CU(🌀)AUV

The Cornell University Autonomous Underwater Vehicle (CUAUV) team has been competing in the International RoboSub Competition, an autonomous underwater vehicle competition, since its inception. The competition requires entrants to create a completely computer-controlled submarine, which will autonomously read a series of arrows and navigational cues in a large pond, as well as track a series of acoustic beacons, in order to place a target on a bull's-eye.

Navigating Murky Waters

In order to communicate with the submarine, students from CUAUV developed Windows client applications which update their mission specifications and allow them monitor the submarine's progress. Previously written in C++, new code was created using the Syncfusion Essential Studio products to develop a full-fledged autopilot system. The Syncfusion controls were implemented into a robust, intuitive ground control interface. The controls' ease of use allowed students to focus their efforts on the autopilot instead of the data display.

Riding the Tide to Victory

After adding Syncfusion Essential Studio to their arsenal of computer-controlled submarine creation products, Cornell University's autonomous underwater vehicle outperformed 11 other entries to take first place in the 2003 International RoboSub Competition. For its efforts, the Cornell team received $7,000 in prize money. It returned in 2004 to capture second place in the competition. In addition to the autonomous vehicle competitions, Cornell competed in Microsoft's Imagine Cup Competition in April 2004. The university's unique autonomous flight package and Syncfusion's controls contributed to Cornell's placing as a national finalist.

About Cornell University Autonomous Underwater Vehicle Team

The Cornell University Autonomous Underwater Vehicle team consists of undergraduate engineering students who work together to design, construct, test, and eventually pilot an autonomous underwater vehicle in the International RoboSub Competition. Their website is located at *www.cuauv.org*.

The Challenge

★   Develop a complete autopilot system.

★   Keep application user-intuitive.

★   Obtain a sophisticated editor.

The Benefits

Provided easy and versatile interfaces.	Quick and convenient loading of data.	Eliminated low-level coding.