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(JIIMA/JSA)

**Electronic imaging process of  
paper documents and microfilmed  
documents**

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## Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Image and Information Management Association (JIIMA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS Z 6016**:2003 is replaced with this Standard.

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# Electronic imaging process of paper documents and microfilmed documents

## 1 Scope

This Japanese Industrial Standard specifies a series of electronic imaging processes including electronic imaging, storage, utilization, disposal, quality control, security measures and the like in the life cycle of paper documents and microfilmed documents.

This Standard does not apply to documents of which the important component is colour identification.

Security measures of electronic imaged documents shall be specified in Annex A and preservation and periodic inspection shall be specified in Annex B.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS X 6933 *Information technology—Office machines—Method of specifying image reproduction of colour copying machines by analog test charts—Realisation and application*

JIS Z 6014 *Micrographics—Test charts for digitizing image—Description and use in electronic imagery*

JIS Z 6017 *Document management—Long-term preservation for electronic imaging documents*

ISO 19005-1 *Document management—Electronic document file format for long-term preservation—Part 1: Use of PDF 1.4 (PDF/A-1)*

## 3 Terms and definitions

For the purposes of this Standard, the following definitions apply.

### 3.1 documents

information and data recorded in the recording media and the like by means of letters, other symbols, images and the like

### 3.2 paper documents

documents recorded on paper

### 3.3 microfilmed documents

documents recorded on microfilm

### 3.4 electronic documents

documents prepared with software and the like of personal computer (hereafter referred to as “PC”) or word processor

### **3.5 electronic imaged documents**

documents made by electronic image (bit-mapped image) of paper documents or microfilmed documents

### **3.6 electronic imaging process**

electronic imaging method of paper documents or microfilmed documents and utilizing procedure thereof

### **3.7 life cycle of documents**

life property of documents or total period of a series of processes in which documents are prepared, registered, utilized, stored/preserved and disposed

### **3.8 electronic imaging**

creating electronic image (bit-mapped image) of paper documents or microfilmed documents by using a scanner and the like

### **3.9 conversion**

performing electronic imaging of paper documents or microfilmed documents

### **3.10 gradation**

brightness stage of image from light to dark

### **3.11 registration slip**

a slip on which an index of documents subjected to electronic imaging is recorded

### **3.12 bit-mapped image**

electronic image in which letters, symbols, figures and the like are expressed in a collection of dots (pixels)

### **3.13 storage**

writing electronic imaged documents or electronic documents in electromagnetic recording media such as magnetic disk

### **3.14 common server**

a server which offers the mechanism to an apparatus to store electronic imaged documents or electronic documents to be used commonly on network

### **3.15 registration**

recording electronic imaged documents or electronic documents to the predetermined management ledger via verification followed by confirmation by the specified person in organization

### **3.16 recording media**

media which record documents such as paper, microfilm, magnetic tape, optical disc and magnetic disc

Magnetic tape, optical disc, magnetic disc and the like are also called the electromagnetic recording media. The electromagnetic record refers to the record made by methods such as an electronic method and a magnetic method which are unable to be recognized by human perception.

### **3.17 partition paper**

paper used for partitioning the unit of index

### **3.18 TIFF (Tag Image File Format)**

one of the file format of electronic imaged documents

### **3.19 PDF (Portable Document Format)**

one of the file format of electronic imaged documents and electronic documents

There is a PDF/A format according to **ISO 19005-1** suitable for long-term preservation.

### **3.20 OCR (Optical Character Recognition), (Optical Character Reader)**

recognizing electronic imaged documents as code data or technology of recognizing

An abbreviation of apparatus for optical character recognition or optical character reading. The former is the appellation of the technology and the latter is the appellation of the system to which the former is applied.

### **3.21 colour reproducibility**

degree of colour reproduction of original document

### **3.22 electronic signature**

technology which enables falsification detection of electronic imaged documents or electronic documents and proves the prepared person in place of the conventional handwriting signature or seal in paper documents

### **3.23 time stamp**

technology which proves from what time electronic imaged documents or electronic documents exist and that they are not falsified by not only the third party but also even the prepared person from that time

## **4 Regulation of electronic imaged document preparation and documentation of operating procedure**

### **4.1 Regulation of electronic imaged document preparation and administrative regulation**

The department responsible for document management and the person responsible for document management shall include the preparation process of electronic imaged documents with the following contents and the required administrative regulation in the administrative regulation of documents prepared by the organization according to the direction of the business proprietor.

#### **4.1.1 Preservation period**

The preservation period of electronic imaged documents shall be specified for each document.

#### **4.1.2 Original document necessary to be preserved**

The original document necessary to be preserved even after electronic imaging shall be specified. The types of documents shall be as follows.

- a) Documents in which preservation of paper documents or microfilm documents as they are is obliged according to the statutes, administrative regulation of documents and the like
- b) Documents in which colour identification serves as an important component
- c) Documents in which exact dimensions are required
- d) Documents at law or documents having possibility of relating to a lawsuit
- e) Documents having strong possibility of losing rational management by performing electronic imaging

#### **4.2 Preparation and preservation of management ledger**

The department responsible for document management and the person responsible for document management shall prepare and preserve the management ledger of which the registration content is clear for each document in accordance with 4.4 of JIS Z 6017. In this case, the file format should be a text format which is searchable.

### **5 Specification of electronic imaged documents and setting up of input and output apparatus**

#### **5.1 Specification of electronic imaged documents**

The specification when documents are electronic imaged shall be as follows. When the object document is specified by statutes and the like, it shall be followed by them.

##### **5.1.1 Resolution at the time of conversion**

The resolution at the time of conversion of general documents should be 8 dots/mm (200 dpi), and the resolution at the time of conversion of documents requiring precise reproduction should be 12 dots/mm (300 dpi) or 16 dots/mm (400 dpi). When documents require half-tone, 6 dots/mm (150 dpi) may be used.

Although the precise images are obtained by the electronic imaged documents of higher resolution, since in general scan speed is lowered and file volume becomes large, the optimum resolution shall be determined in accordance with purposes and uses of documents and the sizes of letters of manuscript and the like. In particular, since the file volume for the colour conversion becomes large compared with the black-and-white conversion, care shall be taken when the resolution of electronic imaged documents is made to be excessively high. In colour converted electronic imaged documents, the contents may be understood even if the resolution is the same in comparison with the black-and-white converted electronic imaged documents. In this case, the optimum resolution should be determined by converting the documents to be electronic imaged documents with a specified resolution to confirm whether the contents can be understood or not.

In the case of the microfilmed documents (black-and-white documents), the resolution at the time of being returned to the same size as that of the original manuscript is made to be the same value as the resolution of the above-mentioned paper documents.

NOTE : Scan resolution on the film becomes the set-up resolution  $\times M$  ( $M$  is the value when the photographic reduction ratio is 1 :  $M$ ).