

Methodology and Tools to Support Storytelling in Cultural Heritage Forums

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Abstract

Storytelling is a method by which members of a community communicate, learn and build identity. In the CIPHER project we aim to provide customisable tools for the sharing of stories in communities, and test these tools in specific case studies. Here we describe the generic storytelling environment customised for two quite different communities, a group of adult volunteers interested in a particular heritage area and children collaborating from two different schools. The participatory development of the tools has highlighted a number of design recommendations for the development of community story sharing support including story seeding, role identification, launch strategy, and the model of communication and story exchange.

1. Introduction

In the CIPHER (“Communities of Interest Promoting Heritage of European Regions”) project we aim to provide a set of customizable online tools that facilitate the sharing of stories within communities of interest. Furthermore, through the development of online Cultural Heritage Forums, we intend to test and refine the tools, as well as the method in which they are used, in order to identify a series of guidelines to facilitate the design and support of future online heritage portals.

In this paper we begin by introducing some of the related work regarding narrative, communities of interest, active interpretation of resources, and online communities. We then describe the approach taken in the CIPHER project to support online collaboration within a community of interest and introduce two test case applications. Some of the software tools being used in two test cases are then described and some of the preliminary findings of the project are presented. The paper concludes with a summary.

2. Related Work

This section introduces the key sources of research that have directly influenced the design and development of the tools in the CIPHER project and their use within a Cultural Heritage Forum.

2.1 Narrative

Following the definition of story and narrative provided by Chatman [1] we define narrative as the particular way in which a story is told. A story is a conceptual space representing events, people and objects. A story may be told in a number of ways, to create different effects, such as humour or surprise. The specific ways in which a story is told are narratives.

Schank [2] argues that narrative carries out a crucial role in how we mentally represent the world around us. As a result he argues that conversation can in the majority of cases be viewed as a series of relevant story exchanges. Each participant contributing a relevant story triggered by the stories previously narrated.

2.2 Communities of Interest

Software designers must consider both the social and technical effects of their design decisions [3]. Social interaction and social organization are critical issues in the design lifecycle. Communities of interest are communities of people that are united by a common interest [4]. Within the CIPHER project we are primarily concerned in working with communities organized around a common interest in the heritage of European regions.

2.3 Active Interpretation of Resources

Narrative is crucial to learning, both in terms of how individuals construct meanings and how they learn collaboratively within communities of interest. This is particularly clear when learning is viewed from a constructivist perspective [5]. A central assumption of constructivist theory is that the learner is an active interpreter rather than a passive receiver of instruction. Within the context of a museum, effective learning is an active process where the narrative told by collections is interpreted and reconstructed by the visitor.

2.4 Online Communities

Within the growing online community literature communication is seen as the defining feature for a community. People focused on a shared purpose communicating via email, asynchronous discussion forums, or synchronous chat rooms constitute an online community. Specific guidance on how to support community growth can be found in [6], [7], [8], [9], and [10], the following features are drawn from these sources:

- **Purpose:** Establish and reify the communities shared purpose, the reason for its establishment and continued existence, in every aspect of the online environment. This serves as a constant reminder for each member and helps maintain the focus of the communications.
- **Profiles:** Support and encourage the members to get to know each other by sharing information about themselves. These can help foster relationships and develop trust between community members, and can also be used to deliver personalized services.
- **Roles:** Community members need roles. For example, leaders are people that welcome and encourage newcomers, respond to queries, recognize good postings, deal with inappropriate postings, and maintain the identity of the community.
- **Rules:** Groundrules for participating in a community are crucial. Setting up a system with a well designed set of rules helps avoid conflict. However, some conflict is inevitable and it is therefore important to consider how conflicts may be resolved and the rules of the community evolved to reflect the standards of the community.
- **Events:** Promoting regular online events may help to structure the activities of the community members and foster relationships between them.

3. CIPHER Approach

In the CIPHER project we aim to develop and test the tools and methodology required for Cultural Heritage (“CH”) Forums that have three important characteristics. First, as mentioned earlier, CH Forums should provide a space for members to engage with cultural heritage rather than passively browse it.

Second, a CH Forum should promote rather than replace visits to the associated physical heritage centres. Virtual access to heritage resources can be useful when physical access to the resources is not possible, however, virtual resources can perhaps make an even bigger impact when built around physical visits. For example, the CH Forum could be used to prepare for, or review a physical visit to a heritage institution. Kravchyna and Hastings [11] in a recent online survey

found that over half of the respondents visited a museum’s web site both before and after a physical visit.

