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Panel: Can Information Systems thrive without Design Science?

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Proposal: Panel Discussion

Duration: 45 Minutes

Title: Can Information Systems thrive without Design Science?

Design Science is the scientific study of design i.e. the study of the artificial as opposed to the natural (Gregory 1966; Simon 1996). Design science includes the process of creating IT artifacts such as “constructs (vocabulary and symbols), models (abstractions and representations), methods (algorithms and practices), and instantiations (implemented and prototype systems)” (2004, p. 77) on the basis of a systematic body of evidence. Hevner et al. (2004) provide a set of seven guidelines which help information systems researchers conduct, evaluate and present design-science research. The seven guidelines address design as an artifact, problem relevance, design evaluation, research contributions, research rigor, design as a search process, and research communication (Hevner et al. 2004) So

1. Can IT artifacts be created without Design Science? If yes, why do we need design science?
2. Does the field of Information Systems prosper because of Design Science?
3. How does design science as a methodology differ from other methodologies used in management and systems development research?
4. Future opportunities and frontiers in Design Science

The panel will discuss these topics with a focus on how to create better IT artifacts using Design Science.

Panelists:

1. Prof. Alan Hevner
2. Prof. Meriam Zahedi
3. Prof. Kay Nelson

Moderator: Raj Sharman

Brief Bio

Prof. Alan Hevner holds the Citigroup/Hidden River Chair of Distributed Technology at the Information Systems and Decision Sciences Department, College of Business, University of South Florida. Prof. Hevner earned his bachelors, masters, and PhD degrees from Purdue University. Dr. Hevner's areas of research expertise include information systems development, software engineering, distributed database systems, health care information systems, and service-oriented systems. He has published more than one hundred and fifty research papers on these topics and has consulted for several Fortune 500 companies. He was recently honored with a Lifetime Achievement Award for his contributions to the field of design sciences at the 2009 International Conference on Design Science Research in Information Systems and Technology. An internationally recognized scholar in Information Systems, Dr. Hevner serves as a Senior Editor of the Management Information Systems Quarterly, the top-ranked IS journal. Prof. Hevner has also served as a program manager at the National Science Foundation.

Prof. Fatemeh (Meriam) Zahedi is the Chaired Trisept Solutions Professor in Information Technology Management at the Sheldon B. Lubar School of Business, University of Wisconsin, Milwaukee. She earned her Bachelors and Masters Degree from Tehran University and a second masters in Business Administration and a doctoral degree from Indiana University, Bloomington, Indiana. Her current areas of research interest includes web-design/human-computer interface issues related to beliefs, satisfaction, cultural factors, trust and intelligent personalization, web-design issues in health and disaster-preparedness, new approaches in data mining and visualization, intelligent decision support systems and decision policies for the design of software components and web services. She has served on the editorial boards of a number of journals, which currently include *Information Systems Research*, *Canadian Journal of Administrative Science*, and *Information Resources Management Journal*. Dr. Zahedi has published extensively in leading journals, including *Management Science*, *Information Systems Research*, *MIS Quarterly*, *Journal of MIS*, *Decision Sciences*, *Decision Support Systems*, *Information & Management*, *IEEE Transactions on Software Engineering*, *IEEE Transactions on Systems, Man, and Cybernetics*, *IIE Transactions*, *IEEE Transactions on Professional Communications*, *Operations Research*, *European Journal of Operations Research*, *Computers and Operations Research*, *Interfaces*, *Software Maintenance and Evolution*, and *Review of Economics and Statistics*.

Prof. Kay Nelson serves as a Professor of Management at the Southern Illinois University at Carbondale. Prof. Nelson holds a bachelor's degree from The University of Wisconsin, Green Bay, a master of science from Hampton University and a doctorate in management information systems from The University of Texas at Austin. Her research interests include: Management information systems and innovation strategy, MIS architecture and personnel, Issues involving information systems and their relationship to organizational flexibility, change, and knowledge, Software maintenance, architecture, and metrics, IS personnel issues, Measurement of e-business tools and methods, Business value of IT, and Qualitative and multi-method research methods, innovation theory and practice. She is the recipient of the prestigious National Science Foundation Faculty Early Career Development (CAREER) Award (Young Presidential Scholars Program). "IT Personnel Transition and Organization Transition Strategy," February 2000.

Raj Sharman is an Associate Professor in the Management Science and Systems Department of the State University of New York at Buffalo. He received his B. Tech and M. Tech degree from IIT Bombay, India and his M.S degree in Industrial Engineering and PhD in Computer Science from Louisiana State University. His research streams include Information Assurance, Disaster Preparedness and Response Management, Patient Safety and Health Care Systems, Business Value of Information Technology investments, and Imaging Systems. He has published extensively in National and International journals and is the recipient of several grants from university and external agencies, including the National Science Foundation. He serves as the Associate Editor for the Communications of the Association of Information Systems (CAIS), *Journal of Information Systems Security (JISSEC)* and as a Coordinating guest editor for *Information Systems Frontiers (ISF)*.

Select Publications of the Panelists and Moderators

1. Chen, R., Sharman, R., Chakravarti, N., Rao, H. R., and Upadhyaya, S., "Emergency Response Information System Interoperability: Development of Chemical Incident Response Data Model," *Journal of the Association of Information Systems (JAIS)*, Vol. 9, No. 3, Article 7, 2008.
2. Chou, C. Zahedi, F. M., and Zhao, H. 2011. "Ontology for Developing Websites for Natural Disaster Management: Methodology and Implementation," *IEEE Transactions on Systems, Man, and Cybernetics-Part A*, Vol. 41, No. 1, pp. 50-62.
3. Han, W., Ada, S., Sharman, R., Rao, H. R., and Brennan, J., "Critical Factors Affecting Compliance to Campus Alerts", International Conference on Information Systems (ICIS 2011), Shanghai, China, December 4-7, 2011.
4. Hevner, A.R., S.T. March, J Park, and S. Ram (2004), "Design science in information systems research". *MIS Quarterly*, 28, 75-105.
5. Hevner, A.R. & Chatterjee, S (2010) *Design Research in Information Systems*, Integrated Series in Information Systems, Volume 22, Springer.
6. Zahedi, F. M. and Song, J. 2008. "Dynamics of Trust Revision: Using Health Infomediaries," *Journal of Management Information Systems*, Vol. 24, NO. 4. pp. 225-248.
7. Sharman, R., Ramanna, S.S., Ramesh, R., and Gopal, D. R., "Cache Architecture for On-Demand Remote Streaming on the Web," *ACM Transactions on the Web*, Vol. 44, No. 1, pp 23-49, 2007.
8. Armstrong, D., Nelson, H. J., Nelson, K. M., and Narayanan, V. K. forthcoming. Building the IT Workforce of the Future: The Demand for More Complex, Abstract, and Strategic Knowledge. *Information Resources Management Journal (IRMJ)*.