

# Implementation of RDA and BIBFRAME in Hungary (exercise)

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BIBLIOTHECA NATIONALIS HUNGARIAE

„Don't stop me now”

## KOHA (*Molnár-athon*) Project

- What is Koha used for?
- Koha history
- Why Koha?



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# Tasks

- Installing the latest version of Koha
- Defining bibliographic frameworks: monograph, manuscript, etc.
- Translating bibliographic and authority frameworks into Hungarian
- Creating required fields for frameworks: LDR, c008, c040\$a\$b\$c\$e
- Loading default authority files : c650\$a\$2 - a150\$a; 651\$a\$2 - 151\$a; c655\$a\$2 - a155\$a



# New MARC fields and subfields for RDA elements



- 336 - Content Type authority /bibliographic data
- 337 - Media Type bibliographic data
- 338 – Carrier Type bibliographic data
- 340 – Physical Medium bibliographic data
- 344 – Sound Characteristic bibliographic data
- 347 – Digital File Characteristics bibliographic data
- 348 – Format of Notated Music bibliographic data















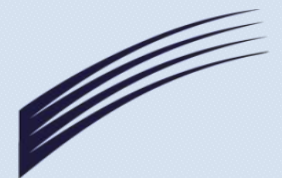
# New MARC fields and subfields for RDA elements

- Problems:

1. Need to link values in each field: term, term code, RDA registry code
2. Different source codes belong to separate subfields of the same field (347)

337 ? [ ] [ ] - MÉDIUM TÍPUSA   Media Type

▲ 0	Authority record control number or standard number			 
▲ 2	Source	rdamedia		
▲ a	Media type term			 
▲ b	Media type code			 



# New MARC fields and subfields for RDA elements

Our solutions:

## 1. Related values in each field:

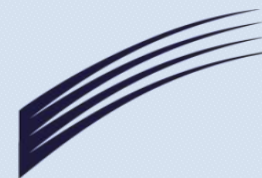
- ✓ Each new MARC fields – authority record

Managing these values in the system:

- ✓ Define new authority types in KOHA

## 2. Different source codes belong to some fields's separate subfields:

- ✓ Repeat the fields



# Relator terms and codes

- Question of MARC Relator Codes or RDA Relationship Designators?
- Linked pairs of values: 700\$e-\$4
- Large amount of terms and codes
- More than one relator terms and codes for a person



# Relator terms and codes

- MARC 21 Relator terms and codes
- Authority records
- Waiting for a solution:

More relator terms and codes for a person





# Conversion - BIBFRAME

- Molnar-athon records:
  - Bibliographic and authority records:
    - Work and expression – Authority records
    - Manifestation – Bibliographic records
  - RDA elements
  - Export mrc



**Molnár Ferenc, 1878-1952. A zenélő angyal (mű)**

Number of records used in: 2

Preferred form: Molnár Ferenc, 1878-1952. A zenélő angyal

**Megjegyzések**

szemantikus publikálásra

A zenélő angyal : egy fiatal szerelem regénye / Molnár Ferenc (1937)

**Entry mű****Work MARC view**

Number of records used in: 2

**001 - CONTROL NUMBER**

- control field: 60193

**003 - CONTROL NUMBER IDENTIFIER**

- control field: HU-IL-001206-1

**005 - DATE AND TIME OF LATEST TRANSACTION**

- control field: 20181120105508.0

**008 - FIXED-LENGTH DATA ELEMENTS**

- fixed length control field: 181114|| aza||aabn | a|a d

**040 ## - CATALOGING SOURCE**

- Original cataloging agency: HU-IL-001206-1
- Language of cataloging: hun
- Description conventions: RDA

**100 1# - HEADING--PERSONAL NAME**

- Personal name: Molnár Ferenc,
- Dates associated with a name: 1878-1952.
- Title of a work: A zenélő angyal

**380 ## - FORM OF WORK**

- Record control number: 58692
- Source of term: oszkdoktip
- Form of work: regény

**670 ## - SOURCE DATA FOUND**

- Source citation: A zenélő angyal : egy fiatal szerelem regénye / Molnár Ferenc (1937)

