The Case for Open Access Networks

Don Flournoy, Ohio University, USA
Rolland LeBrasseur, Laurentian University, Canada
Sylvie Albert, Laurentian University, Canada

ABSTRACT

Efforts to keep the broadband Internet a free and open public utility are much in the news. In the context of the Network Society, the authors examine some of the publicly stated arguments and positions being taken in the articulation of “net neutrality” and “open source” practices and principles. The article explores the difficult technical challenges present in maintaining “open access” telecommunications networks using proprietary technologies. From a global perspective, industry groups have strong incentives to work together to adopt universal technical standards. With more open technical standards, open source applications and products can be accelerated and made more pervasive. Collaboration among businesses, national governments, and public sectors are seen as key to implementing policies that lead to public participation in economic and social development both locally and globally. The principal means by which all these approaches can be sustained is to keep the Internet accessible, free and open for all.

Keywords: 700 MHz; Broadband Internet; FCC; FLOSS; Google; LINUX; Net Neutrality; Network Society; Open Access; Open Source

INTRODUCTION

Debates about the Internet and its role in modern society continue unabated as stakeholders try to influence the shape of things to come. Originally conceived as an open and neutral carrier of information, access to the Internet of the future is no longer guaranteed.

An essential tool of modern society, the Internet potentially impacts all spheres of activity, whether private or public, whether for leisure or work. To ensure that individuals and communities gain maximum benefit from the Internet, governments are finding themselves under pressure to provide enabling legislation. This article addresses the dilemmas faced by policy makers who see the innovative potential of open access networks but must bow to the economic and technical realities of commercial sectors who do not find all markets profitable and who must manage their networks for maximum value wherever they choose to install them.

To set the stage, the basic idea of the Network Society and the network economy are described, as are the principal stakeholders of the Internet and the controversies that surround
the principles of universal access. The context of this debate is framed in terms of the $4.7 billion bid on the 700 MHz frequencies in U.S. markets by Google Inc. in 2008, followed by a discussion of the three building blocks of open access networks: net neutrality, standards-setting, and non-proprietary technologies and software. The article concludes with some insights that can help inform future policy decisions.

DEVELOPMENT OF THE NETWORK SOCIETY

The Network Society is a dependent social structure using interconnecting digital technologies to process and distribute information (Castells, 2006, p. 7). In essence, the Network Society makes use of information and communication technologies (ICTs) to gain greater openness, adaptability and flexibility for itself. Despite Castells' optimistic view of the Network Society, he has encouraged policy makers to reflect before acting:

...the key question is how to proceed to maximize the changes for fulfilling the collective and individual projects that express social needs and values under the new structural conditions (p. 16).

An important component of the Network Society is the network economy in which knowledge and other intangible assets have become the most important productive factor (Mandeville, 2005). Intangible assets include intellectual property, human and social capital, information economics, brand names, customer databases, core competencies, and business relationships. Organizations operate in a network of relationships and alliances that allow them to compete and innovate. They practice both collaboration and competition, and emphasize openness with close partners and limited proprietary access with competitors and customers. In other words, for-profit organizations may argue for controlled access to networks to generate revenues and maintain a competitive advantage. It depends on where these organizations are located in the Internet structures (Barry, 2008) and where elements of true competition exist.

Castells and followers have tended to view global forces as dominant, with nation states and regional bodies serving as powerful players through their legislative and regulatory powers and public sectors (Castells & Cardoso, 2006). However, other stakeholders (civil liberty groups, industry associations, organizations for disabled people and trade unions) attempt to influence the dominant players (Skogerbo & Storsul, 2000). Equally true is the decision-making that takes place at the local community level which is tied not just to technology and economy, but also to social well-being and basic community values (Jain, Mandviwalla & Banker, 2007). Numerous such examples are supplied by the Intelligent Community Forum, a non-profit think tank and promoter of the broadband economy in local communities throughout the world (www.intelligentcommunity.org). Thus, the policy decisions that shape the Internet impact on all levels of social and economic organization.

Debates over railroad (Suomi, 2005) and telephone services (Preston & Flynn, 2000) have historically centered on the importance of these public services to the well being of all citizens and communities, and the role of government in assuring accessibility. Additional justification for universal service is found in its economic impact through innovation and entrepreneurial activities (Bar & Riis, 2000). This historical background has set the tone for the current debate on the Internet and the mesh of telecommunication networks that compose it. The stakes are high: realizing the potential of the Internet for greater access, innovation, creativity and information dissemination and exchange (Lessig, 2005).

In the Winter of 2008, Google Inc., a ten-year-old dot.com start up, crystallized this debate by submitting a $4.7 billion bid on a block of spectrum at auction by the United States Federal Communications Commission (FCC), with the intent to assure that the Internet remained an “open access network.” At auction
10 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the product's webpage: www.igi-global.com/article/case-open-access-networks/2933?camid=4v1


Related Content

Texting and Christian Practice
www.igi-global.com/chapter/texting-and-christian-practice/130154?camid=4v1a

Anti-Takeover Cocktails: Shareholder Rights Plans, Golden Parachutes, and Shark Repellents
www.igi-global.com/article/anti-takeover-cocktails/65584?camid=4v1a

Principle-Based Engineering
www.igi-global.com/chapter/principle-based-engineering/28397?camid=4v1a