

## Information Systems and Management (ISM) Forum

Autumn Term 2008

**Speaker:** Professor Richard Boland, Case Western Reserve University, USA

**Title:** Innovation in the Digital Era: Digitization and Four Classes of Innovation Networks

**Date:** Wednesday 29th October 2008

**Venue:** Room B3.20, Warwick Business School, Scarman Road

**Time:** 14.30 – 16.00

**Abstract:** The seminar will draw material from the following published paper: Y Yoo, K Lyytinen, and R J Boland, "Innovation in the Digital Era: Digitization and Four Classes of Innovation Networks"

Developments in information and communication technologies (ICT) have raised new challenges for explaining innovation. In this essay, we analyze the impact of digitization of products and services on innovations. We examine how new forms of innovation networks are influenced by the continuing development of digital technologies. We posit that they:

1) reduce communication costs while increasing the reach and scope of communications; and 2) accelerate digital convergence by integrating previously unconnected knowledge, activities, artifacts and capabilities. These influences stretch innovation networks in two ways: 1) they increase the distribution of control and the amount of coordination; and 2) they increase the heterogeneity of knowledge available. We use these premises to distinguish four types of innovation networks, and examine how they involve different types of cognitive and social translations during the innovation process. We distinguish between: 1) Singular innovation networks, 2) Distributed innovation networks, 3) Systemic innovation networks, and 4) Doubly Distributed innovation networks. We identify five design properties for information infrastructure to support innovation networks in digital era. We draw several implications of the proposed framework for innovation research. In particular, we note the emergence and movement towards doubly distributed forms that accompanies digital convergence. We conclude with a call for research based on a richer ontology and epistemology of innovation, using expanded network models and critically examining the nature and impacts of modularization in the digital era.

**Biography:** **Richard Boland** is Professor of Information Systems and Professor of Cognitive Science at Case Western Reserve University and a Fellow of the Judge Business School at the University of Cambridge. His research emphasizes interpretive studies of how individuals design and use information systems. He has served as Professor of Accounting at the University of Illinois at Urbana-Champaign and visiting Professor at the Anderson Graduate School of Management at UCLA, and Malmsten Professor at the Gothenburg School of Economics.

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