

## Chapter II

# IT Standardization: The Billion Dollar Strategy

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### ABSTRACT

*This article summarizes key incentives for vendors, users, government and individuals to participate in the standardization process. It argues that standards can expand markets at all points in the market life cycle, with overall impact measured in billions of dollars. The authors hope to encourage standards involvement, and also future research and analysis that might quantify the financial value of standardization for vendors and users.*

*“Standards are like keys always hung at the same nail—they free up your mind for more useful thoughts.” –Anonymous*

### INTRODUCTION

Information technology standards are commonly perceived as having evolved from what was once a cooperative effort by engineers and standards groups (to achieve a consensus aimed at the common good) to a cutthroat struggle by a

single company or group of allies to gain market dominance by manipulating standards.

This view is an invitation to anti-trust challenges; to rejection of standards in public procurement or as a foundation for public policy; and for preemption of standards initiatives by other industries or regulatory processes. Standards can grow markets, bring sustained value to users, encourage productive government relations and improve engineering excellence; but not if the IT industry fulfills the above perception.

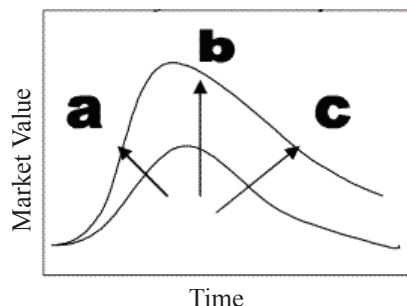
## WHY STANDARDIZE?

The IEEE 802 local area network standards support a \$15 billion per year market. The POSIX/UNIX standards provide an additional \$18 billion per year in the UNIX market<sup>1</sup> (Unter, 1996). Internet and World Wide Web standards exceed these in terms of both financial and social impact, and are totally dependent on a foundation of standards (Cargill, 2001). The social impact of the Internet, and the value to both government and diverse industries, has led to active legislative and regulatory processes affecting the information technology (IT) market in the United States (U.S.) and other jurisdictions. The information technology industry must develop a coherent and responsive approach to IT standardization requirements and associated policy implications. If we fail in this, we will not enjoy the full market growth that is possible, and we risk intervention by government. Here we will look at the incentives for standardization by providers (to make money), users (to save money), government (for the public good) and individuals (professional recognition).

## PROVIDER INCENTIVE

Standards are one way to have a multibillion-dollar impact on IT markets over an extended period of time. For example, Figure 1 is the classic market

*Figure 1. Potential for standards impact on market curve*



curve: market value over time. The area under the curves is the cumulative market value. Early in the curve (a), standards can be used to increase the pace of adoption, thereby increasing the market size more quickly. The consumer electronic industry has learned this, and in order to enable rapid growth, introductions of new technology (for example, CD or DVD) are preceded by agreement on key standards. In the IT industry, the early acceptance of POSIX/UNIX standards and adoption of these in procurement policies accelerated commercial acceptance (FIPS 151, 1986).

As the market is established, standards can increase the overall market size (b). This is how the local area network standards have sustained their impact: by expanding functionality with technology while maintaining compatibility. Ongoing evolution of these standards and their adoption at the international level have provided for ongoing market growth and increased acceptance. As the market goes into its mature phases, standards can be used to extend the life (c) and provide incremental return on investment. We see this with the ongoing, albeit slow, evolution of standards for Cobol, Fortran and CD-ROMs. In mature areas, standards can be augmented to address specific niche segments and opportunities. The influence of the POSIX standards on the creation of Linux (Torvalds, 1991) provides an interesting example of the extension of a market as a result of standards availability.

The classic market curve operates over multiple years, and providers should measure the impact of the standardization investment in multiple billions of dollars of market growth over a 3+-year period. If the market is not measured in the billions, or targeted as an investment over many years, it is probably not a candidate for standards.

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