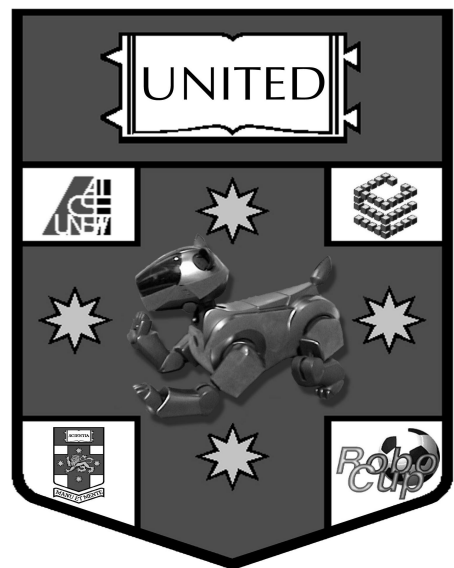


Learning to Kick Ball



UNSW

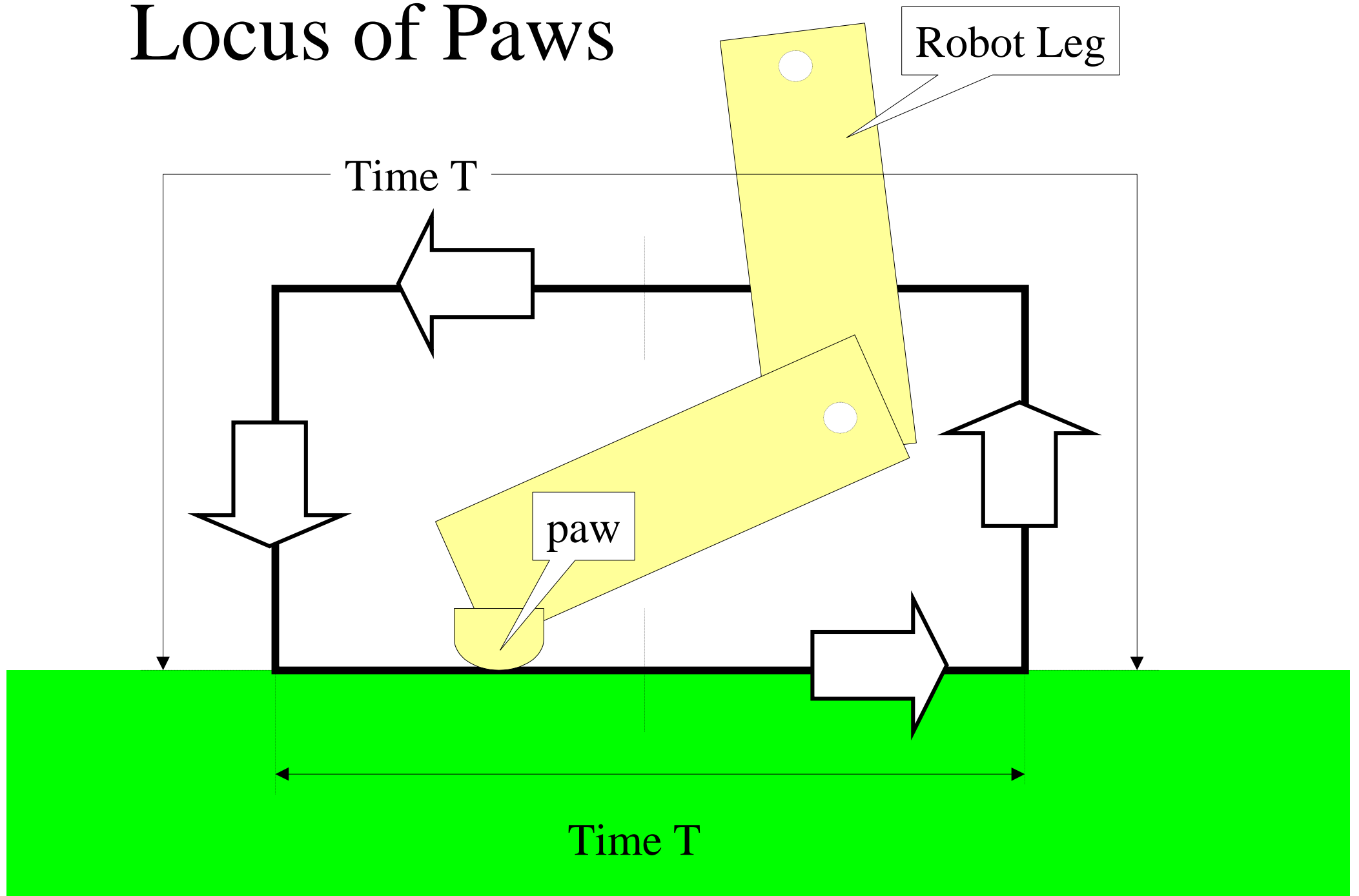
Bernhard Hengst

Computer Science and Engineering
