

# Information sharing and interoperability at the borders: A Study of North America

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## ABSTRACT

This paper provides a summary overview of the interests in and the status of the sub-group on Border States Integration and Interoperation of the North American Digital Government Working Group

## Categories and Subject Descriptors

H.4.2 [Information Systems Applications]: Type of systems – *e-government applications*.

## General Terms

Management, Performance, Human Factors, Standardization, Theory.

## Keywords

North America, Border, Digital Government, Integration, Interoperation

## 1. INTRODUCTION

### 1.1 North America Digital Government Working Group

The North American Digital Government Working Group (NADGWG)[2] was formed in May 2007 to build new understanding of and extend upon digital government research and practice in Canada, Mexico and the United States. In particular, NADGWG is interested in comparative questions about cross-boundary digital government initiatives in North America as well as questions related to initiatives that are transnational in nature. Researchers from a variety of institutions and disciplines are engaged in developing a comparative and transnational research agenda targeted at questions about intergovernmental digital government initiatives in Canada, Mexico, and the United States. The Working Group is seeking to increase understanding of digital government in these complex settings and to develop tools to guide practitioners in the region. NADGWG will contribute to the development of models of collaboration and cooperation employed across geographic, jurisdictional and political boundaries. The development of resources useful to researchers and practitioners throughout North America and beyond, as they work both within and across boundaries to enhance multi-jurisdictional policy domains is also a goal of the working group. In addition, the working group will create new models and strategies for conducting applied digital government research across geographic and political boundaries.

The Working Group members will come together in face-to-face meetings several times throughout three years of the formally funded efforts to produce a series of deliverables for academics and practitioners, including reports, papers, cases or methodological notes among others. In addition to the face-to-face meetings, working group activities are carried out through the use of teleconferences, email and online collaboration tools. In addition, a management team has assumed responsibilities for the coordination of both research and logistical aspects of the working group. The working group is organized to achieve its goals into three different groups. The first, comprised of all members of the working group addresses issues such as the development of a digital government research agenda for North America. The second, comprised of two sub-groups, is organized around specific questions of interest to the members of the working group. To organize the research activities the two sub-groups were formed during the first meeting in May 2007. This paper provides a summary overview of the interests in and the status of the sub-group on Border States Integration and Interoperation.

### 1.2 Sub-Group on Border States Integration and Interoperation

The main purpose of this sub-group is to understand the information sharing and interoperability issues and challenges faced by workers of the borders of government agencies from Canada, Mexico, and the United States. The sub-group is particularly interested in studying the role of information and information technologies in these cross-boundary efforts.

With the development of globalization, transnational issues among countries, especially around border areas, become phenomenal. Not only hot topics like national security, but also other public issues such as public health, daily cross-border worker, environmental protection, natural disasters are all related to borders. Solving those issues require cross-border and cross-agency information sharing and interoperation.

## 2. CREATING A RESEARCH AGENDA

Through teleconferences, the sub-group decided to first conduct literature review and pilot case studies to define research questions. Eight members of the sub-group attended a three day meeting in Cholula, Mexico in November 2007. During the meeting the sub-group discussed the preliminary results of the literature review as well as recent advances in the identification of case studies. The sub-group agreed to use the review findings to identify previous relevant research and theoretical foundations to

support the development of the case studies. The initial product of the sub-group effort will be a description of the current information sharing environment found in three initial case studies from the US-Mexican and US-Canadian borders. The case studies and the theoretical questions which will emerge from the preliminary analysis will be used to frame the creation of joint grant proposals.

### 3. UNDERSTANDING BORDER THEORIES

This literature review sought to identify research papers related to the use of information and communication technologies for information sharing and interoperability in border regions. In the light of the project, works are classified into two categories: 1) Studies addressing the technological aspects of transnational information sharing and collaboration; 2) Studies about cross-border intergovernmental relations/ agreements that address issues related to information sharing.

Brunet-Jailly's study [1] is particularly relevant to our research in defining our research questions. This paper proposes a theory of borders based on the analysis of literature on borders, boundaries, frontiers, and borderland regions. The theory can be used to compare and categorize borders. It includes four dimensions: 1) Market forces and trade flows; 2) Policy activities of multiple levels of governments on adjacent borders; 3) the particular political clout of borderland communities; 4) the specific culture of borderland communities. The author suggests that the relative explanatory power of each analytical dimension varies and that these dimensions are correlated, that is, the specific and complex interaction of the four analytical lenses forms the backbone of a theory that allows us to work empirically and to analyze borders at two levels. The core of the theory of border studies is: the implicit recognition that agency and structure are mutually influential and interrelated in the shaping of emerging and integrated borderlands.

At question is the utility of the level of generalization found in this theory to informing government, for example, understanding the dynamics of information use and sharing in border regions. Moreover these four dimensions fail to explicitly describe and explain the role of information in interoperable border systems. Therefore, the sub-group proposes enriching and refining those four dimensions.

### 4. RESEARCH FOCUS AND DESIGN

The study will draw on Brunet's theory of borders and extend it by incorporating the information dimension. It seeks to join these political, economic and cultural contexts as well as the information needs of cross-border interoperable systems. The Four border areas were selected to present the full range of problems of border crossing and border control represent (see figure 1). Five policy areas present ideal contexts for joining

these perspectives: environment, public health, security, emergency and disaster response and trade. Case selection will be based on a set of criteria designed for comparability as well as the opportunity to identify variation among the dimensions. The study will engage key stakeholders within each policy domain working at the local level within border regions. These officials might include federals officials working within regions and local government officials as well as related businesses.

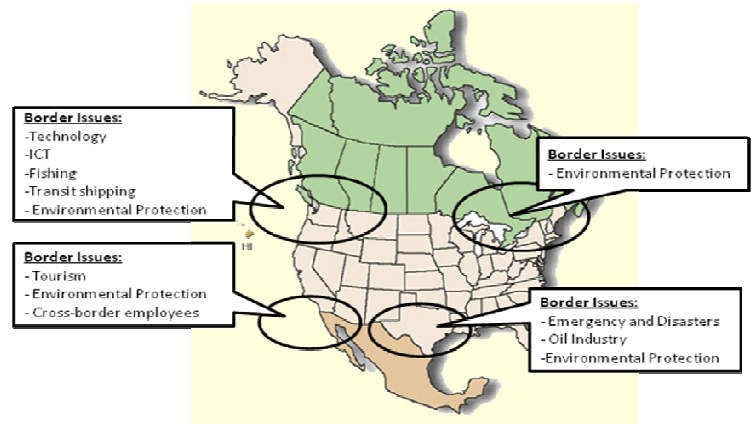


Figure 1: Mapping Border Issues

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### 6. REFERENCES

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