

# Emoscapes and Mirror Heritage: a New Concept of Point of Interest for Cultural Tourism 2.0

Francesca Mighela<sup>a</sup>, Flavio Tariffi<sup>a</sup>

<sup>a</sup>Space SpA, Italy

[francesca.mighela@spacespa.it](mailto:francesca.mighela@spacespa.it), [flavio.tariffi@spacespa.it](mailto:flavio.tariffi@spacespa.it)

## Abstract

Cultural tourism has changed. New cultural tourists are more interested on adventures, emotions, engagement with cultural heritage, than on history of monuments and oeuvres. This means that the narration about Point of Interests should be done from different point of view and with different mood. It should be not a didactic description of an object, but it should be a story able to engage and move the tourist. In this paper we propose a new concept of Point of Interest and, starting from this metamorphosis, we mean to develop an innovative system to create and share cultural contents, a methodology to make cultural contents for satisfying cultural tourist and its new aware needs.

**Keywords:** content generation, *emoscapes*, *mirror heritage*, emotional Point of Interest, cultural tourism, tourism experience.

## 1 Introduction

One of the clearest trends on cultural tourism is the experiential tourism, based on assumptions of emotional and adventurous involvement. The phenomenon has origin first of all on the new players involved in cultural tourism of art cities, and motivated by new ambitions connected to leisure. These users are culturally less well-educated, and their frame of reference is leisure linked to television, cinema and sport, and therefore their expectations must be fulfilled by means of new forms of cultural mediation, such as *edutainment*, multimedia resources, *ambient intelligence* and virtual reality. On the other side, the phenomenon has been expanded thanks to the opportunities offered by the new *cultural tourism of discovery and experience*, which is seeing a season of “tourism 2.0” based on individual access, dynamic configuration of experiences, socialization, adventure and personalization.

In this scenario, the paper aims to better analyze new tourism drivers, and new cultural tourists expectations. The basic idea is to produce cultural digital contents for each POI of an art city, starting from literature heritage (*mirror heritage*) and User Generated Contents (UGC), for “*gloving*” giving those with new description, new attributes, revealing a psychological and emotional perspective, enabling to involve the tourist in a new visit experience.

The Section 2 of the paper proposes an analysis of the state of the art of such type of systems, while Section 3 presents the objectives of the project. Section 4 presents the evaluation methodology: finally, principal and expected results are summarized in Section 5.

## 2 State of the art

One of the most interesting chances offered by the Web 2.0 is the possibility to access and analyze UGC, even for cultural tourism. The study of these contents is the best way to investigate and explore cultural tourists' expectations. Moreover, it is possible to understand when and how these are satisfied, and when these are completely neglected, causing unforgettable dissatisfaction and disappointment. Unforgettable as the experience they were expected to live during cultural trip. The availability of UGC has been utilized specially to evaluate tourists' feedbacks about their experiences, as shown by several research works available on literature. Some representative examples are: Van der Zee, Bertocchi & Janusz (2016), Amaral, Tiago & Tiago (2014), Johnson et al. (2012) and Girardin et al. (2008).

Another investigation useful to identify which kind of tourism services will satisfy tourists' expectations is the investigation of tourism imaginaries. As presented at the major international conference on Tourism Imaginaries (organized by the Tourism Studies Working Group (TSWG), University of California at Berkeley, on February 18-20, 2011), there is a strictly connection between the perception of exoticism, the imaginary connected with places that have been the theatre of historic events, and heroic projections of the individual in the places visited, the social production, spread, acceptance and exchange of constructs of the imagination relating to tourist destinations. Same results are presented by (Salazar, 2012), who examines "*the multiple links between tourism and imagination, illustrating the overlapping but conflicting ways in which imaginings and fantasies drive tourists and tourism service providers alike*".

