

# MASTER REFERENCE FILE

**MANUAL**

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The Hague, The Netherlands  
MMIII



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## Table of Contents

0.	<b>Introduction</b>
1.	<b>Databases</b>
1.1	MRF
1.2	MRFCAN
1.3	Historical databases
2.	<b>Database structure</b>
2.1	Field Definition table - FDT
2.1.1	MRF.FDT
2.1.2	Separate fields
2.2	Field Select Tables - FST
2.2.1	MRF.FST
2.2.2	MREFS.FST
2.2.3	EXPPUB.FST
2.3	Worksheets
2.3.1	Data entry worksheets
2.3.2	User print worksheets
2.3.2.1	EYP1
2.3.2.2	EYP2
2.4	Print & display formats
2.4.1	MRF.PFT
2.4.2	EXPORT.PFT
2.4.3	EXPCAN.PFT
2.4.4	EXPMOD.PFT
2.4.5	TABLE.PFT
2.4.6	UMRF.PFT
2.4.7	TABLES.PFT
3.	<b>Sorting</b>
3.1	Sorting order
3.2	Sorting procedure
4.	<b>Data Input</b>
4.1	FANGORN2.EXE
4.1.1	Input file
4.1.2	Specification file
4.2	Procedure

## Figures

1. MRF Field Definition Table
2. MRF Field Select Table
3. MREFS.FST
4. EXPPUB.FST
5. MRF.PFT
6. EXPORT.PFT
7. EXPCAN.PFT
8. EXPMOD.PFT
9. TABLE.PFT
10. UMRP.PFT
11. TABLES.PFT
12. Adapted file ISISUC.TAB
13. Example Input file Fangorn2
14. Template Specification file Fangorn2
15. Completed Specification file Fangorn2

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## 0. INTRODUCTION

This document describes the structure of the CDS/ISIS database containing the UDC Master Reference File. It also deals with the procedures for its maintenance and its distribution to licensees. It is assumed that readers have a basic knowledge of CDS/ISIS.

This version keeps as much of the structure and content of the previous versions as possible, while making whatever changes and additions seemed needed. In particular, it should be noted that many of the tables etc. shown in the numbered "Figures" have changed.

The procedures for producing check-lists of notations [⇒ 2.3.2] and for data input [⇒ 4] have not been used since the 1997-01-30 version of this manual, and have been left unchanged. The procedure for producing two-column print-outs using a WordPerfect 6.0 micro has been removed. More information on possible display formats can be found in *Extensions & Corrections to the UDC* no 24 (2002), p. 11-15: *A Revised Format for the Master Reference Database*. This article, written by Dr G.J.A. Riesthuis, also elaborates on the changes in the format of the MRF that will be incorporated in the MRF update of December 2003. At that time, an update of this manual also will be made available.

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## 1. DATABASES

To maintain the UDC Master Reference File the following databases have been created:

### 1.1 MRF

Contains the most up-to-date version of the MRF including the most recent officially authorized additions and other modifications except the cancellations. This database is continuously updated, but not distributed, except in special cases.

### 1.2 MRFCAN

Contains all cancellations, officially authorized after the completion of the MRF May-June 1993.

### 1.3 Historical databases

Contain "frozen" versions of the MRF and represent as a rule the state of the MRF shortly after the publication of *Extensions and Corrections to the UDC*.

Such "frozen" versions exist for each year from 1993 to the latest (2000). They are officially made at the end of the year and are named yy12 (e.g. 9312 for the version made in December 1993). All are kept for historical reference.

The most recent of these databases is used for distributing the MRF to the subscribers during the following year. As from the 9712 version, the distributed MRF does not include some fields which are purely for internal use. [⇒ 2.2.3 Reformatting FST]

## 2. DATABASE STRUCTURE

### 2.1 Field Definition Table (FDT)

#### 2.1.1 MRF.FDT

**Fig. 1 - MRF Field Definition Table**

UDC number		1 50 0 0
Table		2 1 1 0
Special aux. type		3 10 0 0
Combination type		4 6 0 1
Derived from p'l instr. at UDC		10 50 0 0
Parallel divided as UDC	abtg	11 50 0 1
Par'l div. provides spec.aux.		12 10 0 1
Applic. note provides spec.aux		13 10 0 1
Description	egsl	100 250 0 1
Verbal examples	egsl	105 250 0 1
Scope note	eg	110 250 0 1
Application note	eg	111 250 0 1
Combination examples	abcdgnry	115 250 0 1
Parallel div. examples	adg	120 250 0 1
References	atg	125 250 0 1
Introduction date		901 6 2 0
Introduction source (internal)		903 50 0 1
Introduction comments		904 250 0 1
Cancellation date		911 6 0 0
Replaced by UDC		912 50 0 1
Cancellation source (internal)		913 50 0 1
Cancellation comments		914 250 0 1
Last revision date		921 6 0 0
Revision field		922 25 0 1
Revision source (internal)		923 50 0 1
Revision comments		924 250 0 1
Revision history (internal)	fds	925 100 0 1
Terms for index only		951 250 0 1
Use special characters		952 250 0 1
Editorial annotation		955 250 0 1
Admin notes (internal)		957 250 0 0
For next E&C (internal)		958 1 0 0
Temp work only (internal)		999 4 0 1

The Field Definition Table (FDT) for the MRF-databases is shown in Fig. 1. The first text column contains the name of the field, and the second shows any subfield tags. The first numerical column contains the field number, the second the length in characters, the third the type of input allowed (0 all types; 1 only letters; 2 only numbers) and the fourth shows if the field is repeatable (1) or not (0).

