” model is tested using partial least squares and survey data from firms that engaged external consultants to assist with computer system selection. Client attitude alone has relatively low explanatory power. The findings highlight the non-volitional nature of client involvement and the power of the consultant to block or facilitate that involvement.

“An Investigation of Volitional Control in Information Ethics,” Feng-Yang Kuo, National Sun Yat-Sen University, and Meng-Hsiang Hsu, National Kaoshiung First University of Science and Technology

The main motivation of this research is how the issue of volitional control might affect the application of the theory of planned behavior (TPB) to research decisions related to information ethics. Specifically, a TPB-based model provides the best fit to the sample collected for the present study. In this model, the contribution of both the attitude and perceived behavioral control to the intention is shown to fluctuate depending upon the degree of volitional control concerning the targeted behavior. As the behavior’s degree of volitional control lessens, the weighted influence of perceived behavioral control increases and that of the attitude decreases. Thus we confirm that degree of volitional control concerning an ethical act indeed plays a central role in applying the theory of planned behavior to information ethics research.

Wednesday, December 19
10:30 a.m.–12:00 noon
Session W2.3
University

“Perceived Risk and Escrow Adoption: An Economic Analysis in Online Consumer-to-Consumer Auction Markets,” Xiaoru Hu, Saint Louis University, Zhangxi Lin, Texas Tech University, Andrew B. Whinston, The University of Texas at Austin, and Han Zhang, Georgia Institute of Technology

Online escrow is an emerging trust service in consumer-to-consumer auction markets for protecting online traders from Internet fraud. Although the process of online escrow services (OES) ensures its effectiveness in blocking Internet frauds, its adoption rate is still surprisingly low relative to the increasing Internet fraud (Fraud.org 2001; Wolverson 2001). This paper intends to study the effect of traders’ perceived risk (Kahneman and Tversky 1979; Weber and Milliman 1999), defined as perceived risk rate (PRR), on the adoption of online escrow service. The research applies economic modeling and computer simulation approaches, following the literature and methodology in Hu et al.(2001).

“Assessing the Risk in E-Commerce,” Michael Ettredge and Vernon J. Richardson, University of Kansas

This study identifies the risks to e-commerce using a diverse sample of Internet and other firms by assessing the stock market reaction to hacker attacks. The research issue is, do expert business risk assessors perceive that Internet activity and e-commerce risks *per se* generate incremental risk of financial distress?

Wednesday, December 19
10:30 a.m.–12:00 noon
Session W2.5
Rex/Gold

“Information Technology Worker Turnover: An Integrative Model and Empirical Test,” Jason Bennett Thatcher and Lee P. Stepina, Florida State University

Although numerous studies have examined information technology (IT) worker turnover, researchers have not used utility approaches to explain the failure of firms to retain IT employees. Utility approaches are important because they explain how comparisons of the present job to alternatives or future opportunities influence behavior (Mobley et al. 1979). Hence, the purpose of this paper is to integrate utility estimates with existing research on IT worker turnover. To do so, we draw on expectancy and utility approaches that explain the cognitive processes leading to turnover. First, we define the dependent variables.

“Identifying the Enablers and Barriers of Information Technology Personnel Transition,” Karin M. Darais, University of Utah, Kay M. Nelson, Ohio State University, Sarah C. Rice, Ohio State University, and Mari Windsor Buche, University of Kansas

This paper reports the initial findings from a National Science Foundation supported study of IT personnel transition. We used the revealed causal mapping method (Narayanan and Fahey 1990) to elicit barriers, enablers, and examples of IT personnel transition. This paper reveals new knowledge and insight into factors that enable and prevent IT personnel transition as organizations evolve. The data is presented in the form of interpretation of revealed causal maps from 83 respondents. The results of this study are the first steps toward developing a theory of IT personnel transition that is distinct from general transition theories.

Theme Related Research Papers

Monday, December 17
8:30 a.m.–10:00 a.m.
Session MI.3
University

“Virtual Communities as Platforms for Product Development: An Interpretive Case Study of Customer Involvement in Online Game Development,” Helena Holmström, Umeå University

Information technology has changed not only the way in which we do business, but also the way in which many products and services are developed. As a structure for communication and interaction, information technology makes it possible to interweave actors such as vendors and customers in organizational processes. This paper explores how interaction in virtual communities can transform the process of product development. It does so on the basis of an interpretive case study conducted at the Swedish computer game developer Daydream Software AB. The focus of the paper is the process in which Daydream involved their customers in the development process of the online game Clusterball™. By using a virtual community as a means to reach the expertise of experienced gamers, Daydream was able to get valuable input in the product development process. In illustrating the way in which the virtual community contributed to the development process of Clusterball™, this study provides empirical support of information technology as a means to transform the process of product development.

“An Empirical Investigation of Virtual Communities and Trust,” Lai Lai Tung, Puay Leng Jennifer Tan, Pei Jin Tartrice Chia, and Yeow Leng Koh, Nanyang Technological University

In the midst of promising perceived benefits, the electronic commerce (EC) environment entails greater challenges than those posed by conventional trade. In addition to privacy and security concerns, researchers and businesses alike are increasingly aware that the lack of trust for online vendors experienced by consumers constitutes a serious barrier to the widespread adoption and successful proliferation of EC. The process of building trust between consumers and vendors in the online environment thus becomes of paramount importance.

This study seeks to examine how online vendors can develop trusting relationships with consumers through the establishment of virtual communities (VCs), fast becoming a notably successful online business model with relationship-enhancing and trust-building capabilities. By integrating multi-disciplinary theories, we propose and empirically validate a model, which proposes that increased levels of involvement in VCs enhances trust building among members and vendors, in turn encouraging greater EC participation in light of lower perceived risks and greater perceived benefits of online transactions. Results indicate that these relationships as proposed in the model are significant. There is empirical support that VCs constitute a successful business model of building trust, reducing perceived risks of purchase, improving customer relationships, reducing search costs, and retaining customers, leading us to conclude that increased involvement in VCs indeed has a positive effect on EC participation.

Monday, December 17
2:00 p.m.–3:30 p.m.
Session M2.2
Emerald

“Knowledge Integration as a Key Problem in an ERP Implementation,” Shan L. Pan, National University of Singapore, Sue Newell, Royal Holloway, University of London, Jimmy C. Huang, The University of Nottingham, and Alvin Wan Kok Cheung, National University of Singapore

While previous studies have focused mainly on the potential benefits and critical success factors associated with ERP implementation, very few have explored the important issues of impediments encountered, especially from a knowledge integration perspective. We have adopted a knowledge integration view that focuses not on the distribution and adoption of particular technological artifacts (ERP systems), but on the knowledge integration processes involved in implementation. The focus of this case study is to understand the nature, structure and process of knowledge integration that occurs during ERP implementation. The paper has identified the integration of knowledge as a key problem in ERP implementation. We discovered four reasons: (1) knowledge is embedded in complex organizational processes; (2) knowledge is embedded in legacy systems; (3) knowledge is embedded in externally based processes; and (4) knowledge is embedded in the ERP system. Based on our analysis, we further suggest that to overcome these impediments to knowledge integration requires the development of interpersonal relations (one-to-one based) and community relations (group-based).

“Demystifying the Rhetorical Closure of ERP Packages,” Marlei Pozzebon, École des Hautes Études Commerciales and McGill University

Understanding how information technology (IT) transforms individual, organizational, and societal ways of being is becoming increasingly complex and discourses on IT present opportunity and risk as two inseparable sides of the same phenomenon. Among the themes that extend throughout practitioner literature, and have emerged gradually in the academic literature as well, ERP projects are illustrative of the opportunities and risks IT presents. In this essay, I propose a discussion centered on the ERP phenomenon as an exemplary illustration of a major question: *why does rhetorical closure dominate some discourses about IT when, in fact, all technologies are social constructions, always open to change?* Dealing with ideas borrowed from structuralist and social constructivist streams of thinking, I identify occasions of ERP package negotiation and change at three levels—segment, organization and individual—demystifying the rhetorical closure that seems to dominate public debate.

Monday, December 17
4:00 p.m.–5:30 p.m.
Session M3.5
Rex/Gold

“Anomaly Reconciliation in Electronic Discussion Groups,” Peter H. Gray and Darren B. Meister, Queen’s University

According to public goods theory, there should be a deficiency of knowledge shared in electronic discussion groups (EDG) because self-interested individuals would be motivated to receive others’ knowledge but not to share their own. A number of motivators (such as generalized reciprocity, altruism, and normative obligations) have been proposed to explain why people actually do share their knowledge in such settings, and empirical research has confirmed that people do express these motivations for sharing their knowledge. However, the simple picture of individuals sharing knowledge that is known to be true limits our ability to understand what actually is going on in EDG. This paper develops a typology of interactions that may arise in electronic discussion groups and argues that several of these types of interactions confer benefits onto participants that may well motivate them to contribute their knowledge, even in settings where traditional motivators may be weak or absent. In particular, the process whereby anomalies are reconciled and the provision of knowledge to conduct remote-controlled experiments both stand to generate returns to those who contribute that are not available to those who “lurk.”

“Finding Information Just for You: Knowledge Reuse Using Collaborative Filtering Systems,” Il Im, New Jersey Institute of Technology, and Alexandar Hars, University of Southern California

In today’s networked business environment, with the endless increase in available information, relevant information is becoming more and more difficult to find. Collaborative filtering (CF) generates recommendations for users based on others’ evaluations. CF has great potential to improve information search and knowledge reuse. Previous studies have mostly focused on the improvement of CF algorithms. Little research has been done on the effect of users and types of product domains on the performance of CF systems. In this study, four factors—product domain, user characteristics, user’s search mode, and number of users—that are expected to affect the accuracy of CF systems were identified and investigated. The effects of the four factors were tested using data collected from two experiments in two different product domains: movies and research papers. It was shown that CF systems work better for knowledge-intensive domains than consumer product domains. The accuracy of CF systems is affected by users’ search mode and knowledge in a domain. This study demonstrates that CF systems have great potential in information search and customization. It also shows that a successful CF system needs to be designed to handle multiple modes of search, even within a domain and user group.

