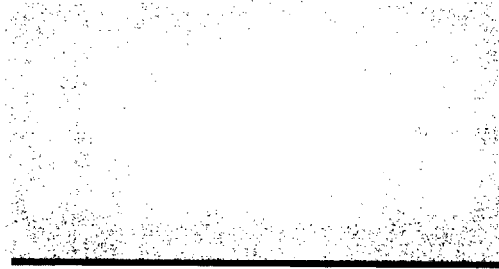


ANSI/AIIM MS14-1996



Standard Recommended Practice — Specifications for 16mm and 35mm Roll Microfilm

Approved As

**American National
Standards Institute (ANSI)
Standard**

August 8, 1996

ANSI/AIIM MS14-1996

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Standard for Information and Image Management —

Standard Recommended Practice — Specifications for 16 mm and 35 mm Roll Microfilm

Association for Information and Image Management International

Abstract:

This standard specifies physical characteristics, formats, placement, and orientation of 16 mm and 35 mm roll microfilm produced as a result of source document and computer-output microfilming.

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Foreword This foreword is not part of the *American National Standard for Information and Image Management — Specifications for 16 mm and 35 mm roll microfilm, ANSI/AIIM MS14-1996*.

For a number of years, separate standards have existed for source document and computer-output microforms. With increasing documentation requirements and advances in COM technology, computer-output microforms have become commonplace. This increased use of COM resulted in a need for compatibility and interchangeability of the same type of microform, no matter how produced. Therefore, as standards were being revised, a standard was prepared for microfiche produced by either source document or computer-output microfilming (ANSI/AIIM MS5-1985). To parallel that standard, the roll microfilm portion of the *Standard for Format and Coding for COM, ANSI/AIIM MS2-1978*, was combined with the *Specifications for 16 mm and 35 mm Microfilm, ANSI/AIIM MS14-1978*, to produce this document.

From a historical perspective, note that in 1938, standardization efforts in the field of still photography were first initiated under the procedures of the (then) American Standards Association (ASA) (subsequently renamed the United States of America Standards Institute and now the American National Standards Institute). The committee organized to carry on this work was designated as the ASA Clauseal Committee on Standardization in the Field of Photography, Z38. This committee continued in operation for over 10 years under the sponsorship of the Optical Society of America and was responsible for the development of over 100 American standards in the photographic field.

By 1950, it was no longer feasible for one committee to handle such a large assignment. Consequently, on November 30, 1950, ASA Committee Z38 was disbanded, and new committees were organized to replace it. Among those committees was PH5, subsequently sponsored by the American Library Association until 1973.

In April 1969, a request was made by the National Micrographics Association subcommittee dealing with computer-output microfilm formats and coding to review film thickness ranges. (This information can now be found in ANSI PH1.51.) During compliance, the simplex format was also reviewed because of reported differences with general industry practice. Because of the advancement of technology and applications, the need for additional formats was recognized, and these were included in the documents. The National Micrographics Association was given the draft for completion and assumed the sponsorship of PH5 in 1973.

In the meantime, work had been progressing on a *Standard for Format and Coding of Computer-Output Microfilm*. This standard, also prepared by the NMA Standards Committee of the same name, was published in 1971 (ANSI PH5.18/NMA MS2-1971) and revised in 1976 and in 1978. Also in 1978, the NMA Information Storage and Retrieval Standards Committee was directed to review and revise *ANSI PH5.3-1967, Specifications for 16 mm and 35 mm Silver-Gelatin Microfilms for Reel Applications*. A draft was prepared by the subcommittee PH5.1 of the clauseal committee PH5 on Photographic Reproduction of Documents, and the final result was the *Specifications for 16 mm and 35 mm Microfilms in Roll Film*. In 1979, NMA streamlined its standards committees and, in the process, expanded the role of the C3 committee by including in its scope the responsibility for all microform formats and renaming it the Microform Formats Standards Committee. As noted earlier, this committee then produced the *Standard for Microfiche* and, subsequently, this standard.

Suggestions for improving this standard are welcome. They should be sent to the Chair, AIIM Standards Board, Association for Information and Image Management International, 1100 Wayne Avenue, Suite 1100, Silver Spring, MD 20910-5603.

