Museums and IT

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Through several years of second year and capstone projects, we have had some excellent projects implemented for local museums. Museums worldwide are dealing with issues such as huge volumes of data, the dichotomy of needing to protect and store artefacts while making them available for the public, a strong educational focus and a shortfall in funding. Information technology solutions can solve many of these problems for local museums, making them an ideal foundation for student projects. This paper examines some of the work currently being carried out in museums, and explores strategies for identifying museum projects. The management of such projects also poses some specific issues which we outline in the paper.

The selection of a capstone project for third year Bachelor of Information Technology students at Otago Polytechnic is a critical process that can affect the final result (see Mann & Smith, these proceedings). It has been stated by Clear *et al* (2001) that the use of a real client is an important factor in the success of the projects. For student involvement and satisfaction, the project must be seen to be providing value for the client and to be likely to be used.

Over the past two years, Otago Polytechnic students have been fortunate to work with clients from several local museums. The MOAS project (Garrett *et al.* 2003) was completed in 2001 with Otago Museum as a client. The MOAS system allows the museum to efficiently capture 3D images of its artefacts and to display them on the web. This system has been widely acclaimed, and demonstrates an application of digital technology to solve a perennial problem for museums across the world.

Since then we have worked with the Otago Maritime Museum at Port Chalmers, completing an analysis and development up to the point of implementation. The Software Engineering students initially saw the problems at the PC museum as trivial – a straightforward database development. Most groups realised however, as the analysis proceeded, that the volume and complexity of maritime data stored by the mu-
seum posed a significant challenge to their emerging software engineering skills. Port Chalmers museum, like most regional museums, is not government funded, so the purchase of proprietary museum software is not an option.

The Southern Heritage Trust has also provided a range of projects for students – from a tour mapping site to a comprehensive cemetery database.

We are currently working on an interactive virtual fish exhibit for a new aquatic gallery and are about to start a major project developing the interactive material for an extensive multi-million dollar tropical butterfly habitat.

What characteristics do these projects share? They are typically dealing with large amounts of raw data, which has overwhelmed the limited resources of the voluntary museum organisation. The museum partners (our clients), on the other hand are far from overwhelmed. We have found them to be ideal clients – enthusiastic, accessible and extremely knowledgeable in their area of expertise.

The management of museum projects raises some interesting challenges. A common goal of museums is to provide a coherent and engaging visitor experience while making the computer invisible. This provides intriguing design constraints needing much creativity, and may involve the use of embedded and wireless technologies. The exhibits also need to be robust enough to withstand constant handling, yet sensitive enough to be triggered by a child's touch. Providing enhanced digital information in a heritage environment poses ethical challenges associated with the accuracy and sensitivity of the data itself.

References

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