Tuesday, December 18
2:00 p.m.–3:30 p.m.
Session T2.2
Emerald

“Open Standards, Information Systems Strategy, and Adoption of Innovative Technology: The Case of the Recording Industry and the MP3 Standard,” Robert F. Easley and John G. Michel, University of Notre Dame

Examining the strategy underlying adoption of new information technologies has long been an interesting and challenging research issue. The emergence of the Internet, and the myriad new technologies that it makes possible, increases both the complexity and the importance of this issue. This research focuses on strategic response to threats posed by innovative new technologies adopted as open standards in electronic markets for information goods. Standards have always been important in the development of commercial markets, and are especially so in e-commerce, and many established industry leaders face a difficult challenge in responding appropriately to disruptive shifts in the marketplace, yet the link between these two phenomena has not been examined. This study begins to address the issue of whether the existence of open standards affects the strategic response of industry leaders, and in particular whether it pushes them to more rapidly embrace e-commerce opportunities.

We use the music recording industry as an example of an industry confronted by competitive pressure from the MP3 open standard for audio-video encoding, and its widespread adoption. The recording industry’s attempts to restrict the diffusion and acceptance of MP3 by legal means have slowed but not stopped illegal uses of the standard and have proved powerless against legal uses. Attempts to establish alternative standards have encountered difficulties simply in reaching agreement among rivals on what that competing standard would be, let alone in gaining acceptance among users.

“IS–Organization Coevolution: The Future of Information Systems,” Dubravka Cecez-Kecmanovic and Robert Kay, University of Western Australia

How information systems (IS) affect organizations and enable radical organizational change has been explored from a variety of perspectives. Through a case study in the investment banking industry, we will examine the changing nature of IS–organization relationships focusing on the crucial role that IS play and will continue to play as organizations strive for competitive advantage in a global economy. By expanding on the organizational emergence theoretical framework of Truex et al. (1999) and drawing on the technology evolution literature, we aim to gain a deeper understanding of the coevolution between an IS and an investment banking company.

Tuesday, December 18
4:00 p.m.–5:30 p.m.
Session T3.5
Rex/Gold

“From Doing to Thinking in Meteorological Forecasting: Changing Work Practice Paradigms with Knowledge Management,” Henry Linger and Frada Burstein, Monash University

This research aims to improve meteorological decision making through the application of knowledge management to the forecasting process. The aim of the research is not to solve the problems of forecasting but to provide appropriate support to enable forecasters to spend more time reflecting on the meteorological situation. To this end, we are engaged in change of the IT paradigm in this problem domain from the one

based on scientific normative models to intelligent support. This change of paradigm allows forecasters not only perform the task but also to consistently share knowledge and learn from their collective experience. The paper also presents a system that allows diverse technologies to be employed in providing decision support for meteorological forecasting.

“Paradise Delayed: The Impacts of IT on Performance and Workers,” Kevin Kobelsky, University of Southern California

Over the past decade, the relationship between IT and performance has been one of the most actively researched topics in MIS. Since Robert Solow quipped that “You can see the computer age everywhere but in the productivity statistics,” over 50 empirical studies have investigated IT’s impacts on productivity and performance. These studies have been motivated by the economic paradox implicit in Solow’s statement and the high risk of IT investments. While some firms have exploited IT to transform their operations, generating spectacular operational and strategic benefits (Kraemer et al. 1999), others have experienced equally spectacular failures (*Financial Times* 1998).

One moderating factor that has received significant attention is the direct labor practices implemented in conjunction with ITs. These practices can transform both workers’ daily lives and the benefits obtained from IT. Several studies have identified the emancipatory potential of IT and suggest that participatory, upskilling practices for managing workers are necessary to fully exploit IT (e.g., Adler 1992; Hirschhorn 1984; Walton 1985; Zammuto and O’Connor 1992; Zuboff, 1988). These arguments have been adopted by the most recent econometric studies (e.g., Bresnahan et al. 2000; Hitt and Brynjolfsson 1997). In searching for a relationship between aggregate measures of IT and performance that holds across types of IT and industries, they investigate direct labor practices and find that a combination of participatory practices and high IT use improves performance.

The purpose of this paper is to present and empirically test a typology of ITs and direct labor practices that provide insight into how each individually affects manufacturing performance, and how the two interact in a highly dynamic setting. This addresses the concern of Orlikowski and Iacono (2001) that “the field of IS...has not deeply engaged the IT artifact [and that it continues] to be under theorized,” and their call for theoretical investigation of “how people engage with various technological artifacts in the course of working, learning, communicating, shopping, or entertaining themselves” (pg. 132). The former is particularly true of research investigating IT’s performance impacts, where the vast majority of studies have treated the internal operation of the firm as a black box.

Wednesday, December 19
8:30 a.m.–10:00 a.m.
Session W1.5
Rex/Gold

“Booktowns on the Internet: Rural Enterprises Enter the Network Society,” Ingjerd Skogseid, Western Norway Research Institute, and Arild Jansen, Western Norway Research Institute and Finnmark College

This paper reports on a project aimed at revitalizing small and old rural villages through establishing a network of bookshops, the BookTownNet. The project combined a research framework based on theories from information system research and regional economics in analyzing the development and

diffusion of information and communication technology (ICT) to small, rural enterprises through that network. Our findings indicate that use of the Internet both locally and between the booktowns has strengthened the communication and collaboration between them, thus creating a better basis for the small bookshops to be competitive in the information society. Further, we have found that differences in local innovation systems to some extent have influenced the diffusion processes. Our data also show that the booktown network has been able to compensate for the lack of support in the regional innovation system, which makes the importance of the ICT-based virtual network spanning geographically distributed regions evident. This indicates that the booktown infrastructure and support system has been the most important factor in the bookshops’ ability to implement and use the new technical solutions.

“On the Sustainability of Rural Information Systems: An Analysis of Preliminary Experimental Evidence,” Shivaraj Kanungo, George Washington University

The use of information technology in rural settings is receiving increasing attention because of the immense potential it brings for improving the quality of life and reducing the digital divide. However, high costs coupled with infrastructure and context-related factors tend to dilute the advantages that are often taken as a set of givens. In this paper, we present a case study of a pioneering experience of IT use in a set of villages in southern India. The project was conceptualized and implemented by the M. S. Swaminathan Research Foundation (MSSRF) to assess the impact of modern information and communication technologies on sustainable rural development in the Pondicherry region of India. The essence of the challenge in this project lay in “reaching the unreached” by attempting to deliver the benefits of new technologies to the economically and socially disadvantaged sections of the rural population. This was conceptualized as a prerequisite for promoting a new paradigm of rural development based on concurrent and integrated attention to the imperatives of ecology, economics, employment, and equity. The system is called the knowledge system for sustainable food security. The long-term experiment is in progress and results presented are intermediate yet useful. Results of the study indicate that information technology when used in concert with an array of initiatives does indeed lead to manifest benefits. Moreover, many of the issues that are relevant to IT use in the corporate world are applicable—but need a different treatment. In essence this paper is an invitation to expand the horizons of mainstream IS research to include rural settings.

Wednesday, December 19
10:30 a.m.–12:00 noon
Session W2.2
Emerald

“Dot-Com Deals: An Empirical Investigation of Value Creation in Internet Related Acquisitions,” C Ranganathan, University of Illinois at Chicago, and Peter Dadalt, Georgia State University

Several traditional brick and mortar firms as well as pure Internet firms are increasingly using acquisitions as a key mechanism for their online business growth. Although the number of internet-related acquisitions have increased in the last few years, there is little understanding of this phenomenon.

This study addresses this gap by examining acquisitions involving traditional brick and mortar firms as well as Internet firms that are primarily aimed at improving online business activities. We specifically study the effectiveness of internet-related acquisitions by examining the value created by these acquisitions.

Studying the value created by web-related acquisitions is important from at least two perspectives. First, acquisitions have become a popular strategy for corporate growth for firms engaged in e-commerce initiatives. Surprisingly, there is little empirical research examining the viability of acquisitions as a mode of corporate growth. A second reason for studying the linkages between acquisitions and firm value comes from the growing literature on the resource-based theory of firm. According to this view, acquisitions lead to redeployment of resources across the firm, leading to more productive uses of resources and capabilities of the firm. Firm-specific assets and capabilities

residing in one organization are merged and combined with those in another organization in an effort to improve the overall productivity of combined resources. This is all the more important in the context of firms engaged in e-commerce initiatives as they are under pressure to gain resources and capabilities before their competitors. For traditional brick and mortar firms as well as Internet firms trying to establish an online presence, acquisitions offer an opportunity to gain quicker access to resources and technological expertise that would accelerate their plans for online expansion. For Internet firms facing intense competition and resource constraints, acquisitions also provide a viable exit strategy, simultaneously satisfying the wealth maximizing objectives of their entrepreneurs. Acquisitions also help in meeting the critical resource requirements faced by several Internet firms that are in the early stages of business development. Evaluating the value created through acquisitions will throw light on the resource synergies that are expected to be generated through the acquisitions.

“Sense of Virtual Community: Determinants and the Moderating Role of the Virtual Community Origin,” Joon Koh and Young-Gul Kim, Korea Advanced Institute of Science and Technology

With the rapidly broadening coverage of the Internet, the *virtual community* has become an interesting topic for IT professionals and management researchers. Despite the explosive growth of virtual communities on the Internet, limited empirical research has been conducted to study the issues related to the psychological states of the virtual community members.

