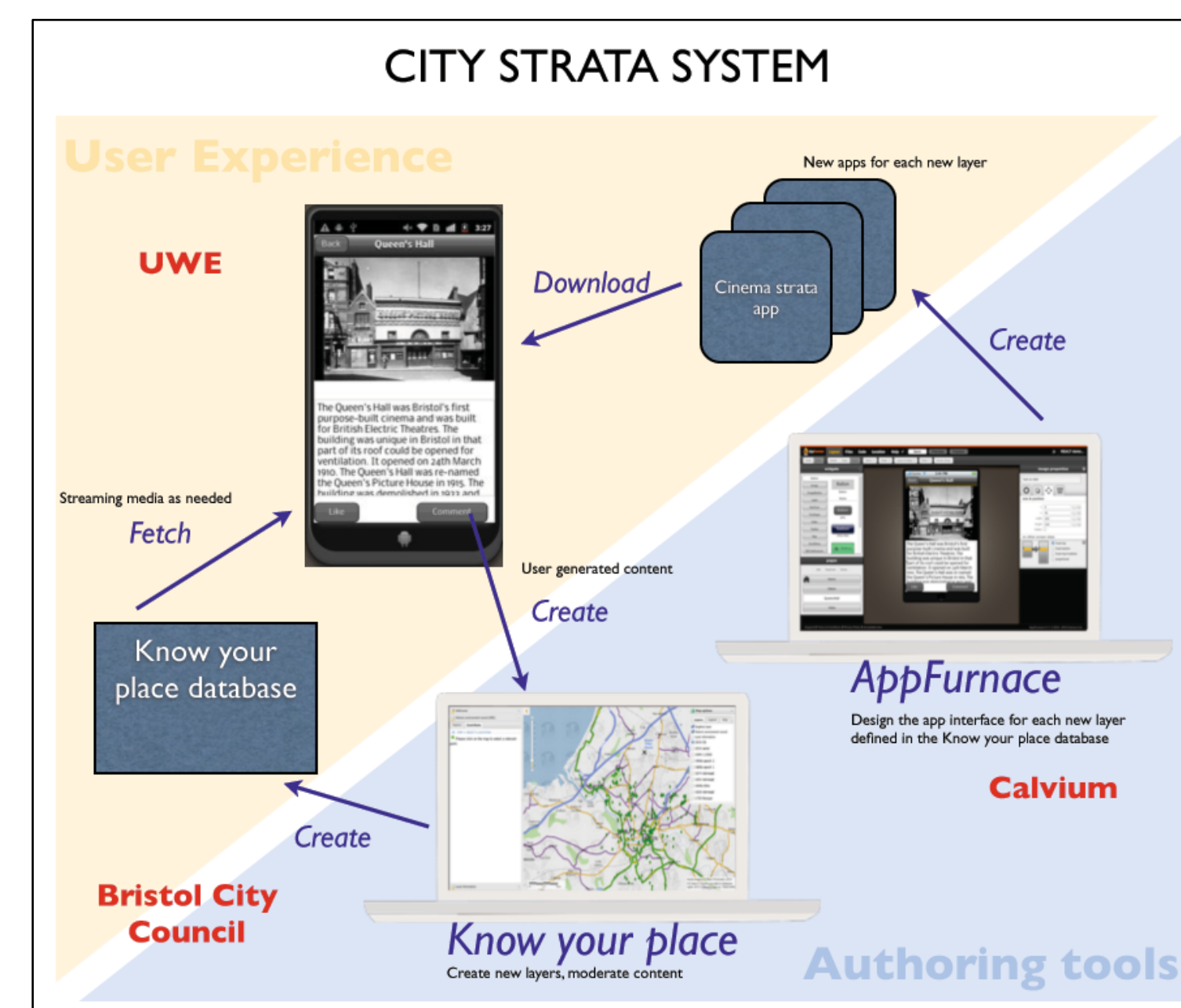


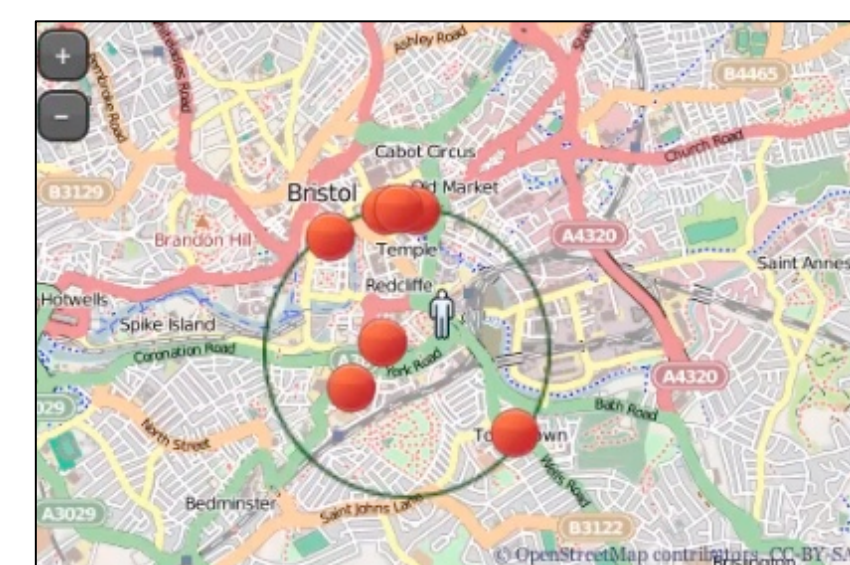
Introduction

City Strata is a new app-authoring platform for creating mobile heritage experiences. The project is a collaboration between Charlotte Crofts at the University of the West of England, creative economy partner Jo Reid at Calvium and heritage partner Peter Insole at Bristol City Council. As part of the 3-month rapid-prototyping REACT 'Heritage Sandbox' process, the City Strata team undertook a number of tests and demos around the *Cinemapping* prototype, which maps Bristol's historic cinemas, so that users can experience local cinema history in the places where it actually happened.

