In memory of the victims of the September 11th attack on the United States and in honor of
the civil servants and members of the military who serve our citizens in their hour of need.

Reginald Daniel, CEO
Scientific Engineering Solutions, Inc.

MARYLAND

BUSINESS REVIEW

ISSUE SIX   2001

Maryland's Joint Strike Fighter connection

When the next generation of fighter jet for the U.S. armed services becomes operational in 2008, Marylanders can know that facilities in their state played an important role in its development. The U.S. Department of Defense selected Bethesda-based Lockheed Martin Corporation to build the versatile new aircraft, which completed many of its final test flights at the Patuxent River Naval Air Station in Southern Maryland.

The contract to build the F-35 is expected to be the most expensive aircraft program in the nation's history, worth an estimated $200 billion to $300 billion to Lockheed and its subcontractors. The three branches of the services slated to use the plane will require more than 3,000 units. Each will cost an estimated $40 million to $50 million. The new aircraft will be one of the last manned jets to be built in the U.S. It is slated to remain in production until 2040.

Another Maryland-based company, Northrop Grumman Electronic Systems, located in Linthicum near Baltimore/ Washington International Airport, developed and tested the aircraft's on-board radar. That company expects its initial share of the contract to be worth $1 billion, solidifying some 500 engineering and manufacturing jobs in Maryland.

"We are pleased to congratulate Lockheed Martin Corporation and their partners on their successful bid to win the Department of Defense contract to build the new Joint Strike Fighter," said Governor Parris N. Glendening. "This next generation of fighter aircraft will become an important tool in our military's defense arsenal. We are proud that Maryland, through Lockheed Martin, will play an active role in helping keep America secure."

Lt. Governor Kathleen Kennedy Townsend echoed the governor's sentiments.

"This announcement is great news for the Maryland economy," she said. "The Department of Defense's decision is also a strong vote of confidence in Maryland's highly trained and highly skilled workforce."

The new fighter that Lockheed will build, to be designated the F-35, is based on a single basic airframe and technology — hence its designation as a Joint Strike Fighter — but it is actually a family of aircraft. Three different variants were developed in the bid proposals by Lockheed Martin and competitor Boeing Aircraft. Each version built was required to meet three basic criteria: commonality of parts, short take-off and vertical landing capabilities and low-speed handling capabilities (required for carrier-based aircraft).

A fighter that makes conventional take-offs and landings is being developed for the Air Force to replace its aging fleet of F-16s, F-15s and A-10 Thunderbolts; the Navy variant will be a carrier-based version to complement its F/A-18s; and a Marine Corps short take-off and vertical landing version is planned to replace its AV-8B Harrier. Northrop Grumman supplies radar systems for the F-16, which is a major part of the electronics business. Their participation in

2001 Lockheed JSF Milestones

Flight testing complete
On March 10, the X-35C completes its flight-test program with all objectives achieved.

STOVL testing successful
On March 10, the X-35B achieves full operational thrust from its short takeoff/ vertical landing propulsion system.

Carrier landing practice
On March 1, U.S. Navy Lt. Cmdr. Greg Fenton successfully completes the X-35C's 100th field carrier landing practice test.

STOVL system begins testing
On February 22, the short takeoff/vertical landing JSF X-35B begins testing its shaft-driven lift-fan propulsion system on a specially designed hover pit.

First transcontinental flight
The X-35C completes a 2,500 mile trans-continental flight from Edwards Air Force Base to Pax River between February 9-10. It is the first of the X-planes to fly transcontinentally.

First supersonic flight supersonic
On January 31, the Lockheed Martin JSF X-35C flies supersonic for the first time.

(Photos, top to bottom) Lockheed Martin's X-35C Joint Strike Fighter demonstration craft flies over the Chesapeake Bay near Patuxent Naval Air Station in Southern Maryland during testing earlier this year; program officials inspect one of Lockheed's demonstration aircraft; pilot tests Boeing's X-32B's ability for vertical takeoffs and landings by hovering above the tarmac at the Pax River facility.

Lockheed Martin

Lockheed Martin

Boeing

Lockheed Martin

the JSF program will help them solidify their position as the premier defense electronics contractor in the region.

Each competing contractor designed and built two aircraft. Patuxent River Naval Air Station, frequently referred to as Pax River, was chosen by Bethesda-based Lockheed to test its X35C Navy version and by Boeing to test its X-32B, the Marine's short take-off and vertical landing — or STOVL — variant.

Lockheed officials felt the Pax River facility was important to the success of their testing program.

"We are happy to be back at Patuxent River, testing carrier aircraft with the Navy," said Tom Burbage, executive vice president and general manager of the Lockheed Martin JSF program and a former Navy carrier pilot during the test program completed earlier this year. "We strongly believe that sea-level testing is necessary to give us a true picture of the X-35C's carrier suitability. Our JSF teammate Northrop Grumman has long been a fixture here, and we're eager to show how our companies' combined technologies, along with those of Royal Navy aviation veteran BAE SYSTEMS, will meet the unique challenges of carrier-suitable, stealthy strike fighters."

Boeing's X-32B version of the JSF completed testing at Pax River in July in what company officials called one of the most successful test flight programs in aviation history. The program included five flights for the versatile plane in one day. It became the first of the models to transition from a hover over the airfield to supersonic flight once airborne.

Retired United States Marine Corps Brigadier General J. Michael Hayes, the Maryland Department of Economic Development's Military and Federal Facility Director, believes that putting the two JSF demonstrators through their paces at Pax River helped clinch the overwhelming success of the test programs.

