Metadata for Intangible Cultural Heritage
The Case of Folk Dances

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Abstract: It is a fact that states and international organizations are trying to protect and promote intangible cultural heritage. According to UNESCO intangible cultural heritage includes traditions or living expressions inherited from our ancestors and passed on to our descendants. Folk dances are an important part of our intangible cultural heritage, so there is a need to promote and protect them to inherit to the next generations. Beyond digitization of various elements of the dance, proper documentation requires to analyse them (either manually or automatically) and describe all important elements using appropriate metadata. However, although different metadata schemas have been defined in the area of cultural heritage, most are suitable only for tangible heritage, and cannot properly describe elements of intangible cultural heritage. The present study proposes a new metadata schema for describing different elements of folk dance.

1 INTRODUCTION

In the area of cultural heritage, a number of metadata standards have been defined allowing the documentation and indexing of cultural information, thus facilitating search and providing access to the information for researchers, experts and/or the general public.

Metadata information can either be generated either manually by expert annotation or by automated multimedia analysis. In the cultural heritage domain, automated extraction of metadata has been extensively used in the past decades as a means of automatic indexing the multimedia cultural content. This necessity, grows even, more these days considering the popularity of digitizing cultural content for purposes such as safeguarding, capturing, visualizing and presenting both tangible and intangible resources that broadly define that heritage. Especially for Intangible Cultural Heritage, the task of metadata extraction becomes even more challenging, since the significance of heritage artefacts extends also to the preservation of the background knowledge that puts these artefacts in proper perspective.

Terpsichore is a European Research Project that focuses on the analysis of Intangible Cultural Heritage. The main purpose of Terpsichore project (A. Doulamis *et al.*, 2017) is to digitize, model, archive, e-preserve and present Intangible Cultural Heritage content related to folk dances. The project aims to develop Web-based cultural server/viewer with the purpose to allow user's interaction, visualization, interface with existing cultural libraries. Moreover, the proposed framework should address many different needs of the potential users, i.e. dance professionals, dance teachers, creative industries, general public, researchers and media producers. For instance, we should consider the needs of these different users e.g. to search for information on a particular dance, learn how to dance, have the possibility to view the technical details of the digitization process. In addition, users want to retrieve dances with specific criteria such as steps, lyrics, rhythm, region. Metadata play a vital role in achieving all these goals because they encode the aforementioned data and allow the user to retrieve and view structured information from the cultural server.

The Terpsichore project is about Intangible Cultural Heritage. Organizations such as UNESCO and the European Union try to preserve and disseminate Intangible Cultural Heritage. UNESCO adopted in 2003 the Convention for the Safeguarding

of the Intangible Cultural Heritage to protect and promote intangible cultural heritage. Among the cultural items included in the UNESCO lists of Intangible Cultural Heritage are traditional dances. To maintain the choreography of the traditional dances, especially in the era of the Internet, it is necessary for transmitting these dances in the next generations.

The paper describes the meaning of metadata and Intangible Cultural Heritage focusing on folk dances. Then we review the corresponding state-of-the-art in metadata schemes for Intangible Cultural Heritage, especially in folk dance case. We conclude with the proposed metadata schema, properly adapted to the Terpsichore's data and to the user's needs.

2 METADATA

Analysing the word metadata, meta and data, we can conclude that metadata is data about data. In other words, metadata is documentation that describes data (Research Data Management Service Group, no date). According to Merriam-Webster online dictionary metadata are data that provides information about other data (*metadata*, 2017). Greenberg (Greenberg, 2003) gives a functional definition of metadata and describe as structured data about an object that supports functions associated with the designated object. The definition mentioned above about metadata includes the aspect of structure, with a meaning of information organized systematically, usually with the use of metadata schemas (Sicilia, 2014). As a metadata schema, according to ISO 23081, we can define a logical plan showing the relationships between metadata elements. The schemes are the basis for metadata standard because we are based on metadata scheme to develop to a metadata standard.

Libraries first used metadata to retrieve and locate the material in their collection. So, metadata main purpose is to assist users to locate information and discover resources. Moreover, metadata are vital in electronic resource organization and digital preservation of resources and information.