The objective of this study is to enhance the existing knowledge about virtual communities by introducing a new construct, sense of virtual community, and empirically validating the effects of virtual community characteristics on the sense of virtual community. This study intends to answer the following questions:

- What is the *sense of virtual community*? Is there any unique property differentiating it from a traditional community?
- What are the key factors affecting the sense of virtual community at the individual level?
- Does the origin of a virtual community moderate the relationship between virtual community characteristics and sense of virtual community?

Research in Progress Papers

Monday, December 17
 8:30 a.m.–10:00 a.m.
 Session M1.4
 Explorers

“What Drives Waves in Information Systems? The Organizing Vision Perspective,” Ping Wang, University of California, Los Angeles

Waves of fashionable ideas shape the practice and research of information systems (IS). What forces drive idea waves in IS? This research takes the first step to empirically study IS idea waves in inter-organizational communities through the lens of organizing visions. Introduced by Swanson and Ramiller (1997), an organizing vision is a focal community idea for applying information technologies in

organizations. Each organizing vision is produced and sustained through a discourse whose popularity often runs a wave-like lifecycle. By studying the discourse promoting enterprise resource planning (ERP), I examine the influence of four forces on the upswing phase of an organizing vision discourse wave: (1) a business problematic highlighted by discourse, (2) the early market for an IS innovation, (3) core technologies, and (4) the collapse of old organizing visions in a problem domain. A better understanding of the relationship between key forces and organizing vision development will help both practitioners and researchers monitor and relate to the exciting waves in our field.

“The Quad-Core Model of Information Systems Innovation: Identifying and Confirming the Role of Novel Technological Frames as a Supra-Innovation Core—The Case of Internet Induced IT Innovation,” Gregory Rose, California State University, Chico, and Kalle Lyytinen, Case Western Reserve University

The paper extends Swanson’s three core model of IT innovation in order to account for observed radical changes in systems development and IS service due to Internet induced innovations. A new supra-core called the base IT innovation core is suggested that accounts for IS innovations in the new world of development which cannot be categorized in the existing tri-core model. The impact and role of this core is supported by findings from a field study, which examined eight leading edge software firms and changes in their development practices. Concurrently, the study confirms the 20 propositions put forward in Lyytinen et al. (1998) that predicted the Internet and its associated tools would represent a new technological frame that would radically change systems development and services.

“An Empirical Study of Electronic Commerce Intrapreneurship Within the IT Units of Large Organizations,” Jasbir S. Dhaliwal, Norwegian School of Management

The rapid growth of the electronic commerce (EC) sector saw the traditional business models of many large organizations being challenged by internet technology-based dot.com start-ups. One reason that can be identified for this is the inability of the information technology (IT) units of these large organizations to respond in a timely manner to the technological innovation and entrepreneurial challenge of electronic commerce. There is therefore a need for chief information officers (CIOs) and information systems managers in large organizations to pay greater attention to nurturing electronic commerce “intrapreneurship” (also known as corporate entrepreneurship) within their IT units. This study develops and empirically validates a theoretical model for electronic commerce intrapreneurship within the IT units of large organizations through an empirical survey of chief information officers. The survey focuses on measuring the level of EC intrapreneurship within the IT unit as represented by its four theoretical components: new business venturing, innovativeness, self-renewal and pro-activeness. The study also investigates other constructs representing the environmental and organizational antecedents of IT unit intrapreneurship, as well as its effects on both electronic commerce assimilation and organizational performance. The results clarify the role that the IT units of large corporations have played in the organizational response to the business and technical innovation challenge of electronic commerce.

Monday, December 17 8:30 a.m.–10:00 a.m. Session M1.6 Creole

“Metaphor Analysis for Improved Information Systems Design,” Bec Neill, University of South Australia

This paper presents the initial findings of an interpretive research study into improved methods of information systems design through a focus on interaction between information systems practitioners and system stakeholders. It argues that root metaphors and mental models of participants in the systems design act can be identified through metaphor and language analysis. By making these potential models and root

metaphors explicit in future interactions both IS practitioners and stakeholders will gain better understandings of their organization’s information systems requirements. Two examples of identified root metaphors and the subsequent change in understanding that occurred are presented in support of the argument.

“Determinants of Inspection Effectiveness in Software Development: An Empirical Analysis,” Sunil Mithas and Ramanath Subramanyam, University of Michigan

Software inspections are formal evaluations of the intermediate work products (artifacts) of the development process. These artifacts are examined to ensure that a high quality work-product is delivered to the testers and ultimately to the end-users of the software product. The crucial role of inspections in determining quality of the software makes it important to assess the effectiveness of inspections.

While prior research has identified several factors that influence effectiveness of software inspections, our understanding of the influence of team composition (personnel mix and team size) and the type of the inspected artifact (project plan, requirements specification, design document, code) on effectiveness of inspections is minimal. We develop hypotheses for the factors affecting inspection effectiveness and attempt to validate these hypotheses in a field setting. Our preliminary results show that, during early stages of software development, an increase in the proportion of experienced reviewers (with greater domain experience) is associated with both an increase in the total number of defects discovered in the inspection process as well as an increase in the likelihood of detecting high severity defects. However, during later stages, we find that greater programming experience is associated with both an increase in the total number of defects discovered in the inspection process as well as an increase in the likelihood of detecting high severity defects. These results have important implications for both practice and research.

“The Complexity of Unified Modeling Language: A GOMS Analysis,” Keng Siau and Yuhong Tian, University of Nebraska–Lincoln

Although the unified modeling language (UML) is becoming the de facto industry standard for object-oriented system development, it is not short of critics. Both researchers and practitioners have agreed that much work needs to be done to enhance UML. This research evaluates the nine UML diagrams using GOMS. GOMS, beginning as a theoretical model in HCI, describes the procedures required for accomplishing a general set of tasks by decomposing the tasks into four elements: Goals, Operators, Methods, and Selection rules. We use a special type of GOMS, NGOMSL, for analyzing UML. This research attempts to find ways to enhance the ease of use of UML diagrams and contribute to the evolution of UML.

Monday, December 17
2:00 p.m.–3:30 p.m.
Session M2.1
Grand Ballroom

“Shopping as Experience and Web Site as a Social Actor: Web Interface Design and Para-Social Presence,” Nanda Kumar and Izak Benbasat, University of British Columbia

We make a case for treating a Web site as a social actor and propose para-social presence as a central construct to measure the structure of the relationship that evolves between a web site and its visitors. Para-social presence (PSP) captures the underlying psychological cues that measure the level and extent of interaction among participating social entities (in an online shopping context in this study). We also argue that one medium could possess different levels of PSP, depending on how it is configured and used. The first phase of our research conceptualizes and develops an instrument to measure PSP. The second phase investigates the impact of new technologies and associated web interface design decisions on perceived communication characteristics of a medium, PSP and subsequent user evaluations of the web site. Specifically, this research studies the impact of personalization technologies and support for virtual communities.

“The Impact of Streaming on Advertising Websites,” Carol Saunders, University of Central Florida, Steven D. Anderson, James Madison University, and Sue Conger, University of Dallas

The World Wide Web is revolutionizing the way companies conduct business. This research explores the use of a company’s web site as an advertising tool. In particular, we are studying the extent to which streaming technology can be used to satisfy the expectations of potential consumers who come to the web site either to browse or to gain information about an automobile dealership. The subjects are 53 potential dealership customers and 65 MBAs. Using a combination of focus groups and questionnaire surveys in a laboratory setting, we tested a variation of uses and gratifications theory to understand the impact of using streaming technology on a company’s homepage as an advertising tool. While the research is incomplete for this proposal, the data are all collected and are being analyzed. The expected date of project completion of the first manuscript is November, 2001.

“Hybrid Genetic Algorithms for Scheduling Advertisements on a Web Page,” Subodha Kumar, University of Washington, Varghese S. Jacob and Chelliah Sriskandarajah, University of Texas at Dallas

Many web sites provide free services to users. The revenue for these sites is dependent on the advertisements they place on their web pages. For these firms, therefore, the optimal placing of advertisements on their web pages becomes a critical issue. In a given planning horizon, we assume that the number of advertisements available for placement on a web site is greater than the available space. The site, therefore, needs to determine the optimal allocation of advertisement space. We develop a hybrid genetic algorithm (GA) that uses problem specific knowledge during the evolution of solutions to solve this problem. Our initial computational results show that the hybrid GA performs exceptionally well in the sense that it provides optimal or near optimal solutions for a variety of problems.

Monday, December 17
2:00 p.m.–3:30 p.m.
Session M2.5
Rex/Gold

“The Role of Personal Innovativeness and Self-Efficacy in Information Technology Acceptance: An Extension of TAM with Notions of Risk,” Rajiv Kishore, The State University of New York at Buffalo, Jungwoo Lee, Yonsei University, and Ephraim R. McLean, Georgia State University

Several research efforts over the last decade have attempted to augment the basic technology acceptance model (TAM) by identifying and testing determinants of the two key predictor beliefs of the model—perceived usefulness and perceived ease of use—and by identifying other extraneous variables that moderate various model relationships. This research is an attempt in the same direction. It addresses some key gaps and inconsistent findings in the TAM literature to further contribute to the refinement of TAM. In this endeavor, this research draws from social cognitive theory (SCT), computer self-efficacy (CSE), technology acceptance model (TAM), and the risk management literature to develop an extended TAM that includes new relationships between the model constructs and personal innovativeness and general and specific computer self-efficacy. The research will be conducted as a survey in the context of the personal digital assistant (PDA) technology.

“IT-Induced Adaptation and Individual Performance: A Coping Acts Model,” Anne Beaudry, Concordia University, and Alan Pinsonneault, McGill University

Recent IS literature stresses the importance of IT-related adaptation behaviors and points out our lack of understanding of them. Drawing on coping theory in individual psychology, this paper attempts to shed new light on this phenomenon. Our model suggests that user adaptation behaviors can be conceptualized as coping acts, which are mainly determined by an initial assessment a user makes of a new IT. Coping is hypothesized to be positively associated with levels of integration of IT and with user task performance. The main premise of this study is that higher levels of integration between the user, IT, and the working system will be related to higher individual performance at work. A survey of 262 account managers was conducted in two large Canadian banks to test our conceptual model.

