Abstract

The Curated Routes project reflects on the visiting routes’ ability to make apparent the internal characteristics of urban environments. The project’s name allude to the intellectual function of curation and the materiality of routes. Curate deals with the practice of arranging material –tangible or intangible- in a way that a new understanding of an area is revealed. The word routes refers to the linear associations that link places and guide movement. The Curated Routes aim to reinforce the development of bonding ties between people and urban environments by re-constructing the way we visit and explore a place.

The overall goal of the project is to outline the conceptual guidelines of a visitors’ guide that could later be used for the development of the informatics model. The project follows the methodology that the context-aware routes apply, though particular attention is paid to the second phase of the process where an innovative approach is applied. The introduction of the “chronotope” filters enables us to “knit” the terrestrial route to a range of informative storylines, and hence to develop different interpretations of an urban environment.

Keywords: travel guide, visiting route, urban environment

1. Introduction

Along itineraries the conditions of the urban environments are made apparent as routes permit us to examine the very ordinary practices of living and consuming space. Itineraries were the fundamental condition for the apprehension of geographical space (De Certeau, 1984, p.120). The first explorative journeys’ descriptions (e.g. logbooks) were an integral part of the geographical map. Through time the link between the two practices got lost (Ingold, 2007, pp.72-103 and 152-170). Today the literary and spatial representations of urban environments form the detached fields of literature, geography and urban design. In the urban design discipline the need to “read” the city led to the rationalization of space through the creation of “panorama” city maps. These design tools reinforced the apprehension of space in a bird’s eye-view perspective to the detriment of the pedestrian’s eye-view (Resina, 2003, pp.5-7).

So far, routes have been applied by academics and professionals in two different ways: as a descriptive-narrative medium to make apparent the internal characteristics of a place, and as a design concept to guide the creation of new terrestrial developments. The former approach is used in tourist itineraries and museum guides, while the latter applies in architectural and planning projects such as promenades, linear parks or infrastructure networks. This paper will elaborate on the first part of the equation, thus on the mechanisms that routes apply in order to reveal the character of a place.

The last decade, due to the rapid development of geographic information systems (GIS) and spatial databases (Huan et al., 2014), a dramatic expansion in the number of electronic tourist guides has been occurred. The electronic tourist guides propose to travelers itineraries in urban environments that fit to their interests. Despite the important research progress which has been made in geo-informatics aspect on
the way urban environments are organized and perceived along a visiting route, in spatial design aspect the issue remains mostly unexplored.

To present a better view of the relation between the physical form of urban environments and the ordering of knowledge along a route we draw an analogy to the space of a museum. The visitors of a museum while moving through the exhibition spaces, familiarize themselves not only with the exhibits, but also with a world of “second order”. With the term “second order” we mean the curatorial storyline that frames what we see and encounter (Sheller and Urry, 2004). This implementation does not aim to drift visitors away from reality. Instead it facilitates and enriches the interpretation of space.

The project’s name Curated Routes allude to the intellectual function of curation and the materiality of routes. Etymologically, curate [Latin curare] means take care. Today specialists curate heritage collections mainly on an interpretational level and less on a conservation point of you. In this frame the verb curate refers to the practice of arranging material –tangible or intangible- in a way that a new understanding of the world is revealed. The word routes refers to the linear associations that link places and guide movement. Therefore, Curated Routes aim by re-ordering the way we visit a place to reinforce the development of bonding ties between people and urban environments.

The remainder of the paper will be organized as follows. The theoretical framework of the research project is summarized in Section 2. The state-of-the-art, namely the different types of visiting routes that are currently available to visitors, is explored in Section 3. In Section 4 the Curated Routes application is described. The objectives and the applied methodology are respectively presented. The paper concludes with remarks and recommendations for future studies in Section 5.

2. Theoretical framework

The man-space relationship was throughout explored in the 1960s as a reaction to modern planning recipes (Figure 1). Kevin Lynch (1962) was the first to formulate a rigid theory around the environmental image and the legibility of space by observing the physical values of the cities along routes of movement. De Certeau (1984, pp.91-110, 115-130) is considered the most influential forerunner supporting that social practices like walking form the sense of individuals about an area. Walking has been also used as a method to investigate the conditions of urban areas which demand further comprehension, and thus they often remain in the margins of urban masterplans. It is not by chance the Situationists in the 1950s have employed the dérive to investigate the habitual patterns and tenses that were developed in districts-in-transition in the core of Paris (McDonough, 2002, p.224). In the 1990s the research group Stalker re-conceptualized the dérive under the new term transurbance. Since then Stalker have been using critical walking as a means of mapping the unique spatial and social conditions of the outskirts of several European cities. Although dérive and transurbance were initially conceived to assist designers on the production of new building environments, they were both seated uncomfortably with the air of rigor they wished to project (Sadler, 1998, p.157). Nevertheless the revolutionary approaches of Situationists and Stalker have underlined the importance and potentials of conducting research on the perception of urban environments along routes.

