Story Telling for Cultural Knowledge Sharing

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Abstract. We present the development of learning resources using multiple contributors. The resources are to assist learning a specific set of cultures, those of the Aboriginal and Torres Strait Islander communities in Australia, using stories uploaded onto a web site. The work is aimed at cultural preservation through non-linear digital stories, and re-presenting it in educational settings.

By enabling the community contributors to tag their artefacts according to themes, relationships, location and language we can provide a way for the learner-user to select relevant stories to their learning experience. The three learning environment interfaces, combined with the contributor’s tagging of their story, provides the interconnection between stories and the learning path for the users.

1 Introduction

To teach cultural understanding, the optimal conditions are for immersion within the culture. Adult learners are highly motivated when re-living real life scenarios [1]. However this process is not feasible for the many people in Australia who wish to broaden their understanding of the local Indigenous cultures. However, providing material online is contentious as members of the Indigenous community are wary of their knowledge and stories being used or analysed out of context, and without acknowledgment. Given the vast difference in culture and learning processes between the Indigenous and non-Indigenous communities in Australia, we need creative means to assist novice computer users to construct useful learning material that retains their cultural values and intent.

This work deals with a similar scenario to that considered in the Virtual Campfire cultural archive developed by Klamma et al. [2] with Web 2.0 features for user-generated content. The present system is aimed at more collaboration features, similar to the proprietary software VoiceThread [3] for collaboration around multimedia artefacts.

We are dealing with novice users as contributors and users, who are highly mobile and often not confident to express themselves in written English. Hence the system is required to support multimedia sharing of knowledge, utilising audio, video and image artefacts, and mobile access. We are using MPEG-7
format on images to enable linking to items within images and MPEG-21 [4] for setting rights of access. Also we are implementing the free and open-source server Annodex [5] for video/audio time-coding designed to chop continuous streams and local caching to reduce download, and adapting this annotation system for HTML5 [6]. Given the contributors come from a mobile population, the trend away from Flash for products such as iPad and iPhone supports this approach.

For Aboriginal and Torres Strait Islander people, story telling is the main mode of knowledge sharing and this requires much repetition for the learner to hear various version from different story tellers in order to understand all the different nuances. While the specific needs addressed in this work apply to the Indigenous people of Australia, there are similar modes of knowledge sharing in other Indigenous cultures.

The learning contexts are non-technical areas of training, where the knowledge experts are not confident with computers, and the community nature of the story makes it hard to develop complex story telling designs, so evaluation of the work has to date been focused around the level of participation in the development of the sites and feedback from workshops. We are interested in using gaming tools to enhance learning but this has been limited to using a simple selection of pathways through collaborative contributions. When the teaching mode is better understood we hope to use other techniques from similar systems to combine multimedia resources into training sessions (Spaniol et al. [1]).

2 Research into Indigenous Knowledge

This work is motivated by an interest in the wealth of knowledge that exists as oral memory within an Indigenous culture, and in particular how this knowledge may be learnt by those modern cultures who have lost their location in time and space, their link to a specific area of land, and the type of environmental and social knowledge that is embodied in such a lifestyle.

While much Indigenous knowledge has been brushed aside as irrelevant to modern society, there is now growing interest in re-gaining access to this knowledge. The main areas of interest are: knowledge about the local environment, its historical changes, and how to reduce the effect of modern societies demands on the environment; and how we relate to each other in a communal sharing society, rather than an individualistic one.

Accessing this knowledge must be done in a manner in which the ownership rests with the community. This provides some apparently conflict between individual contributors and the community authority to share knowledge. For instance these is often a notion that individual stories may conflict around a theme. However the stories are based on personal experience, and the language reflects an understanding of this context. The authority to tell a story is embodied in the knowledge sharing protocols that is understood and generally adhered to by individuals in the community [7] and [8]. Also oral mechanisms exist for the community to verify that the protocol is being followed and this is linked to the development of the web sites through community consultation and involvement in the design.