

6th Edition of the ASACOS Editorial Guidelines
(Revision of ASACOS Editorial Guidelines 5-1995)

ASACOS Rules for Preparation of American National Standards in
**ACOUSTICS, MECHANICAL VIBRATION AND
SHOCK, BIOACOUSTICS, and NOISE**

Approved 11 November 2003 by
Acoustical Society of America Committee on Standards (ASACOS)

ASA Standards Secretariat
35 Pinelawn Road, Suite 114 E
Melville, NY 11747
(631) 390-0215
(631) 390-0217
asastds@aip.org

Contents

1 Scope	1
2 References	1
2.1 Normative references.....	1
2.2 Informative references	2
3 Content of a standard.....	2
3.1 Normative and optional elements	2
3.2 Title page with abstract	3
3.2.1 Format of the title page	3
3.2.2 Title of the Standard.....	3
3.2.3 Abstract	3
3.3 Copyright page	4
3.4 Contents page(s).....	4
3.5 Foreword pages with Committee and Working Group membership lists.....	4
3.6 Introduction page	5
3.7 Text of the standard	5
3.7.1 Contents of the text	5
3.7.2 Title and page numbering	6
3.8 Scope	6
3.9 References	6
3.9.1 Normative references.....	6
3.9.2 Informative references	7
3.10 Terms and definitions.....	7
3.10.1 When to include a list of terms and definitions	7
3.10.2 Resources.....	7
3.10.3 Format for terms and definitions	8
3.11 Requirements	9
3.12 Citations in the text.....	10
3.13 Notes and examples	10
3.13.1 Purpose.....	10
3.13.2 Format for notes and examples	10
3.14 Footnotes to an element of the text of a standard	10
3.15 Abbreviations	11
3.16 Unit symbols.....	11
3.16.1 When to use unit symbols.....	11
3.16.2 When not to use unit symbols	12
3.17 Equations	12
3.18 Tables.....	16
3.18.1 Numbering of tables.....	16
3.18.2 Table captions	16
3.18.3 Table format.....	17
3.18.4 Table notes and table footnotes	17
3.18.5 Continued tables	18
3.19 Figures	18
3.19.1 Use of figures.....	18
3.19.2 Format of figures and figure titles	18
3.19.3 Notes and footnotes to figures	19
3.20 Annexes	19
3.20.1 Placement and format.....	19
3.20.2 Elements of an annex title	20
3.20.3 Normative annexes	20

3.20.4 Informative annexes	20
3.21 Bibliography	21
4 Special considerations	22
4.1 Patented items	22
4.2 Commercial equipment	22
4.3 Clarity	22
4.4 Non-technical expressions	22
4.5 Special word usage	22
4.5.1 "Shall" and "should"	22
4.5.2 "May" and "can"	23
4.5.3 "Must" and "comply"	23
4.5.4 "And/or"	23
4.6 Metric and customary units	23
4.7 Effective dates	23
4.8 Copyrighted material from other organizations	24
4.9 Grammar, punctuation, and spelling	24
4.10 Paragraph numbering	24
5 Technical reports	25
5.1 Technical report versus standard	25
5.2 Editorial requirements	25
5.3 Foreword	25
5.4 General text of a technical report	25
5.5 Designator and running head for pages	26
6 National adoptions of international standards	26
Annex A (informative) The ASA Template	30
A.1 Installing the template	30
A.2 Opening a new template	30
A.3 Using the template	30
A.4 Enter information from the template into the new file	30
Annex B (informative) Editorial Checklist	32
B.1 Manuscript	32
B.2 Checklist	32
B.2.1 Contents	32
B.2.2 Foreword pages	33
B.2.3 Main text	33
B.2.4 Annexes	34
B.2.5 Bibliography	34
B.3 Special considerations	34
Annex C (normative) ASACOS policies on definitions	35
Bibliography	36

Figures

Figure 1 — Sample title page	27
Figure 2 — Sample first page of foreword	28
Figure 3 — Sample final page of the foreword	29

Introduction

This 6th edition of the ASACOS Rules for Preparation of American National Standards in Acoustics, Mechanical Vibration and Shock, Bioacoustics, and Noise is revised to simplify the preparation of draft standards. These ASACOS Rules should be used in conjunction with the ASA Standards Template, which may be obtained free of charge from the Standards Secretariat. Uniform application of the Rules and template will enhance the effectiveness and efficiency of the drafting, review, approval, and publication of standards in areas covered by the scopes of Accredited Standards Committees S1, S2, S3, and S12.

Annex A provides information about installation and use of the template. These *ASACOS Rules* were prepared with the assistance of the ASA Template.

With respect to prior Editions, the primary change in this revision of the *Editorial Guidelines* is the shift from two-column to single column format. This change follows the lead of ISO/IEC as well as many other developers of American National Standards. Many other formatting and style elements of the 2001 edition of the *ISO/IEC Directives, Part 2: Rules for the structure and drafting of International Standards* [1] have been adopted here, as well.

A goal of the Acoustical Society of America's Standards Program is to publish American National Standards that are compatible and consistent with comparable standards published by the International Electrotechnical Commission (IEC) and the International Organization for Standardization (ISO). To that end, these *Rules* have been restructured to closely mimic the current ISO/IEC format with the one exception explained in the following paragraph.

The 2001 edition of Part 2 of the ISO/IEC Directives permits footnotes to tables and on figures to give normative requirements. The Directives also permit a table to contain a cell that states a requirement that applies to the entire content of the table. The Directives also permit a figure to contain a statement in a separate paragraph that gives a requirement. Because of the potential for misinterpretations and ambiguity, such practices are not permitted by these *ASACOS Rules* for acoustical standards proposed as American National Standards nor for the conversion of International Standards to American National Standards. Normative requirements shall be given only in the text of a standard or in a normative annex.

With the introduction of the ASA Template, and to further the goals for greater consistency, uniformity, and efficiency, the name of this document was changed starting with this Edition from *Editorial Guidelines* to *ASACOS Rules*.

In addition to these *Rules*, a Working Group of an Accredited Standards Committee may wish to refer directly to the material on style that is available in *ISO/IEC Directives* [1], the *AIP Style Manual* [2], the *Style Manual for Preparation of Proposed American National Standards* [3], or *Form and Style for ASTM Standards* [4].

It is intended that each Working Group preparing a standard to be published by the Acoustical Society of America shall prepare the drafts of the Standards, starting with the first draft, in accordance with the format and style of these *ASACOS Rules* and the ASA Template.

A checklist has been prepared (see Annex B) to assist the Working Group Chair and other reviewers to ensure that all relevant *Rules* have been considered.

Suggestions for improvement of these ASACOS *Rules* are welcome. Send suggestions to:

Acoustical Society of America
Standards Secretariat
35 Pinelawn Road, Suite 114E
Melville, NY 11747

e-mail: asastds@aip.org
Telephone: (631) 390-0215
Fax: (631) 390-0217

ASACOS Rules for Preparation of American National Standards in Acoustics, Mechanical Vibration and Shock, Bioacoustics, and Noise

1 Scope

These ASACOS *Rules* apply to standards and technical reports prepared by any Working Group of a Standards Committee for which the Acoustical Society of America provides the Secretariat.

The intent of these ASACOS *Rules* is to assist the Accredited Standards Committees and their Working Groups in the preparation of standards and to promote uniformity in form and style in standards published by the Acoustical Society of America.

These ASACOS *Rules* are applicable both to the preparation of new American National Standards originating in a Working Group and to conversion of an ISO or IEC International Standard to a counterpart American National Standard. The ASACOS *Rules* also apply to Working Drafts of proposed standards circulated within a Standards Committee Working Group and to drafts of proposed standards submitted to a Standards Committee for ballot or approval or to ASACOS for information.

NOTE These ASACOS *Rules* and the associated ASA Template for preparation of acoustical standards assume that drafts of acoustical standards or technical reports will be prepared using the Microsoft WORD ® word-processing program.

2 References

2.1 Normative references

Normative references are standards that are incorporated by reference in a new standard, and are required for, and indispensable to, its use. The following paragraph shall be used to introduce the normative references:

"The following referenced documents are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies."

These ASACOS *Rules* strongly recommend that any list of normative references only include dated references. Inclusion of undated references leads to questions about which edition of a document should apply for a future application. If a particular dated reference is modified or even withdrawn at a later date and the modifications affect the requirements in a document, then the ANSI document has to be updated if required. By including only dated references, there is no ambiguity about the applicability of the reference to the requirements of a document.

If these ASACOS *Rules* were actually an American National Standard, the following would be appropriate normative references.

ANSI S1.1-1994 (R 1999), *American National Standard Acoustical Terminology*

ANSI S2.1-2000/ISO 2041:1990 *Nationally Adopted International Standard Vibration and Shock — Vocabulary*

ASACOS RULES 2003

ANSI S2.7-1982 (R 2001), *American National Standard Balancing Terminology*

ANSI S3.20-1995 (R 1999), *American National Standard Bioacoustical Terminology*

ANSI S3.32-1982 (R 1999), *American National Standard Mechanical Vibration and Shock Affecting Man — Vocabulary*

ANSI/IEEE STD 260.4-1996, *American National Standard Letter Symbols and Abbreviations for Quantities Used in Acoustics*

ISO 690:1987, *Documentation — Bibliographic references — Content, form and structure*

ISO 690-2:1997, *Information and documentation — Bibliographic references — Part 2: Electronic documents or parts thereof*

NOTE 1 "R" in the ANSI document number stands for reaffirmed.

NOTE 2 The em dash (—) that separates the various elements of the title of an International Standard or a Nationally Adopted International Standard is conveniently produced by the keyboard combination of 'Cntrl + Alt + Num -', where the last character of that combination is the hyphen or minus sign.

2.2 Informative references

Informative references may be included to provide information about the history or development of a standard. Informative references are those that are not required for application of the standard.

Earlier versions of these ASACOS *Rules* provided for the inclusion of informative references in Clause 2. As part of the effort to harmonize these ASACOS *Rules* with the ISO/IEC *Directives*, such references shall only be included in a bibliography; see the additional information in 3.9.1.

A bibliography is an optional and informative element that is always placed after the last annex of the standard. A bibliography is not an Annex. See 3.20 for details.

