Bulgarian Folk Songs in a Digital Library

N. Kirov[1,2]   L. Peycheva[3]

[1]Department Informatics, New Bulgarian University

[2]Institute of Mathematics and Informatics, Bulgarian Academy of Sciences

[3]Institute for Ethnology and Folklore Studies with Ethnographic Museum
Bulgarian Academy of Sciences

X KONFERENCIJA NOVE TEHNOLOGIJE I STANDARDI:
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Outline

Information technologies for presentation of Bulgarian folk songs with music, notes and text in a digital library

Folklorists and computer science specialists from five institutions:

- Institute of Mathematics and Informatics, Bulgarian Academy of Sciences (BAS)
- Institute of Art Studies, BAS
- Institute for Ethnology and Folklore Studies with Ethnographic Museum, BAS
- Faculty of Mathematics and Informatics, Sofia University "St. Kliment Ochridski"
- Department Informatics, New Bulgarian University

Information technologies for presentation of Bulgarian folk songs with music, notes and text in a digital library

`http://www.math.bas.bg/or/nkirov/2010/folk/FOLK.html`

Introduction
The Collection
Search Engine
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Description
Meta-data

Description
Sources
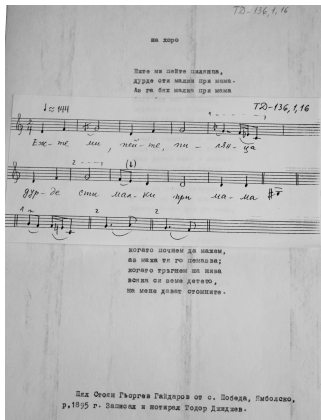
The sources for our collection are the archives from:

- National Center for Intangible Cultural Heritage at the Institute for Ethnology and Folklore Studies with Ethnographic Museum, and
- Institute of Art Studies.

They are a part of the scientific heritage of Prof. **Todor Dzidzev** – over 1000 songs from Trakia region that were recorded and written down during the 60s and 70s of XX century.

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- About 2000 pages with typewritten text of songs and handwritten notes

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- 27 old magnetic types with original performances of songs
- 13 note-books with handwritten texts of the songs and additional notes

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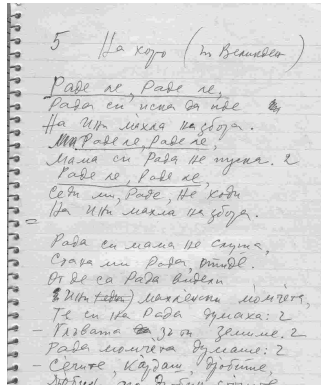
Description
Digital Representation – Notes

The notes are presented in a form of LilyPond coding (plain text files).

```
\score·{¶
\relative·c'·{¶
\tempo·4·=·144¶
\time·2/4¶
d4·f·|·\acciaccatura·f8·g2·|·d4·f·|·g2·|¶
\varA¶
·\acciaccatura·a8\startTextSpan·g4\glissando·f16·(·ees·c8)·\stopTextSpan·|·d4·f·|¶
\varB¶
·\set·Score.measureLength·=·#(ly:make-moment·3·4)¶
·s4\startTextSpan·g2\stopTextSpan·|¶
·\set·Score.measureLength·=·#(ly:make-moment·2·4)¶
f8(·e^"(v)")·d4·d2·d4·d¶
\bar·"|."··s8·\fixB·gis,4·\fixC·s8·\bar·"|."¶
\endm¶
\varA¶
·g'8\startTextSpan\prall(·f)·f16([·e·c8)]·\stopTextSpan·\bar·"||"¶
\varB¶
·g'4.\startTextSpan(·a8)·\stopTextSpan·\bar·"||"¶
\varB¶
·g4.\startTextSpan(·f8)·\stopTextSpan·\bar·"|."¶
}¶
\addlyrics·{·Еж-·те·ми,·пей-·те,·пи-·лян-·ца·дур-·де·сти·мал-·ки·при·ма-·ма·}¶
```

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Digital Representation – Notes

Print view of the song's notes (pdf and eps files).

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Digital Representation – Text

The texts and meta-data of the songs are stored in the library of the form of LaTeX coding (plain text files).

```
%Ежте·ми,·пейте,·пилянца¶
%На·хоро¶
%Джиджев:хороводни¶
\begin{multicols}{2}¶
Ежте·ми,·пейте,·пилянца,¶
дурде·сти·малки·при·мама.¶
Аз,·га·бях·малка·при·мама,¶
бяла·бих·като·кадъна,·(2)¶
червена·като·ябълка:¶
където·ходя,·все·пея,¶
в·градинка·вляза·и·пея!¶
....................¶
когато·тръгнем·на·нива,¶
всяка·си·земе·детето,¶
на·мене·дават·стомните!¶
\end{multicols}¶
\singer{Пял:··Стоян·Гьоргев·Гайдаров}¶
\village{с.··Победа}¶
\area{Ямболско}¶
\year(1895)¶
```

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Digital Representation – Text

Print view of the song's text (pdf and ps formats).

