



EPO PDF PROFILE

TERMS OF REFERENCE

Author: EPO - D.541
Date: 17-02-2021
Version: 1.9

| History of Changes | |
|---------------------------|---|
| 1.9 | <p>1. Patent namespace URI amended (version 1.1)</p> <p>2. CPC-related changes</p> <ul style="list-style-type: none"> • Property patent:Classification replaced with patent:IPC • Property patent:CPC added • Property dc:subject amended (“classification” replaced with “IPC” – property definition unchanged) <p>3. RFC64-related changes</p> <p>Property patent:DocumentSection amended (new value erroneously-filed-documents)</p> <p>4. Miscellaneous</p> <ul style="list-style-type: none"> • Footnote 6 on page 12 amended to reflect the current practice (trailing and duplicated empty spaces are removed in the IPC character string) • Minor amendments in the example of XMP packet e.g. pdfaProperty:description <p>5. Example of XMP packet (fictive example) amended to reflect all above changes</p> |
| 1.8 | New document section “cited-references” added in patent metadata – see pages 13, 14, 16, and 19 |
| 1.7 | B861 and B871 reverse |
| 1.6 | xmp:Identifier example is modified: it is a Bag text field |
| 1.6 | dc:description and dc:title examples are modified: "x-default" instead of "fr" |
| 1.5 | dc:subject - added in the example in chapter 6 |
| 1.5 | data type corrections in the custom property declaration (chapter 6) |
| 1.4 | Dublin Core Schema - corrections in the examples |
| 1.4 | IPC - dc:subject, pdf:Keywords contain only the symbols (without e.g. version number); patent:Classification contains raw IPC (e.g. 50 digits for IPC8) |
| 1.3 | dc:description - contains the abstract in filing language. Must be synchronized with the Subject document info entry. |
| 1.3 | dc:language - its content is always the same as the title and abstract language used in dc:description and dc:title |
| 1.3 | dc:subject - must be synchronised with pdf:Keywords and the Keywords document info entry Clarification about IPC symbols |
| 1.3 | pdf:Title - deleted. See http://www.pdfa.org/doku.php?id=pdfa:en:techdoc , document "Technical Note TN0008 - Predefined XMP Properties in PDF/A-1" |
| 1.3 | patent schema - property name changes (3 properties - e.g. PublicationData becomes Publication) Clarification about IPC symbols |
| 1.3 | All dates in XMP compatible format (yyyy-mm-dd instead of yyyyymmdd) |
| 1.3 | dc:description, patent:Abstract - content modification in case of undesirable elements/data |
| 1.3 | chapter 6, example of XMP packet - completed with standard properties, and re-ordered |

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1. INTRODUCTION

This document presents a recommended profile for PDF files produced for publication and long-term archiving purposes of EPO patent applications and granted patents. The EPO has successfully produced PDF versions of these documents for a number of years, but the specific PDF version used has not previously been rigorously defined. This document does not attempt to propose a new format for the publication of European patent documents, but rather intends to clarify and improve upon existing practices. In drawing-up this profile reference has been made to related initiatives such as the USPTO electronic filing profile and the various ST36 and PCT XML DTDs.

2. PDF VERSION

PDF files must be PDF/A-1b compliant¹ (minimal conformance level).

3. PDF CONTENT

PDF produced is bookmarked and contains:

- images only (e.g. TIFF scanned pages - one image per page), or
- images (e.g. TIFF scanned pages - one image per page) combined with a searchable text layer, or
- text combined with drawings (character-coded PDF with image(s) embedded).

Remarks:

- for the time being TIFF images are using CCITT-G4 compression, but it could be envisaged to make use of other compression methods (e.g. JBIG2).
- for character-coded PDF/A-1b, the font(s) to be legally embedded is (are) not yet identified. Embedded fonts may be limited to a subset containing the glyphs necessary to render the PDF document.

¹ see ISO 19005-1:2005 level B conformance, and ISO 19005-1:2005/Cor 1:2007

4. FUTURE IMPROVEMENTS

The possible improvements that will be addressed in the future are:

- level A conformance of the PDF/A standard (conforming PDF/A -1a files are also known as tagged PDF) - this issue may need to be revisited in the framework of the proposed tri-lateral Common Application Format (CAF),
- linearised PDF,
- details of the image formats used for non-character data to be included in the PDF/A files.

