

# Dynamism of Knowledge Organization, particularly its relation to UDC

ÁGNES HAJDU BARÁT

University of Szeged, Hungary

[hajdu@jgypk.u-szeged.hu](mailto:hajdu@jgypk.u-szeged.hu)

## Abstract

This paper aims to explore the dynamism of Knowledge Organization from stability through extension to development, studying the theory and practice of concordance between different editions of UDC (Universal Decimal Classification), particularly in Hungary. Consideration is given to the principles, demands, changes and possibilities of UDC in the different Hungarian editions, evidencing general conclusions to the dynamism of Knowledge Organization.

There were nine abridged editions of UDC since the Second World War including the last one in 2005, which was approximately ten years after the previous one. After the last Hungarian edition users, particularly librarians, waited for the concordance between two editions (1991 and 2005), because a similar concordance was also set up after the earlier two editions. The concordance can help librarians to use the new version whilst also maintaining and adapting the information from earlier editions. The last edition (2005) was based on the database of UDC MRF (UDC Master Reference File) at that time and it is hoped that it helps to set the concordance.

**Keywords:** Dynamism of Knowledge Organization, Stability and changeability of KO, Universal Decimal Classification, Theory and practice of concordance, UDC in Hungary.



## 1. PREFACE

This paper aims to explore the dynamism of Knowledge Organization from stability through extension to development, studying the theory and practice of concordance between different editions of UDC, particularly in Hungary.

The use of classical classification methods is a strong tradition in Hungary. One of the most wide-spread systems is the Universal Decimal Classification (UDC). It can be found in every type of library and at various levels. Perhaps it is not an overstatement to say that every library has used the UDC at least once in its history, and it is still much in use. Such standardization has been widespread and desirable, although the UDC has not become as universally popular a scheme among users as it has in Hungary. Some integrated library systems (ILS) omitted the UDC numbers from their data. Therefore the expectation of colleagues increased the commitment to concordance. (Hajdu Barát, 2004).

What are the problems in the information retrieval of the UDC codes? Why have some ILS's stopped using UDC? There was much discussion in the Hungarian e-mail list for librarians (KATALIST), with many comments from two different groups. Most of the librarians agreed with the significance and importance of the Hungarian UDC traditional information system. Their responses showed that they knew the UDC structure and how its usage ensures quality of results. However, they report not finding this quality difference in the OPAC and other electronic environments. Software vendors have not incorporated all levels of the classification hierarchy into the integrated library systems. Are there any methods that can search in a hierarchy and can change levels easily?

- Will the UDC codes become more user-friendly?
- Can we see and find the powerful structure of UDC in the OPACs or other electronic environments?
- Should UDC codes become non-terminal scores, and the structure show the way of retrieval?

There are minimum expectations:

1. Users should navigate easily and unequivocally in permanently variable circumstances.
2. Users and not only librarians should be enabled to work and search with UDC codes.
3. The expertise, craft, knowledge, and practice of librarians, professionals and scientists should remain important in the UDC system and UDC MRF, because they are the common cultural heritage. (Hajdu Barát, 2004).

## 2. METHODOLOGY

The principles, demands, changes and possibilities of UDC in the different Hungarian editions were studied from which a general conclusion to the dynamism of Knowledge Organization will be drawn.

### 3. A SHORT HISTORY OF THE UDC IN HUNGARY

It is widely known in Hungary, that Mandello Gyula (1868-1919) brought the Dewey Decimal Classification to the attention of Otlet and La Fontaine's in 1893. He was the editor of 'Economical Review' (Közgazdasági Szemle) in Hungary. Paul Otlet told this story to Esztegár László (1870-1905) in the 2<sup>nd</sup> International Bibliographic Congress (1897). Esztegár László was a Librarian at the National Széchényi Library and published the conversation with Otlet in 1897.

Indeed, Sir, even the beginning of our enterprise was international. Two Belgians – me and my friend La Fontaine – were pondering how to create the repertory of Sociology or perhaps all the sciences in the most suitable and practical way. It was then that I happened to meet a compatriot of yours – avec mon ami Julius Mandello – in Ostende. This Hungarian man started to talk to me about a new and rapidly expanding bibliographical system in the USA. I travelled to London immediately and traced down tables of Dewey with the help of the British Museum. And now we are surrounded by a large international group working hard on the victory of the conception. (Esztegár, 1897).

