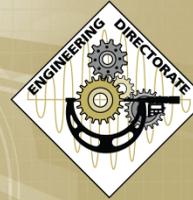


THE ENGINEERING EDGE



ECBC ENGINEERING
Design→Build→Test→Support

EDGEWOOD CHEMICAL BIOLOGICAL CENTER

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Leadership Interview Series: *Jorge Christian*

In this month's *Engineering Edge*, Mr. Jorge Christian provides a new perspective on Engineering and what it means to him. As the leader of the Protection Engineering Group (PEG), Mr. Christian offers insight into his diverse role in Engineering in this one-on-one interview.

Engineering Edge: How did your career at the Edgewood Chemical Biological Center (ECBC) begin?

Jorge Christian: It all began when I graduated from the University of Puerto Rico with a degree in industrial engineering. Initially I was hired by the Army to work at the School of Engineering and

with Combat Systems Test Activity. Then in 1989, I began working with the Chemical Research and Development Center (CRDC). Overall, I have been with ECBC for 22 years.

EE: Can you tell me about your current position at ECBC?

JC: I am the leader of the PEG working under Randy Laye. On a typical day I work with three (Continued on page 2)



*Jorge Christian,
Protection Engineering
Group Leader*

Sixth Strategic Management Meeting Shows Continued Progress in Engineering's Balanced Scorecard

Wednesday, 18 November, marked the sixth Strategic Management Meeting (SMM) as part of the implementation of the Balanced Scorecard (BSC) program. With many areas of the Engineering Directorate and ECBC represented, teams provided updates on the status of their strategic objectives or core competencies to the senior leadership, and received immediate guidance in order to measure their progress against the strategy.

Individuals across initiatives continued to demonstrate progress, and many identified links between

Engineering's BSC and implementation of the Center level BSC. Director AJay Thornton praised the Engineering workforce saying, "You all are leaders in developing the future of the Directorate and the larger ECBC organization. Engineering is (Continued on page 2)



Team Spotlight: Protective Equipment Team



light on the hard-working, close-knit and talented group of individuals that work on the Protective Equipment Team.

In this month's issue, Protective Equipment Team leader Mary Drummond sits down for a one-on-one interview with *Engineering Edge* reporters. Ms. Drummond discusses a number of topics, while also shedding some

Engineering Edge: How did you begin your career here at ECBC?

Mary Drummond: I came to ECBC in 1988 as chemist working with the detection capabilities. I am the Protective Equipment Team Leader, so my career has really come full circle. After spending 20 years here, the heart of our team still hasn't changed. The group realizes that their work is critical to the

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Leadership Interview Series: *Jorge Christian*

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basic customers. Two of these customers are Joint Program Managers (JPMs) with Individual Protection and Collective Protection. The third customer is TACOM. I spend a good amount of time interfacing with these customers to ensure that they are getting the appropriate resourcing and provide engineering support to the Lifecycle Management Center.

EE: After spending 22 years with ECBC, what are some of the highlights of your career?

JC: One of my most memorable experiences occurred during the first Gulf War. During this time I was working with the XM21, which is now the M21 Mask. The XM21 was a remote sensing chemical agent alarm that needed to be deployed. At the time, I was transitioning out of the contamination avoidance group in order to work with physical protection. While working with the XM21 I focused on facilitating the production of the detector.

Another notable highlight for me was working on the transition of a chromium impregnated carbon to a chromium free carbon, while working in physical protection. The carbon originally being used had chromium IV in it, which is a carcinogen and harmful to humans. The Department of Defense (DoD) asked us to remove this carbon from the filters in soldiers' masks and find a chromium-free alternative. This situation required quick developmental testing in order to transition a chromium free version of the filters to the warfighter. During this task, I worked as an engineer dealing with the technical data related to the mask filters. I was responsible for ensuring that the technical data was suitable for supporting the production of a new version of the carbon. This experience gave me a lot of exposure to the carbon manufacturing operations, while also giving me the opportunity to

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Sabre Harper's HR Tip of the Month: *New Employee Orientation*



Sabre Harper,
Engineering HR
Representative

All new ECBC employees must attend a New Employee Orientation. The orientation is held on the fourth Wednesday of every month, and Debbie Buckless, of the Workforce Management Office, contacts all new hires with information. There is a morning and an afternoon session available, both of which give viable information to new employees. For more information please contact Engineering Human Resources Representative Sabre Harper at extension 5-2722. ⚙️

Sixth SMM Shows Continued Progress in Engineering's Balanced Scorecard

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continuing to be a major influence in the Center because of your hard work."

Since the last quarterly SMM meeting there have been a number of major achievements, including significant participation from multiple Engineering teams in communications efforts. Engineering BSC Manager Ed Bowen introduced several new products available to teams through the BSC including team brochures, slick sheets, and large format displays. Mr. Bowen also invited Dave Vincitore from the ECBC Packaging Team to describe the progress his team has made through the BSC to develop a suite of communications products to market the team's capabilities. These products were on display as an example of what is available to all Engineering teams.