3 Content of a standard

3.1 Normative and optional elements

A draft of a proposed standard shall contain the following elements, as applicable, in the noted order:

Title page with abstract (normative)

Copyright page (normative)

Table of Contents (normative)

Foreword (normative)

Introduction (optional)

Scope (normative)

Normative references to other standards and documents (normative, if any are required)

Terms and definitions (optional)

Requirements (main text) (normative)

Tables (as required)

Figures (as required)

Annexes (as required)

Tables for annexes (as required)

Figures for annexes (as required)

Bibliography (optional)

3.2 Title page with abstract

3.2.1 Format of the title page

The title page is the first page (un-numbered) of every draft of a proposed standard. Figure 1 illustrates the requirements for a title page. Until the designation (shown in the upper right-hand corner of the title page) is known, a temporary designation, such as S3.XX-200X, may be used. Contact the ASA Secretariat early in the development process to obtain the designation.

The fact that the proposed standard is a draft and is not approved as an ANSI standard is indicated by including a note to that effect above the words "American National Standards Institute, Inc." on the title page (see Figure 1).

Each draft shall be dated in the upper right corner of the title page. It is convenient to show a sequence of drafts as indicated by the series shown in Figure 1 beneath the designation.

NOTE In a standard, figures and tables are inserted in the text as soon as practicable after first mention. For convenience, the figures in these ASACOS Rules are gathered together after the main text.

3.2.2 Title of the Standard

The title of the proposed standard includes the words "American National Standard" as an adjective modifying, and immediately preceding, a noun such as Method, Requirement, Terms and Definitions, Quantities, Levels, Procedures, Specifications, and so on. The title should be concise, yet complete enough to cover, without ambiguity, the subject of the proposed standard. Titles of analogous standards should be identical, except for the distinguishing feature(s) of each standard. For standards in a series, either use separate titles or use Part numbers with Arabic numerals, followed by a colon and then the title for the Part: for example as, "Part 1: Basic Test Requirements". Contrary to other usage within the standard, the initial letter of each important word in the title is capitalized on the title page and wherever else the title is used in the text. (Titles of international standards and other documents shall be given exactly as stated on the document.)

3.2.3 Abstract

Every proposed standard shall include an abstract at the bottom of the title page as shown in Figure 1. The abstract should begin with the most important purpose(s) or recommendation(s) of the standard and should be self-contained so that it may be understood without reading the standard. It should contain a summary of the contents of the standard. The relationship of the proposed standard to related standards or to previous versions of the standard (national or international) should be indicated. Write the text for the abstract with complete, connected sentences using active verbs and the third person. Abbreviations, symbols, references, and equations shall not be included in an

abstract. The word count of an abstract may range from approximately fifty (50) to approximately two hundred (200) words, in one paragraph.

The abstract shall not contain requirements.

3.3 Copyright page

All standards developed by Accredited Standards Committees S1, S2, S3, and S12 shall carry the ASA copyright notice starting with the first draft of the standard. Use the copyright page given in the template or contact the ASA Standards Manager for assistance.

3.4 Contents page(s)

Each draft of a proposed standard shall contain a contents page(s). The contents page(s) shall be numbered with lower-case Roman numerals, beginning with i. The contents listing shall include as many of the following as are relevant:

- Clause number and full heading
- Subclause number and full heading, but only to the second level
- Annexes (informative or normative), including letter designation and full title
- Bibliography
- Indexes
- Tables
- Figures

The items to be listed in the Contents are those clauses and subclauses with first level and second level headings. Third-level, and lower, headings (for example, 6.1.1 or B.2.3.1) are not to be included. As an exception, third-level headings are included in the Contents for these *ASACOS Rules* for ease of reference, but only for these *ASACOS Rules*.

With two exceptions, required elements for the contents, figures, and tables will self-generate when the template is properly used. The exception in the present Version 1 of the Template is the annexes, for which the information has to be manually inserted.

3.5 Foreword pages with Committee and Working Group membership lists

The proposed standard shall include a foreword beginning on the next page after the contents page(s). Foreword pages shall be numbered sequentially with lower-case Roman numerals that follow the page numbers of the contents pages. The foreword shall include as many of the following items as appropriate: (1) a brief history of the standard, (2) special remarks about use or application of the standard, and (3) if it is a revision of an American National Standard, an explanation of the principal differences between the current and the earlier version. If the proposed standard is a national adoption of an International Standard, the principal technical differences, if any, that were needed to make the International Standard conform to national requirements should be explained. Do not include material in the foreword that is appropriate for the scope. No normative material (that is, any requirement that uses "shall" as the verb) shall be included in the foreword. The content of the foreword shall be within the scope of the document and the scope of the Accredited Standards Committee.

Examples are presented in Figures 2 and 3 of the format for the items to be included in a foreword. A notation that the foreword is not an integral part of the standard is included within brackets at the beginning of the foreword after the word "Foreword", as in Figure 2. After the list of the names of the members of the Working Group, Figure 3 shows the words to use for soliciting comments on the standard (and the location to which the comments should be sent). The word "Foreword" should appear only on the first page of the foreword, as shown in Figure 2.

The foreword shall contain a statement that the standard was developed in accordance with ANSI's Accredited Standards Committee procedures under the Standards Secretariat of the Acoustical Society of America. Then give the current scope of the relevant Accredited Standards Committee. See the example in Figure 2.

After the scope of the Standards Committee, the foreword shall list the names of the officers of the relevant Standards Committee. The names of the organizational members of the Standards Committee, and their representatives and alternate(s) if any, and the names of the Individual Experts of the Standards Committee shall also be included in the foreword. Include, in alphabetical order, the names of the members of the Working Group, if any, who assisted the Committee in preparing the proposed standard. See the examples in Figures 2 and 3.

It is very important that the Committee and Working Group lists be complete with the correct names, properly spelled. Use first and second (if any) initials. Do not spell out first names. Do not include titles such as Mr., Dr., or Professor. Include Jr. or III (or other number) after the last name if the person uses it. The appropriate list of Standards Committee officers, Individual Experts, and organizational members (and the names of their representatives and alternates) should be obtained from the ASA Standards Manager. When the standard is published, the names of the officers and members of the Standards Committee will be applicable to the date when the proposed standard was submitted to the Standards Committee for the final ballot. (This date does not refer to, nor is invalidated by, circulation of the document to the Committee for technical review following a ballot.) The Working Group Chair is responsible for supplying the ASA Standards Secretariat with the names and postal and e-mail addresses of the members of the Working Group.

3.6 Introduction page

A standard does not require an introduction. An introduction may be included if considered necessary by the Working Group to explain certain background details about the technical content of the document, or explanatory information useful for proper understanding of the use of the proposed standard.

The introduction shall be kept as short as feasible. If a more lengthy description of the background for the standard is considered appropriate, it shall be placed in an informative annex.

Material in the introduction shall not duplicate similar information in the foreword. Also, the material in the introduction shall not include anything that properly belongs in the clauses describing the scope or the requirements of the standard.

The introduction page is numbered sequentially with lower-case Roman numerals that follow the page numbers of the foreword. The introduction, itself, is an unnumbered clause.

3.7 Text of the standard

3.7.1 Contents of the text

The text of a standard includes the applicable clauses listed in 3.1, as well as tables, figures, and the normative as well as the informative references that are cited in the text.

3.7.2 Title and page numbering

The text of the standard begins on page 1 (page numbering of the text uses Arabic numerals) with the title of the standard, namely, American National Standard <insert rest of title>.

3.8 Scope

The scope is a normative element of a standard and is always Clause 1. In the scope clause, explain what is and, if necessary, what is not covered by the proposed standard. The scope of a standard shall not exceed the approved scope of the Accredited Standards Committee. The scope shall not contain requirements. In standards that are subdivided into parts, the scope of each part shall describe only the subject of that part of the standard.

The statement of the scope of a standard shall cover as many of the following items as are applicable:

- 1) A general description of the subject of the standard, the aspects covered, and the fundamental assumptions on which the standard is based,
- 2) An indication of the uses of the data or devices developed in accordance with the standard,
- 3) An indication of the intended users of the standard,
- 4) A statement of the possible consequences of the use of the procedure, methods, or quantities addressed by the standard, and
- 5) A description of the applications, or field of applications, for the standard.

For example:

"The scope of this Standard covers a procedure for determining the sound of widgets when used in the high speed mode during the manufacturing of gadgets. The procedure is applicable for use by regulatory enforcement agencies and for production verification to establish compliance with noise regulations and specifications for widgets. The primary concern of the sound measurement program is the risk of hearing damage to widget operators and gadget production line workers. Special purpose widgets are not covered by this Standard."

3.9 References

3.9.1 Normative references

Each normative reference listed in Clause 2 shall be referred to in the text of the standard.

Documents listed as normative references are those that are indispensable for application of the standard. Each listing of a normative reference in Clause 2 shall include the year of issue for the latest edition. If a requirement in the standard refers to a particular clause, subclause, paragraph, figure or table in a standard, the listing in the text of the standard shall also include the year of issue.

American National Standards shall be listed in numerical order according to their designation numbers. That is, ANSI S1.11 before ANSI S3.20. After all ANSI references, list publications of the International Electrotechnical Commission (IEC) and International Standards Organization (ISO), in numerical order.

The list of normative references shall not include the following:

- referenced documents that are not publicly available;
- referenced documents that are only cited in an informative manner;
- referenced documents that have merely served as bibliographic or background material in the preparation of the document. Such referenced documents may be listed in a bibliography.

In particular, do not refer to unpublished theses, private correspondence, personal communications, documents not in English, or reports by companies or other private institutions.

3.9.2 Informative references

Informative references, if required, shall be placed in a bibliography. See 3.20 for details.

3.10 Terms and definitions

3.10.1 When to include a list of terms and definitions

Standards are not required to include a terms and definitions clause. However, include a list of terms and definitions if the standard contains:

- 1) significant terms that are crucial to the interpretation and application of the standard or that may have a meaning more specialized or more restricted than the common dictionary meaning or the meaning in acoustical terminology standards;
- 2) significant terms that are unique or applicable only to the standard or have meaning more specialized or more restricted than other technical meanings of the same term. (If the term is unique to the standard, it shall be so restricted.);
- 3) qualitative adjectives and nouns that could be taken to denote or connote an absolute, unqualified, or unconditional property or capability, for example, free-field, acoustically rigid, infinite impedance, etc. (Define such terms in their intended absolute sense.);
- 4) qualitative adjectives and nouns that denote or describe a quantitatively determinable property or capability, for example, high, low, accurate, thin, quiet, noisy, adequate, etc. (Give such terms their intended specialized quantitative meanings.)

