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FACULTY OF SCIENCE AND TECHNOLOGY
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**“THE VISTA PROJECT: VERTICAL
INFORMATION STANDARD AND
TECHNOLOGY ADOPTION”**

by

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Abstract

This project, funded by the National Science Foundation, involves a comparative empirical analysis of the development, adoption, implementation, and diffusion of vertical (or industry-wide) information system standards in three industries

(automotive parts supply, retailing (RFID applications in the footwear and apparel), and the home mortgage finance industries). The study aims to contribute to knowledge about IT-enabled interorganizational collaboration and its consequences for national productivity improvement.

This work is motivated by the opportunity enabled by the potential for Internet-based XML standards, which promises to lower the costs of interorganizational collaboration significantly. Achieving these gains, however, will depend on 1) the successful development of higher-level Internet-based interorganizational coordination standards, 2) widespread adoption of these standards by both large and small organizations in specific vertical industries, and 3) appropriate technical choices by these industry participants during *implementation* of the standards. Unfortunately, standards development, adoption, and implementation are problematic and challenging processes. Standards development is a collective (industry-level) activity. Because an interorganizational interconnection standard must harmonize the activities of many different organizations, no one organization can develop a successful standard for all others: Representatives of all interdependent organizational segments must join in. The extent to which a vertical information system standard diffuses in an industry is also a collective phenomenon, because individual organizations base their adoption choices on what other organizations do. But the actual adoption and implementation of standards are organization-level activities, leading to complex interactions between individual organizational decisions and collective processes and outcomes. For example, certain technical choices during standards development can make it easier to gain consensus and successful development of an industry-wide standard. This, however, would make simultaneously organization-level adoption and effective implementation of the standard less likely to occur, such as by failing to account for the incentives of commercial software developers. Our aim is to better understand how these processes interact in shaping vertical information system standards creation and use.

The study involves in-depth case studies of three industries, including analysis of the efforts of the relevant industry consortia developing vertical information system (VIS) standards. These industry-level case studies are complemented by detailed interviews with a sample of 60 companies in each industry in order to allow comparisons of relative success across industries in terms of adoption and use of VIS standards, and the consequences of the standard.

Biography

Rolf T. Wigand is the Maulden-Entergy Chair and Distinguished Professor of Information Science and Management at the University of Arkansas at Little Rock. He is the immediate past Director of the Center for Digital Commerce and the Master's and Graduate Program in Information Management, both in the School of Information Studies at Syracuse University. Wigand is a researcher, consultant and speaker in information systems and management, electronic commerce, and the strategic deployment of information and communication technology. His research interests lie at the intersection of information and communication business issues, the role of newer information technologies and their impact on organizations and society, as well as their strategic alignment within business and industry. Most recent and current NSF-funded research has focused on the global impact of electronic commerce in ten nations, the impact of electronic commerce on the real estate industry, as well as the software standards development in the mortgage industry. His current NSF research grants (2007-2011) continue with standards development research in the mortgage, retail and automotive parts supply industries as well as trust, leadership and strategy in virtual environments (NSF VOSS Program). He has consulted for The Wall Street Journal, The New York Times, Forester Research, Heineken, Steuben, Corning, IBM, ALCATEL, Siemens AG, Ford World Headquarters, Chase Manhattan Bank, Herman Miller, and others. His research has appeared in such journals as MIS Quarterly, Journal of MIS, Sloan Management Review, Journal of Information Technology, International Journal of Electronic Trade and Electronic Markets, European Journal of Information Systems. He is the author of six books and over 110 articles, book chapters, and monographs.

ALL ARE WELCOME!