Looking forward, Mr. Bowen said the BSC Core Team will be meeting in the near future to discuss additional sources for participation, and to consider activating several additional initiatives. Mr. Bowen also maintained that the Engineering leadership should maintain an awareness of the Center-level BSC efforts to support the transition of appropriate initiatives to the Center's Scorecard.

The next Strategic Management Meeting will be held in March 2010, with details to follow – all are welcome to attend. For more information about Engineering's BSC, visit the [Engineering Directorate Balanced Scorecard Website](#), or contact Ed Bowen at x5-4091. ⚙️

Engineering Capability of the Month: BUILD



Building solutions to meet Chemical Biological (CB) Defense mission needs.

ECBC Engineering personnel have the capability to take product designs to the next level via rapid prototyping and manufacturing.

Designers use prototypes to obtain human factors input, complete initial design validations and capture limited test data. Initial prototypes give the user a tangible product to evaluate form, fit and function for feedback to the design.

Developmental items are manufactured for test purposes to determine product performance when compared with user requirements. Engineering manufacturing expertise also provides feedback to the designers to ensure items can be manufactured and supported in a cost effective manner.

These constant feedback loops enable design maturation and continuous product improvement. ⚙️

Team Spotlight: Protective Equipment Team

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warfighter and they are very dedicated.

EE: What kind of work does the Protective Equipment Team focus on?

MD: Our team is able to do a full range of testing, from the most basic to the most sophisticated. We test all types of materials, such as gloves, hoses, boots and lenses. Protective equipment's main function starts with permeation testing.

The first type of permeation testing we are able to do is called qualitative testing. This type of testing is quick and cheap, it tells us if a part will last. The second type of testing, quantitative, is more expensive and sophisticated than qualitative due to the amount of training and maintenance that is required to use the testing equipment. Quantitative testing uses a liquid vapor test which allows us to measure the amount agent that is able to leak through an item. The Protective Equipment Team also meets international testing competency requirements and is ISO-17025 accredited.

The team also performs carbon testing. This testing is done to every mask that a soldier wears. There are 13 different types of carbon tests that are all done here at ECBC. These tests tell us everything about a material, from its physical properties, to how it deals with toxic chemicals. We are also capable of testing against simulants for nerve agents using a very sophisticated system called the Q95 system.

EE: Can you tell me more about your mask testing capabilities?

MD: The Protective Equipment Team uses the Simulant Agent Resistant Test Manikin (SMARTMAN) mask testing system. This system allows us to test and see if all parts of the mask are working together properly. The manikin that wears the mask being tested actually breathes like a real person. We are able to then monitor at the eye and nose for any leaks, as all parts of the mask are equally important.

EE: What is the function of your Technical Support Group?

MD: Our Technical Support Group does a lot of behind the scenes work. They maintain the test bleach and provide decontamination capabilities for the Center. This group also sustains operations and helps maintain the building.

EE: What are some of the challenges your team faces?

MD: Our biggest challenge is maintaining safety precautions. However, this challenge has been relatively simple to deal with as we have received so much support from upper management. We really can't thank Engineering Director AJay Thornton, as well as the rest of the Engineering Directorate enough for all of their continuously supportive attitudes.

EE: What are some of the recent accomplishments of the Protective Equipment Team?

MD: One example that really sticks in my mind was after a large explosion that occurred in our building. The team was able to get the facility back up and running after four weeks because they realized the

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Security Tip of the Month: *Essential Elements of Friendly Information*

Essential Elements of Friendly Information (EEFI) are questions that relate to critical information and that the adversary is likely to ask about friendly capabilities, activities, limitations and intentions.



The use of EEFI is an effective way to ensure widest dissemination of an organization's critical information, while protecting classified and sensitive information." -AR 530-1, Operations Security, paragraphs one through five.

For example, ECBC EEFI #7: "Where is classified or sensitive information stored. What are the security measures in place to protect this important information?" The answer: "In building E0000 room X and we utilize alarm systems equipped with sensors" or "We don't use any special security measures, we simply lock the door(s)." Both of these answers deal with critical information that we must protect. **ECBC's EEFI is located here on the Security Web site.** For more information, please contact Jeremy Taylor at extension 5-4548. 🌀

Leadership Interview: *Jorge Christian*

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work with a number of different scientists.

EE: What are some of the challenges that come with being the PEG leader?

JC: One challenge occurred when the CB defense program became a joint program. During this period, the JPM for Collective Protection needed to establish product directors to address the different needs pertinent to the creation of solutions for a different set of users. At this point, I was identified as an individual who would serve as a product director for the Mobile Collective Protection Systems. One of the biggest challenges I faced during this period was trying to leverage the resources that were already here at ECBC. I used my knowledge and expertise to create alliances with industry, academia and user communication in order to foster awareness in the area of collective protection. The most rewarding part of this was the fact that I had a chance to brief a three star general regarding a collective protection solution for the upper and lower tier missile defense system. This job also gave me the opportunity to network and interface with other lead system integrators.

While this was one of the challenges I have dealt with in the past, there are also challenges that I deal with on a daily basis. Each of the three customers that I work with has a different way that they exercise their lifecycle management responsibilities. In order to determine the best solution for each individual customer, I must first understand their needs. My solution to this challenge incorporates part of my overall philosophy – foster personal dialogue with them that allows me to get direct feedback regarding their needs and how well our teams are meeting their expectations. This direct feedback takes the form of regular phone calls or even one-on-one discussions.

