

# Alliance INSIGHT

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aerospace – advanced materials – shipbuilding

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Welcome to *Alliance Insight*, your source for information on the Mississippi Gulf Coast's growing science and technology economy.

*Alliance Insight* is underwritten by the Mississippi Gulf Coast Alliance for Economic Development, a group of economic development officials representing six counties in South Mississippi.

You may not be familiar with the group, so let me tell you just a little bit about the Alliance.

It was established in 2002 and includes the coastal counties of Hancock, Harrison and Jackson and the three coun-

*(Continued on page 8)*

## Shipbuilding

# A bigger slice of a smaller pie

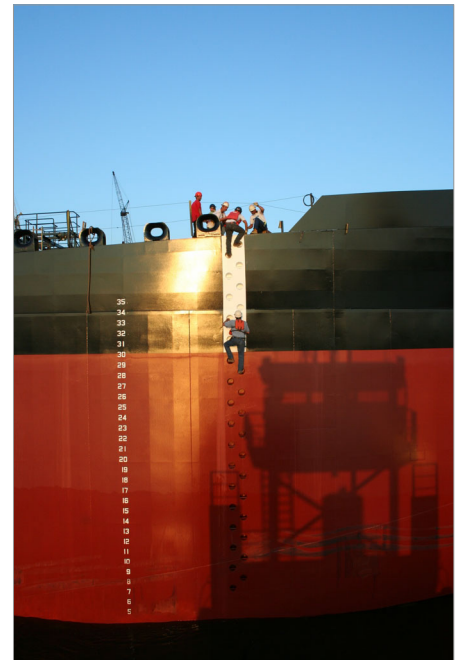
Although the nation's major shipbuilding industry has been shrinking, the Gulf Coast to a large extent has managed to hold its own. And because of that, its proportion of the major shipbuilding pie has increased.

The Department of Transportation's Maritime Administration tracks the shipbuilding sector in five regions: The East Coast, West Coast, Gulf Coast, Great Lakes and non-CONUS areas.

Figures show that between 1982 and 2005, the number of major shipyards and repair facilities nationwide declined 25.4 percent – from 110 to 82 – while the number of workers tumbled by 58.8 percent – from 112,500 to 46,300. The biggest losses were in the East and West coasts.

The East Coast in 1982 had 41 shipyards, but by 2005 that figure was 27, a loss of 34.1 percent. The number of shipbuilding and repair jobs also declined, from 63,100

*(Continued on page 2)*



ARTICULATED TUG BARGE. VT HALTER IMAGE

## Aerospace

# Feeding the aerospace gorilla

Mississippi State University President Robert Foglesong sees it.

He looks at South Mississippi's aerospace efforts and similar aviation pushes in nearby areas along the I-10 corridor and it's clear to him a stretch of the Gulf Coast could wind up as the "gorilla" of the nation's air and space activities.

And he'd like engineering-oriented MSU to play a role.

"We should be more engaged, in

my view, than we have been and that's a priority," he said. When a prospect comes to South Mississippi the availability of MSU expertise should be part of the pitch. "We would like to be sitting in the row behind the leadership down there."

Foglesong is just one of the many who have recognized the growing aerospace corridor along a four-state stretch of the Gulf Coast. The region

*(Continued on page 3)*

## Pie (cont.)

in 1982 to 19,000 in 2005, a 96.9 percent loss.

The West Coast also took a huge hit, going from 27 shipyards in 1982 to 15 in 2005, a 44.4 percent drop. The work force slid as well, going from 23,700 workers in 1982 to 7,700 in 2005, a 67.5 percent decrease.

By contrast, the losses on the Gulf Coast were smaller. In 1982 the Gulf Coast had 33 yards and in 2005 it had 31, a loss of some 6 percent. The work force slipped from 22,900 in 1982 to 18,200 in 2005, a drop of 20.5 percent.