Keresés Könyvtári katalógus

[Bővebb keresés](#) | [Besorolási adatok szerinti keresés](#) | [Összes címke](#)

## Expression normal view

[Kezdőlap](#) - [Besorolási adatok szerinti keresés](#) - [Molnár Ferenc, 1878-1952. A zenélő angyal. magyar \(Kifejezési forma - személy\)](#)[Important links here.](#)[Important links here.](#)

Normál formátum

MARC formátum

**Molnár Ferenc, 1878-1952. A zenélő angyal. magyar (Kifejezési forma - személy)**

Number of records used in: 1

Preferred form: Molnár Ferenc, 1878-1952. A zenélő angyal. magyar

**Megjegyzések**

szemantikus publikálásra

A zenélő angyal : egy fiatal szerelem regénye / Molnár Ferenc (1937)

**Entry Kifejezési forma - személy**

Number of records used in: 1

[Expression MARC view](#)**001 - CONTROL NUMBER**

- control field: 60198

**003 - CONTROL NUMBER IDENTIFIER**

- control field: HU-IL-001206-1

**005 - DATE AND TIME OF LATEST TRANSACTION**

- control field: 20181120110401.0

**008 - FIXED-LENGTH DATA ELEMENTS**

- fixed length control field: 181114|| aza||aabn | a|a d

**040 ## - CATALOGING SOURCE**

- Original cataloging agency: HU-IL-001206-1
- Language of cataloging: hun
- Description conventions: RDA

**100 1# - HEADING--PERSONAL NAME**

- Personal name: Molnár Ferenc,
- Dates associated with a name: 1878-1952.
- Title of a work: A zenélő angyal.
- Language of a work: magyar

**336 ## - CONTENT TYPE**

- Authority record control number or standard number: 54029
- Content type term: szöveg
- Content type code: txt

**377 ## - ASSOCIATED LANGUAGE**

- Language code: hun

**670 ## - SOURCE DATA FOUND**

- Source citation: A zenélő angyal : egy fiatal szerelem regénye / Molnár Ferenc (1937)

### A zenélő angyal : egy fiatal szerelem regénye / Molnár Ferenc.

Szerző: **Molnár Ferenc, 1878-1952** [szerző]

Közreműködő(k): **Athenaeum Könyvkiadó** [kiadó]

Anyag típus:  Könyv

Kiadó: Budapest : Athenaeum Irodalmi és Nyomdai R.-T., [1937]

Copyright-dátum: ©1933

Kiadás: Tizedik ezer.

Leírás: 144 oldal ; 18 cm.

Tartalom típusa: szöveg Adathordozó típus: közvetítő eszköz nélküli Hordozó típus: kötet

Egységesített cím: A zenélő angyal. magyar

Action note:

Üzenet a könyvtártól: E dokumentum nem kapott még címkét ebben a könyvtárban. [Címke hozzáadása](#)

★★★★★ átlagos értékelés: 0.0 (0 szavazat alapján)

Holdings ( 0 ) Cím kiegészítői Comments ( 0 )

