

**WORKING DRAFT**

**A Dossier on the**

**NRO Aerospace Data Facility Southwest  
NGA Integrated Operations Center Southwest  
NASA White Sands Complex/TDRSS Ground Station**

**Las Cruces, New Mexico**

**Version of 2012-07-16**

**WORKING DRAFT**

~~SECRET//TK//NOFORN~~

**NRO DIRECTOR OF SECURITY AND COUNTERINTELLIGENCE  
NOTE 2008-05**

23 October 2008

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**(U) MISSION GROUND STATION DECLASSIFICATION  
MANDATORY TRAINING**

(U) The Director, National Reconnaissance Office has decided that all NRO employees are required to complete the MGS Declassification awareness training.

(U) This requirement applies to all NRO components, employees, and badged contractors. In deference to the fact this will be made a requirement in the future for acceptance of visit certifications to Mission Ground Stations (MGSs), all affiliated contractors are strongly encouraged to avail themselves to this training as well.

(U) Effective, 15 October 2008, the "fact" that the NRO has (U) three domestic Mission Ground Stations (MGSs) located near Washington D.C.; Denver, CO; and Las Cruces, NM can be, for the first time, acknowledged as an unclassified fact. These locations have been renamed and should now be referred to as Aerospace Data Facility, East; Colorado; and Southwest respectively.

(U) Furthermore, effective this same date, the NRO's "presence" at RAF Menwith Hill (RAFMH), located near Harrogate, United Kingdom and the Joint Defence Facility Pine Gap (JDFPG), located near Alice Springs, Australia, can be acknowledged as an unclassified fact.

(U) With this change comes a responsibility to stay informed. All employees and affiliates are reminded that you must be aware that program specific information and associations will remain classified and unchanged.

~~(S//TK//NF)~~ The Office of Security and Counterintelligence (OS&CI) has provided many different links to access the training/information from a multitude of locations below:

<http://www.nrosecurity.npa.gov/mgsdeclassification> (NMIS, GWAN)

[http://\(b\)\(1\)\(1\)4c/mgsdeclassification/](http://(b)(1)(1)4c/mgsdeclassification/) (JWICS)

~~SECRET//TK//NOFORN~~

## Spy Satellites: Entering a New Era

*Intelligence agencies are launching a constellation of new reconnaissance satellites with broad military and arms control implications; but can the data be handled?*

AFTER WAITING 2 YEARS for the return of the space shuttle, America's intelligence agencies have begun to launch a constellation of new and improved spy satellites. All three of the space shuttle launches since the Challenger accident, including last week's flight of the Discovery, have added important links in this surveillance network.

By the end of 1989, if all goes well, three new reconnaissance spacecraft will be in orbit, collecting unprecedented amounts of information on military targets around the globe. Together, they will mark a new era in the ability of the U.S. government to monitor arms control agreements, locate military targets precisely, and wage war in far-flung parts of the globe.

The first of the new satellites flew into orbit last December aboard the space shuttle Atlantis, according to an account in the industry magazine *Aviation Week* that has been confirmed privately by Administration sources. It is a radically new type of surveillance satellite that uses radar to produce high-quality images of the earth's surface. Although NASA has previously launched similar instruments, called synthetic aperture radars, to study geologic formations and ocean phenomena, this is the first imaging radar to be placed into orbit specifically for military surveillance. First known as Indigo, the satellite's code name later changed to Lacrosse, the name revealed by *Washington Post* reporter Bob Woodward in his book *Veil*.

Later this year, the first two KH-12 spy satellites are scheduled to fly into orbit aboard Titan IV rockets. The KH-12 is the latest and most advanced in a long line of photographic intelligence satellites, which use a powerful telescope aimed at the earth to take pictures using visible light and infrared radiation.

Equally important in this network are the Tracking and Data Relay Satellite System (TDRSS) satellites, the third of which was launched by Discovery last week. Although secrecy surrounds military use of the TDRSS, most observers believe that Indigo-Lacrosse is using the satellite to relay its data flow to earth. The KH-12's images probably will be relayed through TDRSS as well.

TDRSS, in fact, is where NASA's science

missions and the secret world of military reconnaissance come into closest contact. Both the military and the space shuttle are "priority 1" users of TDRSS's communications channels, according to NASA officials. The satellite's capacity is scheduled by computer at the TDRSS ground station, located at White Sands Missile Range, New Mexico.