"Pax River has a well-deserved reputation for the testing of experimental aircraft," he says. "Equally important, it brings to bear a full spectrum center for maritime aviation excellence with a large, superbly qualified workforce, state-of-the-art facilities, mature tested business relationships and an active interaction with East Coast joint operational forces." *MBR*

Taking care of business — online!

Maryland's electronic business efforts have been ranked number one in the nation by the Center for Digital Government in its 2001 Digital State Survey. The research group reports that no other state government has as comprehensive a suite of online services as Maryland. Recognized nationally as a leader in e-Procurement, *eMaryland Marketplace* is an important element in the State of Maryland's e-Gov portfolio and a contributor to Maryland's number one ranking in the 2001 Digital State Survey.

eMaryland Marketplace, along with an extensive array of other on-line services, has helped Maryland move toward one of Governor Parris N. Glendening's top priorities: making Maryland the national leader in delivering government services over the Internet. All agencies have been given process conversion goals: at least 50% of services will be available online by 2002, 65% by 2003, and 80% by 2004. Available to all state agencies, *eMM* contributes to meeting this aggressive schedule.

Maryland began moving its $8 billion in annual state purchasing to the Internet with an innovative, no-cost project that was launched March 8, 2000. Conceived by the Maryland Department of General Services procurement division, *eMaryland Marketplace* allows government agency buyers to establish real time communications and business transactions with vendors in a paperless environment, producing savings for both the state and local government agencies and their vendors.

Since its inception, *eMM* (*www.emarylandmarketplace.com*) has posted more than $100 million in procurements on its Web site. The system has grown to include more than 60 state and local government agencies and more than 1,250 bidding vendors. State commodity contracts are loaded as catalogs and are available to public buyers in a fashion similar to amazon.com.

The nation's first fully functional state procurement system, *eMM* has received a number of national awards. Maryland's on-ramp for electronic procurement was selected by E-Gov 2001 for one of 20 coveted Pioneer Awards for best practices in E-Government; *Civic.com,* a national magazine for state and local government IT professionals, presented the portal with its Civic 50 award; the National Association of State Chief Administrators honored *eMaryland Marketplace* for excellence in procurement innovation; and the Council of State Governments has recognized *eMaryland Marketplace* with a 2001 Innovations Award. In addition, the Council of State Governments' Eagle E-Government Awards Program presented *eMaryland Marketplace* with a 2001 Award of Excellence in the Best Executive Branch Web site category. The awards program recognized *eMM* as a model for other e-government initiatives.

"We are very proud of this national recognition," says DGS Secretary Peta N. Richkus. "It's good for Maryland and reflects well on DGS, but also on all our agency partners who have contributed in different ways to making *eMaryland Marketplace* a success.

"Our system delivers savings for government organizations and our private sector vendors; both are realizing financial and resource efficiencies. It also enhances the already favorable business climate in Maryland."

In addition to being the first fully functional state procurement platform to move beyond the development phase, *eMM* was also the first to use a self-funding model. This strategy alone saved the state millions in the development costs incurred by other states. A creative procurement included a proof-of-concept phase and commercial off-the-shelf software to allow the system to go live in March 2000. In addition, *eMaryland Marketplace* broke ground as the first state-sponsored e-Procurement vehicle to include local governments from its inception, offering the advantages of intergovernmental aggregation from the outset.

One of the goals of *eMaryland Marketplace* is, in fact, to build and strengthen the marketplace of Maryland vendors. *eMM* makes government contracts more available and levels the playing field for participating vendors, regardless of their location or company size. It can be especially helpful for small businesses. All vendors experience efficiencies by accessing a single portal to conduct business with government buyers. Rather than assigning sales representatives to go to each agency and pick up bid solicitations, companies can now have immediate electronic access to the state business opportunities of interest to them.

Vendors, an essential part of eMaryland Marketplace, are telling their success stories. Among them, Glen Burnie-based Severn Graphics and Baltimore's Pelican Mobile, one of 111 minority business enterprise organizations that have joined eMM. Severn — a graphics and production firm — was an early joiner and sales executive Doug Shaffer says the system is easy to use. He adds that submitting bids takes half the time it once did.

Daryl Conner, the government account manager for Pelican Mobile, says his mobile computer solutions firm has an edge over competitors not on the system. Conner is especially high on *eMM*'s premium subscriber service, which notifies vendors of procurements by email.

On the government side, *eMM* has saved time and taxpayer dollars. Using *eMM,* procurement officers can purchase or solicit bids for goods and

The nation's first fully functional state procurement system, **eMaryland Marketplace** *has received a number of national awards.*

services in minutes, rather than days or weeks. Invoicing and payment are accelerated, even immediate when purchasing cards are used for payment.

Significant benefits to Maryland government procurement organizations are realized by reducing the average administrative cost per order by an estimated $100. For example, Anne Arundel County reported saving almost $12,000 on 27 bid solicitations its first month using the system. The system reduces maverick buying, increases purchasing power though intergovernmental cooperative procurement and heightens competition among a wider spectrum of suppliers.

For bid solicitations, vendors have two options. They can either browse through all available solicitations posted on the Web or subscribe to e-mail notification that a bid solicitation has been posted matching their business profile. Bids submitted online also can be awarded through the *eMM* procurement system. Bids that have been awarded are listed as public information on the system, including bid amounts by responsive vendors.