In addition to these, metadata play an important role in the cultural heritage world. Libraries, archives and museums create and use structured metadata. Archives use metadata in order to describe their collections and document with historical information. Libraries focus on bibliographic metadata and museums use them to interpret collections and explain the relation between the objects (Riley, 2017). Furthermore, information professionals, creators and users of digital content recognize that metadata can ensure accessibility, interoperability and preservability of cultural heritage information and record-keeping systems. Cultural heritage information professionals use metadata to enhance access to information objects (Baca, 2016).

According to Library of Congress, we can distinguish three types of metadata: descriptive, structural, and administrative. Descriptive metadata have as a purpose to help users to identify, search and locate information and objects like title, author. Structural metadata are used to describe the relationship between the part of a resource. Administrative metadata provides information to help manage a resource, such as when and how it was created, file type and other technical information, and who can access it (Library of Congress, no date). Moreover, metadata may include another two types that contain information about access rights and restrictions that ensure the long-term preservation and access to the information resources. The preservation metadata can include details about format migration and data refreshment (Hillmann, Marker and Brady, 2008).

3 INTANGIBLE CULTURAL HERITAGE

The Convention for Safeguarding the Intangible Cultural Heritage defines it as the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity (Stefano and Davis, 2017)

Moreover, intangible cultural heritage covers the domains of:

- Oral traditions
- Performing arts
- Social practices
- Rituals
- Festive events

Knowledge and practices concerning nature and the universe or the knowledge and skills to produce traditional crafts (UNESCO, no date).

UNESCO give attention to dance as a part of Intangible Cultural Heritage, so dances are included either in the Representative List or the Urgent Safeguarding List. The UNESCO lists include dances like Argentinean tango, Spanish flamenco, Chhau dance from India, Bigwala music and dance from Uganda, Huaconada from Peru (Iacono and Brown, 2016). From the above, we can conclude the importance of protecting and transmit to other generations the intangible cultural and especially the dance. The World Intellectual Property Organization (World Intellectual Property Organization, 2017) point the importance of promoting and respecting traditional cultures and expressions will benefit people, local communities and nations. The protection of cultural expressions could contribute toward the promotion of innovation.

Digitization with the help of new technology offers the possibility to document, record the intangible cultural heritage, due to the fact that heritage elements that are not so visible and disappear we can preserve in a visual and digital format (Yang, 2015). However, digital documentation of intangible heritage, data formats and standards, metadata and semantics, linked data, crowdsourcing and cloud, the use and reuse of data and copyright issues are the rising challenges (Doulamis *et al.*, 2017).

Taking forward this idea, i-Treasures project (Dimitropoulos *et al.*, 2014) explored the challenges and opportunities that emerge when considering the safeguarding of intangible heritage from a technological perspective. I-Treasures developed an open and extendable platform to provide access to intangible cultural heritage resources for research and education. The system is based on the identification of specific features or patterns (e.g. postures, audio patterns, etc.) using multi-sensor technology (e.g. cameras, microphones, EEG etc.) from different ICH forms. Subsequently, data fusion analysis is applied to exploit information across different modalities, while context and content are integrated for mapping the set of low or medium-level multimedia features to high-level concepts using probabilistic inference, i.e. transforming the extracted data into a level of interpretation that is understandable by humans. This information, coupled with other cultural resources, is accessible via the i-Treasures platform (an open-source CMS), in order to enable the widest possible participation of communities, groups and individuals in the safeguarding of ICH. The platform gives access to different types of content (e.g. text, audio, images, video, 3D graphics) from different types of heritage or educational institutions. Furthermore, using the latest advances in web-based game engines, a learning environment is developed to enhance training and evaluation of the learner's performance by means of sensorimotor learning.

