VOLUME SIXTEEN ISSUE FOUR ▪ 2011

Rockwell Collins

horizons

Refueling innovation

View with

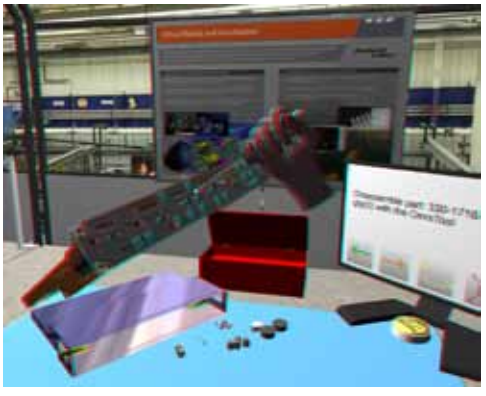
3D glasses

Seeing things as they really are

Employees often come to me with a new technology they're so excited about that they insist I see it for myself. That was the case recently when I donned a pair of 3D glasses in order to experience the Virtual Prototype Modeling system in Advanced Industrial Engineering.

Using gaming software and computer-aided design files, employees are interacting with product designs directly — checking screw settings, fittings, cabling and more. Research and usage statistics show their approach is saving our company time and money by avoiding engineering change orders.

Now, my job is to make sure our focus is on solutions and processes that make sense for our business. And flashy technology, as impressive as it is, does not always translate into business results. Yet, when a clever idea — like the Virtual Prototype Modeling system — solves problems and is cost effective, of course that makes good business sense.



From engineers to assembly operators, entire teams are able to experience a product design with the Virtual Prototype Modeling system.

In this issue of *Horizons*, you'll find most of the articles have one underlying theme: working together. You'll also see that the cover story featuring the KC-46 program, this page, and several other pages inside this magazine require 3D glasses to view.

We've included the stereoscopic 3D images in this issue not because they're flashy, but because the images help illustrate how we're working together to develop solutions that make sense for our customers. So, no, your eyes aren't playing tricks on you. Instead, the 3D images should help you see the benefits of this innovative technology.

I hope you enjoy viewing this issue and learning more about how we're helping our customers perform their jobs easier and more effectively. ▪

Clay Jones
Chairman, President and CEO

IN THIS ISSUE

On the cover

When Rockwell Collins employees constructed proposals for Boeing's new KC-46 tanker for the United States Air Force, they were intent on modernizing aerial refueling operations. The Remote Vision System (RVS) is one of many high-tech solutions that will benefit U.S. forces. With RVS, refueling becomes more like a video game — an operator will watch a large stereoscopic 3D display to connect the boom to the receiving aircraft.

On the back cover

This ad — which introduces our company's latest PAVES™ system — appeared in the daily news at the Airline Passenger Experience Association (APEX) Annual Conference & Exhibition in September.

horizons

A magazine for the employees and friends of Rockwell Collins

Publisher: David Yeoman
Editorial director: Nancy Welsh
Managing editor: Robert Fleener
Editor: Crystal Hardinger
Creative direction: Rick Kaufman, Jeff Andrus

Copy editors:
Ruth Anne Denker
Karen Steggall

Staff writers:
Katie Shatzer
Jill Wojciechowski
Micaela Cashman
Erica Solum

Photography:
Stephen Allen, Winter Park, Fla., page 4
Guy Buesnel, Reading, U.K., page 5
DeDecker Studio, Loveland, Colo., page 13
Galileo illustration courtesy of ESA, page 5
Laurel Hungerford, Costa Mesa, Calif., page 13
Brandon Jennings, Richardson, Texas, page 9
Dan Kalan, Cedar Rapids, Iowa, page 3
Frederic Lancelot, Toulouse, France, pages 15, 19
Chris Longhurst, Salt Lake City, Utah, page 3
Matt Lorch, Cedar Rapids, Iowa, page 10
John Merritt, Williamsburg, Mass., page 11
Photo courtesy of NASA/JPL-Caltech, page 20
Paul Noble, Burgess Hill, U.K., page 2
John Reasoner, Cedar Rapids, Iowa, cover, pages 6, 7
Mark Tade, Iowa City, Iowa, pages 12, 16, 18
John C. Thomas, Hiawatha, Iowa, page 8

Design:
WDG Communications Inc.

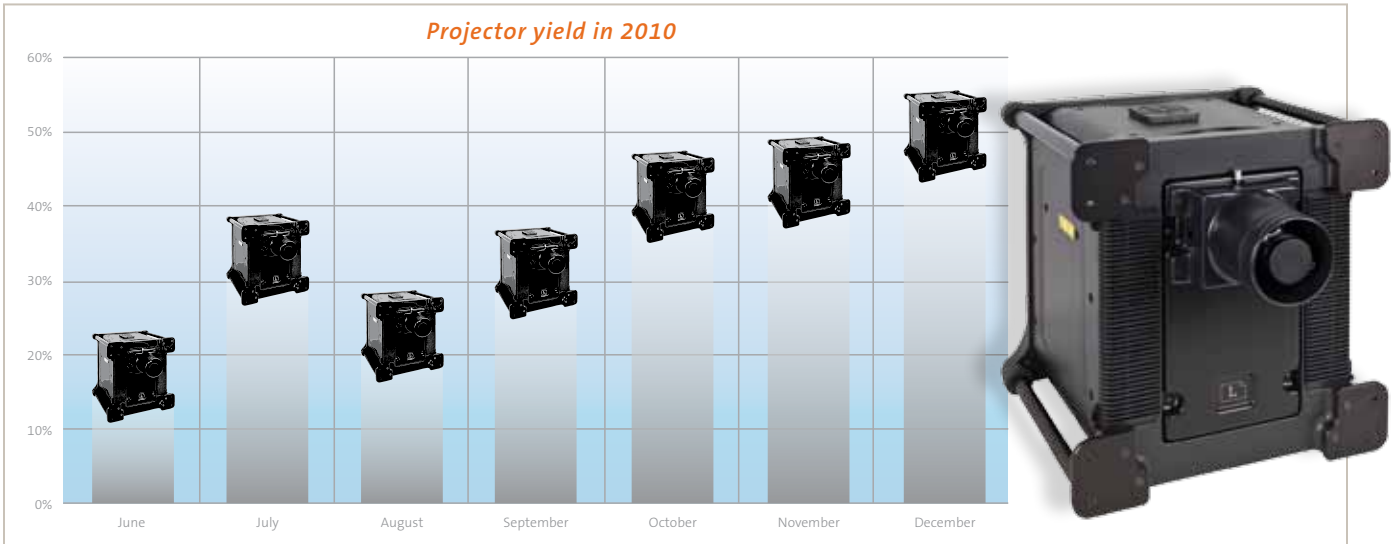
How to contact us:
Email: empcomm@rockwellcollins.com
Horizons
Rockwell Collins
MS 124-302
400 Collins Road NE
Cedar Rapids, IA 52498-0001
Phone: +1.319.295.1000
Fax: +1.319.295.9374

How to contact the Ombudsman:
Phone: +1.866.224.8137 or +1.319.295.7714
Email: ombudsman@rockwellcollins.com

The following articles may contain forward-looking statements including statements about the company's business prospects. Actual results may differ materially from those projected, as a result of certain risks and uncertainties, including but not limited to those detailed from time to time in our earnings press releases and Securities and Exchange Commission filings.

Using Lean in operations

With Lean tools and processes, employees in Burgess Hill, U.K., were able to quickly increase production for the 2015HC projector to meet customer demand.



The Rockwell Collins 2015HC projector is essential for visual display products for simulation training. With an average rate of 1.5 projectors built per day and a goal of five, employees in Burgess Hill, United Kingdom, faced a large order backlog last year. After a five-day Lean event, the team developed a plan to boost production and meet the project schedule. In seven months, the team increased yield (number of projectors that pass all tests and function properly) by 29 percent. Since then, employees have continued to use Lean to make improvements.

Anton White (right), operations manager in Burgess Hill, and Dale Kepler, manager in Lean product optimization in Cedar Rapids, Iowa, focused on basic Lean fundamentals — such as value stream mapping and takt time — to significantly increase the production of 2015HC projectors. To learn more, email Dale Kepler at dlkepler@rockwellcollins.com.

Lean perspectives

After their Lean event, Anton White and his team established daily stand-up meetings, engaged in takt time analysis, and created a new layout for their production floor. These changes reduced build time — from six hours to three hours — and allowed the team to meet customer demands.

Q *What was key to making this Lean effort successful and sustainable?*

A We were able to achieve some big breakthroughs with the value stream mapping. Every employee at the event worked together to identify the entire current process for building the projectors. We were then able to identify areas that needed to be improved and convert that into a future state process map. It gave us direction and a long-term action list for the future, taking the guessing out of the process.

Q *How do you maintain excitement around Lean after the initial event?*

A Before this event, many of us had only heard of Lean, but once we had Dale Kepler and others from across the enterprise to guide us, people directly saw the benefits. Because we had such a large backlog, Dale didn't have to deliver any motivational speech; we wanted to be successful. What started with some Lean experts facilitating an event has turned into a self-sustaining Lean operation. Lean did what we expected it to do. People now look forward to doing Lean events. ▪

Takt time? Value stream mapping? —

Employees can learn more about Lean fundamentals on Rockwell Collins Online via "L" in the Index.

787 Dreamliner receives certification

Boeing's 787 Dreamliner airplane, which features more Rockwell Collins content than any other commercial aircraft, has obtained Federal Aviation Administration and European Aviation Safety Agency certification.

The announcement, made in Everett, Wash., in late August, marked a significant milestone on the way to the first aircraft delivery. According to Jeff Standerski, vice president and general manager of Air Transport Systems at Rockwell Collins, this certification is representative of years of hard work among several teams.

"This accomplishment is monumental," said Standerski. "The talent, sacrifice and commitment of our employees have allowed us to bring industry-first innovations to this revolutionary aircraft."

Rockwell Collins serves as the systems integrator for the 787's flight deck displays and crew alerting system, pilot controls, communication and surveillance systems, and core network cabinets. Rockwell Collins also provides the Common Data Network for the aircraft's Common Core System. ▪

All Nippon Airways (ANA) is the launch customer for the 787 Dreamliner.

Final aircraft brings model KC-135 program to a close

A 100 percent on-time, on-budget program recently came to an end with the final aircraft delivery for the C/KC-135 Global Air Traffic Management (GATM) program. A prime contractor and flight deck systems integrator, Rockwell Collins provided the U.S. Air Force C/KC-135 tanker fleet with a variety of communication, navigation, and surveillance/air traffic management (CNS/ATM) products.

Program Manager Trent Martin and Subcontracts Manager Lida Bridgers, both from Richardson, Texas, participated in the final delivery ceremony at Kelly Field in San Antonio, Texas, in July.

According to Dave Nieuwsma, vice president and general manager of Mobility and Rotary Wing Solutions at Rockwell Collins, the collaboration between our company, the U.S. Air Force and Boeing led to the success.

