



AEW&C

Under a \$1.59 billion contract awarded in November, Boeing will provide four 737 Airborne Early Warning & Control systems for the Republic of Korea's EX program. The system gives Korea powerful capability for airborne surveillance, communications and battle management.

Emerging markets in sight



Jim Albaugh

Executive Vice President, Boeing
President and CEO, Integrated Defense Systems

BOB FERGUSON PHOTO

IDS' Jim Albaugh reflects on 2006, discusses outlook for '07 and beyond

From his Washington, D.C., office, Jim Albaugh quite literally never loses sight of the Pentagon, his primary customer. As president and CEO of Integrated Defense Systems, Albaugh knows he must consider several significant factors that will shape the defense industry in the coming years: forecasts of a flattening U.S. defense budget, continuing U.S. military involvement in Iraq, and new Pentagon and congressional leadership.

Boeing Frontiers recently spoke with Albaugh about how IDS fared in 2006 and what's in store for 2007 and beyond. "What excites me more than anything is what the collective knowledge of this company is capable of," he said.

Q: IDS marked the first anniversary of a major reorganization in January. How has the reorganization measured up to your expectations? And how well is IDS positioned as a result to move forward?

A: I'm very pleased with the results of the reorganization. First, I think you organize around where your customers are going. As our customer moved toward a joint-portfolio management approach to capabilities, we needed to do the same. By having all of our domain knowledge and intellectual property in a more focused organization, it has allowed us to do several key things: improve the execution on programs, reduce organizational complexity and improve competitiveness. The result has been wins on some significant programs for IDS, including the Secure Border Initiative network (SBI-net) and Combat Search and Rescue (HH-47 CSAR) programs. As our customer moves more towards jointness, interoperability and capabilities, we are well positioned to support them.

Q: What IDS achievement were you proudest of in 2006?

A: There were so many good things that happened. Certainly all the production programs executed in a terrific fashion. Space programs that a year ago I would have said were troubled were fixed, and we regained the confidence of the customer. Programs like Family of Advanced Beyond line-of-sight Terminals, Joint Tactical Radio System and Global Positioning System—we did a great job there. In Missile Defense, we had three successful launches last year, we regained the confidence of the customer, and we earned one of our highest award fees from the Missile Defense Agency. And we had flawless execution in the launches of satellites and the space shuttle. I can almost go down program by program and, with just a couple of exceptions, we had superb performance.

I was also very pleased with some of the captures we had: the SBI-net win, where I think we really understood what the customer wanted; and the same thing on the HH-47 CSAR. On C-17, we captured 10 additional orders from the U.S. Air Force along with international orders and commitments, which will likely extend the C-17 production line into mid 2009. This is very significant. And the AEW&C (Airborne Early Warning & Control) win that we had in Korea was something that pleased me very much.

Q: If you were to name any one disappointment in 2006, what was it, and what steps have been taken to ensure IDS has moved beyond it in 2007?

A: Certainly the biggest disappointment in 2006 had to do with the AEW&C program. The good news is that the new organization structure helped identify the issues and, as a result, we are fixing the problems. Regardless, it was disappointing that a problem of this magnitude hadn't surfaced earlier.

If I step back and ask myself why, it really comes down to leadership at all levels of the organization. It comes down to making sure that we're open and honest with ourselves about how programs are performing; that we have solid, executable plans in place; and that we have program-management best practices not just in words but in actual practice that will give us the early indications that we have issues on programs.

In terms of what we've done as a result, we have reconfigured how we do our nonadvocate reviews. Steve Goo (vice president,

Looking back to see the future

In 2006, Integrated Defense Systems recorded numerous contract wins and successful program executions. These achievements—and many other successes across Advanced Systems, Network & Space Systems, Precision Engagement & Mobility Systems, and Support Systems—position IDS to pursue opportunities for future growth:

IDS contract wins in 2006

C-17 Globemaster III—In September, the U.S. Congress added \$2.1 billion for 10 additional C-17 Globemaster IIIs for the U.S. Air Force. These, along with recently announced international C-17 orders and commitments, likely have extended the C-17 production line into mid 2009.