Nincs tényleges példány csatolva ehhez a bejegyzéshez

```

=LDR 01454nam a2200325 i 4500
=999 \\$c233151$d233151
=001 233151
=003 HU-IL-001206-1
=005 20181210160029.0
=008 181113s1921\\$hu\\$a\\$b\\$c\\$d\\$e\\$f\\$g\\$h\\$i\\$j\\$k\\$l\\$m\\$n\\$o\\$p\\$q\\$r\\$s\\$t\\$u\\$v\\$w\\$x\\$y\\$z
=040 \\$aHU-IL-001206-1$bhun$cHU-IL-001206-1$dERDA
=041 0\\$ahun
=080 1\\$a894.511-22
=100 1\\$aMolnár Ferenc,$d1878-1952$eszerző$4aut$04016$94016
=240 12$060194$aA hattyú.$lmagyar$960194
=245 12$aA hattyú :$bvigjáték három felvonásban /$círta Molnár Ferenc.
=264 \\$aBudapest :$bFranklin-Társulat, $c[1921]
=264 \\$c01921
=300 \\$a198, [2] oldal ;$c14 cm
=336 \\$2rdacontent$aszoveg$btxt$0http://rdaregistry.info/termList/RDAContentType/1020$0http://id.loc.gov/vocabulary/contentTypes/txt
=337 \\$2rdamedia$asegedeszköz nélküli$bn$0http://rdaregistry.info/termList/RDAMediaType/1007$0http://id.loc.gov/vocabulary/mediaTypes/n
=338 \\$2rdacarrier$akötet$bnc$0http://rdaregistry.info/termList/RDACarrierType/1049$0http://id.loc.gov/vocabulary/carriers/nc
=340 \\$2rdagen
=347 \\$2rdaft
=583 \\$xszemantikus publikálásra
=710 2\\$aFranklin Társulat Magyar Irodalmi Intézet és Könyvnyomda$ekiadó$4pbl$960166
=776 08$iElektronikus másolata$aMolnár Ferenc, 1878-1952$dBudapest : [Országos Széchényi Könyvtár Digitalizáló Osztály], 2018$tA hattyú$w233166
=850 \\$aHuBpOSK
=852 \\$aHuBpOSK
=942 \\$2ddc

```

### Manifestation MARC view

## **Phase Two:**

# **BIBFRAME Conversion Issues and Solutions in NSZL**

**Miklós Hubay**

**LIS PhD Student**

**Petőfi Literary Museum**



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# The Starting Point

- 15 bibliographic records in .mrc
- Opening with MARCBreaker in MARCEdit
- Test conversion
- Customized specification for NSZL with using the results of the test conversion
- RDF-conversion with a customized XSLT (in connection with a non-NSZL expert)
- Comparison of two RDF data-sets
- Correction

```
<bf:hasInstance>
  <bf:Instance rdf:about="XYZ Instance URI">
    <bf:contribution>
      <bf:PrimaryContribution>
        <bf:agent>
          <bf:Agent>
            <rdfs:label>value of 776 $a</rdfs:label>
          </bf:Agent>
        </bf:agent>
      </bf:PrimaryContribution>
    </bf:contribution>
    <bf:relationship>
      <bf:Relationship>
        <bf:relation>
          <bf:Relation>
            <rdfs:label>value of 776 $i</rdfs:label>
          </bf:Relation>
        </bf:relation>
        <bf:relatedTo rdf:resource="XYZ connecting Instance URI" />
      </bf:Relationship>
    </bf:relationship>
    <bf:identifiedBy>
      <bf:Identifier>
        <rdf:value>value of 776 $w</rdf:value>
      </bf:Identifier>
    </bf:identifiedBy>
    <bf:provisionActivityStatement>value of 776 $d</bf:provisionActivityStatement>
      <bf:extent>
        <bf:Extent>
          <rdfs:label>value of 776 $h</rdfs:label>
        </bf:Extent>
      </bf:extent>
    <bf:title>
      <bf>Title>
        <rdfs:label>value of 776 $t</rdfs:label>
      </bf>Title>
    </bf:title>
    <bf:instanceOf rdf:resource="XYZ Work ID" />
  </bf:Instance>
</bf:hasInstance>
```

# XSLT particles (thanks to Mrs. Ildiko Vitez)

```
<xsl:for-each select="marc:datafield[@tag=040]">
  <bf:source>
    <bf:Source>
      <rdf:type rdf:resource="http://id.loc.gov/ontologies/bibframe/Agent"/>
      <rdfs:label><xsl:value-of select="marc:subfield[@code='a']"/></rdfs:label>
    </bf:Source>
  </bf:source>
```

```
<xsl:variable name="leader" select="marc:leader"/>
<xsl:variable name="leader5" select="substring($leader,6,1)"/>
```

...

```
<bf:status>
  <bf:Status>
    <bf:code><xsl:value-of select="$leader5"/></bf:code>
  </bf:Status>
</bf:status>
```

Guide:

MARC21slim2RDFDC.xsl

MARC21slimUtils.xsl

<http://www.loc.gov/standards/marcxml/xslt/>

MARC to BIBFRAME specifications

<http://www.loc.gov/bibframe/mtbf/>



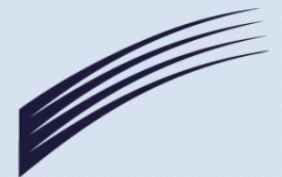
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# Redundancy

- **337 (media type)**
- and **007/00** (category of material)
- and **LDR/06** (type of record)

<b>007--ELECTRONIC RESOURCE</b>	
00 - Category of material	
c - Computer file	I - Electronic (if not already added from Leader) Add I - media - Media - <a href="http://id.loc.gov/vocabulary/mediaTypes/c">http://id.loc.gov/vocabulary/mediaTypes/c</a> (if not added from 337 Media Type); Add rdfs:label "computer"
01 - Specific material designation	I - carrier - Carrier ; Add these if not already added from 338 Carrier Type

- **338 (carrier type)**
- and **007/01** (specific material designation)
- and **008/23** (form of item)





# Partial Redundancy

<bf:descriptionConventions>

<bf:DescriptionConventions

rdf:about="http://id.loc.gov/vocabulary/descriptionConventions/**value of 040\$e**" />

</bf:descriptionConventions>

<bf:descriptionConventions>

<bf:DescriptionConventions>

<bf:code>**based on 000/18**</bf:code>

</bf:DescriptionConventions>

</bf:descriptionConventions>

**Mostly of  
punctuation**



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# Work Properties from Fixed Fields

```
<bf:status>
<bf:Status>
<bf:code>000/05</bf:code>
</bf:Status>
</bf:status>

<bflc:encodingLevel>
<bflc:EncodingLevel>
<bf:code>000/17</bf:code>
</bflc:EncodingLevel>
</bflc:encodingLevel>

<bf:descriptionConventions>
<bf:DescriptionConventions>
<bf:code>based on 000/18</bf:code>
</bf:DescriptionConventions>
</bf:descriptionConventions>

<rdf:type rdf:resource=
"http://id.loc.gov/ontologies/bibframe/based on 000/06" />
```

```
<bf:colorContent>
<bf:ColorContent rdf:about=
"http://id.loc.gov/vocabulary/mcolor/based on 007/03">
<rdfs:label>based on 007/03</rdfs:label>
</bf:ColorContent>
</bf:colorContent>

<bf:language>
<bf:Language rdf:about=
"http://id.loc.gov/vocabulary/languages/008/35-37" />
</bf:language>

<bf:genreForm>
<bf:GenreForm rdf:about=
"http://id.loc.gov/vocabulary/marcgt/based on 008/33">
<rdfs:label>based on 008/33</rdfs:label>
</bf:GenreForm>
</bf:genreForm>
```



# Instance Properties from Fixed Fields

```
<bf:issuance>  
<bf:Issuance rdf:about=  
"http://id.loc.gov/vocabulary/issuance/based on 000/07" />  
</bf:issuance>
```

```
<rdf:type rdf:resource=  
"http://id.loc.gov/ontologies/bibframe/based on 007/00" />
```

```
<bf:digitalCharacteristic>  
<bf:DigitalCharacteristic>  
<rdf:type rdf:resource=  
"http://id.loc.gov/ontologies/bflc/ImageBitDepth" />  
<rdfs:label>007/06-08</rdfs:label>  
</bf:DigitalCharacteristic>  
</bf:digitalCharacteristic>
```

```
<bf:digitalCharacteristic>  
<bf:DigitalCharacteristic>  
<rdf:type rdf:resource=  
"http://id.loc.gov/ontologies/bibframe/EncodingFormat" />  
<rdfs:label>based on 007/09</rdfs:label>  
</bf:DigitalCharacteristic>  
</bf:digitalCharacteristic>
```

```
<bf:provisionActivity>  
<bf:ProvisionActivity>  
<rdf:type  
rdf:resource="http://id.loc.gov/ontologies/bibframe/Publication" />  
<bf:date rdf:datatype=  
"http://id.loc.gov/datatypes/edtf">008/07-10</bf:date>  
<bf:place>  
<bf:Place rdf:about=  
"http://id.loc.gov/vocabulary/countries/008/15-17" />  
</bf:place>  
</bf:ProvisionActivity>  
</bf:provisionActivity>
```

```
<bf:illustrativeContent>  
<bf:Illustration rdf:about=  
"http://id.loc.gov/vocabulary/millus/008/18-21">  
<rdfs:label>based on 008/18-21</rdfs:label>  
</bf:Illustration>  
</bf:illustrativeContent>
```