Definitions should not be prepared for technical terms covering broad fields and having meanings that are well understood and not subject to dispute such as: force, mass, root-mean-square, integral, and other mathematical terms.

3.10.2 Resources

Great care is required to prepare definitions. Well-written definitions are needed to ensure that standards are properly understood and unambiguously interpreted, and to explain the meanings of technical terms for the benefit of the user of the standard. Whenever possible, each definition should stand on its own and clearly indicate or delimit its field of applicability.

Definitions should be consistent with those given in ANSI S1.1-1994, ANSI S2.1-2000, ANSI S2.7-1982, ANSI S3.20-1995, and ANSI S3.32-1982, (see 2.1), or the latest revisions thereof, and, where appropriate, other existing American National Standards, including new standards on terms and definitions approved by one of the Accredited Standards Committees.

ASACOS RULES 2003

A definition for a technical term that differs from a corresponding definition in one of the above Standards may be included if the existing definition is deemed by the Working Group to be incorrect or inadequate, and written explanation for the new definition is included in the background information provided with the letter ballots.

The ASACOS policies on definitions are given in Annex C.

3.10.3 Format for terms and definitions

A list of terms and definitions shall be preceded by the following words: "For the purposes of this document, the following terms and definitions apply."

In the case where terms defined in one or more other documents also apply, the following introductory wording shall be used, altered as necessary. "For the purposes of this document, the terms and definitions given in <insert the designation(s) of applicable standard(s)> and the following apply."

Terms and definitions may be listed in alphabetical order or in a technical sequence so that related terms are placed together. Each definition shall be numbered as a subclause of the terms and definitions clause of the standard, normally Clause 3, after the list of normative references in Clause 2.

A definition shall not take the form of, or contain, a requirement.

Examples of term usage and notes concerning entries, if needed, shall be given after the definition. One or more notes may follow a definition. Additional information that supplements the definition for a term should be given in a note.

Do not use a letter symbol as, or as part of, a term. Use full words to describe all terms. Letter symbols are for use in equations and, if required, as column headings in a table.

An equation is not a substitute for the full-word description of a term. An equation may be included in a note or an example after a definition. Letter symbols in an equation shall be explained and the preferred units of measure shall be given for physical quantities represented in the equation; see 3.17 for additional details

The dictionary format may be used for all definitions. As can be seen, for example, in *Merriam Webster's New Collegiate Dictionary*, the name of the quantity being defined is given in lower-case letters (unless the word is a proper name for which an initial capital letter is used), in bold typeface, and followed by a period (full stop). A verb such as "is" is omitted but understood. Leading articles such as "A", "An", and "The" are omitted and the term being defined is not repeated. The first letter of the first word of the definition is capitalized.

The dictionary format is illustrated as follows:

3.1 standard. Document describing (1) a specification, (2) a method for measurement, test, or evaluation, or (3) terminology.

NOTE 1 For the purposes of these ASACOS Rules, the material in a draft Standard is that proposed for approval by the relevant Accredited Standards Committee.

NOTE 2 A standard may contain guidelines.

For terms that are physical quantities, give the SI (metric) units in full words in a note and introduce the unit for the quantity by the words "expressed in", with the standard unit symbol enclosed within parentheses as shown in the following example.

NOTE Sound pressure is expressed in pascals (Pa).

The dictionary format described above for the listing of terms and definitions follows the practice long used in the preparation of acoustical standards. The ISO/IEC Directives [1], however, require a different layout where the reference number for the term is given on the first line of type, followed by the term on a second line, and ending with the definition. The definition does not have a period at the end because it is not a sentence, just a statement. Using the above example, the layout of a term and its definition with notes would be as shown below according to the ISO/IEC Directives [1].

3.1 standard

document describing (1) a specification, (2) a method for measurement, test, or evaluation, or (3) terminology

NOTE 1 For the purposes of these *ASACOS Rules*, the material in a draft Standard is that proposed for approval by the relevant Accredited Standards Committee.

NOTE 2 A standard may contain guidelines.

The reference number for the term and the term are set in boldface type as for the dictionary format. The definition starts with a lower-case letter except for capital letters that may be required by the normal written form of the definition.

For the purposes of this Edition of the ASACOS Rules, either the dictionary format or the format of the ISO/IEC Directives may be used in drafting an American National Standard.

An American National Standard that is prepared with the ultimate objective of being submitted for consideration as an International Standard preferably should prepare the list of terms and definitions in accordance with the requirements of the ISO/IEC Directives [1]. An International Standard that is being considered for adoption as an American National Standard will have been prepared in accordance with the ISO/IEC Directives and it is not necessary to re-write all the terms and definitions into the dictionary format.

3.11 Requirements

The main part of the text of standards prepared by an Accredited Standards Committee usually contains some kind of requirements. These requirements may be developed in one or more clauses in any sequence that makes logical technical sense for the subject of the document. Development of the text should follow the conventions specified in these *ASACOS Rules*, as supplemented by the material in [1] to [3] of the bibliography regarding form, style, and usage.

For ease of reference, the various subclauses shall be numbered, as in these *ASACOS Rules*, using the ISO/IEC numbering system [1]. Although not required, it is often very helpful for cross-referencing purposes to give each paragraph a number under the subclause, except when there is only one paragraph under a subclause.

Requirements shall describe the following:

- a) all characteristics relevant to the aspects of the products or processes covered by the standard, either explicitly or by reference;
- b) the design-goal values of quantifiable characteristics and the tolerance limits allowed around the design goals;
- c) for each requirement, either a reference to a test method for determining or verifying conformance to the requirements of the standard for a characteristic, or the test method itself.

Requirements shall be clearly distinguished from statements or recommendations.

Contractual, legal, or statutory requirements shall not be included in a standard prepared by an Accredited Standards Committee.

3.12 Citations in the text

As a rule, citations are given in the text. If the cited document is a normative reference, the designation (ANSI S#.##-YYYY or ISO or IEC #####:YYYY) shall be provided. Be sure to include the year of issue.

If the cited document is from the informative bibliography, the bibliographic number should be provided in the text and enclosed with brackets as [1].

3.13 Notes and examples

3.13.1 Purpose

Notes and examples are used to clarify an element of a standard wherever appropriate, including a definition. Notes and examples that are integrated into the text are not integral parts of the standard. Any information necessary to conform to the requirements of the standard shall not be placed in a note.

3.13.2 Format for notes and examples

Notes and examples use the Note or Example styles and are set in smaller 9-point type rather than the 10-point type used in the Normal style.

The format for placing notes in the text of a standard is slightly different if there is one note or example being inserted or two or more.

Notes and examples shall be placed immediately after the paragraph to which they apply.

Notes and examples integrated into the text of a standard shall be preceded by the word NOTE or EXAMPLE in capital letters. The first and subsequent lines of a note or example are set flush left.

EXAMPLE 1 Format for a single note:

NOTE When a single note is inserted it is not numbered. Apply the Note style to obtain the correct spacing and strike the tab key once after the word NOTE. Do not insert a blank space after the word NOTE or after the tab.

EXAMPLE 2 Format for two or more notes:

NOTE 1 The word "NOTE" precedes the numeral that is assigned to the NOTE with one blank space between the word NOTE and the numeral, followed by two strikes of the tab key with no blank spaces before or after the tabs.

NOTE 2 When there is more than one note, each note is numbered, with no en-dash or other punctuation separating the number and the text of the note, just two strikes of the tab key followed by the text of the note.

3.14 Footnotes to an element of the text of a standard

Footnotes may be used to give additional information; however, their use shall be minimized. A footnote to the text of a standard shall not provide any requirements or any information that is needed

to apply the requirements of the standard. Footnotes to the text of a standard are not integral parts of the standard.

Each footnote to the text of a standard shall be sequentially numbered using superscript Arabic numerals followed by a single right parenthesis and inserted in the text. The footnote itself and its reference number shall appear at the bottom of the same page, separated from the text by a short thin horizontal line. The sequential numbering of the footnotes shall be continuous throughout the standard.

Footnotes and the separator lines should be generated using the footnote insertion feature provided in Microsoft WORD.

Figures and tables may contain footnotes that are independent of the footnotes to the text and may give requirements; see 3.18.4 and 3.19.3.

3.15 Abbreviations

Use of an abbreviation such as ADNL, CSEL, or PWL in a national or an international standard is unwise, because of the risk of misinterpretation. If a term is being used so frequently that an abbreviation is desirable, the abbreviated term should be spelled out in full at its first appearance in text, followed by the abbreviation in parentheses. For example, "at 1 kHz the sound pressure level (SPL) was 87 decibels"; later, this same phrase may be written, "at 1 kHz the SPL was 87 dB." Do not write, "the measured L_A shall not exceed 65 dB"; write, "the measured A-weighted sound level shall not exceed 65 dB". Except for explanation in pertinent text, a letter symbol should not be used in place of full text or an abbreviation; use letter symbols in equations or, if necessary because of inadequate space, as a column heading in a table.

3.16 Unit symbols

3.16.1 When to use unit symbols

In the text of the standard, the unit symbol for a quantity shall be used only when the unit is preceded by a numeral. When the unit is not preceded by a numeral, spell out the name of the unit. In text, even when a numerical value is given, it is desirable to spell out the name of the unit. Moreover, the name shall be spelled out when it first appears in the text, and more often if the text is lengthy.

Thus, in text write "...a sound pressure level of 73 dB; or "...a sound pressure level of 73 decibels." Do not write "sound pressure level in dB"; the correct form is "sound pressure level in decibels."

Do not write "dB levels", "dB readings", or "dB SPL." Levels or readings are not of decibels; they are of sound pressure levels or some other acoustical quantity. Write out the word "decibel" for such applications, and be sure that the word 'decibel' follows, not precedes the description of the relevant acoustical quantity.

Always place a single blank space between a numerical value and its unit symbol, except for plane angles where the unit symbol for degrees, minutes, and seconds shall immediately follow the numerical value. For temperatures, place a blank space between the numerical value and the degree sign followed by the symbol for the unit as 20 °C, not as 20° C.

Unit symbols shall always be in roman type.

