Open Datasets for Evaluating the Interpretation of Bibliographic Records
Joffrey Decourselle, Fabien Duchateau, Trond Aalberg, Naimdjon Takhirov, Nicolas Lumineau

To cite this version:

HAL Id: hal-01302830
https://hal.archives-ouvertes.fr/hal-01302830v2
Submitted on 18 Oct 2016

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L’archive ouverte pluridisciplinaire HAL, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d’enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.
Open Datasets for Evaluating the Interpretation of Bibliographic Records

Joffrey Decourselle\textsuperscript{1}, Fabien Duchateau\textsuperscript{1}, Trond Aalberg\textsuperscript{2}, Naimdjon Takhirov\textsuperscript{3} and Nicolas Lumineau\textsuperscript{1}

\textsuperscript{1} LIRIS, UMR5205, Université Lyon 1
Lyon, France
firstname.lastname@liris.cnrs.fr

\textsuperscript{2} NTNU
Trondheim, Norway
trondaal@idi.ntnu.no

\textsuperscript{3} Westerdals - Oslo School of Arts, Communication and Technology - Faculty of Technology - Oslo, Norway
taknai@westerdals.no

1 - Background
FRBRization is a metadata migration process which aims at extracting FRBR entities from MARC records.
- Crucial for the adoption of Semantic Web technologies in libraries
- Many tools proposed to perform the migration during the last decades
- No benchmark to compare and evaluate these tools

We provide two open datasets dedicated to the evaluation of FRBRization tools considering different specificities of MARC catalog like cataloging practices, inconsistencies and bibliographic patterns.

2 – Specificities of MARC records
Cataloging practices and inconsistencies:
- Missing information (missing of publication info or authoritative data leading to misunderstandings).
- Linkage errors (All errors in title or responsibility identifiers leading to dead links between records).
- Cataloging practices and norms (Specific form of data in the record, e.g., ISBD punctuation)

Bibliographic patterns:
- Core pattern (basic bibliographic cases)
- Augmentation pattern (any addition of a Work)
- Derivation pattern (Intellectual modification)
- Aggregation pattern (whole-part relationships)
- Complementary pattern (other related works)

3 – Open Datasets
Including both MARC files and FRBR gold standard
- T42 allows the evaluation of a migration tool in terms of bibliographic patterns and cataloging issues.
- BIB-RCAT offers a larger collection for evaluating the interpretation of MARC records in a real-world context.

http://bib-r.github.io/

Features

<table>
<thead>
<tr>
<th>Features</th>
<th>T42</th>
<th>BIB-RCAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of unit tests</td>
<td>42</td>
<td>-</td>
</tr>
<tr>
<td>Number of collections</td>
<td>126</td>
<td>3</td>
</tr>
<tr>
<td>Number of languages</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Number of media types</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Average MARC records</td>
<td>10 / test</td>
<td>560</td>
</tr>
<tr>
<td>Average fields / records</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>Average FRBR entities</td>
<td>73 / test</td>
<td>1922</td>
</tr>
<tr>
<td>Average FRBR properties</td>
<td>241 / test</td>
<td>9517</td>
</tr>
</tbody>
</table>

4 – Extract of a unit test from T42
Example of derivation patterns in FRBR (adaptation and translations)