Maryland Lt. Governor Kathleen Kennedy Townsend gets a briefing on eMaryland Marketplace *from Carla Tucker of the Maryland Department of General Services at the Maryland Association of Counties summer conference. Looking on are Jason Carlo and Michael Skigen of SAIC.*

In moving more and more services online, Maryland is following the lead of business in the use of technology. By adding value to the services we provide to businesses, the state is leveraging the potential of the Internet to meet the needs of its business partners. *MBR*

I n a move to help shrink the "digital divide," the Maryland Department of General Services has launched the eMaryland Connection program which will provide additional access to the State's award-winning Internet-based procurement portal *eMaryland Marketplace.* By placing computer stations in DGS-operated buildings across the state, more participating vendors, regardless of company size, will be able to take advantage of the e-Procurement portal to bid on goods and services required by state and local government agencies.

"eMaryland Connection is designed to help both small and minority businesses that want to participate in the State's procurement process, but have limited resources to do so," said DGS Secretary Peta N. Richkus. "We believe the convenience of computer access at more than 20 State office buildings across Maryland will give these businesses exposure to a larger number of procurement opportunities."

Leveraging technology resources

Maryland leads the nation in federally funded and conducted R&D ($6.3 billion in 1998), with more than twice the level of federal research investment as any other state. So why does Maryland lag behind other states when it comes to producing patents and licenses, university spinoffs, and initial public offerings?

Maryland has to be more effective in leveraging its technological resources, according to Dr. Phillip Singerman.

Singerman is executive director of TEDCO, the Maryland Technology Development Corporation, a quasi-public entity charged with promoting the commercialization, development, and deployment of technology in the state. TEDCO's mission is to transform Maryland into the nation's premier location for technology and technology-based economic development.

In only its second full year, TEDCO has made notable progress in achieving this goal, as it is now responsible for $10 million in investments aimed at commercializing technology from universities and federal laboratories.

During the 2001 fiscal year, TEDCO helped secure over $1 million in grants and federal contracts from the likes of NASA, the National Science Foundation, and the U.S. Department of Commerce. So far in the 2002 fiscal year, agreements with the U.S. Navy, Small Business Association, and the American Society of Mechanical Engineers have brought in nearly $1 million more.

TEDCO was created by an act of the Maryland General Assembly in April 1998, and began operations the next year with a mere $642,000 in start-up funding. Governor Parris Glendening named Singerman to head the organization in 1999, after he served four years as U.S. Assistant Secretary of Commerce in the Clinton Administration. In the federally appointed position, Singerman oversaw the Economic Development Administration, which works with the nation's distressed communities to develop and diversify their economies.

According to Singerman, national security considerations and restrictive legislative provisions have worked in the past to prevent government laboratories from generating spin-off ventures commensurate with their capabilities. Naturally, TEDCO's strategy for maximizing the state's intellectual capital involves linking Maryland's numerous federal labs with the myriad high-tech start up companies and educational institutions that operate within state borders.

"We are now focused on linking our innovative tech companies with the vast resources of the federal labs," he says. "As a result, we are picking up the pace in moving promising research through the pipeline and into the marketplace."

The Maryland Federal Laboratory Partnership Program has been extremely successful in creating greater awareness of technologies available in the state's federal labs by organizing conferences to consider topics such as "From Discovery to

Deployment" at the Naval Air Systems Command in Patuxent River, and "Maritime Technology for the Marketplace" at Naval Sea Systems Command in Bethesda. These showcases disseminate valuable technological information to interested companies while acting as a forum in which the labs and tech firms can share ideas that lead to prototyping for early stage product development. Along with grants of up to $20,000 that are available for joint projects, the typically small tech companies derive added benefit by improving their skills and reducing their costs for technical assistance from the federal labs.

Two other TEDCO programs provide direct links between federal labs and state universities. The Maryland Technology Partnership for Innovation aims to create new wealth and strengthen local economies in distressed communities across the state, and the University Technology Development Fund supports pre-commercial research to facilitate the development of promising intellectual property.

TEDCO is also focusing on business incubators as a way to speed the commercialization process. The state's eight publicly funded incubators have proven to be effective vehicles for technology commercialization and worthy of continuing institutional and financial support. To guide its efforts, TEDCO commissioned the National Business Incubation Association (NBIA) to survey national and international best practices in business incubation to identify strategies that could be adopted by Maryland-based incubators. According to NBIA's executive director, this was the first time any state has worked with the Association to benchmark best practices as

TEDCO Officers (left to right): Eugene M. DeLoatch, Ph.D.; Phillip A. Singerman, Ph.D.,; William E. Hannah Jr.; David S. Iannucci; Hon. Beverly B. Byron; James S. Burns.

the basis of an incubator program.

TEDCO plans to roll out a major study analyzing Maryland's e-readiness in December 2001 to continue the momentum generated by its initial programs. The study will determine whether the state has enough bandwidth to accommodate next generation technologies, which will affect Maryland's ability to adapt in the Information Age.

Singerman is confident about Maryland's economic future. "Governor Glendening and other state leaders have done a tremendous job of positioning Maryland for future prosperity," he said. "It is one thing to be blessed with the kinds of resources we have in Maryland, but the key has been the Glendening-Townsend Administration's willingness to make investments that will allow us to seize economic development opportunities well into the future." *MBR*

Technology
hits the road!

