UCT SCARAB Inspection Robot

The UCT Scarab robot technology was developed as a low cost tool that could be deployed in dangerous environments (e.g. collapsed buildings, following natural disasters) to inspect the environmental layout and determine the presence of people.

Inspection robots are generally very expensive and complex to operate. A consequence is that end users feel uncomfortable working with such an expensive instrument, which has a high risk of being destroyed if a building should collapse further, or the robot becomes irretrievably stuck. This has led to a poor uptake of robotic systems in the inspection market.

The Scarab is sufficiently robust and durable whilst also being easy to operate and can be marketed at a price point where users would be less concerned with loss of the device. Potential end users are the police force, fire services, disaster recovery units, medical emergency personnel who might operate in unsafe environments and even miners. Scarab is designed to literally be thrown into the unsafe environment and then navigated using a simple remote control user interface.

The Scarab additionally boasts flexibility in its design with an option to change the visualisation system. Although the development and testing of different visualisation systems has not been completed, the base technology package makes provision for installation of different visualisation systems such as normal imagery, IR camera, night vision, multispectral, etc. Other payloads can also be readily interchanged and fitted as required.

Key Features

- Low cost robotic system
- Robust and durable to enable many different entry points into dangerous environment
- Remote control interface
- Flexible design to allow for different applications
- Development team are available as part of the technology transfer process

Intellectual Property Status:
Intellectual property exists in the form of know-how.

Technology Readiness Level:
3 - Proof of Concept

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