



# Information technology — Text and office systems — Document Printing Application (DPA) —

## Part 1: Abstract service definition and procedures

### TECHNICAL CORRIGENDUM 4

*Technologies de l'information — Bureautique — Application impression de documents (DPA) —*

*Partie 1: Définition de service abstrait et procédures*

*RECTIFICATIF TECHNIQUE 4*

Technical Corrigendum 4 to International Standard ISO/IEC 10175-1:1996 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 33, *Distributed application services*.

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#### Subclause 6.4.5.1

*Replace the text of paragraphs f) subset-of, g) superset-of, and h) non-null-set-intersection with the following text:*

- f) **subset-of**, it evaluates to TRUE if and only if all of the assertion value is present in, or lies within, the attribute value.

This matching rule applies both to multi-valued attributes and to single-valued attributes that specify:

- (1) ranges,
- (2) two-dimensional areas,
- (3) sequences of a single type.

In the case of multi-valued attributes, the assertion evaluates to TRUE if and only if each of the assertion value members is present in the attribute value set.

For attributes that specify a range (or two-dimensional area), the assertion evaluates to TRUE if and only if the assertion range|area lies within the attribute value range|area. For examples, see 9.1.5.16, IntegerRange and integerRangeSyntax, and 9.1.5.47, Area and areaSyntax.

In the case of single-valued sequence types (other than range or area types), the assertion evaluates to TRUE if and only if each of the assertion value members is present in the attribute value sequence, and the assertion value members are in the same sequence as the attribute value members.

- g) **superset-of**, it evaluates to TRUE if and only if all of the attribute value is present in, or lies completely within, the assertion value.

This matching rule applies both to multi-valued attributes and to single-valued attributes that specify:

- (1) ranges,
- (2) two-dimensional areas,
- (3) sequences of a single type.

In the case of multi-valued attributes, the assertion evaluates to TRUE if and only if each of the attribute value members is present in the assertion value set.

For attributes that specify a range (or two-dimensional area), the assertion evaluates to TRUE if and only if the attribute range|area lies within the assertion value range|area. For examples, see 9.1.5.16, IntegerRange and integerRangeSyntax, and 9.1.5.47, Area and areaSyntax.

In the case of single-valued sequence types (other than range or area types), the assertion evaluates to TRUE if and only if each of the attribute value members is present in the assertion value sequence, and the attribute value members are in the same sequence as the assertion value members.

- h) **non-null-set-intersection**, it evaluates to TRUE if and only if at least one of the assertion members is present in the attribute value.

This matching rule applies to multi-valued attributes, and to single-valued attributes that specify sequences of a single type.

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#### Subclause 8.2.1

*In the second paragraph following the ASN.1, replace the current text:*

This International Standard assumes that printers and other server components are reset or returned to appropriate states prior to processing each job. The **reset-printer** attribute permits the client to suspend the reset of the printer after particular documents, if desired for down-line loading of fonts, forms, PDL prologues, etc.

*with the following text:*

This part of ISO/IEC 10175 stipulates that printers and other server components are reset or returned to appropriate states prior to processing each job. However, between documents of the same job, resetting of the printer or interpreter depends upon the type of document format and/or the value of the **reset-printer** attribute. For page-independent document formats, the printer and interpreter should reset their states automatically at the end of printing each document. For other document formats, the **reset-printer** attribute permits the client to suspend the reset of the printer after particular documents, if desired for down-line loading of fonts, forms, PDL prologues, etc.

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#### Subclause 8.2.2.1

*Delete the sixth paragraph from the bottom of the page, which reads as follows:*

If the client lists a required attribute (i.e. an attribute element of the **PrintArgument**) in either the **job-non-compulsory-attributes** or **non-compulsory-attributes** attribute, the server shall completely ignore this particular value of the attribute.

**Subclause 9.2.8.2**

Following the table in 9.2.8.2, add the following text and table:

The following table indicates in which states the **job-state-reasons** are valid. The event that sets a particular **job-state-reason** may occur in a different state from the state in which the **job-state-reason** is reported; in such cases, the **job-state-reason** usually indicates why the job has transitioned to its current state.