These features, in addition to possible PDF/A-2 features, may be addressed at a later stage or in other standards and recommendations that are applicable to industrial property information.

Other aspects, such as the possibility to store non-XMP-structured data (e.g. XML ST36) in the metadata, are under discussions in some PDF/A working groups. The EPO will keep an eye on the possible outcome of these discussions.

Last but not least, packaging aspects (file naming, file structures etc.) are indeed important in terms of long-term archiving perspective. These aspects will also be addressed.

5. METADATA

Most of the metadata is composed of bibliographic data visible on the first page of a patent document, and available in XML format.

The metadata to be created must be XMP-compliant².

Most of the standard schemas available (e.g. Dublin Core, PDF, XMP schemas) are designed for general publication purposes. Their corresponding properties are visible in the "Properties" of a PDF file.

This profile proposes to use standard schemas as much as possible, and additionally to create a custom patent bibliographic data schema for the patent data that does not fit into existing standard schemas.

The following pages suggest lists of standard XMP schema properties, and a list of patent schema properties.

² see XMP specification, September 2005

5.1. DUBLIN CORE SCHEMA

Standard properties available: **title**, **subject**, **description**, **type**, source, relation, coverage, creator, **publisher**, contributor, rights, date, **format**, **identifiant**, **language**.

Remark: the 15 Dublin Core properties have been formally endorsed in the NISO Standard Z39.85-2001 and ISO Standard 15836-2003.

| description | |
|---|---|
| Definition: abstract of the patent document | XML element: abstract/@lang, abstract/p |
| <p>Example:</p> <pre><dc:description><rdf:Alt><rdf:li xml:lang="x-default">La présente invention concerne un dispositif de conditionnement et d'application, comportant : - un applicateur (2) pour l'application d'un produit (P) sur les cils ou les sourcils, comportant : • une âme allongée s'étendant selon un axe longitudinal, • au moins deux rangées de dents se raccordant à des faces longitudinales respectives et différentes de l'âme, chacune des rangées de ces deux rangées au moins comportant : - un premier ensemble de premières dents se raccordant en faisant un premier angle avec la normale à la face longitudinale correspondante de l'âme, et - un deuxième ensemble de secondes dents se raccordant en faisant un second angle avec la normale à la face longitudinale correspondante de l'âme, l'âme étant observée selon son axe longitudinal, - le deuxième angle étant supérieur au premier angle, et/ou - au moins une première dent du premier ensemble et une deuxième dent du deuxième ensemble ayant des extrémités libres situées à des distances différentes de l'axe longitudinal de l'âme. - un récipient contenant le produit.</rdf:li></rdf:Alt></dc:description></pre> <p>Remarks:</p> <ul style="list-style-type: none"> - should there be several abstracts, the one corresponding to the filing language is selected. Abstracts in other languages are available in patent: Abstract - dc:description must be synchronized with the Subject document info entry - all elements or data that are not compatible with the XMP specification should be removed from the abstract content, e.g. HTML elements such as i, br, etc., or replaced by an empty space. | |

| identifiant | |
|--|--|
| Definition: Patent Document Identifier | XML element: B100 (formatted subset: country code + publication number + kind code + publication date) |
| <p>Example:</p> <pre><dc:identifiant>EP-1872682-A1-20080102</dc:identifiant></pre> | |

| format | |
|---|--|
| Definition: MIME type that identifies the file format | |
| <pre><dc:format>application/pdf</dc:format></pre> | |

| language | |
|---|---------------------------------------|
| Definition: language of the patent document | XML element: ep-patent-document/@lang |
| Example: | |
| <pre><dc:language><rdf:Bag><rdf:li>fr</rdf:li></rdf:Bag></dc:language></pre> | |
| Remark: this property contains the language used in the patent application document. It is always the same as the title and abstract language used in dc:description and dc:title | |

| publisher | |
|--|--|
| Definition: Publishing Office | |
| <pre><dc:publisher><rdf:Bag><rdf:li>European Patent Office</rdf:li></rdf:Bag></dc:publisher></pre> | |

