

Universal Decimal Classification

DATA ELEMENTS IN UDC MRF EXPORTS

Introduction

From 1992 the Universal Decimal Classification (UDC) has been maintained and updated in English in a database called the UDC Master Reference File (UDC MRF). The complete UDC MRF contains over 70,000 entries.

The UDC MRF is distributed in English to licensees for publication or use as a set of database exports. From 1993-2012, the UDC has been updated every year and a new version of the UDC MRF released in the year after which changes were introduced - following the publication of these changes in the annual issue of the *Extensions and Corrections to the UDC*, the official UDCC publication (ISSN 0014-5424).

In 2009 UDC MRF data was migrated into a relational database. Previously, from 1992-2008 UDC was maintained in a CDS/ISIS database. We continue to support CDS/ISIS users¹.

This document lists a selection of data elements (sub-elements and properties) from the UDC databases which are distributed to users in UDC export files and can be used to interpret data content in the various exports. The main purpose of this document is to assist UDC MRF licensees and other users in implementing and using UDC data exports.

There are 3 types of standard UDC MRF exports distributed with the UDC MRF release, supporting different type of users:

- exports for publishing in print form (a simple tagged text export) (cc 5 MB)
- exports for the CDS/ISIS database (ISO2709) (cc 17 MB)
- platform-independent exports suitable for use by software
 - extended tagged text set (cc 6 Mb)
 - XML export (cc 25 Mb)
 - SKOS export - currently not provided for the UDC MRF, but SKOS dumps are available for UDC Summary, see <http://udccdata.info/>

Other types of exports are provided to licensees on demand.

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¹ UDC MRF distribution files: standard sets of ISO2709 exports and empty CDS/ISIS database files. Because of the fact that the version of CDS/ISIS used for UDC MRF can only handle the extended ASCII character set and the MySQL database holds data as UTF8 - we provide text exports supporting both character coding standards.

1. Unique UDC number identifier

NAME: identifier (abbreviation 'id')
SUB-ELEMENTS: n/a
PROPERTIES: n/a

DESCRIPTION: Unique identifier is a numerical identification assigned to each UDC number (described under 2) within the UDC system. Its purpose is an accurate identification of a relationship established between a concept and its notational representation at any point in UDC history. The identifier is the primary key in the UDC MRF database

EXAMPLE (XML):

```
<udc_class>
  <id>000731</id>
  <notation>=432.942</notation>
  <caption language="en">Matumbi (Ngindo) group</caption>
</udc_class>
```

EXPORT LABELS:	ISO 2709	902
	XML export	<id>
	Text export	<i>not exported</i>
	SKOS export	skos:Concept

DATABASE DETAILS:

DB TABLE	classmarks
DB COLUMN	classmarks_id
CARDINALITY	mandatory
OCCURRENCE	single
VALUE	numeric
DISPLAY	as entered / as URL

2. UDC number

NAME: notation (abbreviation: n/a)
SUB-ELEMENTS: n/a for standard exports
PROPERTIES: n/a for standard exports

DESCRIPTION: This field contains the UDC heading i.e. UDC number notation as it should be displayed for human access

EXAMPLE (XML):

```
<udc_class>
  <id>000731</id>
  <notation>=432.942</notation>
  <caption language="en">Matumbi (Ngindo) group</caption>
</udc_class>
```

EXPORT LABELS:	ISO 2709	001
	XML export	<notation>
	Text export	<01>
	SKOS export	skos:notation

DATABASE DETAILS:	
DB TABLE	classmarks
DB COLUMN	classmarks_tag
CARDINALITY	mandatory
OCCURRENCE	single
VALUE	text (notation)
DISPLAY	as entered

3. Table

NAME: table

CODES:

- a Table Ia - Coordination. Extension
- b Table Ib - Relation. Subgrouping. Order-fixing
- c Table Ic - Common Auxiliaries of Language
- d Table Id - Common Auxiliaries of Form
- e Table Ie - Common Auxiliaries of Place
- f Table If - Common Auxiliaries of Ethnic Grouping
- g Table Ig - Common Auxiliaries of Time
- h Table Ih - Subject specification by notations from non-UDC sources
- i Table Ii - Common Auxiliaries of Viewpoint
- k Table Ik - Common Auxiliaries of: Properties, Relations/Processes, Materials and Persons
- l Section II. Special auxiliary subdivisions.
- M Main table
- X Table grouping titles

