LIBRARY OF CONGRESS COLLECTIONS POLICY STATEMENTS

**Technology
(Class T: Subclasses TA, TC, TD, TE, TF, TG, TH, TJ, TK, TL, TN, TP, TR, TS, TT, and portions of Z)**

Contents

I. Scope

This Collections Policy Statement for Technology covers mostly class T. For purposes of this statement, technology is neither synonymous with engineering, which it includes, nor is it defined as strictly applied science. Rather, it is a much wider concept encompassing the totality of the means, processes, and machines that contribute to the creation of material objects with a practical purpose. This statement for Technology covers the classes/subclasses: T (Technology, General.), TA (Engineering--General. Civil engineering--General.), TC (Hydraulic engineering. Ocean engineering.), TD (Environmental technology. Sanitary engineering.), TE (Highway engineering. Roads and pavements.), TF (Railroad engineering and operation.), TG (Bridge engineering.), TH (Building construction.), TJ (Mechanical engineering and machinery.), TK (Electrical engineering. Electronics. Nuclear engineering.), TL (Motor vehicles. Aeronautics. Astronautics.), TN (Mining engineering. Metallurgy.), TP (Chemical technology.), TR (Photography.), TS (Manufactures.), TT (Handicrafts. Arts and crafts.) and associated materials classed in subject bibliography, indexes, and abstracting services in class Z. The following Collections Policy Statements also cover selected areas within the T class: *Chemical Sciences*; *Computer Science, Telecommunications and Artificial Intelligence;* *Fine and Decorative Arts-- Books and Periodicals*; *Cookery, Nutrition and Food Technology*; *Earth Sciences*; *Environmental Sciences*; *Government Publications—Non-U.S.*; *Government Publications-- United States*; *History of Science and History of Technology*; *Mathematics*; *Medicine*; *Military Science*; *Naval Science*; *Photography*; *Physics and Astronomy*; *Science-- General*; *Societies and Associations*; *Standards*; *Technical Reports, Working Papers and Preprints*; *Translations*; and *Dissertations and Theses*; as well as Supplementary Guidelines for *Electronic Resources* and *Web Archiving* for a more complete picture of the Library's collecting policies in technology. **Please note, while this Collections Policy Statement and that for *Chemical Sciences* cover books and other formats about the subject of photography, recommendation and acquisition of actual photographs are covered by the *Photography* Collections Policy Statement.**

II. Diverse and Inclusive Collecting Statement

As the nation's de facto national library, the Library of Congress strives to build an expansive, yet selective, collection that records the creativity of the United States and is reflective of the nation's diversity and complexity. The Library's mandate is to have collections that are inclusive and representative of a diversity of creators and ideas. A priority includes acquiring material of underrepresented perspectives and voices in the Library's collections to ensure diverse authorship, points of view, cultural identities, and other historical or cultural factors. The Library also seeks to build a research collection that comprises a globally representative sample of international materials that are diverse in voice and perspective, relative to their places of origin, further supporting the Library's mission to sustain and preserve a universal collection of knowledge and creativity for Congress and future generations.

Diverse collecting is mentioned within many of the Library's Collections Policy Statements. In addition, the Library has adopted several specific collection policies in an effort to ensure it is building an inclusive and representative collection. For more information, see the Library's Collections Policy Statements on *Ethnic Materials*, *LGBTQIA+ Studies*, *Women's and Gender Studies*, *Independently Published and Self-Published Textual Materials, and Countries and Regions with Acquisitions Challenges*.

III. Research Strengths

General
The Library's holdings in applied science and technology are strong, as befit the national library of a nation that has been known for technological accomplishments since colonial days. The Library's collections are particularly strong for conducting historical research and for tracing developments in technology and the physical infrastructure of the nation. Areas of current strength include engineering mathematics; materials science; structural engineering; structural analysis; structural design; applied optics; hydraulic engineering; harbors and coast protective works; river, lake, and water supply engineering; environmental technology and sanitary engineering; water supply; water and wastewater treatment; solid waste management; air pollution; railroad engineering; bridge engineering; building construction; mines, mining, and mineral resources: practical mining operations, safety measures, ore deposits and mining of particular metals, ore dressing and milling, metallurgy, metallography, physical metallurgy, metallurgy of ferrous metals, coal, petroleum, natural gas; and chemical technology: chemical engineering, manufacture and use of chemicals, industrial electrochemistry, fuel, food processing and manufacture, low temperature engineering, polymer and polymer manufacture.

Areas of Distinction
For many areas of these subclasses, the great strength of the collection is in the wide variety of its monographs, domestic and non-U.S. journals, as well as society and congress publications. Also of significant note are the many works that parallel the history and development of various fields of knowledge, such as railroad engineering, motor transport, electronics, rocket propulsion, industrial electrochemistry, color photography, and clothing manufacture. Many of the Library's obscure journals and conference proceedings are not readily available elsewhere.