Szabó Ervin introduced the usage of the UDC to the Metropolitan Library from 1910. The first Hungarian edition was prepared by autolithography and published in 1912. (A Fővárosi, 1912). In fact, from 1938, Hungary became a national member of the FID (The International Federation for Information and Documentation) through the Association of the Hungarian Librarians and Archivists which proved beneficial in the spread of the use of UDC. The next official publication of the UDC editions was a short Hungarian version of the UDC in 1943. (Káplány, 1943). In the meantime the tables were published and used as internal duplications. From 1947 the National Documentation Centre (ODK), then the National Library Centre, and finally the Centre for Library Science and Methodology of the National Széchényi Library represented Hungary in the FID, and these institutions published the tables four times in three volumes between 1950 and 1955.

From 1929 to 1941, a UDC edition, in 8 volumes, was published by the Municipal Library, under the editorship of Veredy Gyula. Classification numbers approached the international standard of UDC. In 1943, Káplány Géza published his *Principles of Library Science*, in two volumes, the second one being an abridged edition of UDC.

From 1968 the Hungarian Standards Office published booklets containing the full edition of the UDC for more than 20 years. Between 1968 and 1992, the Hungarian volumes of the complete full edition were published in a total of 112 booklets. (Hajdu Barát, 2007).

There were nine abridged, or medium editions from the Second World War including the last one in 2005.

The penultimate medium edition of UDC was published in 1990. This volume was not published as had been typical by the Hungarian Standards Office. Instead this volume was published by the Centre for Library Science and Methodology of the National Széchényi Library (OSZK KMK) as well as the National Technical Information Centre and Library (OMIKK). Although later, this medium issue was published as a reprint, but it did not

contain newer notation. This edition (1990-1991) is more generic than the full edition, and summarizes the human knowledge in 33.000 notations.

TABLE 1. HUNGARIAN UDC EDITIONS AFTER 1945

Volumes of the short/ medium Year	Publisher	Closed	Volume No.:	Number of Copies
1950	National Documentation Centre Duplicated	P-Notes 1949	3	Four editions published: a total of 3500 copies
1951	National Documentation Centre Duplicated	P-Notes 1950	3	
1953	National Documentation Centre Duplicated	DK-Ergänzungen 1951	3	
1955	National Széchényi Library (OSZK) Duplicated	Ext. Corr. 1:6 1949-1952	3	
1958	Az OSZK kiadványai. Gondolat Kiadó: Budapest	Ext. Corr. 2:3 1954	1	1150
1966	MSZ 4000-66 (FID Publ.389.)	EC 5:6 and EC 6:1 1965	2	3000
1977-1978	MSZ 4000-77 (FID Publ.555.)	EC 9:2 1976	2	6000
1990-1991	OMIKK-OSZK KMK (FID Publ.691.)	EC 13:3 1988	2	2000
2005 (2006)	OSZK Library Institute	EC 2000	3	1300

#### 4. PRINCIPLES

The Universal Decimal Classification has a number of strengths, for example universality, standardization, meaningful notation, well-defined categories, clarity and transparency, rich network of relationships, well-developed hierarchies, a long tradition, wide usage in many libraries, significant potential, rich collection of concepts, clear principles, understandable structure, easy to survey, and logical relationships, among others.

Nevertheless, it has been frequently criticized because its first creator of Dewey Decimal Classification (DDC), Melvil Dewey relied on Francis Bacon's division of science, which does not correspond to the modern principles of science organization, whether in philosophy, adapting their work to the natural development theory, or practice. In addition, the fields of knowledge are not proportionately represented in the system: certain classes (e.g. 6 Applied Sciences. Medicine. Technology) are overcrowded. (Fejős, 2008).

##### 4.1 Changes with structural revision

But these criticized points are mostly theoretical and philosophical, and there are more important questions related to the development of UDC as a system. The challenges of developing classification systems, particularly one with such a well established tradition, as UDC, are *stability and extension*. These are two elements of the *Dynamism of Knowledge Organization*, and they are contradictory, inversely proportional to each other.

Changes are necessary:

- New concepts have come into the world, we have discovered the universe deeper and deeper and this knowledge appears in newly published documents. Therefore librarians require these new concepts to be available in revised UDC codes. A bigger, updated collection of concepts satisfies the users (librarians) and the classification process is therefore more suitable.

- Searching methods and circumstances, the integrated library systems, and the Internet have each brought such changes that expect UDC to be more flexible with easier structures and methods than previous versions.