# MarcKey, MatchKey, SortKey, Label

- Defined by BFLC „official” extension
- Keep the subfield order and...
- **MatchKey** – drop all indicators and subfield codes
- **MarcKey** – keep all indicators and subfield codes with \$ delimiter
- **rdfs:label** – drop all indicators and subfield codes
- **titleSortKey** – rdfs:label + remove the characters that have been specified in i2

*name00MarcKey*  
*name00MatchKey*  
*name10MarcKey*  
*name10MatchKey*  
*name11MarcKey*  
*name11MatchKey*

*primaryContributorName00MatchKey*  
*primaryContributorName10MatchKey*  
*primaryContributorName11MatchKey*

*title00MarcKey*  
*title00MatchKey*  
*title10MarcKey*  
*title10MatchKey*  
*title11MarcKey*  
*title11MatchKey*  
*title30MarcKey*  
*title30MatchKey*  
*title40MarcKey*  
*title40MatchKey*

*titleSortKey*



# Digression: Coping with Non-Latin (whew...)

<<http://example.org/ocn122820377#Agent880-52>> a bf:Agent,  
bf:Organization;  
rdfs:label "[中国电视剧制作中心.](#)"@zh-cmn-hant;

**bflc:name10MarcKey "8802 \$6710-12/\$1\$a中国电视剧制作中心.";**

**880** – field of alternate graphic representation

**2** – indicator value as it is used in the linked field

**\$6 710-12** – linked field and the occurrence number

**/** - delimiter

**\$1** – script identification code (Chinese, Japanese, Korean)

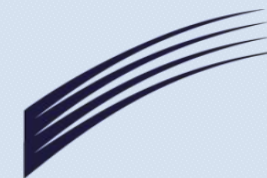
**\$a** 中国电视剧制作中心.";

In BIBFRAME: **transcribed** Instance, **transliterated** Work

Proposal of LOC:

→ do NOT use 880 in the bibliographic records!

→ use transliteration in the authority records!



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# The Problem of \$0-s

=100 1\

\$a Molnár Ferenc,

\$d 1878-1952

\$e szerző

\$4 aut

**\$0 4016**

\$9 4016

*There were no \$0 values in  
two records  
(unintentionally)*

```
<bflc:name00MarcKey>
```

```
1001 $aMolnár Ferenc,$d1878-1952$eszerző$4aut$94016
```

```
</bflc:name00MarcKey>
```

```
<rdfs:label>Molnár Ferenc, 1878-1952</rdfs:label>
```

```
<bf:identifiedBy>
```

```
<bf:Identifier>
```

```
<rdf:value/>
```

```
</bf:Identifier>
```

```
</bf:identifiedBy>
```

```
<bf:Agent rdf:about="http://data.koha.oszk.hu/#Agent">
```



# The Problem of \$0-s

=710 2\

\$a Franklin Társulat Magyar  
Irodalmi Intézet és  
Könyvnyomda

\$e kiadó

\$4 pbl

\$9 60166

*There were no \$0 values at  
all (KOHA configuration  
problem in 700 and 710)*

```
<bf:contribution>
```

```
<bf:Contribution>
```

```
<bf:agent>
```

```
<bf:Agent rdf:about="http://data.koha.oszk.hu/233151#Agent">
```

```
<rdf:type
```

```
  rdf:resource="http://id.loc.gov/ontologies/bibframe/Organization"/>
```

```
<bflc:name10MatchKey>Franklin Társulat Magyar Irodalmi Intézet és  
Könyvnyomda</bflc:name10MatchKey>
```

```
<bflc:name10MarcKey>7102 $aFranklin Társulat Magyar Irodalmi Intézet és  
Könyvnyomda$ekiadó$4pbl$960166</bflc:name10MarcKey>
```

```
<rdfs:label>Franklin Társulat Magyar Irodalmi Intézet és  
Könyvnyomda</rdfs:label>
```

```
</bf:Agent>
```

```
</bf:agent>
```