The City Strata System enables developers to create different heritage 'layers' or ways of experiencing the city, that their users can then enhance by uploading their own content. Behind the scenes, the platform innovates by drawing content that relates to your specific location from a remote geo-database – in this case BCC's *Know Your Place* historic ArcGIS map. By storing content in 'The Cloud' more information can be accessed locally than can fit into a normal app, making it scalable for multiple urban, national or even global points of interest.



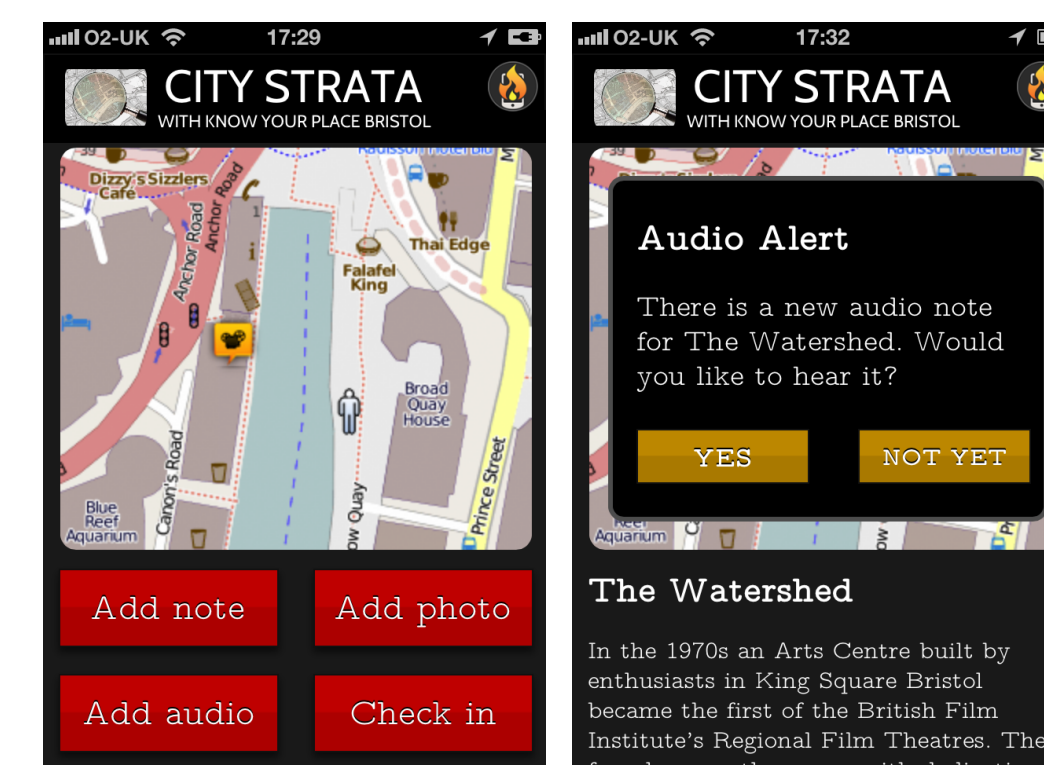
During the course of the technical Research and Development for the *Cinemapping* prototype, Calvium explored the challenge of dealing with large scale and dynamic content by caching 'hotspots' within a 1km radius of the user.