"This team has met all major milestones while also maintaining an extremely demanding schedule," Nieuwsma said during a final delivery ceremony at Kelly Field in San Antonio, Texas, in July. "The commitments we made became commitments kept. This program has allowed the KC-135 to transition between commercial and restricted military airspace seamlessly... anytime, anywhere."

Our company will continue to upgrade the C/KC-135 as part of the Engineering, Manufacturing and Development phase of the C/KC-135 Block 45 cockpit upgrade program. ▪

Lisa Andrade, a Rockwell Collins operations manager who earned her MBA degree at Florida Institute of Technology, shows Gerald Melton the campus of her alma mater.

Continuing education:
Does it make sense for you?

Our tuition reimbursement program helps employees make the most of education options.

As a new employee, Gerald Melton began counting the days until he marked one year with Rockwell Collins. Melton — a production manager in Melbourne, Fla. — had plans to earn a master's degree, and he knew that after one year at his job, he would be eligible for our company's tuition reimbursement benefit.

"Knowing that the company had a very healthy tuition reimbursement program was one reason I was drawn here," said Melton.

Shortly after he joined Rockwell Collins, Melton discussed his goals with his manager, and then contacted Tuition Advisory Services (TAS), an external resource designed to help employees research schools and map out programs of study.

A TAS enrollment counselor helped Melton determine that it made sense for him to pursue a Master of Business Administration (MBA) degree and recommended several area schools. The counselor also explained the amount of financial support available through Rockwell Collins' tuition reimbursement program.

Start with your leader

According to Anita Augustine, director of the Rockwell Collins University, most employees use our tuition reimbursement program to pursue MBA, Master of Engineering or Master of Computer Science degrees. However, she emphasized the importance of finding a degree program that fits in with your career goals.

"What's important is that employees talk with their leaders before and during their enrollment in a program," said Augustine. "Draft a plan and work together to find a balance between work commitments and classes."

Melton's manager, Lisa Andrade, knows what finding that balance requires from her own experience working full time while taking classes.

"It's not easy," said Andrade, an operations manager. "You need your family and your company's support, and that includes flexibility from your manager."

Since Andrade received her advanced degree, she's worked in management roles with increasing responsibility. As Melton takes the first steps toward earning his MBA degree, he also looks forward to how it may help his career.

"Right now, my skill set is not on par with my ambition," said Melton. "I hope an MBA degree will help me become more well-rounded." ▪

By Katie Shatzer

Tuition reimbursement is a benefit available to qualified part- and full-time U.S. employees. To learn more, visit Rockwell Collins University via Rockwell Collins Online or email rockwellcollins@tuitionadvisory.com.

Navigating for the future

As a new era of global satellite navigation unfolds in Europe, Rockwell Collins employees in Reading, U.K., are leading the way.

Satellite navigation technology reaches from the everyday to the spectacular — from guiding soldiers blinded by a sandstorm to directing an Unmanned Aerial Vehicle (UAV) landing on a small island.

In the 1980s, Rockwell Collins helped begin a revolution in navigation technology by proving the potential of the United States' Global Positioning System (GPS). Now, Rockwell Collins joins Europe in its leap to establish its own satellite system, Galileo, by developing interoperable receivers.

"We have a history as the premier military GPS provider in the U.S., as well as the expertise to develop Galileo solutions for our European customers," said Guy Buesnel, the European Global Navigation Satellite System (GNSS) Product Line Manager at Rockwell Collins in Reading, United Kingdom. "Galileo and GPS are separate systems, but they can complement each other."

A constellation is born

Since the advent of satellite navigation, Europe has used GPS and Russia's GLONASS (GLObal NAvigation Satellite System) constellations – or groups of satellites. According to Buesnel, Galileo will change that.

"It gives European users a degree of independence from relying on GPS," he said. "It will be simpler for them to change or update technology, or change the signals available."

Additionally, Galileo will provide improved satellite coverage in urban and mountainous areas, and support satellite navigation in commercial air transport.

Independent yet complementary

Recognizing the importance of interoperability between Galileo and other constellations, Rockwell Collins engineers in the U.K. began to explore how existing Rockwell Collins GPS receivers could be augmented to pick up Galileo signals.

To start the development process, Buesnel and David Hagan, a senior systems engineer in Avionics and GNSS Solutions in Reading, worked with a global team of Rockwell Collins subject matter experts. Together, they created a roadmap for the phased development of an interoperable, multi-constellation receiver.

Within four months, the U.K. team completed the first phase. The team hopes to complete the next phase during FY'12, when they plan to demonstrate the receiver to European regulatory authorities.

"It's important that European institutions offering research and development funding perceive Rockwell Collins as an international organization with strong European development capability," said Hagan. "We need to show what Rockwell Collins is doing in Europe." ▪

By Katie Shatzer

Senior Systems Engineer David Hagan is part of the U.K. team developing interoperable navigation receivers that will work with Europe's Galileo satellite system and the United States' Global Positioning System (GPS).

Refueling innovation

Inspired by in-house technologies, Rockwell Collins employees took a collaborative approach to design cost-effective solutions for the KC-46 tanker.

Military aircraft that perform attack, reconnaissance and air defense missions are known for speed, maneuverability, superior weapons systems and stealth. Yet, without the tanker's aerial refueling capabilities, these aircraft wouldn't have the military might to respond quickly to a conflict or crisis anywhere in the world.

When Rockwell Collins employees constructed proposals for Boeing's new KC-46 tanker for the United States Air Force, they were intent on modernizing aerial refueling operations. Technology and geopolitics have changed a lot since the Cold War era when the current tanker — the KC-135 — was initially deployed. After looking at requirements and working with internal experts, engineers envisioned high-tech and cost-effective solutions for the new tanker that would benefit all U.S. forces for decades to come.

"Other companies' engineers might falter at where to start," said Steve Keane, director of Tanker and Transport Advanced Solutions. "But this is Rockwell Collins, and integrating complex systems for extreme situations is what our engineers do."

A clear view

From his experience with flight tests and operations on KC-135 upgrade programs, Keane understands the technological leap Boeing and Rockwell Collins are making with the KC-46.

For example, the Remote Vision System (RVS), which allows crew members to accurately view the physical fuel boom and refueling status data, will include cutting-edge sensors, a graphics subsystem and stereoscopic 3D displays to allow the operator to control the aerial refueling boom. The RVS is one of many systems Rockwell Collins is providing Boeing.

"The tanker's primary mission is refueling," explained Keane as he flipped through an album of photos portraying refueling operations on a KC-135. "It's a difficult job that requires a clear view and accurate depth cues in all conditions."

In the photos, Keane showed how a KC-135 boom operator currently conducts this aerial ballet while lying face down, peering out a small window to guide the boom into the receiving aircraft. He explained that with the RVS, refueling will become more like a video game — an operator will watch a large stereoscopic 3D display to connect the boom to the receiving aircraft.

"It's critical to have those 3D depth cues so operators can guide the boom into the receptacle," said Gladys Yanez, a systems engineer on Keane's team, working on the RVS in Cedar Rapids, Iowa.

"We're using proven technology to develop an imaging solution that has never been done before," said Yanez. "That's what is exciting."

3D glasses recommended

KC-46 boom operators will use the Remote Vision System — instead of a small window — to view the boom and receiving aircraft. The system, provided by Rockwell Collins, includes cutting-edge sensors, a graphics subsystem, stereoscopic 3D displays and 2D displays (above). The stereoscopic 3D displays provide the boom operators with enhanced depth perception.

Evolved from a robot

Many times, inspiration begins by taking technology already available and adapting it to the challenge at hand. This is exactly what happened with the RVS.

During the early stages of the proposal, the team contacted employees in Carlsbad, Calif., and Warrenton, Va., who worked on optics for the Mars rovers and unmanned aerial vehicles, respectively. They also reached out to employees in Portland, Ore., hoping to draw upon their experience with head-up displays, along with the Head Down Display Center (HDDC) in Cedar Rapids.

"A remotely-operated bomb-disposal robot in the HDDC sparked the idea for the RVS proposal," said Yanez, who has been at Rockwell Collins for four years and is quickly becoming an expert on imaging technology. "The stereoscopic 3D display used for the robot helped us develop a solution that would work for the RVS. It was as if we started with a puzzle we had already put together, and then thought about how we could adapt those pieces to meet a new customer need."

At the same time, the RVS team evaluated the Air Force's requirements to design a long-term cost-effective solution. One of these requirements was ruggedization — a process that distinguishes military 3D technology from that used commercially in products like televisions.

"Consumer commercial technology couldn't withstand the environmental factors the technology on the tanker will endure under normal operating conditions," explained Yanez, pointing to a consumer digital camera as an example. "If you put your camera in the freezer — temperatures that the RVS sensors will routinely experience — it probably won't work anymore. So we ruggedized each piece of the RVS, which was challenging, but something Rockwell Collins knows how to do well."

Collaborative relationships

Along with the RVS, Rockwell Collins is providing the large-format cockpit display system, tactical situational awareness system, autopilot flight director system, military and commercial navigation sensors, military and commercial communication radios, the signal data converter network, onboard maintenance system and data transfer unit.

To develop these solutions, more than 200 Rockwell Collins engineers will be assigned to the KC-46 program. And while the overall program is managed by Government Systems, it includes engineers from other areas of our company.

Lisa Steffen, formerly the Commercial Systems principal engineering manager for the display program for the Boeing 787 Dreamliner, led the proposal for the

>>>

The cockpit display system on the KC-46 is modeled after the displays on Boeing's 787 Dreamliner. Lisa Steffen (front) demonstrates the features of the large display system to Gladys Yanez (left), Steve Keane, and AJ Lindaman.

large-format cockpit display system on the KC-46. According to Steffen, Rockwell Collins submitted a proposal so that the physical displays and features on the new tanker would mirror the Dreamliner.

"The wide displays on the 787 are well received by pilots, and our proposal will provide some of the same features on the tanker," explained Steffen. "We've built a collaborative relationship with Boeing, from their engineers to their leadership. That has led to a lot of strong working relationships."

Integrating information

Of course, as a military platform, the KC-46 has unique requirements for tactical information. That's where Rockwell Collins' datalink integration team comes in. For the past four years, a team in Richardson, Texas, has been developing datalink and situational awareness technology for multiple programs, including the Tactical Situational Awareness System (TSAS) processor and display for the KC-46.

"Our team has experience with multiple tactical datalinks and has grown in size to support this and other future datalink programs," explained Technical Project Manager Kimberly Frank, whose team will include more than 35 people from Richardson at the peak of the program. "With TSAS, we're providing a new level of capability with improved situational awareness that helps tanker pilots identify other aircraft and threats."

The KC-46 program brings some additional challenges, due to the amount of information from multiple sources that must be correlated and displayed to the tanker crew.

"We're experts at being able to display that information in a way that can improve pilots' situational awareness without overwhelming them," said Josh Brinkley, a senior software engineer behind the TSAS software built on the Rockwell Collins OpenEdge™ product line. "As a team, we analyzed the requirements and architected a solution to provide a tactical situational awareness system that minimizes aircrew workload as well as enables tanker crews to make more informed decisions."