Stability is expected:

- Embracing change is difficult, particularly in the OPACs. The software vendors don't take care of technical solutions of extensions fairly.

- The same codes should maintain their meanings consistently for lengthy periods.

The resulting dilemma causes difficulties. Resolving this dilemma is intricate or demanding caution. The extensions can be very responsible. The editorial board of the UDC has to develop and fit in new concepts, but not randomly. They hold the stability and extension as equally crucial in their strategy, and therefore they prefer to make complete revisions of entire classes, subclasses or smaller part of any class. There are some very well-known revised classes in recent years, like 2 Religion, 61 Medicine, 004 Computer Science and Technology. Computing. Data Processing, 005 Management.

During revision the editors focus on the reorganization of structure, too. The proposal should have not only new concepts, but such structure as is able to integrate readily future, unknown concepts. During this process the editors ensured avoidance of duplications, enumeration and would evolve facets instead of using the same captions.

Example<sup>[1]</sup>:

TABLE 2. PROPOSAL OF A SECTION OF MATHEMATICS

- 517.952	General first-order equations and systems. Including: Variational methods. Analytical methods. Transform methods. Geometric theory. Approximations
+ 517.952.1	<i>General theory</i> in relation to first order logic
+ 517.952.3	<i>Cauchy problem. Initial value problems</i> in relation to first order
+ 517.952.5	<i>Boundary-value problems</i> in relation to first order logic
- 517.953	General higher-order equations and systems: properties, types etc.
+ 517.953.1	<i>General theory</i>
+ 517.953.3	<i>Cauchy problem. Initial value problems</i>
+ 517.953.5	<i>Boundary-value problems</i>
- 517.954	Boundary-value problems. Including: General theory. Equations on manifolds

[1] This example from the revision process in 2006 was made by Ines Cordeiro, Aida Slavic, Gerhard Riesthuis and Ágnes Hajdu Barát.

There are some duplications here. Editors had to study the meaning of concepts and the possibility of using facets.

The main thing here is to establish where these concepts originally belong as simple concepts/phenomena. What is their common denominator? Topological problems? What we need is a broad class/category under which they belong.

They are first listed in 517 as combinations then as single concepts then as combinations: the whole class looks like a mess of simple and complex classes the same as it is in Subject Mathematical Classification - mark and park. While the Boundary value problems is listed as a simple concept twice, the Cauchy problem appears only in classes of complex subjects four times in 517... and it looks like it also exists in 519.

We have, for instance found in MRF:

#### CAUCHY PROBLEM

517.544.73                      Table [002]: M              02  
The Cauchy-type integral  
517.518.13; 517.968.2

517.955                          Table [002]: M              02  
Cauchy problem for partial differential equations  
Asymptotics of solutions of partial differential equations

519.622                          Table [002]: M              02  
Cauchy problems for ordinary differential equations

#### BOUNDARY VALUE PROBLEMS

517.544.8                      Table [002]: M              0  
Boundary value problems of the theory of analytic functions

517.927                          Table [002]: M              0  
Boundary value problems for ordinary differential equations  
Eigen values. Eigen functions

517.954                          Table [002]: M              0  
Boundary value problems  
General theory. Equations on manifolds

517.956.223                      Table [002]: M              0  
Boundary value problems

In 517.95 we find in the first subdivision.

517.951 General theory of partial differential equations and systems

517.952 General first-order equations and systems

517.953 General higher-order equations and systems: properties, types, etc.

517.954 Boundary-value problems

517.955 Cauchy problem for partial differential equations

[...].

The duplication problem is caused by subdividing 517.952 and 517.953 by the other three first level subdivisions of 517.95. This can be done more simply in several ways than by enumeration with separate notations.

1. We can change 517.951, 517.954 and 517.955 into special auxiliaries under 517.95 and cancel these three main numbers. [And also 517.956.223] and replace them with examples of combinations with the new auxiliaries.

2. A first alternative is to use parallel subdivision. Say that 517.952 and 517.953 can be subdivided like 517.95.

3. Also the apostrophe solution as used in 546 can be applied [replace 517.95 by an apostrophe]. This gives e.g. 517.952`2 for “Cauchy problems with general first-order equations and systems”. This is clumsy.

4. A fourth possibility is using colon combinations - and examples of combination.

The first and fourth solutions are the most general. These problems can occur with a lot of differential equations and systems. Obviously there are duplications and this structure is typically enumerated. We decided to use special auxiliaries here instead of the original captions.

