

# Something for everyone in 'Rocket City'

## Broad skill base supports Huntsville's many programs

BY AMY REAGAN

Ground-based Midcourse Defense, Future Combat Systems, SBI-net, the International Space Station. Even the 787 Dreamliner. All are among the biggest programs at Boeing; and the 2,700 Boeing employees in Huntsville, Ala., have a role in each of them.

"The exciting thing about Huntsville is the diversity of work," said Gina DeSimone, vice president of division operations for Missile Defense Systems and acting vice president of business operations for the site. "We literally have something for everyone."

With more engineers per capita than any other city in the United States, Huntsville is able to match its engineering talent with a growing customer presence that includes NASA, the U.S. Army and the Missile Defense Agency.

"We have a tremendous wealth of knowledge and experience largely because of the diverse programs we support and the variety of skills needed," said Dan Olberding, director of engineering and mission assurance for Missile Defense Systems and Boeing Huntsville.

Here's a snapshot of the work being done at Huntsville, as seen through the eyes of some of the employees there. ■

*amy.l.reagan@boeing.com*

### **Cristina Benzenhafer** FUTURE COMBAT SYSTEMS

How does a young engineer-to-be from Michigan end up in Huntsville? For Cristina Benzenhafer, that answer is easy: a week at Space Academy at the U.S. Space and Rocket Center in Huntsville.

Benzenhafer attended Space Academy during high school. She remembers how impressed she was with Huntsville and the prospect of working on a NASA or U.S. Army program, as most of the camp counselors planned to do once they graduated. So when the time came to choose a college, she chose the University of Alabama, Huntsville, and followed in the steps of her counselors.

In her seven years at Boeing, Benzenhafer has worked on the International Space Station, satellites, and now Future Combat Systems—an Army transformation initiative linking soldiers to a wide range of weapons, sensors, and information systems by means of a mobile ad hoc network architecture. She said her FCS experience has been great for a new systems engineer. "Working on FCS, I have the opportunity to be involved in all aspects of systems engineering—from 'cradle to grave,'" she said. "And we're developing all-new technology. It's amazing to see how much we're really helping the warfighter."



ERIC SHINDELBOWER PHOTO

Cristina Benzenhafer worked on the International Space Station and satellite programs before joining Future Combat Systems.



ERIC SHINDELBOWER PHOTO

Reliability engineer Jon Franklin, displaying a composite skin/stringer panel as used on the 787, is one of 150 Huntsville Design Center engineers who support 787 design and development.

## Jon Franklin DESIGN CENTER/787

Through his work at the Huntsville Design Center, Jon Franklin has traveled to a lot of Boeing sites and worked on many projects. Yet he's found in his travels—to as far away as Moscow—there's no place like home.

"Huntsville is booming, but it's still small enough that you really get to know a lot of people. And because of the broad spectrum of disciplines here, you

get a clear perspective of Boeing's overall business," Franklin said.

Engineers at the Design Center provide engineering design and analysis support on a wide range of programs. As a strength engineer, Franklin has developed repair analytical processes, test plans and predictions for a lot of different Boeing products, most recently the 787.

"Because we work on so many different programs, we're exposed to a wide variety of solutions," he said. "So we have a pretty extensive experience pool to pull from when we're challenged."

## Debbie Barnett GROUND-BASED MIDCOURSE DEFENSE

After spending seven years integrating payloads for SPACEHAB, Debbie Barnett now spends her days integrating test events for one of the United States' largest missile defense programs. As the director of mission integration for the Ground-based Midcourse Defense program, Barnett is responsible for managing integration and execution of all ground- and flight-testing for the nation's first operational system to defend against ballistic missile attacks.

Barnett said GMD, which is designed to intercept and destroy long-range ballistic missiles during the midcourse phase of flight, is an ever-changing and exciting program. "This is a very dynamic program," she said. "We have solid processes and a great relationship with our customer, and everyone is focused on ensuring that the system will be successful."



ERIC SHINDELBOWER PHOTO

As the director of Mission Integration for the Ground-based Midcourse Defense program, Debbie Barnett oversees the end-to-end integration of the system's tests.



ERIC SHINDELBOWER PHOTO

30-year Boeing veteran Clint Jones has spent much of his career working on Integrated Missile Defense programs in Huntsville.

## Clint Jones (above) INTEGRATED MISSILE DEFENSE

On a given day, Clint Jones may start his morning by reviewing a new business proposal. By noon he's finalizing a new production line plan for the Avenger short-range air defense system. Before he calls it a day, he's developing Lean production goals for the Aegis Ballistic Missile Defense program, a sea-based defense against short- to intermediate-range ballistic missile threats.

Jones said new and interesting opportunities and challenges are one of the main reasons he's spent 30 years working on Integrated Missile Defense programs in Huntsville.

