

1 presentation outline

1.1 Intro

This should be interactive. Ask audience members what they do when they want to make a computer do something. Someone will probably say something along the lines of 'write a program'. Ask them how they will do that, and they will say 'I use some programming language,' or 'write some code,' 'etc.'

I will pick up on either 'language' or 'code' and discuss how that creates a barrier between those who know the language, and those who don't. Wouldn't it be nice if anyone could program a computer using a language they already knew? Hmmmm....

1.2 The idea

Present the idea—a robot that watches a person's gestures, and then follows the path the person indicated. Do this with lots of emphatic gesturing and running around.

1.3 how to do it

Talk about concrete details of implementing it. Show off the robot. Pass it around. Discuss using the camera for color tracking, and 'write' an example 'program' for everyone to see.

1.4 how to actually do it

Now we hump into the verilog bits. There are really 5 parts of this project:

- The robot
- the part of the FPGA that talks to the robot
- the camera and tracking bits
- the memory storage bits
- the part that reads the memory and makes the robot go to a certain location.

Draw these bits really big on the board, and then discuss them. Have printed copies of a sexied-up state diagram for everyone. Spend most of the time on

the playback module and the tracking modules, since those are the interesting bits.

At this point, I've probably flapped my gums for about 10 minutes.

1.5 shutting up

Talk for a couple minutes about what it's good for—give some examples of handicapped starving children using it to cure diseases or what have you, and then wrap it up, leaving everyone with a good warm feeling in their tummies and an overwhelming sense of clarity.