Why do people go to the zoo? The simple answer is to see the animals. A common part of a child’s visit to the zoo involves running from exhibit to exhibit to observe the animals. In order to create a more interactive visit the zoo will often have docents, animal encounters, informative signs and other interesting activities. However, the zoo still remains an observatory atmosphere, children watch the trainers interact with animals, they listen to docents talk and in the rush to see ever animal how much of their time and education is actually remembered? In order to create a new dynamic this project proposes to integrate the zoo and technology and allow the children a chance to turn around and teach others about the animals they have been watching. Through the use of digital cameras and simple programs children will get a chance to create their own mini-documentary.

The zoo is an amazing place. It gives people the chance to observe wildlife they may otherwise never see and establishes the importance of conservation efforts all over the world. As technology has advanced we have all faced the increased jumble of communication. Social networks, email, blogs, all the ways to communicate via the internet are building a wider audience that the zoo can tap into. To provide a few examples, the Bronx Zoo has a facebook profile, the Cleveland Zoo has a twitterfeed, and the San Diego Zoo provides animal cams and a blog. All of these connections require considerable maintenance, but if done correctly it increases the zoo exposure and allows for better outreach. This zoo documentary proposal aims to do the same. The popularity of shows such as iCarly and Bindi the Jungle Girl and the attraction of hands on education all indicate that children are capable and motivated enough to want to explore the possibility of creating their own documentary. The zoo documentary also fits into the educational and technological goals for multiple groups. According to the Association of Zoos and Aquariums it is essential “that education be central to an institution's mission” and frameworks set by many groups such as the National Educational Technology Standards would lend support to the use of digital cameras and documentary creation within the zoo.

My proposal is loosely based off of a similar proposal made in Japan (Ohashi et al 2008) and on the conclusions found in another paper about mobile technology in education (Anderson and Blackwood 2004). An overwhelming amount of information is available today and in order to sort through it people have turned to a wide variety of mobile technology. The zoo can be viewed as a trusted source of ecological and scientific information but not just for the people visiting the physical zoo. The zoo documentary will encourage basic research skills, create a more dynamic interaction for patrons and increase the online zoo identity.

The premise for the project is simple; however as with most great ideas the implementation draws out the complexity. The basic idea can best be explained through a series of steps. Step 1) Give the children instructions (show them an example documentary; teach them how to work the digital cameras). Step 2) Hand out the equipment. Step 3) Provide an area and animal for the children to document. Step 4) Record video! Step 5) Use a simple computer program to download and create the documentary. Step 6) Upload the video to a webhost. The
idea is simple, but as I went through each step in order to create my own example multiple problems and considerations were brought up. In order to provide an example I went to the Miller Park Zoo in Bloomington, IL with two young girls (ages 9 and 10) and the following design elements were observed. (You can jump ahead and see the video here.)

Step 1) Give the children instructions. This step was straightforward, not much was necessary to teach the girls how to use the camera but a key step was allowing the girls to film me. After they watched my example it was easy to let them film where they wanted. However, I provided minimal guidance in order to see how well they would do independently. It may be beneficial for a classroom to prepare ahead of time before their visit or to provide more instruction to help insure that the information is recorded in a punctual and factual manner. The use of example documentaries, instructional videos, helpful docents and research worksheets could all be ways for the zoo to set up a positive beginning to the project. The strength of this step emerges when flexibility is given toward the content of the video, children can focus on a particular theme such as marine mammals, or rain forest habitat or evolutionary adaptations, etc. It could be up to the educators or the zoo to provide the proper instruction to allow children to prepare and learn about a particular theme.

Step 2) Hand out the equipment. Digital cameras can be expensive and the idea of handing a bunch of them out to a group of children could be a potential money drain. However, with my camera the girls were respectful of the property and proper instruction in the beginning can also involve a reminder of being careful. Of course, there are always going to be accidents. The zoo would need to consider how much they are willing to invest in the cameras and replacements. Children’s cameras such as the ones talked about in this article are available and are made to resist the wear and tear of young hands. Another possibility would be to create stationary cameras which the children activate through a swipe card, therefore limiting damage to the cameras and allowing the zoo to control where the video is taken.