SUB-ELEMENTS: n/a

PROPERTIES: n/a

DESCRIPTION: **UDC numbers are organized in a number of tables that are displayed in a designated order. This field provides codes for the management of table sequence and table groupings. In the old CDS/ISIS database this field was also used for sorting of UDC tables.**

EXAMPLE (XML):	<pre> <udc_class> <notation>512.554.7</notation> ... <table>M</table> </udc_class> </pre>
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EXPORT LABELS:	ISO 2709	002
	XML export	<table>
	Text exports	<i>not exported</i>
	SKOS export	<i>not exported</i>

DATABASE DETAILS:	
DB TABLE	classmarks
DB COLUMN	heading_type
CARDINALITY	mandatory

OCCURRENCE	single
VALUE	text (coded value)
DISPLAY	not present in schedule display

4. Special auxiliary type

NAME: **special_aux_type**

CODES: A hyphen (-) auxiliary
B point-nought (.0) auxiliary
C apostrophe (') auxiliary. NB apostrophe will appear as inverted comma (`)
D other

SUB-ELEMENTS: *n/a*

PROPERTIES: *n/a*

DESCRIPTION: **If the UDC number is a special auxiliary its type is indicated in this field by one of the codes listed. It allows special auxiliaries to be displayed or printed in a different style. If the number comprises more than one type of special auxiliary, the codes are entered in alphabetical order, e.g. BD.**

EXAMPLE (XML):

```
<udc_class>
  <id>062870</id>
  <notation>681.84.087.3</notation>
  ...
  <special_aux_type>B</special_aux_type>
</udc_class>
```

EXPORT LABELS:	ISO 2709	002
	XML export	<special_aux_type>
	Text export	<i>not exported</i>
	SKOS export	<i>not exported</i>

DATABASE DETAILS:

DB TABLE	classmarks
DB COLUMN	special_aux_type
CARDINALITY	mandatory for special auxiliaries
OCCURRENCE	repeatable
VALUE	text (coded value)
DISPLAY	not displayed in schedules

5. Broader class

NAME: **broader_class**

SUB-ELEMENTS: notation (UDC notation of the broader class)
id (Unique ID of the broader class)

{other sub-elements not present in standard exports}

DESCRIPTION: **Broader class is the immediate super-ordinate class under which the UDC number belongs**

EXAMPLE (XML):

```

<udc_class>
  <id>062870</id>
  <notation>681.84.087.3</notation>
  <broadener>
    <id>62868</id>
    <notation>681.84.087</notation>
  </broadener>
  ...
</udc_class>

```

EXPORT LABELS:	ISO 2709	007
	XML export	<broadener> <id></id> <notation></notation> </broadener>
	Text exports	<i>not exported</i>
	SKOS export	skos:broadener (value URI)

DATABASE DETAILS:

DB TABLE	classmarks
DB COLUMN	broadener_category
CARDINALITY	mandatory
OCCURRENCE	single
VALUE	numeric (id)
DISPLAY	as id / as URI / as notation / as notation with caption

6. Parallel derivation

NAME: **derivation**

SUB-ELEMENTS: *not present in standard exports*

PROPERTIES: *not present in standard exports*

DESCRIPTION: **If a UDC notation has been created by parallel division (and has its own ID) this field contains the UDC number where the relative parallel instruction can be found. It allows these records to be displayed in a different style (e.g. indented, or with a note inserted between the record of the number in this field and the derived records).**

EXAMPLE (XML):

```

<udc_class>
  <id>063318</id>
  <notation>685.341.353</notation>
  ...
  <derivation>685.341.3</derivation>

```

```
</udc_class>
```

EXPORT LABELS:	ISO 2709	010
	XML export	<derivation>
	Text exports	<12>
	SKOS export	<i>not exported</i>

DATABASE DETAILS:

DB TABLE	classmarks
DB COLUMN	parallel_deriv
CARDINALITY	optional
OCCURRENCE	multiple
VALUE	text (notation)
DISPLAY	In printed edition preceded by the following text: "See parallel division instruction at"

7. Parallel division instruction

NAME: parallel_div_instruction

SUB-ELEMENTS: *not present in standard exports*

PROPERTIES: *not present in standard exports*

DESCRIPTION: If a number can be subdivided by parallel division this field contains the elements which make up the parallel division instruction: source notation and target notation. In printed editions it is customary to use the sign \cong to mean "is subdivided parallel to".)