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Areas of greatest strengths are: Materials science (TA401--492); Surveying (TA501--625); Sewage collection and disposal systems, sewerage (TD511--780); Municipal refuse, Solid wastes (TD785--812); Highway engineering, Roads (TE1--155); Aeronautics (General) (TL500--TL777); Aeronautics--Aerodynamics (TL570--577); Chemical technology (General) (TP1-TP154); Chemical engineering (TP155--156); Fuel (TP315--360); Food processing and manufacture (TP368--TP465); Polymers and polymer manufacture (TP1101--TP1185); and Clothing manufacture (TT490--TT695).

The Library's collections related to technology are distinctive in number, language, scope, and level of comprehensiveness. For many areas of these subclasses, the great strength of the collection is in its long unbroken runs of domestic and non-U.S. serials, society publications, conference proceedings, and monographs often dating back to the nineteenth century. The Library's holdings of materials on exhibitions and world's fairs are admirable in quantity and variety. Journals, conference proceedings, transactions, and other publications of learned and professional societies, research institutes, major universities, government agencies, and numerous other institutions, both non-U.S. and domestic, are well represented. Non-U.S. publications as well as bilingual and multilingual dictionaries are found throughout the collections. Biographical materials from all periods, in many languages, and in widely-ranging formats, from print to electronic, provide historians of technology, scholars, biographers, and researchers with unparalleled resources related to technology. Formed and shaped by the research needs of Congress, government agencies, scientists, engineers, historians, and the public, the Library's collections related to technology are notable for their broad appeal and usefulness. Emphasis has been placed on collecting materials that support research on current issues, legislation, and public policy as well as to support scientific and technical literacy, literature reviews, scholarly research, and congressional debate.

The Library's collections recording the history of American infrastructure and public works, as well as those chronicling the history of the world's infrastructure through the ages, are important, extensive, and diverse. Numerous titles highlight the people, materials, and engineering feats that went into the building of bridges, dams, elevated railways, and other national infrastructure projects. The Library's collections abound in reports of commissions and exploring expeditions, personal narratives, newspaper accounts, survey data, maps, and photographs, coupled with the papers of engineers and government officials involved in public works. The Library's holdings of the records of government-sponsored research, development, and invention are enormous and well-documented in its technical reports, standards, and gray literature.

Cases abound where works are primarily divided between two classes or scattered among several classes. For example, works related to transportation are predominantly within the subclasses of both TE and HE. Similarly, other areas of infrastructure are divided between various subclasses of H and T. Many subjects of current interest are not specified in this statement because they do not have their own classes but instead have a narrow slice of a larger class. Subject areas that are either in a narrowly defined classification, or are scattered over various subclasses and elsewhere in the collections besides class T include: Materials science, Nanotechnology, Robotics, Biotechnology, Three-dimensional printing, Virtual reality, Augmented reality, and Infrastructure. ₃Many subjects of current interest have their basic works in class T within a narrowly-defined call

number range, but the bulk of the works on that subject are found in other classes. For example, Nanotechnology as a general subject is classed under T174.5 but works on Nanoscience abound in class Q. The reverse holds true for works on Artificial intelligence, Virtual reality, and Augmented reality where the core of the works are in class Q, but there are works related to these topics scattered in the subclasses T, TJ, and TK. Works on Robotics are mostly in the subclass TJ Mechanical engineering and machinery from TJ210.2 to TJ211.5. Works on Three-dimensional printing and Additive manufacturing are found under TS171.95.

Biotechnology, as a general subject, is classed from TP248.13 through TP248.65, but most works related to Biotechnology are in class Q. Genetic engineering applications are classed under TP248.6, but the bulk of the works related to Genetic engineering are in the subclass QH. While the Library of Congress does not have a separate Collections Policy Statement for Biotechnology and Nanotechnology per se, the existing Collections Policy Statements for *Life Sciences*, *Physics and Astronomy*, *Chemical Sciences*, *Medicine*, *Agriculture*, and *Law*, as well as the Supplementary Guidelines for *Web Archiving* and *Electronic Resources* are sufficient to maintain its collecting strength in virtually every aspect of biotechnology needed to support the research needs of the Library's many constituencies.

In addition to the over one million volumes in class T, the Science, Technology and Business Division has custody of an extensive collection of standards, specifications, and technical reports in print, microform, and electronic format in its technical reports and standards collections. The Library's electronic resources are also accessible from staff and public terminals throughout the Library.