Main instruments used by modern tourist are smartphone and tablets, instruments that allows them to be always connected and on-line. For this reason, there are a lot of touristic apps available on app stores, even if most of these are poor on the engagement and psychological pitch. The survey about most diffused tourism applications presented by Timeout Magazine, *The world's 50 best travel apps*, (<http://www.timeout.com/city-guides/travel/50-best-travel-apps/>, [Oct. 17, 2016]) evidences that there are not commercial apps that offer literature heritage contents to engage the tourist in visited heritage. Making a focused research, it is possible to find some projects that have the object to diffuse the existing literature heritage through ICT ([http://creativech-toolkit.salzburgresearch.at/case\\_study/edinburgh-book-trail-exploring-the-literary-heritage-of-a-world-heritage-city/](http://creativech-toolkit.salzburgresearch.at/case_study/edinburgh-book-trail-exploring-the-literary-heritage-of-a-world-heritage-city/), [Oct. 18, 2016]), ([http://cordis.europa.eu/news/rcn/124605\\_en.html](http://cordis.europa.eu/news/rcn/124605_en.html), [Oct. 18, 2016]).

The main evidence is that available tourism services are not focused to satisfy new experiential, emotional and engagement needs of cultural tourists, especially considering big opportunities and chances offered by new ICT instruments.

## 3 Objectives

Final research objective is to develop a model for creating, sharing, classifying, publicizing, issue and reserving the intellectual property of POIs content available for tourists. The deployed solutions will help heritage experts to "*glove*" mirror memories onto the fabric of the present-day town resources and artistic collections, thus creating

a detailed mapping of the narratives that recount the places and works of art, both topographically (the stories of every place in the city) and through time (narrative “strata” corresponding to differing historical periods), or by following specific themes of the voice of a given personality of the past. The content should contain same versatility and emotional grip of *mirror heritage*, i.e. the literary and mediatic memories from past authors describing their experiences with art and heritage, with the potential of stimulating in present-time users an approach of experiential embodiment and adventurous participation. These contents will be available for tourists through web or mobile applications, and a specific recommender system will suggest which POI visit matching tourist preferences, mood, and sentiment with POI associated contents. To do this, the recommender system will access to specific maps where POI are classified and tagged following the proposed standard metadata system, that implies classify all POIs, both principal and secondary, on the base of emotion and sentiment associated: the “*emoscapes*” of urban centres.

To ensure quality and emotional content is necessary to protect the intellectual property of heritage expert authors. To do this, we mean adapt the DOI System, used for scientific publications, to POI content, and create a specific registry where the content will be available to be acquired in different ways.

The final system is modular, and its realization requires the design of different subsystems. In particular, 4 subsystems are expected to be realized:

- Development of an automated system for POIs generation named *smartspotting*, and set a standard metadata system in order to classify POIs not only for physical characteristics, but also considering emotional and psychological descriptions;
- Planning the content development considering the emotional and experiential tourists’ needs, and product theme using specific editorial plans;
- Development of a system for structuring and joining content to realize most complex and complete content, available with mobile or web applications;
- Planning a system to univocally identify the content, covered by copyright and registered on a digital registry managed by an independent authority.

The system will allow realizing digital contents that can be aggregate more and more time, creating each time a different guide to visit the same city, showing same places by different point of view: i.e., a horror tour, a love tour, a nostalgic tour, etc.

## 4 Methodology

The project requires different approaches to be developed, since it is necessary to develop some software tools on one side, and on the other it is necessary to establish some methodologies to identify, for example, the literature heritage and the UGC to be used to make contents.

The **smartspotting** system has been designed as a modular system. The components are:

- **POI Engine**: it generates the POI starting from structured, semi-structured and unstructured (free text) databases;
- **POI Manager**: it is the Graphical User Interface (GUI) to manage generated POI;

- **POI Server:** it supplies the information and services related to POI;
- **POI Validator:** it allows the user to validate the generated POI;
- **POI Data Base:** it is the module that guarantees the persistence of POI data. It is based on PostgreSQL and PostGIS technology.

Each POI is described with a set of metadata containing geographical and logistic information, POI typology, and other information acquired during POI generation process.

At the same time, the UGC are analyzed with sentiment analysis techniques, considering as sources web sites, forums and blogs dedicated to tourism, selecting especially the topic and discussion on cultural tourism, when possible. All the extracted definitions are elaborated to create a set of metadata to classify psychological and emotional POI characteristics. Same sentiment analysis is carried out on *mirror heritage*, and the description will be used to increase and refine the set of metadata extracted from UGC.

