DEVELOPING **SYMBOLIC AND AUDIO DATA ANALYSIS MODULES** FOR A PROTOTYPE TRADITIONAL MUSICC REPOSITORY

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MIR MUSIC INFORMATION RETRIEVAL

DARIAH - PL Working Group

THE OBJECTIVE of DARIAH-PL Music Information Retrieval Working Group is to develop **a virtual research environment** based on the archives of Polish traditional music and dLibra Digital Library Framework, **to support researchers and educators, media professionals and artists, citizen scientists and general public** working with music content.

Content Managers

Supervised content acquisition and processing

Music Archives

Phonographic collections and digitized databases Music scores and descriptors

Documents

Videos

Photographs

Institute of Art PAS traditional music archives

/// Field recordings collected over a period of 100 years

/// Symbolic music representation collection

dLibra - DIGITAL LIBRARY FRAMEWORK

Complex content structure

- Content hierarchies and object grouping
- Multi-level collections
- Many parallel media formats

Flexible metadata schema

- Descriptive, technical and administrative metadata
- Configurable schemas
- Metadata interoperability and API access

Search and browse features

- Basic and advanced search
- Facet filtering and API access
- Metadata index browsing and searching
- Collection browsing

IAPAS - POLISH TRADITIONAL MUSIC COLLECTIONS

Symbolic music transcript acquisition and processing

- Oscar Kolberg collection – 20 000 tunes and songs

Historic field recordings digitization

- Folk Music Collecting Campaign (1950-54) – 46 000 recordings
- Archival collections held by libraries, radio and TV broadcasters, museums, regional cultural organizations, fundations, private collectors

Present field recording activities

- IAPAS regional recording projects - phonographic, audiovisual and photographic documentation

Polish traditional music

Repository

Preserving and sharing

MUSIC INFORMATION RETRIEVAL

Browsing

- Presentation of various music formats
- Presentation of related documents
- Audio analysis visualization
- Geo-browser

Search and retrieval

- Advanced multi-criteria search based on symbolic notation, audio content and metadata
- Music score and description similarity evaluation
- Audio identification

MUSIC PROCESSING

Automatic music description

- Acoustic audio analysis
- Music transcription (SoundSubscribe)
- Symbolic notation conversion and analysis (WebEsAC)
- Source identification and separation (instrumental, vocal)
- Song lyrics extraction

Music analysis

- Description verification and modification
- Classification and auto -tagging
- Audio alignment
- Morphologic analysis

WebEsAC

- Web-based management of folk music collection
- EsAC representation of structure and melody
- EsAC-to-MIDI converter for aural verification
- Symbolic representation syntax validation
- Scale extraction and melodic line conversion into intervals
- Scale-types and rhythmic bar structure statistics

SoundScribe

- Automatic melody transcription with pYIN algorithm for audio files
- Symbolic melody notation
- Melody transcription conversion into MIDI
- Fundamental frequency values
- GUI for verification and manual correction
- Integration with dLibra based MIR repository

OTHER REPOSITORIES

Citizen Scientists, Artists

Artistic inspiration, educational and cognitive use

- Multicultural influences and similarities
- Folk music influence on other genres

Researchers

Ethnomusicological research contextual, statistical, cognitive

- Environmental influence on music style
- Modern folk music transformation
- Digital media influence on folk music performance

OTHER REPOSITORIES

POLISH ACADEMY OF SCIENCES INSTITUTE OF ART

PSNC

UAM

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