CS 2951A Robots for Education

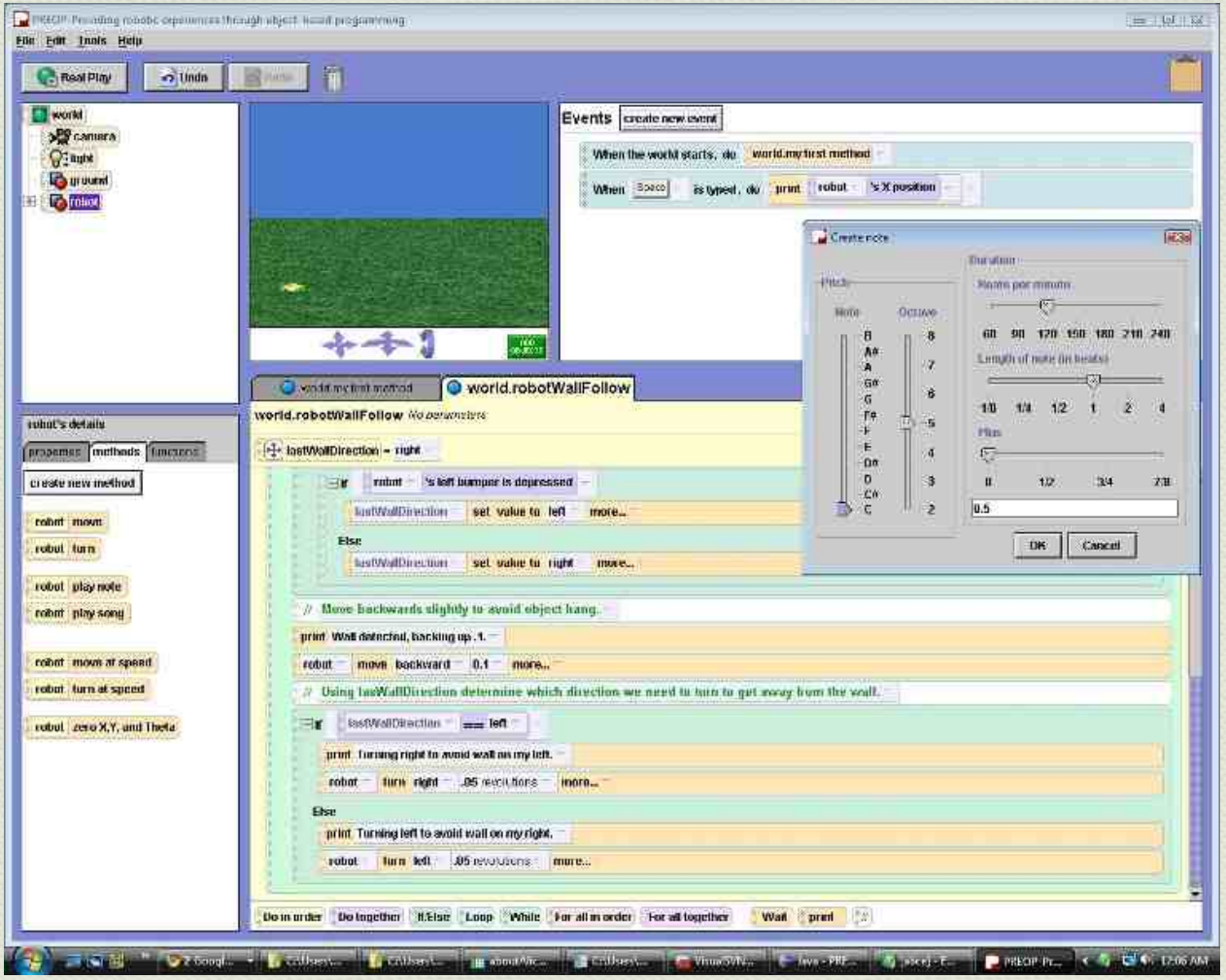
Instructor: Chad Jenkins

Spring 2011

Structure

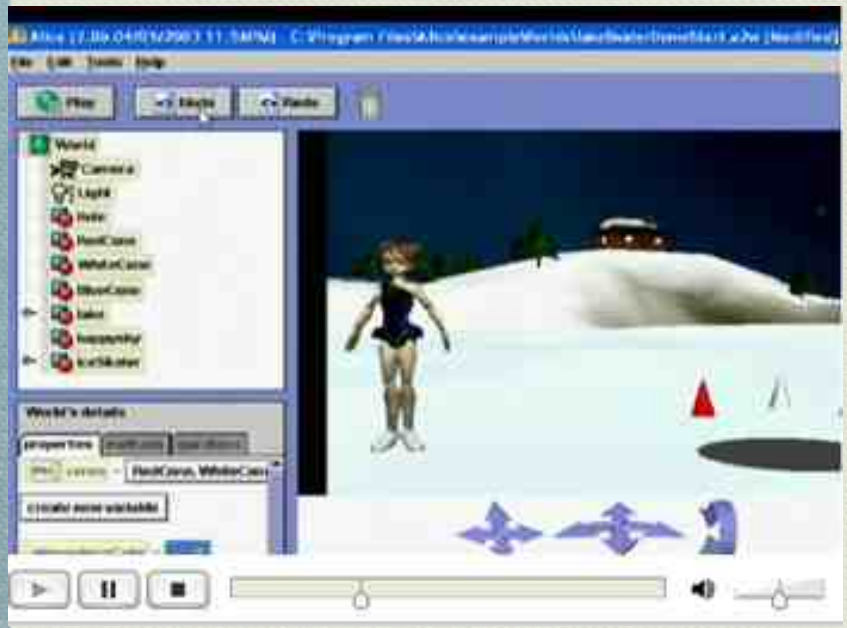
- Research and present 1 topic in educational robotics
- Implement 1 project:
  - new interface for educational robotics
  - document module for instructional project with interface
- Course page on brown-robotics.org wiki
- Class meetings: 1 hour of presentation, 70 minutes project work

