

***Information Systems Research***  
***-Special Issue Announcement-***

**Digital Systems and Competition**

Walter J. Ferrier, University of Kentucky, [walter.ferrier@uky.edu](mailto:walter.ferrier@uky.edu)

Clyde W. Holsapple, University of Kentucky, [cwhols@uky.edu](mailto:cwhols@uky.edu)

Rajiv Sabherwal, University of Missouri – St. Louis, [sabherwal@umsl.edu](mailto:sabherwal@umsl.edu)

**FOCUS**

Digital systems within and across firm boundaries have become fundamental to business operations, spanning multiple activities in value chains and supply chains. As firms continue to digitize their business processes and enhance their capabilities via increasingly powerful computing platforms, they are better able to access and process critical knowledge in real-time, increasing their awareness of emerging market opportunities, and their ability to respond to those opportunities. Business actions are becoming increasingly inseparable from information technology (IT), either IT-enabled or IT-induced. Consequently, digital systems, and IT in general, are becoming core to many products and services, and thereby becoming indistinguishable from the rest of the business. Thus, there is a pressing need to move toward a more expansive view of the relationship between digital systems and competitive action.

Digital systems are inter-related with emergent forms of competition in several important ways. First, ***digital systems impact competitive actions and competitive dynamics***. For example, in the airline industry, retail automation, co-host programs, discriminatory pricing, frequent flyer programs, joint marketing arrangements, dynamic pricing, and incentive programs are examples of competitive actions that have been enabled by digital systems, but constitute the core of the airline business. Strassmann (2005) emphasizes the use of IT-induced or enabled competitive actions as a new kind of IT value measure. According to him, companies should evaluate how much of their technology actually supports competitive actions, and how much is allocated to support functions such as finance, personnel, and corporate management? Understanding the impacts of digital systems on competition could benefit from the adoption of a *competitive dynamics* perspective (Smith, Ferrier, and Ndofor, 2001). Grounded in Austrian economics and Schumpeter's (1934) theory of creative destruction, this perspective recognizes the need to explicitly account for the dynamic and adaptive process-based relationships in complex, interactive research contexts, and focuses on the process of how firms act-react to their environment in order to achieve greater competitiveness.

Second, ***digital systems enable different forms of competition, which might even involve collaboration among competitors***. By providing a common infrastructure for managing interdependencies within and across firms, many digital systems have opened new avenues for collaborative linkages among competing firms, leading to growing "co-opetition" (i.e., concurrent collaboration and competition) in e-business. Digital systems enable this through numerous means, including shared repositories, real-time integration of business processes,

electronic communities that foster learning and relationships, and virtual organizations that allow rapid assembly of external resources and capabilities (Strader, Lin, and Shaw, 1998).

Third, *widespread use of digital systems enables competition to occur across traditionally defined industry boundaries*. Although research on competitive actions and IS has largely focused on firms that compete as direct rivals in industry contexts that are fairly circumscribed, it has become increasingly important to account for competition among indirect rivals from industries that are tangential or altogether unrelated from the focal industry. For example, as they become increasingly reliant on web-based ticketing, airlines face competition from firms such as sidestep.com and travelocity.com. Similarly, retailers of all kinds face competition from pricewatch.com and amazon.com.

**This special issue of *ISR* is designed to stimulate fresh investigation of the relationship between digital systems and emergent competition.** All lenses of inquiry into the nature of this relationship are encouraged, including: strategic, organizational, behavioral, economic, and technical. The special issue welcomes theoretical, analytical, and empirical (using any kind of research method, including case studies, simulations, surveys, and so on) examinations of topics dealing with relationships in this area. The research topics addressed in the papers might relate to some of the trends mentioned above, or to other aspects of the relationship between digital systems and competition.

**Topics of interest** include, but are not limited to, the following:

- Relationships between digital systems and competitive actions
- Relationships between digital systems and emerging forms of competition
- Dynamics of digital systems and competitive actions in inter-firms networks
- Digital systems as enabling or inhibiting competition across industries
- Links between digital systems, competitive actions, and firm performance
- Contingency impacts of the nature of the firm, the firm's industry, the firm's socio-political environment, and the role of IT
- Competitive action measures for gauging impacts of digital systems on competitive actions (and consequent firm performance)
- Longitudinal evolution of the linkage between a firm's digital systems and competition
- Firm and network capabilities for leveraging digital systems in competitive actions
- Links between IT investments, IT capabilities, complementary organizational capabilities, and competitive actions.
- Dynamics of competitive actions in the digital goods industry (media, content, software, travel services, retail finance, etc.).
- IT-enabled new product development, pricing, multi-channel marketing, and competitive dynamics
- The role of standards in competing through digital systems
- Economics of digital systems and competition

## References

- Schumpeter, J.A. *The Theory of Economic Development*. Cambridge, Harvard University Press, MA, 1934.
- Smith, K.G., Ferrier, W.J., and Ndofor, H. “Competitive Dynamics Research: Critique and Future Directions,” in *Handbook of Strategic Management*, M. A. Hitt, R. E. Freeman and Jeffrey S. Harrison (eds.), Blackwell Publishers, Malden, MA, 2001, pp. 315-361.
- Strader, T.J., Lin, F.R., and Shaw, M.J. “Information Structure for Electronic Virtual Organization Management,” *Decision Support Systems*, (23), 1998, pp. 75-94.
- Strassmann, P.A. “Real Numbers: Taking a Bite out of Overhead,” *Baseline*, May 2005, pp. 30.

