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ECBC's Nuclear Magnetic Resonance Suite in high demand

Edgewood Chemical Biological Center

Aberdeen Proving Ground, Md. – As the nation's lead non-medical chemical and biological defense laboratory, the Edgewood Chemical Biological Center is home to a wealth of high-technology equipment and facilities. One current initiative is maintaining and expanding ECBC's suite of Nuclear Magnetic Resonance machines.

A powerful method for studying reactions and chemical analysis, NMR is key to ECBC's work to improve and develop current and future products, including many decontamination items. NMR also extends the understanding of environmental agent fate. Because of high demand from government and industry for our such resources, ECBC has augmented its NMR-proficient staff with additional personnel.

ECBC has nine NMR machines ranging from 600 to 250 MHz, which compares to resources within academia and industry. But ECBC has the unique capability of toxic materials analyses that cannot be performed elsewhere, such as analysis of chemical warfare materiel.



ECBC's unique capabilities include chemical warfare analysis using its suite of Nuclear Magnetic Resonance machines.

AMRDEC provides Army with unique research and development asset

By Jim Bowne

Redstone Arsenal, Ala. – A unique collection of test equipment fills the Navigation Technology Lab at the Aviation and Missile Research, Development and Engineering Center at Redstone Arsenal, Ala., the only such lab in the U.S. Army's vast network of laboratories.

Steve Cayson, chief of the Navigation and Control Technology Branch, Applied Sensors, Guidance and Electronics Directorate, said the lab's \$12 million worth of equipment "provides the Army and our users with a unique research and development asset."

"The equipment in the lab represents the broadest collection of navigation sensor and system test capability, and the Precision High-G Centrifuge is one-of-a-kind," he added, noting that the lab's test capabilities "are crucial in identifying sensors and systems that will enable Future Combat Systems and next-generation technologies."

The Navigation and Control Technology Branch provides central Army oversight of research and development in inertial systems and components for missiles, aircraft and drones, land navigation, and other applications, such as inertial land surveying and inertial fuzing. This function has expanded to encompass Global Positioning System technology.

The branch's two-fold mission is to conduct and support inertial and GPS research, exploratory, and advanced developments; and, to provide technical support to the Army Aviation and Missile System Project Offices in inertial and GPS technologies.

This mission has grown to include efforts for NASA's Marshall Space Flight Center and the Missile Space and Intelligence Center, both located on Redstone Arsenal. It also includes efforts for the Space and Missile Defense Command, scheduled to move to Redstone upon completion of its new facility.

In addition, the Navigation and Control Technology Branch works navigation issues such as initialization, calibration, compensation, algorithm development, test and evaluation, analysis, simulation, and transfer alignment. It also works error budgets, timelines, trade studies, industry surveys, specification development, data fusion, system integration, flight test support and post-flight analysis.

Chris Roberts, Navigation Technology team leader, said the Navigation Technology Lab was built in the 1960s to test the Army's early missile systems, such as Lance, Dragon, Hawk, TOW, Pershing and Patriot.

"Today, full facilities and instrumentation are in place to conduct performance evaluations of inertial and GPS systems, and components over temperature, acceleration, linear vibration, angular vibration, and shock environments," he said.

The Navigation and Control Technology Branch has a long history of providing technical support related to inertial systems and components, as well as GPS systems for development and demonstration programs. That support includes analysis, test, evaluation, integration, modeling, and digital and hardware-in-the-loop simulations of navigation systems.

Programs supported include the Guided Multiple Launch Rocket System Advanced Technology Demonstration and Engineering Manufacturing Development; Low-Cost Precision Kill; the Compact Kinetic Energy Missile; Enhanced Fiber Optic Guided Missile; Army Tactical Missile System Block 1A EMD; Army TACMS 2000; MLRS Improved Fire Control System; Low Cost Guidance and Navigation Unit; and the GPS Guidance Package.



Chris Lofts holds an example of Inertial Measurement Unit technology that will enable Future Combat Systems to be smaller and more lethal. *Photo by Sharon Dudley*

The Inertial Sensors Test Facility can test a variety of systems.

“We can test inertial sensors on missiles, UAV’s [Unmanned Aerial Vehicles], helicopters, launchers—you name it,” said Chris Lofts, electronics engineer and subject matter expert on inertial systems technology. “These days, performance verification of inertial sensors is becoming even more important, because recent technological advances have enabled companies with no prior inertial sensor experience to enter the market.

