

# 11 NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

*The* National Institute of Standards and Technology (NIST) is a public/private partnership, and as shown in Table 11.1, it provides direct infrastructural and research resources to leverage both public and private R&D.<sup>1</sup>

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A standard is a prescribed set of rules, conditions, or requirements concerning:

- Definitions of terms.
- Classification of components.
- Specification of materials, their performance, and their operations.
- Delineation of procedures.
- Measurement of quantity and quality in describing materials, products, systems, services, or practices.

To understand the current activities that take place at NIST, its public good mission must be placed in an historical perspective. The concept of the government's involvement in standards traces to the Articles of Confederation signed on July 9, 1778. In Article 9, § 4:

The United States, in Congress assembled, shall also have the sole and exclusive right and power of regulating the

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<sup>1</sup> This chapter draws on National Research Council (1995), Link (1996b, 1999b), and Link and Scott (1998b).

alloy and value of coin struck by their own authority, or by that of the respective States; fixing the standard of weights and measures throughout the United States ...

**Table 11.1.** Taxonomy of Public/Private Partnerships

Economic Objective		
<i>Governmental Involvement</i>	<i>Leverage Public R&amp;D</i>	<i>Leverage Private R&amp;D</i>
Indirect		Patent system (Patent Act)
		Tax incentives (R&E tax credit)
		Research joint ventures (NCRA and NCRPA)
Direct		
Financial Resources		Advanced Technology Program (Omnibus Trade and Competitiveness Act)
Infrastructural Resources	<b>National Institute of Standards and Technology</b> (Organic Act)	<b>National Institute of Standards and Technology</b> (Organic Act)
Research Resources	<b>National Institute of Standards and Technology</b> (Organic Act)	<b>National Institute of Standards and Technology</b> (Organic Act)

This responsibility was reiterated in Article 1, § 8 of the Constitution of the United States:

The Congress shall have power ... To coin money, regulate the value thereof, and of foreign coin, and fix the standard of weights and measures ...