TinREAD – an integrative solution for subject authority control

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Overview

• Introduction
• Historical background
• Why do information retrieval systems need authority control
• TinREAD (The Information Navigator for Readers)
• Concluding remarks
Where to get structured information on subjects?

• **Google** for fast, unstructured and ready to use information

• **library systematic catalogues** for structured and reliable information

• **library OPAC’s** – taking advantage of new technologies that allow re-use of subject information in line with changes in information seeking behavior and an updated information infrastructure
Historical background

• UDC – useful tool whose notation can impose consistency in indexing and control natural language terms linked to it in order to facilitate searching

• UDC – used in early automated information systems to improve subject authority control such as: AUDACIOUS, ETHICS and BSRS and later on in library systems like DOBIS/LIBIS and NEBIS

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Reasons for mentioning these projects

- they use classification to provide indexing consistency
- they allow searching of individual semantically discrete elements of complex UDC notation
- they use classification as a base for a word search system and they enable multilingual information access by adding terms in different languages to UDC notation.
AUDACIOUS

• **Automatic Direct Access to Information with the Online UDC System** – the first online retrieval system offering advanced searching options via UDC notation and index terms in English associated to the UDC class marks

• documents in the system could be indexed and searched by natural language terms, while UDC hierarchically expressive notation made provision for truncation (semantic broadening of searching) and advanced searching using Boolean operators

• while UDC was a hidden form of indexing, users of the system could address their queries in natural language regardless of the original indexing language used

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ETHICS

• Eidgenössischen Technischen Hochschule Information Control System – a library system which explored and made use of the UDC to support online searching at the ETH Library in three languages: English, French and German.

• Although the classification structure operating in the ETH library system is slightly different from the UDC basic structure, ETHICS was at its time the best example of an online catalogue and a sophisticated multilingual information storage and retrieval system based on the UDC scheme.
Example of index terms in three languages from ETHICS

<table>
<thead>
<tr>
<th>Registre-Matieres Alphabetique</th>
<th>Langue Reg-Mat.: A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ADAPTATION/BEWEGUNGSADAPTATION (ANATOMIE U. PHYSIOLOGIE)</td>
<td>D O, Q</td>
</tr>
<tr>
<td>2. ADAPTATION/BOTANY</td>
<td>E O, Q</td>
</tr>
<tr>
<td>3. ADAPTATION/BRIGHT TO DARK ADAPTATION (VISION)</td>
<td>E O, Q</td>
</tr>
<tr>
<td>4. ADAPTATION/CELLULAIRE A L'ENVIRONNEMENT (CYTOLOGIE)</td>
<td>F O, Q</td>
</tr>
<tr>
<td>5. ADAPTATION/CELLULAR ADAPTATION</td>
<td>E O, Q</td>
</tr>
<tr>
<td>6. ADAPTATION/CLIMAT (ANATOMIE ET PHYSIOL.)</td>
<td>F O, Q</td>
</tr>
<tr>
<td>7. ADAPTATION/CLIMATIQUE ET EDAPHIQUE (PHYTOGENETIQUE)</td>
<td>F O</td>
</tr>
<tr>
<td>8. ADAPTATION/COLORATION (ANIMAL ETHOLOGY)</td>
<td>E O, Q</td>
</tr>
<tr>
<td>9. ADAPTATION/CULTIVATED PLANTS</td>
<td>E O</td>
</tr>
<tr>
<td>10. ADAPTATION/CULTURAL</td>
<td>E O</td>
</tr>
<tr>
<td>11. ADAPTATION/DARK ADAPTATION (VISION)</td>
<td>E O, Q</td>
</tr>
<tr>
<td>12. ADAPTATION/DU L AGRICULTURE</td>
<td>F O</td>
</tr>
<tr>
<td>13. ADAPTATION/DUNKELADAPTATION (PHYSICLOGISCHE OPTIK)</td>
<td>D O, Q</td>
</tr>
<tr>
<td>14. ADAPTATION/ECOLOGIE VEGETALE</td>
<td>F O, Q, E, U</td>
</tr>
<tr>
<td>15. ADAPTATION/EVOLUTIONARY FACTORS (BIOLOGICAL EVOLUTION)</td>
<td>E O, Q, U</td>
</tr>
</tbody>
</table>


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Search screen from DOBIS/LIBIS
Bibliographic record in NEBIS

Title: File organization and search strategy using the universal decimal classification in mechanized reference retrieval systems / Robert R. Freeman, Pauline Atherton


Descri.: IV, 30 p., 28 cm : fig.

All Holdings: All Items

Library: ETH-HDB (Zurich) | 7 CONV 2545 | Kammer 7

Subjects: UNIVERSAL DECIMAL CLASSIFICATION UDC (LIBRARIANSHIP) : 025.45*UDC

Author/-ess: Freeman, Robert R.
Atherton, Pauline

Sys. no: 000135119

Order:

- Click on All items or library name to see items and to make a loan or copy request.
- In the bibliographic records of serial publications, use the underlined terms Down links or Create set of down-linked records to access the records of the individual volumes.

