
Encouraging Visitor Engagement and Reflection with the Landscape of the English Lake District: Exploring the potential of Locative Media

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NatureCHI 2016, workshop at CHI'16 May 8 2016. San Jose, CA, USA.
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Abstract

The Lake poets were a sub-set of the 18th to 19th century Romantic poets that lived in, and were inspired by, the English Lake District. For example, William Wordsworth's poem 'Yew trees' makes reference to four Yew trees located in the Lake District's Borrowdale valley. In this paper, we present our research into the design (and formative evaluation) of Locative Media Experiences (LMEs) that may facilitate visitors to the Lake District in engaging both with the landscape and with the poetry itself.

Author Keywords

Locative Media; Nature; Lake District; Lake Poets.

ACM Classification Keywords

H.5.m. Information interfaces and presentation.

Introduction

The rugged and mountainous landscape of the English Lake District was a significant inspiration to many English poets and artists during the so-called Romantic period of the 18th to 19th century [5]. Notable English artists include Joseph Mallard William Turner while poets include William Wordsworth and Samuel Taylor Coleridge; both of whom were amongst a small

The Borrowdale Valley



Figure 1-3: The Borrowdale valley (top), The Ashness Bridge Viewing Station (centre), Information Signage at site of the 'Yew Trees' in Borrowdale (bottom).

group of poets (known as the Lake Poets) that lived in, and produced works inspired by, what they felt to be the sublime qualities of Lake District [13]. Furthermore, many of the works themselves relate directly to the landscape of the Lake District and its Borrowdale valley¹ in particular (see figures 1 and 2). For example, Turner's painting looking south into Borrowdale² and Wordsworth's 'Yew trees' poem [12] that makes reference to four Yew trees located at the head of the Borrowdale valley³.

*Those fraternal Four of Borrowdale,
Joined in one solemn and capacious grove;
Huge trunks! and each particular trunk a growth
Of intertwined fibres serpentine*

The Lake District National Park is located in Cumbria in the North of England and a significant portion of the land and more of the public bridleways are managed by the National Trust (NT) conservation charity. In addition to conservation activities, the NT also provides and maintains signage, e.g. signs to support wayfinding on public footpaths and bridleways or information signage such as that shown in Figure 3 which provides visitors with information relating to Wordsworth's poem at the site of Yew Trees.

In this paper, we discuss our formative research on enhancing the visitor experience to the Borrowdale valley through Locative Media Experiences (LMEs) that feature the poems and paintings inspired by the landscape. In particular, we wish to support visitors' engagement with both the landscape and the painting or poem that relates to it. However, one of our major concerns is that the locative media experience (and the

¹ www.nationaltrust.org.uk/borrowdale-and-derwent-water

² www.william-turner.org/Looking-south-into-Borrowdale,-Lake-District.html

³ www.theborrowdalestory.co.uk/literature-and-art/

GPS-equipped mobile device delivering it) does not distract the visitor from this engagement. The remainder of the paper is structured as follows. In the next section we present background and related work. This is followed by a section describing our current research including meetings with the Lake District NT and the brief reporting of a formative expert field trial of a LME. A discussion section follows this and, finally, we present future work and concluding remarks.

Background and Related Work

In this section we start by briefly introducing the role of non-digital technology in nature and the Lake District in particular. This leads onto a description of so-called 'viewing stations'. Following this we survey the related HCI literature involving studies of digital technology in nature. Next we introduce Locative Media.

Guidebooks: a Non-Digital Mobile Technology in Nature

To start to unpack 'unobtrusive user experiences with technology in nature' we should first consider what we mean and include by way of the term 'technology' or indeed 'mobile technology'. A popular resource used by ramblers walking in the Lakes is Alfred Wainright's series of Pictorial Guide to the Lakeland Fells⁴. These books are available in A5 size and so can fit in the pocket of a Rambler's waterproof jacket and can be considered as an example of mobile technology (albeit non-digital). The books contain sketches of landscapes which many would consider as works of art in themselves [2]. A Rambler can use the sketches to support her wayfinding by comparing the landscape in front of them with the perspective of landscape

⁴ en.wikipedia.org/wiki/Pictorial_Guide_to_the_Lakeland_Fells



Figures 4-6: Thomas Ogle print of Bowderstone circa 1864 (top), The Bowderstone Viewing Station (centre), Consuming the LME at the Bowderstone (bottom).

presented in the sketch; hence the sketches encourage engagement with both the landscape and the sketch.

Lake District Viewing Stations

The first guidebook to the Lake District was published by Thomas West [11] in which he described the picturesque scenery from locations referred to as 'Viewing Stations'. The Lake District NT is currently re-establishing four of the Viewing Stations highlighted in West's guidebook. One of the Viewing Stations is the Bowderstone (figure 5). Another is Ashness Bridge, which affords a stunning view facing West (Figure 2).

Technology in Nature within HCI/Design Literature

A review of the HCI/Design literature reveals surprisingly few examples of research that has studied the role of technology in nature. The relatively few systems that do report on technology interaction 'outdoors' typically focus on the learning domain, e.g. the Ambient wood project [10], the GreenHat Mobile Augmented Reality System (supporting students in learning about biodiversity [8] and the MobileGIS system which forms one of the case studies described in [1]. Examples of systems where learning is not the goal typically focus on wayfinding, e.g. the Hobbit 'asocial hiking app' [9]. Recent research that adopts a research through design approach [7] includes [4] and its use of so-called Nature-technology hybrids.