| subject | |
|---|--|
| Definition: IPC symbols, part of the document identifier, and title | XML element: part of classification-ipcr/text or part of B511 and B512, part of B100, and B542 |
| Example: | |
| <pre><dc:subject> <rdf:Bag> <rdf:li>EP1872682</rdf:li> <rdf:li>EP 1872682</rdf:li> <rdf:li>A45D 40/26</rdf:li> <rdf:li>Device for the application of a product on eyelashes or eyebrows</rdf:li> </rdf:Bag> </dc:subject></pre> | |
| Remarks: | |
| <ul style="list-style-type: none"> - dc:subject must be synchronised with pdf:Keywords and the Keywords document info entry - the document identifier is included as follows: country code + publication number concatenated, and country code + " " + publication number - IPC data contains <u>only classification symbols</u>, and no additional data available in the IPC XML raw data - the title included here should be the one in English language, when available. | |

| title | |
|--|--|
| Definition: title of the patent document combined with additional data | |
| Content: | |
| title + " - " + office name + " - " + country code + " " + publication number + " " + kind code | |
| Example: | |
| <pre><dc:title> <rdf:Alt> <rdf:li xml:lang="x-default">Dispositif pour l'application d'un produit sur les cils ou les sourcils - European Patent Office - EP 1872682 A1</rdf:li> </rdf:Alt> </dc:title></pre> | |
| Remarks: | |
| <ul style="list-style-type: none"> - dc:title must be synchronised with the Title document info entry - should there be several titles, the one corresponding to the filing language is selected. Titles in additional languages are available in patent:Title | |

| type | |
|--|-------------------|
| Definition: type of patent document | XML element: B121 |
| Example: | |
| <pre><dc:type> <rdf:Bag> <rdf:li>DEMANDE DE BREVET EUROPEEN</rdf:li> </rdf:Bag> </dc:type></pre> | |

5.2. PDF SCHEMA

Standard properties: Author, CreationDate, Creator, **Keywords**, ModDate, **PDFVersion**, Producer, Subject, Title.

| Keywords | |
|--|--|
| Definition: keywords | |
| Example: <pdf:Keywords>EP1872682; EP 1872682; A45D 40/26; Device for the application of a product on eyelashes or eyebrows</pdf:Keywords> | |
| Remark: pdf:Keywords must be synchronised with dc:subject and the Keywords document info entry | |

| PDFVersion | |
|--------------------------------------|--|
| Definition: PDF version | |
| <pdf:PDFVersion>1.4</pdf:PDFVersion> | |

5.3. PDFAID SCHEMA

Standard properties: version, **part**, **conformance**, amd.

| conformance | |
|--|--|
| Definition: ISO 19005-1:2005 Conformance Level | |
| <pdfaid:conformance>B</pdfaid:conformance> | |

| part | |
|--------------------------------------|--|
| Definition: Part of ISO 19005-1:2005 | |
| <pdfaid:part>1</pdfaid:part> | |

5.4. XMP BASIC SCHEMA

Standard properties: Advisory, BaseURL, [CreateDate](#), [CreatorTool](#), [Identifier](#), Label, [MetadataDate](#), [ModifyDate](#), Nickname, Rating, ThumbnailsFormat, ThumbnailsHeight, ThumbnailsImage, ThumbnailsWidth.

| CreateDate | |
|--|--|
| Definition: Creation Date of the PDF | |
| Example: <xmp:CreateDate>2007-10-04T17:24:08+02:00</xmp:CreateDate> | |

| Identifier | |
|---|--|
| Definition: Patent Document Identifier | XML element: B100 (formatted subset: country code + publication number + kind code + publication date) |
| Example: <xmp:Identifier> <rdf:Bag><rdf:li>EP-1872682-A1-20080102</rdf:li></rdf:Bag> </xmp:Identifier> | |
| Remark: same content as dc:identifier content | |

| MetadataDate | |
|--|--|
| Definition: Date of creation of metadata | |
| Example: <xmp:MetadataDate>2007-10-04T17:24:08+02:00</xmp:MetadataDate> | |

| ModifyDate | |
|--|--|
| Definition: Date of modification | |
| Example: <xmp:ModifyDate>2007-10-04T17:24:08+02:00</xmp:ModifyDate> | |

| CreatorTool | |
|--|--|
| Definition: Tool used | |
| Example: <xmp:CreatorTool>Apache FOP Version 0.93</xmp:CreatorTool> | |