SBlnet—In September, the U.S. Department of Homeland Security awarded Boeing a contract—potentially valued at up to \$7.6 billion—for the technology component of its Secure Border Initiative effort. SBlnet will significantly improve the availability of information and tools to Border Patrol agents so they can better detect, identify, classify and resolve illegal activity along the northern and southern United States borders.

HH-47 CSAR—In November, the U.S. Air Force awarded Boeing Rotorcraft the Combat Search and Rescue aircraft contract—potentially valued at up to \$13 billion—to build 141 HH-47 CSAR helicopters.

AEW&C—In November, Boeing signed a \$1.59 billion contract to provide four 737 Airborne Early Warning and Control systems for the Republic of Korea's EX program. The 737 AEW&C gives Korea powerful capability for airborne surveillance, communications and battle management.

Successful IDS execution in 2006

FCS review—Future Combat Systems passed its Initial Preliminary Design Review in August, achieving 100 percent of performance, cost and schedule criteria. The completion of the review marked the beginning of the build, test, integrate phase of the program.


Missile Defense tests—In June, Boeing, industry teammates and the U.S. Missile Defense Agency successfully conducted an Airborne Laser ground test, demonstrating the weapon's ability to track and target a ballistic missile. In October, the Patriot Advanced Capability-3 missile successfully intercepted its target during a flight test. Boeing designs and builds the PAC-3 seeker, which guides the missile toward an enemy target for destruction on impact. In September, Boeing, again working with industry teammates and the U.S. Missile Defense Agency, successfully completed a flight test of the Ground-based Midcourse Defense system. For the first time, an operationally configured interceptor was fired from an operational GMD site, tracked a ballistic missile, and intercepted and destroyed the warhead.

EA-18G Growler first flight—In August, the U.S. Navy's newest and the world's most advanced electronic attack aircraft, the Boeing-built EA-18G Growler, completed its first flight. The plane enables warfighters to perform an array of advanced electronic attack missions, operating from either the deck of an aircraft carrier or land-based airfields.

Upgraded C-130 first flight—In November, a U.S. Air Force C-130 aircraft made its first flight following upgrades Boeing performed under the C-130 Avionics Modernization Program. Boeing is upgrading more than 400 of these military transport aircraft to common avionics.

MICHAEL GAIL PHOTO

GMD



Boeing, working with industry teammates and the U.S. Missile Defense Agency, successfully completed a flight test of the Ground-based Midcourse Defense system. For the first time, an operationally configured interceptor was fired from an operational GMD site, tracked a ballistic missile, and intercepted and destroyed the warhead.

Program Management and Business Excellence) and his organization are much more involved, not just in looking at technical issues, but also considering programmatic and leadership issues. We have done a lot of soul searching and conducted reviews, and strongly believe we don't have any of those kinds of issues in the other programs in our portfolio. Not that we're not going to have problems on development programs. We do the hard stuff at Boeing, and we know we can't predict all the unknowns. But we must have good processes in place that will allow us to see issues early on so that we can bring all the resources of Boeing to address concerns.

Q: Keeping in mind the challenges of the defense budget, the continuing war in Iraq, changes in leadership at the Pentagon—what does all of this mean to IDS in 2007 and over the next few years?

A: The Department of Defense (DOD) budget, including supplemental spending, is one that we think will moderate over the next five years. In fact, in the long-range planning that we put together, we think that the actual budget will decline at a rate of about 1 percent a year compounded annually.

So, again what we have to do is keep the programs that we won sold—and that means execution. We need to provide low-risk, best-value proposals to our customers on new programs, and make very



EA-18G Growler

The EA-18G Growler completed its first flight in August. The plane enables warfighters to perform an array of advanced electronic attack missions, operating from either the deck of an aircraft carrier or land-based airfields.

sure that what we propose is relevant near-term to the warfighter. Those are the things we have to focus on in this new budget environment that we're facing. The good news is, based on our Long-Range Business Plan, despite the fact that in real dollars the procurement opportunities go down, we expect to grow at a compound annual growth rate of about 5 percent over the next five years.