Lower priority users of TDRSS, such as the Hubble Space Telescope or the Landsat earth-imaging satellites, must submit their requests to use TDRSS without knowing which times are blocked out for the military's use. "You're in an absolutely crazy situation where you have to play guessing games," said Robert Bless, professor of astronomy at the University of Wisconsin, Madison. He is the principal investigator for the high-speed photometer on the Hubble telescope.

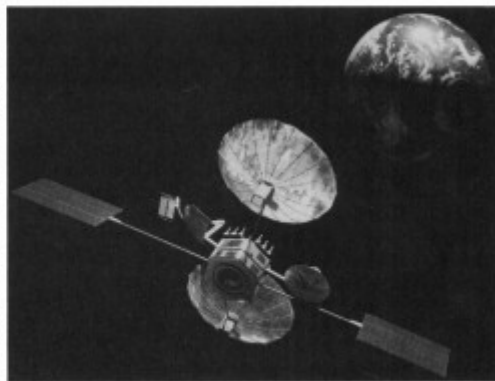
The peak rate at which Hubble's instruments will send data through TDRSS—1 million bits per second (Mbs)—is a mere trickle compared with the flood of data generated by the new spy satellites. Synthetic aperture radars like Indigo-Lacrosse, in particular, tend to swamp any available data relay, because transmission capacity and available computing power, not the radar itself, generally limit the quality and size of the images that the system can produce.

Robert Cooper, former head of the Defense Advanced Research Projects Agency, noted in an interview that a high-resolution radar system, with a resolution of perhaps 1 foot, can generate raw data at a rate of many billions of bits per second—far beyond the capacity of any existing communication links in space. Cooper is now president of Atlantic Aerospace Electronics Corporation.

Reducing the raw data instantly to images—a data stream small enough for TDRSS to handle—would require one of the world's largest supercomputers on board

the spacecraft, said Cooper. A more likely way of getting around the data bottleneck is for Indigo-Lacrosse only to operate intermittently, storing bursts of data on recorders. These devices could then transmit the data at a slower rate through TDRSS to earth.

NASA plans to launch its own imaging



The TDRSS satellites, one of which was launched last week by the space shuttle, play a key role in relaying data from spy satellites.

radar as part of its Earth Observing System (EOS) sometime in the late 1990s. The instrument will detect objects roughly 30 meters across in a swath 50 kilometers wide, with less detail when the swath is expanded to its maximum width of 700 kilometers. The data rate of its transmissions is limited to 300 Mbs, the maximum capacity of one of TDRSS's two high-capacity channels. "The data rate limits everything. It limits resolution, gray scale accuracy, and field of view," said one of EOS's designers at NASA's Jet Propulsion Lab.

Because Indigo-Lacrosse's performance is limited by the capacity of TDRSS, the pictures it furnishes probably are less detailed than those from optical systems like the KH-12, which can detect objects only a few inches across. According to John Pike of the Federation of American Scientists (FAS), the new radar satellite probably can detect objects as small as 1 meter across, since that level of detail is necessary to identify important items such as mobile Soviet missiles.

The radar's crucial advantage, however, is its ability to see through the clouds that generally hide much of the Soviet Union and Europe from optical remote-sensing satellites such as Landsat and the KH-12. An all-weather capability "opens up entire new worlds," said Cooper, who, like other former government officials interviewed for this article, refused to confirm Indigo-Lacrosse's existence.

Compared to the novelty of Indigo-Lacrosse, the KH-12 is practically a known quantity. In fact, it probably bears a strong resemblance to the Hubble Space Telescope, since both were built to fit inside the shuttle bay. The primary mirror (and therefore the power) of the KH-12's telescope can be little larger than Hubble's.

As a comparison, a telescope with Hubble's power in an orbit 200 nautical miles above the earth could detect objects on the earth's surface 7 inches across. According to Pike and Jeffrey Richelson of the private National Security Archive, the KH-12 carries a large quantity of fuel that it can use to maneuver in space, so that it could dip down to a low 100-mile orbit in order to see details half as large. In order to counter the distortions caused by the earth's atmosphere, spy satellites use computer-controlled "adaptive optics" that vary the surface of its mirror minutely.

Detecting ever smaller objects, however, is no longer the key to more effective spying from space, according to reconnaissance specialists. The greatest technical challenges now lie in programming high-speed computers to unearth valuable information buried in the mountain of data.

"In the past, the problems have been mostly connected with sensing the data. Now, they are more in filtering and interpreting it," said Thomas Rona, who moved from the Department of Defense to be



**Edward Aldridge:** Better space-based surveillance capability is needed to target mobile Soviet missiles and command centers.

deputy director of the White House Science Office in 1986.

