



FioBuoy Advanced Buoy & Retrieval System

VPAC worked with Fiomarine in a design engineering project to optimise the manufacturing and in-use performance of the FioBuoy. The collaborative relationship assisted Fiomarine to undertake design and optimisation studies that improved the efficiency of Fiomarine's manufacturing and assembly operations.

<<< FioBuoy: Advanced Marine Marker Buoy and Retrieval System

VPAC Dramatically Improves Fiomarine's Product Development Process

Fiomarine Industries Pty Ltd (Fiomarine) manufacture the FioBuoy®, a submersible marine marker buoy and retrieval system which is designed to remain fully submerged until the operator wants to retrieve the object it is attached to. This allows the product to work in military and commercial applications and in waterways where surface buoys are unacceptable from an environmental or marine safety perspective. Fiobuoys are security coded, computer programmable and deployable to depths of up to 200 metres. Once triggered, either by a pre-set time and date or via acoustic command, the FioBuoy self-releases from its underwater mooring and floats to the surface to fulfil its marking and retrieval function. The current product has been developed with a focus on the military and scientific research markets and is not yet optimised for widespread commercial and recreational marine applications.

In order to identify ways of improving their design process by using computer generated modelling to explore new model ideas and quickly refine concepts, Fiomarine was put in touch with VPAC through the Australian Institute for Commercialisation's (AIC) TechFast® program. Fiomarine's previous design activities for the FioBuoy were based on conventional manufactured prototype trial and improvement processes using working models. VPAC's role was to assist Fiomarine in revolutionising their product design and development processes by utilising VPAC's Advanced Computing and Virtual Integrated Design Environment expertise.

Mike Shegog, Technical Director, Fiomarine Industries Pty Ltd said that "before entering the TechFast program, development of the FioBuoy relied on the internal knowledge and capabilities of the Fiomarine employees and Directors...The work we undertook with VPAC showed us the potential for computer modelling to complement physical prototypes in the design process to explore new ideas (some of which were radically different to our existing product) and quickly refine promising concepts."

Access to VPAC's Advanced Computing facilities and services such as visualisation and simulation software enabled Fiomarine to understand the capabilities and limitations of their current designs, as well as leap on to the next development steps more easily. A new and improved design concept developed through this project is now being further developed by Fiomarine for inclusion in future releases of the FioBuoy. The new concepts will be used to keep Fiomarine at the forefront of submersible buoy technology and as a springboard for future product development.

For more information on VPAC, visit www.vpac.org or phone +61 3 9647 5433.

For more information on Fiomarine, visit www.fiomarine.com or phone +61 3 6272 6167.

For more information on AIC's TechFast Program, visit www.ausicom.com or phone +61 1300 364 739.