“The Social Effect of Self Identity and Social Identity on Technology Acceptance,” Younghwa Lee, University of Colorado, Boulder, Jintae Lee, University of Colorado, Boulder, and Zoonky Lee, University of Nebraska at Lincoln

While the effect of social factors on information technology (IT) acceptance behavior has been recognized as an important issue, only a few studies examined this topic in the context of the technology acceptance model. In this study, we incorporate two social factors, self identity and social identity, in the model and address their impacts on IT acceptance decision. An empirical study investigating the impact these social factors have on the acceptance of a web-based class support system is in progress. Upon completion of this study, we expect to provide further understanding on the role of social influence on individual technology acceptance decisions.

Monday, December 17
4:00 p.m.–5:30 p.m.
Session M3.2
Emerald

“Exploring the Role of Information Systems Resources in Dynamic Environments,” Michael Wade, University of Western Ontario

This study seeks to understand the role of information systems (IS) resources in dynamic environments. To date, 30 interviews have been conducted with senior managers in charge of online retail commerce operations. The results appear to challenge the research literature both in terms of the composition of IS resources and the role that they play in sustained competitiveness. This paper describes preliminary results

from the first phase of a multi-phase study on how IS resources affect the firm.

“Surging Volatility: An Internet Effect?,” Deepak Agrawal, New York University, Sreedhar T. Bharath, New York University, and Siva Viswanathan, University of Maryland, College Park

This paper analyzes the impact of firms’ adoption of online retailing on their stock price volatility. Given the nascency of the Web, firms moving online are faced with an increased uncertainty in their product markets in addition to fixed setup costs. A simple model illustrates how increased uncertainty in the product markets increases the volatility of the firm’s profits and its stock price. Results consistent with the model are confirmed by an empirical analysis of the volatility of stock prices of traditional firms adopting online-retailing. Both the traditional event study methodology as well as the structural break analysis reveal a distinct surge in volatility of firms’ stock prices around the date of announcement of their online-retailing operations, an effect that is absent in a matched sample of traditional firms. More interestingly, the volatility-surge is absent for the sample of firms that moved online prior to June 1998. Ongoing research examines possible drivers and the implications of these phenomena for investors, firms, and regulatory authorities.

“The Impact of Fluctuating Financial Markets on the Signaling Effect of E-Commerce Announcements,” Michael J. Dardan and Antonis C. Stylianou, University of North Carolina at Charlotte

This paper presents an event study of business signaling through electronic commerce announcements during fluctuating financial markets. This topic is of unique and substantial importance. If there are abnormal returns on an eCommerce initiative, and these returns are different during bull and bear markets, then we know that the markets value these investments, but the value is subjective rather than inherent to the investment. If the value is subjective, then gains to the investor and corporation itself will vary in sympathy with market movement. This paper researches these new aspects of returns due to eCommerce announcements and compares them with other recent studies. We use event study methodology and assess the cumulative abnormal returns from eCommerce initiatives announced by firms in the S&P 100 Index between January 1999 and December 2000.

Tuesday, December 18
8:30 a.m.–10:30 a.m.
Session T1.3
University

“An Exploratory Study of Ideology and Trust in Open Source Development Groups,” Katherine Stewart and Sanjay Gosain, University of Maryland at College Park

Open source (OS) software development has been the subject of heightened interest among organizational scholars because of the novel social coordination practices that signal a departure from traditional proprietary software development. We propose that trust among group members in open source development groups (OSDGs) plays a key role in facilitating their success. Trust is important in this

context because of the risk of opportunistic behavior by other members who volunteers may not have met and may never expect to meet, as well as a lack of explicit market contracts or common organizational affiliation. The open source community is differentiated by a coherent ideology that emphasizes a distinct set of interrelated norms, beliefs, and values. These serve to create incentives for open source practices that eschew conventional transactional norms in favor of a gift culture and a focus on reputations. In this study, we primarily examine the role of the shared ideology in enabling the development of affective and cognitive trust in OSDGs. We further examine how this trust leads to desired outcomes—group efficacy and effectiveness. The study is based on exploratory interviews, examination of

archival records and a preliminary survey to understand the specific conditions of open source efforts on which this work-in-progress report is based. This is being followed-up by empirical testing of our research model through a survey of a broad variety of OSDGs. This study would contribute to a clarification of the role of trust in enabling software groups to work effectively and help to understand the bases of trust in ideology-permeated groups.

“Shared Mental Models and Coordination in Large-Scale, Distributed Software Development,” J. Alberto Espinosa, Robert E. Kraut, Javier F. Lerch, and Sandra A. Slaughter, Carnegie Mellon University, and James D. Herbsleb and Audris Mockus, Lucent Technologies

Despite substantial improvements in the last few years in software engineering and collaboration tools, coordination in large-scale software development continues to be problematic. This coordination is important because of the complex interdependencies that exist among software tasks, in that small productivity improvements can lead to substantial cost-savings and competitiveness. Traditional theories suggest that collaborators coordinate by organizing tasks and communicating, but recent research suggests that they also coordinate via implicit mechanisms like shared mental models. However, most of the shared mental model research literature focuses on real-time tasks, and there is very little empirical evidence on how these models affect coordination in more asynchronous and geographically distributed collaboration. Furthermore, none of this evidence is based on large-scale software development organizations. The present research is a field study at a large telecommunications company. It employs qualitative, quantitative, and survey research methods to investigate the effect of shared mental models on coordination in large-scale software development, and to better understand how geographic distance affects coordination.

“Opening the Code: How Open Is Optimal?,” Geoffrey Parker, Tulane University, and Marshall Van Alstyne, University of Michigan

Recent developments have challenged one prevailing interpretation of the idea that proprietary systems, enshrined in copyright, create the greatest value. The challenge appears at one level among economic strategists who assert that the greatest value in information goods is not created by the strongest and most restrictive intellectual property protection and in another form by the proponents of Open Source Software who argue for value created by peer review and openly modifiable, shared code. We articulate a balance of incentives and openness to promote both the creation of new products and the network externality benefits from open access. We consider the welfare of consumers and producers to show that environmental parameters such as the size of the market, the network effects, and the locus of innovation can affect the optimal choice of time to release and degree of openness.

Tuesday, December 18 8:30 a.m.–10:30 a.m. Session T1.5 Rex/Gold
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“Frame-of-Reference Effects on the Accuracy of Self-Assessed User Competence,” Jane I. Gravill, The University of Western Ontario, Deborah R. Compeau, The University of Western Ontario, and Barbara L. Marcolin, The University of Calgary

It is important for individuals to accurately assess their competence in the information systems they use as individuals are increasingly required to self-manage their IT skills, and self-assessment is critical to self-management. This study conceptualizes the accuracy of self-assessment as the overlap between self-assessed and actual user competence. We argue that a wider frame-of-reference—that is, greater experience in and understanding of the domains of IT—will increase the overlap between self-assessed and actual user competence. This study provides information to assist organizations in identifying over- or under-estimation of user competence, which can lead to inefficiencies, and has found initial support for the notion that exposing employees to a wider range of information technology experiences will reap benefits through more accurate self-assessments and increased effectiveness in software usage. This effectiveness will be achieved by improving individuals’ assessment accuracy and by working to solve the “But, I thought I knew that” problem.

“Understanding Successive Searches Across Multiple Sessions Over the Web,” Shin-Jeng Lin, LeMoyne College

This study intends to enhance the understanding of successive searches over multiple sessions by characterizing successive searches with a conceptual model, Multiple Information Seeking Episodes (MISE), validating MISE and supporting successive searches with a prototyped information system, PERsonalized and Successive Information Seeking Toolkit (PERSIST), whose requirements are derived from MISE. The study has both theoretical and practical values as it increases the understanding of human information behavior and develops useful tools to support the concerned behavior.

“A Model for and the Effects of Information Request Ambiguity on End-User Query Performance,” Micheal Axelsen, University of Queensland, A. Faye Borthick, Georgia State University, and Paul L. Bowen, University of Queensland

The increasing reliance of organizations on information technology, which prompts everyone to expect faster responses to information needs, is propelling end users to satisfy many information requests they receive by querying databases themselves. This paper develops and tests a model for the effects of information request ambiguity on end-user query performance where performance is measured by the number of errors in user-developed queries, the time taken to complete queries, and end users’ confidence in the correctness of their queries. Based on preliminary analysis of participants’ performance, end-user query performance was significantly degraded by the presence of ambiguity in information requests. The model identifies seven ambiguities: lexical, syntactical, inflective, pragmatic, extraneous, emphatic, and suggestive. Organizations whose participants rely on e-mail to communicate information requests or whose work teams experience rapid personnel turnover may be especially vulnerable to the debilitating effects of ambiguities on information requests.

Tuesday, December 18
2:00 p.m.–3:30 p.m.
Session T2.5
Rex/Gold

“The Relationship between Demand, Product, and Information Sharing Strategies,” Gek Woo Tan and Bei Wang, National University of Singapore

The hallmarks of today’s business environment are volatile demand, shorter product life cycles, and increasing global competition. Advances in information technology allow more and more information to be shared across entities so that the activities can be better coordinated throughout the entire supply chain. For different products and under different demand patterns, sharing information may have quite different

results. Our research aims to study the relationship between product nature, demand pattern, and information sharing strategy. As product nature changes at different stages in the production cycle, and over time, demand pattern changes accordingly, thus requiring changes in information sharing strategies employed. We use the multi-agent simulation system to evaluate the effectiveness of the information sharing strategies under different product natures and demand patterns.