5.5. PATENT BIBLIOGRAPHIC DATA SCHEMA

URI: <http://www.epo.org/patent-bibliographic-data/1.1/>

Name Space: [patent](#)

| Properties corresponding to bibliographic data available in XML ST36 | | | |
|--|-----------|--|--|
| name | Type | XML element ³ | property (patent:*) |
| Publication data | DocId | | Publication ⁴ |
| country | Text | B190 | CountryCode |
| number | Text | B110 | Number |
| kind code | Text | B130 | KindCode |
| corr. code | Text | B151+B132EP | CorrectionCode |
| date ⁵ | date | B140/date ("- " added") | Date |
| Int. Pub. data | DocId | | InternationalPublication |
| country | Text | B871/ctry | CountryCode |
| number | Text | B871/dnum/pnum | Number |
| date | date | B871/date ("- " added") | Date |
| Application data | DocId | | Application |
| number | Text | B210 | Number |
| date | date | B220/date ("- " added") | Date |
| Int. App. data | DocId | | InternationalApplication |
| country | Text | B861/ctry | CountryCode |
| number | Text | B861/dnum/anum | Number |
| date | date | B861/date ("- " added") | Date |
| Priority data | bag DocId | | Priority |
| country | Text | B330/ctry | CountryCode |
| number | Text | B310 | Number |
| date | date | B320/date ("- " added") | Date |
| IPC ⁶ | bag Text | classification-ipcr/text or B511, B512 | IPC |
| CPC | bag Text | classification-cpc/text | CPC |
| Applicant names | bag Text | B711/ttl+fnm+snm+sfx+onm+odv | Applicant |
| Inventors names | bag Text | B721/ttl+fnm+snm+sfx+onm+odv | Inventor |
| Proprietors names | bag Text | B731/ttl+fnm+snm+sfx+onm+odv | Proprietor |
| Represent. names | bag Text | B741/ttl+fnm+snm+sfx+onm+odv | Representative |
| Title | alt Text | B541, B542 | Title (default value depends on @lang in ep-patent-document) |
| Abstract ⁷ | seq Text | abstract/@lang, abstract/p | Abstract (first abstract in the ordered list depends on @lang in ep-patent-document) |

³ definition available at <http://www.wipo.int/scit/en/standards/st36-xml-dtd.htm>, EPO's production DTD.

⁴ with the exception of CorrectionCode, all the properties contained in **Publication** should be mandatory. All other properties are considered as optional.

⁵ all dates must be formatted as follows: yyyy-mm-dd

⁶ the content of patent:IPC and patent:CPC is IPC/CPC XML raw data where trailing and duplicated empty spaces are removed. The IPC data (not CPC) contained in dc:subject and pdf:Keywords is not IPC XML raw data, i.e. it is a subset of this XML raw data.

⁷ all elements or data that are not compatible with the XMP specification should be removed from the abstract content, e.g. HTML elements such as i, br, etc., or replaced by an empty space.

| Properties related to the document structure | | | |
|--|--------------|-------------|---------------------|
| name | Type | XML element | property (patent:*) |
| Total n. of pages | Real | | TotalNumberOfPages |
| Document struct. | seq Bookmark | | DocumentStructure |
| Doc. Section | Text | | DocumentSection |
| Start Page | Real | | StartPage |
| Num. of Pages | Real | | NumberOfPages |

The possible values of **DocumentSection** are:

- bibliography
- abstract
- description
- claims
- drawings
- search-report
- amendment
- cited-references
- erroneously-filed-documents

Note: **erroneously-filed-documents** means all “incorrect” parts (abstract, description, claims and/or drawings) that may appear at the end of a Euro-PCT application republished by the EPO.

6. EXAMPLE OF XMP PACKET

This sample contains the Patent Bibliographic Data schema, and metadata (standard and custom) for the publication EP1872682A1, with a number of changes compared with its original content.