Cache of Nearest 10 Hotspots Demo: The green circle represents the scope of the current "radar sweep", and the red blobs represent the *Know Your Place* cinema hotspots in that sweep.

Calvium also tested the possibility of using the iOS 'Significant Location Change Service' which automatically 'wakes-up' suspended iPhone apps when new location data is triggered, but found the service was not yet granular enough to recognise the relatively small changes in location required for multiple points of interest concentrated in the city centre. Initial tests suggest a combined strategy of switching between the low-power qualities of cellular positioning and the fine-grain accuracy and latency of GPS, plus leveraging the intermediate characteristics of Wi-Fi positioning where appropriate, as the user approaches new points of interest.

One of the key features of Bristol City Council's *Know Your Place* website is the ability for the public to contribute their own archive. During the Sandbox we have undertaken a feasibility study for users to be able to upload audio, text and images whilst on the move and mocked up a mobile app to demo the user interface:



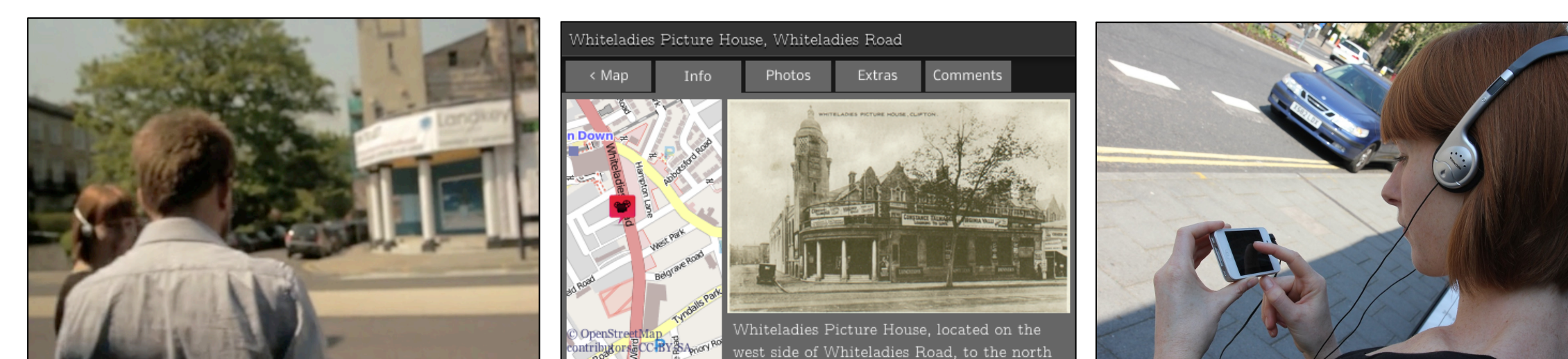
Peter Insole: "Community contributions to *Know Your Place* currently go straight into the Historic Environment Record, they become a material consideration within any planning considerations and are already being referred to in Planning submissions. In the long term this sharing of information will improve our data for managing physical change in the City and increase the appreciation of the value of our heritage."

The Cinemapping Prototype draws data from the 'historic cinemas' layer extracted from *Know Your Place*, allowing users to access information about Bristol cinemas past and present in the field.