“Organizational Knowledge Sharing in ERP Implementation: A Multiple Case Study Analysis,” Mary C. Jones, University of North Texas, and R. Leon Price, University of Oklahoma

This study examines how firms are able to effectively share knowledge across diverse functions and perspectives during enterprise resource planning (ERP) systems implementation. The primary objective of the study is to provide a theoretically grounded assessment of factors that enable firms to articulate and integrate the diversity of knowledge required for effective use of ERP. This includes factors that impact how existing knowledge is shared and how new knowledge is absorbed and transferred to become part of the firm’s core knowledge competency.

“Sense-Making of Empirical Knowledge Management Through Frames of Reference,” David Yuh Foong Law and Joo Eng Lee-Partridge, National University of Singapore

This research aims to make sense of empirical perceptions of multidimensional complex KM (knowledge management) issues, through the construction of social cognitive structures such as frames of references. The objective of this study is to derive a set of empirically induced KM frames which may serve three purposes: to establish a set of frameworks for future research in perception congruency or misalignment of KM-related issues; to offer empirical insights to existing KM-related theoretical research models; and to bridge research gaps and inter-link cross-functional, cross-disciplinary perspectives. Our research fits broadly into four phases, with current progression halfway through the second phase. Focus group research, in the context of grounded theory approach, will be used as the main research strategy to induce and refine KM frames.

Tuesday, December 18
4:00 p.m.–5:30 p.m.
Session T3.4
Explorers

“Value-Focused Assessment of Information System Security in Organizations,” Gurpreet Dhillon and Gholamreza Torkzadeh, University of Nevada, Las Vegas

This paper presents findings of an empirical study of information system (IS) security values adhered to by user managers in a cross section of firms in various industries. Using Keeney’s (1999) *value-focused thinking* approach, 73 managers were interviewed to identify a set of fundamental and means values that are essential in protecting the information resources of a firm. The findings are used to develop a theoretical

framework for conceptualizing individual and organizational issues in managing IS security. The proposed framework will be an appropriate underpinning for the development of an instrument for measuring IS security concerns.

“The Threat-Rigidity Model of Professional Obsolescence and Its Impact on Occupational Mobility Behaviors of IT Professionals,” Damien Joseph and Soon Ang, Nanyang Technological University

This study examines how IT professionals cope with the threat of professional obsolescence. We adopt the threat rigidity model to explain the relationship between threat of professional obsolescence and occupational mobility. In addition, we argue that professional commitment moderates the relationship between the consequent cognitive coping mechanisms of threat and occupational mobility. We collected data from 192 IT professionals using a survey methodology for data collection. Initial results of the field study provide strong support for the threat-rigidity hypotheses with professional commitment moderating the relationship between the cognitive coping mechanisms and occupational mobility.

“An Assessment of Information Technology Outsourcing Risk,” Bouchaïb Bahli, Concordia University, and Suzanne Rivard, HEC–Montreal

This paper proposes a research model for defining and measuring information technology outsourcing risks. The model is based on transaction cost and agency theory as well as on IT outsourcing literature. Risk is defined here as a set of triplets composed of scenarios, their likelihood and consequences. It draws on the behavioral perspective, which associates risk with the magnitude of a negative consequence of a decision. A survey is being conducted to test the model.

Wednesday, December 19 8:30 a.m.–10:00 a.m. Session W1.3 University
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“Technology Adaptation: The Case of Large-Scale Information Systems,” Bongsug Chae, Texas A&M University

The deployment of large-scale information systems is a major trend in the corporate world today due to a number of driving forces such as the Internet, globalization, and the use of IT for distributed knowledge. However, the adaptation process of such new technologies is not yet well understood. With its theoretical basis on structuration theory and actor network theory (ANT), this study employs a case study

methodology with organizations implementing ERP systems and investigates how the technological adaptation of large-scale IS, specifically ERP systems, differs from that of traditional (standalone) IS. Our findings are expected to have both theoretical and practical implications for the design as well as implementation of large-scale IS.

“The Mechanics of Internet Diffusion in India: Lessons for Developing Countries,” Amitava Dutta, George Mason University, and Rahul Roy, University of Northern Iowa

The issue of Internet diffusion in an economy over time is of interest to several stakeholders, including policy makers, regulators, investors, and businesses. It is particularly important in developing countries, which see the Internet as a major driver in achieving social and developmental goals. Concerns about the so-called “digital divide” also lend some urgency to the issue. However, Internet diffusion is driven by social as well as technical factors, and developing countries have distinctive characteristics that make their adoption process different from that in industrialized countries. This paper develops a causal model of Internet diffusion in developing countries, using the systems dynamics methodology. The modeling approach allows us to combine standard contagion mechanisms inherent in diffusion, such as innovators and imitators, with the distinctive regulatory, economic, and social circumstances in developing countries. The structure of the model is first justified using India as a specific developing country context. Next, the simulated values generated by this structural model are compared against actual values for Internet adoption in India for the period 1996–2001, and the fit is found to be reasonably good. These initial findings support model validity. Using a technique called dominant loop analysis the model suggests that, among all the different drivers, poor telecommunications infrastructure and high telephone charges are the major barriers to diffusion. In conclusion, we discuss the issues to be addressed in the remainder of this ongoing work.

“Facilitators and Inhibitors for Deploying Business-to-Business E-Commerce Applications: A Multi-Method, Cross-Cultural Study,” C Ranganathan, University of Illinois at Chicago, Thomas S. H. Teo, National University of Singapore, Jasbir S. Dhaliwal, Norwegian School of Management, James S. K. Ang, National University of Singapore, and Micki Hyde, Belmont University

Firms are increasingly using the Web to conduct inter-organizational business transactions. This type of effort, popularly known as “business-to-business” (B2B) electronic commerce (e-commerce) has caught the attention of researchers and practitioners. Although there is a widespread adoption of B2B applications, there is very little empirical research that has attempted to investigate this phenomenon. There is no clear idea on how firms are managing the B2B initiatives and what problems they face in deploying B2B e-commerce systems. This paper describes an on-going research project that examines the facilitators and inhibitors for deploying B2B applications. The project employs both qualitative and quantitative approaches and is being conducted in the United States, Singapore, and Norway. The project is being conducted in two phases. In the first phase, an extensive literature review and iterative interviews with senior IT executives yielded

a list of 46 facilitators/inhibitors. In the second phase, a survey instrument was developed based on the initial list. This survey form was pilot tested and sent to senior IT executives in the three countries. The preliminary analysis of data reveals nine categories of factors as affecting the deployment of B2B e-commerce applications in organizations. The current status of the project, preliminary findings from a partial data set, and the study's potential contributions are discussed.

Wednesday, December 19
10:30 a.m.–12:00 noon
Session W2.4
Explorers

“Satisfaction with Internet-Based Services: A Longitudinal Study,” Mohamed Khalifa and Vanessa Liu, City University of Hong Kong

Satisfaction has been studied extensively in information systems. Most studies, however, focused on specific system characteristics, providing very little understanding of the process of satisfaction formation. Furthermore, very little is known about the evolution of satisfaction over time, as most previous studies were cross-sectional, implicitly assuming satisfaction to be static. In this research, we address

these problems. We develop, operationalize, and empirically test a model that provides a better understanding of customer satisfaction formation in the context of Internet-based services. We also predict/explain the evolution of satisfaction over time from the stage of adoption of Internet-based services to the post-usage stage.

“User Acceptance of a Web-Based Information System in a Non-Voluntary Context,” Luis L. Martins and Franz Willi Kellermanns, University of Connecticut

In this paper, we use a combination of the technology acceptance model (TAM) and the literature on change management to develop and test a model predicting user acceptance of a new Web-based information system, the use of which is non-voluntary. Arguing that a non-voluntary system which transitions traditional processes to the Web constitutes an instance of a process change, we examine the role played by various change-enabling factors as well as change-motivating factors in user acceptance of the system. We find that the change enablers predict perceived ease of use, whereas the change motivators predict perceived usefulness of the system. Perceived usefulness and ease of use predict attitude toward the system, which in turn predicts behavioral intention to use the system, which predicts use of the system.

“Customer Loyalty to an Online Store: The Meaning of Online Service Quality,” David Gefen and Pat Devine, Drexel University

Service quality is crucial in retaining customers in both online and traditional stores. However, measuring online service quality is hampered because of the unique aspects of online service quality that are not part of the widely used service quality instrument, SERVQUAL. Identifying these dimensions and assessing their relative importance is the objective of this study.

New service dimensions are identified: lack of annoying banners, beneficial search engines, site security, quick response time, and customer recognition. Data dealing with Barnes & Noble.com (www.bn.com) indeed show that all five dimensions are correlated with increased customer loyalty. The data also show that service quality overrides the effects of perceived risk, cheaper prices, and cost to switch a vendor. Data dealing with the traditional Barnes & Noble bookshops and including the new dimension of customer recognition shows that the these new dimensions do not contribute beyond SERVQUAL.

These preliminary results suggest that although SERVQUAL is a good instrument for assessing the service quality of traditional stores, additional dimensions are needed to capture some of the unique aspects of online service. The results also confirm that in both traditional and online shops, service quality reduces the effects of perceived risk, cost to switch, and relative price.

Panels/Debates Papers

Monday, December 17
8:30 a.m.–10:00 a.m.
Session M1.2
Emerald

Using Information Technology to Transform Unstructured, Creative Work

Chair Gordon B. Davis University of Minnesota
Panelists Lynne Cooper, Jet Propulsion Laboratory, California Institute of Technology
Steven Orla Kimbrough, University of Pennsylvania
Ann Majchrzak, University of Southern California
M. Lynne Markus, City University of Hong Kong

This panel explores the potential for knowledge management systems (KMS) to enhance creativity in highly unstructured situations, such as R&D, new product development, strategic planning, and organizational design. A practicing knowledge management specialist will set the stage by presenting her vision for KMS—and the not-so-inspiring reality. Three active KMS researchers will debate challenging questions related to the use of KMS in creative unstructured knowledge work situations. First, what is the potential for IT to support creative work? Second, what is the IS research agenda here? Third, how should we go about studying this? Finally, a distinguished academic will provide a summary and commentary.