"You have to filter it in terms of geography, but also in terms of targets that are interesting," said Rona. "Humans used to do this—photo interpreters. Now there are attempts to automate it."

Technical experts for the Central Intelligence Agency, the Pentagon, and the National Reconnaissance Office now are struggling to harness computers to the task of filtering out valuable information from the deluge of data sent down from space. Computers, says former Air Force Secretary Edward (Pete) Aldridge, eventually may help solve a typical dilemma confronting intelligence analysts: "Somewhere in that data there is a target. Now, how do you find it . . . unless you take the population of the United States and make them photo interpreters?" Aldridge is now president of McDonnell Douglas Electronics Corporation.

The sheer volume of data streaming down through TDRSS, threatening to overwhelm even armies of analysts, is one source of pressure to automate the interpretation of photographic intelligence. But skyrocketing demands on the reconnaissance system are even more important.

Rather than simply monitor known sites, such as missile silos and airfields, satellites now are required to find and track Soviet nuclear missiles that move about from day to day. This will be necessary to verify future arms control treaties, but the Air Force also has a more frankly military aim: targeting the missiles for destruction in wartime.

"As we see [Soviet] leadership and military forces becoming more mobile, it's putting more demands on us to detect, localize, and hold at risk those forces," said Aldridge. "The biggest difficulty is not searching the target area. Even if the sensor has flown over the target, and it is in the database, it still has to be found."

Computers can search the data from a wide area, looking for an electronic signal that matches the known return from a Soviet missile launcher. But while simple in concept, teaching computers to recognize an object—particularly when the Soviet Union is also trying to hide the targets under cover and behind trees—has proved difficult in practice. "We're still 5 years away from the point where some data comes in and rings a bell and says I've got a target X in location Y," said Aldridge.

The most valuable contribution of computer analysis, said Rona, may be in matching up information from various sensors, so that one instrument can correct the other's blind spots. While the KH-12 might be fooled by a plastic decoy built to look like a tank, for instance, the radar of Indigo-La-

## Culliton Named to New Post

Barbara J. Culliton, News Editor of *Science* for the past 10 years, has decided to return to her first interest—reporting. She has accepted a newly created position at *Science* as Correspondent-at-Large, which will give her wide latitude in the choice and writing of news and features for the magazine. During her editorship, the News section has received many distinguished prizes, including the George Polk Award for the "lucidity and pertinence" of News and Comment.

crossed could immediately tell the difference. "All sensors lie a little," said Rona. "The reason that you coalesce information from all sorts of sensors is that you don't trust any of them." Attempts to write computer software capable of comparing and evaluating data from many different sources, however, have run into significant problems. Military sources estimate that working prototypes of these "data fusion" systems will not be available for several years.

Complicating the job even more is the growing demand for access to data from satellites. Not only the President, but every major U.S. military commander around the world can now request pictures from satellites to help plan military operations.

The trend began nearly 10 years ago, when the armed forces started a program called TENCAP (Tactical Exploitation of National Capabilities) aimed at making information from space reconnaissance available to military commanders. Although an Army spokesman refused to provide any information on TENCAP, calling the program "100% classified," it has been discussed frequently at congressional hearings.

In 1981, the Marines established a TENCAP elective at their staff college, said Lieutenant General Harry T. Hagaman (retired), former Director of Intelligence for the Marine Corps. "We opened that magic door . . . and many eyes were opened to what was actually out there," said Hagaman. "As you continue to educate people about what's available, you build up enthusiasm . . . and ways begin to be developed on how to break down some of the old national barriers [preventing] some of this very fine information [from being] sent lower down [the chain of command]."

The primary barrier to wider use of satellite data, said Hagaman, has been secrecy. But under the pressure of crises, such as the

military operations in Beirut and the Persian Gulf, decisions were made to distribute information that had been held very tightly by intelligence officials in Washington. "It takes a commander in the field screaming for more information to get things to change," said Hagaman.

"Most of the imagery is declassified down to the level where it's just handled as 'secret,'" said Donald Latham, former Assistant Secretary of Defense for Command, Control, Communications, and Intelligence. "We can move imagery today, worldwide, with our communications systems. We've even got suitcase versions of these systems, where you can look at [an image] and do things with it—all with soft copy, without film."