In addition to these, safeguarding intangible heritage should include locating the heritage and pay attention to heritage elements that are in a danger of disappearing. Another step is to catalogue and deposit in a local or national digital platform in order to spread the knowledge to the internet, also to preserve and conserve for the society (Artese and Gagliardi, no date)

As mentioned before, folk dance is an essential part of Intangible Cultural Heritage. It is important to define dance and especially folk dance more definitively. According to Merriam-Webster a folk dance is a dance that originates as a ritual among and is characteristic of the common people of a country and that is transmitted from generation to generation ('folk dance', no date). In addition, we can define dance (as cited in Wong, 2013) as rhythmic or patterned movement. Royce expands the aforementioned definition and describes dance as patterned movement performed as an end in itself (Royce, 1977). From the above we can conclude that dance movements or choreography is the basis for a dance.

It is a fact that it is not easy to define the meaning of folk dance. Folk dance was part of a community life and had an important function. According to Hoerburger (Hoerburger, 1968), folk dance had as a purpose the pleasure or the recreation. In addition to these, we can broaden the definition of folk dance and include a variety of dance forms which survive as, or are based on, local or national tradition. These dances with their music, which may be sung or played upon 'folk' instruments, have been passed from generation to generation and have acquired through tradition the stable and identifiable forms that we know today (Hoerburger, 1968).

Furthermore, Encyclopaedia Britannica (Kealiinohomoku, 2017) defines the term folk dance and analyse examples of folk dances from European countries, also Hawaiian dance and Korean dance focusing on the movements of the dance, the rhythm of the music and the clothes the dancers wear. In an extended analysis of Snodgrass (Snodgrass, 2016) about the folk dances across the world, the author describes the history and origin of each and summarize the same features of each dance as the Encyclopaedia Britannica.

4 INTANGIBLE CULTURAL HERITAGE METADATA

Various research efforts are focusing on digitization, archiving and preservation of intangible cultural heritage and performing-art content. I-Treasures was a European project that had as a purpose to develop an open and extendable platform to provide access to ICH resources. On that framework, the project had as a purpose to propose novel methodologies and new technological paradigms for the analysis and modelling of ICH. The project focused on four different cases of ICH a) Rare Traditional Songs, b) Rare Dance Interactions, c) Traditional Craftsmanship and d) Contemporary Music Composition (Adistambha *et al.*, 2012). In the i-Treasures project, the metadata schema for their platform used a combination of Dublin Core Metadata Element Set, i-Treasures Model, ESE – Europeana Semantic Elements (Manitsaris, 2015).

Another European research project related to ICH and especially to dance is Wholodance. Wholodance has a purpose to develop and apply breakthrough technologies to Dance Learning. The result of the project will benefit dance practitioners ranging from Researchers and Professionals to Dance Students and the Interested Public. In the project, they will investigate bodily knowledge by applying techniques for the automated analysis of dance movements. Moreover, they will capture the dance motion in order to create virtual bodies that will enhance the teaching of a dance and give the choreographers the opportunity to create new choreographies (*Wholodance website Official*, no date). To achieve the aforementioned goals in their research about ontological representation of dance movement El Raheb et.al. (Raheb *et al.*, 2016) (Raheb *et al.*, 2017) use OWL to assign annotations representing movement sequences of a dance-recording video.

In an extended research about metadata in digital folklore collections, Lourdi (Lourdi, 2010) concluded that main metadata standards used for cultural heritage collections are Dublin Core Metadata Element Set (DC), Dublin Core Collections Application Profile (DCCAP), Metadata Encoding and Transmission Standard (METS), Categories for the Description of Works of Art (CDWA), VRA Core Record (VRA Core Record), Machine Readable Cataloguing (MARC), Text Encoding Initiative (TEI), Encoded Archival Description (EAD), Metadata Object Description Schema (MODS), RSLP Collection Description (RSLP), CIDOC/CRM.

Dublin Core Metadata Element Set has the purpose to exchange and retrieve information for the digital objects in the web. The Dublin Core consists of 15 metadata elements and with the help of Dublin Core Qualifiers we can extend the prototype to adjust the needs of the collection it is necessary to describe (Dublin Core Metadata Initiative, 2000). In a research (Ye and Zhou, 2013) to suggest a metadata standard for Chinese Intangible Cultural Heritage, the scientists analysed the mainstream metadata standards systems such as ISAD (G), Encoded Archival Description, International Standard Archival Authority Record, Encoded Archival Description, Text Encoding Initiative and Dublin Core. Furthermore, they examined the parameter that metadata standard should reflect the cultural value of intangible cultural heritage and the UNESCO guidelines for the world heritages convention they suggested a scheme based on Dublin Core with 14 metadata elements and 67 filed names.

