



# **Endangered Cultural Heritage: Problems and Solutions**

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# [ Background ]

- The access to old music manuscripts, which are **fragile and perishable**, has to be rather restricted:
  - they are hardly accessible for scholars research
  - they are almost inaccessible for general public

# A Real Heritage



# [ Communities Interests ]

- Manuscripts - a rich and unique source for:
  - Scholars studying manuscripts, illuminations, and musical notations
  - Musicologists interested in early music transposition and performance
- General public interest in early music is growing continuously
- **IT professionals' mission** – to create a digital repository – to help in digital acquisition, archiving, delivery of early music manuscripts as multimedia objects

# [ The Project Aims ]

- Two main lines are:
  - **Safeguarding and Preservation**
  - **Presentation** of cultural values
- To develop **software** for filling and searching multimedia data base (MDB)
- To create **copyrights** trading environment of **MultiMedia** products and **Rights Clearance (MMRC)** on European basis

# [ The Project Aims ]

- To create an **MDB prototype** using as entries multimedia musical heritage items (**MMHI**), based on early European musical heritage stored at the Library of the Lithuanian Academy of Sciences
- To make **images of musical manuscripts**, audio-video records accessible to users for legal acquisition

# Expected Results

- The prototype will **demonstrate MDB** operability on:
  - digital acquisition and archiving
  - transfer/presentation of unique multimedia items
  - will prove the benefits of interactive delivery
- Manuscripts stored in digital space used for:
  - **Publishing needs**
  - **Education**
  - **Cultural industry**

# [ Holdings at the Library ]

- In the repositories of the Manuscripts Department there are more than 1000 different musical manuscripts stored in several collections and archives
- They belong to the period of 14-20th century
- Geographically they reflect the musical life of Lithuania, Poland, Byelorussia, Russia, Ukraine, Germany, and the Netherlands



# [ Holdings at the Library ]

- According to the content they comprise :
  - Old musical manuscripts
  - Transcripts of classical music
  - Music of Lithuanian authors
  
- According to the performance of musical compositions, these include the pieces of:
  - Vocal
  - Scenic
  - Instrumental music

# [ From Text to Sound or Image ]

## **The development of software for Internet-integrated MDB management and interactive delivery involves:**

- Original software for filling MDB online with MMHI
- Managing MDB and running it on an Internet server for an output delivery online
- Research in advanced data bases mining and knowledge discovery

# [ From Text to Sound or Image ]

- Research of innovative methods for processing of digital information: the best quality pictures, sound and video records
- Multilingual information distribution channels – the websites on early music and its context by pictures, descriptions, examples of music
- **The working collaborative environment has been created:**
  - for experts – to fill MDB by MMHI
  - for users to access content and to acquire legal digital copies

LMAB RS F 43-27167 Vesp(e)re in D	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 43-27169 Vespere in D	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 15-288 Missa de Requiem	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 22-102 Antiphonale	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 22-90 Liber generationis	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 19-133 [Irmalagionas]	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 43-27160 Kyrie [Missa in D?]	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 43-27162 Missa Maestoso [in C]	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 43-27238 Litanía in C	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 19-115 Ирмолой	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 15-286 [Vargonų tabulatūra]	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 18-1 Apollo Prawodawca, albo Parnassus reformowany, Operetta złożona z rozmów y spiewania	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 15-285 [Liutnios tabulatūra]	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 22-103 Graduale	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 30-149 Pastorello Musicale	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 19-116 [Supraslio irmalagionas]	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 15-284 Liber tabulatura	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 30-119 Cancione	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 15-303 [Pirmas lietuvių liaudies dainos užrašymas]	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>
LMAB RS F 22-95 Procesionale [Grigališkojo choralo giesmynas]	<a href="#">Redaquoti</a>	<a href="#">Trinti</a>

#### Užsakymai:

ID	Vardas	Pavardė	Užsakymo data	
30	First name*	Last name*	2004-11-03 16:33:08	<a href="#">Daugiau Trinti</a>
29	Vardas*dddd	Pavardė*	2004-11-03 16:28:52	<a href="#">Daugiau Trinti</a>
28	Vardas*	Pavardė*	2004-11-03 14:36:44	<a href="#">Daugiau Trinti</a>

## Rankraščio paveikslai

Pavadinimas

Kaina

 Lt

Didelis paveikslas

Browse...

Mažas paveikslas

Browse...