Monday, December 17
2:00 p.m.–3:30 p.m.
Session M2.4
Explorers

IS Research Relevance Revisited: Subtle Accomplishment, Unfulfilled Promise, or Serial Hypocrisy?

Chair Ned Kock, Temple University
Panelists Paul Gray, Claremont Graduate University
Ray Hoving, SIM International
Heinz Klein, Temple University
Michael Myers, University of Auckland
Jack Rockart, Massachusetts Institute of Technology

The topic of IS research relevance has been receiving increasing attention from the IS research community. While debate on this topic has been taking place since the inception of the IS field, interest seems to have reached a new plateau recently, with several articles published in leading IS journals addressing issues related to IS research relevance. Among the issues addressed are the possible dichotomy between IS research relevance and rigor, the contribution of IS research to practitioners, and the pros and cons of using research approaches that bridge the gap between researchers and practitioners such as action research. In addition, there have been many recent discussions on the ISWorld listserv addressing issues related to IS research relevance.

Publications and postings on IS research relevance suggest much diversity in the opinions held by senior IS researchers. Some seem to think that current IS research is not relevant to practitioners, and that this will soon lead to a negative impact on the entire field. Others disagree, pointing out that what is often referred to as relevant research is simply IS consulting conducted with little research rigor. These divergent views, while providing fuel for much constructive debate and the development of new research paradigms, have at least one highly undesirable result: They create confusion in the minds of those who look up to senior IS researchers for guidance on how to begin their incipient IS research careers and what research paths to follow. Investing time and effort into a research path that is not likely to draw approval from the research community may have consequences that may go from mildly adverse, such as reduced social motivation stemming from lack of peer recognition and support, to devastating, such as denial of tenure or discontinuation of an academic appointment.

We believe that one major item is missing in the midst of the heated debate about IS research relevance: a definition of what IS research relevance means. Even though relevance is commonly equated with direct IS practitioner applicability of the results of the research, often the theoretical foundations on which such research builds are seen as practically irrelevant when published. This is true for many other fields as well. An example from the field of mathematics, where similar debates on research relevance exist, is George Boole's development of the modern symbolic logic, now known as Boolean algebra. In the mid-1800s, when it was developed, it hardly qualified as a contribution to the practical needs of anyone. Nevertheless, today it provides the foundation on which virtually all digital circuits are designed and without which computers would not exist (nor would the field of IS, incidentally). The lesson here is that contemporaries, be they practitioners or researchers, may not be in a good position to judge the relevance of research that may have great practical applications in the future. Another example closer to home is the discovery of relational databases, which were at first ridiculed as a theoretical toy

Monday, December 17
4:00 p.m.–5:30 p.m.
Session M3.3
University

Divergent Practices for Software Development at Internet Speed

Chair Richard Baskerville, Georgia State University
Panelists Linda Levine, Carnegie Mellon University
Jan Pries-Heje, IT University of Copenhagen
Balasubramanian Ramesh, Georgia State University
Sandra Slaughter, Carnegie Mellon University

Commercial expansion of the Internet has exploded into a worldwide frenzy of computing development. Driven by electronic commerce, and a market potential that is mind-boggling, organizations of all interests and sizes rush to keep or capture clients and customers.

Just as clearly, the stampede has affected the nature of software development in the Internet arena. We call this frantic pace in software development *Internet speed development*. The pressure to release new software products faster and faster has accelerated over the years. Ten years ago, development cycles of 24 to 36 months were typical. Today, a year to 18 months development cycle is normal for software products. However, within “emerging fields such as electronic commerce and Web portal sites, competing on Internet time demands significant product and feature changes every three to six months” (Cusumano and Yoffie 1998).

The Internet speed shifts in development techniques are happening so rapidly that there is surprisingly little formal knowledge about the ways in which high-speed software development has been achieved. Global competition has been building business pressures for faster product development in general. Practical work is yielding techniques like “lean production” (Womack et al. 1990) and “fast cycle time” (Highsmith 1999), which are being applied for “developing products in half the time” (Smith and Reinertsen 1995). Such techniques have made their way into the big browser competitors Microsoft (Cusumano and Selby 1995) and Netscape (Clark 1999). These companies have found some solutions; e.g., Microsoft has developed daily “builds” and checks in time—parallelism, synchronization, and stabilization—in order to permit software development to be innovative and nimble (Cusumano and Selby 1997; Cusumano and Yoffie 1999). Also, prototyping, venerated in small projects, is now being applied to large software projects for quality improvement, cost reduction, and faster production. Further, lengthening the conceptualization time while shortening the implementation time may allow for radical change late in the development cycle to make products more current and competitive (Iansiti and McCormack 1997).

Beyond these high visibility Internet software leaders, there is little knowledge about how Internet software development is carried out more generally in practice. Recent research in this area suggests that architecture is important to the process (MacCormack et al. 2001), and that at this speed, quality can become negotiable (Baskerville et al. 2001). But we do not fully understand how the application and smaller niche software developers in this exploding market are actually building their fast cycle time software. Further, what is the impact of these software development practices on software quality and other project outcomes?

The Standish Group estimates that bad software cost U.S. businesses \$85 billion in lost productivity in 1999, and that 73% of software projects are late, substantially over budget, cancelled, or outright failures. It would appear that software quality is not being achieved, even without the added complication of the strategic requirements for speed and agility. Clearly, software development in its traditional forms may not be a match for the demands of the new information economy. As the President’s Information Technology Advisory Committee (PITAC 1999) states: “it has become clear that the processes of developing, testing and maintaining software must change....We need scientifically sound approaches to software development that will enable meaningful and practical testing for consistency of specifications and implementations” (pg. 29). The committee also recommends that major improvements must be made for software development, verification, validation, and maintenance (pg. 31).

The fast-moving nature of the Internet marketplaces means the field of information systems has yet to build a substantial body of little empirical research into high-speed and agile Internet software development. Existing information systems development approaches may be difficult to match to the needs of this world. Such approaches can be oriented toward a scale that is large, can make project configuration assumptions that are relatively cumbersome, and are based on assumptions that represent a single-goal dimension. Agility in software development refers to the ability to not only quickly deliver the products, but also the ability to quickly adapt to changing requirements (Aoyama 1998). Building software for competitive advantage in multiple dimensions (such as quality, cost, and time to market) may be extremely difficult to achieve.

Therefore, there is a critical need to understand how Internet speed development is accomplished. How do firms develop fast cycle time software? What quality processes do they use? What development practices are effective in this rapid pace environment?

Monday, December
4:00 p.m.–5:30 p.m.
Session M3.4
Explorers

Documenting Across Time and Space: Diverse Approaches and Organizational Implications

Chair Richard Boland, Case Western Reserve University
Panelists Wanda Orlikowski, Massachusetts Institute of Technology
Michael Barrett, University of Cambridge
Carsten Østerlund, Massachusetts Institute of Technology

As modern organizations have become more global and distributed, organizational life is becoming increasingly dependent on the involvement of others who are distant in time and space. How to incorporate the concerns and contributions of these absent others is an important consideration for organizational members. The use of documents serves as one strategy to “capture” and “stand for” the interests and work of others. The rapid introduction of information technology leads us to reconsider the seemingly unproblematic nature of documenting practices as bridging time-space. The question is: How does the use of information technology in documenting practices support and constrain organizational members’ ability to manage the temporal and spatial dimensions of their ongoing collaboration?

The temporal and spatial dimensions of organizational life have received increased attention in recent years, both in the emergent literature on virtual and distributed work, and more broadly in organization studies and the social sciences. Scholars have adopted diverse perspectives to explore the temporality of work, the meaning of place and space, and the implications of the local and global among individuals, teams, organizations, and networks. Despite the expansion in this literature, few researchers have explicitly addressed the relationship between temporal-spatial dimensions and information technology. This panel will explore this relationship through an examination of documenting practices that organizational members use to work with others who are not colocated in time and space.

In a dialog with the audience, the panelists will engage different theoretical and methodological perspectives associated with the relationship between information technology, documenting practices, and time-space. At the beginning of the session, the chair will lead the audience in a discussion of what they believe is the most fruitful way to understand the organizational implications of documenting practices in distributed settings. The panelists will react to these suggestions in their individual presentations. At the end of the session the chair will once again open the floor to a debate on which approaches, including those mentioned by the audience, are most useful in understanding the important organizational implications of documenting practices across time and space.

Tuesday, December 18
8:30 a.m.–10:00 a.m.
Session T1.2
Emerald

Real Options Analysis Is Entirely Appropriate for Evaluating Uncertain IT Investments

Co-Chairs Paul Tallon, Boston College
Yossi Lichtenstein, University College Dublin (nonparticipating)
Speakers Robert Kauffman, University of Minnesota
Henry C. Lucas Jr., University of Maryland, College Park
Andrew Whinston, The University of Texas at Austin
Kevin Zhu, University of California, Irvine

Business and information systems (IS) executives continue to grapple with the issue of uncertainty in evaluating IT investments. Despite the use of net present value and other techniques, executives are often forced to resort to a gut decision. Real options analysis has been suggested as an alternative evaluation technique—one that considers the level of risk associated with an investment and recognizes the ability of corporations to defer an investment until a later period or to make a partial investment instead. The use of real options is not without criticism, however. For example, the assumptions behind the technique have been identified as problematic while the technique is also said to be too complex. In this debate, four speakers will address the efficacy of using real options to evaluate uncertain IT investments.