Figure 1: Chronological distribution of influential theories and designs about experiential space.
Closer to our times several architects and urban designers have been reflecting on the way urban environments are conceived by the designers and perceived by the users. Francesco Careri (2002, p. 26), the founder of the Stalker group, states: “Walking is useful for architecture as a cognitive and design tool, as a means of recognizing a geography in the chaos of the peripheries, and as a means through which to invent new ways to intervene in public metropolitan spaces, to investigate them and make them visible”. Steven Holl (2007, p. 48) points out that although people and architects believe that they understand the city as a “whole”, our terrestrial experience manifests that we understand places through fragmented and incomplete perspective views. Instead of looking for a fixed image, Bernard Tschumi (1994, p. 9) argues that the city becomes interesting only when place, movement and events meet each other. Both Tschumi and the Dutch architect Raoul Bunschoten (2000) turn to routes and cinematographic techniques to apprehend the way building environments are organised.

3. State of the art

The potentials that the market offers for the development of a new travel guide application are revealed through a state-of-the-art study. So far, tourism, informatics and heritage management have recruited different types of visiting routes to describe the attributes of environments. In our survey we took into account visiting routes which were developed in both paper and electronic form. First, the routes were listed and then they were classified based on their typology (Table 1).

<table>
<thead>
<tr>
<th>Typology</th>
<th>Origin</th>
<th>Factors taken into account</th>
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<tbody>
<tr>
<td>Generic routes</td>
<td>Guidebooks, Offices of Tourism</td>
<td>Points of Interest</td>
</tr>
<tr>
<td>Personalized routes</td>
<td>Personalized electronic tourist guides</td>
<td>Points of Interest, Journey’s restrictions, Traveler’s interests</td>
</tr>
<tr>
<td>Guided routes</td>
<td>Curator, Electronic museum guides</td>
<td>Narration, Visitor’s interests</td>
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Table 1. Typologies of visiting routes and performance details.

- **Generic routes**: In the first category we have classified itineraries that satisfy the interests of the majority (Cheverst et al., 2000). The most guidebooks and offices of tourism suggest generalized routes which simply interconnect the Points of Interest (PoIs) of an area. Thematic routes are proposed only by a few travel guides; for instance Michelin maps propose scenic roads in areas with natural beauty and Lonely Planet guides introduce routes that assist travelers to acknowledge better a location, namely classic routes, the essentials, roads less travelled and tailored trips.

- **Personalized routes**: The second category refers to visiting routes that take user context into account. Personalized Electronic Tourist guides (PET) develop itineraries that interconnect the PoIs of an area to the travelers’ interests (Hale and Schnädelbach, 2009; Le Berre, 2013; Ikkala et al., 2014). Existing applications of this kind are the City Trip Planner (Souffriau, 2010), CT-Planner (Kurata, 2010), My Visit Planner (Refanidis et al., 2014), Photo2Trip (Lu et al., 2010), SuperHub (Alvarez-Napagao, 2014) and TripBuilder (Brihanye and Nardini, 2013). Although these applications are innovative in geo-informatics aspect, they often fail to offer a meaningful sequential relation to the entire route as each PoI is interpreted independently from another.

Another popular activity among travelers is strolling in museums and galleries. These cultural environments assist visitors to “grasp” the historical and cultural identity of a city. In museums and cultural parks guided
tours are performed by curators or electronic applications. It is in those areas that we meet a third type of visiting routes the "guided routes".

- **Guided routes:** A third type of itineraries includes visiting routes that provide guidance to visitors of museums, galleries and open-air sculpture parks. First the visitor selects the attributes he/she is interested in (historical period, art movements, area, style, material, etc.) and then the guide, or the electronic system, proposes to him/her the appropriate visiting route. Existing similar applications are the Hermes (Spence, 2005), Hippie (Oppermann, 1999) and HyperAudio (Petrelli, 2005).

4. **The Curated Routes application**

**Justification**

The paper elaborates on the development of a visitors' guide application which aims to empower the interaction between urban environments and individuals. In the state-of-the-art analysis three types of visiting routes have been presented: the generic routes, the personalized routes and the guided routes. The Curated Routes application presents an alternative to the abovementioned routes by introducing itineraries with a sequential storyline and scenography. The itineraries that we develop derive from the dynamic synthesis of two existing types: the personalized and the guided routes.

In the Curated Routes the visitors could find their personal PoIs set out on a route with a sequential storyline and scenography. The sequential storyline works as a connecting "thread" that assists the users to understand the meaning of a place. To better illustrate the technique that we use, we draw an analogy between the sequential storyline and the syntax of a sentence: A solely group of words presents fragmented information. It is only when we combine these words in a sentence under a syntax, that the meaning is revealed. Accordingly, the meaning of a route is revealed when a sequential storyline is linked to the visual stimulus of the landscape.