If a field is repeatable, occurrences should be separated by a percent sign (%).

The field length shown in the FDT is only indicative and does not restrict data entered in the field to that length. It is used to provide the default length for a field in a data entry worksheet. Fields shown with a length of 250 in the FDT have the possibility of being very long and should be made scrolling fields in worksheets.

## 2.1.2 Separate fields

### 2.1.2.1 FIELD 001 - UDC Number

In this and other fields the appearance of a UDC number may differ from the one that should occur in printed versions.

- a. Some special characters will be missing because they cannot be represented in the Extended ASCII set used by ISIS.  
A note relating to this will be found in field 952.
- b. For technical reasons related to Micro CDS/ISIS some distinctive marks for auxiliaries needed to be changed in the database. Editors will have to correct these performing a change & replace action during text processing.  
It affects the following characters:

- The *apostrophe* ( ' ASC 039) in special auxiliaries appears in the database as inverted comma ( ` ASC 096).
- The double quotes ( " ASC 034) of the Auxiliaries of Time appear in the database as « » (resp. ASCII 174 and 175).

N.B. Up to 1996 the approximation sign ( $\approx$  ASC 247) was used instead of the equals sign (= ASC 061) in the Common Auxiliaries because of a problem in early versions of Micro CDS/ISIS.

### 2.1.2.2 FIELD 002 - Table

Using this field as the primary sort key ensures that the Common Auxiliary Tables in the database will appear in the correct order and precede the Main Table.

[  $\Rightarrow$  3. Sorting]

<i>Codes:</i>	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 Persons and Materials
	l	Section II. Special auxiliary subdivisions.
	M	Main table

### 2.1.2.3 FIELD 003 - Type of special auxiliary

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.

<i>Codes:</i>	A	hyphen (-) auxiliary
	B	point-nought (.0) auxiliary
	C	apostrophe (') auxiliary NB apostrophe will appear as inverted comma ( ` )
	D	other, e.g. final digits (...1/...9)

2.1.2.4 FIELD 004 - **Combination type** [not yet implemented]

This field did not occur in the original database and was created in order to indicate special characteristics of a notation, mainly the structure of a compound number. It was the intention to allow the following codes that perhaps also could be used for correction if the filing order did not conform to UDC conventions.

<i>Codes:</i>	a	Plus addition [+]
	b	Stroke range [/]
	c	Simple number
	d	Intercalation
	e	Colon [:] combination
	f	Double colon [::] combination
	g	Combination with Common Auxiliary of Language [=...]
	h	Combination with Common Auxiliary of Form [(0...)]
	i	Combination with Common Auxiliary of Place [(1/9)]
	k	Combination with Common Auxiliary of Ethnic Grouping [(=...)]
	l	Combination with Common Auxiliary of Time ["..."]
	m	Combination with non-UDC notation [*]
	n	Combination with A/Z
	o	Combination with .00 special auxiliary
	p	Combination with -0 Common Auxiliary of Persons/Materials
	q	Combination with hyphen (-) special auxiliary
	r	Combination with point-nought (.0) special auxiliary
	s	Combination with apostrophe (') special auxiliary

2.1.2.5 FIELD 010 - **Parallel derivation**

If a notation has been created by parallel division 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).

2.1.2.6 FIELD 011 - **Instruction for parallel division**

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

<i>Subfields:</i>	^a	Source notation for the parallel division
	^b	Target notation (if not identical with the number in field 001)
	^t	English annotation
	^g	German annotation

2.1.2.7 FIELD 012 - **Special auxiliary supplied by parallel division**

If the parallel instruction in field 011 results in the creation of a set of special auxiliaries, this field indicates the type of the created auxiliary.

<i>Codes:</i>	A	hyphen (-) auxiliary
	B	point-nought (.0) auxiliary
	C	apostrophe (') auxiliary
	D	other, e.g. final digits (...1/...9)

⇒ 2.1.2.3

2.1.2.8 FIELD 013 - **Special auxiliary supplied by annotation**

If an annotation in field 110 or 111 introduces or excludes a set of special auxiliaries, this field indicates its type.

*Codes:*

A	hyphen (-) auxiliary
B	point-nought (.0) auxiliary
C	apostrophe (') auxiliary
D	other, e.g. final digits (...1/...9)

⇒ 2.1.2.3

#### 2.1.2.9 FIELD 100 - **Description**

This field is meant for the core definition of the concept expressed by the UDC number.

*Subfields:*

^e	English text
^g	German text

#### 2.1.2.10 FIELD 105 - **Verbal examples**

This field includes examples of the core concept. In compiling the MRF it has often been used for concepts that in full editions had been expressed on a hierarchical lower level. In text output this field can be preceded by the word "Including".

