JAMENDO MUSIC PORTAL
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MUSIC ONTOLOGY

- **Level 1:** aims at providing a vocabulary for simple editorial information (tracks/artists/releases, etc.)
- **Level 2:** aims at providing a vocabulary for expressing the *music creation workflow* (composition, arrangement, performance, recording, etc.)
- **Level 3:** aims at providing a vocabulary for complex event decomposition, to express, for example, what happened during a particular performance, what is the melody line of a particular work, etc.

Interlinking music-related information on the web of data
Music ontology metadata used in Jamendo

FOAF Basics
- Agent
- Person
- name
- nick
- title
- homepage
- mbox
- mbox_sha1sum
- img
- depiction (depicts)
- surname
- family_name
- givenname
- firstName

MO Basics
- MusicalWork
- MusicalExpression
- MusicalManifestation
- MusicalItem
- Composition
- Recording
- Arrangement
- MusicArtist
- SoloMusicArtist
- MusicGroup
- CorporateBody
- Label

MO Record Types
- ReleaseType
- release_type
- album
- audiobook
- compilation
- ep
- interview
- live
- soundtrack
- spokenword
- remix
- encoding
Music ontology metadata used in Jamendo

MO Signal Relationships
- Signal
- DigitalSignal
- AnalogSignal
- bitsPerSample
- channels
- puid
- sampleRate
- sampled_version_of
- signal time
- tmid

MO Record Relationships
- Record
- Track
- track
- track_number

MO External web document links Relationships
- image
- biography
- discography
- fanpage
- myspace
- review
<!DOCTYPE rdf:RDF [
<!ENTITY dc 'http://purl.org/dc/elements/1.1/'>
<!ENTITY event 'http://purl.org/NET/c4dm/event.owl#'>
<!ENTITY foaf 'http://xmlns.com/foaf/0.1'/>
<!ENTITY mo 'http://purl.org/ontology/mo'/>
<!ENTITY rdf 'http://www.w3.org/1999/02/22-rdf-syntax-ns#'>
<!ENTITY tags 'http://www.holygoat.co.uk/owl/redwood/0.1/tags/'>
<!ENTITY time 'http://www.w3.org/2006/time#'>
<!ENTITY tl 'http://purl.org/NET/c4dm/timeline.owl#'>
<!ENTITY xsd 'http://www.w3.org/2001/XMLSchema#'>
]>
JAMENDO RDF EXAMPLES

- Music Artist - Vincent J

- <rdf:RDF>
  - <mo:MusicArtist rdf:about="http://dbtune.org/jamendo/artist/1005">
    <serql:directType rdf:resource="http://purl.org/ontology/mo/MusicArtist"/>
    <rdf:type rdf:resource="http://www.w3.org/2000/01/rdf-schema#Resource"/>
    <foaf:based_near rdf:resource="http://sws.geonames.org/3020781/"/>
    <foaf:homepage rdf:resource="http://v.joudrier.free.fr/SiteV"/>
    <foaf:made rdf:resource="http://dbtune.org/jamendo/record/1186"/>
    <foaf:name rdf:datatype="http://www.w3.org/2001/XMLSchema#string">vincent j</foaf:name>
  </mo:MusicArtist>
  - <rdf:Description rdf:about="http://dbtune.org/jamendo/record/1186">
  </rdf:Description>
</rdf:RDF>
JAMENDO RDF EXAMPLES

- Album – First Dub

```xml
- <rdf:RDF>
  - <rdf:Description rdf:about="http://dbtune.org/jamendo/artist/1025">
    <foaf:made rdf:resource="http://dbtune.org/jamendo/record/2931"/>
  </rdf:Description>
  - <mo:Record rdf:about="http://dbtune.org/jamendo/record/2931" dc:date="2006-09-29 18:06:24">
    <mo:available_as rdf:resource="http://www.jamendo.com/get/album/id/album/p2p/redirect/2931/?p2pnet=bittorrent&are=mp32"/>
    <mo:available_as rdf:resource="http://www.jamendo.com/get/album/id/album/p2p/redirect/2931/?p2pnet=bittorrent&are=ogg3"/>
    <mo:image rdf:resource="http://img.jamendo.com/albums/2931/covers/1.300.jpg"/>
    <mo:track rdf:resource="http://dbtune.org/jamendo/track/20940"/>
    <mo:track rdf:resource="http://dbtune.org/jamendo/track/20942"/>
    <tags:taggedWithTag rdf:resource="http://dbtune.org/jamendo/tag/roots"/>
    <tags:taggedWithTag rdf:resource="http://dbtune.org/jamendo/tag/rythme"/>
    <dc:title rdf:datatype="http://www.w3.org/2001/XMLSchema#string">First Dubs</dc:title>
    <serql:directType rdf:resource="http://purl.org/ontology/mo/Record"/>
    <rdf:type rdf:resource="http://www.w3.org/2000/01/rdf-schema#Resource"/>
  </mo:Record>
</rdf:RDF>
```
JAMENDO MUSIC PORTAL