Those changes made the Gulf Coast a bigger player in a smaller field. In 1982, the East Coast had 37.3 percent of the big shipbuilding yards, the Gulf Coast 30 percent and the West Coast about 24.5 percent. By 2005, the Gulf Coast had increased its proportion to 37.8 percent, while the East Coast slipped to 32.9 percent and the West Coast fell to 18.3 percent.

The same shift occurred with the workforce.

In 1982 the East Coast had well over half the work force with more than 56 percent, followed by the West Coast's 21 percent and the Gulf Coast's 20.35 percent. By 2005 the East Coast still had the most workers with 41 percent, followed by the Gulf Coast with 39.3 percent and the West Coast with 16.63 percent.

### Gulf Coast core

The Gulf Coast shipbuilding region spans an area between south Texas and Florida. Within that crescent most of the major shipbuilding operations are concentrated between New Orleans and Mobile. It has four of the nation's nine active yards: Bender Shipbuilding and Repair Co. Inc. in Mobile, Ala., Northrop Grumman Ship Systems' Ingalls Operations and VT-Halter Marine Pascagoula, both in Pascagoula, Miss., and Northrop Grumman Ship Systems' Avondale Operations in New Orleans.

In addition, four of the seven Gulf Coast shipyards with build positions are in two adjacent counties: Alabama Shipyard and Austal USA, both in Mobile County, Ala., and Signal International LLC – East Yard and VT-Halter Moss Point, both in Jackson County, Miss.

When Hurricane Katrina plowed into South Mississippi Aug. 29, 2005, the shipyards were at the very front of the assault. It caused considerable damage to every yard and the displacement of workers. Recovery was costly, and even now shipbuilders are coping with a worker shortage.

Still, South Mississippi got more shipbuilders.

Trinity Yachts, which specializes in megayachts,

### Mississippi Gulf Coast shipbuilding snapshot

Active shipbuilding yards and shipyards with build positions	Northrop Grumman Ingalls
	Signal International East Yard
	VT Halter Marine Pascagoula
	VT Halter Moss Point
Shipbuilding research	Center for Advanced Power Systems
	Center for Turbine Innovation and Research
	Electric Ship Research and Development Consortium
	Fire and Safety Test Detachment
	Full Scale Fire Test Facility
	Marine Composites Consortium Center of Excellence
	National Biodynamics Laboratory
	National High Magnetic Field Laboratory
	Naval Surface Warfare Center
	Simulation Based Design Center
University of New Orleans/Gulf Coast Region Maritime Technology Center	

*Source: Mississippi Gulf Coast Shipbuilding Corridor*

opted to move to Gulfport along the industrial canal of Bernard Bayou Industrial District. United States Marine, which builds boats for special operations, also moved to Gulfport at a site along the canal. Then Gulf Ship set up operations at a 31-acre site along the waterway to build ships for Louisiana's Edison Chouest Offshore.

In what may be one of the more significant developments for South Mississippi in the shipbuilding sector, a group of Gulfport companies and colleges formed a marine composites consortium that could turn South Mississippi into a leading center for research in the use of advanced materials for the shipbuilding industry. It will also work to build a cadre of scientists, technicians and workers who will create future generations of military and commercial vessels. Members include Northrop Grumman, Seemann Composites, United States Marine, Trinity Yachts, the University of Southern Mississippi, Mississippi Gulf Coast Community College and Pearl River Community College.

*(Condensed from Mississippi Gulf Coast Shipbuilding Corridor 2007, which can be downloaded at [www.mscoastshipbuilding.com](http://www.mscoastshipbuilding.com))*

## Gorilla (cont.)

includes RDT&E activities in aerospace and related fields, such as geospatial, advanced materials and weapons development, and operations of some of the biggest names in the industry.

The activity in the region has picked up in recent years. In New Orleans, Michoud is being remade as a hub for NASA’s Constellation program. This past January Northrop Grumman announced it’s teamed up with the University of New Orleans’ National Center for Advanced Manufacturing to develop and test new ways to produce large composite structures for future space transportation systems.