*Subfields:*

^e	English text
^g	German text

#### 2.1.2.11 FIELD 110 - **Scope note**

#### 2.1.2.12 FIELD 111 - **Application note**

These fields have been created for future separation of the semantical explanation of the concept expressed by the notation from the technical instructions regarding application, number building, etc. If these fields include UDC notations that should be searchable in the database these should be placed between <> (ISIS indexing technique 2)

*Subfields:*

^e	English text
^g	German text

#### 2.1.2.13 FIELD 115 - **Examples of combination**

This field shows compound numbers based on the notation in field 001.

*Subfields:*

^a	Direct addition
^b	Colon (:) combination
^c	Full notation
	Used if the first component differs from the notation in field 001.
^r	Reference(s) to UDC-number
^d	English description
	Note: Should be changed for consistency into ^e.
^g	German description
^n	English annotation
^y	German annotation

#### 2.1.2.14 FIELD 120 - **Examples of parallel division**

This field is meant for notations illustrating the parallel division instruction of field 011, when they do not immediately follow in sequence after the number in field 001. (Most parallel division examples are entered as separate records in the database ⇒ 2.1.2.5).

*Subfields:* ^a Notation  
 ^d English description  
 ^g German description

#### 2.1.2.15 FIELD 125 - **References**

*Subfields* ^a Notation  
 ^t English annotation  
 ^g German annotation

#### 2.1.2.16 **Administrative fields**

The following fields have no function in the UDC tables, but apply only to the management of the database or contain information that is of interest for editors.

##### 2.1.2.16.1 FIELDS 901, 903, 904 - **Introduction**

These fields are found at entries added to the database after the completion of the MRF in May 1993.

- 901 Date of introduction  
Should have the format *yymm*.
- 903 Source  
The following abbreviations may occur:  
 DS Received from P. David Strachan, Autumn 1993.  
 BSI Received from Geoffrey Robinson BSI, Autumn 1994.  
 E&C## Volume of *Extensions and Corrections* in which the introduction has been published.
- 904 Comments

##### 2.1.2.16.2 FIELDS 911, 912, 913, 914 - **Cancellation**

These fields are found at entries cancelled after the completion of the MRF in May 1993. In the MRF they are used for marking records that should be exported to MRFCAN before their actual deletion.

- 911 Date of cancellation  
Should have the format *yymm*.
- 912 Replacing UDC notation (if any)
- 913 Source of cancellation  
Abbreviations ⇒ 2.1.2.16.1.
- 914 Comments

### 2.1.2.16.3 FIELDS 921, 922, 923, 924, 925 - **Revision**

These fields are found at entries revised after the completion of the MRF in May 1993.

921	Date of last revision Format <i>yymm</i> .
922	Field(s) revised. Identified by field number; if more fields are affected, numbers should be separated by % (percent sign).
923	Source Abbreviations ⇒ 2.1.2.16.1.
924	Comments
925	History This field is meant to keep record of revisions preceding the most recent one in 922. <i>Subfields:</i> ^d     Date (former content of field 921) ^f     Field(s) (former content of field 922; separate fields by ;) ^s     Source (former content of field 923)

### 2.1.2.16.4 FIELD 951 - **Index only UDC notations**

This field has been used during the compilation of the MRF to include in the inverted file those which should be searchable but are not indexable by MRF.FST at the fields where they occur.

### 2.1.2.16.5 FIELD 952 - **Use special characters**

This field contains notes about any necessary introduction of characters which are not in the Extended ASCII set and therefore cannot be used in data within the Micro CDS/ISIS database (e.g. Subscripts, superscripts, Greek letters).

### 2.1.2.16.6 FIELD 955 - **Editorial annotations**

This field contains notes drawing attention to editing that should be done in text files extracted from the database. Such notes may be about:

- rearrangement of the textual elements in a complex UDC entry to achieve a preferred order;
- rearrangement of a sequence of entries which the special UDCSORT.TAB filing order [⇒ 3.1] cannot achieve. These are either sequences of ranging UDC numbers where the larger number following the stroke must file before the smaller (e.g. 285/288 must be filed before 285/286), or cases where a number has sequences of both point-nought and apostrophe special auxiliaries and the apostrophe must be moved to follow the point-nought sequence (e.g. at 628.1);
- explanation about particular peculiarities in the record.

### 2.1.2.16.7 FIELD 957 - **Administrative notes**

Notes for internal use by those editing and maintaining the UDC MRF. Not for distribution.

### 2.1.2.16.8 FIELD 958 - **For next E&C**

This field is used only to flag a record where a textual correction has been made after the annual output for E&C, but is included in the end-of-year distributed MRF. The date yy12 (e.g. 9712) appears in field 921, whereas items included in E&C have yy10 or earlier in the same year. Enter "x" in the field. The record should be included in the E&C of the following year, after which the "x" must be deleted. For internal use, and not for distribution.

### 2.1.2.16.9 FIELD 999 - **Temporary work only**

Field purely for temporary use by the MRF editor when doing a particular job. It must be cleared when the job is completed. For internal use, and not for distribution.