3.16.2 When not to use unit symbols

Do not use unit symbols as part of the name of a quantity, or as a modifier of a noun, or even as a modifier of an abbreviation. Unit symbols shall be used only when preceded by a number in the text of the standard, or in the caption of a table, or in the scale label of a figure.

Do not mix a name for a quantity and letter symbols. For example, for the unit of power spectral density, it is incorrect to write "power per Hz" or even "power per hertz" or "power/hertz." Write "watt per hertz" or "W/Hz."

Do not attach anything to a standard unit symbol in an attempt to qualify, modify, or describe the quantity being measured in the given unit. Put the name for the modifier with the name for the quantity. Do not write "sound level in dBA", or "sound level of 90 dB(A)", or "sound level in A-weighted decibels." Write "A-weighted sound level in decibels" or "an A-weighted sound level of 90 dB." The unit of the level of an acoustical quantity (bels or decibels) cannot be frequency weighted or time weighted; the quantity (not its unit) may be so weighted.

3.17 Equations

- 1) Equations are useful and valuable means to convey unambiguous information in a standard. While complicated mathematical expressions are rarely required for a standard, this subclause provides general guidance for the presentation and display of equations. Equations in a note to a definition can be a particularly valuable adjunct to supplement the text of the definition.
- 2) Create equations in an equation editor such as the equation editor supplied with Microsoft WORD. (The equation editor may be selected as an "Object" from the menu under "Insert.")
- 3) Center each equation between the left and right margins. Number each equation in Arabic numerals contained in parenthesis and right flush at the right-hand margin.
- 4) It is not appropriate to include the derivation of an equation in a standard. Give only the relevant equation(s) in final form accompanied by a careful explanation of all letter symbols, subscripts and superscripts, constants, and the applicable SI units of measure for all terms. Give all units in the text or in an explanatory list, not as part of the equation. Make sure that all equations are dimensionally correct. It is not necessary or appropriate to include the unit symbol dB after the expression "10 lg (ratio)" in an equation. For an expression of the level of an acoustical quantity, all elements of the left and right-hand sides of the equation are expressed in bels or decibels, as should be clear from the adjacent text.
- 5) Letter symbols from Roman or Greek alphabets shall be used for variables that represent physical quantities and shall be set in italic font style. Symbols for vector quantities are set in roman bold font style. Text, mathematical functions, frequency weightings, and numbers are set in regular font style.
- 6) Names of quantities and multi-letter abbreviations, either on the line of type or as subscripts, shall not be used instead of symbols.
- 7) Abbreviations for mathematical functions, including trigonometric functions such as sin, cos, and tan, are set in regular font style. The preferred expression for the base-10 (common) logarithm is lg, not log or log10. Use ln for Napierian (base-e) logarithms, not log e. The square root of -1 is preferably represented by j, not i.
- 8) As will be selected by the equation editor, mathematical operators are set in regular font style as: +, -, ±, <, >, and =. Use the × (a cross from the symbol set of standard fonts), not an x

- (ex), to represent multiplication, or enclose the elements within parentheses. Integral and summation signs are also set in regular font style.
- 9) In American National Standards, the decimal sign shall be a period or dot on the line. To avoid confusion with differing practices in various countries, International Standards use the comma as the decimal sign.
 - 10) In many acoustical standards there is an exponential relationship among the variables. If the relationship is relatively simple, use the form e^{-ax} where the base e is in italic or slanted type, as is the variable x and coefficient a . When the relationship is more complicated, avoid built-up fractions and use instead the exp operator as: $\exp[(a \sin \theta + b \cos \phi)/c]$, where the operator "exp" is in regular font style. The awkward alternative, which should not be used in a line of type or as a display equation because the font size in the exponent is so small, is $e^{[(a \sin \theta + b \cos \phi)/c]}$.
 - 11) Avoid the radical (square root) sign, especially for exponents smaller than 1/2. In a line of text, use fractional exponents to indicate exponentiation to a power less than one. The equation editor should be able to produce a square-root radical sign that is consistent with the rest of the elements of the equation. Otherwise, use fractions for exponents less than 1.
 - 12) In a line of text, use the solidus (/ or forward slash) to indicate division, never the ÷ sign. For displayed equations that involve one or more complicated numerator and denominator terms, use built-up fractions to avoid ambiguity and spacing problems. The equation editor should have an automatic means to produce built-up fractions.
 - 13) For most applications where the terms in an equation require only a single line of type, judicious use of parentheses (), brackets [], and braces { }, will avoid ambiguity and also avoid the complication of a built-up fraction.
 - 14) Use basic 10-point type size for equations that are a part of the text of a standard. For equations that are placed in a note, use the 9-point type size for notes. Some experimentation with the equation editor may be necessary to scale Greek letters, subscripts, and superscripts, relative to the basic type size, so that equations are clearly readable. It may be helpful to scale Greek letters as much as 180% of the size of the base font to maintain balance with the Roman characters in the equation. Similarly, subscripts and superscripts for Greek letters may need to be larger than those used for Roman letters. The equation editor should have the ability to adjust these scaling relations by selecting the size of the superscripts, subscripts, and symbols as a fraction of the full size.
 - 15) Each equation in the main text of a standard, including those in notes, shall be numbered sequentially with an Arabic number starting with (1) and independent of the numbering of clauses, tables, or figures. Identify equations in annexes with numbers preceded by the letter designating the annex with a period (full stop) separating the letter and the number, for example as (A.1). Set all equation designators flush with the right margin of the page. Subdivided equation designators, as (3a), (3b), (3c), shall not be used.
 - 16) In the clause with terms and definitions, there are two acceptable ways to write an equation in a note to a definition for the level of an acoustical quantity that has a complicated expression in the numerator, and perhaps also the denominator, of the ratio of which the logarithm is taken. One procedure is to show the complete expressions for the numerator and denominator in one equation with descriptions below the equation of all symbols and their SI units of measure. The other procedure is to provide separate definitions and letter symbols for the quantities in the numerator and denominator expressions and then use those letter symbols in the expression for the level of the quantity, also with all symbols and their units described. Examples below illustrate these two options.

ASACOS RULES 2003

- 17) If the right-hand side of an equation contains so many terms that it is too long to fit comfortably within the margins of a page, the equation shall be broken and carried over to subsequent lines, aligned with the equals sign on appropriate mathematical operators. If it necessary to show alternative forms of an equation, the various alternatives shall be on separate lines and shall each have separate equation designations. Additional examples below illustrate these rules. In each case, the equation editor was used to create the equation that was then inserted as an "object" into the file for these ASACOS Rules. The equation was then centered between the margins and the equation number was added by using a center tab at 8 cm and a right-flush tab at 16 cm, respectively.
- 18) Additional guidance is also available in the ISO/IEC Directives [1] and the AIP Style Manual, [2]. Working Groups may also request assistance through the ASA Standards Secretariat.

EXAMPLE 1 The definition for A-weighted sound exposure level might be given as "ten times the logarithm to the base-10 of the ratio of the A-weighted sound exposure to the reference sound exposure." The mathematical expression for A-weighted sound exposure level might be given in a note to the definition as follows. (Notice that the A_E subscript to the letter symbol for the quantity indicates that the sound exposure is determined with frequency weighting A and that the "A" is in roman type because the frequency weighting is not a physical quantity. Sound exposure E is a physical quantity and hence the " E " is shown in italic type. The "A" precedes the " E " because the frequency weighting is applied to the sound pressure signal before the operation of time integration) (It is also agreed by the Working Group to include a separate note to show the mathematical expression for the relation between a measurement of sound exposure level and the corresponding measurement of time-average sound level.)

NOTE 1 In accordance with the definition, the mathematical expression for A-weighted sound exposure level is given by:

$$L_{AE} = 10 \lg(E_A / E_0) \quad (1)$$

or, using the underlying physical quantities, by:

$$L_{AE} = 10 \lg \left\{ \left[\int_{t_1}^{t_2} p_A^2(t) dt \right] / p_0^2 T_0 \right\} \quad (2)$$

where

- L_{AE} is A-weighted sound exposure level, expressed in decibels (dB);
- E_A is A-weighted sound exposure, expressed in pascal-squared seconds (Pa^2s);
- E_0 is the reference sound exposure of $400 \times 10^{-12} \text{ Pa}^2\text{s}$ from the product of the square of the reference sound pressure and the reference time for sound exposure level;
- $p_A^2(t)$ is the square of the A-weighted instantaneous sound pressure, expressed in pascals squared, as a function of running time, t , during an integration period starting at time t_1 and ending at time t_2 ;
- p_0 is the reference sound pressure of $20 \mu\text{Pa}$;
- T_0 is the reference time for sound exposure level of 1 s.

NOTE 2 A-weighted sound exposure level is related to a corresponding measurement of time-average A-weighted sound level by:

$$L_{AE} = L_{AT} + 10 \lg(T/T_0) \quad (3)$$

where

- L_{AT} is the time-average, A-weighted sound level, expressed in decibels (dB) relative to the reference sound pressure;
- T is the averaging time for the measurement of time-average sound level and also the integration time for the measurement of sound exposure level, that is $T = t_2 - t_1$, expressed in seconds.

EXAMPLE 2 An alternative approach to the presentations of EXAMPLE 1 that may be preferred for some standards is to give separate definitions for the various terms before giving the definition for the level of the acoustical quantity. Thus, the list of terms and definitions would define the reference sound pressure after the definition for sound pressure, which would lead to definitions for sound pressure level and time-average sound level. Subsequently, the list would define sound exposure and then sound exposure level. By this approach, the notes that might follow the definitions for sound exposure and sound exposure level are as follows. In this case, sound exposure is assumed to be defined as a general frequency-weighted quantity while the note, as an example, assumes that frequency-weighting A has been employed. The equation number is assumed to be 5.

NOTE 1 The mathematical expression for A-weighted sound exposure level is given by:

$$L_{AE} = 10 \lg(E_A/E_0) \quad (5)$$

where

- L_{AE} is A-weighted sound exposure level, expressed in decibels (dB);
- E_A is A-weighted sound exposure, expressed in pascal-squared seconds (Pa^2s);
- E_0 is the reference sound exposure of $400 \times 10^{-12} \text{ Pa}^2\text{s}$ from the product of the square of the reference sound pressure and the reference time for sound exposure level.

