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THE ABC's OF STANDARDS ACTIVITIES

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<http://ts.nist.gov/Standards/Conformity/stdpmr.cfm>)

Foreword

The Standards Services Division (SSD) within the National Institute of Standards and Technology (NIST) publishes information related to standards and conformity assessment as a service to producers and users of such systems—both in the government and in the private sector. This report provides a basic introduction to the U.S. standards system; explains what is meant by the term, “documentary standard;” and provides an overview of the U.S., international and regional standards systems. In addition, it describes the principles used in effective standards development efforts. This report discusses the role played by private sector entities in the standards process, including the role played by the American National Standards Institute (ANSI). It also discusses the U.S. Standards Strategy (USSS), which provides a roadmap for reliable, market-driven standards in all sectors.

In addition, it covers some obligations of U.S. federal agencies with respect to their use and adoption of standards. In particular, this document covers the impact of the National Technology and Transfer and Advancement Act (NTTAA), the Office of Management and Budget (OMB) Circular A-119, *Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities*, as well as the obligations imposed by international and regional trade agreements.

The report is intended to provide basic information to help educate U.S. government agency officials, legislative staff, industry, and other standards professionals to make informed decisions regarding standards development policies and the effective allocation of limited standards development resources. It is also hoped that this report will serve as a starting point for further study and discussion on some of these important issues. Readers may also be interested in other related publications which are available on the NIST website at:
<http://ts.nist.gov/standards/information/osc.cfm> .

... BENEFITS AND PROBLEMS OF STANDARDIZATION

On the whole, the benefits of standardization far outweigh the difficulties and potential for abuse. Standards promote understanding between buyer and seller and make possible mutually beneficial

commercial transactions. A product's conformance to accepted standards readily provides an efficient method of conveying complex information on the product's suitability. Architects use standards in a shorthand manner when drafting plans for buildings, and purchasing agents can use standards as an easy way of communicating their needs to potential suppliers. In a host of situations standards are or may be used to replace large quantities of complex information.

Standards underlie mass production methods and processes. They promote more effective and organized social interaction, such as the example of the standardized colors for traffic lights and many other widely accepted conventions. Standards are essential in efforts to improve product safety and to clean up the environment. Standardized and interchangeable parts can reduce inventory requirements and facilitate product repairs. They can also promote fair competition by facilitating the comparison of prices of standardized commodities.

In general, standards permit society to make more effective use of its resources and allow more be effective communication among all parties to particular activities, transactions, or processes. Indeed, standards are crucial to every form of scientific and industrial process. Without standards, the quality of life would be significantly reduced.

No system, particularly one as complex and diverse as the U.S. voluntary standards system, is without problems. (pp. 23-24)

...Problems can also occur when standards are not based on sound science. According to the National Foreign Trade Council's May 2003 report, *Looking Behind the Curtain: The Growth of Trade Barriers*, "... when regulations and standards are not based on sound science they serve as de facto trade barriers and have a negative impact on a wide variety of U.S. export sectors, as well as, those of developing countries." The report notes that many standards (or regulations that reference or incorporate standards) that are not based on sound science and that justify denying market access to imported products on the basis of meeting a national objective (such as the preservation of health and safety, animal welfare and the environment or the protection of consumer choice) may actually be intended to protect ailing or otherwise noncompetitive domestic industries. This study notes that such measures are often based on a "presumption of harm" without any scientific evidence and/or scientifically based risk assessment to support such an assumption. The report notes that such countries invoke "the precautionary principle, a non-scientific touchstone," to justify their enactment of such technical measures and that such an approach is both insular and presumptive of the existence of unacceptable hazard or risk, even in the face of scientific evidence to the contrary. The United States has taken an approach that stresses sound science, risk analysis and transparency. The ability to create a free and open global marketplace depends on the implementation of standards and regulations that are transparent and reference objective principles of sound science.

There can also be problems in standards development activities when the content of standards ends up being regulatory driven as opposed to marketplace driven. Such standards may not effectively meet the needs of the marketplace, and may also end up as technical barriers to trade. (p. 24)