Note:

- CPC is included only to provide an example, i.e. it is not available in the original EP1872682A1.
- Sections **cited-references** and **erroneously-filed-documents** are included only to provide examples, i.e. they are not available as sections in the original EP1872682A1.

```
<?xpacket begin="ï»¿' id='W5M0MpCehiHzreSzNTczkc9d'?>
<x:xmpmeta xmlns:x='adobe:ns:meta/'>
<rdf:RDF xmlns:rdf='http://www.w3.org/1999/02/22-rdf-syntax-ns#'>

<rdf:Description rdf:about="" xmlns:xmp="http://ns.adobe.com/xap/1.0/">
  <xmp:CreateDate>2009-05-06T15:09:49Z</xmp:CreateDate>
  <xmp:Identifier>
    <rdf:Bag><rdf:li>EP-1872682-A1-20080102</rdf:li></rdf:Bag>
  </xmp:Identifier>
  <xmp:MetadataDate>2009-05-06T15:09:49+02:00</xmp:MetadataDate>
  <xmp:ModifyDate>2009-05-06T15:09:49+02:00</xmp:ModifyDate>
  <xmp:CreatorTool>callas pdfaPilot CLI 1.3.080</xmp:CreatorTool>
</rdf:Description>

<rdf:Description rdf:about="" xmlns:pdf="http://ns.adobe.com/pdf/1.3/">
  <pdf:Keywords>EP1872682; EP 1872682; A45D 40/26; Device for the application of a product on eyelashes or eyebrows</pdf:Keywords>
  <pdf:PDFVersion>1.4</pdf:PDFVersion>
</rdf:Description>

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1872682 A1</rdf:li>
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  </dc:title>
  <dc:description>
    <rdf:Alt>
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applicateur (2) pour l'application d'un produit (P) sur les cils ou les sourcils, comportant : • une âme allongée s'étendant selon un axe
longitudinal, • au moins deux rangées de dents se raccordant à des faces longitudinales respectives et différentes de l'âme, chacune des
rangées de ces deux rangées au moins comportant : - un premier ensemble de premières dents se raccordant en faisant un premier angle avec
la normale à la face longitudinale correspondante de l'âme, et - un deuxième ensemble de secondes dents se raccordant en faisant un second
angle avec la normale à la face longitudinale correspondante de l'âme, l'âme étant observée selon son axe longitudinal, - le deuxième angle
étant supérieur au premier angle, et/ou - au moins une première dent du premier ensemble et une deuxième dent du deuxième ensemble ayant
des extrémités libres situées à des distances différentes de l'axe longitudinal de l'âme. - un récipient contenant le produit.</rdf:li>
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    </rdf:Bag>
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</rdf:Description>

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  <patent:Inventor>
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      <rdf:li>Gueret, Jean-Louis</rdf:li>
    </rdf:Bag>
  </patent:Inventor>

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    <rdf:li xml:lang="de">Vorrichtung zum Auftragen eines Produktes auf die Wimpern oder Augenbrauen</rdf:li>
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    <rdf:li xml:lang="fr">Dispositif pour l'application d'un produit sur les cils ou les sourcils</rdf:li>
  </rdf:Alt>
</patent:Title>
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```
<patent:Abstract>
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    <rdf:li xml:lang="fr">La présente invention concerne un dispositif de conditionnement et d'application, comportant : - un applicateur (2) pour l'application d'un produit (P) sur les cils ou les sourcils, comportant : • une âme allongée s'étendant selon un axe longitudinal, • au moins deux rangées de dents se raccordant à des faces longitudinales respectives et différentes de l'âme, chacune des rangées de ces deux rangées au moins comportant : - un premier ensemble de premières dents se raccordant en faisant un premier angle avec la normale à la face longitudinale correspondante de l'âme, et - un deuxième ensemble de secondes dents se raccordant en faisant un second angle avec la normale à la face longitudinale correspondante de l'âme, l'âme étant observée selon son axe longitudinal, - le deuxième angle étant supérieur au premier angle, et/ou - au moins une première dent du premier ensemble et une deuxième dent du deuxième ensemble ayant des extrémités libres situées à des distances différentes de l'axe longitudinal de l'âme. - un récipient contenant le produit.
  </rdf:li>
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      <patent:NumberOfPages>1</patent:NumberOfPages>
    </rdf:li>
    <rdf:li rdf:parseType="Resource">
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      <patent:NumberOfPages>4</patent:NumberOfPages>
    </rdf:li>
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      - B220/date for an application or B861/date for an international application
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