

ANSI/NISO Z39.56-1996 (Version 2)
(Revision of ANSI/NISO Z39.56-1991)

ISSN: 1041-5653

Serial Item and Contribution Identifier (SICI)

Abstract: This standard defines the requirements for providing in coded form an identifier for each item of a serial and each contribution contained in a serial.

**An American National Standard
Developed by the
National Information Standards Organization
Approved August 14, 1996 by the
American National Standards Institute**



Bethesda, Maryland, U.S.A.

Published by
NISO Press
4733 Bethesda Avenue, Suite 300
Bethesda, MD 20814

Copyright ©1997 by the National Information Standards Organization
All rights reserved under International and Pan-American Copyright Conventions. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage or retrieval system, without prior permission in writing from the publisher. All inquiries should be addressed to NISO Press, 4733 Bethesda Avenue, Bethesda, MD 20814.

Printed in the United States of America

ISSN: 1041-5653 National Information Standards series
ISBN: 1-880124-28-9

Ⓒ This paper meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper).

Library of Congress Cataloging-in-Publication Data

National Information Standards Organization (U.S.)

Serial item and contribution identifier (SICI) / developed by the National Information Standards Organization : approved August 14, 1996 by the American National Standards Institute.

p. cm. — (National information standards series, ISSN 1041-5653)

"ANSI/NISO Z39.56-1996."

ISBN 1-880124-28-9 (alk. paper)

1. Serial publications—Bibliography—Methodology—Standards—United States. 2. Bibliographical citations—Standards—United States. I. American National Standards Institute. II. Title. III. Series.

Z6940.5.N38 1996

025.3'432—DC20

96-43631

CIP

Contents

| | |
|--|----------|
| Foreword | v |
| 1. Introduction | 1 |
| 1.1 Purpose | 1 |
| 1.2 Scope | 1 |
| 1.3 Principles and Guidelines | 1 |
| 1.4 The Structural Model for Identifiers | 1 |
| 1.4.1 Code Structure Identifier in Control Segment | 2 |
| 1.4.1.1 Code Structure Identifier-1 (CSI-1) | 2 |
| 1.4.1.2 Code Structure Identifier-2 (CSI-2) | 2 |
| 1.4.1.3 Code Structure Identifier-3 (CSI-3) | 3 |
| 2. Referenced Standards | 3 |
| 3. Definitions | 3 |
| 4. Character Sets | 5 |
| 5. Punctuation | 6 |
| 6. Segments and Data Elements | 7 |
| 6.1 Overview of Data Elements and Segments | 7 |
| 6.2 Control Segment | 7 |
| 6.2.1 Code Structure Identifier (CSI) | 8 |
| 6.2.2 Derivative Part Identifier (DPI) | 8 |
| 6.2.3 Medium/Format Identifier (MFI) | 8 |
| 6.2.4 Standard Version Number | 9 |
| 6.2.5 Check Character | 9 |
| 6.2.6 Summary of the Control Segment | 9 |
| 6.3 Item Segment | 9 |
| 6.3.1 ISSN | 10 |
| 6.3.2 Chronology | 10 |
| 6.3.2.1 Date Used | 10 |
| 6.3.2.2 Chronology Format | 10 |
| 6.3.2.3 Combined Chronology | 11 |
| 6.3.2.4 Calendar Used | 11 |
| 6.3.3 Enumeration | 11 |
| 6.3.3.1 Combined Numbering | 12 |
| 6.3.4 Supplements and Indexes | 12 |
| 6.3.4.1 Supplements | 12 |
| 6.3.4.2 Indexes | 12 |
| 6.3.5 Summary of Item Segment Format | 13 |
| 6.4 Contribution Segment | 13 |
| 6.4.1 Location | 13 |
| 6.4.2 Title Code | 14 |

(continued)

(Contents continued)

| | |
|--|----|
| 6.4.3 Supplements and Indexes | 15 |
| 6.4.4 Locally Assigned Number for Use in CSI-3 | 15 |
| 6.4.5 Summary of Contribution Segment Format..... | 16 |

7. Maintenance Agency 16

Appendixes

| | |
|---|----|
| A Calculation of the Modulus 37 Check Character | 17 |
| B Designation of Maintenance Agency | 18 |
| C Usage Scenarios..... | 19 |
| D SICIs for Various Citations of the Same Article | 20 |
| E Related Standards and References | 22 |