Q: Looking ahead at 2007 and beyond, where do you see the greatest potential for growth?

A: There are four markets that we need to focus on that we believe will provide solid growth opportunities.

The first is international. There are more international opportunities today than I have seen in the last decade in places like Asia, Europe and Canada. As a result, we've put together international strategies that leverage the entire Boeing enterprise that I think will set us apart from the competition.

The second area is services. As the airplanes we have provided to our customers continue to stay in service, and as new platforms like V-22, AEW&C and P-8 are deployed, we'll have opportunities to propose performance-based logistics solutions. That will allow Support Services to grow business by close to a double-digit compound annual growth rate.

The third area is moving into adjacencies—areas that take the capabilities we've developed supporting our DOD and NASA cus-

tomers—and taking those to new markets. A great example of that is SBInet with the Department of Homeland Security.

The fourth area is continuing to add value to products in the field by network-enabling them, making them more capable and increasing their useful life. We're doing that now in support of the Army—integrating into the current forces some of the technologies that we've developed as part of Future Combat Systems.

Q: How do you strike a balance when our competitors are often our partners? How can we compete with them when at times we also partner with them?

A: We work in a very different environment than most industries. We compete with the likes of Lockheed Martin, Raytheon and Northrop Grumman, and they're also our trusted partners on many programs. The reason for that is that there's no company in the defense industry that has all of the capabilities to support the integrated programs or the systems-of-systems kinds of programs that our customer requires. I have the utmost respect for all of our partners/competitors. We have great relationships with all of them, and they trust us. That trust is based on the ethics and integrity of The Boeing Company—doing things right from a conflict-of-interest standpoint, doing things right from a proprietary-document standpoint, being trusted not just as a company but as individuals by partners/competitors. What will set us apart is our



BOEING GRAPHIC

GPS IIF

The Global Positioning System IIF satellites will upgrade the original GPS worldwide timing and navigation system, which utilizes 24 satellites positioned in orbit approximately 12,000 miles (19,300 kilometers) above the Earth's surface.

ability to pull together the collective thoughts of all 73,000 people in IDS better than the competition. If we can do that, we will satisfy our customer.

The other thing we have to do is make sure that we are as cost-competitive as we can be, which means good, robust Lean processes and working only on those things that add value to our customer. If we can do that, if we can be more cost-effective than the competition, if we can pull all the knowledge that we have as an integrated organization to bear on a program for our customer—we'll win.

And there are a number of important competitions coming up in the next year or two, and I will tell you that I want to win them.

Q: How do you see the four companywide growth and productivity initiatives translating into work that's being done at IDS?

A: We have a customer today who is trying to do more for less. In the '90s, when we got a request for proposal, what our customer was looking for was innovation. Today, what our customer is looking for is low-risk, time-certain deployment of capability, and also lower costs. The initiatives will help us provide our customer with the lower-cost solution. They should also allow us to do our work more effectively and efficiently, which should help with that time-certain capability deployment.

We've identified significant cost reductions over the next several years that you'll see reflected in our guidance and in our actual performance. Some of that will translate into improved profit, but more importantly, it will all translate into improving our competitiveness, and it will make cost a strategic advantage for IDS—which is something that I don't think has been an advantage in the past.

Q: What do you want employees to focus on in 2007? And are there some specific, tangible actions that you think they can take?

A: It begins and ends with the customer. When people ask me what they can do to ensure that they have jobs now and in the future, I always give them the same answer: Satisfy the customer better than the competition, and the customer will come back time and time again. More specifically, employee involvement is all about people who understand processes, making those processes better: What processes are you using? Are you using common processes,

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HH-47 CSAR

The U.S. Air Force awarded Boeing a contract in November—potentially valued at up to \$13 billion—to build 141 HH-47 Combat Search and Rescue helicopters.



BOEING GRAPHIC

“In the current environment, there are fewer large new competitive procurements out there—and we need to win.”

—Chris Raymond, vice president of Business Development for Integrated Defense Systems

BOB FERGUSON PHOTO

Prospects abound

Meet IDS' business development leader

Chris Raymond, vice president of Business Development for Integrated Defense Systems, is responsible for the development, integration and implementation of IDS customer and business strategies. Following are Raymond's thoughts on domestic and international markets and the overall prospects for IDS.

