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**"We are primarily a sales company and we also service what we sell."**

**UVS** 

# CLEVER BOYS

*UVS Pty Ltd is a wholly owned Australian company, headquartered in Newcastle, that has been supplying quality subsea equipment and services to the offshore oil & gas, defence, oceanographic, hydrographic, renewable energy and water utility markets since 1973.*

**Written by John Boley**

Its first incarnation was as Underwater Video Systems, hence the acronym. The company has been a supplier of quality subsea equipment and systems to industry, science and academic institutions for over forty years, introducing many innovative technologies to the Australian market.

The company was reorganised in 2011 when its present owners Darren Burrowes and Neil Hodges acquired the assets to add to their existing ROV service business for the Royal Australian Navy. Although its roots are in the Bass Strait, UVS can and often does supply products to anywhere in the world (recent jobs include the North Sea and the icy waters off St Petersburg), Darren says that in general the ocean is a harsh master wherever you are. "Things have to be just right when you are working subsea,"

he shares. "There is no second chance and in general it's pretty much the same wherever you are operating." If you are complying with all the challenges the ocean is throwing at you, you'll be right in one ocean and the next.

"We are primarily a sales company and we also service what we sell," explains Darren. "It's complex equipment, sold to sophisticated customers, and our technical managers are all degree-educated and able to assist customers to select the best equipment for any specific job." Even the biggest and most sophisticated customers appreciate hearing advice and input from people with as much experience as the UVS staff.

The technology of subsea equipment is changing rapidly, not least in the wake of the rapid development of ever-more powerful IT processing. "There are certain limitations in some underwater fields, such as acoustic communication, but LED lighting or inertial navigation are examples of technologies that are bringing new possibilities to the sphere. UVS takes great care to stay on top of any such developments. ▶

# REMUS

## Intelligent Marine Robots You Can Rely On

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The company is, as one might expect, particularly adept in the area of robotics. As Darren emphasises, given the conditions underwater in any given ocean (although the same applies to lakes and rivers where UVS also operates), "it's not a great place to put people and it's expensive, so it's a natural candidate for robotics. Increasingly we are seeing autonomous surface and underwater vehicles and I think the robotic impact on the oceans is going to get faster and faster in the future." Demand for autonomous vehicles is immense and skyrocketing; for example, one of the leading manufacturers and a major supplier to UVS, Hydroid Inc., has recently opened a new, state-of-the-art manufacturing and applied research facility to cope with rapid growth.



UVS is in the privileged position, with many of its OEMs, of acting as a kind of product development arm because of its expertise, often combining items already available and designing additional elements and software to make it precisely correct for a particular subsea application. The company will, of course, also support the operation in the field if required. Many clients ask the company for special-purpose tools to fit to equipment to carry out a particular job that might be extremely specialised and thus often not appearing in the product catalogue from a large manufacturer. UVS is ready and willing to do just that (it has its own workshops with staff skilled in

### "The Clever Buoy project, devised in conjunction with Google, uses state of the art sonar imaging technology deployed on the seabed..."

engineering and associated electronics), then – with a client's permission, of course – can report back to the OEM about the tools thus produced. In many cases, the design developed by UVS has ended up being adopted as an additional option in the OEM's product catalogue.

Australian customers are often very discerning and innovative themselves, says Darren, so this kind of feedback is immensely valuable to the OEMs. He sees great possibilities here for marketing his company's abilities around the world and getting more international business; it's also a means of adding value and distancing UVS from the rest of the competition in what is a crowded space.

Darren is not overly concerned by recent negative reports from the resources sector; UVS has a lot of business servicing existing operations including maintenance and inspections, and that is not going to diminish. "Of course we would prefer more big projects, but there is a lot more to our business than oil and gas," he says. Recent jobs have included river surveys up in Cairns and installing a Wave Monitoring System at the entrance to Darwin Harbour for The Australian Institute of Marine Science. UVS has also had a major role in the development of the Optus Clever Buoy, which promises to become a real and commercialised project in the very near future. As Darren says, "anything underwater" is what UVS can do. ■

### THE REAL CLEVER BUOY

Telcos come in for a lot of criticism. But you have to take your hat off the Optus for its initiative in harnessing the latest IT available in a novel and possibly life-saving manner.