Step 3) Provide an area and animal for the children to document. I had 4GB of memory and an entire zoo when I went to Miller Park. In the end I had 44 minutes of video. The zoo would most likely want to contain the children and the equipment in one area and limit the amount of memory so the children can only record themselves for a certain period of time. This step is necessary for a variety of reason. By limiting the area children can focus on providing better information about one or two animals. A contained area would also be easier to supervise and prevent cameras from being stolen. A time limitation makes future video editing simple and will increase the camera turnover (so more children can have their ‘turn’). Also, the zoo could create scenery and other props for the children to interact with in their documentary. It would be up to the zoo to decide where this project would best fit, or they could decide to move it around the zoo and allow a wider variety of animals to be recorded at different times.
Step 4) Record video! This step can be performed in a variety of ways and in order to enable creativity the zoo should consider signs, sounds and copyright. Informative signs allowed the girls to read facts to the camera. This could end up creating a bunch of videos with the same facts read over and over and prevent the children from comprehending what they are reading. It is a problem I am not sure how to remedy, but could be further investigated by sampling a larger group of children. Another recording problem was sound, if someone else was talking, or there was wind, or the building has echo then recorded sound does not come through clearly. The zoo would need to consider purchasing microphones or setting up the project in a way which allows sound to be transported clearly to the video. A third problem could be copyright and privacy issues, if someone is recorded on the video who does not want to be, or if a protected product is filmed the zoo could be faced with lawsuit problems. This is a problem which should be more fully investigated before the project is implemented. I can see this being a non-issue, or if necessary the zoo could implement simple signs alerting the public to the filming and a statement about no endorsement.

Step 5) Use a simple computer program to download and create the documentary. For this part I used Windows Movie Maker, a simple drag and drop program (Figure 1). The zoo should make sure that all the video recorded and images taken are correctly formatted to be useable by whatever computers and programs they decide to use. I had problems initially because all of the videos had been recorded as MOV and had to be converted to AVI in order to use them in Windows Movie Maker.
Windows Movie Maker allows the user to insert opening and closing credits, transitions, music and edit the video clips to the correct length. The program could also insert pop-up facts onto images and video. The zoo could include photos taken by its own photographer to give the documentary a more professional feel. While I found the program simple to use I did not get a chance to see how well this program could be used by children. However a simple instructional video could most likely be shown while the video content was being downloaded. This program had many other options also, but it might be necessary for the zoo to limit the tools so that the creation is not too complex. A similar online video editor can be found on the American Image website. This is a step where children or the teacher/parent might be easily discouraged if it is too hard, so it is essential end user research be done to insure a smooth project conclusion.

Step 6) Upload the video to a webhost. The videos I created and uploaded can be viewed here. The zoo could choose to upload their video to a YouTube web channel, or another video host site or they could host their video on their own separate web space. Because of the popularity of YouTube I would recommend its use for increased exposure. This step is what builds the online zoo identity. After making the video patrons have a recorded memory of their time, and can continue to interact with the zoo by watching their online video and perhaps commenting/discussing about it with other online members. People outside the zoo can view what is going on and gain a greater understanding of the animal they are learning about.

This project was well received by my two volunteers and overall it was very fun to produce. While the process did bring up a lot of problems, especially if it is done with a larger group of children, the simple idea has a potentially powerful outcome. This proposal only briefly looks at the various steps necessary to begin building this idea inside a zoo. A more in depth look would need to choose a specific zoo and test a larger group of children. The zoo would need to take a closer look at the technical side of the zoo documentary. The amount of memory and internet speed needed for a large quantity of video to be downloaded, edited then uploaded is one aspect which would require more attention. A closer look at the instructional and educational aspects is also needed in order to establish a solid structure for children to learn and have fun. After more thorough and formal research is performed the value of this simple idea might shine through. In the end, the zoo documentary allows children to learn in an interactive way through the use of inquiry based learning and the zoo will benefit by producing an end product that highlights the zoo conservation message and connects it to the world.
Works Cited


Hyperlinks Provided

American Image Website: http://americanimage.unm.edu/video_editor.html


Bindi the Jungle Girl: http://kids.discovery.com/tv/bindibindi.html

Bronx Zoo Facebook: http://www.facebook.com/bronxzoo?ref=s


Cleveland Zoo twitter: http://twitter.com/clemetzoo

iCarly: http://www.icarly.com/

National Educational Technology Standards: http://www.iste.org/AM/Template.cfm?Section=NETS

YouTube Video: http://www.youtube.com/view_play_list?p=3BFFFD214C2E6C8D

San Diego Zoo Blog: http://www.sandiegozoo.org/wordpress/

San Diego Zoo Cam: http://www.sandiegozoo.org/livecams/