The AIIM Standards Board had the following members at the time it approved this standard:

<u>Name of Representative</u>	<u>Organization Represented</u>
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Roy Pierce	Xerox Corporation
Fernando L. Podio	National Institute of Standards and Technology
Shahzad S. Qazi	Eastman Kodak Company
Michael L. Thomas	MSTC, Inc.
Stephen Urban	Delta Information Systems

This standard was originally developed by the AIIM Committee C3 in 1988. C3 has since been combined with C4, C11, and C7 to form C23, Micrographics Technologies. C23 had the following members at the time it developed this revision:

<u>Name of Representative</u>	<u>Organization Represented</u>
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James E. Snyder	AT&T
Paul J. Stock	IGI
Steve M. Stucki	Genealogical Society of Utah

American National Standard for Information and Image Management —

Standard Recommended Practice — Specifications for 16 mm and 35 mm Roll Microfilm, ANSI/AIIM MS14-1996

1 Audience, scope, and purpose

1.1 Audience

This document is intended for managers and designers of document imaging systems who require information regarding the arrangement of document images on microfilm.

1.2 Scope

This standard applies to 16 mm and 35 mm roll microfilm produced as a result of source document and/or computer-output microfilming. This standard does not preclude the use of other standards for roll microfilm. This standard specifies physical characteristics, formats, placement, and orientation.

1.3 Purpose

The purpose of the standard is to present a listing of film sizes, types, and formats currently in use in micrographics to allow users to make the best use of this media in their applications.

2 Normative references

All standards are subject to revision. When the following documents are superseded by an approved revision, that revision may apply.

2.1 Referenced American national standards

ANSI PH1.51:1990, Photography (Film) — Micrographic sheet and roll film — Dimensions.

ANSI/AIIM MS1:1996, Information and image management — Practice for inspection and quality control for alphanumeric computer-output microforms.

ANSI/AIIM MS5:1992, Micrographics — Microfiche.

ANSI/AIIM MS8:1988, Information and image management — Image mark (blip) used in image mark retrieval systems.

ANSI/AIIM MS19:1993, Information and image management — Recommended practice for identification of microforms.

ANSI/AIIM MS23:1991, Information and image management — Practice for operational procedures/inspection and quality control of first generation silver gelatin microfilm of documents.

ANSI/AIIM MS35:1990, Information and image management — Requirements and characteristics of original documents that may be microfilmed.

ANSI/AIIM MS38:1995, Information and image management — Microrecording of engineering graphics — Computer-output microfilm.

ANSI/AIIM MS39:1987, Information and image management — Recommended practice for operational procedures, quality control and inspection of graphic computer-output microforms.

2.2 Related Publications

ANSI/AIIM TR2:1992, Association for information and image management — Glossary of imaging technology.

3 Definitions

The following definitions apply to terms that appear in this standard. Other terms may be defined in *ANSI/AIIM TR2, Association for information and image management — Glossary of imaging technology.*

3.1 horizontal mode The arrangement of microimages on roll microfilm where the lines of print or writing are parallel to the length of the microfilm for horizontal script and perpendicular for vertical script (see figure 1). Also referred to as B orientation or comic mode (since the frames have the same orientation as those on a comic strip).

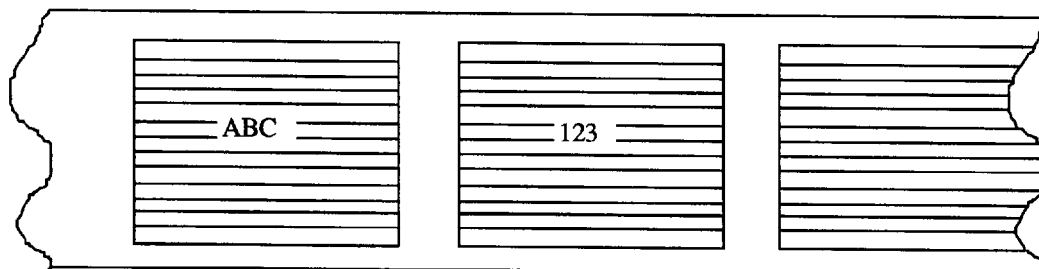


Figure 1 — Horizontal mode (B or comic orientation)

3.2 imaginary document A document of the appropriate size that would have existed if the COM-generated microimage had been produced by source document microfilming.

3.3 right reading Orientation of text or images in normal sequence for reading, even if the material is rotated from an upright position. Right reading is the opposite of reverse reading, which describes a mirror image (see figures 2 and 3).