EXAMPLE (XML):

```
<udc_class>
<id>063317</id>
<notation>685.341.3</notation>
...
<parallel_div_instruction language="en">685.341.3 divided as -03
(Table 1k)</parallel_div_instruction>
</udc_class>
```

EXPORT LABELS:	ISO 2709	011
	XML export	<parallel_div_instruction>
	Text export	<07>
	SKOS export	<i>not exported</i>

DATABASE DETAILS:

DB TABLE	parallel_div_instructions
DB COLUMN	source_notation; target_notation
CARDINALITY	optional
OCCURRENCE	multiple
VALUE	text (notation)
DISPLAY	Source notation and target notation are connected with a symbol \cong or

the Following statement: *[insert source notation]* is subdivided as *[insert target notation]*

8. Caption (description)

NAME:	caption
SUB-ELEMENTS:	<i>n/a</i>
PROPERTIES:	language specific, represented with ISO 639-1 codes (2 letter language code)
DESCRIPTION:	Caption (also known as 'description' or 'class description') contains the core definition of the concept/class expressed by the UDC number

EXAMPLE (XML):

```
<udc_class>
  <id>000731</id>
  <notation>=432.942</notation>
  <caption language="en">Matumbi (Ngindo) group</caption>
</udc_class>
```

EXPORT LABELS:	ISO 2709	100
	XML export	<caption language="en">
	Text export	<02>
	SKOS export	skos:prefLabel (<i>sub-property</i> udc:caption)

DATABASE DETAILS:

DB TABLE	language_fields
DB COLUMN	description, field_id (where field_id = 1)
CARDINALITY	mandatory
OCCURRENCE	single (once per language)
VALUE	text
DISPLAY	as entered

9. Including note (verbal examples)

NAME:	including (abbreviation 'incl')
SUB-ELEMENTS:	<i>n/a</i>
PROPERTIES:	language specific, represented with ISO 639-1 codes (2 letter language code)
DESCRIPTION:	This field includes more specific concepts that belong to the class and are not expressed explicitly in the subdivision. Typically, these are concepts that would appear further below on a deeper hierarchy level that happens not to be supported by the UDC MRF

EXAMPLE (XML):

```
<udc_class>
  <id>063360</id>
  <notation>685.348.2</notation>
  <caption language="en">Prophylactic footwear (to prevent foot ailments)</caption>
  <including_note language="en">Footwear with orthopaedic or hygienic devices</including_note>
  ...
</udc_class>
```

EXPORT LABELS:	ISO 2709	105
	XML export	<including_note>
	Text export	<03>
	SKOS export	skos:note (<i>sub-property</i> udc:includingNote)

DATABASE DETAILS:

DB TABLE	language_fields
DB COLUMN	description, field_id (where field_id = 4)
CARDINALITY	optional
OCCURRENCE	single (once per language)
VALUE	text
DISPLAY	preceded with a word label 'Including:'

10. Scope note

NAME: **scope_note** (abbreviation SN)

SUB-ELEMENTS: *n/a*

PROPERTIES: language specific, represented with ISO 639-1 codes (2 letter language code)

DESCRIPTION: **This field provides explanation of the semantic content of the class, when this may be required for disambiguation**

EXPORT LABELS:	ISO 2709	110
	XML export	<scope_note>
	Text export	<04>
	SKOS export	skos:scopeNote

DATABASE DETAILS:

DB TABLE	language_fields
DB COLUMN	description, field_id (where field_id = 5)
CARDINALITY	optional
OCCURRENCE	single (once per language)
VALUE	text
DISPLAY	preceded with label SN:

11. Application note

NAME: **application_note** (abbreviation AN)

SUB-ELEMENTS: *n/a*

PROPERTIES: language specific, represented with ISO 639-1 codes (2 letter language code)

DESCRIPTION: **Technical instructions regarding application, number building, etc.**

EXAMPLE (XML):

```
<udc_class>
  <id>064963</id>
  <notation>711.426</notation>
  ...
  <application_note language="en">Details by colon combination
  with 693/694</application_note
</udc_class>
```