Esantys paveikslėliai:

Trinti   
[Redaguoti](#)



[pirmas viršelis.](#) - 0 Lt

Trinti   
[Redaguoti](#)



[antras viršelis.](#) - 0 Lt

Trinti   
Redaquoti



lapas 45. - 0 Lt

Trinti   
Redaquoti



lapas 46. - 0 Lt

Trinti   
Redaquoti



## Garso įrašai

Pavadinimas

Garso failas  
(WMA)

Browse...

Garso failas (ZIP)

Browse...

Tekstas

Esantys garsai:

Trinti  Canzona ir Ricercare  
Redaguoti

Trinti  Preambulė  
Redaguoti

Trinti  Canzona  
Redaguoti

Trinti  Ricercare  
Redaguoti

Trinti  Toccata brevis  
Redaguoti

Trinti  Ricercare  
Redaguoti

Trinti  Ricercare  
Redaguoti

Trinti  Canzona  
Redaguoti

Vykdyti

## Vaizdo įrašai

Pavadinimas

Vaizdo failas  
(WMV)

Browse...

Vaizdo failas (ZIP)

Browse...

Tekstas

Esantys vaizdai:

Trinti  Canzona  
Redaquoti

Trinti  Pjesė  
Redaquoti

Trinti  Ricerca  
Redaquoti

Trinti  Ricerca  
Redaquoti

Trinti  Toccata brevis  
Redaquoti

Vykdyti



# [ Archiving, Transfer and Presentation ]

- Choice of image file format, media
- Problems of data migration and conversion to new standards
- Choice of the optimal compression method
- Creation of data indexing system and metadata structures

# MDB Copyright Trading Environment

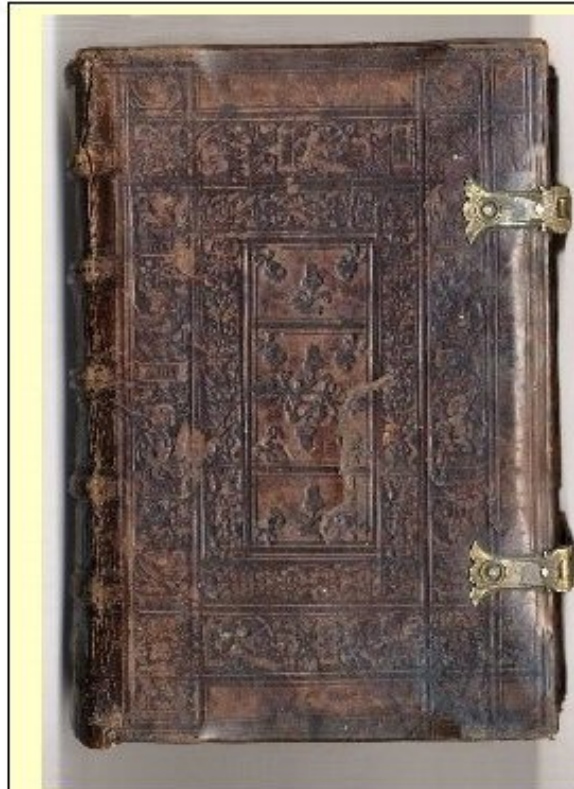
- There is no global standards, IPR for digital objects are fuzzy (at least in Lithuania)
- Differential pricing according to the user:
  - commercial
  - educational
  - private individual
  - regional variations

# MUSICALIA



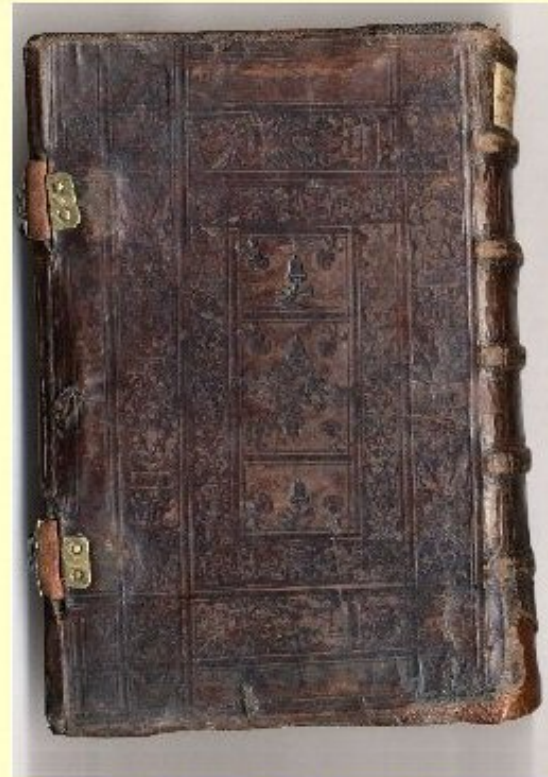
Paveikslai

## *LMAB RS F 22-95 Procesionale [Grigališkojo choralo giesmynas]*

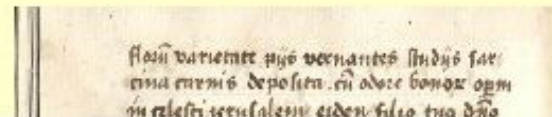


LMAB RS F 22-95, Pirmas viršelis.

