



Spring 2011 Colloquium

Temple University

Computer and Information Sciences

Digital City as an Operating System: Digitalization and Generative Urban Innovations

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Abstract

As pervasive digitalization progresses in our everyday environment, we have the opportunity to apply digital technology to address some of the serious challenges our society is facing.

The talk will first explore topics of digital innovation as a new paradigm in the field of general innovation, driven by the three unique characteristics of digital technology:

- (a) reprogrammability,
- (b) homogenization of data, and
- (c) self-referential nature.

Based on these unique characteristics of digital innovation, the talk will represent cities or urban environments as the most serious generational challenges, which we have to approach with the tools offered to us by recent advances in digital technology.

Furthermore, a specific architectural vision of a digital city as an operating system will be proposed. Such a vision can be used to establish a new generative platform for urban innovations.

The North Broadband Project will be presented as an illustrative example.

Bio:

Youngjin Yoo (PhD, 1997, University of Maryland), Associate Professor, Management Information Systems, Temple University, studies a wide range of topics broadly related to the IT-enabled innovations and organizational transformation. Over the last five years, he has been studying the changes and innovations in architecture, construction and engineering industry. In 2003-04, he studied the implementation of the integrated financial management systems at NASA. He also studies the worldwide diffusion of broadband wireless technologies and is currently editing a book on mobile commerce in Asia-Pacific region. Most currently, he is interested in the role of design in reshaping management language and education. His work was published at leading academic journals such as Information Systems Research, MIS Quarterly, Organization Science, the Communications of the ACM, the Academy of Management Journal, the Journal of Strategic Information Systems, the Journal of Management Education, and Information Systems Management. He is a senior editor of the Journal of Strategic Information Systems, an associate editor of Information Systems Research and on the editorial board of Organization Science, Information and Organization, and Journal of AIS. He has received over \$1 million in research grant from National Science Foundation, NASA and Korea Science Foundation. Prior to joining Temple University, he was Lewis-Progressive Chair of Management at the Weatherhead School of Management at Case Western Reserve University. He was also a visiting professor at Hong Kong City University, Zollverein School of Design, and Tokyo University of Science in Japan. He consults and lectures worldwide.