“Our unique equipment allows us to verify inertial sensor performance over ranges undreamed of only a few years ago,” he added. “With the equipment we have here, we can determine the strengths and weaknesses of any inertial sensor, information that we pass along so that our soldiers get the best weapons possible.”

Typical inertial support for development programs includes conducting surveys of industry to identify state-of-the-art design, and development and manufacturing practices for inertial system and component technologies. It also includes providing support in developing inertial error budgets and specifications, as well as developing and fabricating mechanical and electrical interfaces necessary to conduct tests. The branch also analyzes test data and makes recommendations.

The GPS Test Facility provides inexpensive GPS hardware testing by using satellite simulators capable of generating radio frequency signals for a full GPS satellite constellation for both military and civilian applications.

“We can evaluate stand-alone GPS receivers or combined GPS inertial navigation systems in a static or dynamic environment,” explained Brian Baeder, an electronics engineer and a GPS technology subject matter expert.

“This allows the user to simulate the GPS environment that will be experienced by any vehicle at the time and location defined,” he added. “Also, simulated inertial data and various jammer waveforms can be integrated into the test setup, thereby creating a cost effective test capability for evaluating candidate navigation systems for various applications.”

Test parameters include navigation accuracy, benefits of GPS accuracy enhancements, GPS acquisition and tracking performance, effects of terrain or body masking, antenna radiation pattern effects on satellite geometry and visibility, effects of vehicle dynamics, and interference susceptibility.

“Recent efforts include performance analysis to determine applicability of GPS accuracy improvement for precision strike, GPS interference susceptibility analysis against the latest GPS threat, and performance evaluation of candidate GPS/INS systems to reduce cost without degrading accuracy,” Baeder said.

This unique capability led to a Cooperative Research and Development Agreement with Lockheed Missile and Fire Control Systems, he added.

“One example of this successful partnership is when a navigation problem with the Army TACMS 2000 navigation systems was found during the flight test. Lockheed tasked the Navigation Technology Lab to identify the problem and develop a solution. After numerous tests using the GPS Satellite Constellation Simulator, we were able to develop and implement a solution in the lab. The solution was incorporated into the next operational flight software release and proven successful in the remaining flight tests.”

Cayson said the branch continues to be involved in research programs.

“Our branch receives a significant amount of technology base funding each year to support the development of inertial and GPS systems and components for specific Army missile system applications. Primary research program supported by the Navigation and Control Branch are GPS Anti-Jam Technology, Low-Cost Inertial Systems and Components, Deeply Integrated Guidance and Navigation Unit, and Common Guidance Common Sense,” he said.



Chris Roberts prepares a CKEM Inertial Measurement Unit for testing in the High-G Centrifuge. Photo by Sharon Dudley

“For the Low-Cost Inertial Systems and Components Program, our Branch is designing new inertial systems and Inertial Measurement Units using available hardware for use on emerging Army missile systems. In addition, we’re conducting test and evaluation of available miniature gyroscopes, accelerometers, Inertial Measurement Units and Inertial Navigation Systems over military environments.

“The Deeply Integrated Guidance and Navigation Unit is being developed for missile and munition applications, using innovative concepts to reduce size, weight, power and cost, while providing necessary performance in High-G and jamming environments,” Cayson added. “The ultimate goal is to have a DIGNU with a size of about four cubic inches, weighs less than a pound, and consumes two watts or less.

“Solid state — miniaturization, low cost, high volume production, smaller weapons and more lethality — that’s where we’re going.”

Awarding veterans becomes easier

U.S. Army Soldier Systems Center

Philadelphia – Army veterans and their families will have an easier time tracking and receiving medals and decorations thanks to an automated system used by the Clothing and Heraldry Product Support Integration Directorate here. The new Web-based system eliminates extensive paperwork, reduces processing time and has new capabilities such as allowing each veteran the opportunity to find out the status of his or her request or make address changes online. Inquiries that used to be handled telephonically or by letter can be entered online at <http://veteranmedals.army.mil>. Award criteria and background for service medals can be found on the Web site.

Requests for medals are initiated through the National Personnel Records Center in St. Louis. Eligible veterans or the next-of-kin of a deceased veteran can request medals from NPRC at <http://vetrecs.archives.gov>.