Figures

| | |
|---------------------------|---|
| 1 Example of a CSI-1..... | 2 |
| 2 Example of a CSI-2..... | 2 |
| 3 Example of a CSI-3..... | 2 |

Tables

| | |
|---|----|
| 1 Characters Used to Construct a SICI Code | 5 |
| 2 Legal Character Usage by Data Element for SICIs | 5 |
| 3 Use of Punctuation in a SICI | 6 |
| 4 Data Element Requirements by Segment and CSI Type | 7 |
| 5 Medium/Format Codes | 9 |
| 6 Chronology Codes | 10 |
| A-1 Check Character Values | 17 |
| A-2 Example of Check Character Calculation | 17 |
| D-1 SICIs for Various Citations of the Same Article | 20 |

Foreword

(This foreword is not part of the American National Standard for Serial Item and Contribution Identifier (SICI), ANSI/NISO Z39.56-1996. It is included for information only.)

About This Standard

This Serial Item and Contribution Identifier (SICI) standard defines a variable length code that will provide unique identification of serial items (e.g., issues) and the contributions (e.g., articles) contained in a serial title.¹ The standard is intended primarily for use by those involved in the use or management of serial titles and their contributions. While the SICI code is intended to be applicable to both automated parsing and human-readable environments, it does not prescribe any specific machine-scannable symbology, nor does it prescribe a specific machine-readable interchange format for electronic transmission of the coded data.

As a prescriptive standard, Z39.56-1996 defines the requirements for constructing a compact SICI code that has a unique value for each unique bibliographic item.² Every effort has been made to specify requirements that can be applied to the vast majority of serials and can be used in the many different applications to which the code is appropriate.

The significant developments in this version of the SICI include:

- A means for identifying a SICI structure type. This clarifies the distinction between a code used to specify a Serial Item or a Contribution Identifier. In addition it provides a structure that can accommodate other uses such as the incorporation of private numbering systems (e.g., those used to track manuscripts prior to publication). Also, the structure provides an extensibility mechanism for future versions and applications of the standard.
- A method for indicating the medium used for distribution of serial items or contributions being identified (e.g., text on paper, microform, electronic).
- A way to specify a derivative part of the serial item (table of contents, index, etc.) or a contribution (e.g., abstract).
- No limit on word length in the construction of the Title Code. The Title Code has been expanded to a maximum of six characters and the rules for construction have been simplified and made more precise. The changes in the Title Code derivation algorithm should improve uniqueness of SICI codes for contributions.
- A change in the punctuation used to delimit data elements.
- A nomenclature for modeling the discussion of logically-bound pieces of the identifier. The standard now models the SICI code as a sequence of well-defined segments: item, contribution, and control. The Serial Item Identifier carries data only in the *Item* and *Control Segments* (the *Contribution Segment* is null); the Contribution Identifier uses all three. The standard has been reorganized to reflect this model.

¹ For the purposes of this standard *serial* is defined as a publication issued in successive parts at regular or irregular intervals, bearing numerical and/or chronological designation, and intended to be continued indefinitely. Serials include: periodicals, newspapers, annual works, reports, journals, proceedings, transactions and the like of societies and other corporate entities such as conferences, and numbered monographic series.

² While the SICI speaks of a "unique" value for each unique contribution, the reader should understand that theoretically two contributions can have identical SICI values. The design of the algorithms specified in this standard attempt to minimize the occurrence of this situation, and empirical tests indicate that duplicate SICI values occur roughly once per million contributions. The revision committee believes this is an acceptable balance between the conflicting design goals of uniqueness and compactness.

Background

This standard began in the Serials Industry Systems Advisory Committee (SISAC). From its inception, SISAC recognized that methods for increasing the efficiency with which data about serials could be entered into any system depended on a standard for identifying not only the serial items themselves, but their components. Therefore, in 1983, SISAC created a subcommittee to begin the development of such a standard. One of the SISAC subcommittee's first tasks was to submit a proposal to the National Information Standards Organization (NISO) to develop the SICI as a formal NISO standard. NISO approved the proposal and created Standards Committee CC to develop the standard that resulted in Z39.56-1991.