EXPORT LABELS:	ISO 2709	111
	XML export	<application_note>
	Text export	<05>
	SKOS export	skos:note (<i>sub-property</i> udc:applicationNote)

DATABASE DETAILS:

DB TABLE	language_fields
DB COLUMN	description, field_id (where field_id = 6)
CARDINALITY	optional
OCCURRENCE	single (once per language)
VALUE	text
DISPLAY	preceded with label AN:

12. General information note

NAME: **information_note** (abbreviation IN)

SUB-ELEMENTS: *n/a*

PROPERTIES: language specific, represented with ISO 639-1 codes (2 letter language code)

DESCRIPTION: **Contains additional lexicographical or factual information about the core concepts that may assist users but is not fundamental for the UDC application as such. In order to save space publisher may choose to omit this note or to present it in a form a footnote.**

EXPORT LABELS:

ISO 2709	114
XML export	<information_note>
Text export	<13>
SKOS export	not exported

DATABASE DETAILS:

DB TABLE	language_fields
DB COLUMN	description, field_id (where field_id = 10)
CARDINALITY	optional
OCCURRENCE	single (once per language)
VALUE	text
DISPLAY	preceded with label IN:

13. Examples of combination

NAME: example (abbreviation 'eoc')

SUB-ELEMENTS: notation; caption (language)

PROPERTIES: example caption is language specific, represented with ISO 639-1 codes (2 letter language codes)

DESCRIPTION: **Examples of combinations field shows compound numbers based on the notation in UDC number field. When there is more than one examples the group of examples are ordered according to the UDC filing rules. In some exports (e.g. XML) this group is presented in a group container.**

EXPORT LABELS:	ISO 2709	115
	XML export	<example> <notation></notation> <caption language="en"></caption> </example>
	Text export	<06>
	SKOS export	skos:example

DATABASE DETAILS:

DB TABLE	example_classmarks
DB COLUMN	tag (notation)
DB TABLE	language_fields
DB COLUMN	description, field_id (where field_id = 2_
CARDINALITY	optional
OCCURRENCE	multiple
VALUE	text
DISPLAY	each example preceded by 'EX' or the whole block with with the expression 'Examples(s) of combination'

14. Examples of parallel division

NAME: paralleld example (abbreviation 'pdeoc')

SUB-ELEMENTS: notation; caption (language)

PROPERTIES: example/caption is language specific, represented with ISO 639-1 codes (2 letter language codes)

DESCRIPTION: **This field is meant for notations illustrating the parallel division instruction described under 7 (db field 011). When there is more than one parallel division example, the group of examples are ordered according to the UDC filing rules. In some exports (e.g. XML) this group is presented in a group container.**

EXAMPLE (XML):

```
<udc_class>
  <notation>(0.05)</notation>
  <caption language="en">Documents for particular kinds of user</caption>
  <parallel_div_examples>
    <parallel_div_example>
      <notation>(0.053.2)</notation>
      <caption language="en">Documents for children</caption>
```

```

</parallel_div_example>
...
</parallel_div_examples>
</udc_class>

```

EXPORT LABELS:	ISO 2709	120
	XML export	<pre><parallel_div_example> <notation></notation> <caption language="en"></caption> </parallel_div_example></pre>
	Text export	<08>
	SKOS export	<i>not present in text exports</i>

DATABASE DETAILS:	
DB TABLE	parallel_div_examples
DB COLUMN	notation
DB TABLE	language_fields
DB COLUMN	description, field_id (where field_id = 7)
CARDINALITY	optional
OCCURRENCE	multiple
VALUE	text
DISPLAY	Each example preceded by 'PDEX' or the whole block with with the expression 'Examples(s) of parallel division'

15. References

NAME: reference (abbreviation 'ref')

SUB-ELEMENTS: id; notation

PROPERTIES: n/a

DESCRIPTION: Represent 'see also' reference i.e. it points to related classes. When there is more than one reference examples the group is ordered according to the UDC filing rules. In some exports (e.g. XML) this group is presented in a group container.

```

EXAMPLE (XML):
<udc_class>
  <id>002693</id>
  <notation>(252.331)</notation>
  <caption language="en">Dunes. Drifting sand</caption>
  <references>
    <reference>
      <id>2181</id>
      <notation>(212)</notation>
    </reference>
    ...
  </references>
</udc_class>