It now takes only hours, said several sources, for a picture of a particular scene to get from the satellite to the military commander who ordered it. In the future, said Aldridge, field commanders may be able to look at a scene at the very moment that the satellite is photographing it.

These technical marvels have their price. "Data fusion systems are not cheap," commented Aldridge. According to the industry newspaper *Defense News*, the Army has spent somewhere between \$840 million and \$1 billion during the past decade on a single system, called the All Source Analysis System, that is designed to distribute information from various intelligence sources to Army commanders. Primarily because of problems with software, "it's 2 or 3 years, and a couple of hundred million dollars away," said Hagaman.

According to published reports, the White House has agreed to a demand by the Senate Intelligence Committee that it spend \$6 billion on improving surveillance systems during the next 5 or 6 years. The FAS's Pike estimates that each KH-12 satellite costs between \$1.5 and \$2 billion, not including the cost of launch.

The irony of spending this quantity of money on spy satellites while cutting off funds for Landsat, the civilian earth resources monitoring satellite, was noted by Congressman Dave McCurdy (D-OK), a member of the House Intelligence Committee, which approves all secret reconnaissance projects. At a hearing on Landsat on 8 March, McCurdy complained that "the green eyeshade guys down in a basement [at the White House Office of Management and Budget] are running national space policy. If [Landsat] were a special access program, we wouldn't be up here worrying about funding." ■ DANIEL CHARLES

*Daniel Charles is a free-lance journalist based in Washington, D.C.*

24 MARCH 1989

## DOD Lists Critical Technologies

The Department of Defense (DOD) has submitted to Congress a list of 22 technologies that it considers critical to the long-term superiority of U.S. weapons systems. In every area except one, the United States holds a lead over the Soviet Union, and in most cases the lead is substantial, according to the Pentagon's analysis. But among U.S. allies, technological leadership in some key areas has gone to Japan.

The list was prepared in response to legislation authored last year by Senator Jeff Bingaman (D-NM), who says he has grown increasingly frustrated because "technologies that seemed to be on everybody's list of truly critical technologies were severely underfunded in DOD [budget] requests." That experience, says Bingaman, "left a real question in my mind as to whether we had a very well prioritized science and technology program in the DOD."

Bingaman therefore attempted to force the Pentagon to consider its technological priorities by asking DOD, together with the Department of Energy, to list 20 technologies deemed especially critical for future weapons systems. (The Pentagon came back with a list of 22.) He also asked for an assessment of where the United States stands in relation to other countries in the development and use of these technologies.

The Pentagon's report\* could prove important in budget deliberations on Capitol Hill. It has already been the focus of hearings, held on 17 March, by the Senate Armed Services Committee's defense industry and technology subcommittee, which Bingaman chairs.

The report indicates that the United States holds a clear world lead in technologies that have primarily military applications, such as sensitive radars and "stealth" technology. But in most areas that also have civilian applications, the United States is losing ground to allied countries.

In the area of microelectronic circuitry and the fabrication of microelectronics devices, for example, the report states that "if current trends continue, the United States can be expected to become dependent on Japanese suppliers of many key materials and production equipment by the year 2000." The same holds true for gallium arsenide semiconductors, a technology in which "Japan is the undisputed leader," fiber optics, and some areas of materials science.

As for the Soviet Union, the report indicates that the United States is technologically superior in all the key areas except for high-power microwave oscillators. In most cases, the Soviet Union's relative backwardness in state-of-the-art computing is a severe handicap. "In the USSR, software continues to be an area of serious deficiency," the report says, and "there is no evidence that the Eastern bloc has achieved any success in high-performance computing. . . . The Soviets lag the U.S. and can be expected to fall further behind due to a lack of capability in the underlying microcircuitry." These deficiencies affect Soviet capabilities in areas as diverse as robotics and fluid dynamics, the report says.

The report estimates that DOD will spend a total of about \$2 billion this year on R&D involving 21 of the 22 key technologies it identified. (The budget for one technology—suppressing the radar signature of weapons systems—is classified.) In some areas, such as the development of sensitive radars and computer modeling, the Strategic Defense Initiative (SDI) provides the bulk of the funding. This led Bingaman to suggest that perhaps Congress should move some of the programs out of the SDI budget in order to protect them when the SDI request is cut back by Congress.

