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GMS develops underwater ROV

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The creators of a new underwater remotely operated vehicle (ROV) claim almost any problem with the device can be repaired in less than 20 minutes.

Global Marine Systems (GMS), an underwater cable company, built the Predator to help with operations on offshore wind farms.

But the company also decided to market the ROV commercially and wanted to make it easy to repair by people with little expertise, in order to cut delays if something went wrong.

'A multi-thousand pound vessel can be sat there and waiting on this small ROV before it can carry on with work, so we set ourselves a target of about 20 minutes to change any component,' John Davies, managing director of Global Marine Subsea Services, told *The Engineer*.

In order to make the Predator easier to maintain, GMS increased the number of components to make them easier to replace. For example, certain cables are held in place with two connectors rather than one so they can be removed without having to take the device apart further.

The firm also built in indicators to help users identify problems. 'We wanted the plug-and-play video game aspect where if a light breaks down the ROV tells you whether you've got a problem with the light itself or the control board and this is what you need to change,' said Davies.

The Predator is specifically designed to work in the difficult conditions associated with offshore wind farms. It has a high power-to-weight ratio to allow it to navigate strong currents and a number of integrated sensors to deal with low visibility.

'We've gone for robustness,' said Davies. 'We've chosen the most stable power supplies that have the longest mean time between failures. The selling point is around its durability.'

GMS is building five units to assist with the installation and repair of its cable laying and plans to use them on the planned London Array wind farm in the Thames Estuary and on a project in Asia. The unit is expected to sell for around £64,000.

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