ID-based URI instead of  
entity-based URI



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# The Problem of 240-s

```
▼ <bf:Work rdf:about="http://data.koha.oszk.hu/233160#Work">
```

```
<rdfs:label>A zenélő angyal. német</rdfs:label>
▼ <bf:title>
  ▼ <bf:Title>
    <bflc:title40MatchKey>A zenélő angyal. német</bflc:title40MatchKey>
    <bflc:title40MarcKey>24014$060208$aA zenélő angyal.$lnémet$960208</bflc:title40MarcKey>
    <rdfs:label>A zenélő angyal. német</rdfs:label>
    <bflc:titleSortKey>nélő angyal.német</bflc:titleSortKey>
    <bf:mainTitle>A zenélő angyal</bf:mainTitle>
  </bf:Title>
</bf:title>
▼ <bf:language>
  ▼ <bf:Language>
    <rdfs:label>német</rdfs:label>
  </bf:Language>
</bf:language>
▼ <bf:identifiedBy>
  ▼ <bf:Identifier>
    <rdf:value>60208</rdf:value>
  </bf:Identifier>
</bf:identifiedBy>
```

Wrong indicator  
setting, solved in  
MARC

Wrong ID



# The Problem of 240-s

```
▼<bf:Work rdf:about="http://data.koha.oszk.hu/233160#Work">
```

```
▼<bf:translationOf>
```

```
▼<bf:Work rdf:about="http://data.koha.oszk.hu/233160#Work">
```

Wrong URI

```
<rdfs:label>A zenélő angyal.</rdfs:label>
```

```
▼<bf:title>
```

```
▼<bf:Title>
```

```
<bflc:title40MatchKey>A zenélő angyal.</bflc:title40MatchKey>
```

```
<bflc:title40MarcKey>24014$060208$aA zenélő angyal.$lnémet$960208</bflc:title40MarcKey>
```

```
<rdfs:label>A zenélő angyal.</rdfs:label>
```

```
<bflc:titleSortKey>nélő angyal</bflc:titleSortKey>
```

```
<bf:mainTitle>A zenélő angyal</bf:mainTitle>
```

Wrong indicator  
setting, solved in  
MARC

```
</bf:Title>
```

```
</bf:title>
```

```
▼<bf:identifiedBy>
```

```
▼<bf:Identifier>
```

```
<rdf:value>60208</rdf:value>
```

Correct ID

```
</bf:Identifier>
```

```
</bf:identifiedBy>
```

```
</bf:Work>
```

```
</bf:translationOf>
```

# Punctuation

```
<rdfs:label>Játék a kastélyban : anekdota három felvonásban /</rdfs:label>
▼<bf:title>
  ▼<bf:Title>
    <rdfs:label>Játék a kastélyban : anekdota három felvonásban /</rdfs:label>
    <bflc:titleSortKey>Játék a kastélyban : anekdota három felvonásban /</bflc:titleSortKey>
    <bf:mainTitle>Játék a kastélyban</bf:mainTitle>
    <bf:subtitle>anekdota három felvonásban</bf:subtitle>
  </bf:Title>
</bf:title>
```

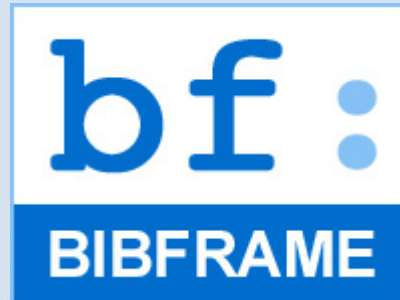


# To be Continued...

- ~ 50 authority records besides the bib. records
- Trying to find the proper vocabulary/-ies
- Conversion and upload into Virtuoso



# Thank you for your attention!



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