

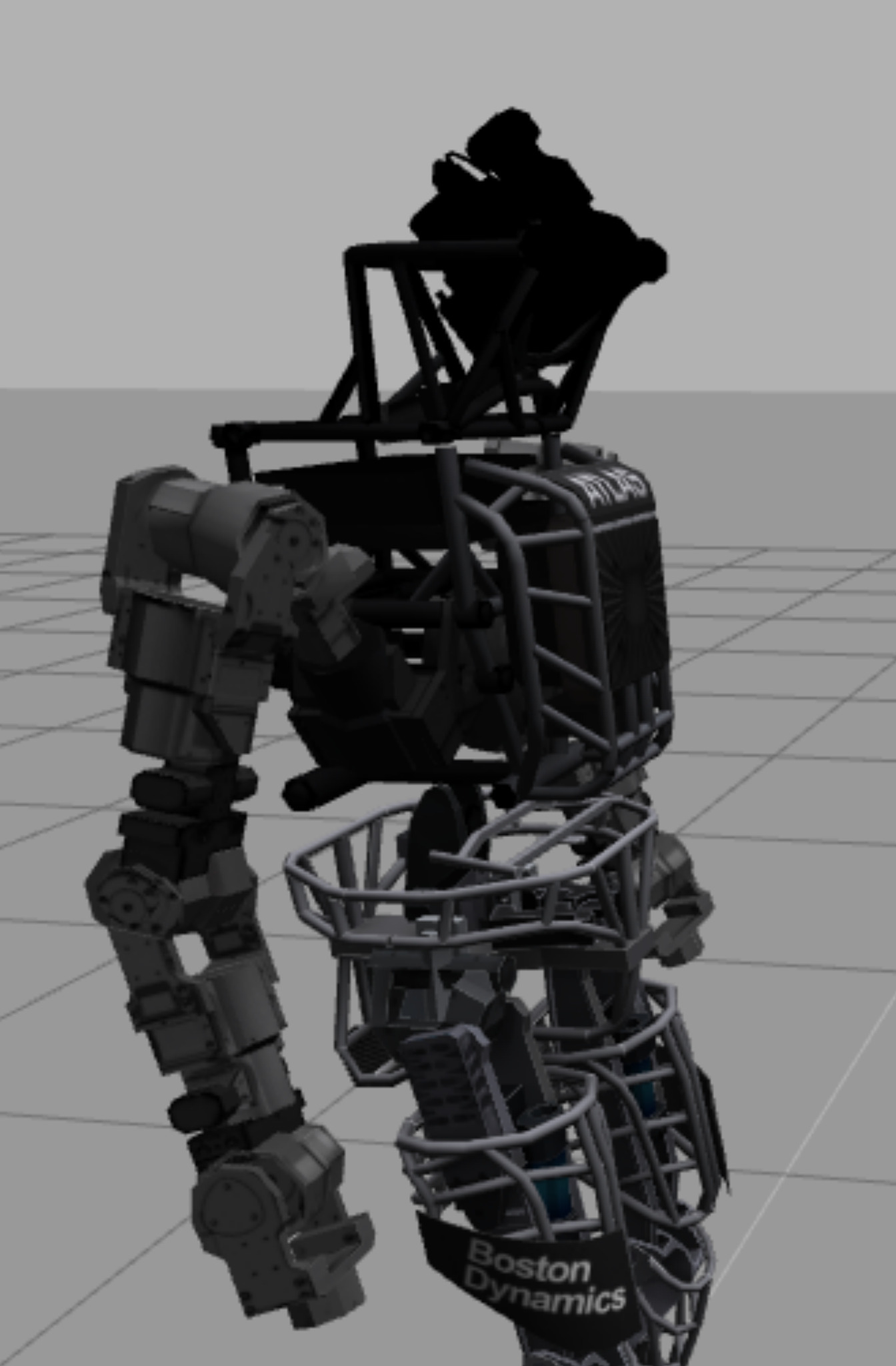
UNIVERSAL APPROACH TO SIMULATION COMPETITIONS

Ricardo Téllez, CTO at The Construct

**WHAT ARE WE TALKING
ABOUT HERE?**



The Construct
Just Simulate



-
- A unified environment for robotics competitions based on simulations
 - To allow automaticity of competitions
 - To simplify the contest process
 - To remove barriers (location, complexity, equipment)
 - To provide a common environment to all participants and contests



The Construct[®]

Just Simulate



ADVANTAGES

.....

