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Guidelines for Alphabetical Arrangement of Letters and Sorting of Numerals and Other Symbols



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National Information Standards Organization
4733 Bethesda Avenue, Suite 300
Bethesda, MD 20814-5248
Telephone: 301-654-2512
Fax: 301-654-1721
nisohq@niso.org
nisopress@niso.org
www.niso.org

NISO Technical Report 03
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Guidelines for Alphabetical Arrangement of Letters and Sorting of Numerals and Other Symbols

Hans H. Wellisch

Abstract: This technical report provides rules for the alphabetical arrangement of headings in lists of all kinds, such as bibliographies, indexes, dictionaries, directories, inventories, etc. It also covers the sorting of Arabic or Roman numbers, and other symbols. It consists of seven rules that cover problems which may arise in alphanumeric arrangement of headings. The technical report is based on the traditional order of letters in the English alphabet and that of numerals in ascending arithmetical order. It does not address issues concerning meaning or type of headings. The rules can generally be applied by human beings as well as by computers. Each rule is followed by illustrative examples.

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Foreword

Virtually all major industrialized countries have developed national standards for alphabetical arrangement. No international standard exists on this topic because alphabetization is language-specific, and no two languages written in the Roman script have the same alphabet and orthographic rules. However, the rules presented here are intended to serve wherever the English language is used in written form.

The arrangement (or "filing") rules currently used in American library catalogs, indexes, inventories, dictionaries, directories, and other alphabetically arranged lists are, to a certain extent, incompatible with each other; this incompatibility often results in different arrangements of similar headings. Also, all current filing rules contain exceptions from basic rules, and they prescribe classified arrangements for certain types of headings according to their meaning or type. These exceptions and classified arrangements are a major source of confusion for the general public; they are often the cause of users' failure to find items in catalogs, indexes, and even in telephone directories.

Virtually all alphanumeric headings today are arranged by computers, not by human beings. However, before headings that are to be arranged by an exception to a rule can be sorted automatically, intervention by human beings who can use criteria other than the sequence of letters or numerals is needed.

Given the potential for confusion in working with different sets of rules, this technical report seeks to make the alphanumeric arrangement of headings "as easy as ABC." It attempts to do this by means of the following principles:

1. The number of rules is kept to an absolute minimum.
2. There are only two minor exceptions which are necessary because of headings containing numbers.
3. All rules apply to headings exactly as they appear in written, printed, or otherwise visually displayed form. The arrangement of a heading among other headings is based solely on the sequence of letters in the English alphabet and the arithmetical order of numbers. Therefore, the rules can generally be executed both by human beings and by computers without any additional instructions.¹

(continued)

¹ One exception is the recognition of a decimal point in Section 6.3 as a significant character (not as a disregarded one). The other exception is Section 6.4 for the arrangement of Roman numbers. This exception is necessary because the ancient hybrid practice of using letters as numerals is still widely used in many kinds of texts. Computers, however, cannot recognize a string of letters such as LIV as being the number 54, not the word "liv." A Roman number can only be recognized as such and tagged for proper arrangement by human intervention.

4. The rules do not address the order of headings in classified arrangements based on the meaning or type of the words that constitute a heading (for example, arrangement of headings beginning with the same word in the order: personal names — place names — subjects). Any such classified arrangement necessarily involves human intervention and intellectual decisions based on special rules, not on the sequence of characters or words in a heading. Consequently, computers cannot perform such tasks. Users of classified arrangements may or may not know the underlying rules that go beyond the basic rules for the sequence of numerals and letters that every literate person learns in grade school.
5. For the same reason, any transpositions, deletions, or other changes in the sequence of the characters or words in a heading are not permitted.

A feature not satisfactorily treated by previous filing rules is the arrangement of symbols other than letters or numerals. Symbols are particularly important in the context of instructions for software applications, but they may also appear in scientific and other texts, all of which may have to be arranged in indexes and other ordered listings. These guidelines recognize symbols as characters (not as non-existing entities) and provide rules for their place in an alphanumeric sequence.

Hans H. Wellisch
Professor Emeritus
University of Maryland

Preface

This technical report grew out of NISO's work to create an American National Standard on alphanumeric arrangement. The draft standard developed by the NISO Standards Committee on Alphanumeric Arrangement (Standards Committee AK) was reviewed and balloted by the NISO members in 1996. The NISO Members failed to reach consensus on the proposed standard. Because indexing and arrangement continue to be important to organization of information, the proposed standard is being published as a non-normative technical report.

The rules presented in this technical report reflect the collaborative efforts of the members of Standards Committee AK. Dr. Hans H. Wellisch was the chairman of Standards Committee AK. The committee members were Ruth Christ (University of Iowa), Jessica Milstead (The JELEM Company), Don Riseborough (R.R. Bowker Company), and Albert Simmonds (R.R. Bowker Company).

Patricia Harris
Executive Director
National Information Standards Organization

Guidelines for Alphabetical Arrangement of Letters and Sorting of Numerals and Other Symbols

1. Scope

This technical report provides rules for the alphanumeric arrangement of headings consisting of letters, numerals, other symbols, or any combination of such characters in ordered lists such as bibliographies, catalogs, indexes, directories, dictionaries, inventories, etc.

Using the order of character sets designed for computer sorting does not necessarily produce a sort sequence that is acceptable for bibliographies, indexes, or library catalogs, because some computer sorting codes, for example, the American Standard Code for Information Interchange (7-bit ASCII), sort uppercase and lowercase letters separately and sort punctuation marks and symbols in various places between numerals and letters.

Examples in this technical report are chosen to illustrate the application of its rules; they do not necessarily conform to existing cataloging or indexing rules. Guidelines for the compilation of indexes may be found in the NISO TR02, Guidelines for Indexes and Related Information Retrieval Devices.

This technical report is not applicable to the arrangement of headings written in non-Roman scripts but it does apply to any romanizations of headings originally written in such scripts. *See also* Appendix B.

2. Definitions

Boldface terms within definitions are defined in this section.

Abbreviation. A shortened or contracted form of one or more **words**, used to represent the whole.

Alphanumeric arrangement. An ordered display of **headings** according to their constituent **characters**.

Character. The smallest possible unit of arrangement: a **space**, **letter**, **numeral**, **punctuation mark**, or other **symbol**.

Cross-reference. A **heading** plus a link to one or more other headings.

Function word. A **word** that indicates the syntactic relation of nouns, verbs, and adjectives in a sentence, clause, or phrase. Articles, conjunctions, and prepositions are function words.