Once NPRC finalizes its research, a notification letter is sent to the veterans and their next of kin listing the veteran's authorized medals, decorations and awards. The request also is routed through the Web-enabled database directly to PSID's Medals Team in Philadelphia for processing and shipment of the awards.

The team engraves decorations with the veteran's name, now an automated process, assembles attachments such as bronze/silver stars or oak leaf clusters, and mails the set to the veteran or next-of-kin.

Vickie Ramoni, team leader of the Heraldry Section of PSID, said 4,000 to 5,000 award requests per month are prepared and this new system will increase production and lower costs.

"It will reduce backlog and assist in order processing time by predicting incoming workload," she said. "It also allows us to the capability to expedite a routine request when a veteran is ill or when an award ceremony is scheduled just by clicking a button. We did not have this capability prior to the automation."

A ribbon cutting ceremony to celebrate the new system took place on Aug. 19. During the ceremony, Greg Schech, senior team leader of the Clothing and Heraldry PSID, spoke about the history of the organization and its changes since its inception in 1957. He said that the motto of the team is "We Deliver Pride," and that having the new automated system lets them honor those who serve and also helps the team keep up with the intense pace of transformation.

Maj. Gen. John C. Doesburg, commander, U.S. Army Research, Development and Engineering Command (Provisional), thanked those who participated in the medals process, and said that, "every day, some veteran is being recognized or honored somewhere, and you have reached out and touched that veteran or that family."

Doesburg said he had the chance to visit the medals section where the work is done. What touched him the most was that "the folks who were working on the medals really cared," adding that although they didn't know for whom they were making the medals, but understood the importance of what was being done.

He closed his comments with a personal story about an old veteran friend of his father's who passed away. No one was there to take care of the arrangements to make sure everything was done correctly, including making sure he got the correct medals recognizing his service to his country.

Doesburg contacted the Clothing and Heraldry PSID and they made sure the correct medals were delivered in time. Three months later he received a package containing 53 letters from Jefferson City, Mo., the veteran's hometown, thanking him for making sure the deceased was recognized for his military service. That praise, he said, really should go to the team.

Robert Henry Jr., medals foreman, said that he is proud of the team and its accomplishments in the past year as they made the transformation to the paperless environment. He stated that every request they process is a way of honoring

those who have served our country and the Medals Team takes great pride in being able to provide this service to veterans and their families.

Dragon Fire mortar system test successful

By Peter Rowland

Dahlgren, Va. – The first successful test firing of the Dragon Fire mortar system aboard a light armored vehicle took place at the Naval Surface Warfare Center in Dahlgren, Va., Aug. 10.

Dragon Fire, a highly automated 120mm rifled mortar system capable of remote operation by mortar crews, is under development here for the Marine Corps by the Program Executive Office for Ammunition and the Armament Research, Development and Engineering Center.

Ted Greiner and Tony Franchino, who head the program's development team, said the system performed very well throughout the test.

"The test showed that an automated indirect fire support system can be fired from the ground as well as from a mobile platform such as a LAV," Greiner said. "Eighty rounds of 120mm rifled and smoothbore ammunition were fired during the three-day period. The test was designed to collect data on the weapon and vehicle, such as shock loads, accelerations and the performance of the vehicle suspension."

Franchino said Dragon Fire, a candidate for the Marine Corps' Expeditionary Fire Support System, can be towed by a light armored vehicle or Humvee or loaded into a CH-53 helicopter or an MV22 Osprey.

The system is one of several concepts being considered by the Marine Corps for the EFSS, he added.

"Dragon Fire is the first system to incorporate an automated fire and gun control system and an indirect fire mortar system," Franchino explained. "This is significant because it increases the fire response time, reduces crew size, allows the crew to operate the system remotely from a covered, secure position, and improves firing accuracy. The weapon receives a fire mission digitally, calculates the ballistic solution and automatically points and fires."

Greiner said the next version of Dragon Fire, already under development, will incorporate a new mortar fire control system Picatinny is developing for the Army.

"The Mortar Fire Control System will improve the performance and accuracy of the system and is 100 percent backward compatible with the U.S. Army," he explained. "The only differences will be the addition of mission sets specific to the Marine Corps and a sophisticated gun control capability."

