

December 2000

# Does the Trend Toward E-Business Call for Changes in Fundamental Concepts of Information Systems?

Follow this and additional works at: <http://aisel.aisnet.org/icis2000>

---

## Recommended Citation

"Does the Trend Toward E-Business Call for Changes in Fundamental Concepts of Information Systems?" (2000). *ICIS 2000 Proceedings*. 79.

<http://aisel.aisnet.org/icis2000/79>

This material is brought to you by the International Conference on Information Systems (ICIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICIS 2000 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

# DEBATE

## DOES THE TREND TOWARD E-BUSINESS CALL FOR CHANGES IN FUNDAMENTAL CONCEPTS OF INFORMATION SYSTEMS?

**Moderator:** Steven Alter, University of San Francisco, U.S.A.

**Proponents:** M. Lynne Markus, Claremont Graduate University, U.S.A., and City University of Hong Kong, Hong Kong  
Judy Scott, University of Colorado, Denver, U.S.A.

**Opponents:** Phillip Ein-Dor, Tel Aviv University, Israel  
Iris Vessey, Indiana University, U.S.A.

This debate is directly related to the theme of ICIS 2000, "Fundamental Concepts for the New Millennium." It asks whether the fundamental information system concepts developed and used during the past millennium are becoming inadequate and should, therefore, be supplanted by new information system concepts as e-business becomes more commonplace throughout most businesses.

### BACKGROUND

During the early development of the IS field, information systems were for after-the-fact tracking, reporting, and analysis. Someone did the work, the information system recorded information, and managers used the information for planning and control. As interactive computing took hold, the information system became integrated into the process of doing the work, rather than just recording results and completions of interim work steps. Today, many business schools are launching e-commerce or e-business initiatives. Simultaneously, many consultants and academics are predicting that computer and communications applications will soon be so intertwined with typical business practices that there will be little or no difference between business and e-business.

In order to include almost any organization, rather than just those primarily engaged in e-commerce or those selling information products and services, we will interpret e-business as an operating style rather than a characterization of a business strategy (such as "clicks and bricks"). The trend toward e-business is a trend toward an operating style in which most of an organization's significant work systems make extensive use of both computer and communications technologies in order to operate efficiently and effectively. Internet technology has provided a new level of cost-effectiveness in many areas, but the trend toward e-business is not limited to the Internet because other types of networks may be more effective for transmitting particular types of information for particular purposes (such as mobile payment systems, real time monitoring systems, and downloads of streaming video).

### DEBATE FORMAT

Steven Alter, the debate moderator, will explain why the debate topic is important and will explain that the debate will focus on two major propositions:

- (1) The trend toward e-business calls for changes in fundamental concepts regarding the evaluation and description of information systems.
- (2) The trend toward e-business calls for changes in fundamental concepts regarding the building and maintaining of information systems.

### ***Evaluation and Description of Systems***

The proponent, Judy Scott, will argue that current concepts in this area are inadequate and need to be modified, extended significantly, or scrapped in favor of other concepts. The opponent, Philip Ein-Dor, will argue that current concepts for describing and evaluating systems are adequate and will remain adequate as the trend toward e-business unfolds.

Each debater will have 10 minutes and will focus on several large issues. An additional 10 minutes will be devoted to counter-arguments and questions from the moderator.

### ***Processes for Building and Maintaining Systems***

The proponent, M. Lynne Markus, will argue that existing concepts should be modified, extended significantly, or scrapped in favor of other concepts. The opponent, Iris Vessey, will argue that current concepts about processes for building and maintaining systems are adequate and will remain adequate as the trend toward e-business unfolds.

As in the first part of the debate, each debater will have 10 minutes for primary arguments. An additional 10 minutes will be devoted to counter-arguments.

In the remaining time, the debaters will engage in an open discussion aimed at amplifying the interesting questions of research and practice that emerged from the debate.

Two types of audience response will be requested. First, the audience will be asked to vote “yea or nay” on the main question: Based on the arguments presented, does the audience agree that the widespread trend toward e-business calls for changes in fundamental concepts of information systems? A feedback form will also be distributed to solicit views about which side prevailed in the debate, about the most important issues that emerged from the debate, and about what they consider to be the main implications for future research directions. If warranted by the quantity and quality of the feedback, the main arguments by the debaters and the results of the feedback will be posted on a Web site.

## **WHY THE TOPIC IS IMPORTANT TO THE PARTICIPANTS**

Steven Alter wrote one of the first books on DSS and spent most of the 1980s as vice president of a manufacturing software firm. This experience led him to devote his research in the 1990s to developing methods that typical business people can use to understand systems in organizations. His Information Systems text (Alter 1999a) and two recent papers in *Communications of AIS* (Alter 1999b, 2000) are directly related to issues concerning the basic ideas about information systems.