Tuesday, December 18
2:00 p.m.–3:30 p.m.
Session T2.1
Grand Ballroom

Confessional Research in Information Systems

Co-Chairs Rudy Hirschheim, University of Houston
Wynne Chin, University of Houston (nonparticipating)
Panelists Ulrike Schultze, Southern Methodist University
Dan Robey, Georgia State University
Geoff Walsham, Cambridge University

Ulrike Schultze’s (2000) recent article in *MIS Quarterly* entitled “A Confessional Account of an Ethnography about Knowledge Work” has sparked considerable interest in the notion of confessional research. For quite some time, individuals in the IS community have been arguing for the adoption of such ideas. Although they may have used different terms—self reflection, weltanschauung, reflexive, and the

like—they were really lobbying for articulating up front the values, assumptions, beliefs, biases, etc., which the researchers bring to the table in undertaking their research. In this panel, we wish to explore these ideas. More specifically we wish to focus on questions such as: What exactly is confessional research? How does one do confessional research? Is confessional research restricted to qualitative research or is it also relevant for quantitative research? What is the value of engaging in confessional research: for the researcher, for the group being researched, for the community of scholars, for society? What are the drawbacks and limitations of confessional research? And if one assumes a confessional style is valuable, is it possible to add a confessional element to the research being undertaken without dramatically altering its course?

Anyone who has been involved in intensive field research, has no doubt wondered about the serendipity and often apparent randomness associated with the work (*cf.* Behar 1996; Wolf 1992). One cannot help but be struck by the ambiguity and the paradoxical nature of doing intensive fieldwork. It is perplexing even to the most seasoned of researchers. Yet this has not stopped researchers from undertaking fieldwork. Van Maanen (1988) writes:

To do fieldwork apparently requires some of the instincts of an exile, for the fieldworker typically arrives at the place of study without much of an introduction and knowing few people, if any. Fieldworkers, it seems, learn to move among strangers while holding themselves in readiness for episodes of embarrassment, affection, misfortune, partial or vague revelation, deceit, confusion, isolation, warmth, adventure, fear, concealment, pleasure, surprise, insult and always possible deportation. Accident and happenstance shapes fieldworkers' studies as much as planning and foresight; numbing routine as much as live theater; impulse as much as rational choice; mistaken judgments as much as accurate ones. This may not be the way fieldwork is reported, but it is the way it is done (pg. 2).

The *raison d'être* of the panel is to explore the paradoxical nature of (especially) field research and to see to what extent a confessional approach might help. To this end, we will focus on the issue of “reflexivity.” According to Davies (1999), “reflexivity, broadly defined, means turning back on oneself; [it is] a process of self-reference” (pg. 4). In all science, reflexivity is desirable in order to identify what role the researcher has played in arriving at certain findings or results (Bourdieu and Wacquant 1992; Checkland 1981). But even in the realm of the practice, reflexivity is seen to be important (*cf.* Mathiassen 1998; Schon 1983).

Tuesday, December 18 4:00 p.m.–5:30 p.m. Session T3.2 Emerald
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Knowledge Management: Challenging Assumptions

Chair James D. McKeen, Queen's University
Panelists John C. Henderson, Boston University
Clyde Holsapple, University of Kentucky
Larry Prusak, IBM Global Services

Over the past few years, knowledge management (KM) has become an extremely hot topic for organizations. In many ways, the development of KM research parallels the history of IT: emerging competitive research paradigms, raging definitional debates, value of knowledge management proving elusive, evangelism, technology-focused initiatives, early “wins” difficult to replicate, “motherhood” status, and foreboding questions beginning to emanate from the ranks of senior executives looking for returns on investments.

The panel consists of individuals who are “in the thick of knowledge management.” Each is a director of a research center focusing on knowledge management and each has written several papers in this area. John Henderson directs the Systems Research Center at Boston University's School of Management. Clyde Holsapple has been the director of the Kentucky Initiative for Knowledge Management since its founding in 1988. James McKeen is the founding director of the Queen's Centre for Knowledge-Based Enterprises, a research think-tank for the knowledge economy. Larry Pursak is the founder and Executive Director of the Institute for Knowledge Management, a global consortium of member organizations engaged in advancing the practice of knowledge management through action research.

Wednesday, December 19 8:30 a.m.–10:30 a.m. Session W1.1 Grand Ballroom
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What I Think About Reviewing: Confessions of a Panel of Expert Reviewers

Chair Trevor Moores, University of Nevada, Las Vegas
Panelists Wynne Chin, University of Houston
Deborah Compeau, University of Western Ontario
Izak Benbasat, University of British Columbia

Since promotion and tenure is often tied to publication, it is a bitter disappointment to receive a rejection letter from a journal or conference with reviewer comments that are neither illuminating nor constructive, and which suggests the paper

has not even been read properly. While a number of tips and suggestions on how to review exist (e.g., Daft 1985; Lee 1995; Straub et al. 1994), there is a general feeling that IS, along with many other disciplines, suffers from a poor standard of reviewing (Ives 1992; Zmud 1998). This has led to calls to change the review process, with, perhaps, an open reviewing process whereby reviewers become more visible and accountable for their comments (Straub 2000).

This panel will not discuss the myriad of bad reviews that we have all encountered; rather, it seeks to debate the problems of reviewing itself. The panel will include a moderator (Trevor Moores, University of Nevada Las Vegas), three *MIS Quarterly* Reviewers of the Year, and the editor-in-chief of *Information Systems Research*; namely, Wynne Chin (University of Houston), Deborah Compeau (University of Western Ontario), Viswanath Venkatesh (University of Maryland–College Park), and Izak Benbasat (University of British Columbia). The panelists will address, among others, the following questions:

- Why get involved in reviewing? What’s in it for me?
- To what extent should a paper be “interesting,” rather than just methodologically sound?
- Is there a structure to a good review? What are the best (and worst) reviews I have ever received, and how have they shaped my own approach to reviewing?
- To what extent should a reviewer “rewrite” a paper, as opposed to simply providing an evaluation of it?
- How much time do I spend reviewing papers each year? How much time should I spend, and what do I think is the consequence of refusing to do a review?
- Do I think blind-review is the best approach? Or, as was previously suggested in an ICIS panel, is it better for the identities of the reviewers to be made known?
- What should I do if I have been asked to review a paper and I do not consider myself to be an expert in either the theoretical domain or methods used?
- Is there a difference between reviewing for a conference/B-journal/A-journal? Do I apply the same amount of critical evaluation?
- Is it fair that some journals rate the performance of their reviewers? After all, the role is voluntary!
- Do I think reviewing is something that can be taught, or is it a skill that some people have, and some do not? Should we have a course on reviewing for our Ph.D.s?

Each panelist will be asked to address one of the questions in turn. To encourage debate and interaction with the audience, the other panelists and the audience will then be invited to comment on the remarks made.

Wednesday, December 10:30 a.m.–12:00 noon Session W2.1 Grand Ballroom
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E-Business Autopsy: What Have We Learned?

Chair	Detmar Straub, Georgia State University
Panelists	Peter Weill, Massachusetts Institute of Technology Jeanne Ross, Massachusetts Institute of Technology Michael Vitale, Australian Graduate School of Management

One year ago at ICIS, IT researchers reveled in the plethora of research opportunities prompted by the dot com and e-business explosion. E-business represented the realization—at long last—of the potential of IT to create competitive advantage. With the collapse of the dot coms in the U.S., IT researchers need to re-examine their research questions to better understand the implications of e-business for both established firms and Internet start-ups. Is the rise and fall of e-business yet another reminder that IT plays a support role in which success depends upon visionary business strategy and its implementation? Or should we examine e-business as the pivotal business phenomenon that thrust IT into the role of business driver likely to distinguish winners from losers for years to come? The members of this panel will present differing views on these issues as they present key lessons from research on e-business.

Peter Weill will argue that e-business has taught us the critical role of strategy and models in business success. He will describe eight atomic business models, each with different sources of revenue, value propositions, IT infrastructure, and demonstrated profitability. Acting as building blocks, these eight atomic business models allow firms to segment their markets and create tailored e-business strategies. Relying on Manheim Auctions as an example, he will describe how business models define success in an electronic world.

Jeanne Ross will argue that the key lesson of e-business is that IT capability will make or break firms in the new economy. She will focus on the critical role of IT architecture in positioning firms for success in increasingly electronic business environments. Using United Parcel Service (UPS) and Delta Air Lines as examples, she will explain how a firm’s architecture dictates strategy and thus drives business success.

Michael Vitale will challenge both of the preceding propositions and argue that e-business success depends upon the coherence between firms’ business strategies and their IT capabilities. He will emphasize the critical role of IT governance in ensuring that firms effectively

align their business strategies and information technology. Citing Australia Post and National Australia Bank as examples, he will note how governance enables firms to invest in their strategic priorities and sustain appropriate IT capabilities.

Detmar Straub will chair the panel and dissect the relevance of the panelists' arguments. He will then enlist the audience in a debate as to what we should have learned and the lessons we still need to learn about e-business.

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The Association for Information Systems (AIS) founded in 1994, is a professional organization whose purpose is to serve as the premier global organization for academics specializing in Information Systems. Our mission is to: advance knowledge in the use of information technology to improve organizational performance and individual quality of work life.

AIS recognizes in its governance structure three international regions, representing the Americas (1), Europe and Africa (2), and Asia and the Pacific (3). Each region has two regional representatives on the council and a President of the Association is chosen from a particular region on a rotating basis. AIS also runs the annual America's Conference on Information Systems (AMCIS), the ISWorld Net web site (www.isworld.org). We also sponsor the ISWorld Net Information Systems Faculty Directory and ISWorld List, a distribution list for information systems researchers and faculty. Both of these are accessible from the AIS home page at www.aisnet.org.

