

Phase I of Testing Nnemo1 Finished

Sias Patterson Inc., announced the end of phase I testing of NNemo1 (Newport News Experimental Model 1), a large Autonomous Underwater Vehicle (AUV) built to specification for Northrop Grumman Newport News.

NNemo1 is used by Northrop Grumman to test advanced concepts in hydrodynamic stability and conceptual design for the next generation of submarines.

Displacing 4000 lbs (1800 kg) in water and almost 16 ft (4.9 m) in length, NNemo1 is built around the Fetch 2 electronics chassis and software. Fetch 2 is SPI®'s small AUV (6ft, 160 lb ≈ 2 m, 73 kg) that previously has set standards for ease of use and is covered by US Patent 5,995,882.

NNemo1 is instrumented with two inertial navigation packages to record motion during testing. One package incorporates a SAASM GPS receiver with an integrated Kalman filter navigation engine by Interstate Electronics Corporation (Anaheim, CA), a division of L-3 Communications. This system accepts input from a Litton LN200 Inertial Motion Unit made by Northrop Grumman. A second LN200 owned by the Naval Surface Warfare Center, Carderock Division, is also integrated, along with a Doppler Velocity Log made by RDI Instruments (San Diego, CA). The Fetch 2 flight computer interrogates all systems during NNemo1 underwater flight and records the data for post-mission analysis.

Payload integration and initial field testing of the vehicle was achieved at a fraction of the time and cost normally associated for projects of this magnitude by use of LabVIEW (National Instruments, Austin, TX) software and COTS hardware for many key vehicle components including weight and trim systems, motion control, emergency blow, and underwater packaging. During 2004, Northrop Grumman will continue testing of NNemo1 at US Navy installations.

<https://www.hydro-international.com/content/news/phase-i-of-testing-nnemo1-finished>
