

ROBOTICS EMMA KELLY / LONDON

Robot arm offers flexible solution

Snake Arm to provide aerospace solutions, including on-the-wing engine inspection and airframe production

UK company OCRobotics has developed a prototype flexible arm robot which has aerospace applications, such as airframe production and the ability to inspect engines on the wing.

The Bristol, UK-based company has started talks with aerospace companies on the Snake Arm Robot, which comprises a flexible arm able to follow complex paths. The device, which can be mounted on a mobile vehicle, another robot or on a linear slide, provides the

operator with control over the whole device and not just the tip.

The modular, segmented arm is designed to be interchangeable, with a user able to select an arm with the length and bend behaviour suitable for a particular application. The drive unit which controls the arm consists of actuator systems that make the arm move and a computer that calculates how to make the arm follow the prescribed path. The standard tool for the Snake Arm Robot is tip

vision, but the arm could be used for a variety of uses, says OCRobotics. Initially a five-segment product is being developed, but the company has designs for a 20-plus segment device.

"Aerospace is the most obvious market," says Dr Rob Buckingham, managing director of OCRobotics, adding that other applications include the nuclear, medical and emergency services sectors. The Snake Arm Robot is particularly suitable for work on engines, fuse-

lages and wings, Buckingham believes. With an increasing need to minimise engine downtime, the Snake Arm Robot allows an aircraft engine to be inspected on the wing using the air path for access. "The arm allows you to get into the engine without having to dismantle it," he says.

OCRobotics has built a prototype to prove the concept, for which patents have been filed, and hopes to secure a launch customer in the next 12 months.

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