During the proposal phase, the team discussed how to meet requirements while also providing the best technical solutions for the lowest cost. Employees who had previously worked on digital mapping solutions, datalinks, military radios and OpenEdge software were consulted. These employees provided best practices for receiving, processing and displaying information. Brinkley's team also turned to the Advanced Technology Center (ATC) for innovative technology when an aircraft needs to be rerouted in flight due to pop-up tactical threats such as surface-to-air missiles or hostile aircraft.

Josh Brinkley, Dana Williamson and Kimberly Frank (left to right) discuss best practices for receiving, processing and displaying information so that tanker pilots can easily identify other aircraft and threats via the KC-46 Tactical Situational Awareness System.

Dr. Ryan Young, a principal systems engineer in ATC, has been leading an internal research team to develop Airborne E*, a technology that will be used on KC-46 tankers to automate the threat assessment and avoidance tasks.

"Currently, when pilots determine a reroute is needed, they also need to decide what maneuver should be performed to safely avoid pop-up threats as well as terrain and surrounding traffic," explained Young. "Our automatic rerouting technology shows how technology developed through internal research helps us win programs."

A new generation

At the end of February, soon after the U.S. Air Force announced the selection of the Boeing Company to provide the KC-46 tanker, Brinkley received several instant messages from his fellow engineers.

Many employees had followed the tanker's decade-long competition. Weeks before the ink dried on our company's contracts, they were eager to start work on TSAS solutions that would help the warfighter — today and in the future.

"The OpenEdge software architecture in TSAS allows the customer a lot of flexibility and capability for growth potential," explained Brinkley. "It's very easy to add new capabilities to TSAS; if a customer updates or adds new hardware in the future, the application can be easily modified based on the modular design of the OpenEdge software."

Already, the datalink integration team is testing the software on new hardware platforms, including smartphones and tablet computers that run the Android™ operating system.

"The scalability of the OpenEdge architecture is really what makes TSAS such a cutting-edge setup for military applications," explained Frank. "It's possible for a soldier on the ground or a sailor on a ship with a smartphone to see the same tactical picture as the pilot in the tanker."

Asked about the future, Brinkley responds with an answer typical of employees on the KC-46 tanker program these days.

"We're ready to execute on a program we've been waiting years for," he said. "It's a very exciting time." ▪

By Katie Shatzer and Crystal Hardinger

Why 3D?

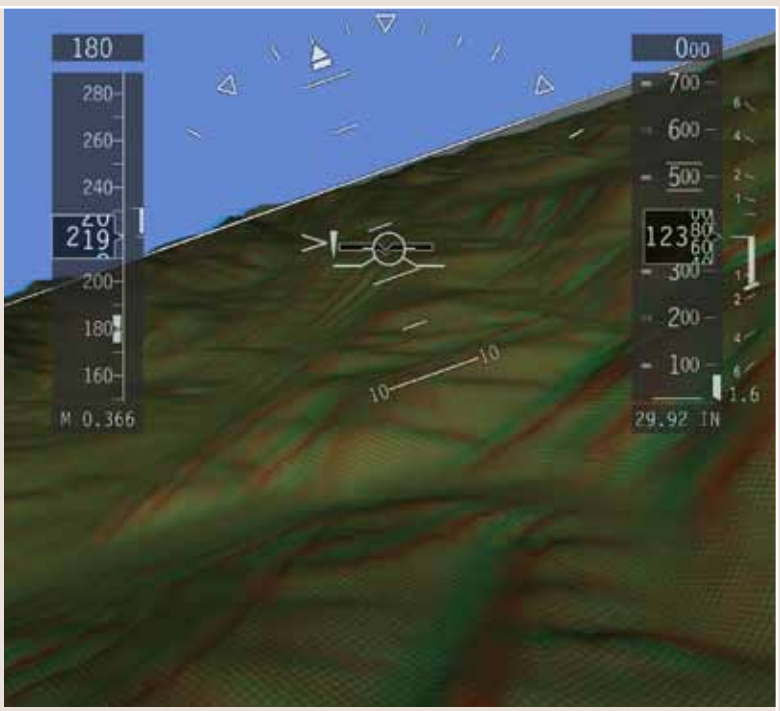
Right now, stereoscopic 3D, or S3D, is one of the hottest trends in Hollywood. It's been cropping up everywhere, from animated and live-action movies, to video games, to laptop computers specifically developed for S3D viewing.

So given the enormous appeal of S3D, it should come as no surprise that Rockwell Collins is researching the benefits of this evolving technology for future applications.

"Stereoscopic systems allow us to use our natural depth perception," explained TJ Barnidge, a senior material and process engineer in the Head Down Display Center. "This can make certain tasks easier to perform."

For most people, it's easy to understand why S3D is appealing for the entertainment industry. Here, three examples demonstrate why it makes sense for our industry.

Note: A small percentage of the population is not able to perceive depth when viewing S3D content due to impaired stereoscopic depth perception.



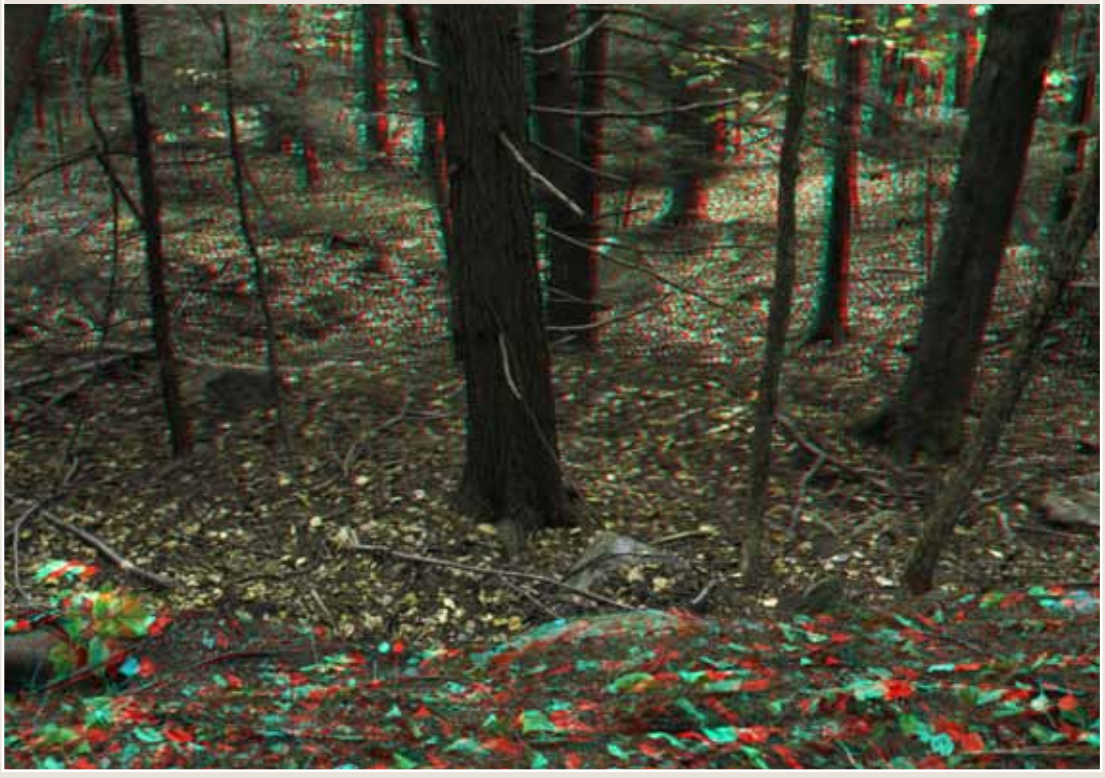
Improves situational awareness

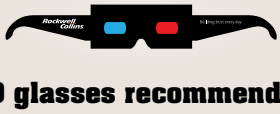
With stereoscopic vision, the brain can more easily separate a complicated image and better comprehend spatial relationships between objects. This helps reduce visual workload and allows people to more rapidly focus on critical information at various depths.

That's why stereoscopic vision could be beneficial for Rockwell Collins' Synthetic Vision System and similar applications. Today, synthetic vision provides a three-dimensional image of the earth's terrain, obstacles and airports to improve a pilot's situational awareness. By adding stereoscopic vision to current synthetic vision technology, situational awareness is taken to the next level. The prototype images above — developed by the Rockwell Collins Advanced Technology Center — show the difference between synthetic vision with and without S3D.

Enhances spatial recognition

Stereoscopic vision helps expose potential hazards not easily detected with conventional 2D systems. If you were remotely operating a ground vehicle through this scene, which view would you prefer?





3D glasses recommended

Helps decipher poor-quality images

S3D glasses enable the eyes to each see a different image. The illusion of depth occurs when the two eyes see an object differently and the brain combines the two perspectives. In our industry, different angles of view are particularly helpful when people have to decipher images of reduced quality due to interference or lack of color. This image, taken behind Building 192 in Cedar Rapids, Iowa, during a test, helps illustrate the different angles of view.

- Look at the image with the 3D glasses.
- Close your right eye. Watch the cloud disappear.
- Open your right eye and close your left eye. Watch the cloud reappear.

Why does this happen?

The cloud is in the right eye image but not the left eye image.

Extending a helping hand

Rusty Brown's dedication to providing disadvantaged children with homemade blankets and other necessities earned him the Rockwell Collins Volunteer of the Year Award.

Rusty Brown, a senior reliability, maintainability and safety engineer at Rockwell Collins, enjoys volunteering with others at the Coralville Ecumenical Food Pantry in Coralville, Iowa. He is the Rockwell Collins 2011 Volunteer of the Year winner for his work with the food pantry and other area non-profit organizations.

Last year, as the holiday season approached, Russell "Rusty" Brown, a senior reliability, maintainability and safety engineer at Rockwell Collins in Cedar Rapids, Iowa, planned to give a gift at a party.

It wasn't anything significant — just extra baby blankets a friend had given him.

When he arrived at the party, he saw presents pouring out from under the grand evergreen tree. Children ran from every direction, yelling and laughing, clutching brand-new toys to their chests like they were gold. Then, a boy no taller than Brown's thigh appeared at his side.

"Will you tie my shoe?" the boy asked.

"As I was tying it," Brown recalled, "the boy said, 'Put it in a double knot.'"

For most people, that moment may have seemed insignificant but, for Brown, it made him think of his favorite work of art — a statue of a man bending to tie a boy's shoe.

And as he looked around the room at the Homeless Children's Trust's Community Christmas Event, he was impressed by the actions of the volunteers who had helped coordinate activities for the party and made arrangements so parents could choose and purchase gifts for their kids. He also was reminded that children whose families are homeless rarely realize they need help from others; they just act like any other kids.

Later, when Brown began handing out the extra baby blankets to the parents, he couldn't believe the looks on the faces of the mothers.

