CS 523 Term Project Sneak Preview –

1. Problem Statement
   1. To design an interactive environment to help K-12 kids to stay physically active and promote team spirit, preferably involve soccer
2. Motivation
   1. “Let’s Move” initiative launched by First Lady Michelle Obama
   2. Suppress future medical cost of the nation by curbing childhood obesity
   3. Promote team spirit, tune down individualism/selfishness – good team play goes unrewarded
   4. Increase competitiveness of the U.S. Men’s national team in the FIFA World Cup
3. Method / Implementation
   1. Motion/pressure sensors on jerseys / boots / goal posts / ball
   2. Receivers around the perimeter
   3. Using a formula to calculate a team spirit score (assists/pass etc.)
   4. From the score, determine the best possible mediation action
4. Formula
   1. The team score formula will involve several independent variables.
   2. Each independent variable represent a certain action, such as <pass>, interception, tackles etc.
   3. Coeffcients will be determined beforehand with data from past match data using Ordinary Least Squares
   4. A modifier will be applied for events that happened in a particular order, such as <ball hogging> , <interception> or <tackled> , <Goal> (from enemy team); this is an indication of a player hogging the ball for far too long, end up being given away, and result a goal for the opposite team.
5. Technologies
   1. Input
      1. Sensors
      2. Previous coefficients from past match data (optional)
   2. Output
      1. Team spirit score

Tanya berger wof – tracking zebra

Feedback to the player – not to the coach

Earphone – (Bluetooth) instant feedback

Software – AI

Camera based solution vs. active RFID technologies

Spekeare next week. (are you able to close to tracking individuals)

Streatgic stuff / AI

ROLES (f/M/r)

GUI

Feed in coordination data and see how the program reacts (5-a-side)

AI/Heuristics/Graphics

End product – Graphical representation – where they should be the dots

Radio message update every 15-30 sec

Talk about the HARDWARE (TRACKING) -, then the software (algorithm / AI).

Feedback --- only with defenders for now