About ICIS

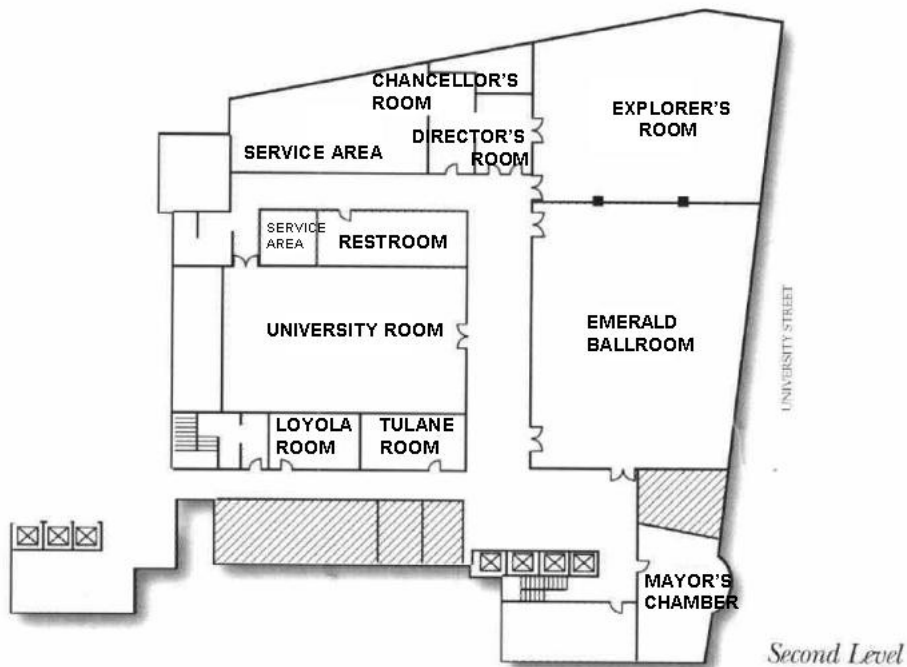
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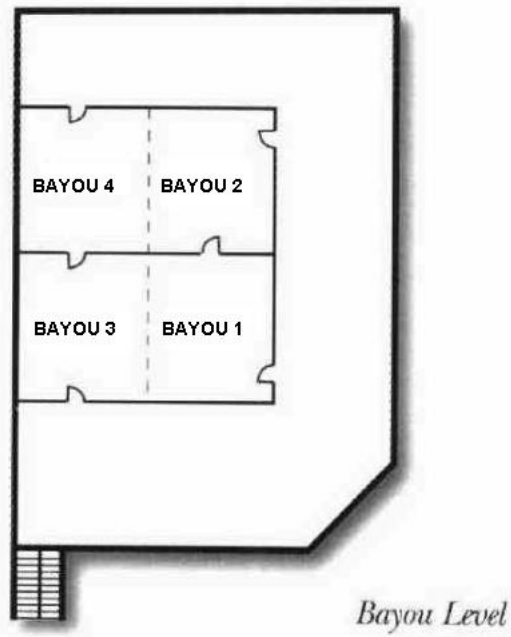
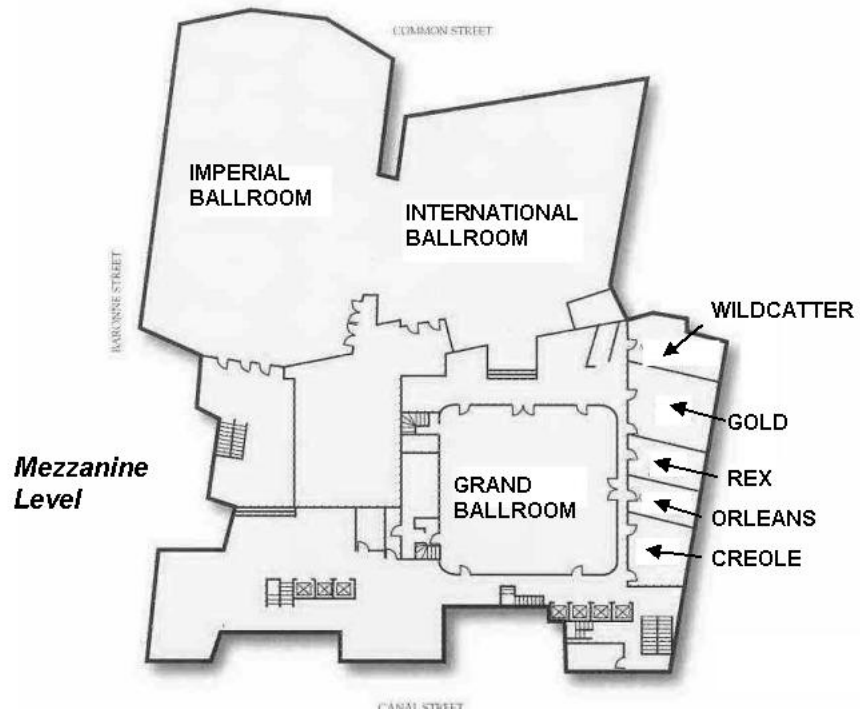
ICIS refers both to the annual International Conference on Information Systems, and to an ever changing volunteer group that organizes the conference. ICIS merged in 2000 to become a conference of the Association for Information Systems (AIS) and is associated with the Association for Computing Machinery (ACM), the International Academy for Information Management (IAIM), the International Federation for Information Processing (IFIP) Technical Committee 8 (Information Systems), the Institute for Operations Research and Management Sciences (INFORMS), and the Society for Information Management (SIM). Further information about ICIS is available at www.icisnet.org.

Conferences in 2002

2002 AMCIS August 9 – 11 Dallas, Texas <http://hsb.baylor.edu/AMCIS2002/>
2002 ICIS December 15-18 Barcelona, Spain <http://www.icis2002.org/>

Map of Meeting Space at the Fairmont Hotel, New Orleans





ICIS 2001: Program at a Glance

Monday, December 17, 2001

Time Slot	Session 1 Grand	Session 2 Emerald	Session 2 University	Session 4 Explorers	Session 5 Rex/Gold	Session 6 Creole
8:30 a.m. – 10:00 a.m. M1	Panel/Debate: Using Information Technology to Transform Unstruc- tured, Creative Work	Completed Research: IT- strategy and Use in the Context of Orga- nizational Learning	Theme-Related Research: Virtual Communities	Research-in- Progress: Organizational Innovation	Completed Research: Improving Perform- ance of Software Users/Teams	Research-in- Progress: Systems Development: Advanced Methods
10:30 a.m. – 12:00 noon	Keynote: Glover Ferguson, Chief Scientist, Accenture Grand Ballroom					
12:00 noon – 2:00 p.m.	Lunch					
2:00 p.m. – 3:30 p.m. M2	Research-in- Progress: Web- based Retailing and Advertising	Theme-Related Research: Enterprise Resource Planning*	Completed Research: Empirical Analysis of Mobile Internet Services and Call Centers	Panel/Debate: IS Research Relevance Revisited: Subtle Accomplishment, Unfulfilled Promise, or Serial Hypocrisy?	Research-in- Progress: User Acceptance of IT	Completed Research: Hybrid Approaches in Classification and Optimization
4:00 p.m. – 5:00 p.m. M3	Completed Research: Economics of Electronic Goods and Markets*	Research-in- Progress: Digital Economy and E- Commerce Strategy	Panel/Debate: Divergent Practices for Software Development at Internet Speed	Panel/Debate: Documenting Across Time and Space: Diverse Approaches and Organizational Implications	Theme-Related Research: Information Processing and Sharing	Completed Research: Database and Knowledge-based Systems

Tuesday, December 18, 2001

Time Slot	Session 1 Grand	Session 2 Emerald	Session 2 University	Session 4 Explorers	Session 5 Rex/Gold
8:30 a.m. – 10:00 a.m. T1	Completed Research: E-Commerce: Technology Adoption and B2B Marketplace*	Panel/Debate: Real Options Analysis is Entirely Appropriate for Evaluating Uncertain IT Investments	Research-in-Progress: Open-source Develop- ment: Trust, Coordi- nation, and Optimality	Completed Research: Electronic Repositories and Effectiveness in Knowledge Management	Research-in-Progress: Human-Computer Interface and Infor- mation Search
10:30 a.m. – 12:00 noon	Keynote: Pierre Hessler, Vice Chairman, Cap Gemini Ernst & Young Grand Ballroom				
12:00 noon – 2:00 p.m.	Lunch				
2:00 p.m. – 3:30 p.m. T2	Panel/Debate: Confessional Research in Information Systems	Theme-Related Research: IT and Strategy*	Completed Research: IT Investment and Productivity Paradox	Completed Research: Decision Support and Expert Systems in Organizations	Research-in-Progress: Information and Knowledge Sharing
4:00 p.m. – 5:00 p.m. T3	Completed Research: Technology Fear and Deception in the Internet Age*	Panel/Debate: Knowledge Manage- ment: Challenging Assumptions	Completed Research: Design of Web-based Systems	Research-in-Progress: Managing the IS Functions	Theme-Related Research: IT and Organizational Transformation

Wednesday, December 19, 2001

Time Slot	Session 1 Grand	Session 2 Emerald	Session 2 University	Session 4 Explorers	Session 5 Rex/Gold
8:30 a.m. – 10:00 a.m. W1	Panel/Debate: How do you Become a Top Reviewer?	Completed Research: Electronic Markets	Research-in-Progress: IT Adoption: Organi- zation, Country and Culture	Completed Research: IS-Research Based on the Theory of Planned Behavior	Theme-Related Research: The Rural Systems Challenge
10:30 a.m. – 12:00 noon W2	Theme-Related Research: The Virtual Environment*	Completed Research: Risk in Online Systems	Research-in-Progress: Web-based Services: User Satisfaction, Acceptance and Loyalty	Completed Research: Turnover and Transition of IT Personnel	

* Session includes a paper nominated for the Best Paper Award in that track