Privacy Protection via Technology: Platform for Privacy Preferences (P3P)

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ABSTRACT

Increasingly, the Internet is used as a common tool for communication, information gathering, and online transactions. Information privacy is threatened as users are expected to reveal personal information without knowing the consequences of sharing their information. To that end, research groups, both from academia and industry, have embarked on the development of privacy enhancement technologies. One such technology is Platform for Privacy Preferences (P3P). Developed by the World Wide Web Consortium (W3C), P3P has a number of prominent stakeholders such as IBM, Microsoft, and AT&T. Yet, there is little published information on what P3P is and to what extent it is being adopted by e-business organizations. This study is exploratory in nature and aims at addressing these questions; in particular, we look at P3P both as a new technology and as a standard. We use our empirical data on top 500 interactive companies to assess its adoption.

Keywords: enterprise privacy authorization language; platform for privacy preferences; privacy laws; standards; technology

INTRODUCTION

The computing field today is far from what it was 20 years ago. As the distributed networked computing architecture is becoming prevalent and with e-commerce on the rise, the issues of privacy protection and system security have come into focus (Reagle, 1999). Although some personal information has been available in city-hall records and libraries for some time, its level of accessibility, when put into electronic form on computer networks, has changed drastically in recent years (Moor, 1997). Easy access to personal information has caused concerns about privacy and security among end-user consumers and IT professionals. Telzrow and Kobsa (2004) report that 64% of users have expressed apprehension in using the Internet for online transactions due to the fact that they don’t know how their personal information will be used. Ninety percent are in favor of being asked for permission before companies use their personal information for marketing purposes. Seventy-six percent con-
sider privacy policies quite important, and 55% would be willing to provide personal information to Web sites that have posted privacy policies.

The security issue is often regarded as a technical issue to be solved by off-the-shelf solutions such as virus checkers or firewalls. The privacy problem, however, has received little attention and is likely to get worse without proactive measures. According to a recent report by Zona Research, a low percentage (16%) of managers and IT staffers surveyed said that their company addressed privacy issues (Surmacz, 2001).

Why security and privacy issues remain unresolved after so many years is not really a mystery. Both are more of a process than a static problem, and the environment keeps changing, while little resources have been applied to deal with these issues. Budget allocation and organizational culture have evolved slowly, even if the distributed architecture adopted by most organizations is far from the vault-setting environment characterizing computing systems of 20 years ago. On the other hand, the e-business economy is growing (Rohde, 2002), and there is a sense of urgency for building trust and gaining respect for privacy before another wave of issues brings instability to this emerging infrastructure. Research groups, both from academia and industry, have embarked in the development of Privacy Enhancement Technologies.

To that end, P3P is an emerging standard and technology developed by the World Wide Web Consortium. The simplicity and transparency are two characteristics that make P3P so appealing (Karjoth et al., 2003). It allows the users to gain more control over their personal information by the Web sites they visit. For Web site developers, it provides a simple means to express their Web site information collection, distribution, and retention policies.

Among the proponents of P3P, IBM is distinguishing itself and experimenting with the development of a P3P policy editor (IBM, 2000). AT&T has a research project dedicated to developing a P3P addon to Microsoft Internet Explorer (AT&T, 2003), which matches personal preferences of the visitors on privacy issues with the XML published privacy policies of the companies.

Despite these efforts, there is little published information on what actually P3P is, what its capabilities are, and to what extent it is being adopted by e-commerce organizations. This study is exploratory in nature and aims at providing a brief explanation of P3P, both as a new technology and as a standard. We use our empirical data to assess its adoption in the e-commerce environment. The next section presents the background on the use of technology for privacy protection. We then examine the role of P3P in privacy protection and offer a brief history of how it started. The following sections explore P3P capabilities as privacy protection technology and standard, and the extent it is adopted by interactive companies. We then look at P3P as a competitive advantage and how it is used to gain the end-user’s trust. We conclude with discussion on the limitations of P3P and its future directions.

**BACKGROUND**

Alan Westin (1967) defines privacy as "the claim of individuals, groups, or institutions to determine for themselves when, how and to what extent information about them is communicated to others" (p. 7). In the e-business realm, the transactions have
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