Prior to the test, the Picatinny team developed the test plan, conducted detailed maintenance of the system, trained the test crew on the system and supported the test ensuring the system functioned properly. The team also will review and analyze the test data once it is reduced and provided by the test facility, to optimize the design of the next generation of the Dragon Fire, known as Dragon Fire II.

Franchino and Greiner said the next generation Dragon Fire will be smaller and approximately 3000 pounds lighter than its predecessor.

It also will incorporate a more advanced fire and gun control system, which will make the system more responsive and automatically load and fire both rifled and smoothbore ammunition. The current version can fire smoothbore ammunition, but it must be hand-loaded.

Automated loading and firing allows the crew to remotely operate the system from a covered, secured location while providing responsive, accurate indirect fire support.

The Dragon Fire is designed to fill a void in the Marine Corps inventory for a mid-range fire support weapon system. The mortar system has a range of more than 8,200 meters (8883 yards). It can fire as many as 10 rounds per minute for two minutes, and four rounds per minute thereafter.

SMART Conference sets path for future combat system

By Spc. Bill Putnam

Dearborn, Mich. – Development of the Future Combat System will be done primarily with simulation because the vehicles and network are still a concept, said Army officials at a four-day conference last week in Dearborn.

The FCS of 16 manned and unmanned vehicles must be fielded by 2010, said Dr. Grace Bochenek of the Army's Tank-Automotive Research, Development and Engineering Center in Warren, Mich. Bochenek is executive director of TARDEC's research arm and she served as the conference co-chair.

Because of the fast development schedule of FCS, getting key players like Army Materiel Command, Training and Doctrine Command and contractors onto the same sheet of music is important, Bochenek said.

AMC held the Simulation Modeling for Acquisition, Requirements and Training, SMART, conference Sept. 8-11 to give engineers "the best ability to find the best course of action" for FCS said Gen. Paul Kern, AMC commander.

Based at Fort Belvoir, Va., AMC is charged with a multitude of missions around the world, including storing ammunition, repairing and refitting damaged equipment and developing new equipment.

Simulation and modeling can help bridge the technology and geographic gap that the Army faces during that short testing, Bochenek said. With the fielding of that family of vehicles just seven short years away, everyone needs to work together, she said.

The conference attendees want to start developing equipment through simulation and help bring the Army's FCS development on-line, Kern said, adding that developing simulation technology now will help training in the meantime and future.

A good example of simulation capability currently in use is the Fort Hood, Texas-based 4th Infantry Division's Shadow Unmanned Aerial Vehicle. The soldiers that guide the Shadow during flight also can run simulations when the UAV isn't operating, Kern said.

AMC wants to expand that capability to other platforms in the Army, he added. Instead of sending Fort Hood Bradley Fighting Vehicles and Abrams tank crews to a simulation center on that installation, they could run battle drills in their own vehicles in the unit's motor pool.

The Army also wants to bring that technology to battalion and brigade tactical operations centers in the field, Kern said, adding that a commander could take real-time intelligence from the search of a village and tell his staff to see how that mission might go.

But he noted that before the Army can expand the use of simulations for training, it has to overcome the cultural and resource issues it faces today. Kern speaks from experience. He commanded the 4th ID when it became the Army's first true "digitized" division in the late 1990s.

Before the division started what was called Force XXI training in the mid-1990s, critics said computers the division would have wouldn't handle hot, dusty environments, Kern said. Now the 4th ID is in Iraq and proving soldiers can use computers to help fight a war in very austere conditions.

But that division isn't the be-all-to-end-all of the Army's digitization, he said.

"The 4th ID is only a step in the way to what (the Army) wants to do," he said.

Part of the technology that Kern's division tested, Blue Force Tracking, is being expanded to the rest of the Army, he said. The challenge is to expand the many lessons learned from that division's digitization, the Stryker Brigade testing and Operation Iraqi Freedom to developing FCS.

The Army's biggest challenge right now to integrate the current force of Abrams, Stryker units and eventually FCS so it's "not segmented," he said.

ECBC to Host NATO Conference

Edgewood Chemical Biological Command

ECBC will host the North Atlantic Treaty Organization's lecture series on chemical and biological defense Oct. 22-23. NATO's Research and Technology Organisation, which is sponsoring the series, is engaged in a Long-Term Scientific Study on the defensive aspects of chemical and biological warfare, reflecting the renewed interest in CB defense technologies.

