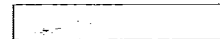
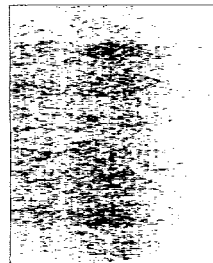
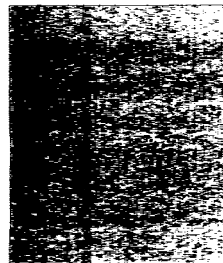
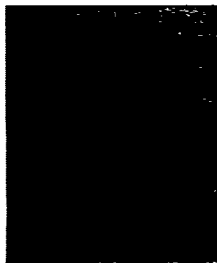


Microfiche



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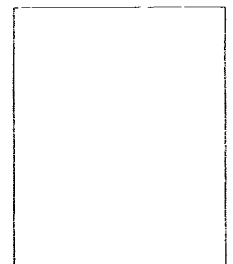
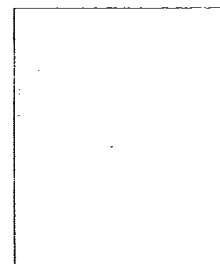
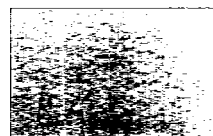
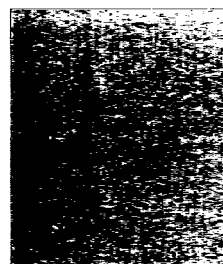
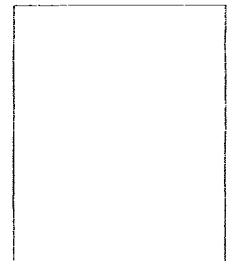
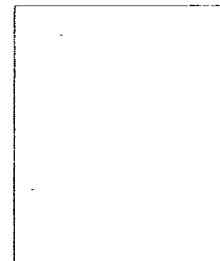
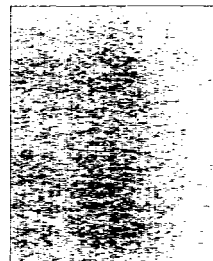
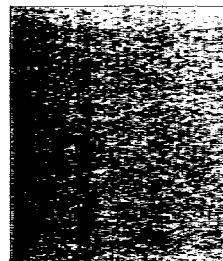


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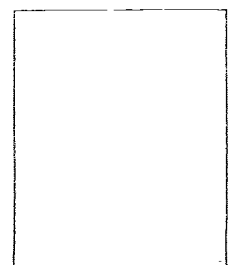
December 21, 1992



AIIM

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ANSI/AIIM MS5-1992



This standard has been adopted for federal government use.

Details concerning its use within the federal government are contained in Federal Information Processing Standards Publication 54-1. For a complete list of the publications available in the Federal Information Processing Standards series, write to the Standards Processing Coordinator (ADP), National Institute of Standards and Technology, Gaithersburg, MD 20899.

Standard for Information and Image Management —

Microfiche

Association for Information and Image Management

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Foreword

(This foreword is not part of the American National Standard for Information and Image Management—Microfiche, ANSI/AIIM MS5-1992.)

Since the first American National Standard for Microfiche of Documents was completed in 1970, the micrographics field has seen major changes and advances in technology. Although this document was revised in 1975, the rapidly expanding use of microfiche and the need to recognize the accepted practices, procedures, and formats dictated its revision in 1991. A number of major factors influenced the changes that were made to the standard at that time.

This standard replaces ANSI/AIIM MS5-1991 which superseded ANSI/AIIM MS5-1985 and those portions of ANSI/AIIM MS2-1978 that referenced microfiche. First, some reduction ratios and microfiche formats have gained such wide acceptance as to constitute de facto standards. Over fifteen years ago, 1:48 was a rare reduction ratio for COM, much less for source document microfilming; today, it is commonplace. Although this standard recognizes the widespread use of 1:24 and 1:48 reductions and the associated microfiche formats, the continuing use of 1:20 and 1:42 reduction ratios is also acknowledged and retained in Appendix A. The use of other reduction ratios, such as 1:72, must also be noted; should their use become commonplace, their inclusion in an appendix or the body of the standard may be warranted in the future.

Second, the use of microfiche as computer-output microform has resulted in COM becoming one of the major sources of the microfiche medium. The benefits of compatible microfiche, no matter how produced, have also been recognized. As a result, one microfiche standard for both source documents and computer- output microfiche is now appropriate.

Third, much progress has been made in the area of quality control in both computer-output and source document microfilming. While this standard is not intended to duplicate or repeat the quality controls that are specified in other standards or practices, it is important to realize that microfiche formats and reduction ratios cannot be considered independent of quality requirements. Therefore, reference to such requirements is provided throughout this standard.

Fourth, the expanding use of microfiche in both private and public applications has increased the demand for information concerning accepted practices and procedures. Such information ranges from the seemingly simple areas of how to microfilm documents of different sizes within the accepted formats and reductions to the more complex

areas of dimensional tolerances and the effects of temperature and humidity. This standard, therefore, includes such guidance.