Clever Buoy is a research and development programme aimed at developing a prototype that could one day present a viable alternative to current shark defence methods. Sharks are rarely out of the news, given Australians' love of the sea, the need to protect them and the often controversial methods employed to do so. The Clever Buoy project, devised in conjunction with Google, uses state of the art sonar imaging technology deployed on the seabed to provide accurate, real-time data capture to detect the presence in a given area of water of a shark, which has very distinctive movements that are relatively easily isolated from those of other marine life. The buoy itself, on the surface, is powered by a custom-designed, rechargeable battery, which powers the sonar, onboard data analysis and transmission.

The data is transferred using a two-way Inmarsat IsatData Pro satellite service, which can remotely manage fixed and mobile assets anywhere in the world. Optus has ensured a solution which allows alerts triggered by the Clever Buoy to be sent over a secure channel. This means the alerts can be

received and responded to in real time. Shark detections are alerted via a signal on shore. The data is also shared with relevant audiences using Google Plus, so that the right information reaches the right people at the right time. Long term, says Optus, "we hope to use the buoys to capture the sonar signatures of all marine life. This will eventually give us a snapshot into the ongoing health of the sea like never before."

Self-contained on board the Clever Buoy is a microprocessor that analyses the sonar signature data. If the sonar detects a shark, it sends a signal (via the Optus networks and satellites) to relevant bodies – in particular, to lifeguards on any nearby beach so they can raise the alarm.

While much of the focus of Clever Buoy in the media so far has been on its value to Optus as an advertising and brand-building tool, it must be said that this is a spectacularly good idea that uses the latest technology in an innovative and potentially truly beneficial manner; it's still at the evaluation stage, and while it is expected and hoped that Clever Buoy will be a success, it's too early to be certain. The Clever Buoy team is currently working on a commercially viable product for 2015 which it is looking to test further on one of Australia's iconic beaches.



UVS 

# CAPABILITY STATEMENT

## OCEANOGRAPHIC/HYDROGRAPHIC

UVS has been a long term supplier to the ocean science community and we stand behind every product that we sell - supported from our workshops in Newcastle, Melbourne and Perth where factory-trained technicians can complete repairs, upgrades and calibrations to meet your requirements.

### Oceanographic

Now, more than ever, the importance of Ocean Science is recognised in its contribution to the understanding of the impact of climate change on our planet due to human activity. From equipment for water sampling to sophisticated ADCP buoys for long term deployment, UVS offers all types of products for Ocean Science.

UVS provides products to support professional hydrographic and geophysical survey services to the coastal engineering, port development and maintenance and offshore oil and gas industries.

### Hydrographic

UVS provides solutions for Hydrographic Survey products including Single Beam Echo Sounders, Multi Beam Echo Sounders, Side Scan Sonars and Hydrographic Survey Software. Drawing on the wide range of hydrographic survey products represented by UVS, we are able to tailor a system offer to suit your application. Industry professionals agree that hydrographic survey systems such as Multi Beam Echo Sounders must be carefully selected to provide the right solution and value-for-money for the application. UVS will work with you to determine the final use of your hydrographic data to and recommended the best equipment for your budget.

### Training

#### Hydrographic Survey Training

Our product offering is fully supported by our capability for on-the-job training at your site or using our facilities in Port Stephens NSW. Our hydrographic professionals keep up-to-date with factory visits and OEM training conducted at manufacturer sites world-wide.

### Support Capability

Our nation-wide support capability, from facilities located in Newcastle, Melbourne and Perth ensures that we stand behind every product we sell with Australian-based service and repair.

#### Teledyne RDI ADCP Verification Service

UVS has been successful in establishing the first Service Centre for Teledyne RDI ADCPs outside of the Teledyne organisation. This service capability is now receiving orders and is available for fast turn-around of ADCP equipment in Australia for fault-finding, repair, verification and maintenance.

#### Teledyne Marine Acoustic Imaging Service

UVS factory-trained engineers are available to assist with all types of service and support issues for products supplied by the Teledyne Marine Acoustic imaging Group including Teledyne RESON, Teledyne BlueView and Teledyne Odom.

“Teledyne RDI and UVS have enjoyed a long term relationship that is focussed on spectacular customer satisfaction and initiatives such as the “ADCPs in Action conference in Australia” were key to supporting customers in the application of ADCPs to their work.”

**HARRY MAXFIELD, VICE PRESIDENT OF SALES & MARKETING  
Teledyne RD Instruments**

UVS has been a distributor for Teledyne RD Instruments for more than thirty years.

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