



The i-Treasures Project - www.i-treasures.eu

i-Treasures (Intangible Treasures - Capturing the Intangible Cultural Heritage and Learning the Rare Know-How of Living Human Treasures FP7-ICT-2011-9-600676-i-Treasures) is an Integrated Project (IP) of the European Union's 7th Framework for Access to Cultural Resources. The project started on February 1, 2013, and will last 48 months.

Cultural expression is not limited to architecture, monuments or collections of artifacts. It also includes fragile intangible live expressions, which involve knowledge and skills. Such expressions include music, dance, singing, theatre, human skills and craftsmanship. These manifestations of human intelligence and creativeness constitute our Intangible Cultural Heritage (ICH). ICH is at the same time traditional, contemporary and living, because it does not only refer to inherited knowledge but also to the renewal of contemporary cultural expressions. It refers to the past, to the present, and, certainly to the future and is the mainspring of humanity's cultural diversity.

The main objective of i-Treasures is to develop an open and extendable platform to provide access to ICH resources, enable knowledge exchange between researchers and contribute to the transmission of rare know-how from Living Human Treasures to apprentices. To this end, the project aims to go beyond the mere digitization of cultural content. Its main contribution is the creation of new knowledge by proposing novel methodologies and new technological paradigms for the analysis and modeling of ICH. One of the main objectives of the proposal is the development of an appropriate methodology based on multisensory technology for the creation of information (intangible treasures) that has never been analyzed or studied before.

Within the i-Treasures project, the usability of the platform will be demonstrated in four different case studies: a) Rare Traditional Songs, b) Rare Dance Interactions, c) Traditional Craftsmanship and d) Contemporary Music Composition. For the extraction of a novel set of ICH data and the creation of new knowledge, multisensory technology will be employed. The project participants will strive to adapt the proposed technology to the specific conditions and needs of each of these use cases.

• *Use Case 1: Rare Singing Knowledge*

The singing use case will deal with a number of traditional European singing techniques of the UNESCO Inventory of Intangible Cultural Heritage in need of urgent safeguarding. Selected songs are the "cantu in paghjella" of Corsica (France), the "canto a tenore" pastoral songs from



Sardinia (Italy), and Byzantine hymns from Mount Athos (Greece). Our case-study will also include a newly expanding contemporary singing style: the "human beat box", where the vocalist imitates percussive and drum instrument sounds.

• *Use Case 2: Rare Dancing Knowledge*



(symbolic dances), spiritual meanings (whirling dervishes), etc.

The dance case-study will focus on two specific use cases: Contemporary Dance and Traditional Dance. Dance is an immaterial art by essence, as it consists in the motion of the performer's body. Dance can convey different messages according to the context, and focus on aesthetics or artistic aspects (contemporary dance, ballet dance), the cultural and social aspects (folk dances, traditional dances), a story telling

• *Use Case 3: Traditional Craftsmanship*

The case study of the traditional handicrafts aims at the analysis, modelling, recognition and semantic analysis of gestural interactions between the craftsman and his material. Within the proposed context, handicraft interaction means gesture control of the material. In order to develop a hybrid gesture recognition methodology, depth cameras will be used for the detection of global hand gestures and postures, optical cameras for finger gesture recognition and embedded sensors for the measurement of gestural parameters.



• *Use Case 4: Contemporary Music Composition*



The performing arts combine both the communicational (expressions, emotions, etc.) and control aspects (triggering actions, controlling continuous parameters). The performer is both a trigger and transmitter connecting perception, gesture and knowledge. A few years ago, the electronic synthesizer was a revolutionary concept of a new music instrument that was capable of producing sounds by generating electrical signals of different frequencies by pianistic gestures performed on a keyboard. The main objective of the project in this use case is to develop a novel intangible musical instrument, which will allow the performer to control non-sequential music with natural gestures performed in a real-world environment, emotions and other stochastic parameters.

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