

Deliverable D.1.4, Under Water Equipment, Perspectives

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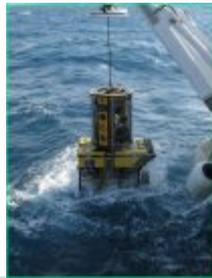
UWE development trends

- Increased operational depths, increased sophistication in operations, requiring more sophisticated equipment and tools
- Means larger and more powerful winches, and more sophisticated Launch And Recovery Systems (LARS), larger A-frames, heave compensation, increased bandwidths in cables, lighter cables due to increased lengths etc
- Requires vessels with DP-systems, active or semi-active stabilizing systems, under water positioning systems etc



Industrial cooperation regarding Under Water Vehicles (UWVs)

- UWVs such as ROVs and AUVs are in heavy use both industrially and scientifically
- They are very expensive to buy, use and keep "up to speed" with user needs, new technology etc
- The industrial use of AUVs and ROVs is much heavier than for marine science and the industry is often a more demanding customer, have more "operating hours" on their equipment and have more trained staff than the marine research community regarding UWVs



Industrial cooperation regarding UWVs

- It is therefore a question if the marine research community should play a secondary role in this field and let the industry take the lead regarding technology development, ownership, services etc and instead of Government development of UWVs, and primarily rent from commercial companies when an UWV is needed on a cruise?
- Joint ownership of UWVs between Government and industry could be difficult due to different planning cycles (months vs weeks) and insurance (self insured vs insurance policy)



Hugin
AUV



Bathysaurus
ROV



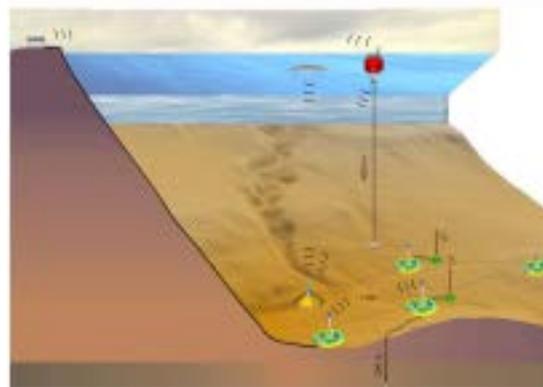
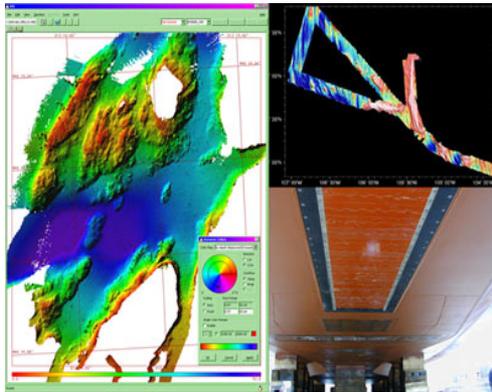
Joint design of scientific instruments and equipment

- The functional lifetime of marine research instruments and equipment can be anything from decades for mechanical equipment such as trawls, grabs, box corers, plankton nets etc to just a few years for hydro acoustical systems such as sonars, multi beam echo sounders, towed vehicles, ROV tools, landers, oceanographic instruments etc
- It is crucially important that there are a very strong and close international cooperation between marine research institutions and/or industry regarding design, development and testing of new marine research instruments and tools in order to maintain the necessary innovation and development of such instruments



Joint design of scientific instruments and equipment

- The biggest challenge for this is probably the public procurement rules and regulations which require competition, transparency etc which potentially could "scare away" the industrial partners from participating in conceptual designs, prototyping etc since that could exclude them from the production contract at a later stage



Joint ownership and/or barter

- Due to high investment and operating costs, and short functional lifetime for ever more sophisticated equipment and instruments, national and international joint development and ownership of equipment is likely to be more common in the future
- Increased establishment of national and international barter clubs for vessels and/or equipment should also be the future trend





Thank you for your attention!