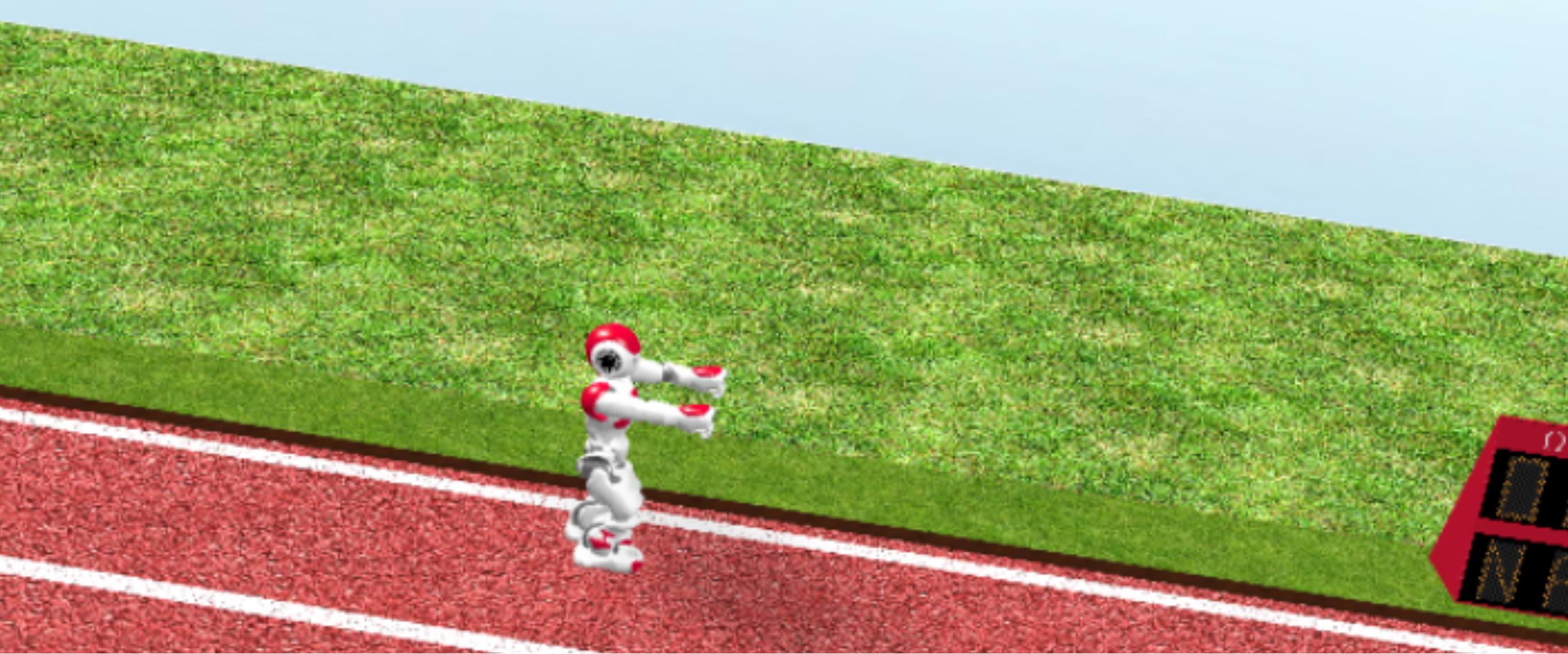
- The exact same environment for each participant **during training and during competition**
- Independent of the computer O.S.
- Independent of the location
- Participants don't have to travel
- Larger CPU power than desktops
- Different simulators
- Fully compatible with desktop

HOW IT WORKS?