The study's goal is to provide NATO members with an overview of the scientific and technological developments foreseen for the next 10-15 years that may enhance the survival and operational capabilities of NATO in a CB-contaminated area.

The lecture series will include an overview on the NATO Research and Technology Organisation and the study and extensive discussions of all aspects of passive CB defense, such as hazard avoidance, physical protection and decontamination. A presentation on countering CB terrorism will be on the agenda.

Attendance at the lecture series is limited to individuals sponsored by a member of the NATO Research and Technology Organization.



Intern relocates to Virginia only to end up in...Afghanistan?

By Marna Palmer

Fort Belvoir, Va. – Many college graduates entering the working world are chained to a desk for the first few years of employment. Not so for Jason Ruck.

While his peers are working at their PC's, Ruck is hopping military flights to aid in the initial deployment of the Stabilized Panoramic Intruder Detection and Recognition system. SPIDER was developed under the Office of the Secretary of Defense Technical Support Working Group Program, and integrated for operation on a Humvee by the Special Products and Prototyping Division.

In early September, Ruck, an intern in the Communications Electronics Research, Development and Engineering Center's Night Vision & Electronic Sensors Directorate, relocated to northern Virginia to begin his career. Little did he know that in just under six months he would find himself on a plane headed straight for a heavily militarized zone.

He and a colleague deployed to Afghanistan to install the mast mounted SPIDER Sensor on U.S. vehicles and to instruct troops to operate and maintain the system.

From May 19 to June 4, Ruck experienced life in a hostile environment, facing challenges unlike any encountered around the office.



On the perimeter of Bagram Air Base, Jason Ruck prepares the SPIDER System for a demonstration to members of base operations

“One of the hardest things was sleeping in the tent and all of the sand!” Ruck said. “Seriously, one of the things I found to be the most challenging was getting the soldiers to accept you. They’ve been there for a long time and may not even know when they’re going home. They live in these rough conditions, and you come in for two weeks and then get to leave again. It was hard to gain their approval.”

Once Ruck had gained the soldiers’ confidence, the logistics of implementing such a high-tech system in a terrain with minimal technology available presented a new set of problems.

“Though SPP members have been on similar missions world wide, this was the first time anyone from NVESD had gone to Afghanistan, so we went in kind of blind, not knowing what to expect,” Ruck explained.

The trip was not made up exclusively of hardships, and turned out to be quite a learning experience. One thing that made the biggest impact on him was the tenacity of the soldiers. Seeing the men and women who chose to defend our country living in the harsh conditions and hostile territory day after day left Ruck with a newfound respect.

“It’s something I wish everyone could see, because it really makes an impression,” he said.

Professionally, he said the highlight of the trip was the successful implementation of the SPIDER System.

“Seeing the system be accepted and used by the soldiers was a great feeling,” he said.

On a more personal note, Ruck enjoyed seeing another part of the world where life is so unlike that in the States.

“Being able to see Afghanistan for myself was a lot different than just seeing it on TV,” he said.

While many young professionals are catching a glimpse of the news on their way out the door to fight rush hour traffic, Ruck is living it. His experiences in Afghanistan have taught him personal and professional lessons that are unmatched by any office experience.



Jason Ruck makes the final touches on the installation of a SPIDER Unit onto the pneumatic mast, during the initial deployment of the system.

Butler assumes management of PM-MAS' Small and Medium Caliber Ammunition

By Myra Hess

Lt. Col. Matthew C. Butler assumed management of Project Manager for Maneuver Ammunition Systems July 31.

Butler, an Army Acquisition Corps Officer with multiple program management, acquisition contracting and contingency contracting assignments, served as the in-plant program integrator for the Army Special Operations Command MH-47 E/G Chinook Program and the Navy H46 Sea Knight Dynamic Component Upgrade Program at the Boeing Company's Philadelphia plant.

Previously, he served as executive officer to the CECOM Acquisition Center director, Fort Monmouth, N.J., and Base Operations Branch chief and contracting officer.

Butler's first acquisition assignment was as a Contingency Contracting Officer with the 3rd Infantry Division, Fort Stewart, Ga. and he has deployed as a CCO supporting Joint Forces in Central America, the Balkans and the Middle East.