PREOP

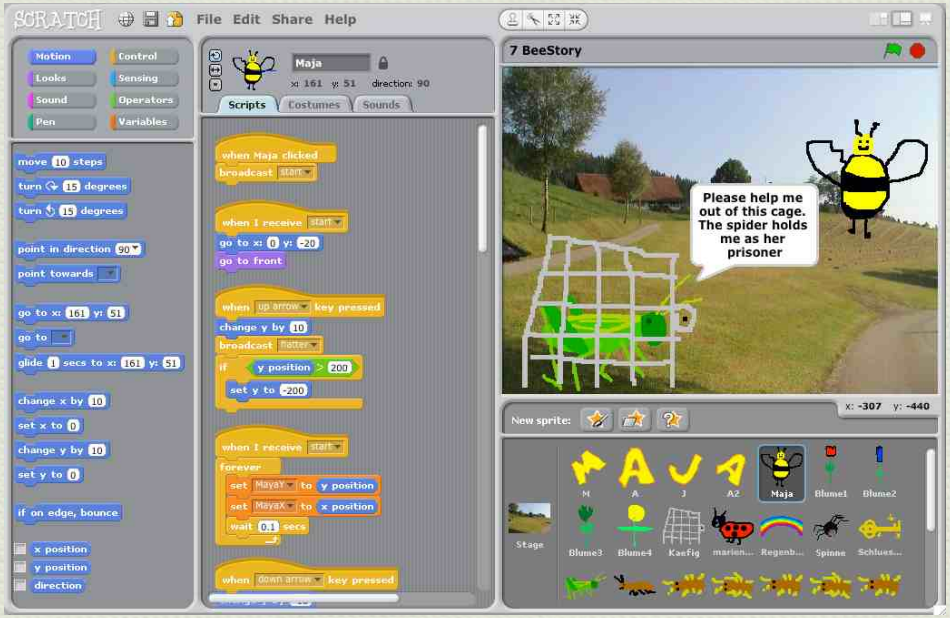

File Edit Tools Help
Real Play
Undo
world
camera
light
ground
robot
Events
create new event
When the world starts, do world.my first method
When Space is typed, do print robot 's X position
world.robotWallFollow
world.robotWallFollow No parameters
lastWallDirection = right
robot 's left bumper is depressed
lastWallDirection set value to left more...
Else
lastWallDirection set value to right more...
// Move backwards slightly to avoid object hang.
print Wall detected, backing up .1.
robot move backward 0.1 more...
// Using lastWallDirection determine which direction we need to turn to get away from the wall.
lastWallDirection == left
print Turning right to avoid wall on my left.
robot turn right .05 revolutions more...
Else
print Turning left to avoid wall on my right.
robot turn left .05 revolutions more...
robot's details
properties methods functions
create new method
robot move
robot turn
robot play note
robot play song
robot move at speed
robot turn at speed
robot zero X,Y, and Theta
Create note
Pitch
Note
Octave
Duration
Beats per minute
Length of note (in beats)
Rest
0.5
OK
Cancel
Do in order
Do together
If/Else
Loop
While
For all in order
For all together
Wait
print