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Necessity of authority control

• it is a method through which a library or bibliographic agency normalizes the form of headings used in bibliographic records

• allows enhanced access to information by linking different forms of headings under a single authorized form

• helps the indexers in consistently assigning subject headings to records and keeps the library catalogues well organized

• helps the users in selecting the appropriate search terms, thus saving their time and satisfying their information needs
What is TinREAD?

• TinREAD (The Information Navigator for Readers) is an integrated library system
• basically, it can handle the assignment of verbal index terms mapped to classification numbers in bibliographic records by means of authority files
• it supports subject authority control by linking two types of authority files: subject headings and Universal Decimal Classification (UDC)
• it allows global changes for the consolidation of records
Bibliographic record in TinREAD

Mathematical Statistics

Record Type: Language materials, printed: monographic
Book designer: Geer, Sara van de
Statement of Responsibility: Sara van de Geer
Published: 2010
Year of Publication: 142 p.
Description: English
Language: Statistica mathematica
Subject: Statistique mathematique
Subject: Mathematical statistics
Subject: Matematische statistika
Classification: 519.22

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TinREAD subject authority record in UNIMARC-A

<table>
<thead>
<tr>
<th>Authority Record</th>
<th>Multimedi n</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LDR</strong>: 00218nx j220097</td>
<td></td>
</tr>
<tr>
<td><strong>001</strong>: 152417</td>
<td></td>
</tr>
<tr>
<td><strong>250</strong>: $7 ba0vba0a $8 rumrum $a Statistica matematica</td>
<td>1</td>
</tr>
<tr>
<td><strong>675</strong>: $a 519.22</td>
<td>2</td>
</tr>
<tr>
<td><strong>750</strong>: $3 161203 $2 UCV $a Matematica statistica $6 rusrus</td>
<td>3</td>
</tr>
<tr>
<td><strong>750</strong>: $3 161189 $2 RAMEAU $a Statistique mathematique $8 frefr</td>
<td></td>
</tr>
<tr>
<td><strong>750</strong>: $3 161188 $2 LCSH $a Mathematical statistics $8 engeng</td>
<td></td>
</tr>
<tr>
<td><strong>750</strong>: $3 161204 $2 UCV $a chichi</td>
<td></td>
</tr>
<tr>
<td><strong>750</strong>: $3 161205 $2 UCV $a 88 $f arara</td>
<td></td>
</tr>
<tr>
<td><strong>750</strong>: $3 161206 $2 UCV $a Matematika statistik $8 turtur</td>
<td></td>
</tr>
<tr>
<td><strong>801</strong>: 0 $a RO $b UCV</td>
<td></td>
</tr>
<tr>
<td><strong>950</strong>: $3 156212 $2 UCV $7 ba0vba0a $8 rumrum $a Probabilitati</td>
<td>4</td>
</tr>
<tr>
<td><strong>970</strong>: $3 152165 $2 UCV $7 ba0vba0a $8 rumrum $a Matematica</td>
<td></td>
</tr>
<tr>
<td><strong>971</strong>: $3 152416 $2 UCV $7 ba0vba0a $8 rumrum $a Analiza regresiei</td>
<td></td>
</tr>
<tr>
<td><strong>971</strong>: $3 152478 $2 UCV $7 ba0vba0a $8 rumrum $a Analiza statistica</td>
<td></td>
</tr>
<tr>
<td><strong>971</strong>: $3 152479 $2 UCV $7 ba0vba0a $8 rumrum $a Metode de inferenta</td>
<td>5</td>
</tr>
<tr>
<td><strong>971</strong>: $3 152843 $2 UCV $7 ba0vba0a $8 rumrum $a Modele statistice speciale</td>
<td></td>
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<tr>
<td><strong>971</strong>: $3 160173 $2 UCV $7 ba0vba0a $8 rumrum $a Prelucarea datelor</td>
<td></td>
</tr>
<tr>
<td><strong>971</strong>: $3 160863 $2 UCV $7 ba0vba0a $8 rumrum $a Teoria distribuievi</td>
<td></td>
</tr>
</tbody>
</table>

Title

2. Strategii optime pentru probleme markoviene de decizie / Nicolae Popoviciu - București : Editura Academiei Române, 1982

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Multilingual, multi-script subject authority record – search mode
Subject heading assignment in UNIMARC-B

Search the desired subject term

The system's answer is one main record which has many other subject authority records linked to it

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Assignment of other language/other script descriptors to bibliographic records
Authority record showing management of compound UDC numbers
Assignment of authorized descriptors to bibliographic records
Search expression using multilingual & multi-script descriptors

Search result in authority file

Consolidation of records by global changes

• inconsistencies of any kind in the system can be eliminated by global changes
• inconsistencies can originate from aggregating bibliographic records coming from different libraries
• outdated or inaccurate UDC numbers can easily be updated by global changes
Global changes performed in authority records
Global changes performed in bibliographic records
TinREAD generates tag clouds
Concluding remarks (1)

Transforms UDC numbers into natural language terms

Controls the form of subject headings

TinREAD

Reuses subject information existing in systematic catalogues

Links and integrates UDC numbers and multilingual and multi-script subject headings

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Concluding remarks (2)

Consistency in indexing

Authorized use of subject information

The RESULT is:

Effective and enlarged searching options

Added value to library catalogues

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Thank you! Obrigado!

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