

## PICTURE THIS

### Robotic ants

Scientists have long been impressed by the ability of ants and other insects to quickly solve complex problems, such as finding the shortest path to a food source. The phenomenon is known as swarm intelligence. Now, researchers at the Toulouse Ethology and Animal Psychology Laboratory in France have developed an 'army' of remarkable little robots, as part of a project called Alice. Armed with infrared sensors and detectors, the robots are designed to copy real ants' behaviour. Scientists then use the data the robots have 'learned' to try to better understand how swarm intelligence works.

The information from the robots is already being used to solve practical problems in industry. The work in a painting unit in a car factory has been reorganised, and a traffic managing system based on swarm intelligence has been developed using 'virtual ants'. As the concept becomes better understood, scientists hope to develop improved techniques for efficiently routing information across the internet and future communication networks.