The critical technologies identified by the Pentagon are: microelectronic circuits and their fabrication; the preparation of gallium arsenide and other compound semiconductors; software producibility; parallel computer architectures; machine intelligence/robotics; simulation and modeling; integrated optics; fiber optics; sensitive radars; passive sensors; automatic target recognition; phased arrays; data fusion; signature control (stealth technologies); computational fluid dynamics; air-breathing propulsion; high-power microwaves; pulsed power; hypervelocity projectiles; high-temperature, high-strength, lightweight composite materials; superconductivity; and biotechnology materials and processing. ■ COLIN NORMAN

\*The Department of Defense Critical Technologies Plan, 15 March 1989.

[http://www.nro.gov/history/csnr/programs/NRO\\_Brief\\_History.pdf](http://www.nro.gov/history/csnr/programs/NRO_Brief_History.pdf)

# THE NATIONAL RECONNAISSANCE OFFICE AT 50 YEARS: A BRIEF HISTORY

by Dr. Bruce Berkowitz  
Center for the Study of National Reconnaissance  
National Reconnaissance Office  
Chantilly, Virginia  
September 2011



CENTER FOR THE STUDY OF  
NATIONAL RECONNAISSANCE

To support this constellation, the NRO depends on a network of ground stations. This network includes the Aerospace Data Facility–East at Ft. Belvoir, Virginia; the Aerospace Data Facility–Southwest at the White Sands Missile Test Range, New Mexico; and the Aerospace Data Facility–Colorado at Buckley Air Force Base, Colorado. Each is a multi-mission facility that supports worldwide defense operations and the collection, analysis, reporting, and dissemination of intelligence information for multiple agencies.

The NRO also maintains a presence at several locations overseas. These include the Joint Defense Facility Pine Gap in Alice Springs, Australia and RAF Menwith Hill, in Harrogate, United Kingdom. The NRO supports joint missions at these locations through the provision of technical systems and shared research and development. The NRO's participation is achieved with the consent of the host governments and contributes to the national security of the countries involved.

In addition to its intelligence collection systems, the NRO maintains an extensive global communications network that supports both NRO operators and other military and intelligence users. The NRO's communications infrastructure includes for example, its encrypted satellite data relay system and messaging systems essential for the organization to function, such as the Special Operations Communications (SOCOMM) system.

[https://www.fbo.gov/index?s=opportunity&mode=form&id=aaa465790b6d479b3e2ef935518ae88f&tab=core&\\_cview=0](https://www.fbo.gov/index?s=opportunity&mode=form&id=aaa465790b6d479b3e2ef935518ae88f&tab=core&_cview=0)

*[EXCERPTS]*

Print Server

Solicitation Number: HM0177-09-T-0067

Agency: Other Defense Agencies

Office: National Geospatial-Intelligence Agency

Location: Acquisition Technology (ACT)

Original Synopsis

Aug 19, 2009

7:38 am

Solicitation Number:

HM0177-09-T-0067

Synopsis:

Added: Aug 19, 2009 7:38 am

The National Geospatial-Intelligence Agency (NGA) has a requirement for an HP Print Server.

Contracting Office Address:

ACT Mail Stop P-158

12310 Sunrise Valley Road

Reston, Virginia 20191-3449

Place of Performance:

IOC-SW

12400 NASA Road

Las Cruces, New Mexico 88012

United States



NATIONAL RECONNAISSANCE OFFICE  
14675 Lee Road  
Chantilly, VA 20151-1715

9 April 2010

Mr. John Greenewald, Jr.



Dear Mr. Greenewald:

This is in response to your e-mail dated 29 May 2009, received in the Information Management Services Center of the National Reconnaissance Office (NRO) on 29 May 2009. Pursuant to the Freedom of Information Act (FOIA), you are requesting "the last four issues of the magazine RECON."

Your request was processed in accordance with the Freedom of Information Act, 5 U.S.C. § 552, as amended. A thorough search of our files and databases located four records consisting of sixty-five pages responsive to your request. These records are being released to you in part.

The material being withheld is denied pursuant to FOIA exemptions:

- (b) (1) as properly classified information under Executive Order 13526, Section 1.4(c), (e) and (g);

- (b) (3) which allows the withholding of information prohibited from disclosure by statute, 10 U.S.C. § 424 which states: "Except as required by the President or as provided in subsection (c), no provision of law shall be construed to require the disclosure of (1) The organization or any function . . . (2) . . . number of persons employed by or assigned or detailed to any such organization or the name, official title, occupational series, grade, or salary of any such person . . . (b) Covered Organizations . . . the National Reconnaissance Office; and

- (b) (6) Which applies to records which, if released, would constitute a clearly unwarranted invasion of the personal privacy of individuals."