NOTE 2 A-weighted sound exposure level is related to a corresponding measurement of time-average A-weighted sound level by the following expression:

$$L_{AE} = L_{AT} + 10 \lg(T/T_0) \quad (6)$$

where

- L_{AT} is the time-average A-weighted sound level, expressed in decibels (dB) relative to the reference sound pressure;
- T is the averaging time for the measurement of time-average sound level and also the integration time for the measurement of sound exposure level, expressed in seconds.

[The lists below Equations (5) and (6) are minimal because the mathematical expressions for E_A and E_0 and L_{AT} and T would have, by this approach, been given in notes to the definitions for sound exposure, reference sound exposure, and time-average sound level and hence are not repeated here.]

EXAMPLE 3 An example of the presentation of an equation with many terms on the right-hand side, consider the equation, from Annex B of ANSI S1.26-1995, for the calculation of the saturation vapor pressure in a sample of moist air as needed to calculate the molar concentration of water vapor from measurements of the static pressure of the air, air temperature, for a specified relative humidity.

NOTE The ratio of saturation vapor pressure to the reference static air pressure is a function of the temperature of the air and is given by the following:

$$p_{\text{sat}}/p_{\text{ref}} = 10^V \quad (\text{B.2})$$

where

- p_{sat} is the saturation vapor pressure, expressed in pascals;
- p_{ref} is the reference static air pressure of 101 325 Pa;
- V is an exponent given by the following empirical expression.

$$\begin{aligned} V = & 10.79586[1 - (T_{01}/T)] - 5.02808 \lg(T/T_{01}) \\ & + 1.50474 \times 10^{-4} \left\{ 1 - 10^{-8.29692[(T/T_{01})-1]} \right\} \\ & + 0.42873 \times 10^{-3} \left\{ -1 + 10^{4.76955[1 - (T_{01}/T)]} \right\} \\ & - 2.2195983 \end{aligned} \quad (\text{B.3})$$

where

- T is the temperature of the sample of air, expressed in kelvins;
- T_{01} is the triple-point isotherm temperature of 273.16 K.

[Equation (B.3) is shown in 4 lines to emphasize the separate elements of the expression. With use of additional brackets and braces to avoid ambiguity, the equation could be reduced to 2 lines and still be displayed as centered between the margins.]

[Note that kelvins are primary SI units for temperatures and hence the full-word text describing the temperature would read "the triple-point isotherm temperature of 273.16 kelvins" and, when using unit symbols, that no "degree sign" is included before the unit symbol K as seen in the description of T_{01} above. Temperatures expressed in degrees Celsius shall use the degree sign as: "reference temperature of 23 °C."]

3.18 Tables

3.18.1 Numbering of tables

Every table in the main text shall have an Arabic numeral and a caption, and shall be cited at least once in the text. Tables shall be numbered sequentially in the order they are first mentioned throughout the standard. A table in an annex shall be identified by the combination of the capital letter for the annex designation, a period or full stop, and a sequence number for tables in that annex, for example, Table B.3 for the third table in Annex B. The numbering of the tables is independent of the numbering of the clauses or figures. A single table in a standard is designated, for example, as Table 1 in the main text and Table A.1 in Annex A.

3.18.2 Table captions

Center the caption of a table horizontally above the table. Start with the word Table, followed by a space, an em-dash, another space, and then the caption, all in 10-point bold font style. Capitalize only the first word of the caption, with the exception of proper nouns. Do not put a period at the end of the caption. In the caption, enumerate all elements of the table so as to afford a general idea of the subject with only minimum reference to the standard. The format of a table caption is shown in the example below:

Table 1 — Ensure that the caption provides an adequate description of the table's contents**3.18.3 Table format**

Tables should be prepared using the Table layout tool from Microsoft WORD. Each cell of a table shall be boxed. All information relevant to the table shall be contained within its frame, including notes and footnotes (see 3.17.4).

Capitalize only the first word of a column heading. In a text entry for a cell in a table, capitalize only the first word. Use lower-case letters for units that are spelled out, such as hertz or decibel. Unit symbols use lower-case or upper-case characters, as appropriate, for the SI prefix representing a power of 10.

In column headings, where space permits, first write out the name for the quantity being tabulated using the bold font style, then on the next or bottom line give the unit symbol of measure using the regular font style. When only a narrow column width is available, do not use an abbreviation in a column heading if a letter symbol for the quantity is available.

If the same unit of measure applies to all columns of a table, put a statement about the unit above and outside the right hand corner of the table, spelled out in full words and using the 9-point regular font style, so that the units need not be repeated in each column heading, for example as "Levels in decibels."

Do not use powers of ten in a column heading; such usage is ambiguous because one cannot tell whether the entries in the column have been, or should be, multiplied by the power of ten. Instead of powers of ten, choose a prefix of the SI unit (such as kilo "k" or micro " μ ") to make the entries near unity in magnitude.

Preferably align columns of related numbers on the decimal sign. Use a period, not a comma, for the decimal sign. Do not use ditto marks to indicate repeated entries; repeat the entry in full each time. If there are no data for a particular entry in a column, use raised dots (•••), not hyphens or a dash or a blank to represent the missing data. Do not combine decimal fractions and common fractions in the same field of a table.

If needed to conserve space in a column, a hyphen or the word "to" may be used to indicate a range of numerical values.

Choose table alignment to center the table on a page without text wrapping.

3.18.4 Table notes and table footnotes

Place notes and footnotes within the frame of the table.

Indicate notes to a table by the sequence NOTE 1, NOTE 2, and so on, with a new sequence for each table. A single note shall be preceded by the word NOTE.

Notes and footnotes to a table shall not give any requirements or information needed to demonstrate conformance to the requirements of the standard. Notes shall be contained in a single merged cell extending across all columns and either above the bottom frame line or above the cell that contains the footnotes, if any.

Indicate table footnotes by the sequence of superscript lower-case letters beginning with "a". Start a new sequence for each table. Place the superscript footnote reference indicators on the table beginning at the upper left and extending across the table from left to right and downward row-by-row. Footnotes to tables are independent from footnotes to the text or a figure. Table footnotes shall be

placed in the bottom cell of the table extending across all columns and below the cell that contains the notes, if any.

3.18.5 Continued tables

Tables that are too large to fit on one page of the standard shall be captioned as a continued table. Column headings and any statement concerning units shall be repeated on all pages after the first page. The table caption is not repeated, but the words "Table # (continued)" are used in place of the table caption on each page of the continued table, except for the last page where the words "Table # (concluded)" shall be used.

NOTE For tables that continue over several pages, it is often useful to provide an abbreviated caption for the intermediate pages.

The distinguishing feature of the various pages of a continued table shall be described by an appropriate sub-caption preceded by lower-case letters in parentheses as (a), (b), and (c).

Plan all tables for a vertical (portrait) layout centered between the margins; avoid a horizontal (landscape) layout that would require the standard to be turned 90° in order to be read, or a large reduction from the original that would yield very small characters for the table entries. Foldout pages are not acceptable.

3.19 Figures

3.19.1 Use of figures

Figures (graphs and other illustrations) are not required for most acoustical standards because the requirements of the standard should be adequately given in the text, supplemented by tables as necessary. For some standards, however, figures provide a measure of understanding not readily achieved otherwise. Each figure shall be referred to at least once in the text. Continued figures that require more than one page to be displayed shall be avoided.

3.19.2 Format of figures and figure titles

Follow the general guidance of the ISO/IEC Directives [1] and the AIP Style Manual [2] when preparing a figure, with special attention to the scale numbers and scale labels for the abscissa and ordinate axes. If possible, enclose a graph within a 4-sided box with appropriate interior tic marks on the four sides, or at least on the ordinate and abscissa axes. Omit grid lines. Explain the meanings of data symbols, line styles, and line weights in a figure legend; avoid callouts within a graph by giving the information in the legend or a sub-title for the figure.

Figures are preferably prepared as computer-generated drawings (including graphs, illustrations of mechanical elements, circuit diagrams, and flow charts) that are inserted into the electronic file for the draft of the document at a location that is as soon as practical after the first mention of the figure. Graphs or charts prepared by a facility of a spreadsheet program can be saved to the clipboard and then pasted into the file for the draft standard, and resized as required to fit centered within the margins. Graphs or charts or other illustrations shall not be imported into the file of the draft standard as a link to another file where the figure was created.

Line drawings, flow charts, and similar illustrations are preferably created directly in the document file using the drawing feature of Microsoft WORD, or by an equivalent procedure. Alternatively, such illustrations may be created by another program, printed, and then scanned and saved in a separate file. The scanned image file may then be imported into the WORD file.

Photographs are not appropriate for inclusion as a figure in a standard or technical report.

Figures shall be numbered sequentially in Arabic numerals, beginning with 1. Figures in annexes shall be numbered sequentially within each annex with the Arabic numeral separated from the annex letter by a period or full stop as: Figure A.3. A single figure in a standard is designated, for example, as Figure 1 when located in the main text and Figure A.1 in Annex A.

Center the figure number and title below the figure beginning with the word 'Figure', followed by the figure number, followed by a space, then an em-dash, another space, and then the title of the figure, all in bold font style. The layout of a figure title is shown by the following example:

Figure A.5 — Arrangement of calibration apparatus for artificial mastoid

Lettering of callouts on a figure shall be in 10-point italic type for

- symbols for quantities such as linear dimensions, angles, and other physical properties,
- subscripts that represent symbols for quantities, and
- symbols representing pure numbers.

All other lettering on figures shall be in the 10-point regular font style.

3.19.3 Notes and footnotes to figures

Both notes and footnotes to figures shall be treated independently from notes integrated in the text. They shall be located above the title of the relevant figure. Notes shall precede figure footnotes (if any). A single note in a figure shall be preceded by the word 'NOTE', placed at the beginning of the first line of the text of the note. When several notes occur in the same figure, they shall be designated 'NOTE 1', 'NOTE 2', 'NOTE 3', and so on. A separate numbering sequence shall be used for each figure.

Footnotes to figures shall be distinguished by superscript lower-case letters, beginning with "a". The footnotes shall be referred to in the figure by inserting the same superscript lower-case letter along with an appropriate callout, as required.

Notes and footnotes to a figure shall not contain any requirements or information needed to demonstrate conformance to the requirements of the standard.

Footnotes to figures shall be placed immediately above the title for the figure.

