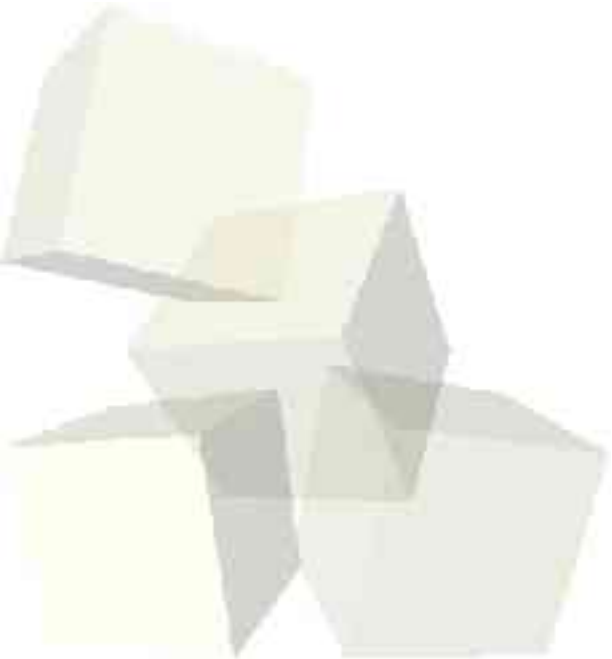
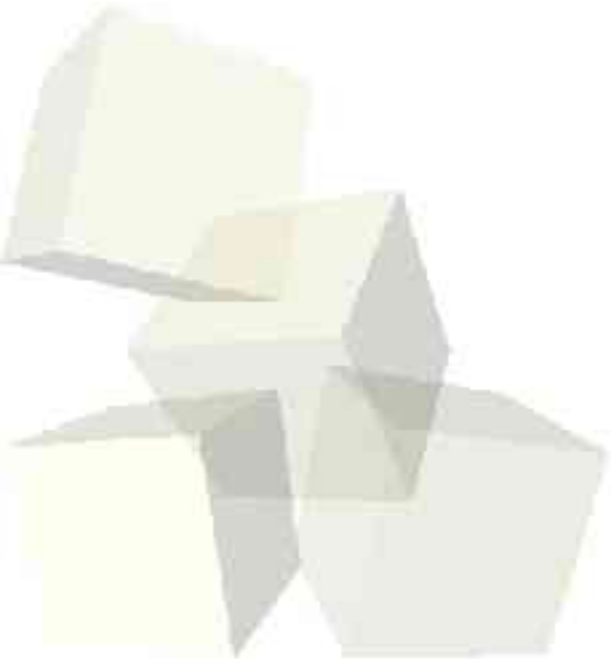
More Function Based Modeling

2-15-2005



Opening Discussion

- Do you have any questions about the quiz?
- What did we talk about last class?



Automatic Vehicle Control

- The text goes through three different models of automatic vehicle control.
- The general idea though is we have a function that gives different output depending on distance and/or velocity.
- The text settles on the model that compares velocities. That worries me because you don't have anything making sure you maintain a safe travel distance.
- It shows nice use of arbitrary functions in block diagrams.

Functional Network Structure

- Code in algorithm 5.3 scares me. It is extremely non-object oriented and their hard coded method could be significantly improved with OO.
- Their data driven method is better, but good OO could also be used for this as well.
- The ideal solution would be for the blocks in the diagram to be objects and have it so the structure can be set up in code or could be set up from data provided in a file.

Digital Logic Circuits

- Obviously the digital logic circuits that you draw in computer design where you build things from and and or gates are just a type of flavor of functional block models.
- At proper simulation of those block models has the advantage of being able to add time delays. This can be very significant if you actually want to simulate to decide what the maximum frequency you can use for a chip is. All the transistors have a maximum flip speed.

Minute Essay

- What is your name?