In Mobile this year EADS opened its large engineering center at the Brookley Industrial Complex. The European company and its American partner, Northrop Grumman, will build aerial refueling tankers in Mobile if the team wins an Air Force contract.

In Northwest Florida, weapons-developer Eglin Air Force base recently announced a plan to create a 100-acre science and technology park just outside the base. It will be a central location where university, federal and corporate scientists and technicians can work together on advanced military weapons technologies.

Economic leaders in South Mississippi have taken note.

Aerospace companies with operations in South Mississippi in January gathered at the Northrop Grumman Unmanned Systems Center in Moss Point to brainstorm. The meeting, hosted by the six-county Mississippi Gulf Coast Alliance for Economic Development, included representatives from NASA’s Stennis Space Center, MSU, Northrop Grumman, Rolls-Royce, Pratt & Whitney and BAE Systems.

They agreed South Mississippi, home of Stennis Space Center, a new composites consortium and UAV center, is an active location within the broader aerospace region that has niche expertise. Pratt & Whitney Rocketdyne builds the RS-68 at Stennis Space Center and is involved in a variety of test activities at the facility; Lockheed-Martin builds satellite components; Rolls-Royce operates a propeller foundry in Pascagoula and will be testing jet engines at Stennis Space Center; and Northrop Grumman builds Global Hawks and Fire Scouts in Moss Point. The fourth largest defense contractor in the nation, BAE Systems, has an operation in Gautier that focuses on work with the Navy, but the company itself is a major aerospace player.

“I think the connective tissue right now is just developing,” said Foglesong, who sees the synergies in all the activities in South Mississippi and the broader Gulf Coast. “Right now there are a lot of

### Mississippi Gulf Coast aerospace snapshot

Major aerospace companies	BAE Systems
	Lockheed Martin
	Northrop Grumman
	Pratt & Whitney
	General Dynamics
	Rolls-Royce
Aerospace research	Center of Higher Learning
	Enterprise for Innovative Geospatial Solutions
	Joint Airborne Lidar Bathymetry Technical Center of Expertise
	Engineering and Science Directorate, Science and Technology Division
	Engineering and Science Directorate, Propulsion Testing
	MSU GeoResources Institute
<i>Source: Mississippi Gulf Coast Aerospace Corridor</i>	

platoons down there ... that are kind of separated geographically and the trick is to try to get all those platoons now lined up in a company (in the military sense) ... I think there’s a corridor down there that could become the gorilla for air and space involvement.”

That MSU wants to get involved in no surprise. Aerospace research is a key activity for the university. It’s the home of Raspet Flight Research Laboratory, which has a national reputation. It has worked with Stennis Space Center and Gulfport’s Seemann Composites.

The university already has a foot in the door through its geospatial work at Stennis. But the presence is not as great as the university would like.

“Part of the dilemma that we have is we’re not in residence there and so we have to figure out how to either be bedded down in that area in a way that we have a constant presence or at least a virtual presence,” he said.

One of the impediments to the growth of the Gulf Coast technology corridor is that the separate areas of the Gulf Coast don’t routinely work together. But he thinks the payoff can overcome the turf mentality.

“I think at the end of the day, we don’t bring all of the expertise. We bring a lot of it, but we should reach out to those areas where there’s expertise – in other states even. There’s no reason we can’t collaborate with other universities where they have centers of excellence that we don’t possess,” he said. – TcP

## Shipbuilding – research

# Battle-scarred veteran a one-of-a-kind Navy lab

By no stretch of the imagination does the weather-worn ship look like a laboratory.

Its gray paint is faded and it looks like it's been through the wringer. Small wonder. It's a battle-scarred World War II veteran that was one of the first U.S. ships to enter Tokyo Bay. More recently it was pounded by Hurricane Katrina and tossed ashore.

But the ex-*USS Shadwell* at Little Sand Island in upper Mobile Bay is a unique laboratory with a replacement value of at least \$100 million. The 457-foot ship may be old, but it's helping the U.S. Navy develop the most effective ways to fight shipboard fires and save the lives of sailors and Marines.

