Decision Support Systems

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Design and natural science research on information technology

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Abstract

Research in IT must address the design tasks faced by practitioners. Real problems must be properly conceptualized and represented, appropriate techniques for their solution must be constructed, and solutions must be implemented and evaluated using appropriate criteria. If significant progress is to be made, IT research must also develop an understanding of how and why IT systems work or do not work. Such an understanding must tie together natural laws governing IT systems with natural laws governing the environments in which they operate. This paper presents a two dimensional framework for research in information technology. The first dimension is based on broad types of design and natural science research activities: build, evaluate, theorize, and justify. The second dimension is based on broad types of outputs produced by design research: representational constructs, models, methods, and instantiations. We argue that both design science and natural science activities are needed to insure that IT research is both relevant and effective.

Previous article Next article

Information system research; Design science; Natural science; Information technology

bio1

bio2

This paper is an extension of ideas originally presented in [46]

Fundamentals of database systems, automation plastic is a drama.
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