The overall goal of the Curated Routes project is to outline the conceptual guidelines of a visitors’ guide that could later be used for the development of the informatics model. Eventually the Curated Routes informatics model could be accessible on desktop or hand-held devices (tablets and smartphones). The routes could be equally developed by other means such as human guides and guided books. However, at the latter occasion the person in charge should perform some additional calculations to "tailor" the itinerary to the needs of the group (e.g. visit duration, opening hours, departure and arrival points).

**Application's methodology**

The methodology and means used for the development of the Curated Routes prototype are clarified in the following lines. Three consecutive phases are required to develop a Curated Route. Particular attention is paid to the second phase where an innovative process is employed.

The methodology that we apply for the design of the visiting routes is aligned to contemporary discourses in museology, history and archeology (e.g. Everyday Urbanism, New Museology, Post-processual Archaeology, Hermeneutics). These discourses highlight the importance of presenting the context around an object; artworks, monuments or even landscapes could be conceived as objects. Therefore, the Curated Routes are required to “knit” two types of routes: the terrestrial route and the figurative route of an informative storyline. Consequently, the project asks for a methodology which would be able to correlate hard and soft data of urban environments (Cook, 1999; Raxworthy and Blood, 2004; Tangires, 2008). The hard data refer to the spatial characteristics of a location (topography, morphology of the building environment, infrastructure networks, etc.), while the intellectual qualities of an area (affective charges, socio-cultural narrations, remembrances, etc.) constitute soft data.

The electronic tourist guides are part of greater category of routes which are stated in the bibliography as context-aware routes. The context-aware routes have developed an effective methodology that allows
them to relate different data sets. In majority, context-aware routes use three consecutive steps to develop a tailored route: Content Selection, Route Generation and Adaptation (García et al., 2010; Kabassi, 2010; Huan, 2014). The system re-calculate the route in real-time by importing parameters in an advanced routing algorithm (Souffriau, 2010; Refanidis et al., 2014). At the end of the process the graph of the desired route is developed. Our project follows in general terms the methodological process of the context-aware routes besides a differentiation on the second phase.

In the next paragraphs the three methodological phases will be presented. In each step we will identify the objectives, the means used, and how the steps lead to the creation of the visiting route in continuity to each other.

I  Content Selection

The design of a Curated Route starts with the development of a list of PoIs in the proximity of the visitors’ departure and arrival points. GIS and GPS systems collect the spatial coordinates of the PoIs and position them over a map. Parallel to the PoI’s process, the profile of the visitor is edited with the aid of a questionnaire. Information about the PoIs could be collected through different sources: public databases (OpenStreetMap, Google Places), social networks (Facebook Places), and feedback information of previous users (Tripadvisor, Flickr). Conventional applications such as City Trip Planner and My Visit Planner use existing databases –public or social- while more interactive applications such as TripBuilder and CT-Planner relate the PoIs of previous users to the itineraries of new ones.

II  Curation & Route Generation

As the second step of the PET’s process, the system loads the data. It correlates the PoIs’ data (location, opening hours, ticket’s price, etc.) to the user’s profile to form a list with the desired places for visiting. Based on this evaluation the desired routes are generated. At this step three important methodological questions are raised:

- Are the GPS coordinates and time restrictions the only parameters in real life that define the visitor’s preference on a route?
- To what extent do the “desired” nodes (in our case PoIs) form as well “desired” paths?
- And after all, which is the real expectation out of a visiting route? Is it the consecutive visit of interesting PoIs or an overall interesting route?

These remarks have led us to differentiate the second step that the Curated Routes application follows, to the one developed by the context-aware routes. In our research, we support that urban environments are not blank pages with abstract spatial coordinates but rather charged places filled with meaning. The aim to emphasize the journey instead of the PoIs led us to add a curated function into the Route Generation step with the introduction of the chronotope filters. To present a better view on the curation function, we draw an analogy between the urban environment and the space of a museum. The museum visitors, while moving in the exhibition spaces, they not only familiarize themselves with the exhibits, but also with a world of “second order”. By the term “second order” we mean the exhibition’s spatial and conceptual design that frames what we see and encounter (Sheller and Urry, 2004). This curatorial approach does not intent to drift visitors away from the reality; instead it facilitates and enriches the interpretation of place. By selecting the chronotope filter that best expresses his/her mood and interests, the visitor would be able to experience different narrations, and thus develop distinct bonding ties with the urban environments he/she traverses (Figure 2). In the following paragraphs the role and function of the chronotope filters is explained.
Urban environments in the form of palimpsest, namely a layered parchment consisting of fragments of stories with none of them legible in isolation or completeness.