The Full Scale Fire Test Facility, established in 1987, is arguably one of the most unique test labs in the world.

While it's hardly a secret, it's likely the general public of Mobile is unfamiliar with the national asset in their own back yard.

The ship sits in the water on the eastern edge of an island accessible only by boat. It's such a low key operation, a guard at the U.S. Coast Guard station at Brookley Industrial Complex was puzzled when a reporter came to visit the ship. The guard wasn't familiar with the ship, and suggested the reporter might be at the wrong place.

"We've only been here 19 years," joked chemist Dr. Fred Williams, director of the Navy Technology Center for Safety and Survivability, after a staffer from the Office of Naval Research lab retrieved the reporter at the gate.

Low profile though it is, the *Shadwell* is a key test facilities in a joint research agreement between the Coast Guard and the Navy. The Fire and Safety Test Detachment is operated by the Coast Guard Research and Development Center in Groton, Conn., but the Coast Guard and Navy share resources to reduce costs.

The F&STD is the only facility in the world using ocean-going vessels for full-scale fire testing. The Navy uses the *Shadwell* and the Coast Guard the nearby ship, *State of Maine*. These test ships provide realism for simulating all types of shipboard fires, including machinery spaces, cargo holds, and on deck.

According to the Navy, the *Shadwell* is a full-scale



EX-USS SHADWELL IS A \$100 MILLION LABORATORY SITTING IN MOBILE BAY. U.S. NAVY IMAGE

damage control research, development, test and evaluation facility for studies on active and passive fire protection, flooding and chemical defense. It measures personnel, materials, equipment, sensors, systems, doctrines, tactics and command and control under time-critical situations. It has features of 688 submarines, DDG 51 and LPD 17 ship classes.

The ship's original mission was transport of craft, amphibious vehicles and troops. It's the first ship in the Navy to bear the name of the birthplace and early home of Thomas Jefferson. The keel of LSD-15 was laid in Newport News, Va., in February 1944. On June 24, 1944, *Shadwell* was commissioned in the U.S. Navy at ceremonies in the Naval Shipyard, Portsmouth, Va.

The ship, designed by the British, was originally contracted for delivery to the United Kingdom. But in August 1944 *Shadwell* sailed for the West Coast and joined the amphibious forces of the South Pacific. In January 1945 *Shadwell* was hit by an air-dropped torpedo just forward amidship, leaving a sixty-foot hole. The ship was repaired at Bremerton, Washington. In August 1945 *Shadwell* was one of the first units to enter Tokyo Bay.

The *Shadwell*, which has a 72-foot beam, is today a major facility in an extensive program at the Naval Research Laboratory. The program includes NRL's Chesapeake Bay Detachment in Chesapeake Beach,

Md.

*Shadwell* serves as the ultimate test platform in the development of fire models and other predictive tools, agents, systems and technology stemming from basic and theoretical concepts developed through research and development.

The way Williams explains it, the theoretical part of the process occurs in the Washington-area lab, and then tested at Chesapeake Bay. But the real world testing is done here in Mobile.

*Shadwell* can do fires in an enclosed space, confined space and open space.

It also serves as a realistic shipboard test platform for endeavors other than damage control that evolve from research and development in other disciplines, such as coatings, insulations, working fluids, cleaners and communications.

It's the seclusion of the ships in a bustling metro area that makes it intriguing. Three small workboats provide for the transportation of personnel, while two landing crafts ferry major equipment items to the vessel.

On their way to the lab the workboats pass McDuffey Island along with sandbars where pelicans loiter in the sun. The Mobile skyline and interstate bridge can be seen in the distance.

Fifty-acre Little Sand Island itself, the result of dumped dredged material, is not used by the researchers. But they have ventured on the island on occasions to pick blackberries. They keep an eye out for one island inhabitant – an alligator named Wally.