Looking like the bridge of the Starship Enterprise, the State Highway Administration's high-tech Statewide Operations Center allows operators to monitor highway conditions around the clock, seven days a week.

by Parker F. Williams, Maryland State Highway Administrator

As the 21st Century progresses and delays along Maryland's highways seem to be increasing as quickly as tempers during rush hour, the Maryland Department of Transportation is fighting back…with technology, teamwork and a little old-fashioned elbow grease.

Current projections show that Maryland will face tremendous growth in the next 20 years. Population will increase by one million — to nearly 6.5 million citizens. Those millions of people will drive more also — increasing the statewide total from 48 billion to 68 billion miles traveled. As we try to reduce congestion, we must look at a combination of land use, planning, increasing transit and maintaining our world-class highway system.

Maryland's system of highways is an integral part of the state's transportation infrastructure and is crucial to commerce. In combination with the Port of Baltimore, Baltimore/Washington International Airport and a thriving railway system, modern, well-kept highways such as

I-70, I-270 and I-95 make moving goods into, throughout and beyond the state efficient and cost effective. This valuable asset is tremendously important to companies who are based in Maryland.

For instance, the state is an overnight road trip from 32 percent of the nation's total population. Trucks over 10,000 lbs. gross weight traveled an estimated 3.8 billion miles on Maryland roads during 1998 — a 44 percent increase over 1985.

Moving goods and services along Maryland's highways is dependent upon one major factor — the ability to get from point A to point B. Most people realize that driving along the Capital Beltway through Montgomery County on a Friday at 7:30 a.m. can be stressful and difficult, given the daily delays that occur. But it is the non-recurring backups during non-rush hour periods that will test the patience of even the most mild-mannered motorist.

Research shows that more than 60 percent of all delays along Maryland's highways results from non-recurring congestion...that is, congestion caused by accidents, disabled vehicles, police activity or any other unplanned traffic-impacting event. And through innovative, state-of-the-art transportation management system technologies, MDOT is making a substantial dent in congestion.

The Coordinated Highways Action Response Team — or CHART — is a multi-jurisdictional effort aimed at reducing non-recurring delays through the use of technologies including closed-circuit cameras, overhead variable message signs, pavement sensors, an interactive web site and other technologically advanced devices.

CHART began in 1989 with little more than a small operations room at the College Park State Police barrack and four operators. It has since grown into a multi-faceted organization with a fleet of response vehicles, a full-time 24-hour-a-day staff of more than 20 technicians and a high-tech Statewide Operations Center near BWI Airport in Hanover. The center is believed to be the first of its kind in the nation and has received visitors from various states and nations who wanted to see it in action.

The heart of the CHART program is emergency response — both the response vehicles and operators. Several different types of response vehicles, from one-ton tow trucks to large ambulance-sized response units, patrol Maryland's highways on a daily basis, responding to incidents and assisting motorists with disabled vehicles. Maryland's Emergency Response Technicians assist more than 20,000 motorists each year. Grateful motorists — surprised that such a service exists and even more pleased at the prompt and courteous services that are rendered — write hundreds of thank-you letters to officials at the administration each year.

"CHART's response technician wasted no time in unloading my truck, changing the tire and replacing all of my luggage," wrote a satisfied motorist from Florida. "I was at a loss as to what to do and the technician took me to a phone on the 4th of July, stayed with me until everything was resolved and gave me directions. What could have been an unpleasant experience was handled with expediency, politeness and good humor. I can never express my gratitude enough to the State Highway Administration for providing such a service."

Emergency response technicians are trained extensively to respond to incidents ranging from a simple tire change to hazardous materials spills. Operators at the SOC dispatch the response vehicles based on information provided by closed-circuit cameras, Maryland State Police (via motorists dialing #77 on cellular phones), traffic reporters and SHA maintenance vehicles.

Operators at one of several satellite operations centers (including centers for the Baltimore, Washington, Eastern Shore and Western Maryland areas) throughout Maryland link motorists to up-to-date information via electronic changeable message signs and highway advisory radio. The operators monitor nearly 50 closed-circuit cameras, located strategically along congested state highways in order to relay this up-to-date information to motorists. Operators share information with traffic reporters daily to provide motorists the most current traffic conditions. In addition, CHART's website (*www.marylandroads.com*) includes live traffic video, real-time average highway speeds and, in emergency situations such as hurricanes and snowstorms, real-time road closure information. In a 24-hour period during a snowstorm in the winter 2000, the CHART website received more than 500,000 hits. Maryland is one of only a few states that provides live traffic camera images on the internet and directly to the media.

During severe weather, such as hurricanes and snowstorms, the SOC also functions as an emergency operations center. The center monitors highway pavement conditions using information from sensors embedded in roadways and weather towers along highways.