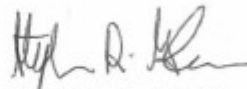


The FOIA authorizes federal agencies to assess fees for record services. Based upon the information provided, you have been placed in the "educational/scientific/media" category of requesters, which means you are responsible for duplication fees (.15 per page) exceeding 100 pages. Additional information about fees can be found on our website at [www.nro.gov](http://www.nro.gov). In this case, no assessable fees were incurred.

You have the right to appeal this determination by addressing your appeal to the NRO Appeal Authority, 14675 Lee Road, Chantilly, VA 20151-1715 within 60 days of the date of this letter. Should you decide to do so, please explain the basis of your appeal.

If you have any questions, please call the Requester Service Center at (703) 227-9326 and reference case number F09-0080.

Sincerely,



Stephen R. Glenn  
Chief, Information Access  
and Release Team

Enclosure: Four Recons (65 pgs)

The Recon - May 04, 2009

~~SI//TK//REL TO USA, FVEY~~

(U) ADF-Southwest Celebrates (b)(1)1.4c

(U) The Aerospace Data Facility-Southwest (ADF-SW) celebrated its (b)(1)1.4c in Las Cruces, New Mexico. Distinguished visitors and guest speakers included Lt Gen (Ret) James H. Clapper, Jr., Under Secretary of Defense for Intelligence; Mr. Scott Large, Director National Reconnaissance Office; Mr. Lloyd Rowland, Deputy Director National Geospatial-Intelligence Agency; and Brig Gen Blair Hansen, Deputy Chief of Staff HAF/A2 ISR.

(S//TK//REL) The (b)(1)1.4c celebration was a momentous occasion that recognized (b)(1)1.4c (b)(1)1.4c to the most recent transition of (b)(1)1.4c. Festivities included a historical walk through the hallways of ADF-SW buildings 10, 10-1, and 10-2. Features along the route included a 64-foot timeline depicting events from 1956, with the inception of the U-2 and first reconnaissance platform, to the (b)(1)1.4c. The timeline featured commanders who have served at the site over the past (b)(1)1.4c highlighted successful milestones and collaborative efforts, posted Space Sentinel articles of ADF-SW's support to the Intelligence Community, identified rescue efforts (including the (b)(1)1.4c), and displayed a variety of spacecraft and rocket models.

(U) The formal celebration was held in the Acoma conference room and featured an (b)(1)1.4c video with footage, captured from (b)(1)1.4c that covered mission inception and transformation, milestones, vehicle launches, and ground processing upgrades and enhancements.

(U) Seasoned ADF-SW staff enjoyed a "grip and grin" with the honorees. Commemorative pins were presented to ADF-SW employees with (b)(3) service. The celebration concluded with a ceremonial saber cake-cutting by the distinguished guest speakers and their counterparts.

(U) ADF-SW (b)(1)1.4c Cake-Cutting Ceremony. Left to right: Col (b)(3) (b)(6) ADF-SW/CC; Mr. Scott Large, (b)(3) (b)(6); Lt Gen James Clapper, (Ret) USD(I); SMSgt (b)(3) (b)(6) COMM Det 4 Chief; Brig Gen Blair Hansen, HQ AF/A2; Mr. (b)(3) (b)(6) Dir AF Systems; Mr. Lloyd Rowland, Dep Dir NSA; and Mr. (b)(3) (b)(6) Dir IOC-SW.



~~S//TK//REL TO USA, FVEY~~

<http://www.icahest.org/docs/2010-06-10/Martin%20Feedback%20email%2011%20June%202010.pdf>

From: Fredrick T. Martin [mailto:ftmartin@topsecret.net.com]  
Sent: Friday, June 11, 2010 3:49 PM  
To: ICAHST Council Members (icahest@topsecret.net.com)  
Cc: Fredrick T. Martin (fredrick.martin@dhs.gov)  
Subject: Feedback from 10 June 2010 ICAHST Quarterly Meeting  
Feedback from 10 June 2010 ICAHST Quarterly Meeting

*[ICAHST: Interagency Council for Applied Homeland Security Technology ]*

*[EXCERPT]*

ICAHST Working Group Status:

Mr. Frank Toomer, ICAHST Outreach Director, NRO, presented an update on current outreach activities, including the ICAHST membership efforts; the Civil Applications Committee (CAC), chaired by the US Geological Survey; and the NRO Law Enforcement / Homeland Security Technology Exchange Working Group (TEWG).

