

# INTERNATIONAL STANDARD

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**8632-4**

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**AMENDMENT 1**  
1990-11-01

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## Information processing systems — Computer graphics — Metafile for the storage and transfer of picture description information —

### Part 4 : Clear text encoding

#### AMENDMENT 1

*Systèmes de traitement de l'information — Infographie — Métafichier de stockage  
et de transfert des informations de description d'images —*

*Partie 4: Codage en clair des textes*

#### AMENDEMENT 1



Reference number  
ISO 8632-4 : 1987/Amd. 1 : 1990 (E)

## Foreword

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# Information processing systems — Computer graphics — Metafile for the storage and transfer of picture description information —

## Part 4: Clear text encoding

### AMENDMENT 1

Page 8

Sub-clause 5.3.1. Change the text in the first sentence from : "INTEGERS, INTEGER COORDINATES, INDICES, and ...." to:

INTEGERS, INTEGER COORDINATES, INDICES, NAMES, and.....

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Add the following to the end of 5.3.5

N ::= <I> {name}

VC ::= <R><I> {viewport coordinate data}

{The abstract parameter type VC, a single VC value, is either a real or an integer, depending on the declaration of the picture descriptor element DEVICE VIEWPORT SPECIFICATION MODE. When DEVICE VIEWPORT SPECIFICATION MODE is 'fraction of display surface' the value is real. When DEVICE VIEWPORT SPECIFICATION MODE is 'millimetres with scale factor' or 'physical device coordinates', the value is integer.}

VPOINTREC ::= <VC><SEP><VC>

VP ::= <VPOINTREC>[<LEFT PAREN><OPTSEP><VPOINTREC><OPTSEP>  
<RIGHT PAREN>]

{COORDINATE in viewport coordinate space. Parentheses are optional. If they are used, they shall group exactly two real or integer numbers, depending on DEVICE VIEWPORT SPECIFICATION MODE. The parenthesized form is intended to aid readability of the metafile.}

TM ::= <<R: a11>  
<SEP>  
<R: a12>  
<SEP>  
<R: a21>  
<SEP>  
<R: a22>  
<SEP>  
<VDC: a13>  
<SEP>  
<VDC: a23>>

Page 12

Add the following at the end of 5.4.3

ALL  
COPY  
FIGURE

FILTER  
FORCED  
FRACTION  
GKSM  
INTERSECTION  
LOCUS  
MATRIX  
NAME  
NEW  
OUTPUT  
PICK  
REGION  
SAVE  
SHAPE  
THEN

Page 12

Add the following at the end of 5.4.4:

|                |        |
|----------------|--------|
| ATTRIBUTE(S)   | ATTR   |
| CLIPPING       | CLIP   |
| CONNECTING     | CONN   |
| CONTEXT        | CONT   |
| COORDINATE(S)  | COORD  |
| DEVICE         | DEV    |
| DISPLAY        | DISP   |
| EXTENDED       | EXT    |
| HIGHLIGHTING   | HIGHL  |
| IDENTIFIER     | ID     |
| INHERITANCE    | INH    |
| MAPPING        | MAP    |
| MILLIMETRE     | MM     |
| PHYSICAL       | PHY    |
| PLACEMENT      | PLACEM |
| PRESENTATION   | PRES   |
| PRIMITIVE(S)   | PRIM   |
| PRIORITY       | PRI    |
| REPRESENTATION | REP    |
| RESTORE        | RES    |
| REVERSED       | REV    |
| SEGMENT        | SEG    |
| STATelist      | STLIST |
| TRANSFORMATION | TRAN   |
| TWO            | 2      |
| VIEWPORT       | VP     |

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Add the following at the end of 5.4.5:

|                                    |           |
|------------------------------------|-----------|
| BEGIN SEGMENT                      | BEGSEG    |
| END SEGMENT                        | ENDSEG    |
| BEGIN FIGURE                       | BEGFIGURE |
| END FIGURE                         | ENDFIGURE |
| NAME PRECISION                     | NAMEPREC  |
| MAXIMUM VDC EXTENT                 | MAXVDCEXT |
| SEGMENT PRIORITY EXTENT            | SEGPRIEXT |
| DEVICE VIEWPORT                    | DEVVP     |
| DEVICE VIEWPORT SPECIFICATION MODE | DEVVPMODE |
| DEVICE VIEWPORT MAPPING            | DEVVPMAP  |
| LINE REPRESENTATION                | LINEREP   |

