Chapter 11

The Promise of Open Source Systems/Software in Developing Requisite E-Government Solutions for the Developing Countries:
A Review of Literature

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ABSTRACT

E-Government open source system is now becoming commonplace. The e-Government open system requires at each review stage the relevant official input, the date, and the time when each application is processed. Free access to the status of an application makes applicants realize that there is no need to contact officials or to provide a bribe to complete the process. No doubt, e-Government open system is a very useful system currently being used by a majority of governments in developing world countries. However, extant review of literature has shown that some developing countries governments are now also making frantic effort to implement the open system although the practice seems to have gone farther in developed nations. In light of this, this chapter discusses e-Government open source system in developing countries and compares this to what is happening in the developed countries, examines the role OSS/SF has played in developing e-Government solutions or applications in the developing world, identifies the benefits and challenges of OSS/SF in the developing countries' context, and discusses possible ways forward. The chapter posits that open source plays a significant role in designing e-Government applications.

INTRODUCTION

The revolution brought about by the information communication technologies touches nearly every areas of human endeavor including governance. Not long ago, governments in most countries around the word realized the potential of Information Communication Technologies (ICTs) to enhance and improve their governance and ensure that government is brought closer to the people. These governments have created Web portals and government online services/platforms in order to ensure citizens directly and easily access government services and employees. Furtherance to the above is to increase citizens' participation in governance. Similarly, (Webe, 2003) testified to this pointing out that many governments around the world have begun to consider the use of open source software as a key part of their strategic thrust in information technology, requiring that its use be considered when it provides a feasible alternative to proprietary software. Developing countries in particular, with the resource constraints they have, view open source software (OSS) as a means of reducing the cost of IT investment and increasing its productivity. The imperative to adopt OSS in these countries particularly in the public sector is also motivated by a desire for independence, a drive for security and autonomy and a means to address intellectual property rights enforcement.

Bruggink (2003) describes open source/free software (OSS/FS) as the software which may be copied and used freely. Open source/free software is often available free of charge on the Internet so it can be acquired only at the cost of downloading it or obtained on CDs at packaging cost. The most popular open source software is the GNU/Linux operating system. Unlike proprietary software, OSS/FS can be copied, used, studied, modified, distributed with few or no copyright restrictions (Backus, 2001).

According to (Baguma, 2005), users of free and open source software have four kinds of freedom: the freedom to run the program, for any purpose; the freedom to study how the program works, and adapt it to their needs; access to the source code is a precondition for this, hence the open source concept; the freedom to redistribute copies so they can help their neighbor; the freedom to improve the program, and release their improvements to the public, so that the whole community benefits (Skidmore,2005). Similarly, Gnu.org, the official home of the free and open source software movement, upholds that: "Free software'' is a matter of liberty, not price. To understand the concept, you should think of ``free'' as in "free speech',' not as in "free beer'.' This is in relation to the associated freedoms to free software (David & Michael, 2004).

Open source software play significant roles in e-Government. For instance, an open source tool, provides a secure method for system administrators to instantly access and manage the servers located in remote local government offices, e-Governance is the most effective way of reducing costs in running public affairs from the lower levels of government to the central government.

E-Government (short for electronic government, also known as digital government, online government, or connected government), refers to digital interactions between a government and citizens (G2C), government and businesses/Commerce (G2B), government and employees (G2E), and also between government and governments/agencies (G2G).Within each of these interaction domains, four kinds of activities take place. These are: Pushing information over the Internet (for example: regulatory services, general holidays, public hearing schedules, issue briefs, notifications, etc.); two-way communications between the agency and the citizen, a business, oranother government agency (In this model, users canengage in dialogue with agencies and post problems, comments, or requests to the agency); conducting transactions (for example: Lodging tax returns, applying for services and grants); governance (for example: online polling, voting, and campaigning). The most important anticipated benefits of

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