A final challenge that I deal with on a regular basis is looking ahead. It is important to identify the path you need to take in order to strategically position teams so that they can respond to the future needs of the customers.

EE: What kinds of skills do you believe are necessary to succeed at ECBC?

JC: I think that this work is all about the people. It is critical to treat all people fairly and with respect. It is also important to recognize that you need the talents and skills that others have to offer. One should not rely solely upon themselves to complete a task, but should work collaboratively with others who have different skill sets. Regardless of your skill set, it is important to remember that our ultimate goal is to support the warfighter by

Team Spotlight: Protective Equipment Team

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importance of their mission. Safety is truly the goal of the entire team, and they are forerunners in that. If an operation doesn't make safety sense then it doesn't happen. We even practice quarterly safety scenarios in conjunction with the Fire Department, other employees and clinics. It is important to carry out these scenarios seriously and remember that you can't afford complacency—that's how accidents happen.

EE: What does a typical day look like for a member of the Protective Equipment team?

MD: Being a part of this team is truly a fun experience, We're like a family and I really love my team. We do any number of tests throughout the day, as well as dealing with customer requests. The quality of the work we do here is extremely important. We strive to maintain and raise the level of quality work done here every day so that our accreditation is clearly reflected. We are able to do this because of all the support and resources that we receive.

EE: What are some of the skills needed to thrive on the Protective Equipment Team?

MD: Attention to detail is critical, as the military specifications we receive are not necessarily clear to decipher. It is also beneficial to be mechanically inclined. Our team deals with a lot of machinery and other equipment.

For more information please visit the [Protective Equipment Team's service page](#). ⚙️

listening to their feedback and acting on that feedback by using the available skills and tools within the structural support that the system provides.

EE: What kind of advice would you give a member of Engineering who is trying to advance her/his career?

JC: Number one, set goals for yourself. Not just any goals, but specific goals that are in line with the vision and values of the organization. Number two, be dedicated to your work. Number three, be humble in the way you conduct your work. Number four, identify a mentor. I personally had four different mentors along the way. I believe you should choose mentors who are savvy, who you can relate to and who inspire confidence in their guidance. You shouldn't just choose someone who has a lot of technical knowledge, as this is not necessarily the mark of a good mentor. The bottom line is that a mentor should be someone you can trust.

While you may not have the technical know-how, success is about relationships both professional and personal. It is important to always seek ways to collaborate internally and with other government agencies. I attribute a lot of my success to the fact that I was able to collaborate with different groups through the various relationships I had with others. ⚙️

December 1 Marked the 21st Annual World AIDS Day

Started on December 1, 1988, World AIDS Day is about raising money, increasing awareness, fighting prejudice and improving education. The World AIDS Day theme for 2009 was "Universal Access and Human Rights." World AIDS Day is important in reminding people that HIV has not gone away, and that there are many things still to be done.

There are now approximately 33.2 million people living with HIV, including 2.5 million children. During 2007, some 2.5 million people became newly infected with the virus. Around half of all people who become infected with HIV do so before they are 25 and are killed by AIDS before they are 35.



Global leaders have pledged to work towards universal access to HIV/AIDS prevention, treatment and care, recognizing these as fundamental human rights. Valuable progress has been made in increasing access to HIV/AIDS services, yet greater commitment is needed around the world if the goal of universal access is to be achieved. Millions of people continue to be infected with HIV every year. In low- and middle-income countries, less than half of those in need of antiretroviral therapy are receiving it, and too many do not have access to adequate care services.

The protection of human rights is fundamental to combating the global HIV and AIDS epidemic. Violations against human rights fuel the spread of HIV, putting marginalized groups, such as injecting drug users and sex workers, at a higher risk of HIV infection. By promoting individual human rights, new infections can be prevented and people who have HIV can live free from discrimination.

World AIDS Day provided an opportunity for all of us – individuals, communities and political leaders – to take action and ensure that human rights are protected and global targets for HIV/AIDS prevention, treatment and care are met.

HOW CAN I HELP IN THE FUTURE?

The red ribbon is an international symbol of AIDS awareness that is worn by people all year round and particularly around World AIDS Day to demonstrate care and concern about HIV and AIDS, and to remind others of the need for their support and commitment.

The red ribbon started as a "grass roots" effort; as a result there is no one official AIDS ribbon manufacturer, and many people make their own. It's easily done – just use some ordinary red ribbon and a safety pin!

If you want to take your awareness raising a step further in the following years then try finding a local event to take part in. There were hundreds of activities taking place around the world to mark World AIDS Day, including candlelight vigils, art shows, marches and religious services.

To learn more about what happened around the world, or to list any events that you may be holding locally next World AIDS Day, please visit the [World AIDS Campaign \(WAC\) events calendar](#).

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Your Thoughts Wanted!

This newsletter was published through the Engineering Directorate Balanced Scorecard. For article suggestions, questions or comments, please contact Ed Bowen at ed.bowen@us.army.mil."