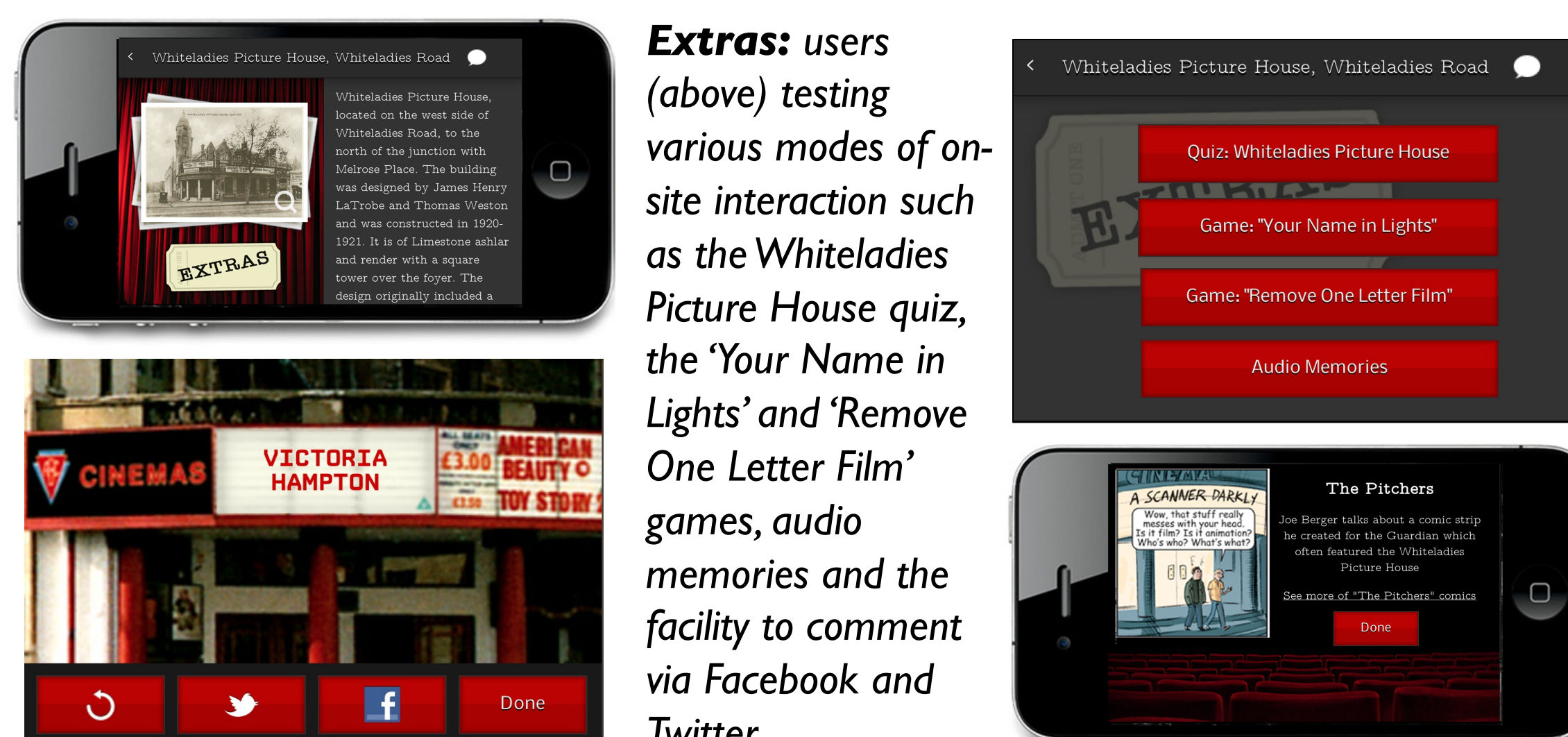


Apping or mapping: in the first iteration we combined a cinematic aesthetic (left: landscape orientation, metaphor of the foyer) with the more traditional tab-based map interface (below). Following user evaluation we decided to simplify the interface, with less emphasis on maps and tabs (bottom).

In developing the interface we piloted two key modes: the single point of interest and multiple cinema sites. The first of these focused on the Grade II listed Whiteladies Picture House where, building on the success of the *Curzon Memories App* (Crofts 2011), we wanted to test how a rich single-site experience could be integrated into the wider application.

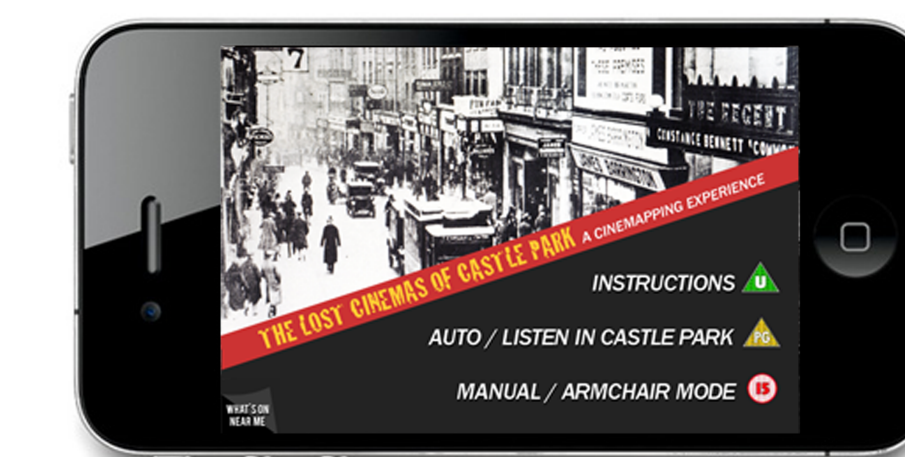


We aimed at two user scenarios: the engaged movie buff interested in cinema history, and the casual user, incorporating games and trivia with audio memories and in-depth cinema history, linking from images of what was screening on the cinema hoarding to films and stars on *imdb.com*. The user won digital souvenirs if they answered the quiz correctly, such as a link to the first film shown at the cinema in 1921. Two key outcomes of the user evaluation were: firstly that listening to audio memories at the actual location offers added value; secondly, the ability to share and comment via Facebook and Twitter gives cinema heritage contemporary relevance, particularly when the live feed is available from within the app.