Third, the CH Forum should be sustainable in the long term. A CH Forum needs to be sustainable from technical, financial and content perspectives. Technical sustainability requires coping with technological advances such as changes in file formats over time. Financial sustainability requires the attraction of required long-term funds for the initiative where necessary. We envisage this may be provided by a core group of public and private organisations and communities that adopt the CH Forum as it serves to promote their associated heritage area. Content sustainability requires that the forum continues to be in active use with the regular authoring of new stories, the continued development of the archive of digital objects, and frequent communication between members of the CH Forum. When someone visits an online portal or forum, there must be evidence of recent contributions otherwise there will be little motivation to join and contribute.

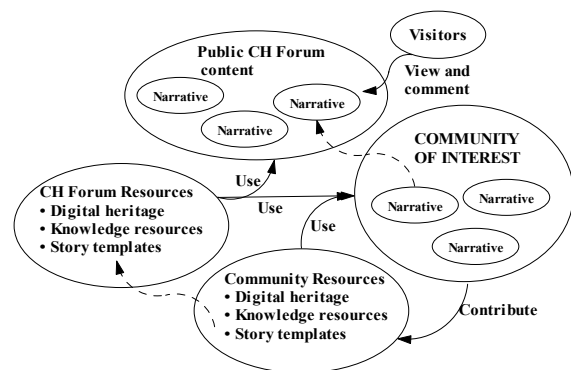


Figure 1. The use scenario envisioned in the CIPHER project.

The overall scenario of use envisaged in the CIPHER project is shown in Figure 1. Here a development team incorporating members of the community put the architecture for the community in place and a seed set of community content. The seed narratives of the community make use of forum resources including digital heritage components, story templates and knowledge structures such as heritage ontologies and meta-data schemes. The seed content developed for each forum community is important for two reasons. First, it provides an attraction and motivation for the first members who visit the site. Second, it helps to underline the scope and purpose of the community, determining the nature of the contributions that members should make. Once launched, members of the community are able to use the provided tools to develop their own narratives and resources. In certain cases, narratives or resources from one community of interest may be made public or available to other communities in the forum.

The CIPHER tools and methodology are being developed and tested using two communities. These two test cases are the Bletchley Park Guides site and the SCOOTER project (Schools Co-operating Through Exploring Region Heritage). One of the CH Forums in CIPHER has as its focus the history of Bletchley Park, the wartime code-breaking centre. One of the communities involved in this forum is a group of volunteer guides who research the history of the Park and provide tours to visitors. The guides wish to use a private area of the forum to conduct their own research into the unfolding history of the Park. They study new releases from the Public Records Office, illuminating aspects of the Park's history that have previously been unavailable. They conduct and transcribe interviews with wartime workers at the Park and their families. The Guides also author historical accounts of the Park for visitors and produce educational resources for schools, which they make available outside the community of interest.

SCOOTER is an experiment in supporting online collaboration between two schools, one in Milton Keynes, UK and one in Prague, Czech Republic. When originally envisaged, SCOOTER was intended to support students in sharing their heritage investigations. The remit has since widened to include other subject areas including the sharing of poetry and puzzles. One of the heritage related activities called "Place of the Week" involves students from each school researching and visiting an area of local interest, and presenting their findings to students in the other school.

4. CIPHER Story Sharing Tools

Internet technology is used in the provision of story sharing tools on the CIPHER project. An online database is used to store the community's information and this information is accessed by CGI scripts to construct the web pages that constitute the Cultural Heritage Forum. By adopting a modular approach to the development of the scripts used in a forum, a generic toolkit has been produced which may be reused and specialized for each community. The tools developed so far are currently being used in the Bletchley Park Guides and SCOOTER test cases. The main facilities of the toolkit presented in the remainder of this section are:

- **Member Profiles:** For managing and presenting the profiles of community members.
- **Story Construction:** Online support for the writing process.
- **Story Presentation:** Presentation templates for different types of submissions.
- **Moderation:** Support for the moderation of the members' profiles and stories.

4.1 Member Profiles

Membership profiles are used by the community members to present their online persona. A member's profile in the CIPHER toolkit is made up of generic and community-specific information. Profiles can be compared to identify people with common interests, or people with an interest in a specific story. In this way we can use the member profiles to personalize the site. Figure 2 shows an example of the profile tool used on the SCOOTER site, a member's profile is shown on the left, and the HTML web form used for creating and editing profiles is shown on the right.



Figure 2. An example from the SCOOTER site of a community member's profile (left) and the web form used to create and maintain the profile (right).

4.2 Story Construction

Two tools have been developed to support the activity of story construction. The first is a Microsoft Word template that allows the member to write their story using a fully formatted layout, the same as that used to display the completed story. The second tool uses an HTML web form to write the story and then preview the story as it will be shown on the site. From previewing the story the community member can either return and edit their story using the web form or submit their story. An example of an empty story form used in the SCOOTER site is shown in Figure 3, two example story layouts are shown in Figure 4.