| Descriptive Name                   | Job States |         |                |        |                 |                 |          |               |
|------------------------------------|------------|---------|----------------|--------|-----------------|-----------------|----------|---------------|
|                                    | held       | pending | process<br>ing | paused | interrup<br>ted | termina<br>ting | retained | complet<br>ed |
| documents-needed                   | X          |         |                |        |                 |                 |          |               |
| job-hold-set                       | X          |         |                |        |                 |                 |          |               |
| job-print-after-specified          | X          |         |                |        |                 |                 |          |               |
| required-resources-not-ready       | X          |         |                |        |                 |                 |          |               |
| successful completion              |            |         |                |        |                 |                 | X        | X             |
| completed-with-warnings            |            |         |                |        |                 |                 | X        | X             |
| completed-with-errors              |            |         |                |        |                 |                 | X        | X             |
| cancelled-by-user                  |            |         |                |        |                 | X               | X        | X             |
| cancelled-by-operator              |            |         |                |        |                 | X               | X        | X             |
| aborted-by-system                  |            |         |                |        |                 | X               | X        | X             |
| logfile-pending                    |            |         |                |        |                 | X               | X        |               |
| logfile-transferring               |            |         |                |        |                 | X               | X        |               |
| cancelled-by-shutdown              |            |         |                |        |                 | X               | X        | X             |
| printer-unavailable                |            | X       |                |        |                 | X               | X        | X             |
| wrong-printer                      |            | X       |                |        |                 | X               | X        | X             |
| bad-job                            |            |         |                |        |                 | X               | X        | X             |
| job-interrupted-by-printer-failure | X          |         |                | X      |                 |                 |          |               |
| cascaded                           |            |         | X              |        |                 |                 | X        | X             |
| deleted-by-administrator           |            |         |                |        |                 | X               | X        | X             |
| discard-time-arrived               |            |         |                |        |                 | X               | X        | X             |
| pre-processing-failed              | X          |         | X              | X      |                 | X               | X        | X             |
| post-processing-failed             |            |         |                |        |                 | X               | X        | X             |
| submission-interrupted             |            |         |                |        |                 | X               | X        | X             |
| max-job-fault-count-exceeded       |            |         |                |        |                 | X               | X        | X             |
| job-outgoing                       |            |         | X              |        |                 |                 |          |               |
| device-stopped-partly              |            |         | X              | X      |                 |                 |          |               |
| device-stopped                     |            |         |                | X      |                 |                 |          |               |
| job-interpreting                   |            |         | X              |        |                 |                 |          |               |
| job-printing                       |            |         | X              |        |                 |                 |          |               |
| service-off-line                   | X          |         |                |        |                 |                 |          |               |
| job-canceled-at-device             |            |         |                |        |                 | X               | X        | X             |
| job-resubmitted by user            | X          | X       |                | X      |                 |                 | X        |               |
| job-resubmitted by-operator        | X          | X       |                | X      |                 |                 | X        |               |
| job-resubmission-completed         | X          | X       |                | X      |                 |                 | X        |               |

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#### Subclause 9.2.8.25

At the end of the 9.2.8.25, add the following note:

NOTE - the value of **processing-time** only includes those periods when the job is actually being processed in some way; **processing-time** does *not* include time periods during which the job has been paused or held while awaiting some operator action, for example. Upon completion of the job, the value of this attribute should represent the total amount of processing time actually consumed by the job.

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#### Subclause 9.3.2.16.1

Replace 9.3.2.16 and the first paragraph in 9.3.2.16.1, which read:

##### 9.3.2.16 Imposition attributes

This group of attributes identify and/or specify the imposition operations performed on each page. An imposition operation consists of 3 steps performed in the order given below and specified by six attributes. The steps are:

- a) **number-up**: the number of source page-images to make up a target page image. This operation may be complex.
- b) **binding-edge-shift**: the amount to shift the target page image away from the binding edge, based on **plex** and **binding edge**.
- c) **page-image-shift**: the final amount to shift in the x and y direction without regard to **plex**.

As introduced in 6.3.13, imposition functions affect the placement, orientation and scaling of page images on the selected media. Examples include applying binding margins, placing two page images on a side of the medium, and simple pamphlet.

##### 9.3.2.16.1 Number-up

This attribute specifies the number of source page-images to impose upon a single instance of a selected medium. The attribute can be specified either by a number directly or by naming an imposition object which specifies some particular number-up imposition.

with the following text:

##### 9.3.2.16 Imposition attributes

This group of attributes identify and/or specify the imposition operations performed to construct each page of the output document. As introduced in 6.3.13, imposition functions affect the placement, orientation and scaling of page images on the selected media. Examples include applying binding margins and placing two page images on a surface of the medium to produce a simple pamphlet.

