IDEA GROUP PUBLISHING **ITB12915**

701 E. Chocolate Avenue, Suite 200, Hershey PA 17033-1240, USA
Tel: 717/533-8845; Fax 717/533-8661; URL-http://www.idea-group.com

This paper appears in the publication, *Collaborative Geographic Information Systems*
edited by Shivanand Balram and Suzana Dragicevic © 2006, Idea Group Inc.

Chapter XII

Design Considerations for an Internet Portal to Support Public Participation in Transportation Improvement Decision Making

Timothy L. Nyerges, University of Washington, USA
Kevin S. Ramsey, University of Washington, USA
Matthew W. Wilson, University of Washington, USA

Abstract

Recent research about "analytic-deliberative" decision processes shows that meaningful public participation is possible, and decision outcomes are improved. The analytic component provides technical information that ensures broad-based, competent perspectives are treated. The deliberative

component provides an opportunity to interactively give voice to a diversity of values, alternatives, and recommendations. Unfortunately, such public participation has been expensive and time consuming, and thus involved small groups. An Internet system that combines geographic information system technology, decision modeling technology, and communications technology into a geospatial portal to support analytic-deliberative processes might be one way to facilitate meaningful participation in large groups as a way for agencies to more effectively engage a public who wishes to participate. The core research question underpinning our work on system design is: What system design considerations for various analytic-deliberative capabilities will foster support of structured and flexible, analytic-deliberative, transportation improvement decision processes?

Introduction

Research about local governance suggests that there is little "meaningful public participation" in public-oriented decision making because it is a complex process, and communication within large groups of publics can be time consuming and rather expensive (National Research Council, 1996; Renn, Blattel-Mink, & Kastenholz, 1997; Smith, 1999; Taylor, 1998). Despite this expense and complexity, laws mandate that it occur. For example, U.S. federal (NEPA, 1970; U.S. Department of Transportation, 1998) and many state transportation laws mandate public participation in at least three pervasive decision situations-long-range planning, capital improvement programming, and major investment studies-that occur at local, regional, and state levels of government. Similar laws mandate public participation in many democracies around the world.

Consequently, it makes sense to investigate the development of advanced information technologies that may be able to foster more efficient, effective, and equitable approaches to meaningful public participation in decision processes. In our research about information technology to support complex decision processes, we focus on the transportation improvement program (TIP) decision situation because it is the intermediate spatial-temporal scale of decision process between planning and project-level decision situation. A TIP consists of a set of transportation projects proposed for development on a "roll-over" basis, that is, projects get added to a 6-year programming budget to be scoped, designed, and then constructed, with those constructed getting "rolled-off." Preparation of a TIP is a rather complex group activity. The activity can involve elected officials, policy analysts, technical specialists, and the public as diverse groups of interested and/or affected persons (Smith, 1999; Taylor, 1998). The TIP process can take months to complete, every 2 years.