Travelers to Maryland are often pleasantly surprised to learn of the state's roadside assistance program.
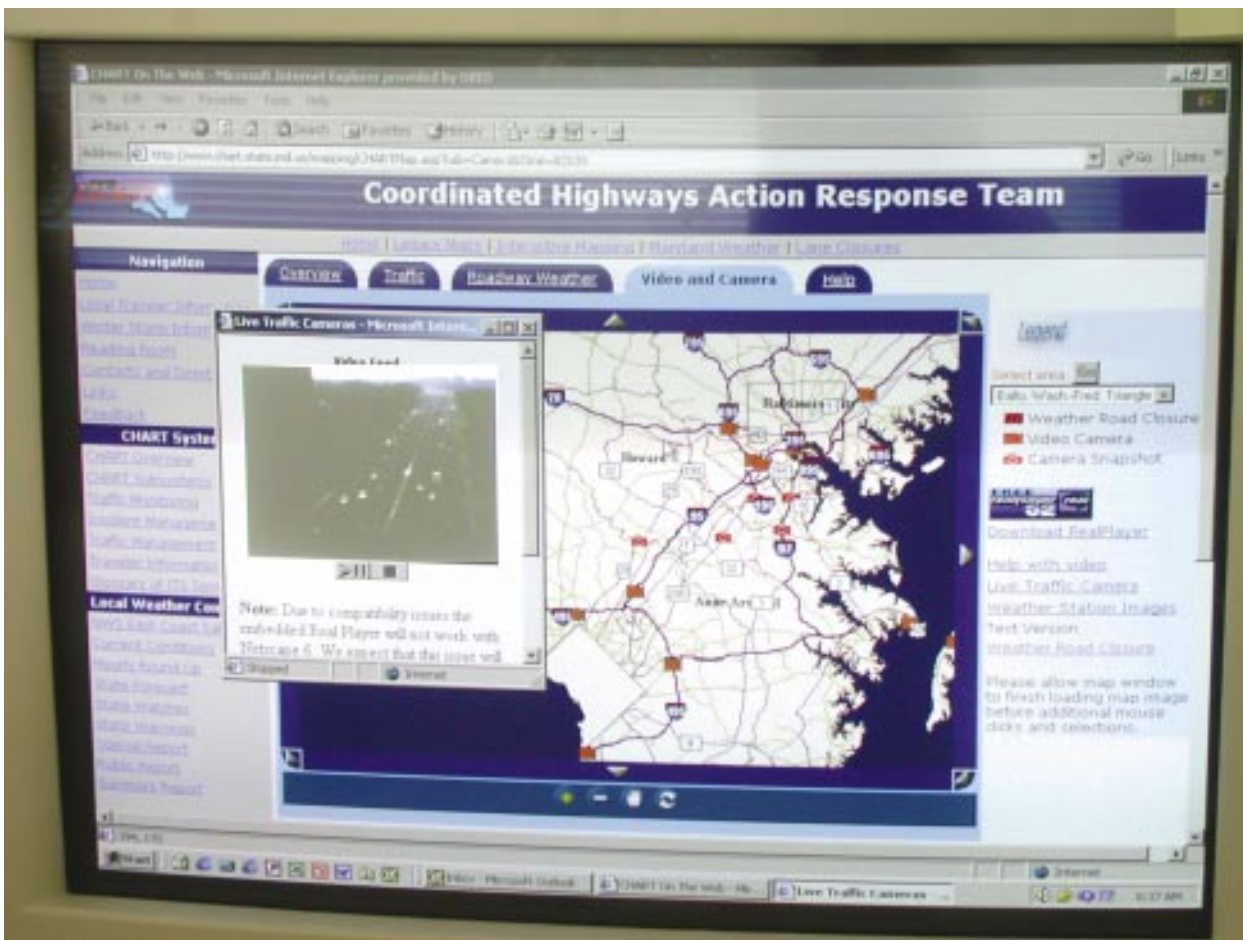
The pavement sensors collect data about the road-surface temperature and potential freezing point. The weather towers report wind velocity, air temperature and visibility. The information allows SHA to determine when to send out salt trucks and how to manage maintenance resources.

In addition, SHA is using technology such as an 'automatic de-icing bridge' along I-68 in Allegany County, where pavement sensors signal automatic sprayers to place chemicals on the bridge surface.

"Keeping highways open along the I-95 corridor is critical to successfully moving people and goods every day," says BWI Business Partnership Executive Director Neil Shpritz. "Maryland's highway system has drawn more than 35 companies since 1995 that established warehousing and distribution facilities creating more than 9,000 jobs. I applaud SHA and their efforts to keep the highways open."

Maryland's strategic geographic location and its transportation infrastructure have been critical in sparking commerce and creating jobs. Traffic management programs, including CHART, are crucial to reducing non-recurring congestion along Maryland's highways. No jurisdiction can build its way out of congestion. The key to a successful transportation network is a balanced approach, using every tool in the ever-growing toolbox. *MBR*

The Maryland State Highway Administration's CHART system offers a Web-based highway information system. The latest road condition are a mouse click away.

What does CHART mean to a motorist en route to work or a trucker hauling frozen chickens through Maryland to Florida? Let's chronicle a hypothetical incident and highlight the effectiveness of traffic management in Maryland. This scenario, although hypothetical, is extremely common along Maryland's highway system. It is estimated that prior to 1990 when the CHART program came into existence, a similar incident would have taken at least twice as long to clear.

◆ 6:15 a.m. A motorist witnesses a major accident involving a jackknifed tractor-trailer and four passenger cars on southbound I-95 at MD 212 in Prince George's County. All lanes are blocked. The motorist calls #77.

◆ 6:15 a.m. The #77 call is immediately directed to the closest state police barrack in College Park. Operators, also located at the College Park State Police barrack at the Traffic Operations Center (TOC 3), are immediately notified.

◆ 6:17 a.m. TOC 3 personnel immediately dispatch SHA Emergency Response Units to the scene. The accident is in view of the closed-circuit camera, located along I-95 at MD 212, and immediately broadcast to all local television stations.

◆ 6:17 a.m. State Highway Administration personnel from local maintenance shops are advised and respond with additional equipment. Front end loaders, sand trucks and arrowboards are dispatched.