Kettula and Hyvönen (Kettula and Hyvönen, 2012) in their study to describe with metadata a video that contains a craft process of shoemaking, moved from an object-oriented approach to an event-centric approach. The crafting process was presented in six main sequences which were annotated with a keyword at the start and at the end of the film. The metadata schema that they used to describe the shoemaking process is based on an RDF ontology. The RDF graph gives the possibility to link to other digital objects such as nails and leather objects.

Kannan et al. (Kannan, Andres and Guetl, 2010) (Kannan *et al.*, 2011) in their research they developed a dance information system, called DanVideo, that gives users the opportunity to retrieve dance videos from semantic metadata. In order to build the architecture of the system, the researchers used the MPEG-7 metadata standard to annotate dance videos. Moreover, they examined what users wish to search for in the system and they concluded that dance learners and viewers would like to have the possibility to search for emotions expressed by the dancers, the history of the dance, recording location, the origin country of the dance, the song that accompanies the dance and the costumes of the dancers.

Mallik et al. (Mallik *et al.*, 2013) (Mallik, Chaudhury and Ghosh, 2011) in their research focused on annotation in MPEG video on Indian dances. In their approach, they created an ontology that correlates heritage resources and multimedia data. In order to construct the ontology, they used the Multimedia Web Ontology Language (MOWL) to annotate new multimedia objects.

Stavrakis et al. (Stavrakis *et al.*, 2012) (Aristidou, Stavrakis and Chrysanthou, 2014) in their effort to

digitize Cypriot folk dances so local community and especially young people to learn folk dances created a dance database schema and for each dance entry the metadata they used was the name of the dance, the type of the dance, the region the dance originates and a description.

Kim (Kim, 2011) developed ChoreoSave, a prototype online system by analysing a dance work into components that are then represented using the EPrints software (http://software.eprints.org). In order to define the metadata standard for the ChoreoSave online system, Kim conducted a research in 14 digital library programs and concluded that the most common metadata standards mentioned were METS, Dublin Core and combinations of metadata standards. The metadata fields for the ChoreoSave included the name of the choreographer, the title of the dance, a set of performers, musical or sound accompaniment and a movement vocabulary.

The PREMIS Data Dictionary for Preservation Metadata (The Library of Congress, 2016c) is an international standard for metadata that was developed to support the preservation of digital objects/assets and ensure their long-term usability. PREMIS metadata standard has been adopted globally in various projects related to digital preservation. It supports numerous digital preservation software tools and systems. The CIDOC Conceptual Reference Model (CRM) (International Organization for Standardization, 2014a), an official standard since 9/12/2006, provides the ability to describe the implicit and explicit relationships of cultural heritage concepts in a formalized manner. Thus, CIDOC CRM is intended to promote a common understanding of cultural heritage information by providing a common and extensible semantic framework that can represent any cultural heritage information. It is designed to be a common language for cultural knowledge domain experts to formulate user requirements for information systems, and thus, facilitating in this way the interoperability between different sources of cultural heritage information in a semantic level.

Tan et al. (Tan, Sun and Zhong, 2009) in an effort to represent the knowledge comes from the dance called "Funeral Dance" they created an ontology based on CIDOC CRM. Moreover, according to the system the designed, the concepts and properties of this filed can be selected from CRM. In addition to these, to construct their domain ontology, all concepts, properties and instances are designed by using Web Ontology Language (owl).