This approach would solve the structural problem generally:

SUGGESTION -TO AVOID ENUMERATION OF COMPLEX SUBJECTS		
A1	A2	A3
B1	B2	B3
C1	C2	C3
into		
A	1	
B	2	
C	3	

There are more enumerations that can be solved more elegantly - but we should know the subject sufficiently to avoid incorrect relationships.

The first sketch was:

517.95-1      General theory  
 517.95-2      Cauchy problem  
 517.95-3      Initial value problems [This is a new concept that was suggested from Ágnes Hajdu Barát.]  
 517.95-4      Boundary value problems  
 517.95-5      If there is any other such      problem

.... And the final entire solution was:

517.95      Partial differential equations



- AN: For specific problems and methods use special auxiliary 517.95-2/-8
- + 517.95-1 General properties
  - + 517.95-2 General theory of partial differential equations and systems
  - + 517.95-21 Local and global solvability problems (local and global uniqueness theorems)
  - + 517.95-22 Fundamental solutions
  - + 517.95-23 Geometric theory. Characteristics. Transformations
  - + 517.95-24 Qualitative theory
  - + 517.95-25 Analytic methods. Singularities
  - + 517.95-26 Variational methods
  - + 517.95-27 Microlocal methods
  - + 517.95-28 Topological methods
  - + 517.95-29 Other aspects of the general theory
  - + 517.95-4 Cauchy problem
  - + 517.95-42 Well-posed theory
  - + 517.95-44 Semi groups related to the Cauchy problem
  - + 517.95-48 Asymptotic behaviour of solutions
  - + 517.95-6 Initial value problem
  - + 517.95-8 Boundary value problem

There were similar cases according to the Theoretical foundations of physics, Quantum physics, Solid state physics.

## 4.2 Changes in the small area of UDC table from special causes

### 4.2.1 *Common auxiliaries of languages*

Language tables were completely revised in 1992 after a long period of preparation, based on linguistic knowledge available from the 1970s and 1980s. In the past thirty years new knowledge emerged with respect to indigenous languages especially in South America, the richest part of the world in linguistic terms. Now this part of the UDC schemes is under revision again, but this revision focuses on the new concepts, instead of on changing structures. From time to time new aspects come forward in this area, for example Valencian and Rusyn.

After long deliberation and discussion the editors of UDC have arrived at the decision to introduce notation for Rusyn as a subdivision of Ukrainian and notation for Valencian as a subdivision of Catalan - to be two exceptional cases in which variant/dialects have their own numbers in the language schedules. New numbers were introduced in E&C 30 (2008) and have been valid from 2009 onwards.

#### !=134.1 Catalan

SN: Catalan has two main groups of dialects: Occidental (including West Catalan and Valencian) and Oriental (including East Catalan, Balearic, Roussillonais and Algherese, dialects spoken in Alghero, Sardinia).

AN: If required denote dialects using the special auxiliary number for dialects =...’282 combined with place numbers (Table 1e) or alphabetical extension A/Z (Table 1h)

Example(s) of combination:

=134.1’282(450.88) Algherese

=134.1’282(460.313) Valencia (Valencian)

=134.1’282(460.32) Balearic

- =161.2 Ukrainian

+ =161.25 Rusyn (Rusin), Carpathian-Rusyn

SN: Rusyn is one of the Carpathian dialects of Ukraine which is often considered to be a language in its own right. Rusyn is spoken by Ruthenians (Rusnaks, Ruthene, Subcarpathian Rusyns, Lemko) - Ukrainians who, by accidents of history in the late Middle Ages, were absorbed into the territory of Lithuania, which in turn was united with Poland. The term Little Russians has also been applied to them. The majority of Carpatho-Rusyns live in Ukraine but there are ethnic minorities speaking the language in Belarus, Poland, Lithuania, Romania, Hungary, Croatia, Serbia, Czechyia, Slovakia and Russia.

#### **4.2.2 Common auxiliaries of human ancestry, ethnic grouping and nationality**

There were some important changes in the captions of several disciplines in the UDC in 2010. Terminology of 'race' was not only a very sensitive issue but the term itself was considered to be wrong in many sciences. Although this terminology seemed not to be offensive in English it does not translate well into other languages, therefore these changes have appeared:

! (=...) Common auxiliaries of \*human ancestry\*, ethnic grouping and nationality.  
Table 1f

! (=01) Human ancestry groups

SN: Human ancestry groups, previously simplified to the concept of race, are difficult to define because of the population migration and shared ancestry. Study of DNA sequence variations has revealed geographical structuring of human populations, but enumeration can vary from five to seven.