## 2.2 **Field select tables (FST)**

FSTs can be used in Micro CDS/ISIS for three purposes:

- Inverted file creation (as MRF.FST).
- Sorting records before printing to file or paper (as MREFS.FST).
- Reformatting records during export to or import from .ISO files (as EXPPUB.FST).

### 2.2.1 **MRF.FST**

The standard Field Select Table MRF.FST determines which fields will be indexed by CDS/ISIS during the generation of the inverted file.

The table is shown in fig. 2.

Explanation

Column 1 Table tag

Column 2 Indexing method (for explanation see Manual Micro CDS/ISIS).

Column 3 (Sub)field indexed; a / means that all occurrences of a repeated field will be taken into account.

Mode is always proof mode.

This table generates an inverted file on all notations including those in references, examples, etc. and also on all English language words in descriptions, verbal examples and the text of other examples. To index also the German texts in those records containing both languages, the following lines should be included:

100	4	(v100^g/)
105	4	(v105^g/)
115	4	(v115^g/)
120	4	(v120^g/)

**Fig. 2 - MRF Field Select Table**

1	1	v1
10	1	v10
11	1	(v11^a/)
11	2	(v11^t/)
100	4	(v100^e/)
105	4	(v105^e/)
110	2	(v110^e/)
111	2	(v111^e/)
115	1	(v115^a/)
115	1	(v115^b/)
115	1	(v115^c/)
115	4	(v115^d/)
115	2	(v115^n/)
120	1	(v120^a/)
120	4	(v120^d/)
125	1	(v125^a/)
951	1	(v951/)

## 2.2.2

**MREFS.FST**

For checking the existence in the database of notations used in references or examples a special field select table has been developed, called MREFS.FST. This table is shown in fig. 3 and indexes only on fields containing notations.

The table may be used in combination with the user print worksheets EYP1 and EYP2 for the generation of lists of references. It selects the relevant elements and adds to each between [ ] a tag indicating the field number where they occur. ⇒ 2.3.2

**Fig. 3 - MREFS.FST**

1	1	(v011^a   [011a] /)
1	2	v011^t   [011t]
1	2	v110   [110]
1	2	v111   [111]
1	1	(v115^a   [115a] /)
1	1	(v115^b   [115b] /)
1	1	(v115^c   [115c] /)
1	2	v115^n   [115n]
1	1	(v120^a   [120a] /)
1	1	(v125^a   [125] /)
1	2	v125^t   [125t]
1	1	(v951   [951] /)

### 2.2.3 EXPPUB.FST

Used to filter out those MRF fields for internal use only, when exporting the database to an .ISO file for distribution. Enter "exppub" in the reformatting FST box in the Export worksheet. This table is shown in fig. 4.

**Fig. 4 - EXPPUB.FST**

1	0	v1
2	0	v2
3	0	v3
4	0	(v4/)
10	0	v10
11	0	(v11/)
12	0	(v12/)
13	0	(v13/)
100	0	(v100/)
105	0	(v105/)
110	0	(v110/)
111	0	(v111/)
115	0	(v115/)
120	0	(v120/)
125	0	(v125/)
901	0	v901
904	0	(v904/)
911	0	v911
912	0	(v912/)
914	0	(v914/)
921	0	v921
922	0	(v922/)
924	0	(v924/)
951	0	(v951/)
952	0	(v952/)
955	0	(v955/)

## 2.3 Worksheets

### 2.3.1 Data entry worksheets

The default worksheet for editing is MRF and has two pages (AMRF.FMT and BMRF.FMT). It shows all fields and for some supplies elementary Help information. A version of this, but without the fields for internal use only, is for the distributed database and called UMRF (AUMRF.FMT and BUMRF.FMT).

No further data entry worksheets have been developed as the standard one was satisfactory for all daily activities.

### 2.3.2 User print worksheets

To check the existence in the database of notations that are used in references, examples etc. one can apply two worksheets both using the Field Select Table MREFS.FST (⇒ 2.2.2).

User print worksheets and the relative sort worksheets can be created and edited using ISISUTL (System utility services), option N (Create/Edit system worksheets).

**2.3.2.1 EYP1**

This worksheet produces a list of all notations occurring in references, examples etc. followed by the notation where they occur. The number of the field of occurrence is indicated between [ ]. If there is no field indicator, the notation occurs in an annotation. Worksheet EYP1 has the following parameters:

Print format	C3 'at' v001
Line width	ad lib.
Lines/page	ad lib.
Data indent	ad lib.
Number of columns	ad lib.
First page number	ad lib.
Sort	Y
Column width	ad lib
EOC tolerance	ad lib
Sort worksheet	EYS1

The corresponding Sort Worksheet EYS1 has the following parameters:

Headings	1
Heading format	#v1
Length first sortkey	50
FST first sortkey	@MREFS
Heading processing indicator	1
Length second sortkey	50
FST second sortkey	2 1 v001
Heading processing indicator	0

**2.3.2.2 EYP2**

This worksheet produces a list of entries followed by all notations occurring at that notation in examples, references etc. Worksheet EYP2 has the following parameters:

Print format	-
Line width	ad lib.
Lines/page	ad lib.
Data indent	ad lib.
Number of columns	ad lib.
First page number	ad lib.
Sort	Y
Column width	ad lib.
EOC tolerance	ad lib.
Sort worksheet	EYS

The corresponding Sort Worksheet EYS2 has the following parameters:

Headings	2
Heading format	v2 IF p(v1) THEN /v1(2,2) FI
Length first sortkey	50
FST first sortkey	2 1 v1
Heading processing indicator	0
Length second sortkey	50
FST second sortkey	@MREFS
Heading processing indicator	1

## 2.4 Print & display formats

For presentation on screen and printing to file or hard copy the following formats (\*.PFT) have been developed:

### 2.4.1 MRF.PFT

MRF.PFT, shown in fig. 5 is the default display format and presents all fields with field number and a short description. It includes all internal and other administrative fields, and is not for distribution. For the distributed version ⇒ 2.4.6 UMRP.PFT.

**Fig. 5 - MRF.PFT**

```

mpl c5"UDC-#[001]: "v001 c50"Table[002]: "v002 c75 f(mfn,1,0) / IF p(v003)
THEN c5"SpAux[003]: "v003 FI IF p(v004) THEN c25 "ComTp[004]: "v004
FI IF p(v010) THEN c50 " < [010]: "v010 FI IF p(v012) THEN /c5
"AuxPr [012]: "v012 FI IF p(v013) THEN c25 "AuxNt[013]: "v013 FI IF
p(v011) THEN /c5 '---> [011] ' FI (IF p(v011) THEN v011(16,16)+| % |
FI) /c5"DESCR[100]: "v100(16,16)+| % | IF p(v105) THEN/c5"INCL [105]: "
v105(16,16)+| % | FI IF p(v110) THEN /c5"SCOPE[110]: "v110(16,16)+| % | FI
IF p(v111) THEN /c5"APPL [111]: "v111(16,16)+| % | FI IF p(v115)
THEN /c5 'COMBI[115]: ' FI (IF p(v115) THEN v115(16,16)+| % | FI)
IF p(v120) THEN /c5'PAREX[120]: ' FI (IF p(v120) THEN v120(16,16)+| % | FI)
IF p(v125) THEN /c5"REF->[125]: "v125(16,16)+| % | FI IF p(v951)
THEN /c5"INDEX[951]: "v951+| % | FI IF p(v952) THEN /c5"CHARS[952]: "
v952+| % | FI IF p(v955) THEN /c5"EDIT[955]: "v955(16,16)+| % | FI
IF p(v957) THEN /c5"ADMIN NOTE[957]: "v957(16,16)+| % | FI
IF p(v958) THEN /c5"FOR NEXT EC [958]: "v958(16,16)+| % | FI
IF p(v921) THEN /c5"LAST REV -DATE[921]: "v921 " -FLD[922]: "v922+| % |
" -SRCE[923]: "v923+| % | " -COMMENT[924]: "v924(5,8)+| % | FI
IF p(v901) THEN /c5 'NEW ENTRY -DATE[901]: ' v901 " -SOURCE[903]:
"v903+| % |
" -COMMENT[904]: "v904(5,8)+| % | FI
IF p(v925) THEN /c5 'REV HIST[925]: 'v925(5,8)+| % | FI
IF p(v911) THEN /c5 'CANC -DATE[911]: ' v911 " -REPL BY[912]: "v912+| % |
" -SOURCE[913]: "v913+| % | " -COMMENT[914]: "v914+| % | FI
IF p(v999) THEN /c5 'TEM WORK[999]: 'v999 FI

```

## 2.4.2 EXPORT.PFT

EXPORT.PFT shown in fig. 6 is the format used for the export of data in ASCII for publishers and users who prefer not to get files in ISO 2709 data exchange format. It contains only the fields used for publishing indicated by the following tags that are placed between <>.

Tags used in Export PFT

Tag	Field	Content
<01>	001	UDC-number
<02>	100	Description
<03>	105	Verbal examples
<04>	110	Note
<05>	111	Note
<06A>	115	Example of combination: direct addition (1st subfield: ^a)
<06B>	115	Example of combination: colon addition (1st subfield: ^b)
<06C>	115	Example of combination: full notation (1st subfield: ^c)
<07>	011	Instruction for parallel division
<08>	120	Example of parallel division
<09>	125	References