On the U.S. government and domestic market:

“As the domestic budget faces increasing pressures, our U.S. customer's focus will shift to operations and support. Our Support Systems team is well-positioned to take advantage of that trend. In the current environment, there are also fewer large new competitive procurements out there—programs like tankers, TSAT (Transformational Communications Satellite) and others in our space business—and we need to win. In addition, our recent SBLnet (Secure Border Initiative network) win represents a deliberate move into an important adjacent market.”

On international opportunities:

“Let's look at India as an example. Certainly, the U.S. policy toward India and the emergence of the nuclear treaty opened up the environment for improved military relations (see story on Page 10). We're putting a lot of enterprise emphasis on India—not just at the IDS level, but also by working together with Commercial Airplanes, Boeing International, Shared

Services and Phantom Works. And, we're moving beyond our traditional means of selling internationally by approaching the emerging opportunities there in a way that truly leverages the best of Boeing.

“Prosperity tied primarily to higher oil prices has enabled the Middle East region to experience an upturn in the investment cycle. We see opportunities there across a broad spectrum of products and services. Applying the lessons we're learning in India will allow us to capture more opportunities as one enterprise.”

On growth in new and adjacent markets:

“The Combat Search and Rescue (HH-47 CSAR) win, to some degree, is an example of how we've moved into an adjacent market—the search-and-rescue rotorcraft market—which is a testament to the team really understanding what the customer values and requires. So, there are areas where we're moving some of our existing products into agencies by keeping them relevant to our customers' missions.

“The Homeland Security market, both domestically and internationally, is an area where we can apply our program-management and large-scale integration experience—as well as our supplier-management competencies, as we are now starting to demonstrate with SBLnet.

“The international market also represents areas for growth. When I say international, I mean more than just selling a product in another country. Our investment in Alsalam in Saudi Arabia, or the equity investment we made last year in Huneed Technologies, a Korean electronics company, are areas where we're taking more than a traditional position in offshore markets.”

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and are those processes as effective as they can be? Are you applying the Lean tools to streamline and improve those processes?

Another question that I think we all need to ask is: In the time that we spend at work, is everything we're doing adding value to the customer? It should be. If we're doing things that don't add value, we shouldn't do them.

Q: What are you most excited about at IDS?

A: It's very difficult for me to say there's any one program that excites me more than another. They're all very important and challenging, and they all contribute to U.S. security or to the space-exploration efforts of the U.S. I think what excites me more than anything is what the collective knowledge of this company is capable of. I don't think there is any other company that can do the hard things that we do, whether that's putting a person into space, changing the way people communicate, enabling our customer to execute their responsibilities to safeguard the United States, or designing a new way of collecting intelligence information. What we do is so complex that I'm not sure that there's any other company in the world that can do what we do. And that's what excites me about Boeing. ■

U.S. Air Force Airman 1st Class Nicholas Shoenhair marshals a KC-10 Extender to its parking spot at a deployed location in Southwest Asia. In 2006, Boeing Support Systems with its U.S. Air Force customer commemorated the 25th anniversary of the KC-10 refueling aircraft, along with the 50th anniversary of the KC-135 Stratotanker. Boeing employees provide a multitude of services for the Air Force's KC-10A fleet including ground-support equipment maintenance—as well as parts and field service representatives who supply technical expertise and training.

KC-10



U.S. AIR FORCE PHOTO BY STAFF SGT. JASON WEBB

ELAINE BRABANT PHOTO

KELLIE MASTERS/TYBRIN CORR. PHOTO

'Opportunities and people'

Boeing Frontiers asked some IDS employees: What is it that excites you about working for Boeing? Here's what they had to say.



DAVE MARTIN PHOTO

Cecilia Perez
Business Development, T-45 program
St. Louis

We're in a very exciting and challenging period for the T-45. We're going to deliver the 200th aircraft in 2007, and we're actively pursuing potential sales to several international customers. My job allows me to work with a lot of diverse people, travel to countries I never thought to visit, and represent IDS and Boeing. It's very satisfying, if a little intimidating at times, to know that the future of this program rests, in part, in my hands.