"They didn't expect to get anything," said Brown, who was chosen as our company's 2011 Volunteer of the Year. "I was hooked. I had to do more."

Ties that Bind by Jane DeDecker is Rusty Brown's favorite work of art because it reminds him that he went from needing help to now being able to give help.

Committed volunteer

With the help of area Girl Scout troops and other volunteers in the Cedar Rapids, Iowa, area, Brown, the vice president of the Homeless Children's Trust board, hopes to give away 1,000 homemade blankets at this year's Community Christmas Event to children whose families are homeless or living in transitional housing. The project, known as Build a Blanket 4 Kids, is just one of many community activities Brown is involved with.

Aside from Build a Blanket 4 Kids and the Homeless Children's Trust, Brown also is an active volunteer at the Coralville Ecumenical Food Pantry. Last year, he put on a benefit show for the food pantry and raised 10 percent of their yearly budget in one night. Additionally, Brown recently started the Corridor Volunteering Group on the website meetup.com, which currently has 30 members who dedicate some of their free time to various projects like planting trees and serving food at the Ronald McDonald House.

Able to relate

There's a reason why Brown is so involved with disadvantaged kids and area charities. At one time, he was the boy needing help tying his shoe.

"I could relate to the kids at the party," said Brown. "My parents worked very hard to provide us with the things kids need, but I came from a struggling family."

As a teenager, Brown's extended family taught him the importance of giving back. He would volunteer with cousins and friends, helping younger kids.

"I knew quite a few kids with a lot less than I had," he said. "I tried to be some small influence for them."

His uncle, Alan Brown, formerly a designer in electrical drafting at Rockwell Collins, inspired Rusty Brown to pursue an engineering career of his own.

In 1991, after Rusty Brown completed his Bachelor of Science degree in electrical engineering at The University of Iowa, he began working as a reliability engineer at Rockwell Collins. In 1998, he completed a Master of Science degree in electrical engineering.

Today, Brown is grateful that he's in a position to be able to extend a helping hand to children, and encourages others to give back within their own communities.

"Each community must step forward together," he said. ▪

By Micaela Cashman

Volunteer of the Year finalists

Rita Gatto

Rita Gatto, a senior recruiting specialist in Tustin, Calif., is an active supporter of the Animal Care Center of Irvine. She frequently searches for stray animals, helps socialize them at the center, and prepares them for adoption by appropriate caretakers. Gatto also served on an animal rescue team after Hurricane Katrina and supported efforts in the Cedar Rapids, Iowa, area after the 2008 flood.

Peter Kumpon

Peter Kumpon, a senior mechanical engineer in Binghamton, N.Y., is the founder and leader of a mentoring program for local elementary school children. The program was designed to help the students build confidence and develop relationships with positive role models. To support the program, Kumpon organized a number of fundraisers – including a beard-growing contest – with his colleagues.

Designing for a global marketplace

When engineers in France began working on a situational awareness solution for risky operations, they had a global market in mind.

At the moment, Etienne Gomez, a principal program manager for Rockwell Collins in Blagnac, France, has but one goal: to provide a picture pilots have never seen before.

Using radar sensors, terrain and obstacle databases, along with unique software, Gomez and others in the Mobility and Rotary Wing Solutions group in France are currently working to develop a new level of situational awareness capabilities for helicopters and fixed-wing aircraft.

"There is a real strong global market need for a situational awareness solution for risky operations," said Gomez, whose team is performing flight trials to test and improve capabilities. "We believe we have the right technology, and it's not like anything else out there."

Currently, pilots providing emergency medical services, search and rescue, law enforcement and military operations are at risk for hazard collisions, in both urban and rural environments, and especially at low altitudes, at night, and in poor weather conditions.

According to the International Helicopter Safety Team, obstacle collisions are the number one cause of nonmechanical helicopter accidents — a statistic the team in Blagnac hopes to change using our company's latest technology.

Our latest scalable situational awareness solution for helicopters and fixed-wing aircraft provides pilots with a clear depiction of threats in all environments and in all weather conditions.

Frédéric Girbal (left), a senior software engineer, and Sébastien Laffont, a systems engineer, work on the demo unit integration in preparation for upcoming trials all over the world. Both employees are part of the Rockwell Collins Navigation Surveillance Group in Blagnac, France.

Multinational team

In 2006, engineers in France were looking at ways to take our company's experience with existing radar technology and find new uses. After the team interviewed pilots from around the world, it became clear that there was a need for a scalable situational awareness solution that could better pinpoint hazards and low-altitude obstacles in an aircraft's path.

Once the Mobility and Rotary Wing Solutions group in France had a development plan in place that included multiple capabilities, they began talking with Government Systems engineers in the United States. They also looked for ways to blend new technologies with our existing radar capabilities.

Since the group in France already had a strong relationship with a European lab that specialized in research and development for radar technology, it also made sense to collaborate with them.

"Research done with the lab helped our team implement new techniques to advance the technology," said Gomez. "From there, Rockwell Collins engineers implemented a real-time system capable of processing millions and millions of operations per second. What we're doing with radar has never been done in a helicopter or fixed-wing aircraft to date."

According to Gomez, in order to meet the most important requirements, ongoing communication with potential customers around the world was essential.

"Specifications from customers differ depending on the mission they need to perform," he said. "In order to develop a solution for customers globally, we matched the mission to the market need and put an emphasis on the needs of our largest potential customers over the long run."

Disruptive technology

Over the next few months, the Rockwell Collins team plans to put the new radar technology demo units through several rigorous trials in operational situations all over the world. The goal of these trials is to prove to customers our scalable solution, which can be implemented in 6-by-8, 8-by-10 and stand-alone displays, dramatically enhances flight safety and increases situational awareness.

Gomez said the feedback from customers up to this point has been encouraging.

"Customers' reactions have helped us refine the final product," he explained. "Since there currently is no satisfactory solution, we do believe our technology is disruptive."

Meanwhile, engineers are again thinking about how to take their experience with radar and develop new uses that would be of interest to customers.

"Our capabilities could be useful for sense and avoid applications in unmanned aerial vehicles or in ground vehicles; additional applications such as ground mapping may be of the interest to military users," said Gomez. "The market needs truly are global." ▪

By Micaela Cashman

Aligning our past with the present

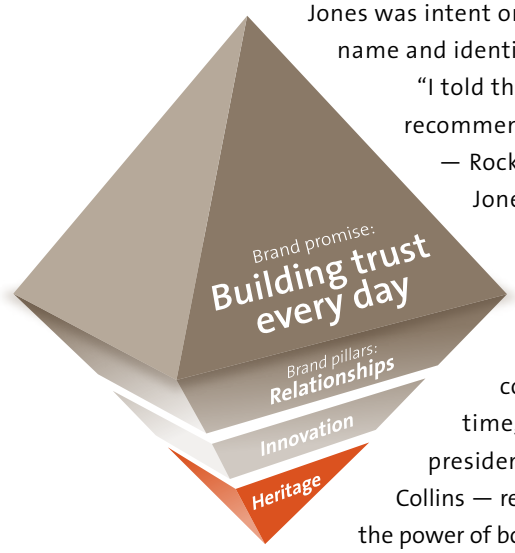
How does our heritage provide a competitive advantage?

Rockwell Collins Marketing Director Bob Ellis has witnessed the evolution of innovative avionics systems during the three decades he's been with our company.

When Clay Jones walked into the senior leadership meeting at Rockwell International in Milwaukee, Wis., in the fall of 2000, he was on a mission.

Well aware of the Board of Directors' decision to make its Avionics & Communications business unit a stand-alone, publicly-traded company, Jones was intent on securing a solid name and identity.

"I told the board, 'I've got my recommended name right now — Rockwell Collins,'" recalled Jones, then president of the Avionics & Communications business unit.



As a 22-year company veteran at the time, Jones — now chairman, president and CEO of Rockwell Collins — recognized and appreciated the power of both brands.

"Some of our customers referred to us as Rockwell, some referred to us as Collins, and some put both names together," said Jones. "Both names had great meaning, and I didn't want to lose that meaning in the negotiations for our final name."

A decade later, three characteristics — personal relationships, innovation and heritage — are embedded in our brand and distinguish our company from our competitors.

As the final in a series of articles about our company's brand, we take a closer look at the heritage of the Rockwell Collins name and what it means for the future.

"Our heritage gives people a sense of what they can expect from those carrying the Rockwell Collins business card," said Jones. "It represents decades of good work that got us to where we are today. How we maintain that heritage going forward is our legacy."

Our heritage says we're innovative

Bob Ellis still finds it amazing that what began as three weeks of new product line training at an aerospace and defense company he knew little about resulted in a 33-year career that's still going strong.

When Ellis went to work in the late 1970s for an avionics dealer in Oxford, England, he was required to learn the ins and outs of a new line of panel-mounted avionics called Collins Micro Line for the single-engine and light twin-engine market segments.

Designed and manufactured by the Collins General Aviation Division of Rockwell International, the new product line made quite an impression on the international commercial aviation audience. Ironically, Ellis also made an impression and, at the end of the three-week training class, was asked to join Rockwell Collins in the United Kingdom.

In the months to follow, Ellis began venturing to places like Africa, Switzerland and the Middle East to sell another line of Collins avionics called Collins Pro Line, which was designed for twin-engine turbine airplanes and business jets.

"Collins was a well-understood brand in the international commercial aerospace and corporate aviation market back then, so it was easy for me to make sales," said Ellis. "Rockwell was almost unheard of because it was primarily a U.S. defense contractor, but Collins had significant brand equity."

Now the director of Marketing for Flight Information Solutions, Ellis has witnessed the evolution of innovative avionics systems during the three decades he's been with our company. The latest example, Pro Line Fusion®, our most integrated and advanced avionics system for business aircraft, is part of the long legacy of Collins Pro Line avionics systems.

Unlike some companies that have exited and others that have entered our marketplace over the years, Rockwell Collins has maintained a strong presence and continues to extend its footprint. According to Ellis, this speaks volumes about our heritage.

"There are so many significant milestones that our company has achieved over the years – the introduction of the single cue (V-bar) flight director (1960s), certification of the first category III autolanding system (1970s), the transition to electronic flight displays (1980s), the introduction of the Common Reusable Elements (CoRE) architecture (1990s), and the recent implementation of synthetic vision imaging on head-up displays," he said. "We wouldn't be where we are today without our heritage and without these innovations. Rockwell Collins was there back then, we've been there along the way, and there's still more to come in the future. That's who we are."

>>>

When Bob Ellis joined our company in 1978, he had dual sets of business cards. One emphasized Rockwell, while the other emphasized Collins. Back then, Collins was a better-understood brand in international market segments.

Visit the Rockwell Collins Museum

You can learn more about our company's heritage by visiting the Rockwell Collins Museum. Tours are held from 11:30 a.m. to 1 p.m. every Wednesday from September through May and begin at the south entrance of Building 120 in Cedar Rapids, Iowa. Large groups and people from outside our company should contact Lawrence Robinson at llrobin2@rockwellcollins.com or 319.295.1698 in advance to make security arrangements.