University of New South Wales

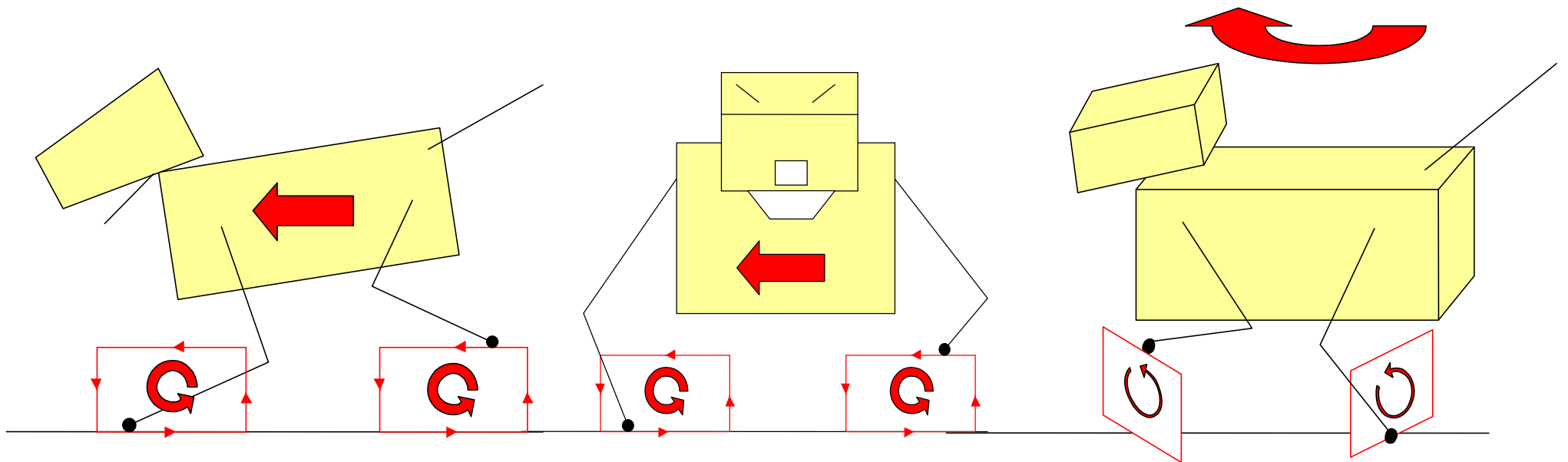
bernhardh@cse.unsw.edu.au



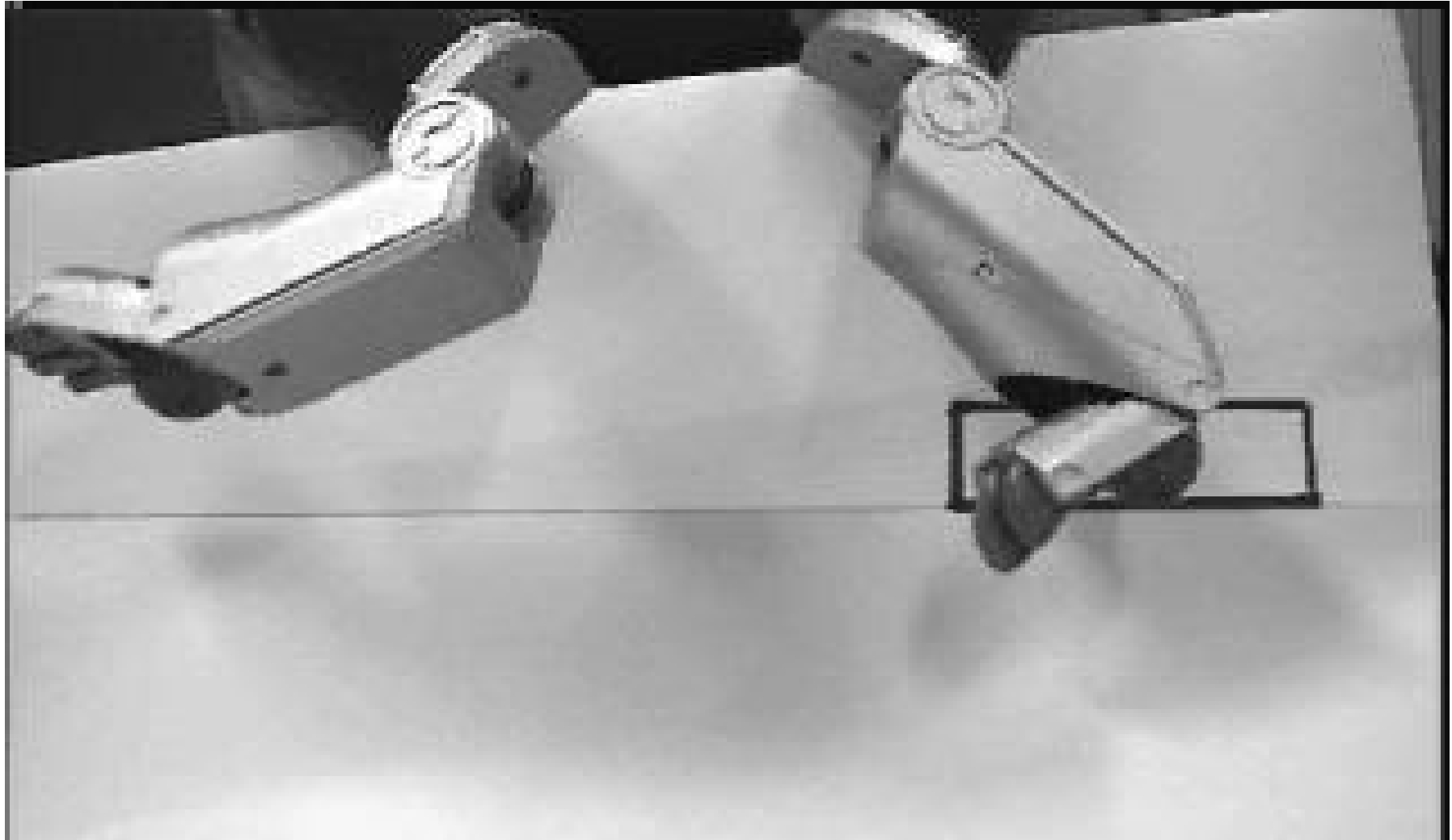
Locus of Paws