Steve Nishikawa
Specialist, IDS program management
Kent, Wash.

IDS offers something for everyone. From air and space vehicles to state-of-the-art simulation and cutting-edge research and development, IDS has diverse products and services. We work on complex components as well as large-scale-integration programs such as Future Combat Systems.



Kristine Lim
Structural analysis engineer,
Airborne Laser program
Edwards Air Force Base, Calif.

The Airborne Laser program is just one of many exciting programs and opportunities within IDS. The technology is new and complex, and the team includes multiple companies with diverse backgrounds. The work is challenging and stressful at times; the rewards, however, are tremendous. When first light was achieved at the SIL (Systems Integration Lab), it proved we could do what many thought was unachievable.



JAROD CANTU PHOTO

Mark Shelly
Associate Technical Fellow, Aerial Refueling and Fuel Systems
Wichita, Kan.

When I started working for Boeing on the KC-135 and the B-52, I found my dream working in aerial refueling. I now have a son flying in the U.S. Air Force, and part of his mission will require aerial refueling. Nothing motivates me more to make aerial refueling as safe as possible than the thought of my son on the receiving end of a Boeing tanker.



RICHARD FAU PHOTO

Bridget Davenport
Supply chain procurement agent
St. Louis

In Training Systems, I have the opportunity to make a difference in our military as well as helping foreign customers meet their needs. And I know that even beyond my current assignment, IDS provides a wealth of other opportunities for my personal and professional development.



MICHAEL GALL PHOTO

Chris Harlambakis
Business Development lead, Family of Advanced Beyond line-of-sight Terminals & Integrated Command and Control
Anaheim, Calif.

Three things excite me about working within Integrated Defense Systems: environment, opportunity and people. Boeing has reinvented itself in providing an environment to grow wherever one is located, whatever one's skills or aspira-

tions. The organization also provides ample opportunities for employees because of its broad involvement in government, civil and commercial business. Most important is the people aspect of working at IDS. Boeing attracts the best of the best; and in turn the environment and abundant opportunities at Boeing bring out the best in people.

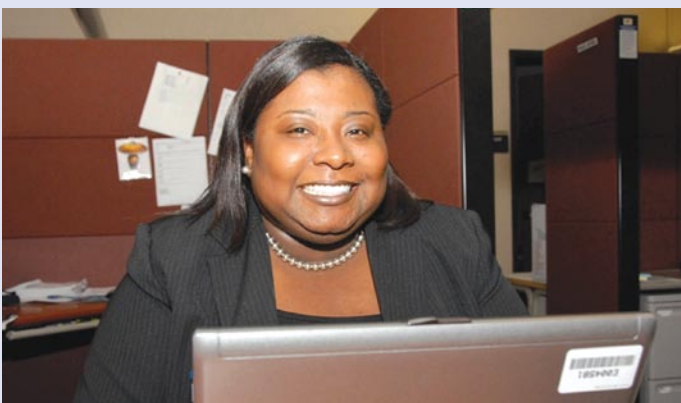


JOE OLMOS PHOTO

Wendy Leung
Embedded software engineer
Huntington Beach, Calif.

What excites me most about working for IDS? It's the excitement of working on big projects that will have a tremendous impact on society. I know that my work is valued and understand how it plays a role in the project. This gives me the feeling my work will create benefits to people and the overall society, in due time, since I realize many IDS projects

take years to complete. I have just finished my assignment for Advanced Systems Orbital Express, and boy, when I first learned of the potential impact of this program, it was motivating to me to make sure it gets completed successfully.



JAROD CANTU PHOTO

Tiffany Harrison
Special Air Mission Finance Manager
Wichita, Kan.

I am constantly excited about the latest advanced concepts, product-support services and cost-effective mission readiness that IDS is able to provide to our customers. I wholeheartedly believe that IDS' greatest competitive advantage is its people. I am motivated daily by the passionate and intelligent leaders and nonleaders I have the honor to work with.