## GUEST EDITORIAL BOARD

### Senior Editors (listed alphabetically):

- Walter J. Ferrier, University of Kentucky ([walter.ferrier@uky.edu](mailto:walter.ferrier@uky.edu))  
Clyde W. Holsapple, University of Kentucky ([cwhols@uky.edu](mailto:cwhols@uky.edu))  
Rajiv Sabherwal, University of Missouri – St. Louis ([sabherwal@umsl.edu](mailto:sabherwal@umsl.edu))

### Editorial Review Board:

- Anitesh Barua, University of Texas-Austin  
Manuel Becerra, Instituto de Empresa (Spain)  
Anandhi Bharadwaj, Emory University  
Sudip Bhattacharjee, University of Connecticut  
Ram Chellappa, Emory University  
Ming-Jer Chen, University of Virginia  
Lei Chi, Rensselaer Polytechnic Institute  
Vivek Choudhury, University of Cincinnati  
Brian Dos Santos, University of Louisville  
Omar El Sawy, University of Southern California  
Samer Faraj, University of Maryland  
Avi Fiegenbaum, Technion-Israel Institute of Technology (Israel)  
Anindya Ghose, New York University  
Devi Gnyawali, Virginia Tech University  
Curt Grimm, University of Maryland  
Göran Goldkuhl, Linköping University (Sweden)  
Ram Gopal, University of Connecticut  
Varun Grover, Clemson University  
Alok Gupta, University of Minnesota  
Kai-Lung Hui, City University of Hong Kong (Hong Kong) and National University of Singapore (Singapore)  
Prabhudev Konana, University of Texas-Austin

Juha-Antti Lamberg, Helsinki University of Technology (Finland)  
Claudia Loebbecke, University of Cologne (Germany)  
Ravi Madhavan, University of Pittsburgh  
Rich Makadok, Emory University  
Arvind Malhotra, University of North Carolina  
Hermann Nfdofor, Texas A&M University  
Mogens Kühn Pedersen, Copenhagen Business School (Denmark)  
Sudha Ram, University of Arizona  
Ram Ramesh, University at Buffalo, The State University of New York  
H.R. Rao, University at Buffalo, The State University of New York  
T. (Ravi) Ravichandran, Rensselaer Polytechnic Institute  
Ken Smith, University of Maryland  
Michael D. Smith, Carnegie Mellon University  
Bruce W. Weber, London Business School (United Kingdom)  
Youngjin Yoo, Temple University  
Greg Young, North Carolina State University

## **TIME TABLE**

Deadline for Submissions: June 1, 2008

Symposium hosted by Rensselaer Polytechnic Institute: circa March 2009

## **PROCESS**

- Researchers interested in submitting papers are invited to submit their paper ideas to the senior editors by November 2007 for early reactions.
- **All research paper submissions must be made through *ISR*'s online submission system which can be accessed at <http://mc.manuscriptcentral.com/isr>**
- All submitted papers will receive an initial screening by the Senior Editors. Only papers that are deemed *a priori* to have a reasonable chance of acceptance in an accelerated review process will remain under consideration. Papers that do not pass this initial screening will not be considered further.
- Papers that pass the initial screening will undergo no more than three rounds of review (i.e., two revisions). Papers not accepted by the end of the third round will be rejected. Papers will be returned to the authors for a second revision only if the revisions to be undertaken after the second round are fairly straightforward.
- Following the first round of review, authors of papers for which revisions are invited will be asked to present their work at a conference organized around the special issue theme and sponsored by the Lally School of Management and Technology at Rensselaer Polytechnic Institute in early 2009. These authors will be required to present their work at the conference in order to have their papers remain under consideration. Attendees will be expected to cover their own travel and lodging expenses. The conference will be valuable in providing feedback to authors, enhancing insights into the nature of their research efforts/results, and stimulating interest in the special issue theme.

- Authors must adhere to a strict schedule for submission and revision of papers:
  - the first round of reviews will be returned to authors three months after the initial submission date
  - the first revision of the paper will be due three months after the return of the first round of reviews
  - the second round of reviews will be returned to authors two months after the conference
  - the second revision of the paper will be due two months after return of the second round of reviews
  - a final decision on the paper will be made within two months of the receipt of the second revision of the paper
  - papers that miss revision deadlines will be rejected
- Rejected papers can be submitted as regular submissions to *Information Systems Research* only if such an action is recommended in the Special Issue rejection letter. A recommendation to revise and resubmit as a regular *Information Systems Research* article will only be undertaken in special circumstances, such as when a formally reviewed manuscript was found to possess a strong likelihood of acceptance but was deemed to either be a poor fit with the theme of the Special Issue or required revisions which, while perceived to be feasible, are unlikely to be accomplished within the Special Issue's accelerated review schedule.