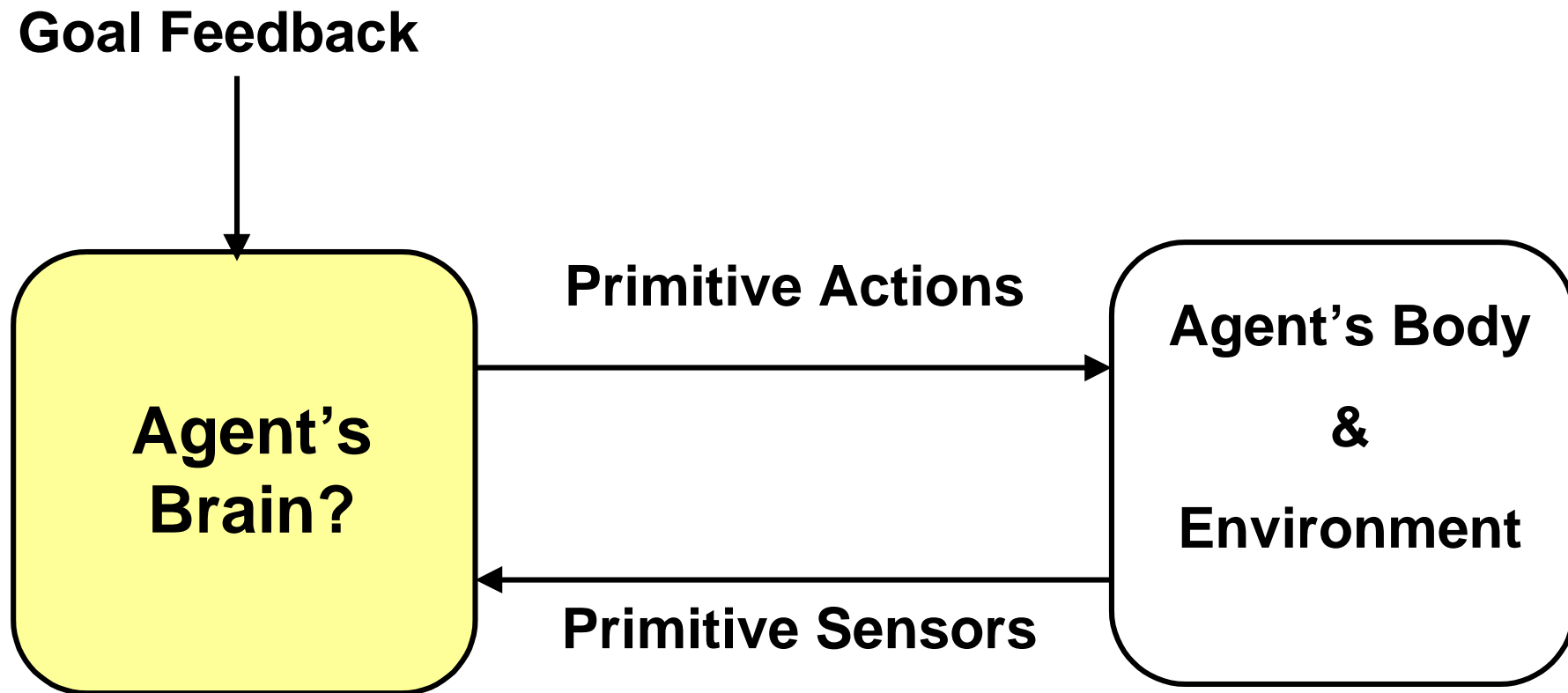
Omni-directional Locomotion



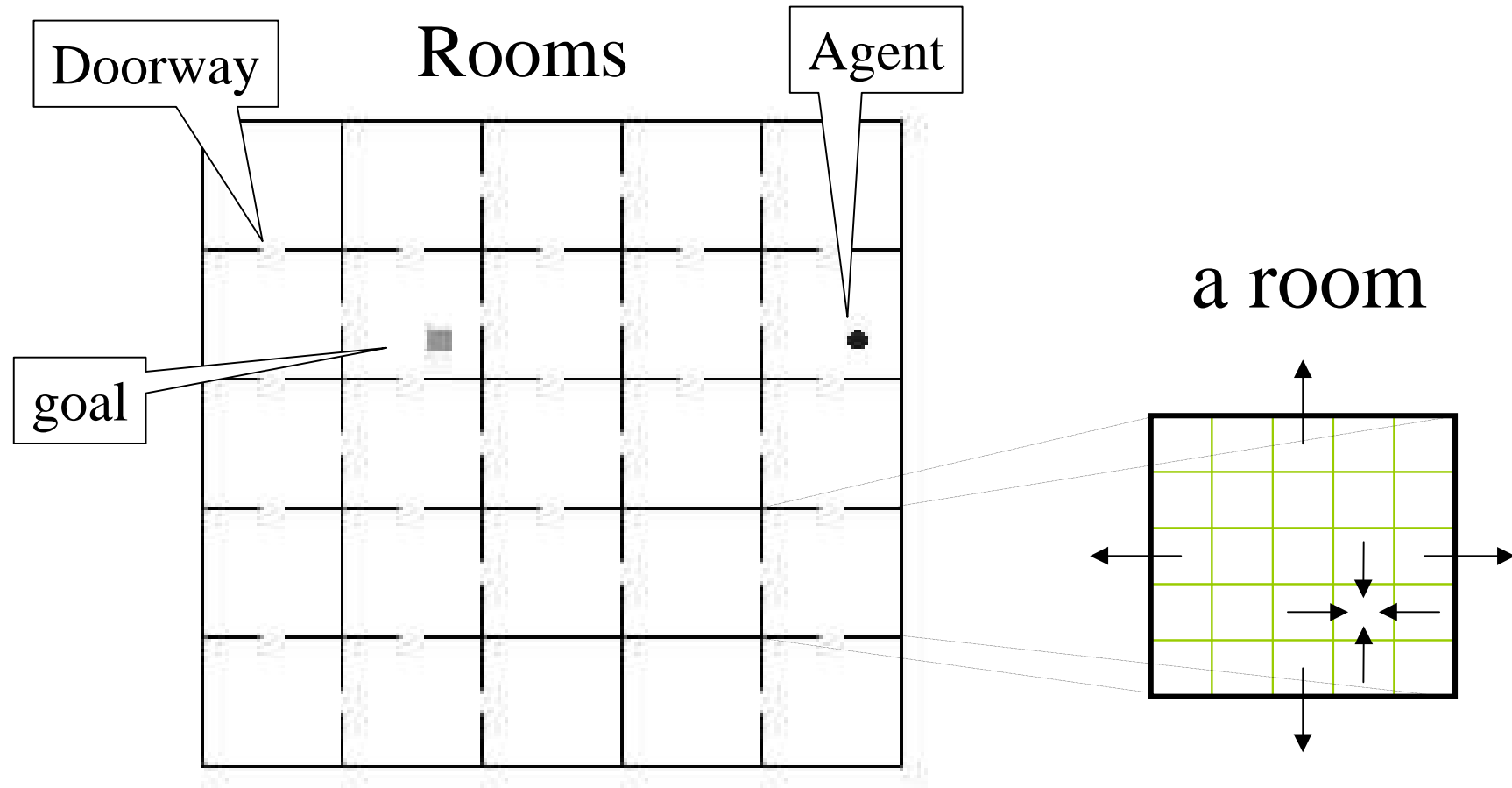
Actual Gait Motion



Hierarchical Reinforcement Learning

