

People:

Keith Clark – symbolic programming languages

Alan Bond – biologically inspired architectures

Andrew Davison – robot vision

Mark Witkowski – robotics, sensors

Simon Coffey – robot programming

BDI-TR agents

Provide knowledge-based control

Are deliberative and reactive

Plans are robust

– can exploit opportunity

– can recover from setbacks

Agents are multithreaded

Percepts and messages are continuously processed

Multiagent systems for cooperation

coordinated action

among sets of robots

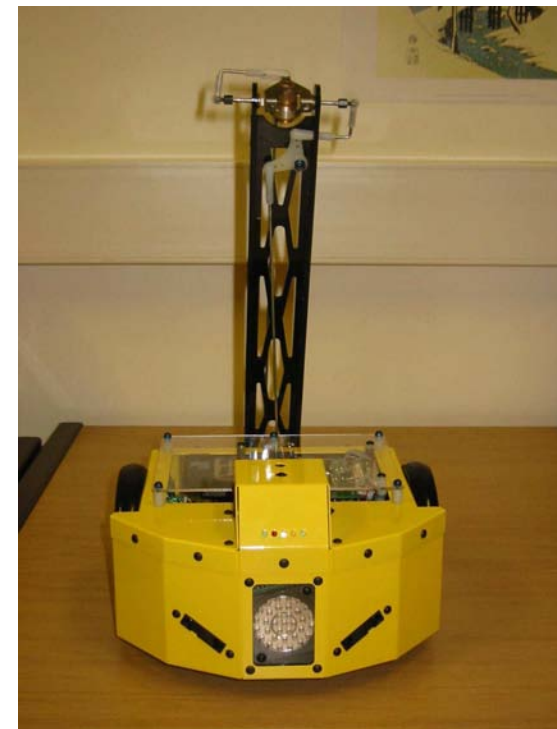
multiple roles in industrial practice

also for rescue and recovery

Being used at Imperial College for

– cognitive robot control

– game character control



<http://www.doc.ic.ac.uk/~klc/>

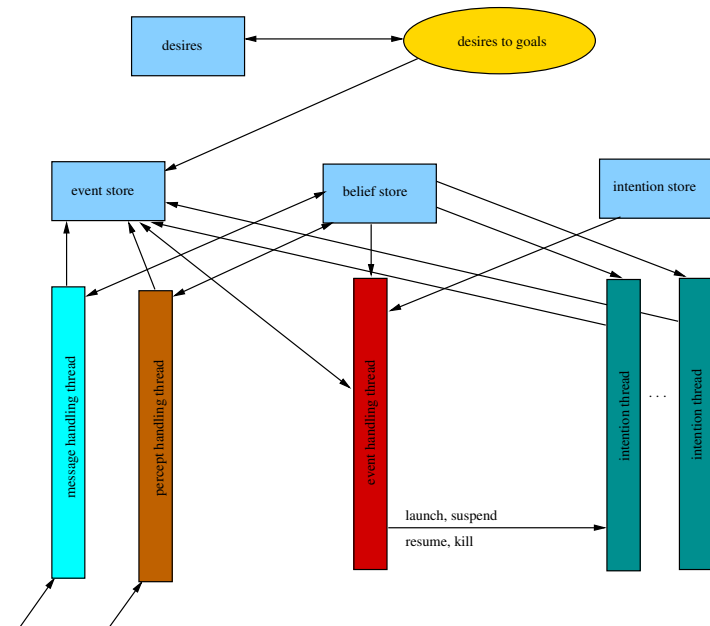
<http://www.exso.com/alan.html>

### BDI-TR agent architectures

- Logical rule sets
- Executed in disciplined control regime
- Gives property of completeness of problem solving ability
- Gives precise mechanisms for concepts of desire, goal, event, percept, plan and intention

We are beginning to apply our research in cooperation mechanisms to situations with multiple robots.

The Go! language is an advanced multi-threaded object-oriented symbolic programming language being developed at Imperial and at Fujitsu.



### Biologically inspired agent architectures

- Parallel at the rule and module level
- Logic programming representation – parallel rules
- Parallel modules
- Based on human neocortex
- The BAD programming language