Our name reflects the company we are today

People buy from companies they know, prefer and trust. The Rockwell Collins name reflects the company we are today, and conveys our value proposition to customers worldwide. By consistently using our corporate name, we build brand awareness and strengthen our global identity. Remember, unless you're referring to our company in a historical context, always use Rockwell Collins.

Our heritage says we're focused on customer needs

Standing behind our product and making it right for the customer are things Jane Krueger believes began with our company's founder, Arthur Collins.

"Our company has always put customers first," said Krueger. "As we go forward and continue developing new products, we need to maintain that reputation."

In 1985, three years before Krueger began working at our company, Rockwell International's Collins Government Avionics Division in Cedar Rapids, Iowa, was selected to produce the first Global Positioning System (GPS) user equipment sets. At that time, Rockwell International's Satellite Systems Division in Seal Beach, Calif., was already producing satellites as part of an earlier phase of the GPS program.

Weighing more than 270 pounds, the Generalized Development Model was the first in a series of GPS technology developments that helped secure our company's position in the multi-billion dollar GPS market segment. Since then, Rockwell Collins has introduced more than 50 GPS products and delivered more than one million GPS receivers — including the PLGR, DAGR, NavStorm™+ and MicroDAGR.

"In the GPS community, Rockwell was recognized as the leader in military GPS," said Krueger, now the senior director of Precision Navigation in Government Systems. "If our name didn't include Rockwell, we would have had to re-establish ourselves, and I think we would have lost some of our credibility."

In her current role, Krueger frequently meets with GPS customers who repeatedly express how much they appreciate our company's service over the years.

One key example of our commitment to our customers can be found with the DAGR. According to Krueger, of the last 73,000 DAGR deliveries, just one customer return has been made.

"The robustness and quality of our GPS receivers speak for themselves," said Krueger. "We've heard incredible stories over the years from people who use our equipment in the field and how that equipment has saved lives or protected the people around them.

"Our customers know that when they have a problem, we're going to jump through hoops to help fix it," continued Krueger. "They know we have the expertise and want to be part of the solution."

Jane Krueger, senior director of Precision Navigation, frequently meets with GPS customers who repeatedly express how much they appreciate our company's service over the years. In the last three decades, Rockwell Collins has introduced more than 50 GPS products — including the Ground-Based GPS Receiver Application Module (GB-GRAM) that she's holding.

Our heritage says we're reliable

Over the years, our company's reputation for quality has helped us win multiple product and system contracts — including in the Middle East.

According to David Wilkinson, a member of our International and Service Solutions sales team for Europe, the Middle East and Africa (EuMEA), our company built a reputation in the Middle East in the 1970s and the 1980s as a premier supplier of air and ground communications equipment.

Junior military officers who started out with our equipment are now in senior officer roles, and they're still choosing our company's solutions.

"These officers know from first-hand experience the Rockwell Collins brand represents a highly reliable product that performs as advertised," said Wilkinson. "Reliability is part of our heritage — it gives people a sense of what they can expect from Rockwell Collins."

As a former aircrew team member for the United Kingdom Royal Air Force (RAF), Wilkinson can easily relate. More than 30 years ago, while spending time on the C-130 and other air transport aircraft, Wilkinson became familiar with the Collins 618T — a high frequency single sideband transceiver installed during the 1970s and 1980s on all RAF multi-engine aircraft — made by a somewhat unfamiliar defense company.

At the time, nearly all communication and navigation products were manufactured by the U.K. aerospace and defense industry. As a result, U.S.-based Rockwell International was almost unheard of.

But Wilkinson and others have built upon the reputation of the 618T so that the Ministry of Defence (MoD) recognizes the value of our brand.

Today, most areas within the U.K. MoD are well aware of Rockwell Collins because of the solid foundation laid so many years ago. In fact, our company's communications, data link, navigation and display products and systems encompass both strategic and tactical platforms in the air, at sea and on land.

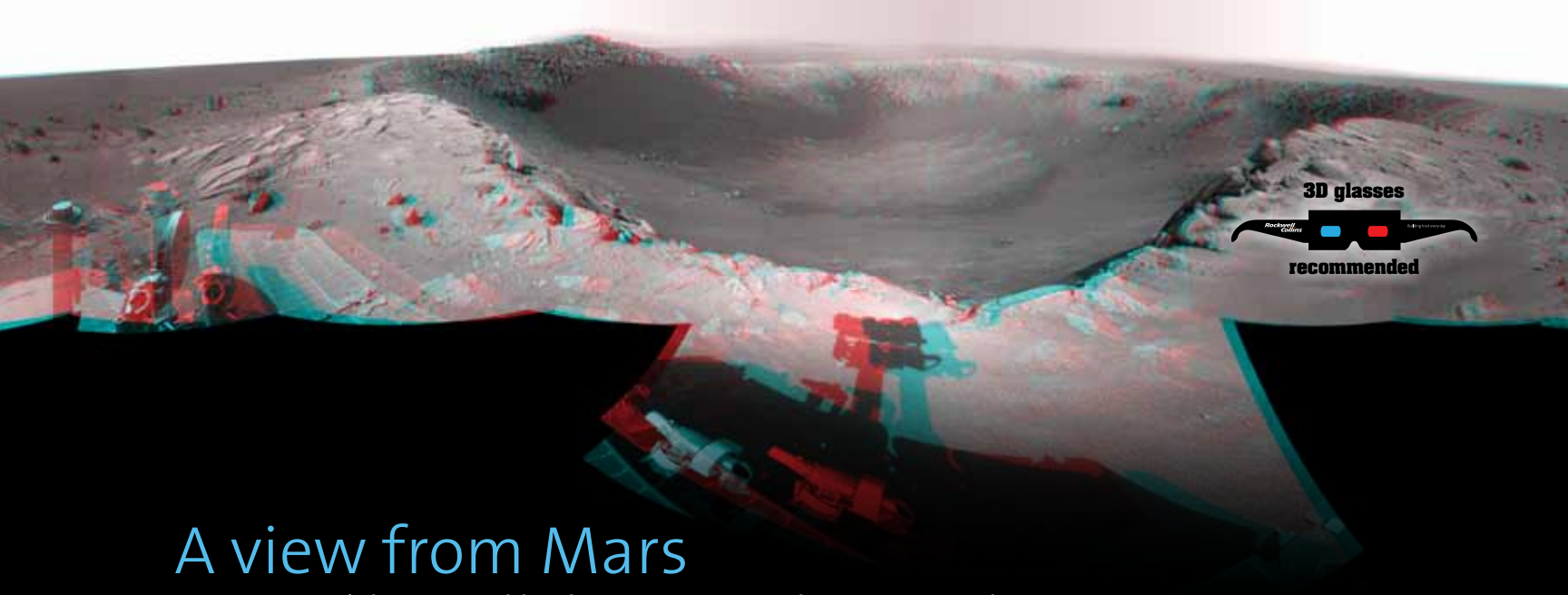
"Our company's reputation for reliability is what keeps customers coming back for more," said Wilkinson. ▪

By Jill Wojciechowski

As a member of the United Kingdom Royal Air Force (RAF), Sales Manager David Wilkinson became familiar with the Collins 618T — a transceiver installed during the 1970s and 1980s on all RAF multi-engine aircraft. Years later, after Wilkinson joined Rockwell Collins, a procurement officer told him the replacement of the 618T was a low priority because it was so reliable.

A link to the past

To view a video about our company's history in aviation, search "Rockwell Collins history" at YouTube.com.



A view from Mars

Our company's lens assemblies have important roles in space exploration.

Perched on the western rim of the Santa Maria crater with wind whistling through its wheels, the Mars rover zooms in on its target.

This rover, known as Opportunity, captures yet another image of the barren and dry Martian landscape using Rockwell Collins lens assemblies. While it will take 90 minutes to send the photo to Earth, once it's there, scientists will examine it, catalog it, and add it to an ever-growing database.

"Every picture that's ever been taken by the Mars rovers was made possible with Rockwell Collins equipment," said John Fitzpatrick, a programs manager in Optical Systems in Carlsbad, Calif. "There are thousands and thousands."

In 2003, the Rockwell Collins Optical Systems team in Carlsbad provided 18 lens assemblies for the Mars rover cameras for the Jet Propulsion Laboratory (JPL), the lead center for robotic exploration of the solar system in the United States. The lens assemblies allow the rovers to navigate across Mars' rough terrain, collect geological data, capture panoramic images, and even take stereoscopic 3D images.

"We've done well in space because we know how to deal with the extremes," said Fitzpatrick. "It was always believed that dust would be the killer of the mission. But the dust isn't getting into the optics because we still have excellent imagery."

Originally slated for a three-month mission, the rovers have far outlasted initial expectations. Today, Opportunity continues to transmit data, while the other rover, Spirit, operated for more than six years.

New opportunities

The success of the Mars rover mission recently led to more business in space for Rockwell Collins. In August 2011, our company's lens assemblies were used on the JunoCam as part of the Jupiter mission. The next Mars rover, which is scheduled to be launched later this year, will again use Rockwell Collins lens assemblies.

"We've proven that we can meet the expectations of an organization like NASA," said Fitzpatrick. "Meeting the stringent requirements of space says a lot about our experience and expertise."

The spacecraft armed with the JunoCam is expected to reach Jupiter in 2016 and will provide the first three-color images of the planet, as well as investigate its ice-rock core. The mission also will involve students in the collection of scientific data.

"Our company provided solutions for the moon and the Mars explorations, and now we will be part of the Jupiter mission," said Linda Vancea, principal account manager for optronics sales in Carlsbad. "It's part of our legacy." ▪

By Erica Solum

Rockwell Collins provided four separate lens designs for the Mars rovers.

Panoramic lenses on the mast of the rover allow for 3D images, navigation lenses help the rover judge distances, and hazard lenses are positioned above the wheels in order to identify potential terrain obstacles. There's also the microscopic imager, which is attached to a robotic arm that grinds away the surface of rocks. Once a fresh layer of strata is revealed, the imager can capture geological details.

STEM experiences translate to real-world results

A group of Girl Scouts from Ames, Iowa, who call themselves "The Flying Monkeys," shared the tale of their science, technology, engineering and math (STEM) adventures over the past year at an Engineering Experiences breakfast in Cedar Rapids, Iowa, in August. Sponsored by Rockwell Collins, The Flying Monkeys received the *FIRST*® Global Innovation Award for developing a prosthetic device that enabled a toddler with a compromised limb to write.

Last year, Rockwell Collins employees dedicated 22,000 volunteer hours to inspiring students to explore careers in STEM through our Engineering Experiences program. To learn how you can get involved, visit www.rockwellcollins.com/Our_Company/Corporate_Responsibility.

Service anniversaries

Rockwell Collins offers congratulations to employees who have marked significant service award milestones in recent months.