Mr. Toomer invited all ICAHST members to participate in TEWG activities. The next meeting of the TEWG will be held at FBI facilities at Quantico, VA from 10:00am to 12:00pm on Thursday 17 June. A SECRET Security clearance is required to enter the FBI grounds. If you are interested in attending, please contact Bob Hamburg at 703-808-3222.

The TEWG is also planning a visit with TS/SCI briefings at **US Air Force (ADF-SW)**, El Paso Intelligence Center (EPIC) and the DoD Joint Task Force-North (JTF-N) during 22-23 June 2010. For additional information, please contact Mr. Toomer at 703-808-2328 or Mr. Kevin Lewis at 703-808-2125.



This Briefing is  
**UNCLASSIFIED**

# *NORAD Maritime Warning Mission*

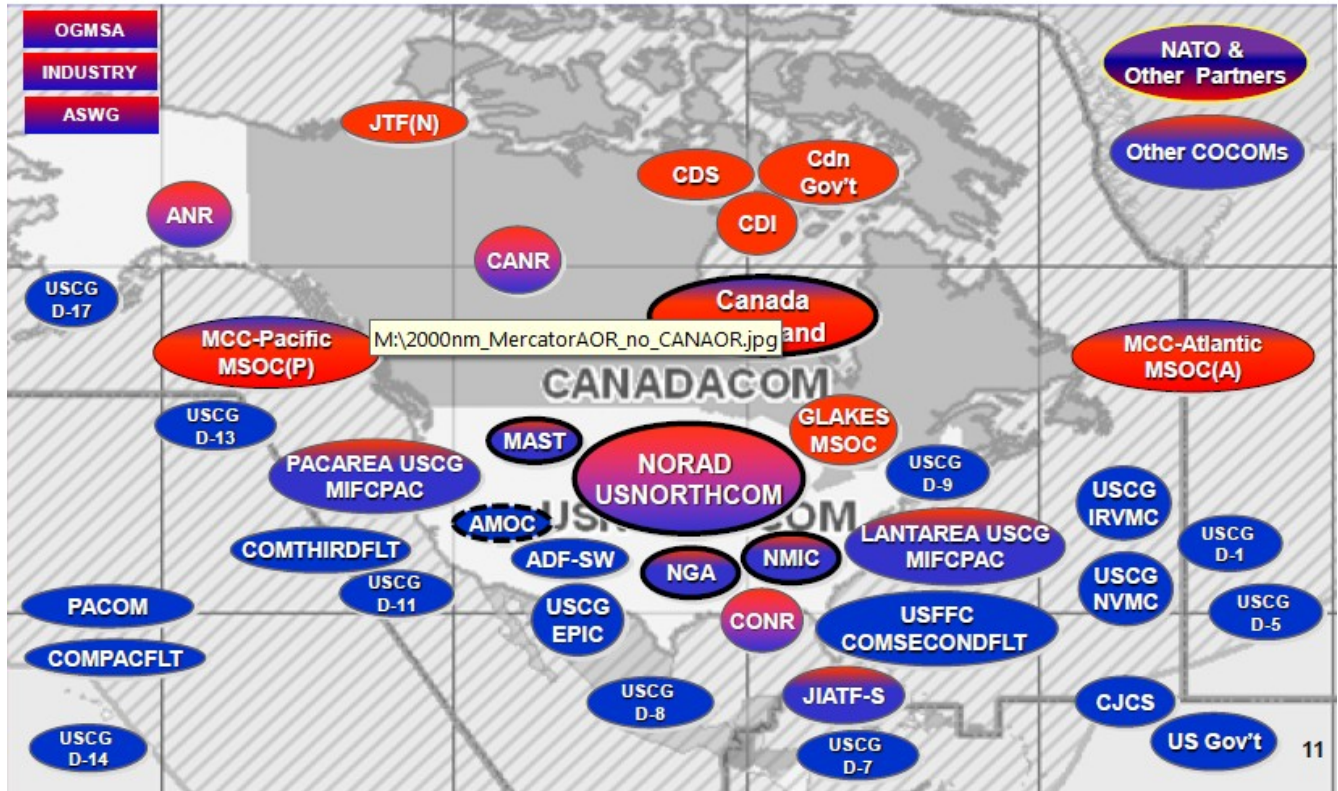
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*Briefing to Working Group 1  
MDA Policy and Laws*

Capt(N) Kurt Salchert, CF  
Division Chief, NJ32  
26-29 October 2009



**UNCLASSIFIED**  
*Current Information Sharing Environment...  
And Growing*



# **Job Descriptions**

This is Google's cache of <http://www.americajob.com/job.asp?cid=0&tid=89473167&no=3918252&retPage=%2FNew-Mexico%2Fadmin-management-jobs-4.asp>. It is a snapshot of the page as it appeared on Jun 5, 2010 08:01:36 GMT.