|                              |                |
|------------------------------|----------------|
| MARKER REPRESENTATION        | MARKERREP      |
| TEXT REPRESENTATION          | TEXTREP        |
| FILL REPRESENTATION          | FILLREP        |
| EDGE REPRESENTATION          | EDGEREP        |
| LINE CLIPPING MODE           | LINECLIPMODE   |
| MARKER CLIPPING MODE         | MARKERCLIPMODE |
| EDGE CLIPPING MODE           | EDGECLIPMODE   |
| NEW REGION                   | NEWREGION      |
| SAVE PRIMITIVE CONTEXT       | SAVEPRIMCONT   |
| RESTORE PRIMITIVE CONTEXT    | RESPRIMCONT    |
| CIRCULAR ARC CENTRE REVERSED | ARCCTRREV      |
| CONNECTING EDGE              | CONNEDGE       |
| PICK IDENTIFIER              | PICKID         |
| COPY SEGMENT                 | COPYSEG        |
| INHERITANCE FILTER           | INHFILTER      |
| CLIP INHERITANCE             | CLIPINH        |
| SEGMENT TRANSFORMATION       | SEGTRAN        |
| SEGMENT VISIBILITY           | SEGVIS         |
| SEGMENT HIGHLIGHTING         | SEGHIGHL       |
| SEGMENT DISPLAY PRIORITY     | SEGDISPPRI     |
| SEGMENT PICK PRIORITY        | SEGPICKPRI     |

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Add the following at the end of 6.2:

```

BEGIN SEGMENT      ::= BEGSEG
                    <SOFTSEP>
                    <N:SEGID>
                    <TERM>

END SEGMENT        ::= ENDSEG <TERM>

BEGIN FIGURE        ::= BEGFIGURE <TERM>

END FIGURE          ::= ENDFIGURE <TERM>

```

Page 17

Add at the end of METAFILE ELEMENT LIST:

The words VERSION2, EXTPRIM and VERSION2GKSM may also be used in this string

Page 17

Add the following at the end of sub-clause 6.3:

```

NAME PRECISION      ::= NAMEPREC
                    <SOFTSEP>
                    <I:MININT>
                    <SEP>
                    <I:MAXINT>
                    <TERM>

```

MAX VDC EXTENT ::= MAXVDCEXT  
 <SOFTSEP>  
 <P:FIRSTCORNER>  
 <SEP>  
 <P:SECONDCORNER>  
 <TERM>

SEGMENT PRIORITY EXTENT ::= SEGPRIEXT  
 <SOFTSEP>  
 <I:MINSEGPRI>  
 <SEP>  
 <I:MAXSEGPRI>  
 <TERM>

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Add the following at the end of 6.4

DEVICE VIEWPORT ::= DEVVP  
 <SOFTSEP>  
 <VP:FIRSTCORNER>  
 <SEP>  
 <VP:SECONDCORNER>  
 <TERM>

DEVICE VIEWPORT SPECIFICATION  
 MODE ::= DEVVPMODE  
 <SOFTSEP>  
 <FRACTION/MM/PHYDEVCOORD>  
 <SEP>  
 <R:SCALEFACTOR>  
 <TERM>

DEVICE VIEWPORT MAPPING ::= DEVVPMAP  
 <SOFTSEP>  
 <NOTFORCED/FORCED>  
 <SEP>  
 <LEFT/CTR/RIGHT>  
 <SEP>  
 <BOTTOM/CTR/TOP>  
 <TERM>

LINE REPRESENTATION ::= LINEREP  
 <SOFTSEP>  
 <I:BUNDLEINDEX> {positive}  
 <SEP>  
 <I:LINETYPE>  
 { 1=solid, 2=dash  
 3=dot, 4=dash-dot  
 5=dash-dot-dot  
 <0 implementation dependent>  
 <SEP>  
 <V:LINEWIDTH> {non-negative}  
 <SEP>  
 <K:LINECOLR>  
 <TERM>

NOTE - Line types with values above 5 are reserved for registration.