IV. Collecting Policy

The Library of Congress endeavors to acquire for its permanent collections all important materials, as well as an extensive and representative sample of the less important materials in the following areas of applied science and technology at a research level (4): General technology: Patents and trademarks, Engineering--General, Civil engineering, Materials science, Hydraulic engineering, Ocean engineering, Environmental technology, Sanitary engineering, Highway engineering, Roads, and Pavements, Transportation engineering, Bridge engineering, Building construction, Mechanical engineering and machinery, Energy, Electrical engineering, Nuclear engineering, Motor vehicles, Mining engineering, Metallurgy, Photography, Manufactures, Handicrafts, and Arts and crafts.

The Library aspires to acquire materials at a comprehensive level (5) for domestic publications in: General technology (most of class T with the exception of non-U.S. patents and trademarks), Railroad engineering and operation (subclass TF), Aeronautics and astronautics (subclass TL550 onwards), Chemical technology (subclass TP). In areas where the collecting level is less than research level, including non-U.S. collecting in classes TR, TR, and TT and in some of the subclasses of class TJ, the Library strives to collect periodical and society publications, conference and congress proceedings, dictionaries, and the most important monographs and electronic resources.

In addition to materials published in the United States, the Library of Congress endeavors to acquire materials from other nations that represent original research, contain new knowledge

developed or discovered around the world, provide an analysis about science and technology in the United States and other nations, or written by recognized authors. There is less emphasis on acquiring materials that are treated uniformly in all countries and languages. Examples of desired materials are those about natural resources (e.g., works containing information or data on mineral resources, energy resources, hydrological resources and data, climate and climatological data, and resources of mineral, petroleum, and gas); nuclear engineering; environment; infrastructure (e.g., transportation, water supply, electrical power, energy); and other areas of science, engineering, and technology (e.g., aeronautics, biotechnology, nanotechnology, materials sciences, and manufacturing). For non-U.S. works, conference proceedings and journals of research quality are selectively collected for many subject areas and from many countries.

It is recognized that for international works it is more difficult to be comprehensive in collection, and this is reflected by the lower collection level. Even though collecting levels are less or the same for non-U.S. as for domestic, one should recognize that certain countries have strengths in selected fields that may not cover an entire class. For example, works on robotics from Germany and Japan, chemical
technology from Germany, tunneling from Austria, physics and mathematics from Russia, and works about the natural resources and infrastructure from just about any other country

The following sections explain the collecting policy for specific types of materials:

A. Electronic Resources and Serial Content
The Library acquires the following types of electronic resources: (1.) general subscription databases that are useful for the subject area of technology; (2.) subscription databases specifically in the area of science and technology; (3.) freely-available electronic resources; and (4.) archival databases.

B. Periodicals
The Library endeavors to acquire comprehensively those serials published in the United States that contain articles of research value. The Library also seeks to acquire a broadly representative collection of such serials from other countries.

C. Societies and Associations
The Library acquires publications of societies and associations with articles of research value. The Library acquires publications of non-U.S. associations that are more international in coverage, while publications of non-U.S. associations with coverage of national scope and/or relating to relations between the United Sates and another country or region are acquired selectively. Newsletters and publications that are predominantly news and events are not acquired.

D. Conference Proceedings
The Library of Congress seeks to acquire at a research level published conference proceedings that are scholarly in nature and/or which contain new information, research, or analysis for all areas of technology. Events like conferences, seminars and webinars are intended to offer the sharing of knowledge in a global platform where various researchers from every part of the world join

together in a common purpose. To learn about the events happening throughout the world, a number of websites function as alert services to highlight upcoming congresses. Many international conferences on a wide variety of topics are held in places that are either of favorable climate, tourist interest, or a desired vacation destination with the result that a conference may be held in a country which is not normally known for its expertise in that particular technology. Therefore even if a particular country is not thought of as being expert in a certain technologies, the proceedings of a conference or other meeting may be sponsored within its borders and published there. High priority is given to acquiring missing years of conferences proceedings for the Library, especially in cases where conferences are held regularly but not necessarily in the same country. Since the Library is often a last resort for the proceedings of conferences and other meetings, there is great value in any increased effort to acquire new conference proceedings, proceedings to complete runs for the years that are missing from the collections, ongoing proceedings, proceedings where the conference moved from one country to another, or those proceedings lacking from the Library's collections.

E.   Textbooks

Textbooks, laboratory manuals, and study guides are collected at the instructional support level. Laboratory manuals and study guides to accompany an existing text are generally not acquired. Laboratory manuals that function as standalone works may be acquired for the collection. In addition to academic textbooks, the Library acquires textbooks for some trades, including electrical, automotive, plumbing, and HVAC.

F.   Websites

Through web harvesting, the Library acquires selected websites and their multi-format contents for the U.S. Congress, researchers, and the general public. Generally, the Library employs a collection-based approach that acquires websites as part of a named subject, theme, or event. The Library also collects individual sites not as part of named collections that present information of historical importance including sites on technology.