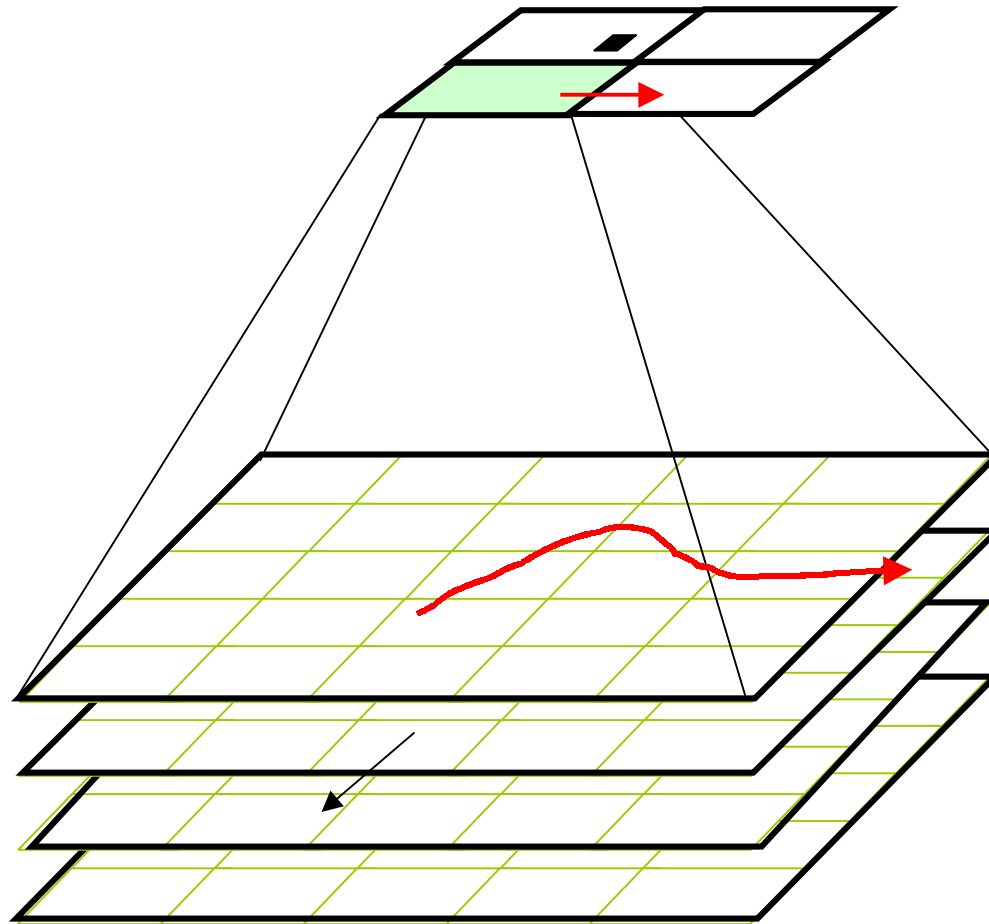


Finding Recurrent Regions



RL Abstraction Hierarchy

Regions become abstract states
Policies become abstract actions



Inter-room policy

Intra-room policies,
one for every Exit

State = (Ball Distance, Leg Position)

Action = step length

Goal = kick ball > 2 m.