◆ 6:18 a.m. TOC personnel begin updating changeable message signs along I-95 corridor. Signs closest to the accident give specific accident information. Signs further from the scene (in Howard and Baltimore counties) give more general information including suggested detour routes.
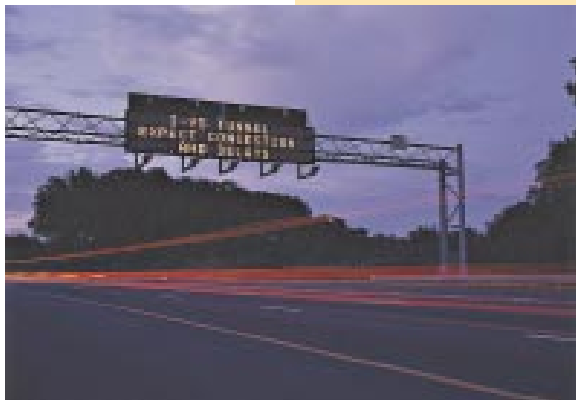
◆ 6:20 a.m. Highway Advisory Radio messages are scripted and recorded onto 1290 AM to give motorists details of the incident.

◆ 6:20 a.m. A commuter getting ready for work logs onto the CHART Web site and sees the backups in real-time on his or her computer. A decision is made to divert onto the Baltimore-Washington Parkway.

◆ 6:22 a.m. Emergency Response Technicians arrive on the scene and begin setting up traffic control (arrowboards, cones, flares, etc…) Maryland State Police arrive.

◆ 6:23 a.m. Traffic reporter aerial surveillance planes arrive above the scene and transmit backups directly to SHA units on the scene via two-way radios. This is particularly important in suggesting proper alternate routes.

◆ 6:25 a.m. SHA prepares to detour traffic onto MD 198 (exit to the north). Traffic signal technicians are notified, as traffic signals along detour routes are likely to be adjusted to add green signal time.

◆ 6:27 a.m. Backups extend more than three miles. All local media are advised. Local television stations broadcast the accident, warn of delays and suggest alternate routes including MD 295 (Baltimore Washington Parkway) and MD 198.

◆ 6:30 a.m. Jackknifed tractor-trailer is straightened. Tow trucks arrive to tow passenger vehicles. No detour will be necessary although alternate routes will be suggested.

◆ 6:45 a.m. All lanes open. All vehicles towed away or removed to shoulder.

Total time from initial call to re-opening of lanes
30 MINUTES

Teaching the care and feeding of entrepreneurship

After little more than a year of operation, the University of Maryland, College Park's Hinman CEOs program is racking up successes.

by James R. Moody

Ninety-four percent of workers in Maryland are employed by small, entrepreneurial businesses. Nationwide, small firms create about 75 percent of net new jobs each year. According to statistics from the U.S. Small Business Administration, between 1998 and 1992, 66 percent of small businesses remained open after two years. The number of ventures still alive dropped to 39.5 percent after six years.

The University of Maryland's Hinman Campus Entrepreneural Opportunities Program — or CEOs, as it's called on campus — is looking to better those numbers by providing students with the knowledge and skills they need to create and run successful start-ups.

State officials have a special interest in entrepreneurship, because they understand that entrepreneurs serve as a major engine of economic development for Maryland. And the University of Maryland entrepreneurship programs are perfectly positioned to play an important role in fueling that engine.

The Hinman CEOs Program, which has operated for a little better than a year, is a joint effort of the Smith School of Business' Dingman Center for Entrepreneurship and the Engineering Research Council of the Clark School of Engineering. It sprang from a conversation between Dr. William Destler, senior vice president for academic affairs and provost of the university and alumnus Brian Hinman, a 1982 graduate in engineering.

Hinman, a successful West Coast entrepreneur who has himself started three Internet companies, commented to Destler that had the university offered a more entrepreneurial environment during his undergraduate studies, he might have stayed on to complete his master's degree there rather than MIT.

Destler, already convinced that a more entreprenurial environment was needed at the university, was energized by Hinman's comments. He set out to create a program that would encourage an entrepreneurial spirit among students and provide opportunities to pursue them. To show his support, Hinman donated $2.5 million to the program. The result was a program that is the first of its kind in the world.

University of Maryland, College Park president C.D. "Dan" Mote Jr., left, greets Hinman CEOs student Lisa Vora. Entrepreneur Brian Hinman, who provided substantial funding for the Hinman CEOs program, looks on.

Participation is limited to a select group of undergraduate students based on their interest and potential strength in entrepreneurial ventures. Once accepted, students live in a special dorm along with other CEOs students.

"Each spring, we begin the process of selecting new students to join the Hinman CEOs Program," says Associate Director Karen Thornton. "The requirements are fairly rigorous and we have an acceptance rate of those applying of approximately 50 percent. Interest has been very strong even though the program is just into its second year of operation."

Being a part of the CEOs program is not so much a course of study as it is a way of life. That is what makes it unique.

In their e-dorm, students are linked togther with state-of-the-art voice, data and video communications. Each student has a laptop computer that is linked to a wireless network — which means that each can work in his or her room or in the building's common areas, including a lab equipped for teleconferencing. Students can interact electronically not only with one another, but with the outside world — a critical factor in the operation of a successful entrepreneurial enterprise.

Program directors also have offices inside the coed residence hall, giving students easy access to advice — or just someone with whom to bounce around ideas.