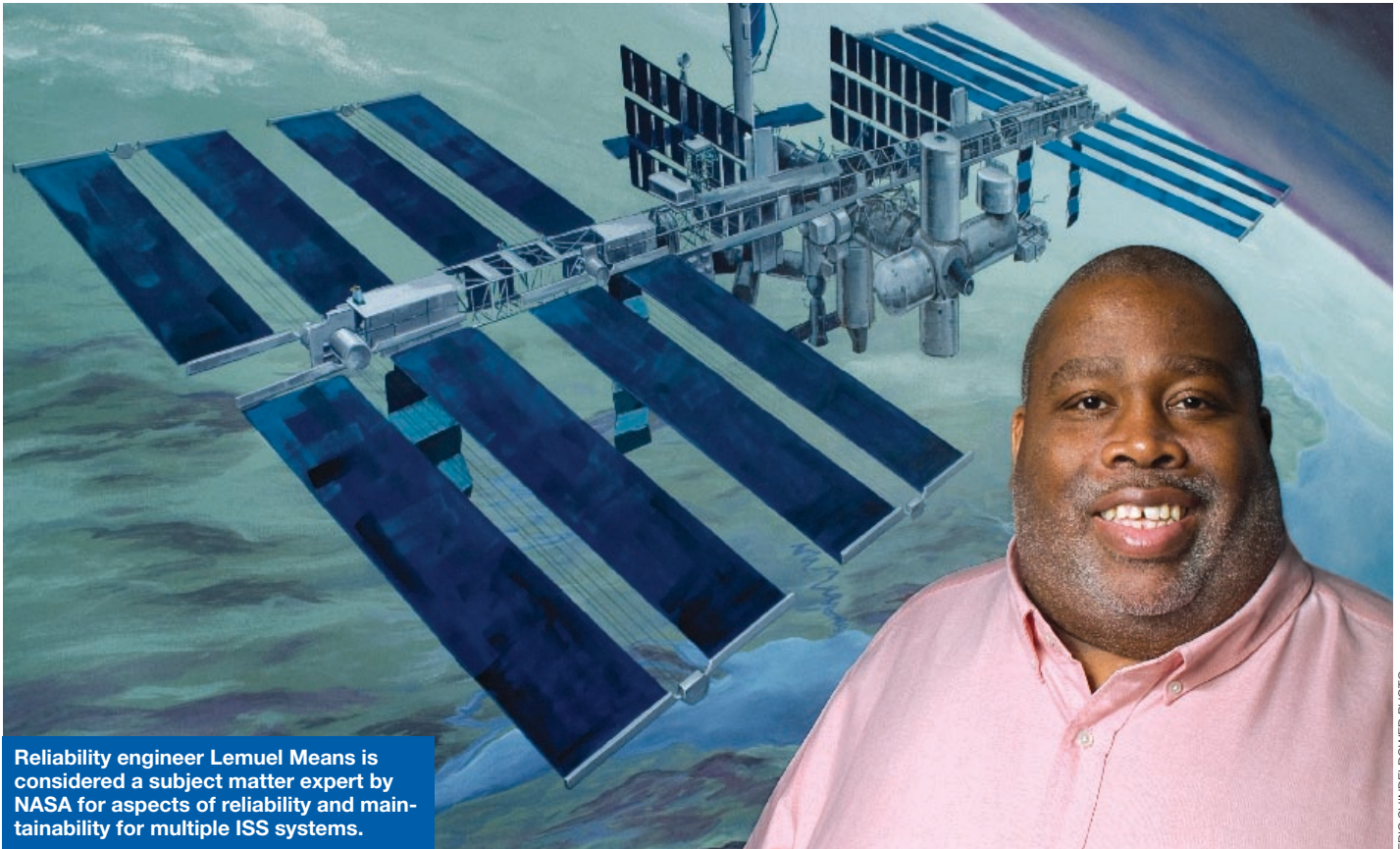
In addition, Jones applies his industrial engineering expertise to a range of U.S. missile defense programs including Arrow (the Israeli national missile defense system) and the Patriot Advance Capability-3 Missile, which uses hit-to-kill technology to intercept and destroy tactical ballistic missiles, cruise missiles and hostile aircraft.

"Here I have the opportunity to use all my industrial engineering skills and expand my work experience across multiple missile defense programs," Jones said.



RONALD BOWMAN PHOTO

Engineer Shelby Basham troubleshoots components of the Army Airborne Command and Control System in a Black Hawk helicopter at Fort Eustis, Va.



Reliability engineer Lemuel Means is considered a subject matter expert by NASA for aspects of reliability and maintainability for multiple ISS systems.

ERIC SHINDELBOWER PHOTO

## Lemuel Means (above) INTERNATIONAL SPACE STATION

Every day after school, Lemuel Means would hop off the bus in his hometown along Alabama's Gulf Coast. He'd routinely plow through his homework before even thinking about hanging with his friends. His diligence paid off later when he achieved his dream, an engineering degree that gave him the opportunity to work on NASA's International Space Station.

As a reliability engineer, he worked the design, development and test of Node 1, Lab and Airlock in the 1990s. Today he is considered a subject matter expert by NASA for all aspects of reliability and maintainability for multiple ISS systems and subsystems. His current work on the critical second oxygen production system on orbit has resulted in award fee strengths for the Boeing ISS program.

After 15 years with Boeing, he's still excited about his work and starry-eyed about the space business: "There's no place else I'd rather be."

### It's our future

Actions cited in this story show how employees are applying concepts of the Boeing Management Model to support the company's business strategies. Here's how.

- **Growth and productivity: Lean+, through cross-enterprise integration and process streamlining.**

To learn more about the Management Model, visit <http://bmm.web.boeing.com> on the Boeing intranet.

## Shelby Basham (left) ADVANCED SYSTEMS

"It's pretty neat to fly in a helicopter," said Advanced Systems engineer Shelby Basham, "but flying in a helicopter as part of your job—that's something special."

And Basham's been flying in helicopters quite a bit over the last few years, integrating and testing the Army Airborne Command and Control System, a mobile command post placed in a Black Hawk helicopter. In fact, Basham has been certified to fly with the Aviation Applied Technical Directorate as he continues to train users and troubleshoot the system.

He said working closely with members and retirees of the military has been one of the most rewarding parts of his job. "There's a big difference between what a lab engineer envisions as a solution versus what the average soldier wants or needs in the field," Basham said. "Soldiers are the ultimate end-users. They are our ultimate customer, and knowing the customer is paramount."