During the reporter's visit in early February, the

team was conducting tests for a nozzle system designed to deliver a water mist to put out a 3 megawatt fire. It was this lab that showed water mist a better alternative to a chemical for fighting a shipboard fire in an enclosed space. The high pressure water mist system for LPD 17 machinery spaces – which allows personnel to remain in a space to fight a fire – was developed on the *Shadwell*.

This day's test was for a company that thinks it's come up with a better mist nozzle.

Getting into the belly of the ship to watch a test is just a bit unnerving. From the well-lit control room the workers go down several decks through dark passageways, being careful to lift your feet as you step through bulkheads.

The control room's monitors give a range of readings critical for the test, from the duration of the fire to the temperature and more. The tests today were for a variety of megawatts. Oddly enough, the bigger the fire, the more effective the mist.

But it's in the underbelly of the ship, in a secure room right next to the test room, where the danger of the fire is most apparent. When the fire begins, the intense heat can be felt immediately through the thick Plexiglas.

If there is any single thing aboard the ship that provides the "why" for the *Shadwell's* mission, it's a project Williams once assigned to a student. He had him paint a bold red line along the interior of the ship that spans a number of compartments. At intervals, a plaque gives a year and shows how many sailors died in fires that year.

"It's a reminder," said Williams. – Tcp

## Advanced materials/shipbuilding Navy seeks help from small businesses

In recognition of the fact that it's not just the big companies that have smart people, the Office of Naval Research is reaching out to non-traditional companies.

It hopes South Mississippi companies step forward.

The Technology Insertion Program for Savings (TIPS) is designed to help the Navy find solutions to a wide variety of problems in the field of maintenance, ship systems and equipment, billets/manning, training and logistics.

It will listen as well to ideas from other fields.

ONR is well aware that the major names in the defense industry – the Boeings, Lockheed Martins, Northrop Grummans and BAE Systems – are used to helping develop solutions to military issues.

But often, it's the non-traditional players that have

unconventional solutions that get lost in the system. The aim is to rapidly transition technology from *any* source into the fleet.

The program concentrates on existing or late-stage development technologies that ONR can help fund to completion. It may also take advantage of existing government technology whose development may have been stopped or the project shelved.

In an effort to familiarize South Mississippi businesses with the problems for which ONR is seeking solutions, the Web site Mississippi Gulf Coast Shipbuilding Corridor ([www.mscoastshipbuilding.com](http://www.mscoastshipbuilding.com)) publishes the top 10 problems the Navy hopes to address. The site, which provides a link to be put in contact with the right people at ONR, is updated every six months. – Tcp

## Aerospace – research

# Raspet on cutting edge of aviation future

The white aircraft looks like a glider, but there's something peculiar about this one: It has on the top of the fuselage an extension with a propeller.

It represents a different approach to UAVs.

The Owl is a project of the Raspet Flight Research Laboratory, Mississippi State University's highly respected RDT&E facility. It represents a new wave of UAVs that are so light they require little power.

This machine ultimately will stay aloft 36 hours to provide surveillance. It will be able to reach 65,000 feet, glide on thermal updrafts and use atmospheric winds, then click on power to lift again and glide some more. The high-flying version will be called Ethereal.

This is the type plane that represents what Raspet is all about: leading edge research into future air vehicles. It's one of the few university aeronautical research labs that can design, build and test prototypes of full-scale manned and unmanned aircraft. Current programs include the ultra light UAV sensor platform, elevated sensor platform and modular composite bridge.

"Right now our emphasis is on unmanned aerial vehicles," said Lawrence, a veteran test pilot. "It's a big deal, and it's going to be the future."

Established 50 years ago as part of MSU's Department of Aerospace Engineering, RFRL is part of the Bagley College of Engineering. It has two Starkville facilities: the 55,000 square foot prototyping building and 35,000 square-foot flight test lab.

Lawrence said there are currently 11 professional staff members and 13 students at Raspet, though the number of students can vary. While its more obvious attribute is RDT&E, teaching is essential.

"Everything we do, we look toward our educational mission," said Lawrence, who brings bright prospects to the lab to let them see for themselves.