5 DATA FOR DIGITAL CHOREOGRAPHIC MODEL

From the metadata definition, we can conclude that it is important to define the data accurately in order to construct the metadata schema. The main goal of the Terpsichore project is the digitization and 3D representation of traditional dances performances. These performances include elements such as the dancer and the dance it is performed (music, lyrics, choreography, etc.). A proposed categorization of the data elements that are essential for the project are illustrated in Fig. 1. From the figure, we can observe that it is necessary to deal with complex and a variety of data including both descriptive data about the traditional dance being performed, as well as data from recording and 3D representation. Specifically, if we examine Figure 1, as seen above onwards, the dance include data about the country/region of origin and its history, the music, including the rhythm, the score, as well as the lyrics, and the choreography described by the Labanotation (Hatol, 2006). In addition to these for recording, it is important to collect data such as the number and the kind of sensors, the calibration parameters, the recording software and the data from recording. The next category includes the 3D environment of the digital representation and the data from that category are the description of the scene, the lighting, as well as objects (e.g. stick, sickle) that may be present or used during the performance of the dance. Finally, the data for the dancer digital representation, include the gender, the costume of the dancer, the body shape, body motion features and the face expressions.

6 PROPOSED METADATA FOR DIGITAL CHOREOGRAPHIC MODEL

After the analysis of the data, it is important to define the metadata elements that will describe this data. The Table 1 is an initial attempt to determine the metadata in the metadata scheme.

Specifically, it is important to mention that dance can be performed in different places, for example, we may have a performance of the traditional Greek dance Kalamatianos in a theatre or in a festival. In both circumstances, the dance is the same, but the recording and the 3D representation is totally different. From the above, we can conclude that for the proposed metadata schema we can follow the
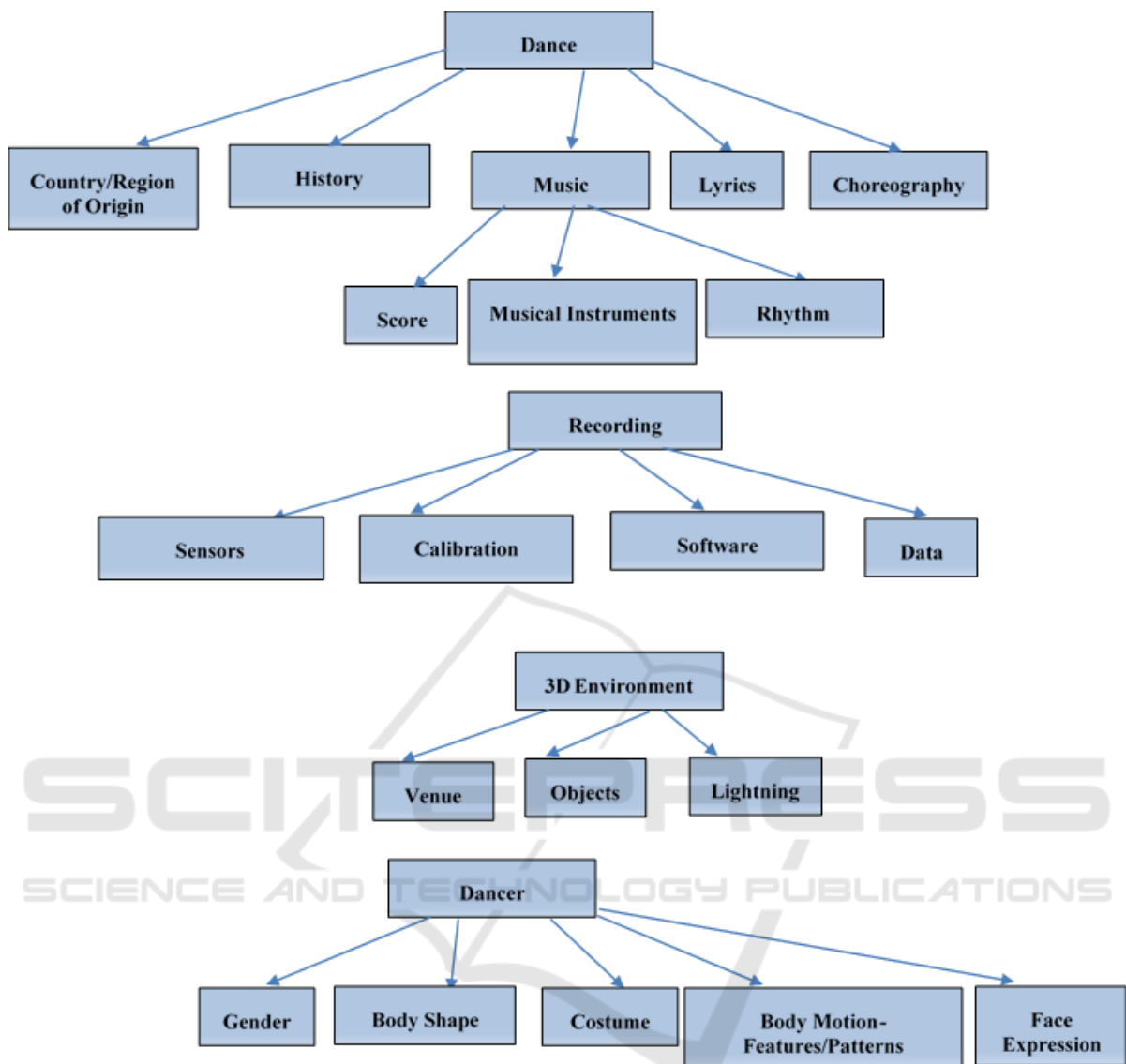
Figure 1: Dance data description scheme.