```

EXPORT LABELS: ISO 2709 125

XML export	<reference> <id></id> <notation></notation> </reference>
Text export	<09>
SKOS export	skos:related (value URI)

DATABASE DETAILS:

DB TABLE	classmarks_refs
DB COLUMN	notation
CARDINALITY	optional
OCCURRENCE	multiple
VALUE	text
DISPLAY	preceded with a double arrow

16. Class introduction date/source

NAME:	introduction (abbreviation 'intro')
SUB-ELEMENTS:	date; introduction_source
PROPERTIES:	n/a
DESCRIPTION:	UDC numbers are introduced following a formal procedure of introduction which is published in UDC official documentation. Date of introduction has format 'yymm'. Introduction source will most typically contain abbreviation E&C and a number (e.g. E&C16) corresponding to the issue of the Extensions & Corrections in which this number was introduced

EXAMPLE (XML):

```
<udc_class>
  <id>001505</id>
  <notation>=862.52</notation>
  <caption language="en">Chamacoco (Ishir)</caption>
  <introduction>
    <date>0812</date>
    <source>EC30</source>
  </introduction>
</udc_class>
```

EXPORT LABELS:	ISO 2709	901 (date); 903 (source)
	XML export	<introduction> <date></date> <source></source> </introduction>
	Text export	<i>not exported</i>
	SKOS export	<i>not exported</i>

DATABASE DETAILS:	
DB TABLE	audit_history
DB COLUMN	audit_date; audit_type; audit_source; audit_comment (where audit_type = 'I')
CARDINALITY	mandatory
OCCURRENCE	single
VALUE	text
DISPLAY	not displayed in scheduels

17. Last revision date/source

NAME:	last_revision (abbreviation 'lastrev')
SUB-ELEMENTS:	date; source <i>{other elements are not included in public exports}</i>
PROPERTIES:	n/a
DESCRIPTION:	Revision of the UDC number records is a continuous process and is documented in the UDC revision history database fields following the publication of changes in the E&C. The last revision date is part of these data that is most relevant to publishers. Date is recorded in format 'yymm'. Introduction source will most typically contain abbreviation E&C and a number (e.g. E&C16) corresponding to the issue of the Extensions & Corrections in which these changes were published

EXAMPLE (XML):	<pre> <udc_class> <id>001692</id> <notation>(042)</notation> <caption language="en">Addresses. Lectures. Speeches</caption> <last_revision> <date>0212</date> <source>EC24</source> </last_revision> </udc_class> </pre>
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EXPORT LABELS:	ISO 2709	921 (date); 923 (source)
	XML export	<last_revision> <date></date> <source></source> </last_revision >
	Text export	<i>not exported</i>
	SKOS export	<i>not exported</i>

DATABASE DETAILS:	
DB TABLE	audit_history
DB COLUMN	audit_date; audit_type; audit_source; audit_comment (where audit_type = 'R')
CARDINALITY	optional
OCCURRENCE	multiple
VALUE	text

DISPLAY not displayed in schedules

18. Special characters information

NAME: **special characters** (abbreviation 'spec char')

SUB-ELEMENTS: n/a

PROPERTIES: n/a

DESCRIPTION: **This field contains notes about any necessary introduction of characters which may require special attention from publishers subscripts, superscripts, Greek letters, mathematical symbols (or cannot be displayed using the extended ASCII character set exports.**

EXAMPLE (XML):

```
<udc_class>
  <id>002134</id>
  <notation>(161/164)</notation>
  <caption language="en">Place according to quadrants</caption>
  <scope_note language="en">The Earth's surface is divided into four quadrants: two
  northern, 0°-180°E and 0°-180°W of Greenwich, and two southern, 0°-180°E and 0°-
  180°W of Greenwich, numbered (161) to (164)</scope_note>
  ...
  <special_char language="en">The o after 0 and 180 in field 110, and after 7 and 9
  in field 115, are superscripts</special_char>
</udc_class>
```

EXPORT LABELS:	ISO 2709	952
	XML export	<special_char>
	Text export	<14>
	SKOS export	<i>not exported</i>

DATABASE DETAILS:

DB TABLE	other_annotations
DB COLUMN	annotation, revision_field (where revision_field ='952')
CARDINALITY	optional
OCCURRENCE	multiple
VALUE	text
DISPLAY	note displayed in schedules