Ethnopedia: A Flexible System for Collecting and Organizing Ethnomusicological Research Metadata

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Abstract:

Introducing a flexible online environment that allows users to design an adaptable structure of analytical categories of metadata, reflecting the immense diversity of ethnomusicological research practices. It supports the creation of enriched metadata collections and provides advanced search capabilities within and across collections. The tool is accessible through a larger interdisciplinary research platform developed by a consortium of institutions focused on digital humanities, which promotes FAIR data practices and provides a foundation for future harmonization of metadata schemes in digital libraries and linked open repositories.

https://music-put.lab.dariah.pl

Background & Framework

The Challenge with Existing Systems

- Ethnomusicological data is often dispersed, inconsistent and difficult to access.
- Existing digital libraries often rely on fixed metadata schemas that require substantial technical effort to update.
- Rigid constraints in current systems do not align with the dynamic needs of researchers who require on-the-fly record updating.

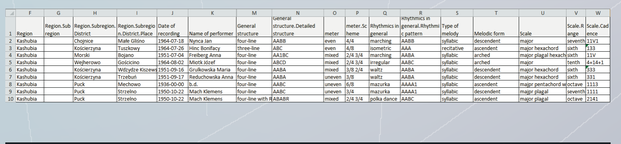
The Ethnopedia Solution

- Ethnopedia serves as a customizable intermediate environment between simple custom tools and professional repositories.
- It supports research-centric flexibility, allowing researchers to annotate data based on specific, individualized research frameworks.
- The system facilitates the sharing of curated datasets while supporting FAIR (Findable, Accessible, Interoperable, Reusable) data practices.

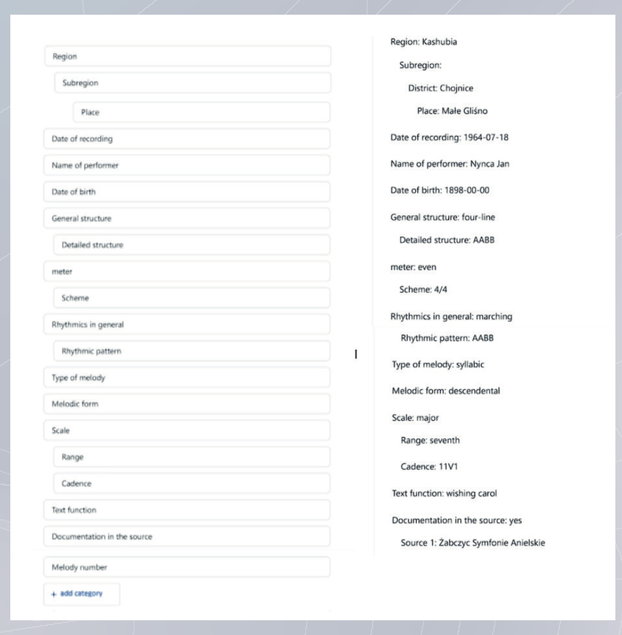
Application Technical Foundation

Case Study: The Kashubia Region Collection

- Ethnopedia is currently used to structure musical metadata for the Kashubia region in northern Poland.
- Researchers manually curate highly specific analytical metadata categories rather than relying on standard, rigid descriptors.



	F	G	H	I	J	K	M	N	O	P	Q	R	S	T	U	V	W
1	Region	Region.Subregion	Region.Subregion	Region.Subregio	Date of		General	General structure.Detailed		meter.Sc	Rhythmics in	Rhythmics in general.Rhythm	Type of			Scale.R	Scale.Cad
2	Kashubia		Chojnice	Małe Gliśno	1964-07-18	Nynca Jan	four-line	AABB	even	4/4	marching	AABB	syllabic	descendent	major	seventh	11V1
3	Kashubia		Kościerzyna	Tuszkowy	1964-07-26	Hinc Bonifacy	three-line	ABC	even	4/8	isometric	AAA	recitative	ascendent	major hexachord	ioth	333
4	Kashubia		Morzeszczyn	Bojano	1951-07-04	Predweg Anna	four-line	AA1BC	mixed	2/4 3/4	marching	AABA	syllabic	arched	major pilagal hexach	ioth	337
5	Kashubia		Wejherowo	Gościcino	1964-08-02	Morń Józef	four-line	ABCD	mixed	2/4 3/4	irregular	AABC	syllabic	arched	major	tenth	4+14+1
6	Kashubia		Kościerzyna	Wiltyńte Kiszewy	1951-09-16	Grudkowska Maria	four-line	AABA	mixed	3/8 2/4	waltz	AABA	syllabic	descendent	major hexachord	ioth	333
7	Kashubia		Kościerzyna	Trzebun	1951-09-17	Redzichowska Anna	four-line	AABA	uneven	3/8	waltz	AABA	syllabic	descendent	major hexachord	ioth	331
8	Kashubia		Puck	Mechowo	1934-00-00	b.d.	four-line	AABC	uneven	4/8	mazurka	AAAA1	syllabic	ascendent	major pentachord-ed	octave	1113
9	Kashubia		Puck	Strzelno	1950-10-22	Mach Klemens	four-line	AABC	uneven	3/4	mazurka	AAAA1	syllabic	descendent	major plagal	seventh	1111
10	Kashubia		Puck	Strzelno	1950-10-22	Mach Klemens	four-line with R	AABABR	mixed	2/4 3/4	polka dance	AABC	syllabic	ascendent	major plagal	octave	2141



Technical Implementation

- The system utilizes a non-relational MongoDB database.
- Mongo document-oriented NoSQL framework is highly flexible and well-suited for dynamically structured environments.
- All resource data is represented as transparent JSON objects, enabling adaptable data models.
- Interoperability is supported through Excel-based import/export functions and integration of the OAI-PMH protocol.

Unprecedented Metadata Flexibility

Dynamic Hierarchical Architecture

- Researchers can independently define custom metadata fields and hierarchical structures to align with their specific methodologies.
- The underlying data architecture utilizes a hierarchical tree-like model.
- Users can establish main categories and subcategories tailored to the precise needs of individual collections.

On-The-Fly Customization

- The creation of a collection begins with defining categories across multiple hierarchical levels via a user-friendly drop-down menu.
- Users can modify existing categories or introduce entirely new subcategories and metadata elements as required.
- Users can establish main categories and subcategories tailored to the precise needs of individual collections.

Advanced Discovery

- The flexible metadata framework supports targeted, advanced searches within individual collections.
- Researchers can perform cross-collection queries to facilitate comparative studies across diverse metadata sets.

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