

Chapter XIII

Open Standards and Government Policy

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ABSTRACT

The fast growth in globalization stimulates the trend of open standards and challenges governments in devising policies for the national information infrastructures to foster equal access to and even distribution of knowledge among citizens and business. In response, governments may seek a more active role in standardization as they face challenges from being stakeholders in use of standards; a need for new standards may drive governments to become participants in the standardization process, and to require conformance assurance by the market, and search for a policy on migration from an installed base of proprietary solutions. In this chapter the authors identify some critical issues, which can help government decision makers opt for select positions and interventions in standardization.

INTRODUCTION

The role of national governments in the context of global informatization is fostering information infrastructures that create equal access to and an even distribution of knowledge among citizens and businesses (Castells, 1996). Efficient func-

tioning of the information infrastructure requires standards for effectively implementing interoperability and interchange of information-based processes and products in the society, which, in turn, requires competent government policy for choosing and adopting broadly recognized standards that do not bias solutions towards specific

implementations (Fomin, Pedersen, & de Vries, 2008). Adoption of relevant standards is also required for protection of the critical infrastructure (GAO, 2004).

An increasing interest in standards across governments may be traced to the understanding of the huge economic impact a *lack* of standards policy can have upon national economies (Garcia, 1992), and government budgets in particular. It is through sharing a common standard that anonymous partners in a market can communicate, can have common expectations on the performance of each other's product, and can trust the compatibility of their joint production. Thus, standards are necessary for the smooth functioning of anonymous exchanges – and therefore, for the efficient functioning of the market (WTO, 2005). The sheer size of the information technology markets, representing a growing share (more than 10 percent) of the global economy, attests to the economic magnitude of standards' influence on products. Practically all ICT products implement one or more standards – *de facto* or *de jure*. This is due to the component nature of all ICT hardware and the many software and hardware interfaces that need being specified.

Compatibility and information and services exchange come with a cost in the age of rapidly developing technology. With major shifts of technology paradigm taking place every decade, governments and businesses alike are facing the huge migration costs of ICT structures built in previous eras of computerization to make them meet the requirements of the present day operations (Hertz, Lucas, & Scott, 2006).

Given the technical criticality and economic importance of standards in the functioning of modern information society, there has been an increasing interest in *open* standards across governments (IBM, 2005). *Open standards* are understood as “technologies whose specifications are public and without any restriction in their access and implementation” (Reding, 2008). In the context of this work, we refer to open standards along

the lines defined by European standardization organizations: open standards are (1) developed and/or affirmed in a transparent process open to all relevant players, including industry, consumers and regulatory authorities; (2) either free of Intellectual Property Rights (IPR) concerns, or licensable on a fair/reasonable and non-discriminatory (F/RAND) basis; (3) driven by stakeholders, whereas user requirements must be fully reflected; (4) publicly available; and (5) maintained (ICT Standards Board, 2005, p.10). Following these process requirements, the standard should not favour a single company or group of companies against others in implementing the specifications. While this technological condition echoes the pluralist rhetoric of democratic society (Oksala, Rutkowski, Spring, & O'Donnell, 1996, p.11), it often presents a challenge for policy-makers, as almost all technologies have vested commercial interests driving their development into standards though specific proprietary technologies.

The novelty of the open standards trend (IBM, 2005) and challenges it brings to government decision-making implies the lack of government expertise in policy formulation. In the tradition of providing academic intellectual vision for building government decision-supporting expertise (Helmer & Rescher, 1959), in this paper we review some of the standards and standardization issues and challenges that governments, ICT industries, and non-ICT industries face in the coming years. We do not aim to provide a comprehensive policy guideline, as such task would be near to impossible given the diversity of national interests and ICT infrastructures from country to country. However, by engaging in the debate, we can sketch out general directions for future developments, and identify some critical issues, which can help government decision makers harness the complexity of the issue (Axelrod & Cohen, 1999).

This paper is structured as follows. First we explore the contemporary challenges ICT infrastructure build-out imposes on the government policy. Then we discuss the role of open standards

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