Most of the professional training and thinking that architects and urban designers apply is strictly three-dimensional. In reality though the city is four-dimensional, and one needs to acknowledge the influence of time to the perception of a place (Bishop and Williams, 2012). Bakhtin’s theory of the literary chronotope (Keunen, 2011; Verraest and Keunen, 2012) allows researchers to analyze urban space from an ephemeral and perceptive point of view. Chronotopes examine the association of time [Greek χρόνος] to the images of places [Greek τόπος] people construct in mind (Figure 3). Examples of possible chronotope filters could be: dramatic (important historical events, emotions); idyllic (romantic, wellness, happy end); postmodern (eclectic, without a real beginning nor end); mnemonic (heroic events, consciousness, respect).

At this phase a methodological innovation was presented. The introduction of the chronotope filters to the design of visiting routes enables to "reconstruct" the way people explore a place. The different narrations that derive from the correlation of the chronotope filters to the PoIs reveal the dynamic nature of urban landscapes.

The “image” of a place that we construct in mind along a visiting route differs significantly from person to person.
III Adaptation

At the last step of the application’s process the user would be able to change specific attributes of the visiting route (e.g. remove visiting points, select different filters, alter his/her departure and arrival points) to better fit his/her own restrictions.

Application’s evaluation

The effectiveness of the Curated Routes application could be measured by conducting comparative research between the curated itineraries and existing visiting routes. Two different projects could provide us with platforms to publish and evaluate our routes: the RouteYou website and the research project “Mobiele Gidsen: Towards a Sustainable Mobile Tourist Guide” developed by iMinds and Thomas More. In the former case the routes will be published online at the RouteYou platform, while in the latter the routes will be distributed among the stakeholders of the project. After a six-month period we could proceed on the examination of the Curated Routes based on the statistics that will be exported from google analytics and the users’ reviews.

5. Conclusions

The paper explores the conceptual design of a visitors’ guide application. Previous accounts on visitors’ guides were focused more on the geo-informatics aspect and the preferences of the visitors whereas we attempt to stretch the spatial design aspect. However preliminary, this study may offer some valuable insight into the design mechanisms that facilitate the apprehension and enjoyment of urban environments along visiting routes.

The project was driven on the conviction that the majority of the existing visiting routes propose the consecutive visit of interesting nodes (Points of Interest) but not overall interesting routes. Although these guides are innovative in geo-informatics aspect, they often fail to offer a meaningful sequential relation to the entire route as each PoI is interpreted independently from another. To overcome this limitation we proposed a methodology which is drawing upon the dynamic synthesis of two types of routes: the personalized routes -which are developed by the PET applications- and the guided routes –which are performed in museums by curators or electronic guides-. In Table 2, we indicate the different processes that the Curated Routes follow and how they lead to the achievement of our goals in continuity to each other.

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<thead>
<tr>
<th>Process</th>
<th>Orientation</th>
<th>Personalization</th>
<th>Narration</th>
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<tbody>
<tr>
<td>Points of Interest</td>
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<tr>
<td>Questionnaire</td>
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<td>X</td>
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<tr>
<td>Chronotope filters</td>
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Table 2: The processes the Curated Routes follow and their characteristics.

An innovative approach is presented in the applied process with the introduction of the “literary chronotope” theory. The chronotope theory assist us to reflect on the ephemeral dimension of the visiting experience, thus the visitors’ mood, and the associated parameter of time [chronos]. The implementation of the chronotope filters enables to “knit” a terrestrial route to several informative storylines, and hence to
develop different interpretations of an urban environment. As the research is on exploratory level, we are unable to determine at this stage if and to what degree the Curated Routes would be effective in comparison to the conventional visiting routes. In overall though we believe that the presented methodology points towards an interesting direction for their evolvement.

In general the paper reflects on the design of the Curated Routes’ conceptual model which could later be used for the development of an informatics model. Thus working with specialists in the field of informatics will be an important future step. This phase will most probably require to proceed on the exploration of particular case studies. It would be interesting to investigate for the selected locations the available data, as these will determine the function of the chronotope filters.

In the present study we intentionally used the terms travelers and visitors instead of tourists, and the phrase visiting routes in the place of tourist routes. Our belief is that tourists and locals do not adopt different behavioral patterns in terms of exploring an urban environment. Thereafter an application of this kind could be beneficial for a diverse group of users. Visitors are permanent or short term migrants, mobile professionals, students and jobseekers (Maitland, 2013). Consequently, leisure tourism is just one of the different mobilities that bring people to cities. In this paper we investigated the performance of Curated Routes in the visitor’s guide context, but we believe that other fields can benefit as well from this conceptual framework such as the organization of cultural events and the design of urban space.

6. References

SESSION 4 - Experiential technology to trigger social interaction


