Chapter V
Public Sector Participation in Open Communities

Andrea B. Baker
University at Albany, SUNY, USA

J. Ramon Gil-Garcia
Centro de Investigación y Docencia Económicas, Mexico

Donna Canestraro
University at Albany, SUNY, USA

Jim Costello
University at Albany, SUNY, USA

Derek Werthmuller
University at Albany, SUNY, USA

INTRODUCTION

As new Internet-based products, services, and resources are developed, private companies and government agencies are exploring the use of these open standards and open source software for their daily operations. One of the main advantages of the open paradigm is interoperability and re-usability of code. Another significant advantage is data longevity, which means that the data created by these products are not constrained by future technology or vendor changes. They will be compatible with new document formats, applications, or specific pieces of software. However, there are also challenges associated with open standards and open software, particularly for public sector organizations. Issues such as technical training and support services can be a major concern for government agencies. Another issue that must be explored is associated with participating in online development communities and how this is constrained by the current legal framework and personnel practices.

One of the primary ways ideas are exchanged open standards and open source products is by sharing ideas and code through online repositories created by open communities. These communities, such as sourceforge.net and Core.gov, offer development advice, repositories of code, and other useful resources for adopting open standards

and open source software. This chapter focuses on the challenges that public sector agencies can potentially face when participating in an online community built around a repository called the XML tool kit. The XML tool kit was a result of a project conducted by the Center for Technology in Government (CTG), a research institution affiliated with the University at Albany, SUNY, which involved state agencies interested in using XML, one of the most well-known open standards, for Web site management. As a result of establishing CTGs XML library and a review of the literature associated with open standards and open source software, questions arose about the issues involved with participating in an online development community, particularly for government employees. We suggest that future research be conducted to explore some of these issues, specifically licensing options and the governance structure of online repositories.

The chapter is organized in six sections, including the foregoing introduction. Section 2, is an overview of open source and open standards as well as a discussion about the associated benefits and challenges. Section 3, the main focus of the chapter, explores in-depth an example of one of those main challenges: creation and sustainability of online development communities and repositories. A detailed description of CTGs case study in which several New York state agencies were partners in creating the shared online repository of XML code for use in Web site management is highlighted. Section 4 suggests future research into licensing options and governance structure of online repositories, specifically considering the particularities of the public sector. Finally, section 5 provides some concluding remarks and section six suggests future research directions.

BACKGROUND: BENEFITS AND CHALLENGES OF OPEN STANDARDS AND OPEN SOURCE SOFTWARE

To begin a discussion about open standards and open source, it is necessary to provide some basic definitions and discuss the benefits and challenges associated with them.

Benefits of Open Standards and Open Source Software

Open standards are simple language data descriptions that are uniform in a discipline so that other programmers and machines can understand their logic. Dalziel (2003) describes open standards as "transparent descriptions of data and behavior that form the basis of interoperability." Interoperability has become an important concept for the future. Tim Berners-Lee, the creator of HTML, is working with the World Wide Web Consortium to develop data standards that allow for the seamless flow of information. His vision of a semantic Web is of an environment where all data is accessible, despite applications, browsers or programming languages. One of the primary languages underlying this concept is extensible markup language (XML).

Another benefit of open standards is data longevity or the ability to access data at any point in time without the concern of software incompatibility. One of the benefits of open standards such as XML is that "no matter which software was used to create the objects or medium to store the objects, future software that understands XML can extract the relevant information" (Baru, 2006).

Open source software is based on concepts similar to open standards, but the two are not the same. Open source software allows anyone to access its source code, which explains how the software works. One of the underlying principles of open source software is that by opening access to code, others could improve it or customize it to fit organizational or personal needs (Stallman, 1999).

One of the most powerful benefits of open source software is its flexibility. For example, each Web site is different in more than one way. A single piece of software, following a predefined set of rules has little chance of working on many sites without having the site conform to its way of working. Open source software allows the developer to modify the software to work the way the site needs it and not vice versa.

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