Finally, it should be noted that this standard does not purport to provide the only possible approach to the use of microfiche. Many other formats of microfiche are acceptable for various purposes. Microfiche with the entire microimaging area containing only one or a couple of microimages of maps or drawings are suitable for specialized applications. High and ultra-high reduction microfiche, produced in one or two steps, and duplicates of jacket microforms also are not discussed in this standard. For such applications, standards and technical reports are being developed or will be developed in the future.

Also, in 1992, the corner cut dimensions in this standard (Section 4.5.2 Corner Cuts) was modified to align with the dimensions in new, related international standards.

ISO 9923 Micrographics—Transparent A6 Microfiche Image Arrangements has been approved and publication is pending. ISO 9923 is a revision of ISO 2707-1980, ISO 2708-1980 and ISO 5126-1980. Dimensions contained in ANSI/AIIM MS5 are in accordance with those in ISO 9923.

A revision of ISO 4330-1987, Photography — Determination of the Curl of Photographic Film, is in process. It will replace ISO 4330-1987. This ISO 4330 standard will also most likely replace ANSI IT9.10-1991, For Imaging Media—Determination of the Curl of Photographic Film. Both ISO 4330 and IT9.10 are referenced standards for this version of MS5. It is also anticipated that ANSI Z39.32-1981, Information on Microfiche Headings, will undergo a revision in the near future. Additionally, ANSI/AIIM MS1, Recommended Practice for Alphanumeric Computer-Output Microforms—Operational Practices for Inspection and Quality Control, also referenced in this standard, is being revised by AIIM C4, Committee on Quality and Control.

Suggestions for changes or improvements to this standard are welcome and should be sent to the Chairman, AIIM Standards Board, Association for Information and Image Management, 1100 Wayne Avenue, Silver Spring, Maryland 20910.

At the time this standard was approved, the Standards Board of the Association for Information and Image Management had the following members:

Marilyn Courtot, <i>Chair</i>	Association for Information and Image Management
Thomas C. Bagg	National Institute of Standards and Technology
Thomas E. Berney	Consultant

Loretta D'Agnolo
Bruce Evans
Bruce A. Holroyd
Don Klosterboer
E. Brien Lewis
Charles A. Plesums
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Charles F. Touchton
Herbert J. White II

American Express Company
3M Company
Eastman Kodak Company
Anacomp, Inc.
I-NET, Inc.
USAA
National Library of Medicine
IBM Corporation
Genealogical Society of Utah

The AIIM Supply Committee, C11, processed and approved this standard. The following were members of the committee at the time of approval:

<u>Organization</u>	<u>Representative</u>
Consultant	Thomas E. Berney, <i>Chair</i>
Air Force Material Command	Geo. Biach
Anacomp, Inc.	Don Klosterboer
Canon, Inc.	Tony Fujinuma
Eastman Kodak Company	Robert Breslawski
First Image Management Company	William Neale
Fuji Photo Film U.S.A.	Jack Tachibana
Genealogical Society of Utah	Eric Erickson
Genealogical Society of Utah	Steve Stucki
Micrographic Equipment Design, Inc.	Timothy Gaia
MicroMedia Laboratories, Inc.	McDonald R. Stewar
National Institute of Standards and Technology	Thomas C. Pagg

American National Standard for Information and Image Management — Microfiche, ANSI/AIIM MS5-1992

1. Scope

This standard applies to microfiche produced as a result of source document and computer-output microfilming. This standard does not preclude the use of other standards for unitized microforms.

2. 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/IT9.6-1991 (ISO 543), Photographic Films — Specifications for Safety Film.

ANSI/IT9.10-1991, Photography (Film) — Methods for Determining Curl.

ANSI/IT9.11-1991 (ISO 5466), Imaging Media — Processed Safety Film — Storage.

ANSI PH1.19-1990, Photographic Sheet Films—Designation of Emulsion Side.

ANSI PH1.43-1985, Photography (Film)—Processed Safety Film—Storage.

ANSI PH1.51-1990, Photography (Film)—Micrographic Sheet and Roll Film—Dimensions.

ANSI Z39.32-1981, Information on Microfiche Headings.

ANSI/AIIM MS1-1988, Information and Image Management—Recommended Practice for Alphanumeric Computer-Output Microforms—Operational Practices for Inspection and Quality Control.

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/ISO 3334-1991 (ANSI/AIIM MS51-1991), Microcopying: ISO Test Chart No. 2 — Description and Use in Photographic Documentary Reproduction.

2.2 Other Referenced Standards

ISO 554-1976, International Standard for Atmospheres for Conditioning and/or Testing—Specifications.

ISO 4330-1987, International Standard for Photography—Determination of the Curl of Photographic Film.

2.3 Other Referenced Publications

AIIM TR2-1992, Technical Report for Information and Image Management — Glossary of Imaging Technology.