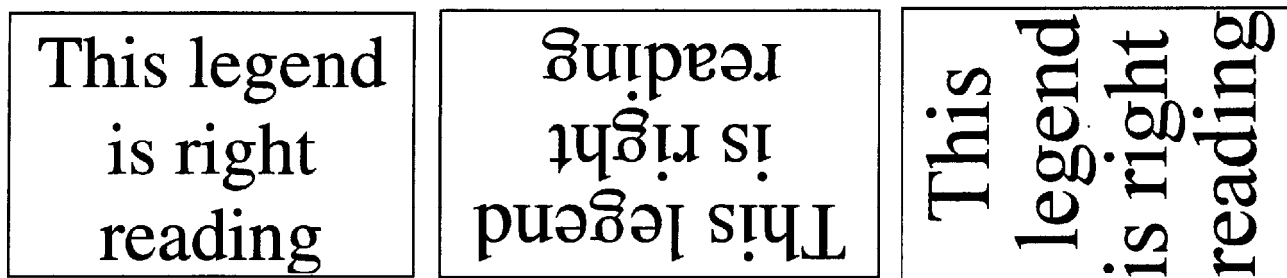


Figure 2 — Examples of right reading

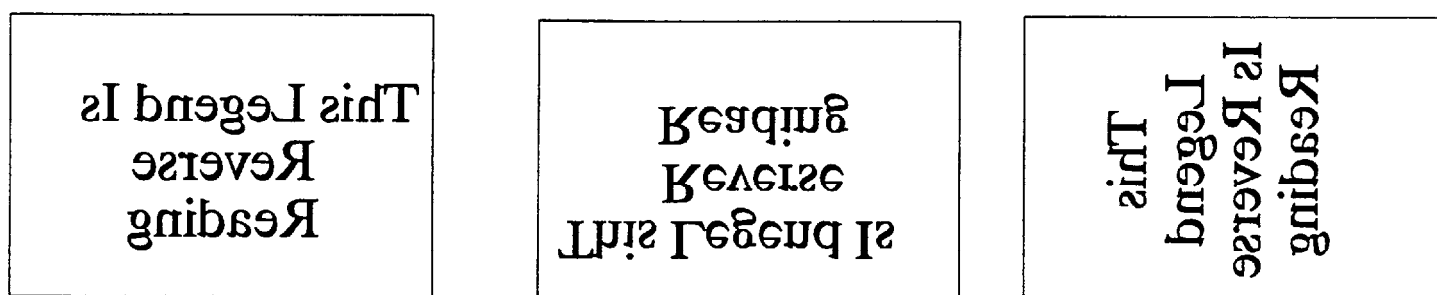


Figure 3 — Examples of reverse reading

3.4 source document microfilming The conversion of documents, usually paper, to microimages.

3.5 vertical mode The arrangement of microimages on roll microfilm where the lines of print or writing are perpendicular to the length of the microfilm for horizontal script and parallel for vertical script (see figure 4). Also referred to as A orientation or cine mode (since the frames have the same orientation as those on a movie film).

Leading end of film

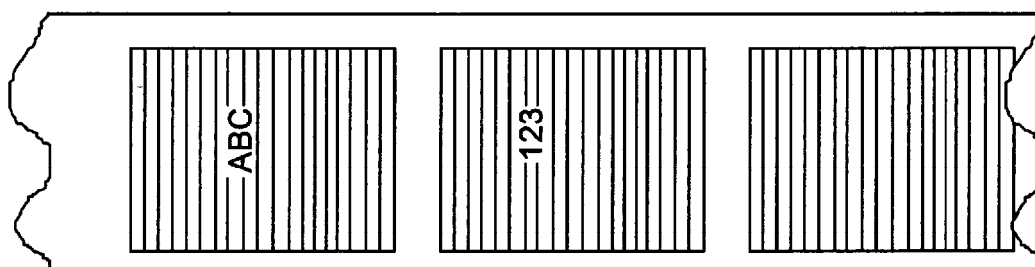


Figure 4 — Vertical mode (A or cine orientation)

4 Physical characteristics: Width and thickness

The width and thickness of roll microfilm shall be as specified in ANSI PH1.51. (See also 6.6).

