Intelligent Rover for Education and Research

Computer controlled vehicle features:

Sensors:

- Powerful embedded computer capable of processing images from all cameras and other sensors simultaneously
- 4 pan and tilt cameras
- Precise steering wheel angle encoder
- 5mm precision measurement of path travelled
- 2 ultrasonic obstacle sensors
- Microphone
- IMU (optional)

Controls:

- computer controlled motor torque in four wheels
- computer controlled steering servo
- pan angle of cameras
- speakers

Communications:

- wireless messaging
- email receive and send
- web search from rover
- speech recognition
- speech synthesis to respond or explain

Rational agent programming software:

- Natural language programming of a belief-desire-intention agent
- Library of sentences for sensing and control primitives
- Vision based self-localisation and mapping is reconfigurable and expandable
- Long and short term goal lists of mission
- Anticipation of future and temporal logic reasoning in terms of sentences

Basic product data:

- 2 batteries allow about 40mins operation before recharge
- Approximate dimension:
  40cm(L) x 25cm(W) x 40cm(H)
- Flat top for marking and overhead-camera-based navigation reference for vision system trials
- Max speed: ~0.7m/s, computer controlled
- Transparent side panels for protection and good looks for visitor demonstrations
- All parts are easily visible for education and demonstrations

Applicability:

- Design technology projects in high schools
- University AI labs and student projects
- Hardware for research on autonomous intelligent vehicles (urban environment is available upon request).

Availability:

- Upon order
- Delivery time: 28 days
- Special configuration upon request (may take longer than 28 days)

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