He also served as the Organizational Clothing Product Executive for the Clothing and Textiles Directorate, Defense Supply Center Philadelphia, Defense Logistics Agency.

Butler is a graduate of several Army leadership and management courses which include the Army Program Managers Course, the Army Command and General Staff College, the Armor Officers Advanced Course and the Field Artillery Officers Basic Course. He is a Senior Army Parachutist and a graduate of the Republic of China Jump School.

He received a master's degree in business administration from Monmouth University and a bachelor's degree in agriculture from the University of Maryland, Eastern Shore. His awards include the Defense Meritorious Service Medal and the Army Meritorious Service Medal. Butler is Department of Defense Certified Level III in Program Management and Contracting and is a Certified Professional Contract Manager by the National Contract Management Association.



William J. Sanville, left, project manager for Maneuver Ammunition Systems, presents the PM-MAS-SMC charter to Lt. Col. Matthew C. Butler at the Assumption of Management Ceremony held July 31. Photo by Todd Mozes

ECBC's Emanuel named Outstanding Young American

Edgewood Chemical Biological Command

Aberdeen Proving Ground, Md. – The United States Junior Chamber, known as the Jaycees, recently named Dr. Peter Emanuel as a recipient of their 2003 Ten Outstanding Young Americans award.

Emanuel, who works at the Edgewood Chemical Biological Center, was honored for his scientific contributions in strengthening the nation's defenses against biological weapons. His work has focused on developing, building and patenting technologies such as a biological sampling device and a high-throughput robotic system for analyzing samples for the presence of biological agents while realizing advances in safety and efficiency.

The Junior Chamber's annual Ten Outstanding Young Americans Awards Program, begun in 1938, recognizes America's best, brightest and most inspirational young leaders. The awards ceremony will be held in Anaheim, Calif., in conjunction with the U.S. Junior Chamber's annual meeting in late 2003.



Dr. Peter Emanuel addresses a group of participants during a recent conference.

Deputy Program Executive Officer retires

By Myra Hess

Picatinny Arsenal, N.J. – After a career spanning 41 years, Deputy Program Executive Officer for Ground Combat Systems E. Carroll Gagnon retired Aug. 1 at a retirement ceremony held in his honor.

Calling Gagnon an agent for change, an innovator, a mentor and describing him as “ahead of his time,” Program Executive Officer for Ground Combat Systems Maj. Gen. Joseph L. Yakovac Jr. spoke proudly of Gagnon’s capabilities. “Thank you very much for all you have accomplished,” he said. “My hat is off to you and thank you for a job well done for 41 years!”

Yakovac presented Gagnon with the Meritorious Civilian Service Award, an Outstanding Service Award for his Senior Executive Service, a Certificate of Appreciation, an American Flag that was flown over the Capitol at the request of Congressman Rodney Frelinghuysen, and a retirement certificate.

“I didn’t expect to be here 41 years,” Gagnon said. “I flipped a coin to decide whether to join the Air Force OCS program or come here and Picatinny won. I started here in the summer of 1962 and it’s a decision I haven’t regretted making.

“Any and all successes I’ve achieved over the years were the direct result of the people who worked with me and the leaders who guided my efforts along with my industry partners. None of the projects I’ve been associated with or led would have been successful without the teams and partners we brought together. Our teams were not watchers; we were and are still doers. We designed, built, produced and delivered products that contributed to the U.S. Army’s fighting capabilities.

“The greatest challenge and the most satisfying was my time as the first board-selected civilian product manager for the Paladin and the FAASV. I’m very proud of my team’s efforts in successfully transitioning to production the Army’s first digitized combat support system, the M109A6 self-propelled howitzer, and one of the first public-private partnerships created. This same equipment recently performed magnificently in Iraq.”

Born in Frenchville, Maine, Gagnon graduated from the University of Maine with a bachelor’s degree in mechanical engineering in 1962. He began his career right after graduation working on the advance production engineering of 30mm and 40mm ammunition and gun systems.

In 1973 he joined the Project Manager for Munitions Production Base leading the management team for design and construction of the Mississippi Army Ammunition Plant. He served in that capacity from through 1984, when he was appointed the Metal Part Division chief.