logic of the FRBR schema. FRBR is a conceptual entity-relationship model that is oriented to achieve a more holistic approach to retrieval and access from a user's perspective. The main group entities are work, expression, manifestation, and item. Work is a distinct intellectual or artistic creation. Expression is the specific intellectual or artistic form that a work takes each time it is realized. Manifestation is the physical embodiment of an expression of a work. Item is a single exemplar of a manifestation (IFLA Study Group on the Functional Requirements for Bibliographic Records, 1998). In our case the work is the dance, the expression is the varieties of the dance and the manifestation is the recording of a venue a dance is performed. Moreover, we use the FRBR

logic because we can create a record three levels work, expression, manifestation. The logic of three levels gives the possibility to create a record that describes the metadata of the dance and in that record to embody all the records referring to that dance. From our previous example we can create a record that describes the traditional Greek dance Kalamtianos and in that record the user can find all the recordings of the project Terpsichore.

From the previous analysis we have the structure of the proposed metadata schema. Moreover, it is important to define the encoding of the metadata. Here we should examine the metadata schemas that can be used in ICH. We can conclude that METS is focused on encoding descriptive, administrative, and

Table 1: The proposed metadata for the metadata scheme.

Dance	Recording	3D Environment	Dancer
Title	Title	Venue description	Gender
History	Description	Objects and their description	Face Expression
Country/Region of Origin	Location in GPS format and human readable	Description of the lightning	Traditional costume description
Time of origin	Number of sensors		
Dance variations	Sensor type and characteristics		
Music motif	Calibration		
Lyrics	Software		
Dance annotation			

structural metadata usually in a digital library, so it is not oriented to describe intangible cultural Heritage (Library of Congress, 2016). From the examples (The Library of Congress, 2016b) of the implementation of METS by the Library of Congress, we can clearly understand that METS orientation is on tangible items than intangible, so it is not an appropriate metadata schema to encode our metadata elements. MODS and MARC are schemes that are widely used by libraries and have as a purpose to describe bibliographic elements. According to the guidance of the Library of Congress (The Library of Congress, 2016a) we can easily understand that MODS is not suitable for encode metadata elements for the case of traditional dances. EAD is focused on describing archival collections. From the best practice guideline of EAD (Research Libraries Group, 2002) we can easily conclude that EAD is referring to archive description and not to describe intangible cultural heritage. RSLP is a metadata model for the description of collections and is a prototype that can replace EAD based on DC (Lourdi, 2010). CDWA is a metadata set that contains guidelines for the description of art, architecture, and other cultural works. CIDOC/CRM is a metadata for the exchange of information between cultural heritage institutions (International Organization for Standardization, 2014b).