"We bring them in here, we show them what we're doing and we give them an exposure to things that are going on in the department as well as the things we're doing in the lab," said Lawrence. "We think that the best way to develop engineers for tomorrow is to give them hands-on training."

Raspet specializes in full-scale flight vehicle development and test, advanced composites development and fabrication, computer controlled manufacturing and test of prototype composite applications.

It has a fleet of five fixed-wing and one rotary-wing aircraft, three autoclaves, fabrication/prototyping/testing equipment, a 40,000 square foot

hangar/assembly area, an engine test cell and a ground test vehicle for UAV prototype development. One unique capability is the large baron autoclave – 10 feet in diameter and 55 feet long.

The lab in 1959 built XV-11A, the first turbine-powered composite aircraft. In 1989 it was involved in the Honda UA-5 project, the first all graphite turboprop business-jet. Its experience with UAVs goes back to 1990.

The Owl represents the type of work for which Raspet is known. The UAV may one day be a mainstay for the military and perhaps Homeland Defense.

The Owl, with a wingspan of less than 40 feet, is a carbon fiber and epoxy composite that weighs just 155 pounds without equipment. It can take off and land in only 100 feet. It will have carry just 17 gallons of fuel to power the two-cycle piston engine, yet will have the capability of remaining aloft about as long as Northrop Grumman's Global Hawk UAV. The Army's ultralight UAV sensor platform program call for it to have a capability of reaching an altitude of 36,000 feet that can be controlled by people who are not pilots.

It will be modular, meaning it can be fitted in different ways for different missions. Although its 250-pound payload capability sounds like little, it's actually a high payload for its weight.

The thought process here was first create an efficient platform, then work on capabilities, said Tony Vizzini, head of the MSU aerospace engineering department. One of its key attributes will be a deicing capability, a problem that has caused the loss of a number of Predator UAVs.

Raspet officials note that the lab serves economic development activities for Mississippi by providing facilities and staff for flight research/testing for manned and unmanned aerial vehicles.

"We think that part of our job here at the lab is to create high tech in the state of Mississippi. We can't do all the things we need to do to develop this little airplane, one of the things that we do with every major sub that we hire we tell them that this is something that goes into a spinoff production they're going to have to put a plant here in the state," Lawrence said.

"I not only want us to be recognized in the U.S., we want worldwide recognition," said Lawrence. – TcP

# First Quarter regional news headlines

## Aerospace

- Lawmakers fight to keep Army program at arsenal (Huntsville Times, 03/24/07)
- USAF creates UAV pilot specialty (Strategypage.com, 03/23/07)
- Researchers hope to improve UAV coordination (Orlando Sentinal, 03/22/07)
- GAO wants review of Air Force tanker need (Mobile Press-Register, 03/08/07)
- AIRINC to be honored (Mobile Press-Register, 03/08/07)
- Global Hawk fuselage leaves Moss Point (Tcpl, 03/01/07)
- Stennis impact totals \$488 million (NASA, 02/28/07)
- Airbus slates ceremony for aircraft center (Mobile Press-Register, 02/25/07)
- Infinity site cleared (Sun Herald, 02/17/07)
- NASA works to create jobs (Baton Rouge Advocate, 02/16/07)
- Remaking Michoud (Times-Picayune, 02/11/07)
- Northrop to compete for tanker (Multiple, 02/08/07)
- EADS ramps up helicopter production (Mobile Press-Register, 02/07/07)
- Studies concerned about aerospace workforce (Aviation Week & Space Technology, 02/05/07)
- Bids submitted for cargo contract (Mobile Press-Register, 02/02/07)
- Northrop-EADS venture to develop Euro Hawk (Northrop Grumman, 02/01/07)
- Tanker final terms released (Multiple, 01/31/07)
- Boeing officials eye Michoud (Baton Rouge Advocate, 01/30/07)
- Air Armament Center gets new leader (EmeralCoast.com, 01/25/07)
- Mississippi in running for Rolls-Royce site (Sun Herald, 01/24/07)
- Bug sized UAVs, robots on the way (Wired, 01/23/07)
- Will Northrop stay in tanker competition? (Multiple, 01/20/07)
- Airplane deal to bring 200 jobs (Mobile Press-Register, 01/19/07)
- Northrop, UNO team up on composite structures (Northrop Grumman, 01/16/07)
- Eglin hopes to use land for industry, university technology park (WEAR-TV, 01/11/07)
- New identification system tested (Military & Aerospace Electronics, 01/05/07)