100 Lt.  [I krepšeli](#)



LMAB RS F 22-95, Antras viršelis.



## KOPIJŲ PRISTATYMO BŪDAS

Norimas pristatymo būdas **Paštas**

Specialūs pageidavimai

Užsakymo data **2004-11-03 16:33:08**

IP adresas **192.168.0.5**

## UŽSAKOMI PAVEIKSLAI

Rankraščio signatūra: **LMAB RS F 22-103 Graduale**

Autorius: Unknown

Data: [XVI - XVII c.]

Paveikslo pavadinimas: folio 1.

Kaina: 60 Lt be PVM

Užsakymo forma: Skaitmeninė kopija(iki 72 dpi, bylos dydis iki 1.5 MB) Lt be PVM

Rankraščio signatūra: **LMAB RS F 30-119 Cancione**

Autorius: Authors of the musical pieces are not identified; the author of copper engravings is Jean Messenger (Paris, ? – 1649)

Data: 16[29] [1st half of XVII c.]

Paveikslo pavadinimas: Cover

Kaina: 30 Lt be PVM

Užsakymo forma: Skaitmeninė kopija(iki 600 dpi, bylos dydis daugiau nei 101 MB) Lt be PVM

Paveikslo pavadinimas: folio 1.

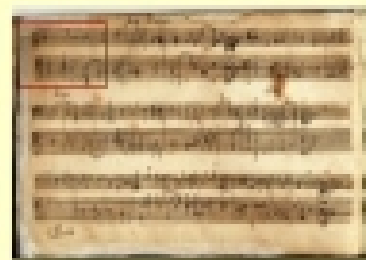
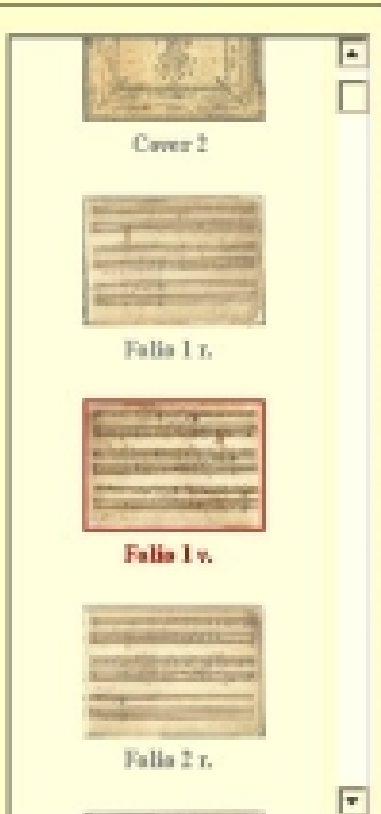
Kaina: 25 Lt be PVM

Užsakymo forma: Skaitmeninė kopija(iki 300 dpi, bylos dydis iki 30 MB) Lt be PVM



# Personalized Interactive CD-ROMs

- Readers and publishers may obtain the best quality digital copies of selected items CD
- For this a novel service, called the **CD-ROM-on-Demand**, a special software has been developed
- A demo version is made for the 17th c. manuscript - notation album and copper engravings - the ***Cancione*** (including 78 images of the best quality and organ music records linked to several images)




# Conclusions

- MDB prototype is accessible online [www.musicalia.it](http://www.musicalia.it). It shows **the positive** and **the negative** sides of a situation
- Multimedia technologies provide new powerful tools for scholars researching manuscripts, musicologists, educators
- Cultural heritage institutions have a chance to maintain better their collections:
  - high-quality digital copies or licenses can be sold to publishers, musical industry, collectors
  - the original collections safeguarded better

# Conclusions – the Other Side

- Memory institutions **are not ready yet** to use the new opportunities
- Content experts are **not able to use** this effectively, to take a new challenge
- A specific training on new information processing technologies and usage **for the needs of the humanities** is in a great need
- The **MMRC** value chain was the weakest point. **IPR for digital objects** is under permanent development and it is rather complicated to manage





Thanks for your attention

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