According to the normal standards revalidation and revision process, the 1991 standard would have been revisited in five years. However, in October of 1993, NISO convened a revision committee (Standards Committee AM) to address issues that had arisen as experience in implementation was gained and as changes in electronic publishing and dissemination of serials occurred. Over the ten years since the work had begun on the first version of the standard, the broad practical relevance of a unique serial item and contribution identifier code had become more evident. Electronic interlibrary loan had become a major activity among libraries and information centers worldwide, and an increasing amount of this activity derived from searches of existing bibliographic and abstracting and indexing (A&I) databases. Other important new requirements were emerging from the electronic full-text journal, newspaper, and other databases with millions of articles now available in electronic form. By now, major library and commercial systems serving specific user groups have been established to support computer-based electronic document search, query, delivery, and original publication. The SICI standard provides the first common link between the author's and publisher's original work, a citation, and the A&I databases, regardless of the format that the contribution takes (see Appendixes C and D).

Goals

The goals that guided the work of the first committee as stated in the foreword to the 1991 version of the standard, were:

- to limit the scope of the standard to a code for unique identification of serial items and contributions
- to cover the broadest possible range of serials; for example, scholarly, trade, and popular, as well as domestic and foreign, regardless of physical form
- to allow independent derivation of the SICI code from the actual serial or a citation to it, regardless of whether the serial is currently published and/or whether the publisher has placed the identifier on the serial
- to provide the briefest possible code consistent with unique identification
- to maintain consistency with and build upon other standards, such as the ISSN.

With these initial goals in mind, the present revision committee, in reviewing ANSI/NISO Z39.56-1991, expanded its objectives to include:

- the reevaluation of the use of mandatory and optional fields as related to date and title code
- the enrichment of the Contribution Segment of the string
- the expansion of the references supplied in the standard to include the sources of auxiliary information needed to construct the code
- the improved ability to compute and use SICIs from citations, a key requirement for interfile linkage, document supply, and rights management applications, which have taken on increased importance
- the assurance that the SICI standard complements the work of other standards

- related to the identification of documents especially in a networked environment
- the interoperability among SICIs derived from multiple sources.

Comments on Z39.56-1991 vs. 1996 Versions

A conceptual model emerged from the revision committee's early discussion of the strengths and weaknesses of ANSI/NISO Z39.56-1991 based upon implementation experience and the broader set of functional requirements now evident. There are three natural sections to the code: (a) groups of elements that describe the serial item, (b) the contribution, and (c) other management features related to the SICI itself. This framework guided the discussions and decisions made to improve the standard.

The first area addressed by the committee was the disambiguation of the SICI structure. ANSI/NISO Z39.56-1991 had established two levels of coding:

- Serial Item Identifier — a unique code for the identification of an issue of a serial title
- Serial Contribution Identifier — by adding data elements to the code that identifies the Serial Item, a unique code is created for each contribution that appears in the serial, even if more than one contribution begins on a given page (e.g., newspapers).

ANSI/NISO Z39.56-1996 establishes a method for specifying the coding structure. This data element is referred to as the Code Structure Identifier (CSI). The CSI is a numeric code at a specified position in the SICI string that allows both humans and computer systems to determine the coding level. At present, three CSIs are defined: CSI-1 specifies the Serial Item, CSI-2 denotes a Contribution Identifier, and CSI-3 carries private identifiers, such as, but not limited to, the publisher-developed Publisher Item Identifier (PII) or the Copyright Clearance Center (CCC) Code. This explicit identification of coding structure also provides a path for future extensibility.

Another area addressed by the revision committee was the use of the SICI in active document delivery and table of contents services, which led to the perception that problems existed with the Title Code. While Z39.56-1991 required the use of the Title Code in only three instances, some implementations found it necessary to use Title Codes in all Contribution Identifiers. To improve the code's ability to uniquely identify contributions, other data elements have been added to the Control Segment. Also, the revision specifies format types (e.g., braille, microform, electronic, or print on paper); these are referred to as Medium Format Identifiers (MFI). The Derivative Part Identifier (DPI) is established as a data element for specifying a part of a serial item that is not a contribution *per se*, such as the table of contents for a serial item or the abstract of a contribution.

