

## Press Release

### Fraunhofer IOSB Welcomes “Shell Ocean Discovery XPRIZE” and will Participate

For years, the Fraunhofer Institute of Optronics, System Technologies and Image Exploitation (IOSB) has been developing autonomous underwater robots to market readiness. Its most recent accomplishment in this field is DEDAVE, an efficient, autonomous deep diving robot. DEDAVE's hold is like that of a space shuttle. Because of this special design, it is more spacious and more flexible in use. DEDAVE will be used in:

1. oceanology research
2. cable routes and pipeline monitoring;
3. seabed mapping for mineral mining
4. coast guard services
5. Inspection in the maritime oil and gas industry

DEDAVE can be used as a universal carrier for almost all sonars and a range of other sensors. Thanks to its unique design and high energy capacity, it can operate at a maximum depth of 6000 meters and complete missions lasting up to 20 hours. Relatively small in size, this flexible vehicle can be used on-board both small and larger ships and in a variety of settings.

The Fraunhofer Institute of Optronics, System Technologies and Image Exploitation IOSB welcomes the XPrize “Shell Ocean Discovery Prize” and sees this as confirming its strategy. “We are similarly convinced that the unknown world before our doorsteps offers plenty of opportunities”, Dr Gunnar Brink, Director of Strategy Management at IOSB explains. “The fact that the XPrize organisation recognises that new, unexplored regions and opportunities do not only lie in outer space, but also in the unknown underwater world that lies just around the corner, confirms our own market research.”

“Our own Fraunhofer project DEDAVE tackles precisely those weak points in the market that are mentioned in the call of the organisation”, Project

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Manager Prof. Thomas Rauschenbach

elucidates. According to the Institute, however, XPrize and Shell underestimate important challenges in their tender specification, such as the necessary sturdiness and reliability an AUV needs on the high seas and in windy and bad weather, and which must be included in the design from the start. “Nevertheless – or maybe even because of this – we are hoping to receive excellent ideas from across the globe that address the challenges we have already started tackling”, Prof. Jürgen Beyerer, D. Eng., Head of the IOSB, emphasises.

### The “Shell Ocean Discovery Price”

The non-profit organisation XPrize has put out a total of seven million US dollars for tender, as part of an international team competition for groups to accelerate technology breakthroughs for rapid and unmanned ocean exploration. The competition is set to last a total of three years, in which the teams must complete several steps consisting of several tasks. At the end, two test rounds will be held with dive sessions up to an ocean depth of 4,000 meters.