Students often cite the ability to brainstorm with fellow CEOs entrepreneurs at almost any hour of the day or night as one of the best advantages of the living-learning experience.

Destler believes the program offers experience that goes far beyond what the traditional classroom can provide.

"The students are successfully running businesses right out of their dorm rooms using state-of-the-art business tools," he says. "The university is supporting the students' efforts and, in fact, is encouraging them in their pursuits. The Hinman CEOs program is proving that students who can stay focused and are provided with the right environment can successfully pursue two jobs — being a talented student and a successful entrepreneur."

Karen Thornton, Associate Director of the Hinman CEOs Program and David Barbe, Professor and Interim Director of the Engineering Research Center look over program material.

During its first year, the program amassed an amazing number of successes. Students started and operated a total of 17 businesses, seven of which showed a profit. The National Collegiate Inventors and Innovators Alliance awarded the program a grant to provide venture funding to student teams and to develop team-building modules. And one student — Ryan Ockuly — was awarded a Certificate of Merit and a $10,000 prize in a business plan competition sponsored by the university. (See sidebar on Page 35)

In fact, the program has been attracting the attention of both local and national media.

A CNN film crew visited the campus last April, spending a day interviewing students enrolled in the program for a segment that was aired nationally in June. Among the students CNN correspondent Allison Tom spoke with was Mikaela Rossman, an undergraduate marketing major. Rossman, who has dreamed of being a "professional brainstormer" since childhood, says that the program allows students to take their ideas from the drawing board to reality.

"We all get together and come up with some amazing ideas — and now we have the resources to carry them out," she says.

Destler believes that the success of the program will extend far beyond the students who participate.

"Graduates of the Hinman CEOs Program will be able to take away a lot of things from the program," he says, "but the most important will be knowledge and experience that will give their entrepreneurial ventures a much higher probability of success when compared with others. And the higher success rate for Hinman entrepreneur graduates will translate into more economic success for our state, region and nation." *MBR*

Ryan Ockuly is often described as the "poster boy" of the Hinman CEOs program. Ockuly (seen working in his CEOs dorm room at right) has been a part of the program since its inception. He participated in the first undergraduate Entrepreneurship Citation class, part of the Hinman CEOs campus living-learning program.

A business major scheduled to graduate in May 2002, Ockuly presented the business plan for the company that he created with a technologist — Blue Wave Semiconductor, Inc. — for the University of Maryland Business Plan Competition.

"I applied my business training to commercialize the Ultra Violet Light semiconductor sensor technology created here," Ockuly says. "I was honored to be able to compete in the finals and pick up valuable experience. We were thrilled to win seed funding and look forward to the road ahead."

His start-up company received a certificate of merit in the competition, along with $10,000 to help in the company's goal of producing high-quality UV light sensors at low cost. He also received a $19,500 E-Team grant from the National Collegiate Inventors and Innovators Alliance.

Taking Workers' Compensation coverage to the next level

by Tori Leonard

A worker in a small business is severely injured on the job. The cost of her medical care wipes out the company. Her employer watches his dreams go up in smoke, as he not only loses his business, but also his home and other assets. The rest of his employees also find themselves unemployed, putting their families in financial jeopardy. This scenario sounds like a real nightmare, but it's exactly the kind of catastrophic turn of events that can happen and that workers' compensation insurance is designed to prevent.

Keeping Maryland businesses viable and competitive is a goal central to the mission of IWIF Workers' Compensation Insurance. IWIF — the Injured Workers' Insurance Fund — seeks to accomplish this by not only providing affordable workers' compensation coverage to businesses large and small, but also by offering a variety of programs to promote safety in the workplace.

In Maryland, all employers are required to provide workers' compensation coverage for their employees. Some companies choose to self-insure, but of those who do not, approximately 25 percent choose IWIF as their insurance carrier — making IWIF Maryland's marketplace leader.

Preston D. Williams, President and Chief Executive Officer IWIF Workers' Compensation Insurance

IWIF's President and CEO Preston D. Williams believes the fund's competitive rates — ranked among the most affordable

IWIF Workers' Compensation Insurance

in the nation — and unique role in the state contribute to Maryland's favorable business climate and success in new job generation. As evidence, he notes that IWIF is the carrier of choice among small to medium size companies in Maryland, with 65 percent of IWIF's policyholders paying less than $1,000 in individual annual premiums.

"Throughout the country, workers' compensation prices are skyrocketing," said Williams. "Coverage that is available at a reasonable cost is a great help to businesses, especially small ones."

Williams points out that if workers' compensation costs exceed affordability, it can lead to companies going out of business, or it can prevent start-ups from ever getting off the ground, thus having a very significant impact on a state's economy.

Although it competes effectively with private insurers, IWIF is not a private insurance company. A self-supporting insurance trust fund that traces its origin to

1914, IWIF was created by the state and is the oldest continuously operating fund among the 27 state workers' compensation funds operating today. Although it is a state-chartered entity, IWIF derives its revenues from premiums paid by policyholders and not from the State of Maryland's budget.

"I like to say IWIF is 'Marylanders for Maryland'," says Williams. "IWIF is a stable force in Maryland's workers' compensation market. IWIF will always be here. When other carriers leave this market, IWIF has continually stepped forward to fill the void," says Williams. He cites a 1995 incident when private insurers discontinued providing Black Lung coverage for Western Maryland coal miners and explains how IWIF and state legislators acted quickly to avert the loss of jobs and businesses.