5 Roll microfilm formats

5.1 Simplex format

The simplex format is a microimage positioning sequence where a single row of microimages is photographed across the width of the microfilm. As illustrated in figure 5, this format allows the following microimage positioning:

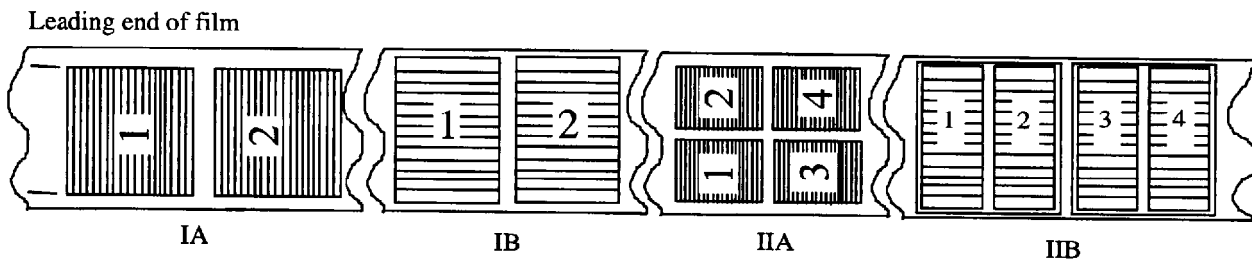


Figure 5 — Simplex format

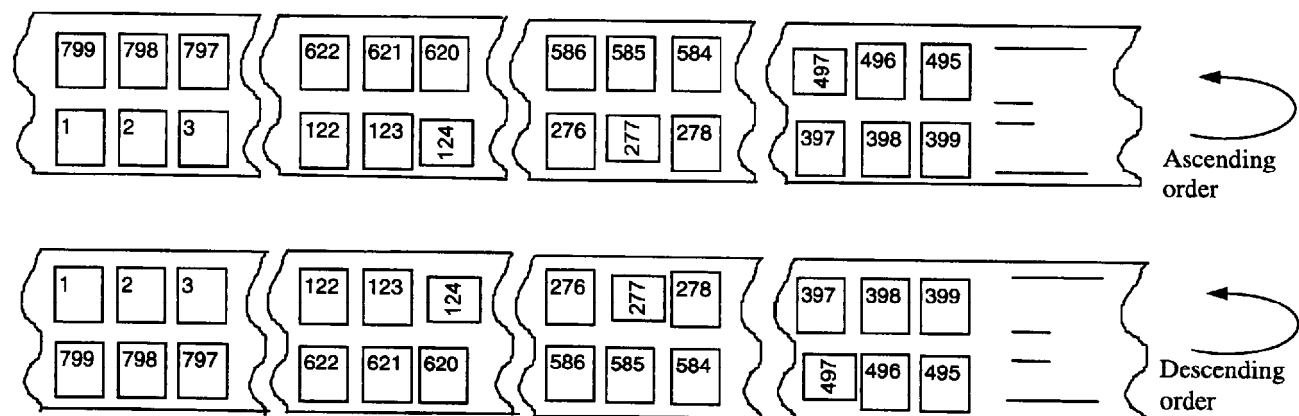


Figure 6 — Duo format

5.1.1 Illustration IA

A single page of a document arranged so that its microimage appears lengthwise on the microfilm with the lines of print perpendicular to the length of the microfilm (i.e., in the vertical mode).

5.1.2 Illustration IB

A single page of a document arranged so that its microimage appears on the microfilm with the lines of print parallel to the length of the microfilm (i.e., in a horizontal mode).

5.1.3 Illustration IIA

Two pages of a document arranged side by side so that a single microimage of the two pages appears lengthwise on the microfilm with the lines of print perpendicular to the length of the microfilm (i.e., in the vertical mode).

5.1.4 Illustration IIB

Two pages of a document arranged side by side so that a single microimage of the two pages appears on the microfilm with the lines of print parallel to the length of the microfilm (i.e., in a horizontal mode).

5.2 Duo format

The duo format is a microimage positioning sequence in which one half of the microfilm is masked and microimages are photographed across the unmasked half of the film width. When the full length of the microfilm has passed through the camera, it is reloaded so that a second series of images is photographed on the half previously left unexposed. This results in one series of microimages running from left to right and the other from right to left. Figure 6 illustrates the two types of duo formats, resulting from microfilming in an ascending or a descending order.

5.3 Duplex format

The duplex format is an image-positioning sequence where, through the use of mirrors or prisms, an image of the front side of the document is photographed on one half of the film, while an image of the back side of the same document is photographed simultaneously on the other half of the microfilm, as illustrated in figure 7.