Visual Progamming

Alice



Scratch



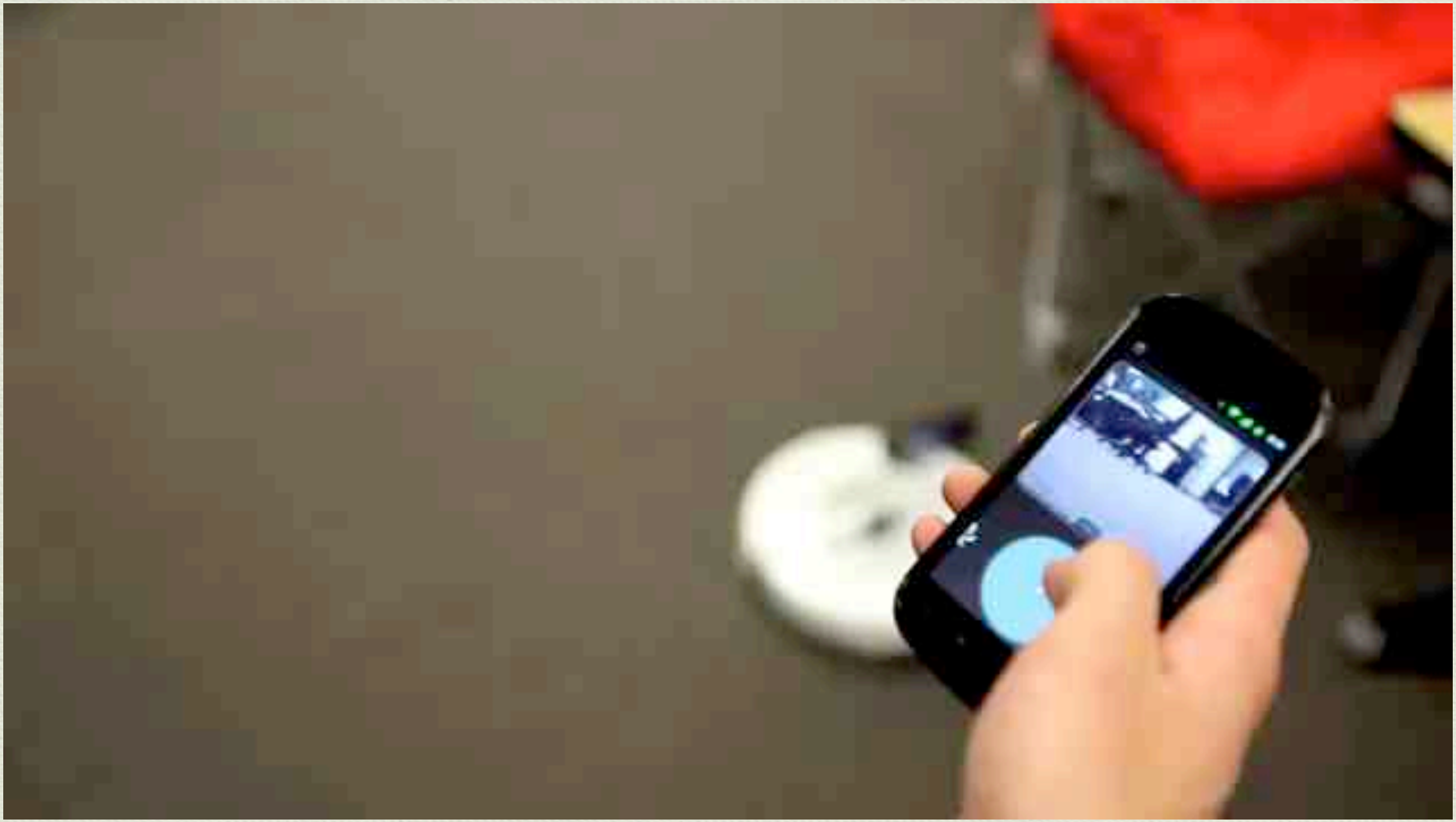