Phillip Ein-Dor has had a long-term interest in attempting to understand the nature of information systems. His current research interests include IS theory, representing commonsense business knowledge, natural language systems, information system economics, and the Internet. He is editor of the *Journal of the AIS*. Some of his publications related to the topic include an article in the Proceedings of the Decision Sciences Institute (Ein-Dor 1986), an article in *Information Systems Research* (Ein-Dor and Segev 1993), and an article in *Communications of the ACM* (Ein-Dor et al. 2000).

M. Lynne Markus has devoted much of her research to topics related to the implementation of enterprise systems and the business value of investments in IT. Her current research focuses on electronic commerce. In the last several years she has been especially interested in ERP systems and has published two monographs (Bashein and Markus, 2000; Bashein et al., 1997) and several papers related to ERP packages (Markus et al. 2000; Brehm et al. under review) and their life cycles in organizations (Brehm and Markus 2000).

Judy Scott focuses much of her research on emerging technologies. She is interested in the organizational and interorganizational impact of IT (Scott 2000b), enterprise software packages (Scott and Kaindl 2000; Scott and Vessey 2000), and e-business (Scott 2000a). She also has extensive experience in integrating ERP-related coursework into undergraduate and MBA business programs.

Iris Vessey has devoted much of her research to evaluating emerging information technologies from cognitive and analytical perspectives. In recent years, her interests have focused on managerial issues associated with the management and implementation of enterprise systems and she has papers in *Communications of the ACM* (Scott and Vessey forthcoming) and the International Conference on Information Systems (Brown and Vessey 1999, 2000), as well as a paper under review (Brown et al.).

## References

- Alter, S. *Information Systems: A Management Perspective* (3<sup>rd</sup> ed.), Upper Saddle River, NJ: Prentice-Hall, 1999.
- Alter, S. "A General, Yet Useful Theory of Information Systems," *Communications of the AIS* (1:13), March 1999. <http://cais.aisnet.org/articles/1-13/>.
- Alter, S. "Same Words, Different Meanings: Are Basic IS/IT Concepts Our Self-Imposed Tower of Babel?" *Communications of the AIS* (3:10), April 2000. <http://cais.aisnet.org/articles/3-10/>
- Bashein, B. J., and Markus, M. L. *Data Warehouses: More Than Just Mining*, Morristown, NJ: Financial Executives Research Foundation, Inc., 2000.
- Bashein, B. J., Markus, M. L., and Finley, J. B. *Safety Nets: Secrets of Effective Information Technology Controls*, Morristown, NJ: Financial Executives Research Foundation, Inc., 1997.
- Brehm, L., and Markus, M. L. "The Divided Software Life Cycle of ERP Packages," *Proceeding of Global IT Management Conference*, Memphis, TN, 2000.
- Brehm, L., Heinzl, A., and Markus, M. L. "Tailoring ERP Packages: A Spectrum of Choices and their Implications," currently under review.
- Brown, C. V., and Vessey, I. "ERP Implementation Approaches: Toward a Contingency Framework," in *Proceedings of the Twentieth International Conference on Information Systems*, P. De and J. I. DeGross (eds.), Charlotte, NC, 1999, pp. 411-416.
- Brown, C. V., Vessey, I., and Powell, A. "Predicting ERP Purchase Decisions: Package Capabilities and Organizational Characteristics," under review.
- Brown, C. V., and Vessey, I. "Nibco's Big Bang," in *Proceedings of the Twenty-first International Conference on Information Systems*, W. J. Orlikowski, S. Ang, P. Weill, H. C. Krcmar, and J. I. DeGross (eds.), Brisbane, Australia, December 2000.
- Ein-Dor, P. "An Epistemological Approach to the Theory of Information Systems," in *Proceedings of the Eighteenth Annual Meeting of the Decision Sciences Institute*, Honolulu, HI, November 1986, pp. 563-565.
- Ein-Dor, P., Goodman, S., and Wolcott, P. "From *Via Maris* to Electronic Highway: The Internet in Canaan," *Communications of the ACM* (3:7), July 2000, pp. 19-23.
- Ein-Dor, P., and Segev, E. "A Classification of Information Systems: Analysis and Interpretation," *Information Systems Research* (4:2), June 1993, pp. 166-204.
- Markus, M. L., Petrie, D., and Axline, S. "Bucking the Trends: What the Future May Hold for ERP Packages," *Information System Frontiers*, June 2000.
- Scott, J. "Emerging Patterns from the Dynamic Capabilities of Internet Intermediaries," *Journal of Computer-Mediated Communications* (5:3), March 2000. <http://www.ascusc.org/jcmc/vol5/issue3/scott.html>.
- Scott, J. "Facilitating Interorganizational Learning with Information Technology," *Journal of Management Information Systems*, forthcoming Fall 2000.
- Scott, J., and Kaindl, L. "Enhancing Functionality in an Enterprise Software Package," *Information and Management* (37), May 2000, pp. 111-122.
- Scott, J., and Vessey, I. "Managing Risks in Enterprise Systems Implementations," *Communications of the ACM*, forthcoming, 2000.