

Road Map for Middle-Size League

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It's me!
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discuss



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State of the art

Mechanics:

- dual-drive, steering, omnidirectional robots
- kicking devices
- ball control devices

Electronics:

- standard technology

Sensors:

- Laser range finder, color vision, omnidirectional vision

SW:

- behaviors, self-localization, cooperative perception, vision, coordination, planning, navigation, learning/adaptation

Short-range goals (5-10 years)

Hardware:

ball control device (dribbling, soft blocking), cross-like kicks, robust robots, longer autonomy (powerful batteries)

Perception:

Goals with nets, free-colored ads around the field, FIFA corner posts, black and white regular ball, free-colored robots, natural illumination

Control:

coordinated behaviors (passages, support to the ball-bearer, etc.), learning, adaptatiton, coordinated free initiative, navigation, dynamical task planning

SCENARIO:

40 minutes matches; dribbling, passing, crossing robots; FIFA-like field (at least for colors), larger than now, indoor.

Really entertaining tournaments (successful TV programs, like robot wars or battlebots).

Medium-range Goals (10-20 years)

Hardware:

ball control (juggling), outdoor robots

Perception:

gesture and posture perception, no electronic communication, long range vision, open environment

Control:

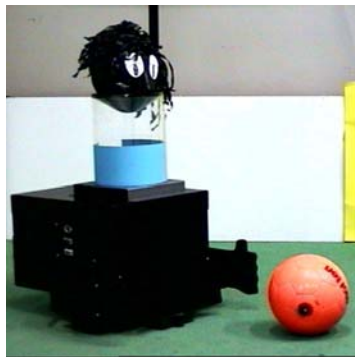
individual decisions based on pre-prepared schemata and situation evaluation

SCENARIO:

Outdoor field, smaller than FIFA. FIFA referee signals.

Long-range goals (20-40 years)

Move the MSL technology to humanoids



Do we need a road map?

Yes, but it is not enough!

We all have in mind almost the same ideas and the same timing

We need:

- **Knowledge sharing mechanisms** (newcomers, community)
- **Motivations for improvements**
 - **Scientific push (doing real research within Robocup)**
 - **Entertaining industry**