Although a unique and compact code was a primary goal of the original standard, the revision committee has left a certain amount of redundancy in the code (enumeration/chronology and location/title code) so that informed judgments can be made about the degree of similarity between two SICIs derived from different sources (see Appendix D). It should be noted that neither the original 1991 standard nor this revision specifies a code that is as short as possible subject to requirement for uniqueness. Both versions of the standard use punctuation to allow for easy visual parsing and machine recognition of the coding structure for the SICI being specified and its constituent segments. The SICI is robust enough to facilitate construction from multiple types of sources, yet is still short enough to allow for both unique identification and easy conversion into machine-scannable symbology (e.g., a bar code representation on the cover of an item). There is no length restriction on a SICI.³

³ Committee members estimate the CSI-1 (Serial Item Identifier only) to average about 30 characters, while the CSI-2 (Serial Contribution Identifier) is about 45 characters.

Matching and Uniqueness of SICI Codes

The revision committee gave extensive consideration to the requirements of document supply, rights management, and interfile linking applications. The design requirements and properties that emerged from these deliberations underlie most changes in this standard.

It was recognized that the SICI — in particular the Serial Contribution Identifier — must be derivable from the issue of the serial in hand and any citations that might describe a contribution. Ideally, the best available source (the serial item itself) should be used to construct the title code, and, all available information should be included so the SICI is definitive and complete.

Depending on the information available to the constructor of the SICI code, a contribution might legitimately be identified by more than one SICI. All versions of the SICI should be constructed to the fullest extent possible from the data available.

The construction of SICI codes from citations that appear in bibliographies presents particular problems. Some citation formats omit the information necessary to provide full chronology or enumeration. The committee believes that, in general, by encoding the most complete information available, a unique SICI will almost always be produced. There are a few common citation formats that provide very limited data elements and as such will not produce a SICI code that is highly interoperable.

The matching of SICI codes in some applications may therefore require algorithms that are much more complex than simple string comparison, since they need to consider that some data elements within one or both of the SICI codes being matched may be omitted. This would be the case, for example, in document ordering applications where a patron-supplied SICI code (derived from a citation, for example) that omits various data elements might be matched against complete SICI codes derived from an A&I or full-text database (see Appendix D).

Integration with Other Standards

Because this standard is but one of many standards addressing serials, the revision committee has tried to ensure consistency with existing standards. Paramount among these is the standard identifier for serial titles, the International Standard Serial Number (ISSN). The SICI uses the ISSN to identify the serial itself, thus conforming to and exploiting the existing investment in NISO and international standards. In order to apply this standard a serial must have an ISSN. The ISSN is the only generally accepted standard identifier for serials and is widely and freely available from the ISSN Network and its component national and regional centers for the entire range of publications that this standard covers. For older serials published before the existence of the ISSN, and for current serials that do not have an ISSN, mechanisms are in place so that an ISSN assignment may be requested from appropriate authorities.⁴

The SICI model illustrates a hierarchy that progresses from the serial title through its individual items (issues) to the individual contributions (articles) published in them. In this sense, the Serial Item and Contribution Identifier is a logical extension of the ISSN to the items and individual contributions that make up a serial's hierarchical structure.

The revision committee has encouraged the accommodation of SICI use in other standards. For example, the SICI has been assigned the use value (1037) in the bib-1 attribute set of Z39.50-1995. Data elements required to support the construction and

⁴<http://lcweb.loc.gov/ISSN>

interchange of SICIs are being advocated in the development and revision work of other standards, i.e., citation standards. Electronic Data Interchange (EDI) environments (X12, and Edifact) also include the SICI as a data element.

The Internet Engineering Task Force (IETF) has been developing a very general Uniform Resource Identifier (URI) scheme for naming and accessing networked information resources. Within this framework both ISSNs and SICI codes (of all structures) are forms of what the IETF terms Uniform Resource Names (URNs). URNs are simply opaque identifiers that are assigned by a naming authority, plus identification of the naming authority itself. Details for the registry of naming authorities are still being worked out as of this writing, but it is expected that the SICI codes will be established within a naming authority and will be consistent with the URN scheme. There may be some problems with the character set permitted within the opaque identifier in the IETF's URN scheme, but the IETF work is not sufficiently mature at this point to resolve this question. If necessary, an encoding of SICI codes for use within URNs can be developed. Part of the validation of the IETF URN syntax will include a specification of the coding of so-called "legacy" naming systems, which will include the SICI.

