Chapter 1
Standardization, Not Standards Matter

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ABSTRACT

It has been observed that standards (and implicitly, standardization) are a hallmark of an industrialized society, since standards provide the necessary interconnections to make things interoperate. As the world tends increasingly towards a "global economy," just-in-time supply chains, and massive interdependencies, standards and standardization forms the infrastructure of these agreements. And yet, standardization is not well understood. This chapter explores standardization.

BACKGROUND

Simply, standardization is one method of controlling a market, either politically, economically, legally, technically or in any combination of these areas. Generally, standardization is an unappreciated art because the signal product of standardization - a standard - is usually a boring document and as such, suffers from business, academic, and policy neglect. (Parenthetically, when standards are brought up for discussion, they are usually brought up as contentious issues. One need only look at the current [late 2018] arguments over BREXIT and food standards in policy discussions. "Britain's trade minister will 'categorically' deny on Wednesday that the government plans to lower foods standards to win trade deals after Brexit[1]" is an example of standards being important only when contentious – they were safely invisible until they were used to define a policy direction.) But this is the nature of standards and standardization; they are invisible until something goes wrong or something blows up. Then, and only then, do they gain a larger share of public awareness.

Standardization can be seen and used as a social policy tool, a public policy tool, and as a business management tool. There is very little literature (academic, legal, or otherwise) that describes how to pursue standardization within a corporation or other commercial organization to accomplish these activities (policy, social control, or business management) except in a retrospective view. The reason this is important is simple – nearly all standards (and many regulations based on standards) are the product

of commercial business organizations - they fund and populate the standards organizations that create standards and they are also charged with implementing these standards in products.

This chapter looks at ways to actually use the art of standardization (since there is not enough data to make this a discipline yet) within the Information Technology sector and within a commercial organization[2] to effect change of some type. Note that this is not about standards - which are relatively sterile documents - but rather a description of how to manage (some might say manipulate) cooperative action which will result, in some manner, in a standard which can be used to create standardization to further a defined policy, legal, social, or business management goal.

The author is, and has been, involved in standardization in a multitude of U.S. software based IT companies, and this biases my view of standardization. The first and most critical bias derives from the fact that, unlike many other industries, the software industry is characterized as a low capital, high intellectual property activity. It is an industry that has been characterized as "IP Intensive". Facebook, Alibaba, e-Bay and Amazon and multiple other multi-billion organizations are all examples of software based firms that started with little or low capital investments and continue to operate in high Intellectual Property, as opposed to real property, investment arenas. As an example, when Alibaba wants to add another 100,000 customers, it adds a server and possibly several more systems administrators; when a brick-and-mortar store seeks to add a 100,000 customers, it needs warehouses, property, stores, and retail associates. This difference is especially critical in IT standardization, since it drives a more transient standard, less influenced by the standardization process[3] than it is by immediacy and deployment. It is not an approach that is recommended when dealing with something like a nuclear power plant, where tried and tested standards are much more valued.

INTRODUCTION

Standards, and standardization, are now a fact of life in all industries globally. With the growth of the linked global economy, and with the dependence of industry on the World Wide Web and the Internet for information, the importance of standards has increased substantially over the last 20 years. While it can be argued that telecommunications (with their implicit standards and standardization) have been present since the early 1900s, I would argue that the use of the web for everything from retail to supply chain management to personal entertainment devices has dwarfed the importance of the earlier telecommunications standardization activity.

Most importantly, nearly all of the Information Technology standards which are the basis of current computing are voluntary standards created by the IT industry. There is a deliberate exclusion of telecommunications standards here, since many of them, although created by a voluntary process, end up being utilized in a regulatory (or at least highly regulated) telecommunications environment. It is this distinction – the use and creation of voluntary, industry led, consensus standards as opposed to regulated or governmentally influenced standards – that has made standards less than a discipline and more of an art form, leading, in turn, to a lack of both predictability and serious academic study.

To understand the whole issue, it is first necessary to look at the document called a "standard". In this article, I will ignore "management standards" and similar types of documents, since they tend to describe best practices garnered from participants in a singular practice (quality, environment, security). What I'd like to look at is "technical specifications" – that is, documents that describe some specific technology. As an example, the following is part of a technical specification (W3C HTML 5 specification):

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