45 YEARS

AUGUST
Lynda N. Gentry

SEPTEMBER
Joanne M. Mitchell
Barbara K. Steger
Nora F. Wade

40 YEARS

AUGUST
Frances J. Kolsrud

SEPTEMBER
Ellen Warren

35 YEARS

JULY
Howard R. Bentley
Kenneth F. Blazek
Klaus Bohlmann
Patricia J. Bulten
Jon A. Gilbert
Deborah J. Heller
Rodney K. Larson
Kevin K. Loux
Mary J. McLaren
David W. Meiners
Randy E. Moore
David O. Morgan
Gary A. Pershin
Ronald G. Redington
Keli J. Walt
Randall R. Wilke

AUGUST
Gary Hamer
Jeffrey L. Hudson
Uwe Kroen
James L. Lane
Marlene A. LeMont
Paul D. Pospischil
Robert M. Sheffler
Karin Strauch
David L. Van Dusseldorp

SEPTEMBER
Redge G. Bartholomew
Robert O. Butler
Doreen K. Harrison
Shelia G. Keith
Jeffrey P. Kline
Kenneth R. Knight
Frank E. Koenig
Sigrid Koessler
Friedbert Oestringer
Juergen Rettig
Judith M. Roedema
Judy Smith
Robert E. Wadell

30 YEARS

JULY
Marco A. Baldi
Layne D. Brooks
David B. Davis
Deborah L. Endres
Fredric R. Gruendell
Dickie E. Hooten
Linda A. Lennon
Kristine A. Malatek
Sheila K. Mathews
Tammy E. Mowrer
Shirley M. Pasker
Bernd Radecke
Susan Simmons
Kenneth E. Smith
Timothy E. Snodgrass
Cynthia J. Temple
Donna L. Troublefield
Kevin D. Walters

AUGUST
Robert L. Anderson
Lowell L. Buchholz
Melissa V. Butler
Albert J. Caliendo
David A. Cudworth
Daniel E. Cudworth
Irene G. Dulin
Sharon D. Duncan
Gaye A. Einck
Thomas A. Frost
Thomas L. Hauber
Thomas R. Kerner
Jenny M. Klotzbach
Jennifer L. Kramer
April M. Meader
Kimberly A. Misel-Scott
Lori E. Ohlhauser
Rudolph Ramirez
Daniel Sentoure
James M. Tedesco
Janet A. Teslow
Brenda K. Warner

CELEBRATING 45 YEARS

Joanne M. Mitchell

Start date:
September 1966

Original position:
Plastics department

Current position: 333C-Plater Etch Operator in Fab Finishing-247

What was your most challenging project? Working on a NASA space shuttle program meant three grueling weeks of training to become solder-certified for space. I passed, but it was the most difficult training I ever went through. ▪

SEPTEMBER
William P. Armstrong
Kathleen J. Bell
Cynthia A. Bonebright
James E. Brooks
Ronald C. Dean
Sharron G. Dennis
Mary B. Dostal
Robert C. Flint
Andreas Graf
Nathan A. Hendricksen
Edward Marquez
Elias H. Orta
Lew D. Schatten
John R. Todd
Rena M. Williams
Kenneth A. Zimmerman

25 YEARS

JULY
Cheryl F. Ahlrichs
Patricia L. Ashlock
David W. Asman
Guadalupe Astorga Diaz
Mark J. Bartelme
Brian S. Bullington
Rhonda L. Cahoon
Luis Cob
Martin S. Frasher
Corinne Guibert
Harald Heimpel
Lee M. Keuter
Robert J. Kirby
Michael Lundy
Alan L. Mahoney
Randy D. Narveson
Jack Primault
Kerry R. Reisen
Barry L. Roberts
Thomas D. Sanders
William J. Schuyler
Timothy D. Stepp
Robert Wolf
Renee L. Woods

AUGUST
Lonnie N. Adams
Stephen J. Banham
Mark Bonifacii
Steven K. Brown
Linda L. Dart
John L. Frankhouse, Jr.
Daniel J. Goiffon

Korry L. Hein
Deanna M. Holtzman
Patrick Y. Hwang
Joseph E. Kopish
Thomas S. Law
Matthew G. Maynard
Robert E. Meikle
Rhonda M. Meiners
Steven A. Milbach
Gregory M. Pollari
Ryan J. Rand
Billie E. Smith
Mary Jo Thurn
Richard L. Tomy
Deborah L. Williamson
John R. Wood
Bruce Woolstenhulme

SEPTEMBER

Gary J. Albert
Donna M. Bandy
Julie A. Bellendier
Michael C. Garrett
Albert A. Giegerich
Timothy E. Gifford
Sandra L. Grant
Jon B. Hamann
Elizabeth A. Heinig
Dena L. Hendrix
Pamela K. Kiefer
Joachim Kohler
Maureen A. Lehman
LuAnn Manson
Uwe Mehren
Wolfgang Merrem
Brian L. Miller
Richard E. Miller
Dan E. Novinger
Ronald J. Pelusi
Todd J. Ramsey
Lori L. Robinson
Christopher A. Sather
Steven I. Schick
Shawn L. Shiley
Bonnie J. Stewart

CELEBRATING 35 YEARS

David Van Dusseldorp

Start date: August 1976

Original position: GPS Receiver Engineering in the Collins Government Avionics Division

Current position: Technical Project Manager in Precision Strike Engineering in Government Systems

What is your proudest accomplishment? Being a member of the GPS teams that started with a new system concept, believed in what it could do, and ended up fundamentally changing the world. ▪

Julie Booth
Michael J. Caldwell
David R. Campbell
William L. Cronbaugh
Scott A. Daugherty
Barbara J. De Long
Michael D. Dillavou
Renee R. Frazier
Eric Thomazeau
Peter C. Tushar, Jr.
Sylvan C. Weis
Larry L. Young

20 YEARS

JULY

Matthew D. Bamford
Belinda L. Banks
Patrice Bourrier
Roxie A. Davis
Muriel Deffore
Kathy S. Gavin
Anna M. Heiserman
Karen K. Hendrickson
Richard L. Jenkins
Rick N. Johannsen
Douglas R. Johnson
Edward A. Johnson
Kerry L. Klein
Laurent Malliet
Octavian I. Popa
Kirk E. Reynolds
David C. Schroeder
Kevin D. Sempf
Mark S. Shanks
Roger K. Shultz
Karen M. Spading

AUGUST

Joan M. Barth
Hubert Birbes
Robert I. Bowen
Scott D. Bruner
George G. Cox
Ruth D. Fleming
Ema D. Graham
Bryan D. Grunewald
Fernando J. Hernandez, Jr.
Carrie L. Hoover
John R. Howell
George S. Lindsay
Kathleen C. McAteer
Mark V. McPeek
Rafael J. Monte
Kathy Schumacher
Jonn D. Strausser
Paul E. Thompson

SEPTEMBER

Robert R. Ankeney
Laurent Cardon
Denise A. Chesmore
Richard C. Elliott
Dominique Favre
Pamela R. Haas
Robert J. Hickey
Thomas R. Hobson
Terry L. Hoffman
Anthony V. John
Ludovic Kaman
David V. Kazanovicz
Stephanie Keuerleber
Steven P. Miller
Debra L. Nelson
Sandra K. Phelps
Doris M. Sommers
Bryan J. Till
Timothy R. Vezina
Uwe Wallenwein
Andrew R. Watson
Peter F. Webb

15 YEARS

JULY

Espen C. Anneling
Timothy F. Bartholomew
Kristine N. Bell
George M. Berry
Mark A. Bobbin
Kevin L. Boomgarden
James D. Cahoon
Lisa M. Coffin
Kelly G. Dalton
De Etta L. Dickerson
James M. Eichstadt
Pedro L. Encarnacion
Timothy D. Erenberger
John E. Ferguson
Alma D. Franco
Gary B. Green
Patti A. Groff
Curtis W. Hicks
John R. Hill
David J. Holtz
Rudolph Jara
Evie R. Johnson
William R. Johnson
Carla M. Lankester
Thomas N. Larson
Choy Wan Lee
Gregg R. Lind
Daniel E. Martin
Kari L. McGregor
Martin G. Mills
Stephen D. Novey
Charles S. Paramore
Jill M. Petersen
Judy F. Phelps
Angela B. Pittman
Linda M. Pratt
John J. Schroyer
Adam A. Schutte
Kevin Shoubridge
Randy A. Simonsen
Andre L. Smith
Stephen R. Spitz
Serge Trouin
Patrick P. Wallace
Edward D. Walsh
Chad M. Weber
Mark W. Weikel
Steven M. Whalen
Matthew M. Wilding
Douglas W. Wolcott

AUGUST

Michael E. Alepra
David P. Bauer
Kevin E. Baughn
Traci L. Beitzel
Jeremy J. Bergh
Hercilia J. Butler
Norma L. Cadena O'Connell
Charles J. Campbell
Gay A. Carpenter
Kevin D. Coates
Mary M. Colon
Rosemarie C. Conner
Alan L. Duncan
Eric W. Dunn
Ronald L. Durant
Steven C. Erwin
Michael G. Farley
Jennifer L. Fisher
Frank M. Gilroy
Dina R. Gray
Donna J. Hanna
Jeffrey W. Hawkins
Brendan T. Howard
Brad J. Jansz
Marcie G. Jean
William E. Jordan
Brian L. Kreger
Robb A. Lassen
Tim M. Lawless
Kai Lai Leong
Benjamin R. McAllister
Julie G. McInroy
Jarad W. Miller
Horace L. Pereira
Ernesto Perez Hernadez
Duane E. Peters
Lillian L. Peters
Debra K. Powers
Jeanne O. Pratt
Steven Reyes
Dennis P. Ricke
Theresa M. Robertson
Sergio Santoyo Ortiz
Lori J. Sipper
Rochell I. Soltau
Kevin W. Stopko
Thomas L. Stoppleworth
Donald A. Stratton
Keith D. Tindall
Carol L. Tuley
Kenneth J. Webb
Lloyd V. Whiting II
Pedro Ismael Zaragoza Blanco
Chongwu Zhong

SEPTEMBER

Gregory A. Arundale
Claudia A. Brown
David J. Butcher
Gary E. Cameron
Brian J. Collins
Craig L. Colwell
Charles C. Cooling
Patricia A. Corbett
Robert F. Corkin
Francisco Delgadillo Gutierrez
Neil Elliott
Maria Isabel Flores Vargas
Kristian B. Fosse
Bruce R. Gelder
Joel T. Gillett
Kurt A. Graber
William D. Hannen
Maria Guadalupe Haro Rosas
Bryan L. James
LuAnn Jensen
Michael L. Johnson
Douglas M. Kirk
Pamela K. Letsch
DeAnna M. Losey
David J. Lynott
Quintin V. Mancilla
Janet M. McClain
Todd M. Petersen
Adriana Mercedes Ramirez
Donald L. Roberts
Armando M. Rodriguez
Robert A. Roslawski
Lisa M. Schreihart
Kirk R. Scott
Peter J. Shaw
Chris R. Simons
Michael S. Smith
Dennis W. Snyder
Bruce E. Thompson
Martin Valdez Salgado
Claudette M. Walker
Timothy C. Wallace

