

A Simulation Theory Approach to Al for AngryBirds Tom Renè Hennig, Till Miemietz, Christoph Starke, Lukas Schweizer, Lutz Thies

## What?

## A Software Agent that can play Angry Birds.

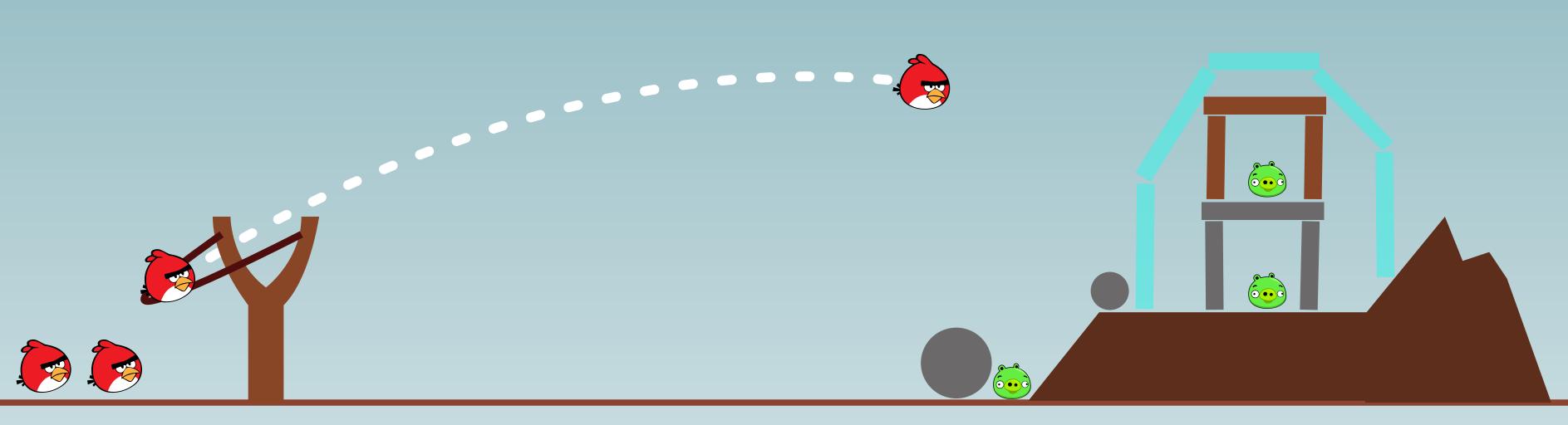
- Annual competition held at major AI conference (IJCAI)
- So far, NO agent outperforms a human player
- Challanging and interesting AI problem:
- a) only the visual input is given
- b) actions in the game adhere to real-world physics

#### H0w/?

## Simulation Supported Decision Making.

- Simulation is used to:
- a) predict possible outcomes of actions, and
- b) perform a static analysis of the structure
- Use shots with the best simulation outcome
- Record input and outcome to improve over time (future)

# Agent (abstract) Reactive Perception Actions **Proccess** Control Virtual World Reasoning **Predictive** Strategy **Proccess Proccess** Dynamic Analysis Static Analysis Abstract World **Imaginary World** Feedback



See also: http://aibirds.org