#### **4.2.3 General history**

Aida Slavic sent a proposal for extension of 94 History to the representation of different countries in 2007: “We would like to have examples of historical subdivision for the history of as many countries as possible and we invite contribution in that respect now or in subsequent years. In addition we would like to relate (cross-reference) countries as appropriate.” Until this time the examples in 94 class were very British dominated, because the original UDC MRF was created on the BSI (British Standards Institution) medium edition which was aimed at English speaking countries.

Many colleagues created numbers of their countries history, like Hungarian examples:

94(439) History of Hungary

Example(s) of combination:

94(439)".../895" Early history to the Original settlement

94(439) "896/ 1301" House of Árpád

94(439) "1301/1526" Medieval Hungary and Türkish conquest (Mohács)

94(439)"1307/1386" House of Anjou, Charles Robert, Louis (the Great) I

94(439) "1458/1490" Period of Matthias Hunyadi

94(439) "1526/1686" Hungary was divided into three parts

94 (439.21)"1526/1686" History of Transylvania 1526-1686

94(439)"1703/1711" Revolution of Ferenc Rákóczi II

94(439)"1686/1790" Hungary and the Habsburg dynasty

94(439)"1790/1849" Achievement of middle class status, reform ages, revolution

94(439)"1825/1848" Reform ages

94(439)"1848/1849" Revolution, War of Independence in 1849/1849

94(439)"1850/1859" 1850-1859 Bach period

94(439)"1867/1918" Compromise of 1867 and Dual Austro-Hungarian Monarchy

94(439)"1914/1920" World War I. and Treaty of Trianon

94(439)"1920/1944" The Horthy period

94(439)"1945/1989" Variation of Socialism

94(439)"1956" The Hungarian Revolution of 1956

94(439)"1990/..." Hungarian Republic

=> (439.2) Former Hungarian provinces to 1919

=> (439.5) Former Austro-Hungarian Monarchy provinces to 1919

## 5. REALIZATION OF CONCORDANCE

The latest edition of UDC was published about ten years after the preceding one. Changes in numbers created big problems for users, and a concordance serves to address these problems. The last concordance was compiled in 2009. After the last Hungarian edition the users, particularly the librarians, hoped for a concordance between two editions (1991 and 2005). There were several meetings about the inauguration of the new codes and changes. The concordance can help librarians to use the new version and to adopt the knowledge of earlier editions. It is hoped that the last edition (2005) based on the database of UDC MRF will be help to set the concordance. During the preparation of the last Hungarian edition, we decided to use the new information in the text about the revision, particularly if the actual code is new compared to the last edition. We hope it would help us to set the concordance – however, it was only a dream. Preparing the concordance was very difficult.

Firstly we decided to try to generalize and automate the indices of differences. We used the UMRF (Name of the Hungarian MRF database) as a starting-point and tried to create lists to change from it automatically. One initial problem was that the edition in 1991 which didn't establish on the database, but at least there was an electronic index volume of UDC. The second problem was that the edition in 1991 absolutely couldn't establish on UDC MRF database, because there wasn't this MRF database in that time (1991). The third problem was the earlier edition was medium and currently is in complete edition (what based on UDC MRF). The Quantity Difference between the two editions is proportionately is 1:2, a crucially significant difference.

Lacking a concordance, the UDC edition published in 2005 in three volumes is suitable for the time being either for getting acquainted with the system or for preparing newly started classification files which have no predecessors.

Those participating in preparing a concordance agree that they worked on the most extensive and most difficult project of its kind ever. It was a new feature of the working method that, without unanimous sources, the two editions were compared, based on a textual analysis of the relevant notations. This could easily be automated, nevertheless the enormous set remaining after filtering out clear correspondences needs a huge amount of person-months' work. It is a task for the future to compile a source material suited for computerized systems in order to carry as much as possible from the re-notation work automatically. Initially systematic shelf arrangement relied on UDC. Today, however, because of this system's "petrification" (justified by various reasons), a major difference has evolved between the two systems used. It was time to adjust systematic shelf arrangement to changes in UDC. A working group consisting of the representatives of various library types has been set up to deal with this task. (Fejős, 2008).