- Portal is implemented in Java using jetty (http server)
- User can query by artist name, album name and tags
- Query Jamendo using SPARQL end point
- Along with information from Jamendo, information from last.fm is also retrieved.
JAMENDO SPARQL QUERIES

- Query for music artist information

```
PREFIX geo: <http://www.geonames.org/ontology#>
PREFIX wgs:<http://www.w3.org/2003/01/geo/wgs84_pos#>
PREFIX mo: <http://purl.org/ontology/mo/>
PREFIX foaf: <http://xmlns.com/foaf/0.1/>
PREFIX dc: <http://purl.org/dc/elements/1.1/>
SELECT DISTINCT ?hp ?image ?bio
WHERE { ?a
  a mo:MusicArtist;
  foaf:name "vincent j".
  OPTIONAL {?a foaf:homepage ?hp}.
  OPTIONAL {?a foaf:img ?image}.
  OPTIONAL {?a mo:biography ?bio}
};
```
JAMENDO SPARQL QUERIES

- Query for album names for a music artist

```sparql
PREFIX geo: <http://www.geonames.org/ontology#>
PREFIX wgs:<http://www.w3.org/2003/01/geo/wgs84_pos#>
PREFIX mo: <http://purl.org/ontology/mo/>
PREFIX foaf: <http://xmlns.com/foaf/0.1/>
PREFIX dc: <http://purl.org/dc/elements/1.1/>
SELECT DISTINCT ?albtitle
WHERE { ?a
  a mo:MusicArtist;
  foaf:name "vincent j".
  foaf:made ?alb.
};
```
JAMENDO SPARQL QUERIES

- Query for album name

```sparql
PREFIX geo: <http://www.geonames.org/ontology#>
PREFIX wgs:<http://www.w3.org/2003/01/geo/wgs84_pos#>
PREFIX mo: <http://purl.org/ontology/mo/>
PREFIX foaf: <http://xmlns.com/foaf/0.1/>
PREFIX dc: <http://purl.org/dc/elements/1.1/>
WHERE { ?a
  a mo:MusicArtist;
  foaf:name ?artistname ;
  foaf:made ?alb.
  ?alb dc:title "First Dub".
  OPTIONAL {?a foaf:img ?image}.
  OPTIONAL {?a foaf:homepage ?hp}.
};
```
JAMENDO SPARQL QUERIES

Query for tags

```
PREFIX geo: <http://www.geonames.org/ontology#>
PREFIX wgs:<http://www.w3.org/2003/01/geo/wgs84_pos#>
PREFIX mo: <http://purl.org/ontology/mo/>
PREFIX foaf: <http://xmlns.com/foaf/0.1/>
PREFIX dc: <http://purl.org/dc/elements/1.1/>
SELECT DISTINCT ?an ?albtitle
WHERE { ?a
  a mo:MusicArtist;
  foaf:name ?an;
  foaf:made ?alb.
  ?alb tags:taggedWithTag
  ?alb dc:title ?albtitle .};
```
DEMO

ARTIST NAME:  Margin of Safety

Members: Mika Hiironnniemi - Drums and percussions Petri Koivistoinen - Bass Jari Schroderus - Guitar & Vocals Though Margin of Safety was conceived as a thought by myself and Mika much earlier, Pete came into the picture in the first half of 2005 and the trio played it's first notes together in April 2005. I'm not sure about the exact date, so it might as well be 1st of April. Margin of Safety has recorded three albums of improvisation and one of more traditional songs. They are about to start recording their fifth album NOW. Check out Margin of Safety on other sites: http://www.myspace.com/marginofsafety
http://www.last.fm/music/Margin+of+Safety

ALBUM 1:  Gonzo Jazz
ALBUM 2:  Where's the Station?
ALBUM 3:  Bulbus
ALBUM 4:  Dream Traps & Black Cats
DEMO

TRACK 1: Sideburn
TRACK 2: Funky Kaftan
TRACK 3: Gonzo Jazz Part 1
TRACK 4: Charming Snakes
TRACK 5: And There Is Always Music In The Air
TRACK 6: Sunday Morning
TRACK 7: Gonzo Jazz Part 2 - Make It Bonk!
TRACK 8: Strap-on Duck
TRACK 9: Percussion Hammer
TRACK 10: GJ3 - Disco Pneumonia
TRACK 11: Is It Pink Yet?
TRACK 12: What Time It Is
TRACK 13: Where's The Station?
TRACK 14: Drive
TRACK 15: Sometimes Magic
TRACK 16: Relief
TRACK 17: Soft Edges (including "A Lullaby for Eternal Lie")
TRACK 18: The Shimmering
TRACK 19: Shapes of Gray
TRACK 20: Crimson Construction, Pt. 1 Pigs are Red and Violets are Blue
FUTURE WORK

- Integrate information from yahoo music portal
- Provide query for track names and some more fields
REFERENCES

- http://dbtune.org/jamendo/
- http://musicontology.com/
- http://xmlns.com/foaf/spec/
- http://www.mortbay.org/jetty/
- http://www.w3.org/TR/rdf-sparql-query/
- http://www.last.fm/home
- http://info.slis.indiana.edu/~dingying/S636Fall2009.html
Thank You

Questions?