1 INTRODUCTION

The variety of movie content has been expanding. Not only conventional TV companies but also other companies (e.g., IT companies) or even individuals can “broadcast” movie content using the Internet and a camera. An era in which everyone, even a small child, can broadcast will come in the near future. However, parents may have concerns about the relationship between digital content or the devices used to access them and their children. For example, letting a child watch too much TV may not be good for them. We designed and implemented “AaahCam”, which is a tool that small children can use to capture images and play with them without changing their natural behavior.

A small child walking in the park often picks up a twig and points it at objects he/she likes (e.g., dogs, birds or squirrels) saying “aaah!” (Figure 1 (a)). This behavior in the park, pointing at an object and making an utterance, is natural to all children. “AaahCam” is a twig-like camera which can capture images and handle them with a simple movement (Figure 1 (b)). It allows a child to make contact with the world of digital images without using complex digital devices such as digital cameras or mobile phones.

It is almost impossible to keep a child away from TV and to not let him/her watch programs at all. But, we can at least say that the TV programs for children should be interactive rather than one way. We designed “AaahCam” not only as a capturing device but also as a tool that a child can use to play with those images captured by him/her.

2 Implementation

“AaahCam” is designed to be used for two purposes. One is for capturing images and the other is for playing with those captured images. To achieve this, “AaahCam” is equipped with a wireless camera and a tri-axis accelerometer. The twig camera is designed to be completely wireless, so that a child can walk freely with it.

We used a wireless camera, microphone, and Bluetooth module to send images and values from the sensor of the “AaahCam” to a PC (Figure 2).

![Figure 2 System Composition](image)

A child can capture images outside using the “AaahCam”. It captures an image when the volume level of an utterance such as “aaah!” picked up by a microphone, is above a certain threshold. The microphone is wireless and is attached to the child’s clothes enabling him/her to walk freely in the park and capture images.

Back at home, just after taking the walk in the park, the child can browse the captured images using the twig. Depending how the twig is moved, for example shaking, the images can be scrolled, fast-forwarded/rewound, or cut out as frames (captured) from a sequence of still images from the movie.

3 Conclusion

We have developed a prototype device for future movie content creation by young children. In the near future, everyone will be able to broadcast images captured by him/her. “AaahCam” is a tool that a small child can use to create and play with movie content. It looks like a real twig, and a child can behave naturally with it and interact with the digital image world at the same time.

References