Two examples



The Construct
Just Simulate

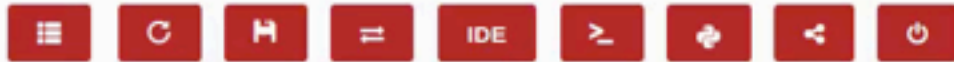



ROBOT RACE TO HAWAII

 The Construct
Just Simulate

Make a Nao robot race 10 meters

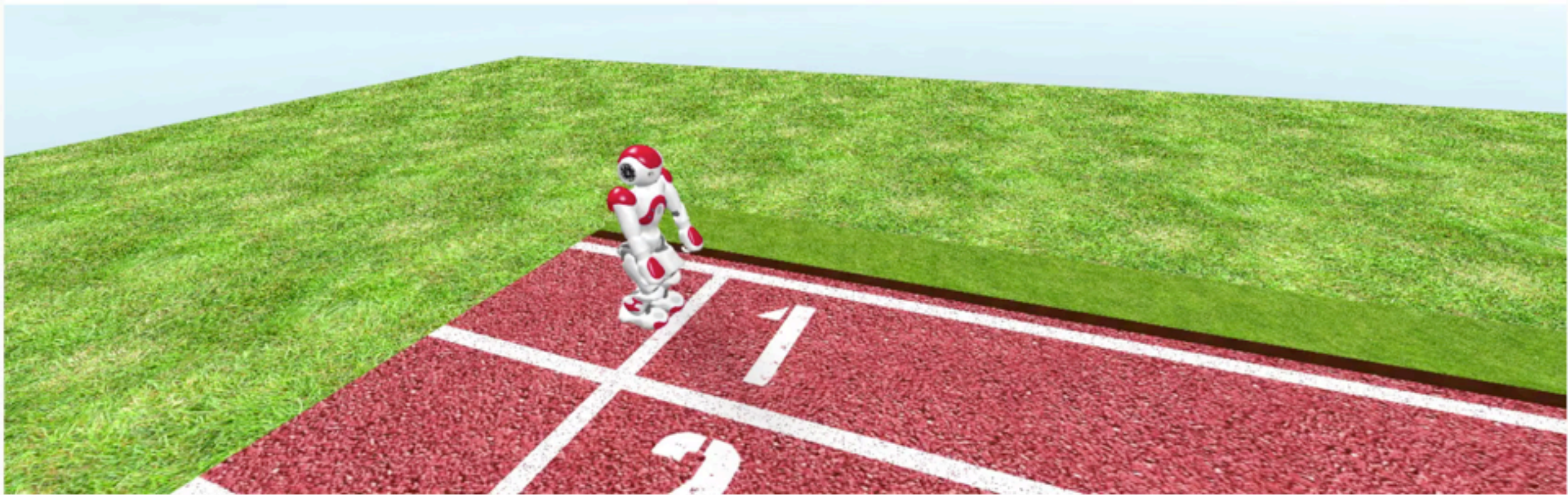




YOUR WORLDS
contests/nao_race/worlds/nao... 