**Fig. 6 - EXPORT.PFT**

```
mhl,<01>|v001/ mpl |<02>|v100^e/|<03>|v105^e+|,/ mhl (IF p(v110) THEN
|<04>|v110^e+|,/FI) (IF p(v111) THEN |<05>|v111^e+|,/ FI) (IF p(v115^a)
THEN |<06A>| v115^a ' ' mpl v115^d mhl IF p(v115^n) THEN ' NOTE: 'v115^n FI
IF p(v115^r) THEN ' -> 'v115^r FI / FI) (IF p(v115^b) THEN |<06B>|:|v115^b ' '
mpl v115^d mhl IF p(v115^n) THEN ' NOTE: 'v115^n FI IF p(v115^r) THEN
' -> 'v115^r FI / FI) (IF p(v115^c) THEN |<06C>| v115^c ' ' mpl v115^d mhl
IF p(v115^n) THEN ' NOTE: 'v115^n FI IF p(v115^r) THEN ' -> 'v115^r FI / FI)
(IF p(v011^a) THEN IF p(v011^b) THEN |<07>|v011^b ELSE |<07>|v001 FI | divided
as |v011^a | |v011^t/ FI) (IF p(v120^a) THEN |<08>|v120^a | |v120^d/ FI)
(IF p(v125^a) THEN |<09>|v125^a | |v125^t/ FI) /#
```

## 2.4.3 EXPCAN.PFT

The EXPCAN.PFT format shown in fig. 7 produces the list of cancellations that for convenience of the licensees is distributed with the yearly updates.

**Fig. 7 - EXPCAN.PFT**

```
mhl 'UDC CLASS NUMBER: 'v1 / 'DESCRIPTION: ' IF p(v100) THEN mpl v100^e ELSE
'NO DESCRIPTION IN THIS ENTRY' FI IF p(v912) THEN / 'REPLACED BY: 'v912+|, |
FI
IF p(v914) THEN / 'COMMENT: 'v914+|, | FI /#
```

#### 2.4.4 EXPMOD.PFT

The EXPMOD.PFT format shown in fig. 8 produces the list of modifications that for convenience of the licensees is distributed with the yearly updates.

**Fig. 8 - EXPMOD.PFT**

```
mhl 'UDC CLASS NUMBER: 'v1 / 'DESCRIPTION: ' IF p(v100) THEN mpl
v100^e
ELSE 'NO DESCRIPTION IN THIS ENTRY' FI IF p(v922) THEN / mhl 'FIELDS
MODIFIED: 'v922+, | FI /#
```

#### 2.4.5 TABLE.PFT

TABLE.PFT is shown in fig. 9 and displays the records in English as they might appear in printed schedules.

**Fig. 9 - TABLE.PFT**

```
mhl IF p(v3) THEN '|' FI IF p(v10) THEN c4 ELSE c3 FI
IF v1:']' AND (NOT v1:[') THEN '[' FI v1 mpl c21 v100^e(21,21)+|. | IF p(v105)
THEN / c21 'Incl. ' v105^e(26,26)+|. | FI mhl
IF p(v110) THEN c21 'Note(s):' (IF p(v110) THEN / FI v110^e(22,22)+|. |) FI
IF p(v111) THEN c21 'Note(s):' (IF p(v111) THEN / FI v111^e(22,22)+|. |) FI
IF p(v115) THEN / c21 'Combination example(s):' (IF p(v115) THEN c23 FI
|:|v115^b v115^a v115^c, mpl | |v115^d(21,27) mhl IF p(v115^n) THEN
/v115^n(29,29) FI IF p(v115^r) THEN / c28 '->' v115^r(29,29) FI ) FI
IF p(v125) THEN / c21 '->' (IF p(v125^t) THEN v125^a(23,23), |v125^t(23,23)+|, |
ELSE v125^a(23,23)+|, | FI) FI
IF p(v011) THEN (IF p(v011) THEN / FI IF p(v011^b) THEN v011^b(20,21) ELSE
IF v1:']' AND (NOT v1:[') THEN c21 '['v1(20,21) ELSE v1(20,21)|| FI FI
| ~ = |v011^a| |v011^t(20,21)) FI
IF p(v120) THEN c21 'E.g.' (IF p(v120) THEN / FI v120^a(20,21) | |, v120^d(20,26)) FI
c71 ' f(mfn,1,0)
```

2.4.6 **UMRF.PFT**

UMRF.PFT is shown in fig. 10. It is the default display format for the distributed

**Fig. 10. UMRF.PFT**

```
mhl c5"UDC-#[001]: "v001 c50"Table[002]: "v002 c75 mfn / IF p(v003)
THEN c5"SpAux[003]: "v003 FI IF p(v004) THEN c25 "ComTp[004]: "v004 FI
IF p(v010) THEN c50 " < [010]: "v010 FI IF p(v012) THEN / c5 "AuxPr
[012]: "v012 FI IF p(v013) THEN c25 "AuxNt[013]: "v013 FI
IF p(v011) THEN /c5 '---> [011] ' FI (IF p(v011) THEN v011(16,16)+. | FI) /c5
mpl 'DESCR[100]: ' IF p(v100^g) THEN c17 v100^e(0,17)+. |c17 v100^g(0,17)+. |
ELSE c17 v100^e(0,17)+. | FI IF p(v105) THEN IF p(v105^g) THEN /c5"INCL[105]:
"v105^e(16,16)+. | / v105^g(16,16)+. | ELSE /c5"INCL[105]: "v105(16,16) FI FI
mhl IF p(v110) THEN IF p(v110^g) THEN /c5"SCOPE[110]: "v110^e(16,16)+. | /
v110^g(16,16)+. | ELSE /c5"SCOPE[110]: "v110(16,16) FI FI
IF p(v111) THEN IF p(v111^g) THEN /c5"APPL [111]: "v111^e(16,16)+. | /
v111^g(16,16)+. | ELSE /c5"APPL[111]: "v111(16,16) FI FI
IF p(v115) THEN /c5 'COMBI[115]: ' FI (IF p(v115) THEN c17 |:v115^b v115^a
v115^c mpl |v115^d(16,16) IF p(v115^n) THEN / v115^n(25,25) FI IF p(v115^g)
THEN / v115^g(22,22) FI mhl IF p(v115^y) THEN / v115^y(25,25) FI IF p(v115^r)
THEN / c21 |-> |v115^r FI / FI) mhl
IF p(v120) THEN /c5"PAREX[120]: ' FI (IF p(v120) THEN mpl v120(16,16)+. | / FI)
IF p(v125) THEN mhl /c5"REF->[125]: "v125(16,16)+; | FI IF p(v951) THEN /
c5"INDEX[951]:"v951+; | FI IF p(v952) THEN mpl /c5"CHARS[952]: "v952+; | FI
IF p(v955) THEN /c5"EDIT [955]: "v955+; | FI
```

