

Artnotes

Outline Project Description

Artnotes is an iPhone application aimed at students in fine art, photography and other visually orientated disciplines. The application allows users to collect images and textual notes on the device in a format analogous to a traditional “Visual notebook” as used in many branches of arts education. The application will be able to take visual input from the device’s camera as well as being able to search online image collections.

1 Appropriateness and Fit to Programme Objectives and Overall Value to the JISC community

The Artnotes project will develop an application for the Apple iPhone platform. The software takes the concept of a “visual notebook” commonly used in arts education for collecting and thematically organising images and other visual artefacts of interest to the learner and their studies. Images may be created by the learner themselves (for example photographs of their own work) or drawn from several searchable online image repositories. It is hoped that the project will be of use to learners and teachers in a broad range of disciplines, beyond the funding period. These could include subjects such as geography, geology, architecture, engineering and many others.

In terms of the Programme Objectives it is envisaged that the project will provide a **mobile, personal** learning tool taking advantage of **public data search** through image repositories (using their respective APIs) as well as the ability to share said collection with tutors, peers and the world through interfaces to popular **blogging services** as well as to **institution-based repositories** through the SWORD protocol.

1.1 Mockups

The following mockups show (from left to right) a thematically organised collection of images, a view of a single image, metadata associated with the image and its source (in this case from Flickr Commons / the Brooklyn Museum) and the users personal notes about the image.



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2 Quality of Proposal and Robustness of Workplan

The key deliverable of the project will be the Artnotes application, released through the Apple iPhone Appstore at no cost to end users. The application will have the following core abilities:

Users will be able to collect images from:

- The device's camera and the device's internal photograph library.
- Public image repositories through web APIs initially Flickr, Google Image Search and Wikimedia Commons. Support for more image repositories may be added in later updates to the application, including (where possible given licensing restrictions) JISC Collections such as VADS.
- Downloaded images will where possible include associated tags, metadata and rights information alongside.

Users will be able to organise their images:

- Into a number of "notebooks" each typically representing a thematic collection.
- Within each "notebook" the images may be freely re-ordered by dragging and dropping.
- The user can freely annotate individual images with their own textual notes and tags.

2.3 Users will be able to share their collections:

- For the benefit of sharing with peers, tutors or the internet at large.
- Sharing will be enabled through public blogging services (tumblr, blogger, wordpress, etc)
- ... or via the SWORD protocol to an institution-based repository.
- It will be possible to enable further sharing services and protocols later through application updates.
- The user may choose whether or not to upload a given collection (or individual images within one) at any time.
- Once uploaded, changes to a collection or additional notes will be automatically synchronised to the blog or repository.

2.4 Development methodology

The software will be developed using established agile development methods. Source code for the application will be released under an LGPL licence and developed "in the open" on Google Code from inception. Software will be released via the Appstore at least at monthly intervals from the start of the third month of development onwards. As with the majority of iPhone applications the majority of the code will be written in the Objective C language.

The project will establish a lightweight website promoting the project and exposing the implementation process and project plans as they progress. This will be driven by information aggregated from the Google Code repository (software releases, source commits etc) a dedicated Twitter hashtag and commentary on the project blog.

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2.5 Risk Analysis

Scheduling and workplanning: The software will be developed according to a rigid project schedule with fixed deliverable dates for software releases. Additional interim releases will be made where possible.

Defects: Software defects are inevitable when developing complex software. Continuous testing of software during the development cycles will be employed. Additionally, monitoring of user feedback on the App Store and Google Code will assist with identifying and fixing defects software.

Scope creep: The project plan (and project blog) will include a specific list of features and designs for the application and its user interface. The project team will make every effort to avoid substantial changes to the scope of the plan during its course.

Staffing: There will be a single developer working on the project who is already employed by the bidding institution. In the event of the loss (through catastrophe or otherwise) of this developer there are other members of staff with the appropriate skillset to continue work on the project. Ongoing documentation, adherence to coding standards (commenting, architecture etc) and “coding in the open” will help to minimise the impact of such an event.

iPhone specific issues: At present applications for the iPhone platform are only distributable through Apple’s App Store. There is a risk that the software does not meet the quality standards or is rejected from the store at any time by Apple. There is also a risk that Apple may alter the underlying iPhone SDK platform rendering the application unusable - strict adherence to apple’s official coding guidelines (for example not using deprecated functionality) will help to minimise the likelihood of this becoming an issue.

Equipment: Three iPhones on “pay-as-you-go” contracts will be purchased for the project development and for use in trials. Damage, loss or theft of equipment constitutes a risk to the project however we intend to minimise this through redundancy (having 3 devices) and use of standard university procedures for equipment loans.

Re-publishing of copyrighted material: The tool will encourage sharing of the user’s collection through public blogging interfaces. This presents a major copyright risk as the images captured and shared may be subject to copyright restrictions. In order to mitigate this the software will present a warning to users at the point of sharing content such that they should not do so unlawfully. Where images have been sourced from a repository search the associated rights information and attribution will automatically be included alongside shared images (eg Creative Commons licence details).

3 Engagement with the Community

3.1 Trials within the University of Bolton

We have identified two courses within the University (Special Effects Development BSc and Photography BA) with tutors who would be interested in trailing the software with their

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students during the project funding period. In both trials students will be expected to gather, organise and annotate collections of images and share their collections via public blogs, an activity they will already be expected to perform as part of the courses in question. Users will be asked to provide feedback which will be fed into the development process both with respect to fixing software defects as well as feedback on the overall usability and effectiveness of the software. Findings will be collected and published through the Artnotes project blog.

Two iPhone devices will be purchased specifically for use in these trials however students already in possession of an appropriate device will also be welcome to participate.

3.2 Engagement through the wider iPhone user community

The application will be freely available to the general public through the Apple iPhone Application Store. This allows users to comment on the software and to give a rating (out of 5 stars) for the application. This will expose the software to a global user audience and enable the team to gather said feedback. Feedback from the wider community may also come through social networking services such as Twitter and blog posts and reviews on other websites, both academic and those of more general readership.

As the software will be developed “in the open” we anticipate that the code and development process may be of interest to other developers of iPhone software.

3.3 Post-project dissemination and evaluation

The project team will be able to work in partnership with JISC during and beyond the funding period for dissemination and evaluation activities. We will also be

4 Budget

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5 Previous experience of the Project Team

Developer:

Sam Easterby-Smith has worked on the JISC-CETIS service, supporting technical development and standards use in the JISC e-Learning Programme since 2004. He is an experienced software developer working with a number of languages and technologies including web and mobile development. Sam’s research interests include user interface design and applications of technology for creative learning.

Critical Friend and project advisor:

Scott Wilson is Assistant Director of the JISC-CETIS service, responsible for strategic guidance in the areas of e-learning infrastructure and enterprise systems. He has considerable experience in systems architecture, integration, and development both within education and the commercial sector, and contributed to the development of the e-

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Framework. More recently he has been associated with work on Personal Learning Environments and the use of Web 2.0 services in education. Scott's research interests lie in the use of flexible, distributed technologies to support organisational viability and coordination.

Evaluation:

Damien Markey is a tutor on the "Special Effects Development" BSc course, part of the department of Games Computing and Creative Technologies.