

# RESEARCH GUIDE

## Standards and Specifications

### George Mason University Libraries

#### DEFINITIONS

**Specification:** a concise statement of the requirements for materials, processes, methods, procedures or services (including, wherever possible, specific steps for meeting those requirements).

**Standards:** a document containing specifications accepted by recognized authority as the most practical and appropriate solution for recurring subjects.

Standards and specifications are formulated by companies, by technical associations and professional societies (such as IEEE, the Institute of Electrical and Electronic Engineers), by government agencies, and by national or international standards agencies (such as ANSI, the American National Standards Institute, or ISO, the International Organization for Standardization).

#### CATEGORIES

Standards and specifications fall into the following categories:

- **Dimensional:** assure uniformity and interchangeability of the types and sizes of manufactured components. Facilitate the replacement of worn-out or damaged parts. Example: spools for 8mm motion picture film.
- **Materials:** specify composition, quality and properties of materials.
- **Performance:** specify minimum performance or quality of products or components to assure acceptable levels of efficiency and safety.
- **Test methods:** provide uniform procedures for comparing the quality or performance of products.
- **Codes of practice:** define procedures for construction, installation, operation, and maintenance to insure uniformity and safety.
- **Standard definitions and symbols:** define the use of terminology and symbols for unambiguous communication.
- **Documentation:** provide standardized procedures for layout, production, reproduction, distribution, classification, indexing and bibliographic description of documents.

#### IDENTIFYING STANDARDS

Use the following sources to identify standards and specifications by organization, number or subject.

**Index and Directory of Industry Standards.** An eight volume set including industry, international and military standards.

*Fenwick Reference T59.2.U6 I5*

**NSSN – A National Resource for Global Standards.** Provided by ANSI, a database for searching for standards information from many sources and ordering standards online. Available online at:  
<http://www.nssn.org/>

## **COLLECTIONS IN THE LIBRARY**

**American National Standards Institute (ANSI) Standards.** C and X Series dealing with computers and information systems. No longer updated. Archive held in Fenwick Reference Office. Contact [kjordan2@gmu.edu](mailto:kjordan2@gmu.edu), or (703) 993-3712.

**American Society for Testing and Materials (ASTM) Industry Standards.** Last updated in 1991.  
*Microfiche, Periodicals Room, TA404.5.I5*

**IEEE - Institute of Electrical & Electronics Engineers Standards.** Full text of standards developed in part or in full by the IEEE since 1988. Access is restricted to GMU faculty, staff and students.  
<http://ieeexplore.ieee.org/>

**International Telecommunication Union (ITU) Standards.**  
*Fenwick Stacks, TK6541.I88R34*

**Open Systems Standards,** 6 vols., McGraw-Hill. A collection of the most commonly used standards for open systems user equipment and interfaces.  
*Fenwick Reference, TK5105 .M39 1990*

**Radio Technical Commission for Aeronautics (RTCA) Standards.**  
*Fenwick Stacks, TL 501 .R32 DO-[standard number]*

## **SEARCHING FOR STANDARDS IN THE LIBRARY CATALOG**

The library collects some individual standards. These standards can be located by searching the title, organization and standard number, subject heading, or keyword.

### **Title Search**

If you know the specific title of a standard, go under the Title/Author/Subject tab in the catalog. Select Title, then type in all or the first few words of the title. Or, type in the first few words, in quotation marks, under Advanced or Word Search.

### **Library of Congress Subject Heading Search Examples**

Under Title/Author/Subject, select Subject then type in a subject, such as:

- data transmission systems standards
- local area networks (computer networks) standards

### **Keyword Search Examples**

+ "data transmission systems" +standards  
+ieee +802 +standards  
+iso +9000  
+posix +standards +ieee

## **STANDARDS NOT OWNED BY GMU**

GMU students and faculty may request standards through Document Acquisition and Delivery (Interlibrary Loan). The online request form is at <http://library.gmu.edu/services/ill.html>. Include the issuing agency and standard number, title, and date. For a fee, Information Handling Services (1-800-716-3447, ext. 2) can send you copies of standards in a timely manner.

*Revised 9/03 by K. Jordan, Fenwick Library, George Mason University*