database.

2.4.7 **TABLES.PFT**

The print format TABLES.PFT is shown in Fig. 11 and produces output that can be processed.

**Fig. 11 TABLES.PFT**

```
mhl c1 v001 '#v100^e IF p(v105^e) THEN / '#<105>'v105^e FI IF p(v125) THEN / '
'#<125>'v125+; | FI IF p(v110) THEN / '#<110>'v110^e+ | FI IF p(v111) THEN / '#
<111>'v111^e+ | FI IF p(v115) THEN / '#<115>' FI (IF p(v115^b) THEN / |#:| v115
^b | |v115^d ELSE IF p(v115^a) THEN / '#v115^a | |v115^d ELSE IF p(v115^c) THE
N / '#v115^c | |v115^d FI FI FI) (IF p(v115^r) THEN / '#<115r>' v115^r+ | | F
I) IF p(v011^b) THEN / '# v011^a '<011>' v011^b ELSE IF p(v011) THEN / '# v001
'<011>' v011 FI FI IF p(v120) THEN / '#<120>' FI (IF p(v120^a) THEN / '#v120+
| FI)
```

### 3. SORTING

#### 3.1 Sorting order

The sorting order in CDS/ISIS is according to ASCII number and therefore in some cases does not conform to the filing order prescribed in the UDC tables.

The most frequent instances occur with notations containing the slash (/ ASC 047) and the inverted comma (^ ASC 096) that for technical reasons had to be used for the apostrophe (' ASC 039). Note also that the database uses « and » (ASC 174 and 175) instead of the double quotes (ASC 034).

A final solution for these and other related sorting problems has not yet been found. Users of Micro CDS/ISIS can avoid most problems by adapting the ISISUC.TAB as follows:

Sign	ASCII	ISISUC.TAB
'	039	125
(	040	034
)	041	032
*	042	064
+	043	020
-	045	123
.	046	126
/	047	000
0	048	179
1	049	180
2	050	181
3	051	182
4	052	183
5	053	184
6	054	185
7	055	186
8	056	187
9	057	188
:	058	036
=	061	039
[	091	037
]	093	037
`	096	125
«	174	035
»	175	032
»	247	033

The adapted ISISUC.TAB is shown in fig. 13.

To the existing table a second section should be added in which the numbers in italics have been replaced by those printed in bold. This adapted ISISUC.TAB file is distributed with the name UDCSORT.TAB.

**Fig. 13 - Adapted file ISISUC.TAB**

```

000 001 002 003 004 005 006 007 008 009 010 011 012 013 014 015 016 017 018 019 020 021 022
      023 024 025 026 027 028 028 030 031
032 033 034 035 036 037 038 039 040 041 042 043 044 045 046 047 048 049 050 051 052 053 054
      055 056 057 058 059 060 061 062 063
064 065 066 067 068 069 070 071 072 073 074 075 076 077 078 079 080 081 082 083 084 085 086
      087 088 089 090 091 092 093 094 095
096 065 066 067 068 069 070 071 072 073 074 075 076 077 078 079 080 081 082 083 084 085 086
      087 088 089 090 123 124 125 126 127
067 085 069 065 065 065 065 067 069 069 069 073 073 073 065 065 069 069 069 079 079 079 085
      085 089 079 085 155 156 157 158 159
065 073 079 085 078 078 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182
      183 184 185 186 187 188 189 190 191
192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214
      215 216 217 218 219 220 221 222 223
224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246
      247 248 249 250 251 252 253 254 255

000 001 002 003 004 005 006 007 008 009 010 011 012 013 014 015 016 017 018 019 020 021 022
      023 024 025 026 027 028 028 030 031
032 033 034 035 036 037 038 125 034 032 064 020 044 123 126 000 179 180 181 182 183 184 185
      186 187 188 036 059 060 039 062 063
064 065 066 067 068 069 070 071 072 073 074 075 076 077 078 079 080 081 082 083 084 085 086
      087 088 089 090 037 092 037 094 095
125 065 066 067 068 069 070 071 072 073 074 075 076 077 078 079 080 081 082 083 084 085 086
      087 088 089 090 123 124 125 126 127
067 085 069 065 065 065 065 067 069 069 069 073 073 073 065 065 069 069 069 079 079 079 085
      085 089 079 085 155 156 157 158 159
065 073 079 085 078 078 166 167 168 169 170 171 172 173 035 032 176 177 178 179 180 181 182
      183 184 185 186 187 188 189 190 191
192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214
      215 216 217 218 219 220 221 222 223
224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246
      033 248 249 250 251 252 253 254 255