## Materials

- Steel company picks Mobile (Mobile Press-Register, 03/10/07)
- Ground broken for new plant (Baton Rouge Advocate, 03/10/07)
- ThyssenKrupp unveils Web site for project (Mobile

Press-Register, 03/09/07)

- Competition heats up (AP, 02/27/07)
- Alabama, Louisiana finalists for steel plant (Mobile Press-Register, 02/08/07)
- Antibiotic-coated medical devices could cut infections (Multiple, 02/05/07)
- Northrop, UNO team up on composite structures (Northrop Grumman, 01/16/07)
- Goodrich selling oil fields (Baton Rouge Advocate, 01/16/07)
- Louisiana eyes wood-plastics composites (Baton Rouge Advocate, 01/07/07)
- General Dynamics gets new contract (Sun Herald, 01/05/07)
- McMoRan's LNG port approved (Times-Picayune, 01/05/07)

## Shipbuilding

- Navy changes timetable on LCS (Mobile Press-Register, 03/21/07)
- Navy may allow shipbuilding to resume (New Orleans Times-Picayune, 03/17/07)
- Coast Guard cancels contract (Washington Post, 03/15/07)
- No further talks planned yet (Sun Herald, 03/08/07)
- Bender gets barge job (Mobile Press-Register, 03/08/07)
- Austal USA eyes new project (Mobile Press-Register, 03/02/07)
- Navy retreats from cost-overrun statement (Mobile Press-Register, 03/01/07)
- Coast Guard buoy work goes back to Universal (Mobile Press-Register, 02/27/07)
- Coast Guard to build facility (Baton Rouge Advocate, 02/26/07)
- Deepwater program under close scrutiny (Multiple, 02/14,15/07)
- Northrop lands contract (Mississippi Press, 01/30/07)
- Coast Guard takes issue with report of cutter problems (New Orleans Times-Picayune, 01/30/07)
- Shipyard labor negotiations under way (The Sun Herald, 01/29/07)
- Six Katrina-damaged Gulf Coast shipyards to split \$140 million (Mobile Press-Register, 01/25/07)
- Navy replaces shipbuilding chief (Mobile Press Register, 01/24/07)
- Superferry to launch Thursday (Mobile Press-Register, 01/14/07)
- Navy orders halt to ship project (New Orleans Times Picayune, Mobile Press-Register, 01/13/07)

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## Welcome (cont.)

ties to their north, Pearl River, Stone and George. While each county takes care of its own economic development issues, the group was formed in recognition of the fact that in today's global world, the way to attract attention is through larger regional groups that can tackle issues of common interest.

The groups represented by the Alliance are the Hancock County Port & Harbor Commission, Harrison County Development Commission, Jackson County Economic Development Foundation, Partners for Pearl River County, Stone County Economic Development Foundation, George County Economic Development Foundation and Mississippi Power.

The Alliance last year began a long-range project to compile information on the science and technology sectors that operate in this region. That research has resulted in an on-going project to create Web sites and reference books that focus on these growing sectors. The Mississippi Development Authority, in recognition of the benefits of this type of regional approach, has partially funded the sectors project.

*Alliance Insight*, produced by Tortorano Commissioned Publications of Gulf Breeze, Fla., is a quar-

terly newsletter designed to highlight the activities in South Mississippi in the fields of aerospace, advanced materials, shipbuilding, geospatial and marine science. It's clear that these science and technology activities will play a major role in South Mississippi's future.

We hope you'll find this publication a valuable addition to your reading, and we welcome your feedback.

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