There are bilingual (English and Hungarian) records in the UMRF and their structures consist of three parts:

- |  |   |                          |
|--|---|--------------------------|
| - codes, captions, notations from the edition in 1991                                | } | IN THE<br>SAME<br>RECORD |
| - actual codes, captions, notations from MRF records in 2000 (English)               |   |                          |
| - actual translated codes, captions, notations from UMRF records in 2000 (Hungarian) |   |                          |

Records are bilingual, 1-99 English fields come from UDC MRF, equivalent 500-599 Hungarian fields come from UDC UMRF, 600-699, 900-999 administrative field got to 700-799 fields. We didn't duplicate the fields with numerical data, because they are not necessarily translated. We can use this database form continuously in the future. We can get information about the history of revision from 900s fields, like cancellation source, cancellation comments, last revision, revision type, revision source, revision comments, revision history, etc.

This structure is able to solve the creation of the concordance from the UDC UMRF database directly and automatically, but don't forget to mention three problems.

From the General ref 1994-2003 databases that were made by UDC Consortium revealed 5046 cancelled/relocated numbers, including issueless cancelled 1096 UDC numbers. From the yearly cancellations we added 1768, totally 6814 cancelled/relocated UDC numbers. The issueless cancellation was developed only 3, totally 1099. (Fejős, 2008).

TABLE 3. DATA STRUCTURE

Identifier	Field name	Subfield name	Max. character	Data type *	Repeatable **
1	UDC number		1000	0	0
2	Table		1000	1	0
3	Special auxiliary type		10	0	0
4	Combination type		6	0	1
10	Derived from par.instr. at UDC		50	0	0
11	Parallel divided as UDC	abtg	50	0	1
12	Par.div. provides spec.aux.		10	0	1
13	Applic.note provides spec.aux.		10	0	1
100	Description (with subfields for language versions)	egsl	250	0	1
105	Verbal examples (with subfields for language versions)	egsl	250	0	1
110	Scope note (with subfields for language versions)	eg	250	0	1
111	Application note (with subfields for language versions)	eg	250	0	1
115	Combination examples	abcdgnry	250	0	1
120	Parallel division examples	adg	250	0	1
125	References	atg	250	0	1
504	Jelzet-összekapcsolási típusok		1000	0	1
510	Párhuzamos jelzetszerkesztés		1000	0	0
511	Párhuzamos jelzetszerkezet	abtg	1000	0	1
512	Speciális alosztás párhuzamos jelzetszerkezet		1000	0	1
513	Speciális alosztás alkalmazási magyarázata		1000	0	1
600	Megnevezés		1000	0	0
605	Szóbeli példák	eg***	250	0	1
610	Érvényességi terület magyarázata	eg***	1000	0	1
611	Alkalmazási terület magyarázata	eg***	1000	0	1
615	Jelzetösszekapcsolási példák	abcdgnry	1000	0	1
620	Párhuzamos jelzetszerkesztés: példák	adg	250	0	1
625	Utalások	atg	250	0	1
704	Bevezető megjegyzések		250	0	1
714	Megjegyzés a törléshez		250	0	1
724	Megjegyzés a revízióhoz		250	0	1
725	A revízió története	fds	1000	0	0
752	Speciális jelek használata		250	0	1
755	Szerkesztői megjegyzés		250	0	1
757	Admin. megjegyzés (belső)		1000	0	0
758	A következő Extension-ből (belső)		1000	0	0
760	Mutató		1000	0	1
799	Csak ideiglenes (belső)		1000	0	1
901	Introduction date		1000	2	0
903	Introduction source.		1000	0	1
904	Introduction comments		250	0	1
911	Cancellation date		1000	0	0
912	Replaced by UDC#		1000	0	1
913	Cancellation source.		1000	0	1
914	Cancellation comments		250	0	1
921	Last revision		1000	0	1
922	Revision type		1000	0	1
923	Revision source		1000	0	1
924	Revision comments		250	0	1
925	Revision history	fds	100	0	1
951	Terms for index only/Index		1000	0	1
952	Use special characters		250	0	1
955	Editorial annotation		250	0	1
957	Admin notes (internal)		250	0	0
958	For next E&C (internal)		1	0	0
999	Temp work only (internal)		4	0	1

\*0 – letter or number, 1 – only letter, 2 – only number. \*\* 0 – unrepeatable, 1 – repeatable. \*\*\* there is needless subfield structure, it is no more

The structure of our sandwich database consists of three divisions:

- cancelled/relocated numbers, including issueless cancelled
- current edition in 1991
- current edition in 2005 (closed 2000)

After the comparison we got 2884 unknown numbers, which “disappeared” between 1990 and 2000. 748 numbers were cancelled then replaced. The unequivocal result was that we couldn’t create the concordance automatically from our sandwich database using our computerized data. Katalin Tar, the librarian from the National Széchényi Library, made an algorithm that can analyze text according to UDC numbers. It helped a lot. We also encountered some “extra, but not real” changes, because sometimes the translators primped only the text comparing to edition in 1991. We achieved these modified numbers, but had to omit them out of natural consideration.