Character Set Issues

Character sets presented several major problems for the revision committee. The rationale for some of the decisions made deserves discussion here. The SICI code makes use of a character set. It does not specify a coding for this character set. The task in this revision was to define the character set that could appear in a SICI, or by which a SICI can be encoded.

Logically, Unicode should resolve the character set question. However, the vast range of current application scenarios in which SICI codes are likely to be applied and the variety of transport mechanisms used to convey them require that SICI codes be expressible in the 7-bit ASCII character data. The Simple Mail Transport Protocol (SMTP), the most widely used in the Internet, carries the 7-bit ASCII character set. Therefore this is the most extensive character set that currently can be used for reliable transmission across the worldwide matrix of interlinked electronic mail systems. The SICI character set is selected from the character set supported by standard 7-bit ASCII. As the nature of the applications environment evolves, future revisions of the standard should revisit these choices, but we believe that the approach used here is most appropriate for today's environment.

Two data elements in the SICI are sensitive to the character set: the Title Code and the Enumeration. Titles of contributions can be in any language; further, they can also include a wide range of special typographic symbols such as mathematical notation or chemical formulas. Special typographic symbols are handled by substituting the English words that describe them; for example, an integral sign (\int) is replaced by the word "integral." For interoperability, it is necessary that one language be used, and English was chosen.

Alternate character sets, such as Japanese, Hebrew, or Cyrillic, are transliterated into the 7-bit ASCII character set using existing standards for transliteration, as are the extended 8-bit Latin alphabet coded character sets. These transliterations produce the required 7-bit ASCII Title Code.

Other Items of Note

With the expansion of data elements in the Control Segment (where the administrative elements reside) the role of the maintenance agency has expanded to include registration of codes for additional Code Structure Identifiers (CSI), Derivative Part Identifiers (DPI),

and Medium Format Identifiers (MFI) as needed between revisions of the standard.

The standard does not prescribe a physical location for presenting the SICI on issues of a serial, nor does it prescribe any machine-scannable symbology. For example, the SISAC Bar Code symbol described in *Serial Item Identification: Bar Code Symbol Implementation Guidelines* provides the physical requirement for specific applications.

The revision committee considered but made no changes to the computation of the Check Character.

The following compares version 1 and version 2 of this standard:

Item: *Forbes* January 1, 1996 vol. 157 no. 1.
 SICI v1: 0015-6914(19960101)157:1;1-1
 SICI v2: 0015-6914(19960101)157:1<>1.0.TX;2-V

Item: Hutheesing, Nikhil, "Keeping the seats warm" *Forbes* January 1, 1996 vol. 157 no. 1 p. 62.
 SICI V1: 0015-6914(19960101)157:1L.62:KSW;1-8
 SICI V2: 0015-6914(19960101)157:1<62:KTSW> 2.0.TX;2-F

This standard was processed and approved for submittal to ANSI by the National Information Standards Organization. It was balloted by the NISO Voting Members February 1, 1996 - April 30, 1996. It is scheduled to be reviewed in 2001. Suggestions for improving this standard are welcome. They should be sent to the National Information Standards Organization, 4733 Bethesda Avenue, Suite 300, Bethesda, MD 20814. NISO approval of this standard does not necessarily imply that all Voting Members voted for its approval. At the time it approved this standard, NISO had the following Voting Members:

NISO Voting Members

| | |
|---|---|
| 3M Richard W. Lindahl Robert L. Dreger (Alt) Gerald G. Marsolek (Alt) | Armed Forces Medical Library Diane Zehnpfennig Beth Knapke (Alt) |
| American Association of Law Libraries Andrew Laurence | Art Libraries Society of North America Thomas E. Young Penney DePas (Alt) |
| American Chemical Society Robert S. Tannehill, Jr. Leon R. Blauvelt (Alt) | Association of Information and Dissemination Centers Bruce H. Kiesel |
| American Library Association Carlen Ruschoff | Association for Information and Image Management Judy Kilpatrick |
| American Society for Information Science Mark H. Needleman | Association of Jewish Libraries Pearl Berger David Gilner (Alt) |
| American Society of Indexers Patricia S. Kuhr Marie Kascus (Alt) | Association of Research Libraries Duane E. Webster |
| American Theological Library Association Myron B. Chace | Bell Laboratories M.E. Brennan |
| Ameritech Library Services, Academic Division John Kolman | CASPR, Inc. Norman Kline Brian Lomeli (Alt) |
| Amoco Corporation Randy R. Reddemann | CARL Corporation Ward Shaw |
| Apple Computer, Inc. Janet Vratney Rita Brennan (Alt) | |

