

# CS39440/CC39440/CS39760 Project suggestions

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My general areas of interest are biological data standards, databases and web systems.

The following are some specific projects.

### 1 Design Studio Asset Management

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The [Design, Web, Printing & Postal Services](#) department (DWPPS) of the University has a large and varied collection of digital assets. They require a system to manage these and provide access to a variety of users. The current, proprietary, system is not liked by users and is providing maintenance problems.

The assets are largely still images. Video and document templates are other possible types. Assets have associated keywords for description and copyright information for potential users.

The two main types of user are:

1. members of DWPPS who need to curate the collection by adding assets and associating keywords and copyright information;
2. general members of the University staff who wish to search the collection for suitable material and be informed of any copyright restrictions and how to obtain permission for use.

A web accessible system is envisaged. Once commissioned, members of DWPPS would maintain it and consideration must be given to their skill set. Automated migration of asset data from the existing system must be considered. The system must be bilingual English and Welsh, though addition of the Welsh translation need not be part of the project.

### 2 University Web site map provision

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At the university provides maps for use by visitors and members of staff. The facilities are currently limited. A newer and more comprehensive system is required. Specifically, the following are desirable:

1. a personalised interface, where registered university staff can customise and store maps for distribution to specific visitors showing, for example *"my office is here"*, *"the best car part is here"*, *"I will meet you outside this building"*;

2. a specific interface for mobile devices;
3. suitable printing options;

The ability to superimpose material onto maps, if they are provided by an external service, so that they are customised for the University is desirable. Images of buildings and routes between locations are examples.

### **3 Animation of Folk Dancing**

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As a teaching aid and as a tool for composers of folk dance, a 2D animation of the movement of the dancers across the floor with clear association with the beat and phrase of the music would be very helpful. The folk dances concerned (Welsh, English Morris, possibly Scottish country dance) involve a moderately well defined set of "figures" which each involve a number of the dancers (often just partners) who describe a shape on the floor relative to each other.

A number of tools might be considered for the task: [Java FX](#), [Silverlight](#) and [Adobe Flash](#) are possibilities. A dance scripting language will be needed which reflects the structure of the dances and the figures. That could be in any format, though XML is an obvious possibility. "Fixed" animation of specific dances is not the objective.

This project is likely to involve familiarisation with some new technologies. Support with dance material will be available so previous experience there is not required (though it might make it more fun if you are a dancer).