```

### 3.2 Sorting procedure

Sorting a MRF database should be done as follows:

1. Produce a hit file using ISISPRT, option P - System print worksheet.
2. On the worksheet change 'Sort?' to 'Y' and enter 'NULL' for 'Print file name'. Check if database name and MFN range are correct.
3. On the Sort worksheet enter the following  
Number of headings                    0  
Length of first sort key            1  
FST for first sort key            1 0 v002  
Length of second sort key        50  
FST for second sort key        1 0 v001  
In this way the records are first sorted according to table (field 002) and subsequently according to notation (field 001) within each table.
4. Export the hit file: on the export worksheet change 'Hit file?' to 'Y'.
5. Create an empty database.
6. Import the exported file.

## 4. DATA INPUT

This section describes a method for batch input of new entries into the MRF CDS/ISIS database that may also be helpful for other modifications that involve much manual typing.

### 4.1 FANGORN2.EXE

Main tool of the method is the program FANGORN2.EXE, written in Pascal by Gerhard Riesthuis, based on a program FANGORN of Hugo Besemer. This program converts an input file in plain ASCII into a file in ISO 2709 data exchange format. The latter can be then added to the CDS/ISIS database using the option *Master File Services - Input CDS/ISIS file*.

#### 4.1.1 Input file

The input file should be stored in the same directory as the program and satisfy the following requirements.

- 4.1.1.1 It has to be in plain ASCII (.TXT) format. If the original file has been prepared in a textprocessor one should save the file in this format (*Wordperfect 6.0: ASCII (DOS) (\*.\*)*).
- 4.1.1.2 It should not contain any instructions or other provisions (added spaces) for lay out etc. Tabs should be deleted and it is advised to remove superfluous spaces.
- 4.1.1.3 The file should start with a marker followed by <CR><LF> that is also used as record separator, e.g. \$\$<CR><LF>.
- 4.1.1.4 The fields within a record should each be indicated by a tag of max. 5 characters that is unique for that field and is followed by a *space*; fields should be separated by a <CR><LF>.
- 4.1.1.5 Subfields should be indicated as defined in the Filed Definition Table for the database involved.

**Fig. 14 - Example of input file (Tags correspond with field numbers MRF)**

```
$$<CR><LF>
001 7.01<CR><LF>
100 ^eTheory and philosophy of art. Principles of design, proportion, optical effect
<CR><LF>
115 ^b111.852^dAesthetics of art. Taste in art<CR><LF>
$$<CR><LF>
001 7.011<CR><LF>
100 ^eTaste and social significance of art<CR><LF>
$$<CR><LF>
...
```

#### 4.1.2 Specification file

FANGORN2 expects a specification file which translates the tags of the input file into tags of the output ISO 2709 file. The file has the form illustrated in Fig. 15 and should be stored in the same directory as the program.

**Fig. 15 - FANGORN2 Specification file**

```

SPECIFICATION FILE
Which conversion is specified      :      { comment }
Number of fields                   :      { number of different tags }
Line indicating start/end of record :

tempField # 1
Tag in incoming file              :      { tag in input, e.g. 11 }
Tag in ISO-2709 file              :      { tag in output, cq. ISIS-file, can be the
                                         same as in input but also different }

tempField # 2
Tag in incoming file              :
Tag in ISO-2709 file              :

```

For the input file of Fig. 14 the specification file should look as in Fig. 16.

**Fig. 16 - Completed FANGORN2 Specification file**

```

SPECIFICATION FILE
Which conversion is specified      :MRF Class 7
Number of fields                   :3
Line indicating start/end of record :$$

tempField # 1
Tag in incoming file              :001
Tag in ISO-2709 file              :001

tempField # 2
Tag in incoming file              :100
Tag in ISO-2709 file              :100

tempField # 3
Tag in incoming file              :115
Tag in ISO-2709 file              :115

```

## 4.2 Procedure

4.2.1 Go to the directory which contains the program, the input file and, if already available, the specification file.

4.2.2 Type: **fangorn2** [ENTER]

*FANGORN2 asks for the name of the specification file. If no such file has yet been made, type **new** and the program will offer the model of fig. 15 for completion; do not change in the model the text of the left column nor the position of the colon (;). After completion of the specification file the program aborts and you will have to start it again.*

4.2.3. Enter the name of the specification file.

*FANGORN2 asks for the name of the input file and the output file.*

4.2.4 Enter the file names, the last one with extension .ISO and the program will start the conversion.

---