Tangible Programming

PR2 Remote Lab

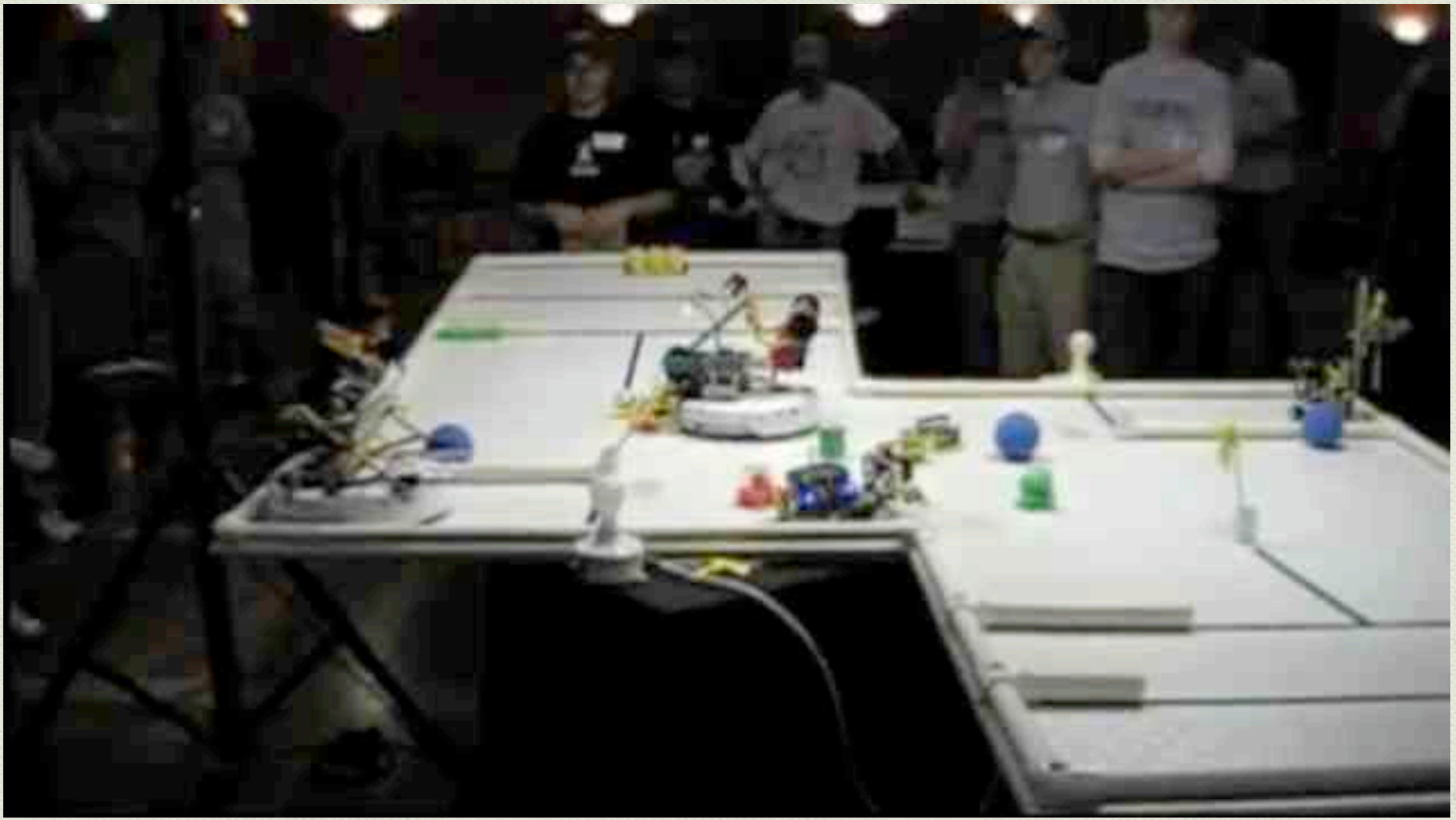