Footnotes to figures shall be sequentially identified in the figure by lower-case superscript letters beginning with "a". The same lower-case letter shall appear as a callout in the figure. Footnote identifications shall begin again with "a" in subsequent figures.

3.20 Annexes

3.20.1 Placement and format

Annexes shall appear after the main text and in the order in which they are cited in the text.

The clauses, subclauses, tables, figures and mathematical formulae of an annex shall be numbered using the letter designating that annex followed by a period (full stop) then the numeral(s) for that

clause or subclause. The numbering shall start again with each annex. A single annex shall be designated "Annex A".

3.20.2 Elements of an annex title

Each annex, whether normative or informative, requires three elements in its title in three, centered, single-spaced paragraphs:

- 1) the word 'Annex' followed by the designation of the annex by a capital letter in alphabetical sequence starting with A and all in the bold font style;
- 2) identification of whether the annex is normative or informative, with the identification enclosed within parentheses and in regular font style;
- 3) title of the annex, with an initial capital letter on the first word and all lower-case letters for the rest of the title all in the bold font style; proper nouns are shown with initial capitals.

3.20.3 Normative annexes

Normative annexes are integral parts of a standard. The fact that an annex is normative, rather than informative, shall be made clear by the way in which it is referred to in the text of the standard, by the second line of the title of the annex, by the listing of the annex in the Contents, and by the choice of the verb forms for the text of the annex.

3.20.4 Informative annexes

Informative annexes give additional information. They are provided only for clarification, illustration, and general information about the standard. For many standards it is appropriate and desirable to include additional related information for general use and guidance. Such information, however, cannot be a normative part of the standard and is appropriately included in an informative annex.

No material that is rightfully an integral part of a standard shall be placed in an informative annex. The material in an informative annex shall be within or closely related to the scope of the standard and not inconsistent with the standard itself. If the material is rightfully part of the standard, it shall be included as a normative annex and so identified as described in 3.19.3.

NOTE An informative annex is not an integral part of a standard, even though its approval by the Standards Committee is required in the overall approval process.

Examples of material appropriate for an informative annex include:

- 1) remarks about significance and interpretation of the standard, for example, to amplify or explain a statement in the text of the standard;
- 2) background for, and development of, equations used in calculations;
- 3) charts, tables, graphs, or supplementary information needed for computations;
- 4) data forms for recording of test results (such forms may also be given in a normative annex);
- 5) comments on the rationale for development of the method or procedure in the standard.

An informative annex may contain equations, tables, and figures that are part of the annex but not an integral part of the standard. Such equations, tables, and figures shall have an identification that is unique to each annex.

3.21 Bibliography

A bibliography is an optional element in a standard. If a bibliography is considered necessary it is placed after the last annex; a bibliography is not an annex but a separate and final element.

There are numerous sources for guidance on bibliographic style and content. The guidance in these sources varies considerably. A goal of these *ASACOS Rules* is to assure that a user of the standard can locate the sources cited in the bibliography. The examples in this subclause show the styles to be used for entries in a bibliography.

Bibliographic entries shall be arranged in the sequence in which they are cited in the text. Each entry in the bibliography shall be cited in the body of the standard or an annex.

A bibliography may contain publications to explain the technical development of the standard. A standard, however, is not intended to be a technical treatise and shall not include an extensive reading list. A bibliography shall not contain references to source material not cited in the standard or to unpublished material.

All bibliographies shall include complete entries for any cited material. (Working Group Chairs are reminded that it is necessary to obtain written permission to reprint any material that is to be included verbatim in a standard.) As far as possible, all entries shall be publicly available for the expected lifetime of the standard.

Each bibliographic entry shall be numbered using Arabic numerals in brackets, for example as [1]. This number shall be shown with the citation in the text. Apply the bibliography style from the ASA template to achieve the desired numbering.

In general, each entry shall include as many of the following elements as possible: the name(s) of the author(s), complete title of the book or article exactly as published, name of the journal or magazine if appropriate, edition, volume, publication data (place, publisher, date), page numbers, Universal Resource Locator (URL) for online Internet documents, and any other relevant data.

NOTE The date for citation of a reference may contain the month and year or just the year as appropriate.

EXAMPLE 1 Book with a single author:

[1] Surname, initials or first name of author. *Title of Book*. City of Publication: Publisher, date.

EXAMPLE 2 Book with more than one author:

[2] Surname, initials or first name of primary author, first name and surname of second and other authors. *Title of Book*. City of Publication: Publisher, date.

EXAMPLE 3 Book or publication with no identified authors:

[3] *Title of publication*: City of Publication: Publisher, date.

EXAMPLE 4 Articles from Journals:

[4] Surname, initials or first name of primary author, first name and surname of second and other authors. "Title of article." *Name of Journal*, volume number, date: pages.

ASACOS RULES 2003

EXAMPLE 5 Online journals or publications:

- [5] Surname, initials or first name of primary author, first name and surname of second and other authors. "Title of Article [online]." Publication date [cited date]. Available from the Internet at: <provide the complete URL>.

EXAMPLE 6 Citation of a URL:

- [6] Available at <<http://www.abc.xyz/folder/filename.htm>>

EXAMPLE 7 A Standard:

- [7] ISO 690 (all parts), *Documentation – Bibliographic references – Content, form and structure*

NOTE The listing in Example 7 of the undated reference to ISO 690 means that the latest version applies.

4 Special considerations

4.1 Patented items

Although there is no objection in principle to developing an American National Standard that calls for the use of a patented item, the practice shall be avoided if at all practicable. Where it is considered necessary for technical reasons to include a patented item, follow the procedures given in 3.1 of the ANSI Essential Requirements [4].

4.2 Commercial equipment

In a standard, references to commercial equipment or intellectual property shall be generic and shall not include trademarks or other proprietary designations. Where, on the date of approval of a standard, a sole source exists for essential equipment or materials, it is permissible to supply the name and address of the source in a note, provided the words "or the equivalent" are added to the citation. Trade names, if their use cannot be avoided, shall be identified, if appropriate, by the symbol ® to indicate a registered trademark.

4.3 Clarity

Great care is required to ensure that the text of subclauses is simply stated and clear-cut. Give only a single requirement in a subclause or paragraph. The wording shall be such as to preclude the possibility of more than one interpretation. Avoid vague and indefinite terms.

4.4 Non-technical expressions

Use non-technical expressions wherever possible in the text to state requirements. If technical expressions have to be used, all unusual terms shall be included in the list of terms and definitions.

4.5 Special word usage

4.5.1 "Shall" and "should"

The word "shall" (and "shall not") is to be understood as denoting a normative requirement; the word "should" (and "should not") as denoting a recommendation.

The following meanings shall apply to these words in American National Standards:

The verb "shall" is to be used wherever the criterion for conformance to the specific recommendation requires that there be no deviation. "Shall" is not to be used in any foreword, informative annex, or note. Do not use "may not" in place of "shall not" to express a prohibition.

The verb "should" is to be used wherever nonconformance to the specific recommendation is permissible. "Should" shall not be substituted for "shall" on the grounds that conformance to the requirements of the standard is considered voluntary.

NOTE The use of "should" or "shall" has no bearing on the voluntary nature of American National Standards. Inclusion of, or reference to, an American National Standard in a document, standard, or contract by a company, agency, or regulatory body is a voluntary act. When an American National Standard is so cited, the standard becomes a requirement within the limitations set forth by the document, standard, or contract.

4.5.2 "May" and "can"

The verb "may" (and "may not") shall be used in statements to indicate a permissible (or non-permissible) action expressed by the standard and within the limits of the scope of a standard. Do not use "possible" or "impossible" as a substitute for "may" or "may not".

The verb "can" shall be used to state a possibility or capability.

4.5.3 "Must" and "comply"

The verbs "must" and "comply" indicate mandatory legal requirements. Such usage is never appropriate for a standard. Use "shall" to express normative requirements. A product or a procedure may be required by a standard to "conform to" the requirements of the standard, but not "comply with" or "meet" the requirements.

4.5.4 "And/or"

Avoid the term "and/or" wherever possible. Rewrite the statement to clarify the meaning; for example: "Heel pads or sock linings, or both", not "heel pads and/or sock linings". "Nuts, or screws, or bolts, or a combination thereof"; not "nuts, screws, and/or bolts".

4.6 Metric and customary units

If a standard includes numerical values for dimensions and quantities, the values shall be given in International System (SI) units. Other appropriate units may be given, in addition, where practicable. Where non-SI units are given to supplement the SI units, they shall be given in parentheses following the SI units.

EXAMPLE "Measurements shall be made at a distance of 100 m (328 ft) from the sound source."

In the SI system of units, prefixes to indicate powers of ten are given in multiples of 1000, for example as 1 km, 1 m, 1 mm, 1 μ m. Use metres or millimetres as appropriate, instead of centimetres.

NOTE The spelling of the SI unit of length is internationally standardized as "metre" and is preferred for acoustical standards.

4.7 Effective dates

American National Standards are published by the Acoustical Society of America and promulgated through ANSI for voluntary use. However, users, distributors, regulatory bodies, certification agencies,

manufacturers, and others may apply American National Standards as normative requirements in commerce and industry. Such applications may require the establishment of effective dates for the provisions of the standard.

Effective dates shall not be part of a standard approved by ANSI. Such dates may be included in published American National Standards only when authorized by the standards developer and only if it is clearly shown that they are not part of the standard. Effective dates may appear on the cover of the publication, in the foreword, as notes, or in parentheses following a provision to which such a date applies. When an effective date appears in any portion of a published American National Standard (or in a proposed American National Standard), the following statement or its equivalent shall be included: "The effective date is established by the Standards developer and not by the American National Standards Institute."

4.8 Copyrighted material from other organizations

If a Working Group wishes to include any copyrighted material, including figures or tables, in a standard, the Working Group Chair shall obtain written permission from the copyright holder granting permission for ASA to publish such material. A copy of the written permission shall be submitted to the ASA Standards Secretariat prior to submitting the draft for ballot of the Accredited Standards Committee. If written permission is not obtained, the copyrighted material shall not be included.

4.9 Grammar, punctuation, and spelling

All ANSI standards shall be prepared in US English.

In numbers, use a decimal point rather than a comma.

Use common American English spellings, except use the word "metre" rather than "meter". (This spelling is the usage of the SI system.)

In a list of three or more items, use a comma before the final "and" or "or" as shown in the heading for this subclause.

