

InVision

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Way to Go, APG-79 AESA Radar Teams!

by Amy Russell



The talented and hard-working integrated product teams responsible for the success of the APG-79 Active Electronically Scanned Array (AESA) radar program have been way too busy to talk about their accomplishments. But their recent achievements deserve recognition.

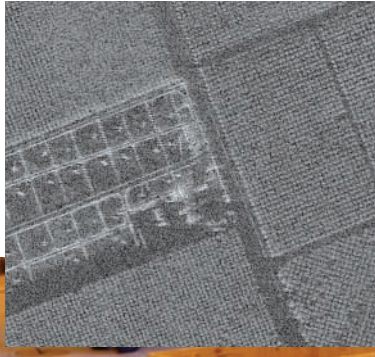
Our APG-79 AESA radar – produced by SAS teams in California, Texas and Massachusetts – is now undergoing flight tests at the Naval Air Weapons Station (NAWS) China Lake. Three Super Hornets are now in the flight testing program: one 'E' model (single seat) and two 'F' models (two-seaters).

Each of the first seven radar modes, including synthetic aperture radar (SAR) and real beam map, was successfully demonstrated on the first attempt. According to our radar guys, such performance is amazing.

The team implemented a unique productivity enhancement for the flight test program: real-time transmittal of flight test audio and video using a high-speed data network. Flight test data from the cockpit is downlinked to the China Lake Range Control Center, then routed to our program office in El Segundo and to Boeing's program office in St. Louis. This enables faster analysis and easier replication of problems for corrective action.

To mark the delivery of Tape 5, a major software milestone, the aircrew flew a Super Hornet from NAWS to LAX in March and joined the SAS celebration.

Another accomplishment to recognize: our AESA radar is part of a feature on the F/A-18 Super Hornet planned for the May 31 issue of *Aviation Week and Space Technology*. The cover story will feature the first declassified APG-79 SAR images (such



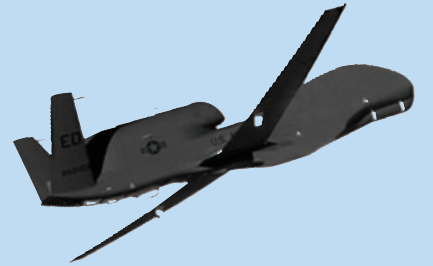
Below, the first APG-79 radar installed at China Lake last year. Left, one of the first declassified SAR maps, showing orange groves, an access road, and livestock pens.



as the one above). SAS created the art for the magazine cover. So look for it on the SAS website!

According to APG-79 Program Manager **Tom Marchese**, the IPT leads and their teams have been working seven days a week, 12 hours a day to meet the Navy's very aggressive schedules and exacting requirements. It's no wonder, then, that Boeing gave SAS a 97% award fee for the program earlier this year.

New Business



SAS to Share in MP-RTIP Pact — Raytheon is negotiating a system design and development contract with Northrop Grumman for Phase II of the U.S. Air Force Multi-Platform Radar Technology Insertion Program (MP-RTIP).

The contract would authorize SAS to work with Northrop to produce six MP-RTIP systems. Three would be for the Global Hawk unmanned aerial system. The remainder would equip the E-10A multi-sensor command-and-control aircraft, an airborne command post in development.

The radar offers commanders several new ways to collect and exploit critical battlefield information. The system simultaneously collects ground-moving-target-indicator imagery and synthetic-aperture-radar still images. It also detects, tracks and identifies more targets faster and with higher resolution than ever.

Look for annual business review recap and photos in next month's issue

Trusted Supplier Delivers Critical Part in One-Tenth Expected Delivery Time

by Tom Olson and Bruce Riblett

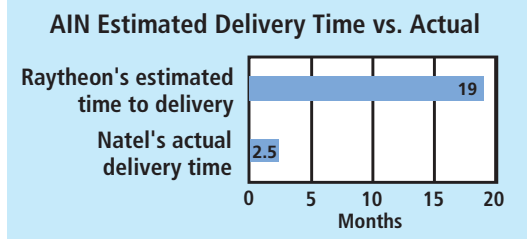
Parts delivered to various Raytheon sites are a common, everyday event. But a part delivered by a supplier's president to SAS headquarters in El Segundo, Calif., means something extraordinary occurred.

This is certainly the case when the president of Natel Engineering, a microelectronics manufacturer, personally handed SAS Vice Presidents **Dick Johnston** and **Wes Motooka** an Aluminum Nitride Substrate (AIN) in approximately one-tenth the expected delivery time from startup to full production. What also makes this achievement so significant is it includes problematic and time consuming ramp-up factors such as equipment purchase, factory startup and qualification of parts and manufacturing processes!

Natel's success in beating deadlines with this venture crystallized, in part, because the APG-79 AESA program and the Multi-platform Radar Technology Insertion Program (MP-RTIP) faced serious consequences due to delayed deliveries, with no other option for sourcing this product.

Understanding how critical this situation was, Natel President Sudesh Arora told SAS employees: "Just tell Dick I'll take care of it because that's what partners do for each other."

"Sudesh's use of the word 'partner' underscores our ongoing relationship, which has grown stronger over the 25 years we've been doing business," says Johnston, SAS vice president, Operations. Johnston noted that Natel embodies the very definition of the word relationship, defined by Merriam-Webster as connecting "two or



Above, VP Wes Motooka (left) examines an AIN delivered in record time by Sudesh Arora, president of Natel Engineering.

more things or parts as ... belonging or working together ..." This captures the type of industry bond Raytheon SAS and Natel have nurtured. Today, each is a trusted extension of the other.

Because Raytheon and Natel share an open and cooperative relationship, there are opportunities for leveraging each other's strengths.

Another example is the co-sponsoring by

Johnston and **Pat Hurley**, vice president, Electronic Warfare, of a significant integrated supply chain initiative. To help get this sponsorship off the ground, Natel committed to providing technically complex subsystems at one-third the program's current price.

Adds Motooka, vice president, Tactical Aircraft Systems and Navigation: "This co-sponsorship is a real-life example of our vision to reduce costs as well as our vendor base through partnerships and strategic approaches to sourcing materials. In turn, reducing the number of vendors greatly enhances day-to-day stability while simultaneously minimizing problems that can arise with a wide supplier base."



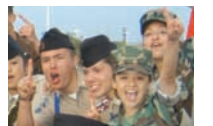
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