Imposition operations are specified by the six attributes defined in this subclause. Imposition attributes are classified in three groups, which are applied in a fixed sequence, regardless of the order in which the attributes appear in a print request. These three groups are described below, listed in the order of their application:

- a) *number-up*: determines the number, scaling and placement of source page-images to make up a target page image. The **number-up** attribute may specify a simple number-up operation operation, or it may identify a predefined imposition function, which may be complex.
- b) *binding-edge-shift*: determines the amount to shift the target page image away from the binding edge, based on **plex** and **binding edge**.
- c) *page-image-shift*: determines the final amount to shift in the x and y direction without regard to **plex**.

##### 9.3.2.16.1 Number-up

This attribute specifies an imposition function to impose upon each surface of a selected medium to be imaged in a document. The operation can be specified either by supplying a number directly or by naming an imposition object which specifies some particular imposition function.

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**Subclause 9.3.4.2**

In the table at the top of page 172, replace the "landscape" and "reverse-landscape" entries:

|                   |  |  |
|-------------------|--|--|
| landscape         | id-val-content-orientation-landscape         | The page orientation such that the sides are shorter than the top when the page is held in the intended human readable orientation. Landscape is defined to be a rotation of the page by +90 degrees with respect to the medium (i.e. anti-clockwise) from the portrait orientation<br>NOTE – The +90 direction was chosen because simple finishing on the long edge is the same edge whether portrait or landscape. |
| reverse-portrait  | id-val-content-orientation-reverse-portrait  | The page orientation defined to be a rotation of 180 degrees with respect to portrait  |
| reverse-landscape | id-val-content-orientation-reverse-landscape | The page orientation defined to be a rotation of 180 degrees with respect to landscape. Landscape is defined to be a rotation of the page by -90 degrees with respect to the medium (i.e. clockwise) from the portrait orientation<br>NOTE – <b>Reverse-landscape</b> was added because some applications rotate landscape -90 degrees from portrait, rather than +90 degrees.                                       |

with the entries:

|                   |  |  |
|-------------------|--|--|
| landscape         | id-val-content-orientation-landscape         | The page orientation such that the sides are shorter than the top when the page is held in the intended human readable orientation. Landscape is defined to be a rotation of the page image by +90 degrees with respect to the medium (i.e. anti-clockwise) from the portrait orientation<br>NOTE 1 – The +90 direction was chosen because simple finishing on the long edge is the same edge whether portrait or landscape.<br>NOTE 2 – If the page image is to be printed on a medium that has landscape orientation, the landscape page image is not rotated before printing. |
| reverse-portrait  | id-val-content-orientation-reverse-portrait  | The page orientation defined to be a rotation of 180 degrees with respect to portrait  |
| reverse-landscape | id-val-content-orientation-reverse-landscape | The page orientation defined to be a rotation of 180 degrees with respect to landscape. Reverse-landscape is defined to be a rotation of the page image by -90 degrees with respect to the medium (i.e. clockwise) from the portrait orientation<br>NOTE 3 – Reverse-landscape was added because some applications rotate landscape -90 degrees from portrait, rather than +90 degrees.<br>NOTE 4 – If the page image is to be printed on a medium that has landscape orientation, the reverse-landscape page image is not rotated before printing.                              |

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### Subclause 9.15

*Replace paragraphs two through five on page 265:*

Commonly used imposition functions may be defined by a systems-administrator, and installed in a server as imposition-objects. An imposition-object instance consists of a named collection of attributes of the imposition object-class that specifies its effect.

The **number-up** document attribute identifies, at most, a single number-up operation which shall be applied once per impression (or result-surface) if the attribute is present and not 0. Otherwise, no number-up operation is applied.

Standard convenience imposition functions may be associated with imposition objects. These imposition functions can then be requested in a print-request by supplying their identifiers via the **number-up** document attribute.

Each defined imposition object shall include at least an imposition-identifier attribute containing the object identifier or simple-name by which it is referenced. Other imposition object attributes may be included as needed to properly describe and specify the effect that shall result when the imposition object is applied.

*with the following three paragraphs of text:*

Commonly used imposition functions may be defined by a systems-administrator, and installed in a server as imposition-objects. After an imposition function has been installed, it can then be specified in a print-request by supplying its identifier via the **number-up** document attribute.

The **number-up** document attribute identifies, at most, a single imposition-object, or simple number-up operation, which shall be applied once per impression (or result-surface) if the attribute is present and not 0. Otherwise, no number-up operation is applied.

An imposition-object instance consists of a named collection of attributes of the imposition object-class that specifies its effect. Each defined imposition-object shall include at least an imposition-identifier attribute containing the object identifier or simple-name by which it is referenced. Other imposition-object attributes may be included as needed to properly describe and specify the effect that shall result when the imposition-object is applied.