(continued)

NISO Voting Members (continued)

College Center for Library Automation
J. Richard Madaus
Ann Armbrister (Alt)

Data Research Associates, Inc.
Michael J. Mellinger
James Michael (Alt)

Data Research Users Group, Inc.
Beth F. Anderson

EBSCO Information Services
Sandra H. Hurd
Mary Beth Vanderpoorten (Alt)

Elsevier Science Incorporated
John Mancia
Norman Paskin (Alt)

The Faxon Company
Alan Nordman

Follett
D. Jeffrey Blumenthal
Michael Marchuck (Alt)

Gaylord Information Systems
James English
William Schickling (Alt)

GCA Research Institute
Christopher Ziener
Norman Scharpf (Alt)

Geac Computers, Inc.
Simon Kendall
B. J. Mitchell (Alt)

IBM Corporation
Tryg Ager

IEEE
Anthony J. Ferraro

Indiana Cooperative Library Services Authority
Millard Johnson
Janice Cox (Alt)

Information Access Company
Delores Meglio
Victoria Gray (Alt)

Innovative Interfaces
Gerald M. Kline
Sandra Westall (Alt)

Knight-Ridder Information, Inc.
Richard Boulderstone
David Loy (Alt)

Lexis-Nexis
Peter Ryall

Library Binding Institute
Sally Grauer

Library of Congress
Winston Tabb
Sally H. McCallum (Alt)

Medical Library Association
Katherine Hughes
Carla J. Funk (Alt)

MINITEX
Anita Anker Branin
William DeJohn (Alt)

Music Library Association
Lenore Coral
Geraldine Ostrove (Alt)

National Agricultural Library
Pamela Q. J. Andre
Gary K. McCone (Alt)

National Archives and Records Administration
Alan Calmes

National Federation of Abstracting and Information
Services
John Schnepf

National Library of Medicine
Lois Ann Colaiani

OCLC, Inc.
Donald J. Muccino

OHIONET
Michael P. Butler
Greg Pronevitz (Alt)

OhioLINK
David Barber

PALINET
James E. Rush

Readmore Academic Services
Sandra J. Gurshman
Amira Aaron (Alt)

The Research Libraries Group
Wayne Davison
Kathy Bales (Alt)

R. R. Bowker
Emery Koltay

R.R. Donnelley & Sons, Co.
Sidney P. Marland III

SilverPlatter Information, Inc.
Peter Ciuffetti
Barbara Bishop (Alt)

Society of American Archivists
Lynn Lady Bellardo

Society for Technical Communication
Connie Bibus
Kevin Burns (Alt)

Special Libraries Association
Marjorie Hlava

SUNY/OCLC
Liz Lane

UMI
Blake Ratcliffe
Jim Tumolo (Alt)

U.S. Department of the Army, Headquarters
Paula E. Vincent

U.S. Department of Commerce, National Institute of
Standards and Technology, Office of Information Services
Paul Vassallo
Jeff Harrison (Alt)

U.S. Department of Defense, Defense Technical
Information Center
Gretchen A. Schlag
Claire Tozier (Alt)

(continued)

NISO Voting Members (continued)

U.S. Department of Energy, Office of Scientific
and Technical Information
Mary Hall
Nancy Hardin (Alt)

U.S. National Commission on Libraries and Information
Science
Peter R. Young

VTLS, Inc.
Vinod Chachra

West Publishing Company
Andy Desmond
Forrest Rhoads (Alt)

Winnebago Software
Bob Engen
Carol E. Blagsvedt (Alt)

H.W. Wilson Company
George I. Lewicky
Ann Case (Alt)

NISO Board of Directors

At the time NISO approved this standard, the following individuals served on its Board of Directors:

Michael J. McGill, Chairperson
University of Michigan Medical Center

Joel H. Baron, Vice-Chair/Chair-Elect
Dawson Holdings PLC

Michael J. Mellinger, Immediate Past Chairperson
Data Research Associates, Inc.