Ежте ми пейте пилянца,
дурде сти малки при мама.
Аз га бях малка при мама
бяла бих като кадъна,
червена като ябълка,
където ходя все пея,
в градинка вляза и пея.
А сега пиленца, а сега,
даде ма майка ми, даде ма
през девет села в десето
при девет млади итърви
и девет зълви се моми,

едно ми младо деверче
и една ми стара свекърва.
Когато почна ляп да меса,
аз меса тя го премиса;
когато почна да пера,
аз пера тя го препира;
когато почнем да межем,
аз мажа тя го премазва;
когати тръгнем на нива
всяка си земе детето,
на мене дават стомните.

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Digital Representation – Music

- The music records consist of authentic performances of folk songs, digitized from old magnetic types (MP3 format files)
- Music, produced by LilyPond system – computer interpretation of the notes (MIDI files)

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Digital Representation – Manuscripts

The handwritten note-books from the research expeditions are presented in a form of page images (jpg format files)

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Meta-data

Based on the expertise of the scientific team of the project the following meta-data components of recorded and notated folk songs were identified and defined:

- title
- context implementation
- genre of the song on a functional basis
- name, date and birthplace of the singer
- name of the recorder
- place and time of the recording

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Search Query
Search Result Table
Google Maps Visualization

Search Engine

The presented here search engine can be used as web
application for keyword-based searching in our library. The
folklore songs are provided as an index of digital content –
lyrics, notes and images. This engine could be used by
professionals in the field of folklore research to look for
common motives, characters and similarities between different
songs. These could be songs from different parts of Bulgaria,
variants of the same song or simply common keywords.

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Search Query

The search engine provides a Google-like web interface that would be used for searching in the library. It uses a search phrase (query) which could contain data as well as meta-data.

Рада

○ в текст по ключови думи ○ в текст, семантично ○ в нотен запис

Търсене

Търсене в 1071 български народни песни

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Search Result Table

The search result table contains the songs that match a given search query

Резултати от търсене за: **Ежте**

Код на песента	Съвпадение	Контекст	Текст	Lilypond нотен запис	PDF нотен запис	EPS нотен запис	Изпълнение	MIDI музика	Изображения
td_136_1_16	0.56	..**Ежте** ми, пейте, пилянца %На хоро %Джиджев:хороводни \begin{multicols}{2} **Ежте** ми, пейте, пилянца, дурде сти малки при мама. Аз, га бях малка при мама, бяла бях като...	.txt	.ly	.pdf	.eps	.mp3	.midi	
td_139_2_10	0.50	%Йелка моmaре дойдаха %Седенкарска (на летни попрелки) %Джиджев:седенкарски \begin......майка \\{и} посрещна и на моmaре думала: -- **Ежте** и пийте, моmaре, и си със здраве...	.txt	.ly	.pdf	.eps	.mp3	.midi	.jpg .jpg
td_170_2_07	0.35	%Посъбра Гълъб, Гълъбо %На хоро %Джиджев:хороводни %%този и следващите записи са.....думаше: %%"Гълъб" вм. "и на" - според записа -- **Ежте** и пийте, дружина, и са в къща...	.txt	.ly	.pdf	.eps	.mp3	.midi	

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Google Maps Visualization

In every step of the search process, a link is provided that could visualize the resulting songs in Google Maps.
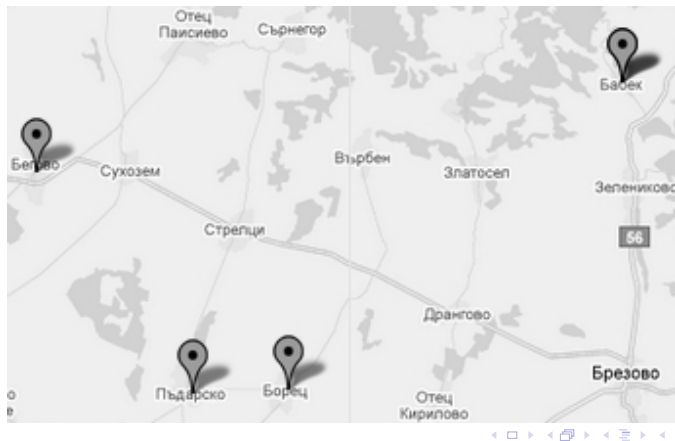
Future Developments
International Collaboration

Our achievements are also a good base for international collaboration in the field of authentic folk songs digitization.

- One perspective is to take in mind the common features of Balkan folklore (Romania, Serbia, Macedonia, Greece, Turkey), and
- other is to attract Cyrillic alphabet countries (Serbia, Macedonia, Bosnia and Herzegovina, Ukraine, Belarus, Russia).

An extended collection of digitized authentic folk songs from several countries can generate many investigations about common roots of popular customs and culture of the people in these countries.

...

:(10k U 4 Ur attention!   :)

http://www.math.bas.bg/or/nkirov/2010/folk/FOLK.html

nkirov@nbu.bg