Webots

Automobile Objects Robots Samples Contests



*Two Months Long
Continuous Operation*

1- TRAINING PHASE

2- CONTEST PHASE

Two Phases



The Construct
Just Simulate

TRAINING PHASE

live demo



The Construct
Just Simulate

CONTEST PHASE

live demo



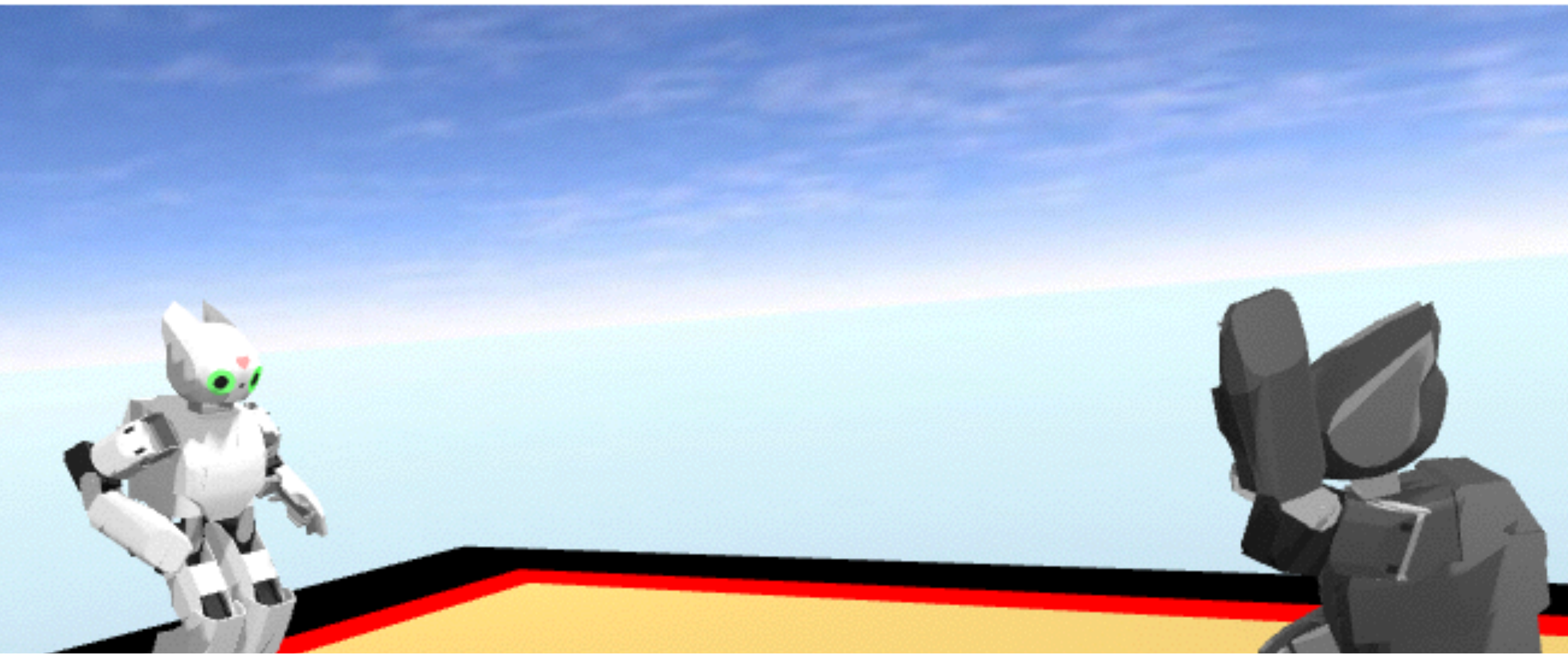
The Construct
Just Simulate

THE LEADERBOARD

<http://sw.theconstructsim.com/leaderboard/>



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ROBOSHI CONTEST

Humanoid Sumo Contest



The Construct
Just Simulate



CYBERBOTICS
professional mobile robot simulation

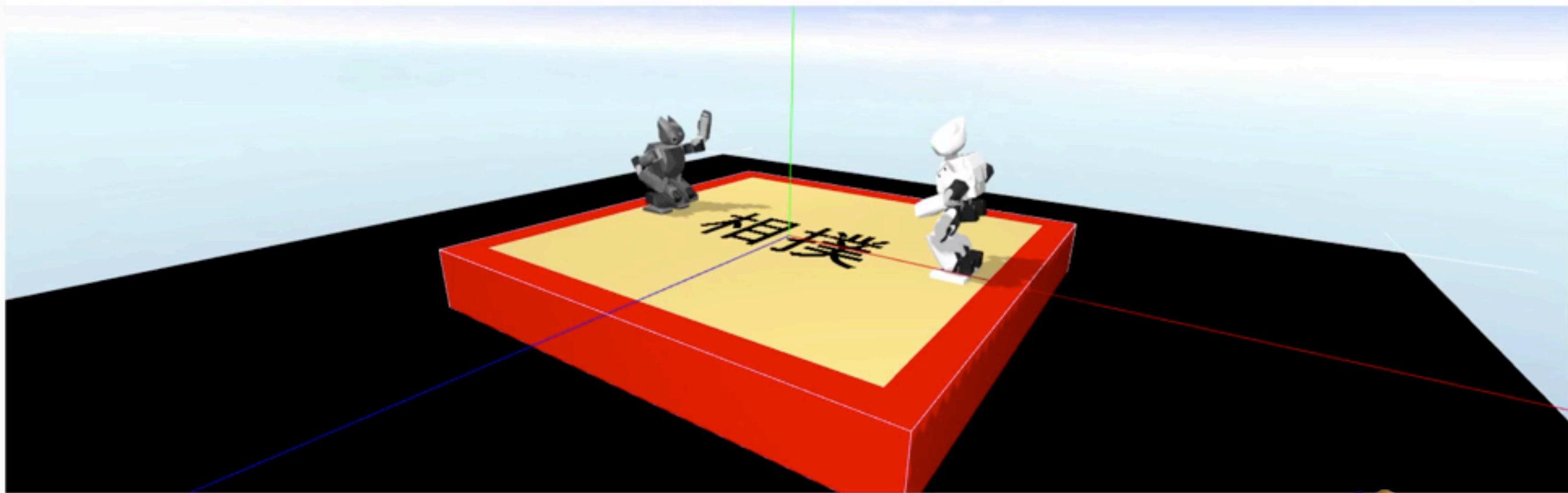


YOUR WORLDS
sumo.zip



Webots

Automobile Objects Robots Samples Contests



The Construct
Just Simulate

*Six Months Long
Automatic Contest Each Night*



CYBERBOTICS
professional mobile robot simulation

THE SAME PROCESS CAN BE USED FOR:

➤ **Benchmarking**

- provide a universal benchmarking tool for robotics based on simulations

➤ **Research**

- provide a way of replicating experiments and allow others continue from your point

➤ **Teaching**

- provide the same exact environment to all the students, and a set of exercises that the teacher knows they will work

TWO MORE COMPETITIONS ON THE WAY

(in alpha state)



The Construct
Just Simulate



TIAGO BASED SIMULATION



The Construct
Just Simulate

PAL
ROBOTICS