Patricia R. Harris, Executive Director
National Information Standards Organization

Directors Representing Libraries

Nolan F. Pope
University of Wisconsin - Madison

Clifford Lynch
University of California

Lennie Stovel
Research Libraries Group

Directors Representing Information Services

Howard Turtle
West Publishing Company

John Kolman
Ameritech Library Services,
Academic Division

Vinod Chachra
VTLS, Inc.

Directors Representing Publishing

Marjorie Hlava
Access Innovations, Inc.

Robert C. Badger
Springer-Verlag NY, Inc.

Elizabeth Bole Eddison
Inmagic, Inc.

Standards Committee AM

The following individuals served on Standards Committee AM which revised this standard:

Frederick Schwartz, Committee Chairperson 1994-95
The Faxon Co.

Julia Blixrud, Committee Chairperson 1996
CAPCON Library Network

Peter Ciuffetti
SilverPlatter Information, Inc.

Allen Dean
Copyright Clearance Center

Tina Feick
Blackwell's Periodical Division

Peter Foppen
Kluwer Academic Publishers Group

Mary Jackson
Association of Research Libraries

Ted Koppel
The UnCover Company

Clifford Lynch
University of California, Division of Library
Automation

Susan Malawski
John Wiley & Sons, Inc.

Mark Needleman, NISO Standards Development
Committee Representative
University of California, Division of Library
Automation

Cecilia Preston
Editor

Linda Richter
Minnesota State University System - MSUS/
PALS

George Wright IV
Product Identification & Processing Systems, Inc.

ANSI/NISO Z39.56-1996 is dedicated to the memory of Fritz Schwartz, Committee Chairperson 1994-95. The revision committee thanks NISO Voting Members and others interested in the progress of this standard for the comments that contributed to the enrichment of this document.

Serial Item and Contribution Identifier

1. Introduction

1.1 Purpose

ANSI/NISO Z39.56-1996 defines the requirements for a variable length code that uniquely identifies serial items (e.g., issues) and each contribution (e.g., article) contained in a serial. The acronym SICI stands for Serial Item and Contribution Identifier and is used in this standard to refer to the code itself.

1.2 Scope

This standard defines the Serial Item and Contribution Identifier (SICI) for use with serial publications in all formats. For the purposes of this standard a serial is defined as a publication issued in successive parts at regular or irregular intervals, bearing numerical and/or chronological designation, and intended to be continued indefinitely.

The SICI is intended to be created and used by those members of the bibliographic community engaged in the functions associated with the management of serials and the contributions they contain, functions such as ordering, accessioning, claiming, royalty collection, rights management, online retrieval, database linking, and document delivery. Appendix C contains scenarios describing the use of the SICI in some of these functions.

Identifiers constructed according to this standard are used within a wide variety of applications: Electronic Data Interchange (EDI), Serials Industry Systems Advisory Committee (SISAC) bar codes, Z39.50 queries, Uniform Resource Names (URNs), electronic mail, and human transcription in print. This standard does not define any specific transport system or means of implementation.

1.3 Principles and Guidelines

Implementation of this standard particularly by publishers and distributors of information about both the serial items and contributions will ensure that the coded information that uniquely describes these items and contributions is readily available.

The SICI uses the International Standard Serial Number (ISSN) to identify the serial title. Therefore, in order to use this standard in the construction of an item or contribution identifier for material published in the serial, the serial must have been assigned an ISSN.

In recognition of the large installed base of serial titles, contributions, and derived works (e.g., abstracting and indexing) databases, no data elements outside those normally associated with such works are introduced into this standard.

1.4 The Structural Model for Identifiers

The SICI is a combination of defined segments, all of which are required. These segments are:

- *Item Segment*, the data elements needed to describe the serial item (ISSN, Chronology, Enumeration).
- *Contribution Segment*, the data elements needed to identify contributions within an item (Location, Title Code, and other numbering schemes in a specific instance of the SICI).
- *Control Segment*, the data elements needed to record those administrative elements that determine the validity, version, and format of the code representation. This is the most important segment of the SICI. Interpretation and processing are determined by the Control Segment.