V.   Best Editions and Preferred Formats

For guidance regarding best editions for material acquired via the Copyright Office, see: http://copyright.gov/circs/circ07b.pdf.

For guidance regarding recommended formats for material acquired via all other means; e.g., purchase, exchange, gift, and transfer, see: https://www.loc.gov/preservation/resources/rfs.

For information regarding electronic resources and web archiving, see the following Supplementary Guidelines: http://www.loc.gov/acq/devpol/electronicresources.pdf, https://www.loc.gov/acq/devpol/opencontent.pdf, http://www.loc.gov/acq/devpol/webarchive.pdf, and https://www.loc.gov/acq/devpol/datasets.pdf.

VI. Acquisition Sources

The Library acquires materials in technology in all formats and languages, e.g., print materials, microforms, audio, video, and electronic, and from a variety of sources, e.g., copyright deposit, Cataloging in Publication (CIP), the Library's field offices, purchase, gift, and exchange. The Supplementary Guidelines for both *Electronic Resources* and *Web Archiving*, as well as the Collections Policy Statement for *Dissertations and Theses*, and the Copyright Office's Best Edition Statement are all used in conjunction with this policy statement to maintain the Library's collecting strengths in technology and to support the work of Congress, scientists, engineers, scholars, educators, and citizens throughout the country and the world. The Library acquires materials in all languages that reflect the science and governmental policy of other nations and their natural resources and infrastructure. As e-prints, podcasts, and webcasts proliferate, they will be collected at either the comprehensive level or the research level.

The challenge is to keep up with the volume of publications in technology, to keep current, to capture those publications that are born digital before they disappear, to keep track of print titles that suddenly turn digital, and to acquire e-journals that are not purchased through an aggregated database. As more publications are issued digitally, the Library must ensure that all important and appropriate information is added to the collections and that the data formats represented in the collections of the Library of Congress in the area of technology are maintained to assure continued access to digital information. Electronic obsolescence is not an option for science and technology materials.

As certain materials migrate from print to digital-only format, these are frequently collected into the Electronic Resources Collections of the Library, within the online public access catalog, and/or through an electronic link. These sources may be freely available, or, as in the case of many electronic resources, may require a subscription. Both are actively collected and will continue to be collected in the future.

Digital formats have increasingly blurred the line among databases of abstracts, citations and full-text materials, so that a given database may provide what is essentially an electronic journal for one title, while providing a citation with no text for another journal. Differences in coverage periods also contribute to making a precise assessment of the number and nature of available electronic resources somewhat difficult.

VII. Collecting Levels

Meeting the Library's Diverse and Inclusive Collecting Statement (see Section II) and the collecting levels outlined below requires continual evaluation of the publishing landscape, sources of expression, current events, and socio-cultural trends to thus maintain effective collecting policies and acquisitions methods. Changes in publishing or in the creation of materials covered by this policy statement may necessitate collecting efforts not explicitly referenced here. Such efforts will be handled on a case-by-case basis while the Library evaluates the need for policy statement updates.

7The following list is of the major subclasses T-TT and Z of the Library of Congress Classification

system. The collecting levels are based on the Research Libraries Group (RLG) Conspectus Collecting Levels. Although the RLG no longer exists, the Library continues to use the collecting levels RLG established to guide its collection building.

For explanation of the Collecting Levels used by the Library, see
https://www.loc.gov/acq/devpol/cpc.html

LC Classification	Subject	U.S Levels	Non-U.S. Levels
T	Technology, General	5	4
TA	Engineering--General. Civil engineering.	4	4
TC	Hydraulic engineering. Ocean engineering.	4	4
TD	Environmental technology. Sanitary engineering.	4	4
TE	Highway engineering. Roads and pavements.	4	4
TF	Railroad engineering and operation	5	4
TG	Bridge engineering	4	4
TH	Building construction	4	4
TJ	Mechanical engineering and machinery Energy conservation (TJ163.26--163.5) Robots (TJ210.2--211.5) Renewable energy sources (TJ807--830)	4 4 4 4	3 4 4 4
TK	Electrical engineering. Electronics. Nuclear engineering.	4	4
TL	(Motor vehicles. Aeronautics. Astronautics.) Motor vehicles Aeronautics. Astronautics.	 4 5	 4 4
TN	Mining engineering. Metallurgy.	4	4
TP	Chemical technology	5	4
TR	Photography	4	3

LC Classification	Subject	U.S Levels	Non-U.S. Levels
TS	Manufactures	4	3
TT	Handicrafts. Arts and crafts.	4	3
Z	Bibliography. Library science. Information resources (General)	5	4

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