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Editorial Statement: Information Technology and Systems (ITS) Department

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Communications of the Association for Information Systems

EDITORIAL STATEMENT: INFORMATION TECHNOLOGY AND SYSTEMS (ITS) DEPARTMENT

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ABSTRACT

This paper introduces the Information Technology and Systems (ITS) Department of CAIS. The department focuses on articles in design science. The goal of design-science research is the development and evaluation of technologies that extend the boundaries of human and organizational information-processing capabilities. Research must demonstrate the utility of such technologies to address problems or tasks not previously thought to be amenable to IT support. The article presents the objectives, concepts, and publication procedures for the ITS Department.

Keywords: design science, information technology and systems

INTRODUCTION

Since 1991, members of the information systems (IS) community interested in design-science research and education have been meeting annually, prior to the ICIS Conference, at the Workshop on Information Technology and Systems (WITS). The research results presented at WITS are available on a timely basis through the WITS proceedings. However, publication of much of this exciting work in the general IS literature has been limited. Extensive review cycles for time-critical technologies and ill-defined criteria for evaluating the quality of design-science research in IS have been the principal obstacles. With its new area on Information Technology and Systems (ITS), co-edited by Alan Hevner (University of South Florida) and Sal March (Vanderbilt University), CAIS now provides a platform for the timely publication of design-science research and its application to information technology and systems.

DESIGN SCIENCE

In the March 2004 issue of *MIS Quarterly* the research essay, "Design Science in Information Systems Research," appears; co-authored by Alan Hevner, Sal March, Jinsoo Park, and Sudha Ram. A goal of this essay is to provide clear guidelines for understanding, executing, and evaluating design-science research in the field of IS. It highlights the synergistic interplay of traditional behavioral-science research and design-science research in a complementary IS research cycle while recognizing their differentiated goals. The goal of behavioral-science

research is the development and justification of theory that predicts and explains behavior within an organizational context. The goal of design-science research is the development and evaluation of technologies that extend the boundaries of human and organizational information-processing capabilities demonstrating the utility of such technologies to address problems or tasks not previously thought to be amenable to IT support. Interested readers are encouraged to consult the MISQ essay as background for the development of design-science research initiatives and papers.

OBJECTIVE OF THE INFORMATION TECHNOLOGY AND SYSTEMS AREA

The objective of the Information Technology and Systems Area of CAIS is to publish novel research papers, tutorials, cases, state-of-the-art surveys, and professional papers that address the theory, development, evaluation, and application of innovative information technologies and systems using the design-science research paradigm.

CONTENTS

Published papers will develop and evaluate novel "IT artifacts" that provide utility to an organization's information technology infrastructure. IT artifacts are broadly defined to include:

- *Constructs* – concepts and language in which problems and solutions are conceptualized, defined, and communicated.

- *Models* – representations of real-world situations that define a design problem and its solution space. Such representations aid problem and solution understanding. They frequently focus on the connection between problems and solutions to make it possible to explore the effects of design decisions and changes in the real world.

- *Methods* – well-defined solution processes. Methods can range from formal, mathematical algorithms that explicitly define the search process to informal, text descriptions of "best practice" approaches.

- *Implementations* – descriptions of constructs, models, or methods in a working system. These descriptions demonstrate feasibility and allow concrete assessment of an artifact's suitability to its intended purpose. Researchers can use instantiations to learn about the real world, how the artifact affects it, and how users appropriate it.

A crucial element of research in this area is demonstrating, through carefully selected evaluation techniques, that the research effectively extends the boundaries of human and organizational capabilities by addressing problems or tasks not previously thought to be amenable to information technology and systems support.

Relevant design research topics are found in such areas as collaboration technologies; database systems and data warehouses; decision support systems; information modeling; intelligent and agent-based systems; knowledge management; mobile technologies; systems and software development; security technologies; electronic commerce systems; networking and network-based systems; information quality issues; and healthcare informatics.

PUBLICATION PROCEDURES

To speed publication, CAIS offers both light review and full review. Light review is by a member of the editorial board and by one external reviewer. Full review includes at least two external reviewers. Light review usually results in quicker turnaround. Papers undergoing full review will have this fact noted prominently in the paper. Because CAIS is electronic, it is able to publish a paper quite quickly once the paper is accepted.

CONTACT

Authors having questions about the department can contact Alan Hevner and Sal March, the members of the CAIS Editorial Board responsible for the Information Technology and Systems department at ahevner@coba.usf.edu and sal.march@owen.vanderbilt.edu respectively.

REFERENCES

Hevner, Alan R., Salvatore T. March, Jinsoo Park, and Sudha Ram (2004) "Design Science in Information Systems Research," *MIS Quarterly* (28)1, pp. 75-105, March.

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