Figure 3. An example of a web form used for submitting stories in the SCOOTER site.

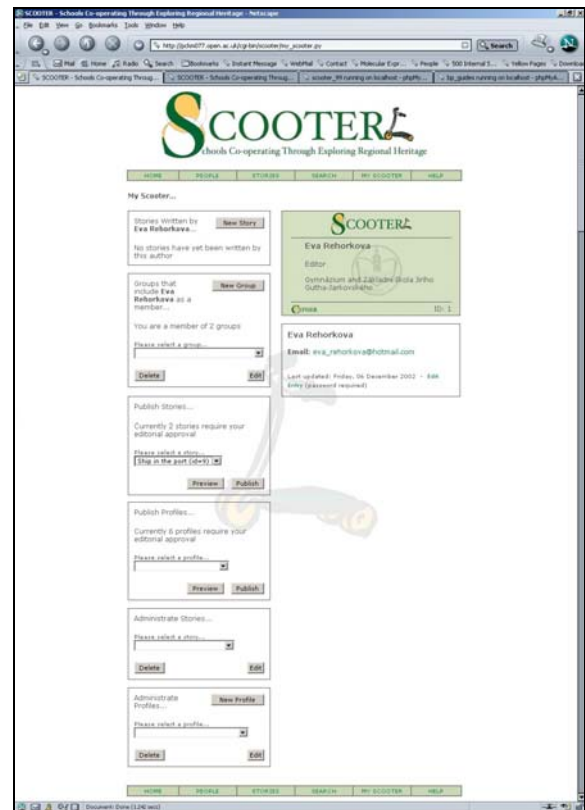


Figure 5. An example personalized area used by a community host on the SCOOTER site to moderate the community member's profiles and stories.



Figure 4. An example of a puzzle (left) and a place of the week (right) story layout templates from the SCOOTER site.

4.3 Story Presentation

Different types of stories are common in a story sharing environment. To signal the different types of story different story layouts are used (see Figure 4). Given that the story is held as raw data and only rendered as HTML when called upon, using different layout styles is a trivial task. Further additional information may also be displayed such as reference links to other stories of this type, stories by this author, or similar stories.

4.4 Moderation

The groundrules governing participation in the community can be enforced through moderation. The form of moderation used significantly influences the community and how its members interact. In the SCOOTER site moderators check all new stories and profiles before they are added to the site. Figure 5 shows the personal area of a member that has moderation and administration rites, dialogue boxes to carry out these tasks are shown on the left of Figure 5.

5. Preliminary Findings

The CIPHER project is a thirty month project that started in April 2002. From the work carried out so far we can highlight the importance of the following issues:

- **Community Participation:** Not only is it important to involve the community members in the design and development of their online environment, it is also important to involve them in the method by which the environment is organized, introduced to the community, and integrated into their working practices as part of the community's resources. Participatory design in the development of the tools and the ways in

which the tools are used helps identify sources of technical and social difficulties.

- **Communication:** The importance of communication in a community cannot be over emphasized. The means for communication can be put in place but without explicit encouragement and structure, these tools may not be used. Communication involves feedback. A response to a posting encourages and helps direct future postings. Within the SCOOTER site we have found that ordering the posting of new stories so that both schools give and receive new stories on an agreed date improves the members' sense of involvement. Previously, when members could post new stories at any time, few stories were posted as the members were unsure if their stories were being read or responded to by the other school.
- **Momentum:** Sustaining a community and helping it to grow is aided when there is a clear sense of value attributed to being a member of the community. An example of a gift economy is one in which people are keen to give their time and support in response of the time and support they have received from others. This model works well online but requires an initial seeding of time and effort (i.e. gifts) in the faith that the investment will be repaid by other community members in the future. In the Bletchley Park Guides site we found that by seeding the site with relevant and useful stories, the guides could immediately see the value of being involved. Furthermore, the seed content shows the guides the type and style of appropriate stories.
- **Roles:** As noted earlier community members need roles. Supporting the different roles carried out by members is really important. Not just from a functional point of view, roles are a part of social interaction and have a significant influence on the members' sense of identity and motivation. For example, during the initial use of the SCOOTER site the roles of the school pupils, teachers and head-teacher had to be made explicit and supported online.

6. Summary

The CIPHER project aims to develop CH Forums where members of the associated communities can actively explore heritage content. The CIPHER story sharing tools provide easy ways to author, present and administrate stories. These tools and the associated methodology are being developed and tested in two communities. Preliminary findings highlight the importance of community participation in design, the specification of communication strategies, establishing and maintaining community momentum, and identifying and supporting the roles of the community members.

Acknowledgements

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