Use hyphens to link a series of two or more nouns used as adjectives to modify another noun.

EXAMPLE "free-field sound-pressure level"

Capitalize the words Clause, Equation, Table, Annex, Figure, and Note when they are used to refer to a specific point of reference in the standard. As example, write "see Figure 2" not "see figure 2" or "see Fig. 2", "see Clause 2" not "see clause 2", and "see Equation (5)" not "see equation (5)" or "see Eq. (5)." Use lower-case for the initial letters on these words when not referring to a specific item. Refer to a subclause or paragraph by its numerical indicator only, not, for example, by "given in subclause 4.9" or "described in paragraph 5.1.1." Just say "given in 4.9" or "described in 5.1.1."

Within a paragraph, use two blank spaces after a period or full stop at the end of a sentence.

4.10 Paragraph numbering

4.10.1 Although it is not necessary, as seen for most paragraphs in these *ASACOS Rules*, to give each individual paragraph a number, numbering the paragraphs is often very useful for referencing and is encouraged for that reason.

4.10.2 A subclause containing a single paragraph shall not be numbered because reference to the subclause number is sufficient to refer to any requirements in the paragraph.

4.10.3 As illustrated by these three paragraphs, paragraph numbers shall be shown in 10-point bold font style followed by a tab to 0.7 cm for numbers with 2 digits or by a tab to 1.5 cm for numbers with more than 2 digits, as required by the number of digits in the number for the preceding clause or subclause.

5 Technical reports

5.1 Technical report versus standard

ANSI and ASA Accredited Standards Committee Procedures recognize that situations can arise in which a Standards Committee may believe it is in the best interest of the public to issue a technical report on a subject instead of a standard with normative requirements. This situation will most often be the case for a developing subject for which a standards committee does not believe that a sufficient consensus exists to approve a document as a standard in a timely fashion, yet the information developed on the subject is of sufficient interest to deserve publication. In these situations, the Accredited Standards Committee may issue a technical report instead of a standard. The ASA Standards Secretariat will then register the report with ANSI in accordance with procedures given in [5], or the ANSI procedures that may currently be in effect.

5.2 Editorial requirements

The basic differences in editorial style between a technical report and a standard are related to the fact that the report shall not contain any normative text or requirements. Specifically:

- 1) "Shall", or related verbs which imply specific requirements, are not used in a technical report.
- 2) All references in a technical report are "informative", not "normative". Hence all such references shall appear in a bibliography at the end of the report.
- 3) No annex to a technical report is "normative", thus the indication required in the Contents of a standard specifying whether an annex is "normative" or "informative" is omitted from the annex title and from the Contents for every annex in a technical report.

5.3 Foreword

The following disclaimer is required in the foreword to a technical report that is published in lieu of a standard:

"Publication of this Technical Report that has been registered with ANSI has been approved by Accredited Standards Committee S1 Acoustics (or as appropriate). This document is registered as a Technical Report according to the *Procedures for the Registration of Technical Reports with ANSI*. This document is not an American National Standard and the material contained herein is not normative in nature. Comments on the content of this document should be sent to Accredited Standards Committee S1 Acoustics (or as appropriate), Standards Secretariat, Acoustical Society of America, 35 Pinelawn Road, Suite 114E, Melville, NY 11747."

The foreword shall also contain a rationale to explain why the document is published as a technical report instead of a standard.

5.4 General text of a technical report

The style of a technical report, other than the general restrictions stated in the previous clauses and the content of the foreword, shall follow the general structure of a standard as closely as possible. In

this way, at some future time when it may be possible to convert the technical report into an actual standard, the extent of the revisions can be minimized.

5.5 Designator and running head for pages

Instead of being designated, for example, as "American National Standard S1.XX-200X", with the running header on each page being "ANSI S1.XX-200X", a technical report shall be designated "ANSI Technical Report S1.XXTR-200X", with the running header on each page being "ANSI S1.XXTR-200X". (Obviously the appropriate S committee number will be used for technical reports issued under each committee's jurisdiction.)

6 National adoptions of international standards

If a Working Group wishes to recommend adoption of an ISO or IEC Standard as an American National Standard, the Chair should consult with the ASA Standards Manager to discuss specific considerations. ANSI's requirements are spelled out in [6], with further information available in the Accredited Operating Procedures of the S Committees, a copy of which may be obtained from the ASA Standards Secretariat.

DRAFT ANSI **Fill in designation here- 200X**

If applicable insert: (Revision of ANSI S#.##-1999)

Insert Draft # and date

Insert Draft # and date

AMERICAN NATIONAL STANDARD

Fill in Title here

Secretariat

Acoustical Society of America

Draft - Not approved by (insert approval date when approved):

American National Standards Institute, Inc.

Abstract

The abstract should begin with the most important purpose(s) or recommendation(s) of the standard and should be self-contained so that it may be understood without reading the standard. It should contain a summary of the contents of the standard. The relationship of the proposed standard to related standards or to previous versions of the standard (national or international) should be indicated. Write the text for the abstract with complete, connected sentences using active verbs and the third person. Abbreviations, symbols, references, and equations shall not be included in an abstract. The word count of an abstract may range from approximately fifty (50) to approximately two hundred (200) words, in one paragraph.

Figure 1 — Sample title page

Foreword

[This foreword is for information only, and is not an integral part of the American National Standard ANSI S2.xx-200X American National Standard <Insert title here>].

This standard comprises a part of a group of definitions, standards, and specifications for use in mechanical vibration and shock. It was developed and approved by Accredited Standards Committee S2, Mechanical Vibration and Shock, under its operating procedures. Those procedures have been accredited by the American National Standards Institute (ANSI).

The Scope of Accredited Standards Committee S2 is as follows:

Standards, specifications, methods of measurement and test, terminology in the fields of mechanical vibration and shock and condition monitoring and diagnostics of machines, but excluding those aspects which pertain to biological safety, tolerance, and comfort.

This standard is a revision of ANSI S2.xx-19##, which has been technically revised. Insert a brief description of the revision(s) contained in this edition.

This standard <is - is not> the counterpart of any existing International Standard. If this draft has an International counterpart, prepared by a technical committee of ISO or IEC, mention the counterpart in this paragraph. Outline significant differences, if any, and reasons for the differences.

At the time this Standard was submitted to Accredited Standards Committee S2, Mechanical Vibration and Shock, for approval, the membership was as follows:

R.J. Peppin, *Chair*
D. J. Evans, *Vice-Chair*
S. Blaeser, *Secretary*

Acoustical Society of America S.I. Hayek
..... B.E. Douglas (Alt.)

American Industrial Hygiene Association J.J. Earshen
..... D. Driscoll (Alt.)

Bently Nevada Corporation R. Thomas
..... J.M. Gilstrap (Alt.)

Brüel & Kjaer Instruments M. Alexander
..... J. Chou (Alt.)

Figure 2 — Sample first page of foreword

National Institute of Standards & Technology (NIST)	.....	D. J. Evans S. Fick (Alt.)
Sandia National Labs	.....	V.I. Bateman
Scantek, Inc.	.....	R.J. Peppin M. Buzduga (Alt.)
Schenck Trebel Corporation	.....	B. Dittmar
Shock and Vibration Information Analysis Center	.....	J. Leifer
Society for Machinery Failure Prevention Technology	.....	H.C. Pusey H.A. Gaberson (Alt.)
U.S. Air Force (USAF)	.....	S.D. Smith
U.S. Naval Sea Systems Command (NAVSEA)	.....	R. F. Taddeo M.T. McGown (Alt.)
U.S. Naval Surface Warfare Center (NSWC)	.....	P. Shang L.D. Cole (Alt.)
U.S. Naval Surface Warfare Center, Crane Div. (NSWC Crane Division)	.....	A. Parkes D. Kristler (Alt.)
Vibration Institute	.....	R.L. Eshleman D.J. Vendittis (Alt.)

Individual Experts of Accredited Standards Committee S2, Mechanical Vibration and Shock were the following:

NAME	NAME	NAME
NAME	NAME	NAME
NAME	NAME	NAME

Working Group S2/WG ##, <Insert WG Title>, which assisted Accredited Standards Committee S2, Mechanical Vibration and Shock, in the development of this standard, had the following membership:

Name, Chair Name (if there is a Vice Chair), Vice-Chair		
MEMBER	MEMBER	MEMBER
MEMBER	MEMBER	MEMBER

Suggestions for improvements of this standard will be welcomed. They should be sent to Accredited Standards Committee S2, Mechanical Vibration and Shock, Standards Secretariat of the Acoustical Society of America, 35 Pinelawn Road, Suite 114E, Melville, New York 11747-3177. Telephone: 631-390-0215; FAX: 631-390-0217; e-mail: asastds@aip.org.

Figure 3 — Sample final page of the foreword

Annex A

(informative)

The ASA template

A.1 Installing the template

For the convenience of Working Group Chairs and Accredited Standards Committee Chairs, ASA has produced a template that incorporates the essential typographic styles necessary for the presentation of a draft standard for review by the Working Group or the Committee. The 'ASA.dot' file for the template may be obtained from the ASA Standards Secretariat.

When the template is employed, the writer does not have to be concerned about details of typographic style. Virtually all styles needed are provided in the template, which can only be used with the Microsoft WORD ® word-processing software.

To install the template, first determine where your computer stores user templates for WORD. To do this, open WORD, expand the "Tools" menu and choose "Options". Click on the "File locations" tab and highlight "User templates". You may have to click "modify" to see the full path. Once the path is identified, make a record of the location, save a copy of the 'ASA.dot' file in that location, and restart the computer.

NOTE A typical location where WORD templates are stored might be 'C:\WINDOWS\Application Data\Microsoft\Templates'.

A.2 Opening a new template

To open a new document with the ASA template, open Word and expand the "File" menu. Choose "New" and locate the ASA.dot icon in the window for the "General" tab. Double click the icon to open the template and immediately choose "Save As" giving the new WORD document a file name of your choice with a .doc extension.

A.3 Using the template

This first version of the template available with this 6th Edition of the ASACOS *Rules* has very few automatic functions. Some drafting guidance is provided in blue type as shown on Figures 2 and 3. To insert text to replace or delete the blue text, overwrite what is shown in blue. (Change the color of any new text from blue to black using the Font selection under the Format button.)