Extras: users (above) testing various modes of on-site interaction such as the *Whiteladies Picture House* quiz, the 'Your Name in Lights' and 'Remove One Letter Film' games, audio memories and the facility to comment via Facebook and Twitter

The Lost Cinemas of Castle Park App is a tour of Castle Park, Bristol's original commercial and leisure district that was destroyed in the Blitz, and the surrounding area. The park itself was the site of five cinemas, with a total of 13 appearing in the app – from the Tivoli which screened the first moving pictures in 1896 to the Europa which opened in 1973. None of these are extant save the Odeon - which presents the challenge of how to bring the invisible history of these buildings to life. We wanted to create a more immersive, cinematic experience and consequently moved away from the text-heavy interface of the earlier pilot to a greater concentration on audio, with pared down images and background map.



Start screen: simple movie poster aesthetic with choice between listening in Castle Park in auto mode, or manual / armchair mode, plus a call to action to see 'What's On' at the nearest cinema, celebrating contemporary cinema-going as much as its heritage.

Working with production assistant Kieron Gurner, the app has been through several iterations and user testing with various audiences, including an illuminating comparison between GPS and the manual or 'armchair' mode, designed to make the app accessible for those who are unable to visit the park. Interestingly, users enjoyed the option of being manually in control even when physically at the site.



Mapping the past: kids from Fairfield High School testing the app sitting roughly where the stalls of the Regent would have been; the Regent before it was bombed in 1940.

The soundtrack became the primary means through which the app attempts to bring the world of the park to life relying on the "acousmatic" images (Chion, 1994) that sound generates in the users' imagination, and aiming for the cinematic "engulfment" (Elaesser, 1998) afforded by a professional sound mix. The intention was always to use a blend of voiceover, dramatisation, oral memories and sound effects at each cinema hotspot. Following user feedback we introduced additional ambient zones with archive music, trailers, adverts and incidental cinema anecdotes between hotspots. This strategy also enables the user to respond directly to the environment without concentrating too much on the screen, a key consideration in locative experience design where the aim should be to harness that serendipitous frisson between user interface, media content and the location itself, creating what Reid et al (2005) have termed "magic moments".



Various stages of interface development: mapping cinema footprints and layered thumbnail of images (above), paring down to single image (top right) and the live Twitter feed (bottom right).

Initially the site for piloting the multiple cinemas mode, it became clear that the Castle Park tour would work better as an add-on, both available to download from within the *Cinemapping* app and as a standalone 'Cinemapping Experience' in app stores. The finished app is due to be published on iPhone in November 2012.

Conclusions

Mobile technologies enable us to bring the past to life by accessing dynamic heritage data in the field, moving us away from desk-top bound websites and databases and back into the material environment. The key findings of the City Strata project are the challenges of streaming and uploading content to and from a remote database across multiple 'hotspots', the need to design both for the location and 'armchair mode', and the efficacy of social media in linking heritage apps to contemporary experience. In terms of the Sandbox process, the project has demonstrated the power of creative knowledge exchange between diverse stakeholders: "the collaboration between UWE, Calvium and the City Council demonstrates the potential of projects that link data-rich local authorities with academic and creative partners" (Peter Insole). Given the timescale and resources available, our objectives have been to demonstrate the feasibility of the new platform and characterize its limitations and requirements rather than to deploy a fully working system. What is now needed is further funding for the full implementation of these features and to extend the platform to new cultural layers and indeed other cities: "The possibility of creating global layers that stitch together locally curated heritage-inspired stories is very exciting" (Jo Reid).

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Acknowledgments

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Lost Cinemas of Castle Park Demo Instructions

- Step 1: Download & Install the free *AppFurnace Player App* from iTunes or Google Play.
- Step 2: Load *AppFurnace Player*, and click the + icon.
- Step 3: Click "Scan & Add" and scan the adjacent QR code.
- Step 4: When it has downloaded, tap to enter & press PLAY



Further information on this project can be obtained at www.cinemapping.co.uk | @cinemapping
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