On the other side, the *mirror heritage* is used to generate, create and share new contents using:

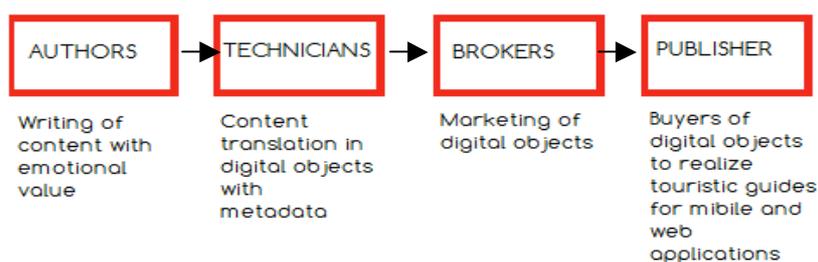
1. A **chunker system** which main features are the extraction of excerpts from mirror sources using taxonomy obtained from *text to knowledge* techniques and the conversion of extracted excerpts on OAI-ORE (*Open Archives Initiative – Object Reuse and Exchange*) objects (<http://www.openarchives.org/ore/>, [Oct. 20, 2016]);
2. An **authoring system**, used by operators to compose the OAI-ORE objects in order to obtain personalized touristic guides, concerning specific themes, and assembled on-demand. The contents will have been identified by metadata describing psychological and emotional characteristics, as the metadata POI does. This metadata correspondence will allow operators to publish contents associated to POI on maps, making a selection on the base of psychological and emotional descriptions (*emoscapes* visualization). The standard used to manipulate metadata is *Metadata Encoding and Transmission Syntax* (METS), the same standard used by the OAI-ORE standard (McDonough, 2009);
3. A **recommender system** able to suggest to authors which OAI-ORE objects aggregate on the base of metadata description, and to tourists which POI visit on the base of their preferences and past choices;
4. A **mobile app** to allow tourist to enjoy with cultural contents elaborated.

The system to univocally identify digital content resources is derived from DOI system used for scientific contents (<https://www.doi.org/>, [Oct. 20, 2016]). The main system features are the persistent identification of objects, the preservation of metadata and all related object information, to allow the transaction or electronic syndication to acquire digital objects preserving the author copyrights. A POI identifier label (POId) will identify a single object related to a specific POI, and an Authority system will manage the POId registry.

## 5 Expected Research Results and Conclusions

Principal result concerns the creation of a new value chain for cultural contents: the production of quality and value contents should increase the contents request, then

authors and publishers will be motivated to produce and sell new contents and guides. The institution of a dedicated DOI Registration Agency, the POIr, focused on the domain of cultural tourism should be an industry enhancer and technical facilitator catalysing interrelationship and cooperation of content owners, content authors, digital publishers, content brokers, local authorities, educational business, and more. The following block diagram shows new value chain derived from this new approach.



**Fig. 1.** The new value chain of the POI contents

## 6 References

- Amaral, F., Tiago, T. & Tiago, F. (2014). User-Generate content: tourists' profiles on TripAdvisor. *International Journal on Strategic Innovative Marketing*, 1, 137-147.
- Cooltura. European Commission CORDIS (2016). [http://cordis.europa.eu/news/rcn/124605\\_en.html](http://cordis.europa.eu/news/rcn/124605_en.html).
- CreativeCH (2014). Edinburgh Book Trail. [http://creativech-toolkit.salzburgresearch.at/case\\_study/edinburgh-book-trail-exploring-the-literary-heritage-of-a-world-heritage-city/](http://creativech-toolkit.salzburgresearch.at/case_study/edinburgh-book-trail-exploring-the-literary-heritage-of-a-world-heritage-city/).
- DOI. The DOI System. 20 10 2016. <https://www.doi.org/>.
- Girardin, F., Calabrese, F., Dal Fiore, F., Ratti, C. & Blat, J. (2008). Digital Footprinting: uncovering tourists with user-generate content. *IEEE Pervasive Computing*, 36-43.
- Johnson, P., Sieber, R.E., Nicoas Magnien, N. & Ariwi, J. (2012). Automated web harvesting to collect and analyse user-generated content for tourism. *Current Issues in Tourism*, 15(3), 293-299.
- McDonough, J.P. (2009). Aligning METS with the OIA-ORE data model. *JCLD '09: Proceedings of the 9th ACM/IEEE-CS joint conference on Digital libraries*, 323-330.
- OAI. ORE. 20 10 2016. <http://www.openarchives.org/ore/>.
- Salazar, N.B. (2012). Tourism Imaginaries: a conceptual approach. *Annals of Tourism Research*, 39, 863-882.