

Using digital stories for local and global information sharing

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ABSTRACT

The StoryBank project is exploring the use of digital storytelling technology for local information sharing in the developing world. A secondary objective of the project is to consider the value of storytelling for global information sharing about the lives and needs of remote communities. In this note we show how we are collecting data on both issues and can present the key findings at the workshop.

Keywords

StoryBank, cameraphones, digital library, India, developing communities, information sharing, digital story, audiophoto

1. INTRODUCTION

At last year's CHI 2007 Workshop on *User-Centered Design for International Development*, David Frohlich introduced the idea of using digital stories for information sharing in a rural Indian community. This is under investigation on the **StoryBank** project which is now into its second year and considerably further advanced (<http://www.cs.swansea.ac.uk/storybank/>).

In this note we set out a twin position paper on two ongoing tests of StoryBank *content*, for information sharing in both a local and global context. In the local context we are currently running a field trial of the system in Budikote village in southern India. In the global context, we have facilitated the creation of 25 stories of life in Budikote by villagers themselves. These are currently being used by UK design students to inform design entries to a competition. At the CHI workshop, we will present the key results of each evaluation for discussion.

2. LOCAL INFORMATION SHARING

The main StoryBank deliverable is a tool for a remote community to create, distribute and view stories. The chosen platform for this is the combination of a Nokia N80 cameraphone and a laptop with a situated display for the repository, using Greenstone digital

library technology [4]. Audiovisual stories were chosen as the focus of this system to extend current ICT initiatives to share local information in text and images [7]. This is because they can be authored and 'read' by spoken-language communities with low levels of textual literacy. Our working hypothesis is that these stories could become a new currency for representing local information, if they were made easy enough to author on a cameraphone and share on other cameraphones or via a situated display. This requires a novel text-free story creation application for the cameraphone, a lightweight communication infrastructure, and a novel text-free method of story retrieval and playback. The need for better methods of representing and sharing local information was established in a prior user requirements study, which showed that community radio was very effective and could be extended with pictures [5].

A recent description of the latest StoryBank system is given in a paper still under review and summarized here. Figure 1 shows the cameraphone screen whilst creating a story. Users can assemble up to six still images and associate them with a two minute voiceover to make a simple audiophoto narrative. This format was inspired by the digital storytelling movement [6], our own prior work on audiophotography [2] and informal interactions with staff from BBC Capture Wales [1]. Once a story has been created it must be categorized by selecting one or more topics from a set of 9 topic icons. These include topics specified by village representatives, such as health, education, agriculture, self-help groups and recreation.



Figure 1. Cameraphone interface to story creation.

Figure 2 shows a touch screen display installed in the ICT centre of the village. This presents a collage of stories for filtering and playback. These are actually stored in a Greenstone digital library running on a laptop connected to the display. Stories are transferred to and from this library from individual cameraphones using a usb cable connection to the laptop. They can also be transmitted between phones by a wireless (Bluetooth) connection. Stories are represented on the display by thumbnails of their

initial photographs, and filtered by direct manipulation of the iconic buttons around the edge of the display. These include topic icons referring to the classification of stories done on their creation (left edge), story collections such as those collected in the trial (top edge), and the identification number of the originating phones (right edge). Stories can also be retrieved by a unique story number typed in on a screen-displayed keyboard (not shown). Pressing any of these buttons acts like a textual query to filter the story database by the selected operator. Hence pressing the Health icon selects only stories with a Health categorization, while pressing further buttons adds extra constraints to the query and filter (e.g. Health stories recorded on Phone 6). Story results are shown to cycle around the screen as thumbnails, which can be selected to play the corresponding story full-screen.



Figure 2. StoryBank repository interface for story selection

Earlier versions of the above system have already been developed and refined through user testing in the village [8]. The next phase of our work is to run a full trial of the latest version in Budikote during October and November 2007. This will assess the value of the system for story creation and sharing by a cross section of the community. We are placing 10 camera phones with key community resource people (CRP) to be custodians" of the devices. They have been trained in the use of the phones and repository and will in turn train other participants from across the village. To inspire a variety of uses of the stories, we have populated the repository with some examples. These represent our best guesses of the kinds of information we think may be useful from prior fieldwork, and include health advice, farming demonstrations, recipes, talking posters and adverts. The actual stories and uses should become known in the trial and described at the workshop.

3. GLOBAL INFORMATION SHARING

As well as being an accessible medium, audiovisual stories have been found to be effective for communicating user behaviours and requirements in a design context [3]. A secondary deliverable of the StoryBank project is to test this value of story content for a more global form of information sharing. We are doing this through a national student design competition hosted by the Royal Society of Arts in the UK called Design Directions. A design brief called *Sandals* has been supplied by our project, and challenges students from a range of disciplines to design something to improve the lives of people in Budikote village [9]. To inform this brief they can draw on 25 ethnographic stories of life in the village, created by members of the village themselves in a story creation exercise. These stories can be seen on the 'Resources' page for the brief [10], and relate to home life, work

life, events and problems in Budikote. Figure 3 shows an index to stories from the Work life section. Students will fill out a questionnaire on the value of these stories when submitting to the competition and findings from these questionnaires will be presented for discussion at the workshop. One question this approach raises is the feasibility of doing remote user research with these kinds of materials in future ICT 4D projects.



Figure 3. Story interface page on RSA website (film strip)

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