Locative Media

One of the earliest examples of a locative media project (dating from 2002 and actually pre-dating the locative media term) was the '34 North 118 West' project (<http://34n118w.net/>). The project coupled location sensing (GPS in this case) with mobile computing devices in order to support a 'locative narrative' in

which users would be pushed audio narratives relating to the history of places they passed by in Los Angeles. A thorough coverage of Locative Media systems, including the contemporary issues associated with smartphone apps is presented in [6]

3. Timeline of Current Research

In this section we briefly describe our stakeholder meetings involving the NT Office in Borrowdale, and the design and outcomes of a formative expert field trial.

Initial Meeting with NT

An initial hour-long meeting with the Lake District NT took place in June 2015 and was attended by a researcher (one of the authors) and a NT Forest Ranger who had been active in the Borrowdale valley for 15 years. The scope of the meeting was to discuss potential research collaboration and, in particular, whether the concept of providing LMEs based around the works of the Lake poets and artists such as Turner would be something that fitted within the NTs values.

During the meeting the Ranger discussed the NT plans to re-establish four of the Viewing Stations including Ashness Bridge and the Bowderstone. We also discussed Wordsworth 'Yew Trees' poem for which the Ranger had a personal interest (having written a dissertation on the subject). The meeting provided an opportunity to discuss the tensions raised by utilizing smartphones and tablets to support interaction with Nature. This led onto a discussion regarding the lack of connectivity within the valley and the researcher was able to clarify that content could be stored locally on a tablet device and use GPS to trigger location-based events without requiring connectivity to mobile data.

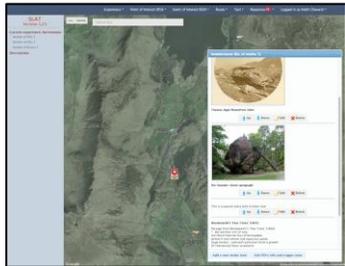


Figure 7: Screenshot illustrating the authoring of the Borrowdale LME using the web-based editing tool provided by the SHARC framework.

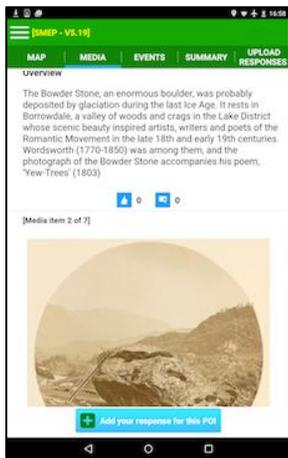


Figure 8: Illustrative screenshot showing sample of pushed media at the Bowderstone viewing station (the text of the Yew Tree poem appears further down the page).

Formative expert field trial of LME in Borrowdale

In July 2015 we carried out a formative trial of a LME which included content such as an excerpt from the Yew Trees poem. The trial participants (one male, one female) were two experts in Mobile UX and neither had visited the Borrowdale valley previously. The LME was created by one of the authors using the locative media authoring tool that forms part of the SHARC framework [3] (see figure 7). The framework also includes a mobile Android app for playing LMEs. In brief, the authoring tool enables the author to define POIs and to associate media items with these Points of Interest (POIs). Furthermore, the author can define geographic 'trigger zones' around these POIs such that when a user enters a given trigger zone the associated media items are pushed to the device (see figures 6 and 8). The LME contained POIs representing two viewing stations, namely: Ashness Bridge and the Bowderstone. Content included an excerpt from Wordsworth's Yew Trees. Images associated with the two POIs included images and paintings (see sidebar). The expert field trial lasted two hours. Each expert was given a nexus 7 tablet with the LME downloaded and were both asked to 'think aloud'. While space precludes detailed discussion of the findings we note here that the experts appeared engaged in the content and the landscape it related to. Furthermore, the visualization of 'trigger zones' around POIs [3] meant they were not constantly looking at the display. At Ashness Bridge, the experts were observed matching the perspective and content of the paintings with their view, noting the strong similarity. Conversely, at the Bowderstone, both noted the difference in forestation between Ogle's 1864 print and the current state (see figures 4 and 5). One expert also suggested that the 'Yew trees' poem should have an audio playback option in addition to the text.

Second Meeting with the Lake District NT

A second two-hour meeting with the Forest Ranger took place in the Borrowdale NT office in November 2015 and was attended by both authors. The LME used in the field trial was presented to the Ranger. His reaction was enthusiastic and he particularly appreciated the content related to the viewing stations. The LME also acted as a useful frame of reference for discussing a range of themes. One notable theme was the potential to 'dispel myths' with the Ranger pointing out Wordsworth's reference to male Yew trees where studies indicate a mixture of male and female. A further meeting is scheduled for January 2016 involving the NT's Visitor Engagement manager, General Manager and Curator.

4. Discussion

Visitors to Borrowdale may be motivated by a desire for its nature to provide them with: peace, nourishment, inspiration, perspective, solitude, adventure, to list just a selection of possibilities. As noted by the NT Ranger, the intention is not to tell visitors "this is a great view" but rather to provide LMEs that encourage visitors to linger a little longer at a given place in the valley (such as a viewing point) and reflect on that which inspired the Lake poet or artist to create their work. In addition, the visitor may reflect on the visual change (or lack thereof) that is apparent at that place and be curious as to what may have caused the change.

5. Future Work and Concluding Remarks

Our work on locative media is currently at a formative stage but is showing promise given the positive feedback from the expert field trial and encouragement from the NT who have generously agreed to support future end-user field trials and to provide access to their extensive photo and written archives.

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