Hence, it is necessary to define a new metadata standard to that will encode all the metadata elements previously referred to the table 1. Since we have a variety of metadata elements it is not easy to cover the encoding of all these elements with a single metadata schema. The Dublin Core is a metadata schema that can be used as interoperable metadata standard and structural framework. Dublin Core is widely used in digital libraries and used by the OAI-PMH standard as a protocol (Kennedy, 2008). The OAI-PMH is a protocol that used by many digital libraries and the Europeana (Europeana, no date) to harvest metadata from other digital libraries. With the help of Dublin Core, we can encode elements of the dance such as title, history, country/region of origin, time of origin. Moreover, we can use MusciXML (Makemusic, 2017) to describe and encode musical motifs. Text Encoding Initiative (TEI) (*TEI: Text Encoding Initiative*, no date)is a metadata standard we can use to encode the lyrics of the traditional dance song. TEI is a standard for the representation of texts in digital form.

MovementXML (Hatol, 2006) is based on LabanXML (Nakamura and Hachimura, 2006) and has as a purpose to represent in XML-based the semantics of Labanotation. MovementXML is the ideal xml schema to encode the dance annotation. With the help of MovementXML and especially with the element define-movement we can put smaller movements together to form a higher-level movement. Furthermore, it is important to consider one of the goals of the Terpsichore project is the extraction of semantic signatures and ontologies. Ontologies will be created by folk dance experts to model the domain knowledge. The domain knowledge is, in essence, the elementary and high-

level concept properties and relationships definition and it will be defined in a structured and principled manner using an ontology. Domain experts (e.g. folk dance experts/teachers) will provide the necessary domain knowledge, which in turn will be translated to formalized knowledge in the form of an ontology. These ontologies will be very useful for knowledge-assisted of the recorded dance performance. The Ontology Web Language (OWL) can be used to this end with input taken from the use case experts (*OWL 2 Web Ontology Language Document Overview (Second Edition)*, no date).

In addition to these, the description of the traditional costume of the dancer we propose to use the VRA standard. VRA (The Library of Congress, 2014) is data standard suitable to describe and encode metadata for paintings, drawings, sculpture, architecture, photographs, as well as book, decorative, and performance art. Furthermore, in a project (Zeng, 1999) about cataloguing 42 fashion objects the researchers compared three metadata schemas USMARC, Dublin Core and VRA and concluded that VRA is the suitable metadata schema for the description of the fashion objects.

Finally, in order to encode the metadata of the recording and the 3D environment, it is necessary to create new metadata fields to encode these metadata elements. Also, gender and face expression of the dancer, are important to encode with some new and appropriate metadata elements. It is vital to develop our metadata fields for the aforementioned cases due to the fact that the existing metadata schema does not cover those cases.