There are 12548 numbers in the concordance between editions in 1991 and 2005 as the end result, with many geographical and linguistic auxiliaries and their consequences, numbers from religion table, etc. There were many changes based on the differences of text and not meaning. These came from the UDC MRF composition mostly, established on abridged edition, not full one. We published this concordance in a different format: WINISIS database, ISO 2709, text, XML, excel, PDF, text with tab.

## 6. CONCLUSION

Stability and changeability - at the same time, in the same scheme – are the equally important requirements for the effective extension of Knowledge Organization Systems. Accessibility to the continual changing knowledge is one of the main duties of computational library systems.

This study has highlighted the benefits of interoperability of KO systems and we can understand the deeper processing of extensions. I have given some general principles to librarians and providers of integrated library systems for adapting their work to the natural development of KO.

The dynamism of effective knowledge organization requiring both stability and extension (i.e., consistency and adaptability) – is a significant and determined theme. Knowledge organization has to do both, as I have pointed out previously. There are many causes and possibilities why we have to study further this field of KO research in the future. On the other hand, there are many parallel principles over KO field also. Just in case I personally wish that the information and communications technology (ICT) industry would put a little more emphasis on stability and a little less on extension! ICT and KO aren't the same thing, though!

## 7. REFERENCES

- BALIKOVA Marie. UDC/DDC crosswalk developed by the Czech National Library for the purpose of collection assessment. Dewey Translators Meeting. IFLA, Milano, 2009. <http://autority.nkp.cz/vecne-autority/prezentace-o-vecnych-autoritach/udc-ddc-crosswalk-developed-by-the-czech-national-library-for-the-purpose-of-collection-assessment>
- ESZTEGÁR, László. A második bibliográfiai kongresszus. *Magyar Könyvszemle*, 1897. p.269.
- A FŐVÁROSI Könyvtár osztályozása. *Átdolgozott decimális klasszifikáció*. Budapest: 1912.
- FEJŐS, László. *Az Egyetemes Az Egyetemes Tizedes Osztályozás (ETO) rendszerének magyarországi gondozása, a szomszédos kiadások konkordanciája, a változások hatása a szakrendi dokumentumtárolásra*. <https://nws.niif.hu/ncd2008/docs/0nj/nj69.htm>
- HAJDU BARÁT, Ágnes. "General information retrieval language dictionary in the Széchényi National Library (Hungary)". In: *Tendencias de Investigación en Organización del Conocimiento – Trends in Knowledge Organization Research*. Salamanca: Universidad de Salamanca, 2003, pp. 463-468.
- HAJDU BARÁT, Ágnes. "Knowledge organization of the Universal Decimal Classification – new solutions, user-friendly methods from Hungary". In: *Knowledge Organization and the Global Information Society*/Ed. Ia C.McIlwaine. Würzburg: Ergon Verlag, 2004, pp. 173-178.
- HAJDU BARÁT, Ágnes. "Multilevel education, training, traditions and research on UDC in Hungary". *Extensions and Corrections to the UDC*. The Hague: UDC Consortium, The Hague MMVII, 2007, n. 29, pp. 273-284.
- HAJDU BARÁT, Ágnes; FEJŐS, László. "New Hungarian UDC edition". *Extensions and Corrections to the UDC*. The Hague: UDC Consortium, The Hague MMV, 2005, n. 27, pp. 8-12.
- KÁPLÁNY, Géza. *Könyvtárak korszerű rendezése és fejlesztése*. 2. köt. Az Egyetemes Decimális Osztályozórendszer rövidített magyar nyelvű kiadása. Budapest: 1943
- LEHMANN, Miklós. *Fogalom, jelentés, percepció*. [electronic resource]. 1999. <http://kincsem.tofk.elte.hu/tarstud/lehmann/>