

Autonomous Robotic Security and Environmental Monitoring

- Develop a set of relatively inexpensive general purpose robots to work in a shared human-robot environment
- The proposed test site is IX Europe's Heathrow data centre – the environment is relatively complex whilst still controlled.
- Robots must work alongside existing staff and assist with maintaining the security and cleanliness of the data centre.
- Respond to Security Alerts such as an alarm and check for intruders.
- Intruder Detection
- Escort Visitors from reception to a specified location.
- Monitor the cleanliness of the corridors and either report or rectify the problem.

Technical and Scientific Challenges

- Robot Sensors and Maintenance – e.g. recharging themselves, reporting faults.
- Multi-purpose – use for relaying video, assisting with menial tasks (visitor guidance), problem detection, e.g. detecting hot-spots in server racks.
- Autonomy and Machine Intelligence – e.g. react as a co-ordinated group to a security threat.
- Simple Control Software – end product should be useable by an “ordinary” individual.
- Health and Safety Issues – must work alongside existing members of staff
- Reduction of Robot Cost - modern sensors and materials to reduce costs.
- Consortium Includes: University of Reading (UK), IX Europe, Zenon (Greece), Ljubjiana and CVUT (Prague). Willing to Co-operate with others!