MARKER REPRESENTATION ::= MARKERREP  
 <SOFTSEP>

```

<I:BUNDLEINDEX> {positive}
<SEP>
<I:MARKERTYPE>
    {1=dot, 2=plus
    3=asterisk, 4=circle
    5=cross (x)
    <0 implementation dependent}
<SEP>
<V:MARKERSIZE> {non-negative}
<SEP>
<K:MARKERCOLOR>
<TERM>

```

NOTE - Marker types with values above 5 are reserved for registration.

```

TEXT REPRESENTATION ::= TEXTREP
    <SOFTSEP>
    <I:BUNDLEINDEX> {positive}
    <SEP>
    <I:FONTINDEX> {positive}
    <SEP>
    <STRINGCHARISTROKE>
    <SEP>
    <R:SPACING>
    <SEP>
    <R:FACTOR>
    <SEP>
    <K:TEXTCOLOR>
    <TERM>

FILL REPRESENTATION ::= FILLREP
    <SOFTSEP>
    <I:BUNDLEINDEX> {positive}
    <SEP>
    <HOLLOWISOLIDPATIHATCHIEMPTY>
    <SEP>
    <K:FILLCOLOR>
    <SEP>
    <I:HATCHINDEX>
        {1=horizontal, 2=vertical
        3=positive slope
        4=negative slope
        5=horizontal/vertical cross
        6=+/- slope cross
        <0 implementation dependent}
    <SEP>
    <I:PATINDEX> {positive}
    <TERM>

```

NOTE - Hatch indices with values above 6 are reserved for registration.

```

EDGE REPRESENTATION ::= EDGEREP
    <SOFTSEP>
    <I:BUNDLEINDEX> {positive}
    <SEP>
    <I:EDGETYPE>
        {1=solid, 2=dash
        3=dot, 4=dash-dot
        5=dash-dot-dot
        <0 implementation dependent}
    <SEP>
    <V:EDGEWIDTH> {non-negative}

```

<SEP>  
<K:EDGECOLR>  
<TERM>

NOTE - Edge types with values above 5 are reserved for registration.

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Add the following at the end of 6.5

LINE CLIPPING MODE ::= LINECLIPMODE  
<SOFTSEP>  
<LOCUSISHAPE|LOCUSTHENSHP>  
<TERM>

MARKER CLIPPING MODE ::= MARKERCLIPMODE  
<SOFTSEP>  
<LOCUSISHAPE|LOCUSTHENSHP>  
<TERM>

EDGE CLIPPING MODE ::= EDGECLIPMODE  
<SOFTSEP>  
<LOCUSISHAPE|LOCUSTHENSHP>  
<TERM>

NEW REGION ::= NEWREGION <TERM>

SAVE PRIMITIVE CONTEXT ::= SAVEPRIMCONT  
<SOFTSEP>  
<I:CONTEXTNAME>  
<TERM>

RESTORE PRIMITIVE  
CONTEXT ::= RESPRIMCONT  
<SOFTSEP>  
<I:CONTEXTNAME>  
<TERM>

Page 24

Add the following at the end of 6.6

CIRCULAR ARC CENTRE  
REVERSED ::= ARCCTRREV  
<CTRARCSP>  
<TERM>

CONNECTING EDGE ::= CONNEDGE <TERM>

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Sub-clause 6.7: Add the following note after the description of LINE TYPE:

NOTE - Line types with values above 5 are reserved for registration.

Page 24

Sub-clause 6.7: Add the following note after the description of MARKER TYPE:

NOTE - Marker types with values above 5 are reserved for registration.

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Sub-clause 6.7: Add the following note after the description of HATCH INDEX:

NOTE - Hatch indices with values above 6 are reserved for registration.

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Sub-clause 6.7: Add the following note after the description of EDGE TYPE:

NOTE - Edge types with values above 5 are reserved for registration.

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Add the following at the end of 6.7

PICK IDENTIFIER ::= PICKID  
<SOFTSEP>  
<I:PICKID>  
<TERM>

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Add the following after 6.9:

#### 6.10 Encoding segment control and segment attribute elements

COPY SEGMENT ::= COPYSEG  
<SOFTSEP>  
<I:SEGID>  
<SEP>  
<TM:TRANMATRIX>  
<NO:YES>  
<TERM>

INHERITANCE FILTER ::= INHFILTER  
<SOFTSEP>  
<ELEMORGROUPNAME>  
<<SEP><ELEMORGROUPNAME>>\*<SEP>  
<STLISTISEG>  
<TERM>

ELEMORGROUPNAME ::= <LINEINDEX|  
LINETYPE|  
LINEWIDTH|  
LINECOLR|  
LINECLIPMODE|  
MARKERINDEX|  
MARKERTYPE|  
MARKERSIZE|  
MARKERCOLR|  
MARKERCLIPMODE|  
TEXTINDEX|  
TEXTFONTINDEX|  
TEXTPREC|  
CHARACTEREXPAN|  
CHARACTERSPACE|  
TEXTCOLR|