Mark S. Webber
Patricia J. Woods
Adam A. Zimerman

10 YEARS

JULY

Kenneth R. Anderson
Barry J. Berg
Timothy I. Blevins
Rolf Boehler
Michael P. Bongiorno
Frédéric Brun
Bruce R. Bullard
David P. Carter
Gary R. Chadick
Craig E. Chambers
Daniel J. Clark
Olivier Dalla Rosa
Christine A. Davis
Benjamin De Souza
Philip D. Dean
Stacy K. Duehr
Régis Garau
Yannick Garriguenc
David I. Han
Matthew R. Hubbell
Raymond E. Kennedy
Fabienne Llorens
John J. Mccorry
Marina Mitrovic
Myles E. Mongar
Kevin G. Mortensen
Lenard E. Noice
Susan M. Olson
Todd D. Peterson
Kathryn T. Ramsey
Alexander D. Reid
Michael A. Rigsby
Steven J. Robbins
Merritt W. Robertson
Mark V. Ryan
Bruce A. Shauger
Edward Slaby
Chan L. Soeung
Scott W. Stadelmann
Clayton C. Stephens
Thomas D. Wahlstrom
Douglas E. Webb
Wayne H. Weeks
Joon Sang Wong

AUGUST

Johnny Alves Jeronimo
Steven V. Auchter
Brett J. Carlson
John M. Carter
Yannick Cornu
Lionel Darrieutort
David W. Davis
Timothy J. Drahos
Stéphane Dupuy
Rachid M. Elkhatib
Barbara L. Elsbernd
Belinda M. Fiacco
Jamie J. Fisher
Sébastien Gay
Darcy E. Grimm
Ronald J. Hoebeck
Gregory A. Hopkins
Srikanth C. Kamineni
Jared M. Kesling
Moris Y. Koriel
Carol L. Lemieux
Oliver Manz
Analisa S. Marquardt
Michael K. McGuire
Patrick D. Miller
Sébastien Montrozier
Jason L. O'Connell
Carmen Ravasz
John M. Reyland
Ralf Ritter
Richard T. Siefers
Marek J. Siwiak
David W. Snow
Bruce H. Stetler
Chen Tian
Anthony A. Trujillo
Sherry L. Webber
Martina Weber Bauer
Mary B. West
Jennifer L. Whittenbaugh
Michael T. Yamagata

SEPTEMBER

Timothy L. Adkisson
Ludovic Almiento
Brian Ayres
Thorsten Benz
Eduardo Bernal Garcia
Jesse C. Bringas
Quan S. Bui
Malcolm S. Burns
Claudine Chadebec
Marianne Chiorozas
Andrew Clements
Richard Counts
Michael L. Cox
Jason K. Dahlstrom
Manuel Diaz
Alan J. Elmer
Bernd Gerlach
Justin P. Gibson
Rebecca L. Haberstroh
Johnny W. Hill
Thomas M. Horner
Jeffrey P. Kolm
Anthony D. Kuker
Joseph A. Lahart
Thomas A. Ligon
Steffen Lortz
Rodney G. Love
Guillaume Mahieu
Deborah A. McIntyre
Thomas J. Minarcin
Praveen Mishra
Ted O. Mundelein
Matthew J. Nelson
Nhi P. Nguyen
Jonathan M. Pavia
William C. Pearson
Tony W. Potter
Jeffrey D. Printy
Aaron F. Rath
Philippe Rouquiere
Philip J. Scarfield
Lora L. Scheckel
Traci N. Schlemmer
Jennifer J. Simmons
Jesse W. Soden
Gabriele Strauss
Joseph M. Strenecky
Thierry Teres
Robert J. Thomas
Milagritos Zarate

5 YEARS

JULY

Vedran Alagic
Charlene L. Anstett
Richard C. Atkins
Aaron B. Austin
Sophie Beaujan
Fawn L. Beckham
Carol A. Beeh
Leticia Bello Valdivia
Denise M. Billings
Hocine Boumaza
Sherin J. Brunker
Scott D. Butler
Stefanie A. Cannon
Elizabeth M. Cazares
Maggie I. Chen

CELEBRATING 35 YEARS

Uwe Kroen

Start date: August 1976

Original position: Operations

Current position: Principal Marketing Manager for Precision Strike

What is your favorite aspect of your current position? I can bring my ideas into the organization and contribute to the future success of Rockwell Collins. ▪

John H. Collins
Andre Colmant
Carmen M. Colon
Clare E. Davis
Catherine O. Demps
Brent A. England
Lu Z. Fields
Roberto Filocamo
John W. Finfrock
Marcela V. Garcia
Brent J. Gassman
David A. Goldberg
Christian M. Griffith
Inez L. Gronewold
Simon A. Grosvenor
Stephen F. Guillot
Keith W. Hartnell
Lee A. Hauser
Yonah Her
Aaron R. Holland
Jodi M. Holtz
Kaly Hong
Michelle M. Howe
Jason Y. Ishibashi
Julie K. Issa
Muhammad Fadli Bin Jaafar
Kathryn A. Janda
Bonnie J. Jessen
Christopher D. Johnson
Wade T. Johnson
Elisha A. Jones
Ronald G. Junge
Christopher A. Kamman
Tristan J. Kendall
Faraz H. Khan
Carl A. Kirkpatrick
Robert J. Klaus
James H. Knupp
Olaf Koepke
Allen J. Kopp
Kim D. Laub
Jill M. Lawniczak
Ya-Shan Lei
April S. Little
Hsien Chiang Lue
Miguel A. Lugardo
Melissa L. Lynas
Silvia D. Maass
Stephane Malepart
Edna Aide Sacnite Marquez Ordan
Christopher M. McGuan
Jeremy S. Miller
Claudia M. Miramontes
Julia L. Mogle
James H. Morash
Matthew J. Mueller
Anwer Muhammad
Bernard D. Mungal
Lourdes Yanett C. Murillo
Raymond A. Narlock
Vladimir O. Negron
Bren M. O'Connor
Jason C. Olmstead Muhs
Elizabeth A. Otting
Anthony P. Overmann
BichHa T. Phan
Francois Pineda
Willis D. Potter
Kurt M. Pulczinski
Carlos C. Ramos
Richard A. Riness
Angela R. Roberts
Jose A. Rodriguez
Aaron L. Runge
Jeffrey D. Sadowitz
Kristine A. Sargent
Charles S. Scarbrough
David E. Schauer
Joshua J. Schmitt
Christopher M. Schubert
Laura J. Seay
Lokesh Shivanna
Karun Siddana
Dwayne M. Simpson
Cristina Soriano
Sarah A. Taylor-Falcioni
Andre B. Theobalds
John V. Thommana
DeShaun A. Thompson
Terry L. Thompson
Kent R. Turpin
John J. Uberbacher
Adam Uribe
Sandra Monica V. Valdez
Nancy L. Vargason
Cecile Vinges
Matthew J. Volk
Kathleen F. Voss
Lisa A. Webb
Amanda J. Westhoff
Aaron C. Williams
Carrie A. Wilson
Liza M. Wilson
Edward T. Wood
Shingo Yonezawa
Lisa R. Young

AUGUST

Kjell O. Albihn
Gabriel Arnedo
Joshua D. Bakk
Michael B. Baumert
James R. Bovinet
Andres A. Brugal
Daniel L. Bullerman
Juan C. Candelaria
Chaun A. Carter
Fabien Casagrande
Michelle W. Chan
Daniel Y. Chiew
Darrell Choa
Elizabeth M. Collins
Nicholas C. Consalvo
Michael A. Cosman
Kendall L. Counce
Erich J. Currier

Arla E. Dawley
Jason B. Dever
Sonja Dieters
Nuku M. Doamekpor
William E. Duffy
Val D. Eisele II
Carmen F. Endicott
Edward W. Fisher
Ulf Folkesson
William G. Galvin
Martha I. Garcia-Wegener
Charles P. Gilkison
Colin D. Gillens
Reginald C. Glaisyer
Robert L. Grange
Samantha A. Green
Raymond J. Gregory
Joseph W. Harvey
Kurt A. Heath
Melissa G. Herring
Herbert D. Joiner
Corne R. Jones
Rachel D. Jones
Richard P. Kaiser
James R. Kennamer
Ronald W. Langbecker
Heather R. LaPlante
Andrew M. Lee
Daniel R. Levetzow
Murray J. Lindstrom
Laura B. Livnat
Brian L. Logan
Marisol Lopez
Jerry H. Lundy
Paul A. Lyman
Frank E. Marcum
Alec D. Marin
Lance A. Maynard
Amy L. McDonald
Jorge Mora
Toni M. Mrkvicka
Keat Seng Ng
Jaime S. Nosbisch
Carly B. Okken
Jessica M. Ostrowski
Dale L. Parker
Clayton R. Parsons
John R. Patton
Ashley N. Percy
Tania M. Pfalzgraf
Thomas A. Porter
Linda I. Purdy
Alen Ramovic
Michael W. Raschke
Bianca Ravasz
Damon Rutledge
Oscar D. Sanchez
Peggy S. Schuver
Mark A. Schwegler
Michael E. Sebree
Carl S. Shank
Mark A. Simmons
Gregory M. Smith
Michael M. Sparks
Yancy D. Stearns
Scott A. Sutton
Thomas L. Tilden
Mai Quynh T. Tran
Candace D. Vargas
Stephen C. Vella
Ryan D. Venteicher
Jennifer L. Wade
Pamela J. Wallace
Colt R. Wallace
Joel L. Ware
Marc S. Widick
Tony G. Wilson
Anthony P. Zaide

SEPTEMBER

Florian Adam
Jennifer K. Allamand
Donovan L. Alldredge
Victor C. Ashby
Steven L. Bailey
Romain Baillet
Jennifer L. Becker
Firew T. Belayneh
Destahun W. Berhe
David M. Birken
Dickie L. Bishop
Catherine A. Bohn
Pamela A. Bowlby
Kristina A. Boyd
Cedric Brault
Lily M. Bridenbaker
Micah J. Briedwell
Lawrence W. Brock
Mary D. Burmeister
Shaun P. Chinn
Karen L. Christensen
River S. Clarke
Kimberly K. Cole
Thomas R. Cooney
Edgar A. Corredor
Steven P. Criswell
Robert M. Cunningham
Kasey A. Curtis
Misty D. Dawson
Ana Veronica O. Delfin
Charles J. Della Porta
Jyl M. DeMoss
Dawn M. Donels
Loic Dupressoir
Fabian Erat
Melissa D. Estes
Louise D. Feagans
Peter R. Fessler
Warren A. Frank
Alisha L. Garrett
Angelika Gastrop

CELEBRATING 35 YEARS

Judith (Judy) M. Roedema

Start date: September 1976

Original position: Keypunch Operator

Current position: Senior Business Integration Analyst in e-Business

What advice do you have for new employees? Get engaged in Rockwell Collins' many opportunities via Communities of Practice (CoPs) or clubs, be excited about your job, and contribute to Rockwell Collins and your community. ▪

