Anaconda snakes along river

The Anaconda, a remote-controlled boat built between Swiftships of Morgan City and the University of Louisiana at Lafayette, was demonstrated outside of the Swiftships facility Tuesday in Morgan City.

Prototype boat test-drives along Atchafalaya, with remote pilot

BY BILLY GUNN
bgunn@theadvocate.com

MORGAN CITY — The shipbuilder and University of Louisiana at Lafayette team that created the Anaconda, a 35-foot prototype Navy vessel that one day might drive itself, took others for a ride Tuesday in the boat that’s marched from concept to work-in-progress in less than a year.

Swiftships, a shipbuilder in Morgan City, and UL-Lafayette professors and engineering graduate students boarded passengers on the Anaconda and ferried them across the Atchafalaya River, a waterway just steps from Swiftships’ back door.

“Today will be the first time we pilot the boat at full speed, at just a hair over 50 knots,” said Eric Geibel, Swiftships director of special projects.

“This is the first step toward autonomous technology,” he said.

The boat did not pilot itself Tuesday, but it was controlled with an iPad. During the driving was Joshua Vaughan, an assistant professor in UL-Lafayette’s Mechanical Engineering Department.

Vaughan is leading a team that includes mechanical engineering graduate students Nicholas Bergeron and Brett Marks to develop the autonomous system.

The technology the team is striving for would use lasers, cameras, ultrasound and other sensors that gauge currents and waves to detect obstacles in the water such as logs or incoming boats. The information would flow to an almost-sentient computer system that reacts quickly, steering and accelerating the boat like an experienced human pilot.

The end-goal is a military vessel that travels according to the GPS coordinates plugged into it, navigating rivers or smaller waterways in far-off dangerous locales, such as enemy territory, to pick up stranded soldiers or to deploy testing equipment in the middle of an ecological disaster, all without the risk of getting a human pilot killed.

“The real challenge is in a river setting,” Geibel said, looking out toward the curving and heavily obstracEd

See ANACONDA, page 5A
A University of Louisiana at Lafayette assistant professor of mechanical engineering, Joshua Vaughan, demonstrates how to control the Anaconda boat by using an iPad from the deck of the boat Tuesday in Morgan City.

ANAConDA

Continued from page 1A

Atchafalaya River.

“Do you determine if it’s a log or a wake?”

The Navy is reaching beyond remotely controlled steering systems used in aircraft drones, which are flown by pilots sitting safely a continent away into airspace that offers few obstacles.

What the Navy wants is a system that can maneuver the Anaconda in a fast-changing environment. And Swiftships, which historically built military vessels, sought out UL-Lafayette.

Swiftships learned of UL-Lafayette’s success 10 years ago with CajunBot, a six-wheel vehicle with an autonomous piloting system. The university entered the CajunBot in Department of Defense contests in 2004 and 2005 for the UL-Lafayette computer engineering team led by computer scientist professor Arun Lakhotia.

In 2012, the university and Swiftships formed a partnership, which has been making progress, Lakhotia said Tuesday.

“At this point, it’s step 1 of ‘We can control the boat with a computer,’ ” Lakhotia said.

Lakhotia said there could be huge rewards if the technology works. “This could be transformational for any transportation in the water.”

Geibel and the UL-Lafayette professors did not predict when the autonomous technology would be ready. Last year, they said they were working on a three- to five-year schedule.

The UL-Lafayette team joined Swiftships employees, members of the media, U.S. Rep. Charles Boustany, R-Lafayette, and Department of Commerce trade specialist Brie Knox for the demonstration.

“These are the first little baby steps,” Vaughan said before taking aboard the Anaconda a third group of passengers, including Boustany, and giving them a 50 knot-per-hour ride using his iPad, or about 57.5 mph.