In order to fully understand the proposed metadata schema, we give an example of the folk dance Kalamatianos in XMl format. Kalamatianos is a popular folk dance in Greece, Cyprus and internationally, often performed at many social gatherings worldwide. It is a circle dance performed in a counterclockwise rotation with the dancers holding hands. It's a twelve steps dance and the musical beat is 7/8.

```
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   <xmlns:rdf=http://www.w3.org/1999/02/22-rdf-syntax-ns#
   xmlns:dc=http://purl.org/dc/elements/1.1/
   rdaSimple
xmlns:rda="http://rdvocab.info/Elements/"
   xmlns:rdg2="http://rdvocab.info/ElementsGr2/"
   xmlns:rdg3="http://rdvocab.info/ElementsGr3/"
xmlns:frbr="http://iflastandards.info/ns/fr/frbr/frbrer/"
xmlns:role=http://rdvocab.info/roles/
   xmlns: MusicXML=
http://www.musicxml.org/dtds/partwise.dtd
   xmlns:tei="http://www.tei-c.org/ns/1.0">
   <!--  frbr Work  -->
   <dance>
   <dc:title>Kalamatianos </dc:title>
   <dc:subject> Folk dancing, Greek </dc:subject>
   <dc:description> The Kalamatianós is one of the best known dances of Greece. It is a popular Greek folkdance throughout Greece, Cyprus and internationally and is often performed at many social gatherings worldwide. As is the case with most Greek folk dances, it is danced in circle with a counterclockwise rotation, the dancers holding hands.  The roots of Kalamatianos can be found in antiquity. Homer, in the Iliad, describes three performances made around the spear of Achilles that depict a dance in an open circle.  The ancient Spartans had a dance called ὅρμος hormos, which was a syrto style dance described in detail by Xenophon where a woman led a male into dance using a handkerchief. Lucian states that the ormos dance was performed in an open circle and was done by young men and women. The men would dance vigorously while the women danced with modest movements. In the 19th century, this dance was called Syrtos O Peloponisios. It is believed to have acquired the name kalamatianos from the town of Kalamata in southern Greece; most Greek dances are commonly named after the villages or areas from which they are considered to have originated. </dc:description>
   <dc:coverage>Ελλάδα</dc:coverage>
   </dance>
   <music>
   <score-partwise>
   <movement-title>Milo mou kokkino</movement-title>
   <identification>
   <creator type="lyricist">Tous aux Balkans !</creator>
   <encoding>
   <encoder>abc2xml version 63</encoder>
   <encoding-date>2017-10-05</encoding-date>
   </encoding>
   </identification>
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    </credit>
    <credit page="1">
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    <credit-words>Kalamatiano</credit-
words>
    </credit>
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    <part-name/>
    </score-part>
    </part-list>
    <part id="P1">
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    <slur type="start" number="1"/>
    </notations>
    </note>
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    <lg type="stanza">
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pomegranate,</l>
    <l>why have you made me wilted and
bitter?</l>
    </lg>
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    <l></l>
    <l>I come and go, but cannot find
you</l>
    <l>I try your door, and it's always
locked.</l>

    </lg>
    <lg type="stanza">
    <l>Your windows are always
lighted</l>
    <l>I ask your door, "Where is your
lady?"</l>
    </lg>
    <lg type="stanza">
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the wellspring</l>
    <l>She's gone to bring water".</l>
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    <description><forward
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    </move>
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    <description><forward
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    </move>
    <move start="2" duration="1">
    <part><foot side="left" /></part>
    <description><forward
/></description
    </move>
    </support>
    <location>
    <set-path start""0" duration="4"
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    Strict="true" direction""clockwise">
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    <direction>360</direction>
    </description>
    </set-path>
    </location>
    </measure>
    </repeat>
    </choreography>
    <costumes>
    <vra:title>Woman
dressing</vra:title>
    <vra:measurements>….</vra:measuremen
ts>
    <vra:description> The women's
costume presents a very wide variety
with bright colors, embroidery and
ornaments </vra:description>
    <vra:title>Men dressing</vra:title>
```

```
    <vra:measurements>….</vra:measuremen
ts>
    <vra:description> The male costume
is lighter than the female one, and the
main types of it are bruce and
fustanella.</vra:description>
    </costumes>
    <!-- frbr Expression -->
    <dance.variance> Kalamatianos in
Macedonia </dance.variance>
    <!-- frbr Manifestation -->
    <recording>
    <recording.title> Kalamatianos
performance in the wine festival
</recording.title>
    <recording.description> 50 dancers
danced Kalamatiano on September 5, 2015
in  Veroia at wine festival which took
place in the square in the
center</recording.description>
    <recording.place> Βέροια
</recording.place>
    <sensors.number>2</sensors.number>
    <sensor>
    <title>Kinect depth camera</title>
     <resolution> 300x300 </resolution>
     <calibration> 1.2, 2.3, 3.5, 4.3,
8.9 </calibration>
    <software> Kinect software v1.7
</software>
    </sensor>
    <sensor>
    <title>GoPro camera</title>
     <resolution> 2000x2000
</resolution>
    <calibration> 1.2, 2.3, 3.5, 4.3,
8.9 </calibration>
    <software> GoPro software
</software>
    </sensor>
    </recording>
    <rdf:RDF/>.
```

7 CONCLUSIONS

In that paper, we have presented our recommendation for a metadata schema for description of folklore dance. From the analysis of the metadata necessary to describe folklore dances we can conclude that encoding ICH is complicated because we have to consider factors such as the environment and the emotions. The next step is the creation of the cultural server/viewer to implement the proposed metadata and investigate the problems and configurations necessary for the metadata schema.

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