He became a charter member of the Acquisition Corps of the Program Executive Office Armaments in 1987 and served as the Deputy PEO for Systems Management for four years.

In 1991, he assumed the Deputy Product Manager Paladin/FAASV position and served until selected as Product Manager in 1996.



Program Executive Officer for Ground Combat Systems Maj. Gen. Joseph L. Yakovac Jr. presents Deputy Program Executive Officer for Ground Combat Systems E. Carroll Gagnon with his Retirement Certificate at the Aug. 1 Retirement Ceremony held in the Lindner Conference Center. *Photo by Todd Mozes*

He became a member of the Senior Executive Service in May 1999 and selected as associate technical director for Development, Engineering and Producibility in ARDEC.

In August 2000 he was named the Deputy Program Executive Officer, Fire Support Systems, Ground Combat Systems.

Chemical Biological Journal to focus on SS&T

The upcoming issue of the Edgewood Chemical Biological Center's CB Quarterly journal will focus on ECBC's contributions to Supporting Science and Technology.

ECBC is home to many research and engineering efforts that contribute towards ongoing Department of Defense technology development projects. The subject areas covered include:

- Aerosol Sciences
- ASK simulants database
- Synthetic simulants
- Low-Level Toxicology

Look for the upcoming CB Quarterly to learn the latest on ECBC's efforts to support new and novel technologies for the warfighter. If you do not currently receive the CB Quarterly, call 410-436-5383 to have your name added to the mailing list.

TARDEC targets young technical talent with summer hire program

Get 'em young, train 'em well. This may sound overly simplistic, but that's the underlying philosophy of the U.S. Army Tank-automotive Research, Development and Engineering Center's Engineering and Science Summer Hire Program.

This annual initiative aims to attract, foster and recruit young technical talent for the Army Materiel Command's TARDEC.

TARDEC Mechanical Engineer Jose Mabesa Jr., 2003 Summer Hire Program coordinator, said participants range from high school juniors to university sophomores. Historically, students who achieve junior status at the university level transition to the TARDEC Engineering and Science Co-Operative Education Program.

Summer Hires are exposed to current military ground vehicle-related projects and can roll up their sleeves to gain practical, hands-on engineering experience. Mabesa said the 2003 TARDEC project lineup includes composite housing for unmanned ground vehicles, legged robotics, vehicle body armor testing, metal-mesh fuel tank liners, power pebbles, transmission and air filtration testing, developing a ballistic range data management system and creating a visual terrain database.

Beyond gaining exposure to engineering as a career field, participants also attended workshops to build team building skills and boost motivation.

"The TARDEC Summer Hire Program is beneficial to everyone involved," said TARDEC Executive Director for Research Dr. Grace Bochenek. "Summer Hires provide TARDEC engineers and scientists with additional resources to get the job done, and the Summer Hires gain practical, hands-on engineering experience. These Summer Hires are very technologically savvy and we can benefit from what they bring to the table. By giving them real, relevant work, this program serves as a great mechanism to attract and recruit young talent."

Newsletter dedicated to safety, surety, and security

The Edgewood Chemical Biological Center is a one-stop source for technical assistance within the defense research and development community. ECBC technicians work with hazardous materials that include unique military chemical agents, microbiologicals, biological toxins, radionuclides, lasers and pyrotechnics or explosives.

The center is committed to ensuring a safe and secure work environment. ECBC's Risk Reduction Office consistently provides innovative ways to share information concerning the safe handling, storage, decontamination and disposal of highly toxic items in laboratory and test chamber operations. Recently, the office launched a monthly newsletter to share up-to-date information in safety, surety and security with center personnel.

Carol Eason, Risk Reduction manager, said interest in receiving additional tips on safety, surety and security subjects led to the publication.

"We decided that a good way to provide them with important information would be to develop and distribute a monthly newsletter," she added.

The hard work invested by the Risk Reduction Office has paid off. In 2003, ECBC passed stringent chemical and biological surety inspections conducted by the Department of the Army Inspector General and the Army Materiel Command Inspector General. In addition, the center received positive comments on efforts to implement upcoming biological surety regulations.

The high demand for ECBC's surety materiel services has enabled the center to continue its critical work in the CB defense industry. ECBC's Risk Reduction Office is proud of this reflection in the vote of confidence in the center's ability to place safety above all else and continues to develop and improve upon its current safety program.