Steffen Gladki
Mark P. Glassberg
Karen S. Hildebrand
Elena N. Hill-Rush
Richard K. Hopkins
Nenshing Hsu
Wei Hu
Kimberly K. Hudson
Ronald A. Iovine
Timothy L. James
Wannipa S. Johnson
Robert J. Jones
Larry M. Jordan
Larry C. Kelley
Glen P. Kiss
Katie J. Kraus
Claire L. Kubecka
Timo Leyser
Sandra M. Louviere
Beatriz Adriana P. Luna
David D. Markley
Carol A. Martensen-Luth
Jessica M. Miller
Robert J. Miller
Cecilia Mjallby
Richard J. Musiol
Robert J. Myhlhousen
Angela L. Nott
Michelle R. Ogle
Mandy L. Orndoff
Mary T. Orndoff
Berardino Parisi
Charles W. Parks
Camden L. Peeples
Robert A. Pfouts
Ronald J. Phister, Jr.
Kyle A. Pogue
Christopher M. Primeau
Raymond E. Proctor, Jr.
Marcel Reiss
Olivier Ricci
Derrick J. Richmann
Angelia J. Rigel
Veronica D. Rivera
Shane D. Robertson
Steve E. Rocha
Stephen W. Russell
Travis J. Ryan
Peter M. Sahayda
Kanupriya Salaria
Edmon R. Salcedo
David C. Schreck
Jenny L. Sheriff Evans
April D. Shircliff
Judith A. Simon
Anthony J. Sleezer
Kyle B. Snyder
Gary A. Stearns
Gerald L. Stewart
Jeffrey A. Stickley
Stephanie L. Takes
Francoise Thekal
Amanda K. Thorstenson
Layne H. Thorup
Brent W. Tolman
Sy T. Tran
Daniel L. Trembath
Jamie J. Vaske
Heather L. Wade
Stefan M. Williams
Jason R. Wirth
Anne M. Wiskerchen
Avinash Yadav
Lyle L. Zumbach

In memoriam

Rockwell Collins offers condolences to the families and friends of the following employees and retirees, whose deaths were recently reported.

James L. Bailey*
Holcomb, Miss.
Jan. 30, 2011

Dennis M. Barton*
Libertyville, Iowa
July 13, 2011

Kathryn A. Bennett*
Cedar Rapids, Iowa
June 24, 2011

Peter M. Burtram*
Orange, Calif.
July 3, 2011

Cleo D. Carolan*
Decorah, Iowa
April 19, 2011

Frank L. Chabre*
Claremont, Calif.
June 11, 2011

Richard A. Dalecky*
Cedar Rapids, Iowa
May 30, 2011

Sylvan L. Dawson*
Marion, Iowa
May 11, 2011

Jack M. Fisher*
Oshkosh, Wis.
July 25, 2011

Clayton V. Ford*
Lodi, Calif.
April 24, 2011

Francis C. Hechmer*
Sneedville, Tenn.
May 30, 2011

Bastian Hello*
Potomac, Md.
Feb. 12, 2011

Diana K. Holliday*
Marion, Iowa
July 23, 2011

Barry L. Holtzer*
West Lawn, Pa.
May 24, 2011

Michael R. Homant*
Lake Orion, Mich.
May 24, 2011

Robert C. Jensen*
San Ramon, Calif.
June 5, 2011

Nancy A. Kelly*
Cedar Rapids, Iowa
July 26, 2011

Darlene M. Klaas*
Cedar Rapids, Iowa
May 6, 2011

Scott T. Knotts
Solon, Iowa
June 29, 2011

Vernon G. Marsden*
Lakewood Ranch, Fla.
Aug. 3, 2011

*retiree

Retirees

Rockwell Collins offers congratulations and best wishes to the following employees, who have recently announced their retirements.

John A. Ackeret
Wichita, Kan.

John H. Ackerman
Apple Valley, Calif.

Margaret A. Ames
Westminster, Calif.

Ronda R. Armstrong
Atkins, Iowa

Jill L. Armstrong
Anamosa, Iowa

Orville A. Bakenhus
Elberon, Iowa

Jacqueline Barnett
Garrison, Iowa

John W. Baughn
Clinton, Mich.

Ruth E. Bensmiller
Marion, Iowa

Robert J. Brice
Cedar Rapids, Iowa

Lauren F. Bullock
Dublin, Calif.

Daniel A. Carda
Riverside, Calif.

Peter M. Carter
Elkhorn, Wis.

John A. Chihak
Hiawatha, Iowa

Michael H. Cisco
McKinney, Texas

Tonda L. Claassen
Cedar Rapids, Iowa

Glenda L. Clark
Shellsburg, Iowa

Terry L. Cole
Elkader, Iowa

Peter F. Collins
Ocala, Fla.

Donald B. Conkle
Laguna Hills, Calif.

Barbara E. Conner
Cedar Rapids, Iowa

Barbara J. Denny
Solon, Iowa

Charles A. Dewey
Iowa City, Iowa

Stephan L. Dickinson
Cedar Rapids, Iowa

Michael J. Dosdourian
Whittier, Calif.

Patricia J. Feller
Plano, Texas

Alicia D. Forstner
Pomona, Calif.

Kenneth J. Gary
Trabuco Canyon, Calif.

Rodney D. Giboney
Irvine, Calif.

Jimmy D. Graham
Plano, Texas

Kathryn S. Gritton
Cedar Rapids, Iowa

Wayne L. Groff
Cedar Rapids, Iowa

Barbara J. Gudenkauf
Cedar Rapids, Iowa

Gary S. Hackbarth
Robins, Iowa

Michele M. Hartzler
Cedar Rapids, Iowa

Steven G. Hostert
Urbana, Iowa

Kathryn E. Hovden
Decorah, Iowa

Rodney A. Hulbert
Cedar Rapids, Iowa

John J. Huschka
Cedar Rapids, Iowa

Catherine J. Jackson
Cedar Rapids, Iowa

Linda S. Jennings
Cedar Rapids, Iowa

Sandra L. Johnson
Guttenberg, Iowa

Laura J. Jones
Cedar Rapids, Iowa

Nancy A. Juve
Decorah, Iowa

Ed L. Kaff
North Liberty, Iowa

Walker B. Kelly
Marion, Iowa

Shirley K. Kemp
Marion, Iowa

Charles W. Kirkpatrick
Fairfax, Iowa

Mary J. Knutson
Manchester, Iowa

Carey G. Krull
Brooklyn, Iowa

Edward A. Landuyt
Atkins, Iowa

Richard B. Lohse
Cedar Rapids, Iowa

George L. Lovato
Rancho Santa Margarita, Calif.

Michael L. Luken
Cedar Rapids, Iowa

Thomas H. Lynch
Cedar Rapids, Iowa

Habib Maleksalhi
Laguna Niguel, Calif.

Richard C. Marett
Cedar Rapids, Iowa

Deborah S. McBride
La Habra, Calif.

Keith V. Melford
Lake Forest, Calif.

Leonard J. Moellers, Jr.
Vinton, Iowa

David P. Moos
Marion, Iowa

Craig A. Mrkvicka
Cedar Rapids, Iowa

Michael K. Musgrave
Garland, Texas

Danny W. Myers
Murphy, Texas

David P. Nessl
Mission Viejo, Calif.

Cassandra A. Norwood
Rialto, Calif.

Michael Parker
Sunnyvale, Calif.

Gene S. Parker
Cedar Rapids, Iowa

Daniel J. Paukert
Cedar Rapids, Iowa

Charles M. Pendleton
Hemet, Calif.

Nancy D. Quinn
Cedar Rapids, Iowa

Carl G. Raap
Cedar Rapids, Iowa

George T. Reid
Morrison, Colo.

Jinann K. Roed
Waukon, Iowa

Alfredo Santana
Laguna Woods, Calif.

Terrence L. Schmitt
Marion, Iowa

Shirley A. Schmitz
Palo, Iowa

Larue S. Shepard
Richardson, Texas

Kulwant Singh
Tracy, Calif.

Gary L. Thompson
Cedar Rapids, Iowa

Robert R. Tierney
Cedar Rapids, Iowa

Ricky L. Tolin
Haven, Kan.

Raymond C. Walaska, Jr.
North Liberty, Iowa

Robert S. White
Cedar Rapids, Iowa

James T. Williams
Coralville, Iowa

Donald R. Wood
Cedar Rapids, Iowa

Bruce F. Young
Swisher, Iowa

Joseph M. Zhou, Jr.
Fremont, Calif.

In memoriam

Martin L. Melrose*
Newark, Ohio
May 27, 2011

Marcelino Mercado*
Reading, Pa.
June 11, 2011

John F. Miller*
Rock Hill, S.C.
May 21, 2011

Frank H. Mills*
Rohnert Park, Calif.
July 3, 2011

Jason A. Mofle
Tualatin, Ore.
Aug. 28, 2011

Rabindra Narayan
Wilsonville, Ore.
July 4, 2011

Patrick J. Neu*
Cedar Rapids, Iowa
July 8, 2011

Lois J. Nosek
Cedar Rapids, Iowa
Aug. 24, 2011

Gary W. Oldham
Hendersonville, Tenn.
Aug. 12, 2011

Danny Penzellna
New Haven, Conn.
Sept. 4, 2011

Donald E. Petrics*
Mission Viejo, Calif.
June 9, 2011

Robert L. Powell*
Anaheim, Calif.
July 16, 2011

Rolf W. Rasmuss*
College Station, Texas
May 26, 2011

Joseph Richter*
Newark, Ohio
July 24, 2011

Gary D. Ross*
San Jose, Calif.
June 1, 2011

James G. Sawyer*
Cedar Rapids, Iowa
July 7, 2011

Russell G. Schmidt*
Springville, Iowa
Aug. 6, 2011

Jody R. Schudel
Kalona, Iowa
June 6, 2011

Georg J. Schwarz*
Suffern, N.Y.
March 20, 2011

Jack R. Shatley*
McKinney, Texas
July 13, 2011

Randy A. Simonsen
Urbana, Iowa
July 1, 2011

Kenneth M. Wendell*
Marion, Iowa
May 19, 2011

Ronald P. Whitson*
Morrisonville, N.Y.
May 26, 2011

**retiree*

INTRODUCING PAVES™ 3. THE INDUSTRY'S MOST VERSATILE IN-FLIGHT ENTERTAINMENT SYSTEM. PAVES 3 from Rockwell Collins can deliver an overhead broadcast solution, a full on-demand in-seat entertainment solution or any configuration in between. With all content cached at the seat, single-point system failures are eliminated, giving users a smooth entertainment experience every flight. Easy upgradability provides system owners with cost-effective options. Enjoy the performance. Learn more about PAVES 3 at rockwellcollins.com.

PAVES 3 benefits

Designed for single-aisle operations
Highly reliable
Easily upgradable
A true HD passenger experience

Rockwell Collins
Building trust every day