IWIF's rates are certainly affordable for small businesses, but their clients also include larger entities such as Garrett County in Western Maryland, Baltimore's Lexington Market, the City of Annapolis, the Maryland State Fair, and the Woodstock Horse Farm in Cecil County, among others.

Although IWIF was created to serve injured workers, its mission today also encompasses helping employees and employers avoid workplace injuries. IWIF places particular emphasis on employee safety by working proactively to educate their insured workplaces. IWIF has demonstrated that educating employers on how they can reduce workplace accidents and injuries leads to lower premium rates for all of their policyholders.

"The ultimate goal of our workplace safety education programs is to help our customers avoid having an accident in the first place," said Williams. "That's the ideal situation for workers, employers and IWIF alike."

Among IWIF's efforts to raise workplace safety awareness are activities such as Safety

Our presence in Maryland means employers save an estimated $100 million a year, because other insurance carriers are writing at more competitive rates than they would have if IWIF were not here. That's a winning formula for Maryland.

Saves Week, a proclamation and week full of events orchestrated by IWIF to promote the importance of workplace safety in Maryland, IWIF's Loss Control Incentive Rating Plan, and safety seminars for policyholders. IWIF even plans to provide workplace safety training this year at vocational schools such as Baltimore's Mergenthaler Vocational Technical High School, which prepares students for a variety of occupations.

"It's important to get our future workers thinking about safety and adopting safe practices, so that down the line they will know what a safe workplace is supposed to look like," said Williams.

Prior to joining IWIF, Williams gained extensive experience in the insurance industry working for companies such as Blue Cross Blue Shield of Washington, D.C., USF&G, CIGNA and The St. Paul Companies. He also served for five years

SAFETY SAVES *With* IWIF

IWIF has conducted safety training sessions for a number of Maryland companies, including the Baltimore Zoo's 70 employees. Here Loss Control staffers Holly Clark (left) and Les Groff (far right) talk with animal caretaker Bill Walters.

the right strategy and the ability to execute it well."

IWIF's unique role and successful performance has sometimes made the organization the envy of its private-sector competitors. He recounts a lobbyist for the insurance industry telling him bluntly "I'm going to put you out of business." He calls it a defining moment, but firmly believes that a state fund is best for Maryland. But he also does *not* believe that Maryland should join the handful of states where state funds have a monopoly on workers' comp coverage.

"Competition is healthy," says Williams. "Our presence in Maryland means employers save an estimated $100 million a year, because other insurance carriers are writing at more competitive rates than they would have if IWIF were not here. That's a winning formula for Maryland." *MBR*

with the National Council on Compensation Insurance–the nation's leading provider of information and services to the workers' compensation insurance industry.

A Maryland native, Williams joined IWIF in February 2000 as executive vice president and chief operating officer. Ten months later, IWIF's Board of Directors named him president and CEO. Among his goals are protecting and enhancing IWIF's excellent customer service reputation, emphasizing safety, and ensuring that IWIF achieves his ambitious goals both for operational excellence and financial strength.

"Our financials are solid," he said. "We generated $77 million in premiums in February 2000, and will have increased that to $150 million by the end of this year. That level of growth demonstrates that we have

Weathering the storm

by Secretary David S. Iannucci

As the nation tries to return to normalcy in the wake of the recent terrorist attacks, there is much speculation about the extent to which this tragedy will affect the already troubled national and global economy. Here in Maryland, we will indeed feel the economic ripples from these events. It is very important that we keep in mind, however, that our state's economic fundamentals are sound and that Maryland is well-positioned to weather any slowdown.

Over the past several months, there have been a significant number of objective studies and reports released that dramatically highlight Maryland's economic strengths. Individually, they detail the efficacy of specific programs and policies. Collectively, they validate the planning and actions undertaken by public and private sector leaders in the state to provide a strong competitive foundation for our businesses, employees and communities.

• Maryland was one of ten states selected as 2001 Honor Roll States by the Corporation for Enterprise Development, a national nonprofit economic development research and policy group. Maryland received an "A" in two categories — performance and development capacity — and a "B" in business vitality. In each category, Maryland either met or exceeded national standards.

• Maryland was ranked the fifth best state for "New Economy" or potential for future high-tech group in a report by The Milken Institute, a nonprofit think tank. The report ranks states based on 12 criteria, including research and development dollars, the percentage of the population with advanced academic degrees, number of patents issued, venture capital investment, business starts and IPO proceeds.

• Federal statistics show Maryland leading the 50 states in the percentage of firms owned by African Americans at nearly 12 percent and the second highest percentage of women-owned businesses. Even though we are a small state, we have the sixth highest number of African American-owned businesses in the nation.

• *Governing* magazine ranks Maryland among the best-managed states in a report card on government performance, with an overall B+ average. According to the Maxwell School of Citizenship and Public Affairs at Syracuse University, which conducted the study, the findings indicate that Maryland's strong management leaves it well-positioned to endure an economic downturn.

While we celebrate the improvements and recognition illustrated in these reports, Governor Parris N. Glendening and Lt. Governor Kathleen Kennedy Townsend are continuing to improve Maryland's business climate, enhance the state's quality of life and provide the resources and support needed by employers and citizens to compete in the fast-paced, global economy. With a strong public and private sector partnership and a commitment to building upon our current successes, Maryland should weather the ongoing national economic slowdown and will remain a premier 21st century location for business. *MBR*