3. Definitions

The following definitions apply to terms that appear in this standard. Other terms are defined in AIIM TR2, Technical Report for Information and Image Management — Glossary of Imaging Technology.

Column. A vertical series of images on microfiche one single frame in width, and the height of that portion of the microfiche grid which is reserved for microimages.

COM. (Computer Output Microfilm) Technique for generation of microforms direct from computer output, either on-line or off-line.

Distribution Microfiche. The distribution microfiche is not defined in terms of generations. It is any microfiche intended for actual use, as distinct from camera and intermediate microfiche whose function it is to create microfiche for distribution. A distribution microfiche is a working copy that is expected to be filed, retrieved, and used. The normal use of a distribution microfiche may be for display on a reader, re-enlargement on a printer or reader-printer, or contact printing to produce a duplicate copy.

Frame. A rectangular area on the microfiche bounded by imaginary intersecting grid lines within which a microimage may be recorded. The grid lines shall be part of gauges used for checking microfiche, but they do not actually appear on the microfiche.

Frame, Single. A frame which is bounded by adjacent pairs of grid lines; the smallest subdivision of a grid.

Frame, Double. A combination of two horizontal, adjacent single frames.

Grid Line. An imaginary vertical or horizontal line which defines an edge of the frame boundary. The line is of zero width on the microfiche proper and does not infringe on the usable area of a single or double frame.

Heading. Inscription placed at the top of the microfiche to identify its contents. It is readable without magnification. It may also contain machine-readable information.

Heading Backing. An opaque or semi-opaque treatment applied to the back of the heading area to make the heading more readily visible by reflected light.

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

Information Area. The area of a document that contains information, usually exclusive of the margin.

Margin, Document. In a document, the space between the information area and the edges of the sheet.

Microfiche. A transparent sheet of microfilm with microimages arranged in a grid pattern. A heading large enough to be read without magnification appears at the top of the microfiche in a space reserved for this purpose.

Microfiche Set. Two or more microfiche. A lead microfiche followed by one or more additional microfiche.

Quality Index. The subjective relationship between legibility of printed text and the resolution pattern resolved in a microimage. Note: used to pre-determine camera/microfilm requirements to ensure legibility in the resulting microimages.

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 1a and 1b.)

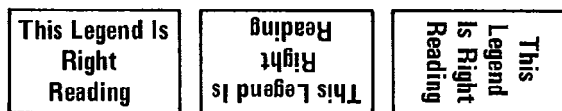


Figure 1a. Examples of Right Reading

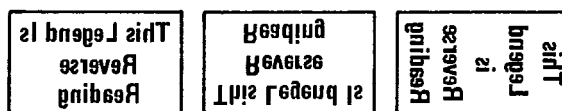


Figure 1b. Examples of Reverse Reading

Row. A horizontal series of microimages on a microfiche.

Source Document Microfilming. The conversion of documents, usually paper, to microimages.

4. Physical Characteristics of the Microfiche

4.1 General. Physical characteristics of the microfiche shall conform to ANSI PH1.51.

4.2 Sheet Size. Nominal sheet sizes shall be 105 mm × 148 mm (nominal ISO A6 size). See Figures 2 through 5 and Appendix D for tolerances and other information that could affect the dimensional characteristics.

4.3 Corner Rounding. The corners of any microfiche may be rounded, with the exception of those corners which were previously subjected to a corner cut. Where corner rounding is employed, the process shall not remove any more than 3 mm of either of the two sides which form the corner.

4.4 Cut-Off Corners. Where segments of an edge have been removed due to corner rounding or corner cuts, a straight line, extending the remainder of the edge in the relevant direction, shall constitute the basis for measuring dimensions and spacing.

4.5 Identification of the Sensitized Side. To facilitate microfiche-to-microfiche copying, a notch or corner cut may be used to identify the sensitized layer of a sheet of photographic film or of the microfiche. See ANSI PH1.19.

When a sheet of photographic film or a microfiche is held with the long side in a vertical position and a notch or cut is in the upper right hand corner, the sensitized side shall be toward the observer.

4.5.1 Notches. If a notch is used, it shall appear in one of the short edges of a sheet of photographic film or microfiche. In a microfiche, the edge in which the notch appears depends on the generation of the microfiche. The notches may be of any desired shape or number. They shall not penetrate more than 1.6 mm inward from the short edge of the sheet of photographic film or microfiche.

4.5.2 Corner Cuts. When a corner cut is used, it shall not exceed 4mm along the long dimension of the sheet of photographic film or the microfiche and 4mm along the short dimension. In a microfiche, the corner cut shall appear in the heading area only; the corner in which it appears depends on the generation of the microfiche.

4.6 Microfilm Thickness. The gross thickness ranges of microfiche, exclusive of the heading backing, if any, shall be:

Cellulose-acetate microfilm: 0.13 mm to 0.23 mm.

Polyester-base microfilm: The preferred thickness range is 0.10 mm to 0.23 mm. (A minimum