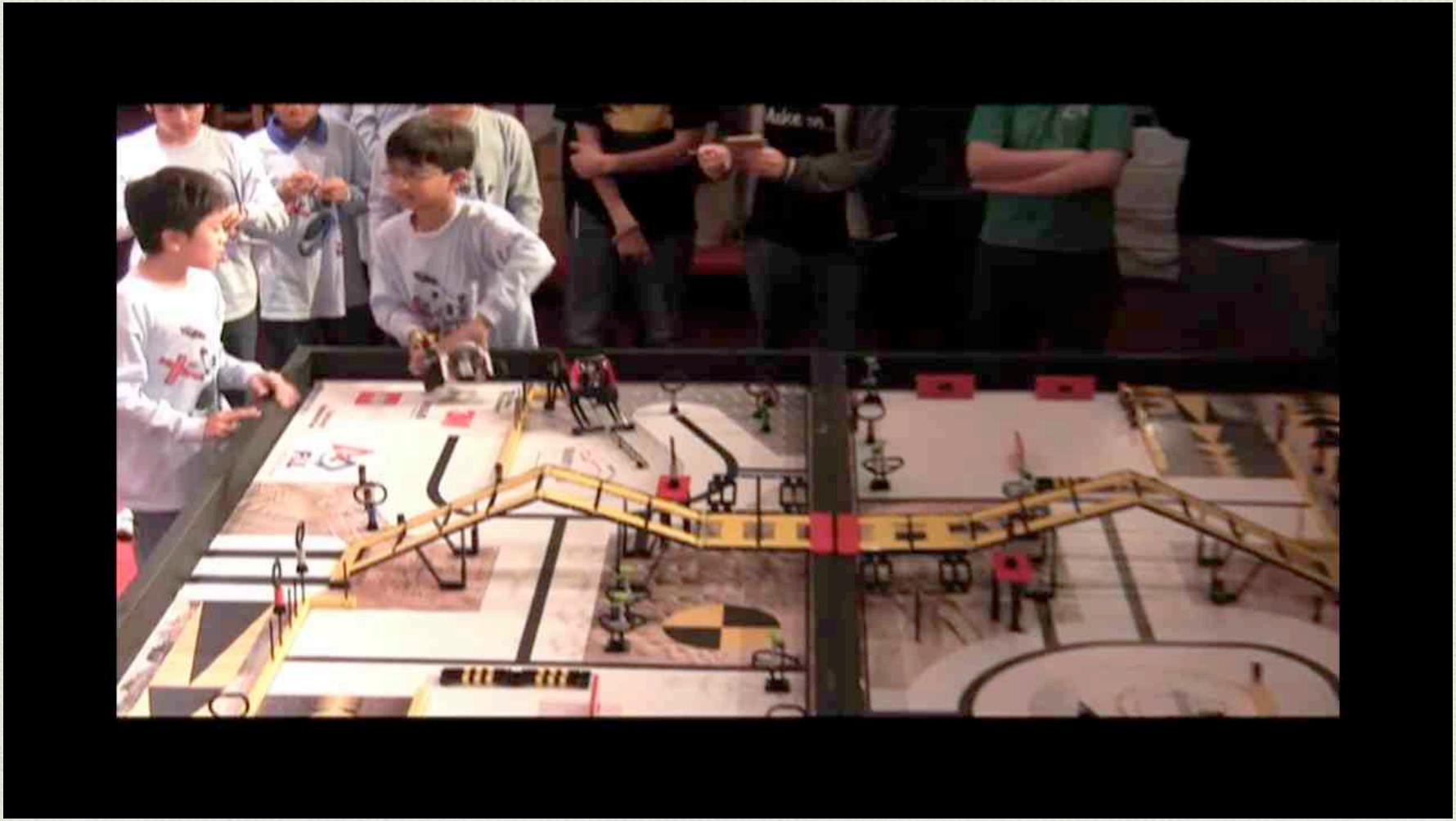
ROS / JavaScript

IPRE

Cellbots



Botball



FIRST Lego League