The World through animal Eyes (Make your Zoo Digital)

Doaa Hamamdeh, Islam Al-bashiti, Rawya Sider Safa Sharabati, Walaa Doudeen Supervisor: Abdalfatah Najjar Information Technology Department College of Administrative Sciences and Informatics Palestine Polytechnic University

Introduction

With the evolution in media, films, animals on television and the Internet, this has reduced the willingness of people to visit the zoo, hence the idea of this work is to make the zoo digitally will lead to a higher rate of income in zoos and increase the number of visitors largely on them. This project is going to present an approach to know the vision system for animals by understanding how the animals see the world. Through analysis and knowledge of visual system for each animal, we find that many animals don't see what we see, some of them can see in infrared, or ultraviolet frequency, others are able to distinguish only some colours, for example cats know green and blue only. Hence this project is about imagining how animals see the world, not only with colours, but also with different points of view, from the sky or from the bottom of a fish ball, or whatever your creative empathy says.

Proposed project



Horse Vision :

Horses have eyes that are located on the sides of their heads. This means that they can see almost all the way around them. This is very important to animals, such as horses, that are preyed upon by other animals in the wild. Horses need to be aware of possible dangers in their surroundings.

Project Objectives:

Snake Vision :

We chose to simulated the different snake visions:

- 1. Color blind with yellow effects
- 2. Infrared vision: We used exposed film to put on web-camera lens. The film filters out other light but infrared; therefore it detected the infrared light we produced with a remote control.
- 3. Blur: the web camera was set out of focus.
- 4. Motion sensing with help of an algorithm that compares each frame with the previous frame and in this way detects

Human Trichromatic Color Vision

Horse Dichromatic Color Vision





Figure 3: System Design Option





Human-Eye View

•The horse can't see directly below its head.

The objectives of this projects is to :

- 1. change the normal routine of zoo visiting, and aims to encourage people to use the concepts of information technology in the tourist sites,
- inform people of various vision systems in animals from the scientific point of view.
- 3. increase profit and financial return to owners zoos and this will be accomplish be installing wireless camera sensor network to show the world through animal eyes.

Results:

Animals have different vision than human and it sees the world in different way. Its very important to know how these animals see the world by this project digital zoo one can imaging how animal look at him or how he/she look like in that animal eyes. motion which is shows as light against the stationary dark



Wolf vision simulation



Figure 1: Wolf vision simulation





•The horse has to lower its head to see faraway objects.

•The horse has to raise its head to see close objects.

•If an object is closer than a few feet, the horse can't see it with its binocular vision.