The main feature that will automate your work is the use of the Microsoft WORD feature: "Styles". The template makes a variety of uniform styles available to you. Do not change or modify any font names, font sizes, font styles, or paragraph characteristics; they have all been preset to conform to the requirements of these ASACOS *Rules* for acoustical standards.

A.4 Enter information from the template into the new file

- 1) The template begins with the title page. (When the standard is published, the Standards Secretariat will add a cover.) In the spaces indicated by blue type, fill in the standard's designation if you know it, for example as S2.28, and the title of the draft standard. Overwrite

the abstract given by the template and insert an abstract consistent with the scope of the proposed standard and the requirements of 3.2.3 of these ASACOS Rules.

- 2) Do not change the copyright page or the contents page at this time.
- 3) Adjust the information in the text of the foreword and insert the list of Working Group members; see the example in Figure 3. The Standards Secretariat will provide the updated list of organizational members of the Accredited Standards Committee before the document goes to ballot, so please do not worry about this list.
- 4) If absolutely necessary, enter an introduction.; see 3.6.
- 5) Enter the title on page 1 and compose the text of the standard beginning with the scope in Clause 1. If no normative references are needed to apply the standard, delete the heading for "normative references" and begin the text at Clause 2 for "terms and definitions," if there is to be such a list in the draft standard. If no terms and definitions are to be provided in the standard, delete the heading for "terms and definitions" and begin the text at Clause 2 or 3, as applicable.
- 6) Each time a subclause or new clause is needed, be sure to select the applicable style from the drop down box at the left of the "Formatting Toolbar," usually the third toolbar from the top of the screen. Main, or level 1, headings for clauses use "1 Heading 1", a level 2 heading for a subclause uses "1.1 Heading 2", and so on. A normal paragraph uses the "Normal" style. Notes use the "Note" style. A numbered list uses the "List Number" style. An example uses the "Example" style. In an annex, level 1 and level 2 headings use the "a2" and "a3" styles, respectively.
- 7) A style is applied to a paragraph by first placing the cursor somewhere in the paragraph, then open the Formatting Toolbar box, locate the desired style, and left-click the mouse pointer on the selected style.
- 8) Ensure that all clause and subclause headings are properly styled since the numbering is automatically generated.
- 9) Ensure that table captions and figure titles are properly styled, as well. The style for a table caption is called "Table Title." The style for a figure title is called "Figure Title." The table and figure numbers will not automatically generate, but the Tables and Figures in the Contents will be automatically numbered.
- 10) Annex headings are created using style "A.1", "A.1.1", etc. The main heading for an annex is generated using style "Annex A". Subsequent annex designations, as Annex B and Annex C, will automatically generate.
- 11) Once the first draft (or outline) is developed and each heading is properly "styled", go to the Contents page and place the cursor in the Contents list. Right click the mouse (or press F9) and select Update Entire Table. The contents listings and their page numbers will generate automatically. Follow the same process by placing the cursor in the Contents list for the tables and the figures.
- 12) (For this 6th Edition of the ASACOS *Rules*, the listing of the annexes in the Contents will only fill in, for example, as Annex A, without the title. The description as (normative) or (informative) and the annex title have to be entered manually.)

Annex B

(informative)

Editorial checklist

B.1 Manuscript

When a draft of a proposed standard is ready to be balloted by a Standards Committee for the first time, it should be reviewed for conformance to these *ASACOS Rules*. The following checklist is intended to assist in this review process.

When the drafting is completed and the Working Group has reached consensus on the content, the Chair of the Working Group should obtain a copy of this checklist from these *Rules* or from the Standards Secretariat, place an X in the applicable blank spaces, and submit the original of the completed checklist to the ASA Standards Secretariat along with the electronic file for the draft standard.

B.2 Checklist

- The draft is submitted in a WORD document file, in conformance with these *ASACOS Rules*.
- The draft has been created using the ASA Template.
- The wording of the title of the standard is the same everywhere it appears.
- A running header is provided to identify each text page of the standard after the page containing the scope.
- Styles provided in the template were used to create the headings for the clauses and subclauses and for the text of the paragraphs.
- Clauses and subclauses are numbered as required by these *ASACOS Rules*.
- Page numbers are provided for every page and are in the prescribed position at the bottom of the page except for the title and copyright pages.
- Page order is as follows:

Title/abstract page
Copyright page
Contents
Foreword
Introduction
Text of standard
Annexes
Bibliography

B.2.1 Contents

- Title page in the format required by the *ASACOS Rules* is included with an abstract and with the date for the current draft indicated in the upper right corner.
- Copyright page is included.

- Contents pages are complete; headings and page numbers for clauses and subclauses agree with those in the document, including annexes; table captions, figure titles, and page numbers agree with those in the document, including any tables and figures in annexes.

B.2.2 Foreword pages

- Foreword pages are included.
- Documentation has been included in the foreword to describe any technical differences between the proposed American National Standard and a corresponding international document if the proposed standard __ is, or __ is not, a conversion.
- The list of names of Working Group members is complete with correct spelling and correct initials.

NOTE The Chair of the Working Group is responsible for providing Standards Secretariat with the list of Working Group members, including initial(s) and surname of each member as well as designations such as "Jr." or "III".

- Development statement, committee scope, and a list of the Organizational Members of the Accredited Standards Committee and their representatives at the time of balloting.

B.2.3 Main text

- Introduction (optional).
- Scope, Clause 1, is included (normative).
- Statement detailing whether the standard is a revision of an existing American National Standard or a conversion from an International Standard is included in the __ abstract, __ foreword, and main body of the standard.
- Normative references, Clause 2, are provided if required, including __ References to American National Standards, and __ International Standards. Ensure that the references are current, that the titles are quoted correctly, and that the reference numbers for the standards are complete with the year of issue.
- Terms and definitions, Clause 3, if applicable, are included with proper format and content.
- Numerical values cited in the standard have been checked for accuracy and agree, to the indicated precision, with values calculated, if possible, from corresponding equations in the standard or annexes.
- Equations are numbered in serial order, have the proper format, and use letter symbols not abbreviations, to represent quantities, variables, and coefficients.
- SI (metric) units are used for all physical quantities, with corresponding (customary) units, if necessary, shown within parentheses following the SI units.
- Symbols for physical quantities and their units conform to the latest available American National Standard. Appropriate __ italic letter symbols are used for measurable quantities; roman letter symbols are used where required for non-measurable quantities.
- Abbreviations and acronyms, if used at all, are explained in full words at least the first time they are used.

- Tables have numbers and captions, each table is referred to in sequence in the text, each table is prepared in accordance with the requirements of these ASACOS *Rules*.
- Figures, if required, have ____ proper dimensions, each figure was prepared as a computer-generated object that was inserted directly into the file for the draft standard; each figure follows the requirements for ____ scales, ____ scale labels, ____ callouts, ____ line weights, and ____ data symbols. Each figure has a separate ____ number ____ and ____ title; ____ each figure is referred to in sequence in the text.

B.2.4 Annexes

- Annexes are identified as ____ normative or ____ informative, ____ each annex is referred to in the text in sequence; for each annex, ____ text, ____ figures, ____ tables, ____ equations, ____ and references conform to the requirements of these ASACOS *Rules* regarding form and style.

B.2.5 Bibliography

- References given in the bibliography are in the proper format, are complete, and the spelling has been checked. Each entry is numbered and sequentially cited in the text.

B.3 Special considerations

- No material intended to be a normative part of the standard is included in a foreword, note, footnote, or informative annex.
- Normative requirements are given by using the auxiliary verb "shall"; direct instructions are given by the imperative tense.
- The verbs "must" and "comply" are not used to give any normative requirement.
- Non-normative requirements are given by the auxiliary verbs "should", "may", or "can".
- The term "and/or" has been avoided and replaced with a statement to clarify the meaning.
- Commercial instruments or equipment are not mentioned in the standard by a trademark name or by a manufacturer's proprietary designation.
- Written permission has been obtained from the publisher for use of any copyrighted material and the original copy of the permission letter has been submitted to the ASA Standards Secretariat.
- If inclusion of patented items has been required, ANSI policies have been followed (see 4.1).

Annex C
(normative)
ASACOS policies on definitions

- 1) Definitions shall be consistent with corresponding definitions in the most current and relevant acoustical terminology standard.
- 2) Definitions in an approved acoustical terminology standard shall not be changed in any respect unless there is a real need. A change proposed to a definition in an existing American National Standard shall be supported by strong technical reasons for the change. The ballot shall indicate the change and the reasons for the change in a way that can be highlighted readily.
- 3) Where more than one definition for a term exists in various standards, the version most recently approved by the Accredited Standards Committee shall be used in subsequent standards.
- 4) The clause for terms and definitions in proposed standards shall not repeat definitions from acoustical terminology standards unless the Working Group considers it absolutely necessary. If such repetition of a definition is deemed to be necessary by the Working Group, the citation to the text from the original Standard shall be specific, such as: See 11.46 in S1.1-1994.
- 5) If a term is used in several related standards in a series, give the definition only in the most general of the standards. The other standards shall then refer to the general standard without repeating the definition.
- 6) Avoid circular definitions in which one concept is defined by a second concept, and the second concept is defined by the first concept.
- 7) Equations may be included in a note to a definition to supplement, but never serve as a replacement for, the text of the definition.
- 8) In an acoustical terminology standard, do not include, definitions that are specialized for use with only one standard, or are so general that they may be found in any general purpose dictionary or mathematics handbook.

Bibliography

- [1] *ISO/IEC Directives, Part 2: Rules for the structure and drafting of International Standards*. Fourth Ed. Geneva, Switzerland: International Organization for Standardization and International Electrotechnical Commission, 2001.
- [2] *AIP Style Manual For Guidance in Writing, Editing, and Preparing Physics Manuscripts for Publication*, 4th Ed., AIP Publication Board. R-283.2. New York: American Institute of Physics, 1990.
- [3] *Form and Style for ASTM Standards*. Conshohocken, Pennsylvania: American Society for Testing and Materials, September 2002.
- [4] *ANSI Essential Requirements: Due process requirements for American National Standards*. New York: American National Standards Institute, January 2003.
- [5] *Procedures for the Registration of Technical Reports with ANSI*. New York: American National Standards Institute, January 2002.
- [6] *ANSI Procedures for the National Adoption of ISO and IEC Standards as American National Standards*. New York: American National Standards Institute, January 2003.