<b>Job Title:</b>	<a href="#">Staff Officer</a>
<b>Agency:</b>	Department Of Defense   National Geospatial-Intelligence Agency
<b>Salary:</b>	57408.00 to 111823.00
<b>Open Dates:</b>	05/24/2010 to 06/04/2010
<b>Pay Grade:</b>	IA-0301/03-03
<b>Location:</b>	US-NM-LAS CRUCES (New Mexico )
<b>Openings:</b>	1

**Duties:**

ADDITIONAL INFORMATION: The Integrated Operations Center-Southwest (IOC-SW) is a diverse Geospatial Intelligence (GEOINT) Community spanning most of NGA's corporate and functional management responsibilities to include tasking; processing; exploitation; analysis and production; dissemination; national and international partnerships; GEOINT policy; training and outreach; research and development; acquisition; and technology insertion. Located in Las Cruces, New Mexico at the National Reconnaissance Office (NRO) Aerospace Data Facility-Southwest (ADF-SW), the IOC-SW is not a traditional, hierarchical organization working a narrow NGA mission set under a single chain of command. Rather, it is a microcosm of NGA and includes elements of other GEOINT organizations as well responsible for 12 different core missions and a host of enabling activities. At present, this GEOINT Community consists of individuals representing 16 different NGA home offices from nine KC's and two military service components, with most members organizationally, programmatically, and operationally linked to those external offices/components. The Integrated Operations Center-Southwest (IOC-SW) is seeking a staff officer who is self-starting, energetic and able to handle multiple tasks. The selectee will report to the IOC-SW Chief of Staff (CoS), and will serve as the focal point of contact for the IOC-SW Business Continuity Plan (BCP) and Continuity of Operations Plan (COOP), policy development and implementation, various administrative duties such as task management and corporate communications. The selectee will represent the IOC-SW CoS in various forums and inform IOC-SW leadership of any relevant topics, issues or actions of interest to the IOC-SW community. They will also provide backup to other IOC-SW staff to ensure day-to-day administrative tasks are accomplished. This will require the selectee to obtain a working knowledge of other IOC-SW staff roles and responsibilities.

This is Google's cache of  
[http://www.jobcentral.com/jobs/Lockheed\\_Martin/NM/Systems\\_Engineer\\_Stf/010481234/job](http://www.jobcentral.com/jobs/Lockheed_Martin/NM/Systems_Engineer_Stf/010481234/job).  
It is a snapshot of the page as it appeared on May 18, 2009 05:12:30 GMT.

Systems Engineer Stf Job in New Mexico

Title : Systems Engineer Stf

Company : Lockheed Martin

Location : New Mexico

Date Acquired : 4/22/2009 12:28:17 AM

Date Updated : 5/11/2009 12:18:54 AM

Req ID 121471BR

Industry Job Title Systems Engineer Stf

Standard Job Code/Title E1464:Systems Engineer Stf

Required skills Current ADF-SW site experience

In depth knowledge of site specific activities

Established relationships with Ground and Systems Operation GPOCs

Systems Integration experience

Strong NRO experience

Desired skills Team lead experience

Full Spectrum Leadership attributes and ability

Specific Job Description High visibility position where individual will be a member of the site System Integration team for Program 606 working directly at remote customer location. This position will support approximately 50% Ground and 50% System Operations support. This person will already be located in the southwest region, will have domain experience, and will have established relationships with site customers. The candidate will be a proven team player, have ability to adapt to rapidly changing work environments, possess strong negotiation skills, have proven project management skills, ability to coordinate across multi-int environment with diplomacy and tact, influential with customer as needed to defend the ultimate mission goals, along with being highly organized. Requires full life cycle engineering experience, including transition to operations, with strong analysis skills.

Specific tasks include, but are not limited to: communication and collaboration with SI SO and GEI teams; document update and control; RFC assessment, analyze/assess schedules, requirements/specification development, integration, test and transition, readiness activities, ground processing, ground operations, CONOPS development, experience at the ADF-SW, knowledge/experience with ICDs/specifications for the ADF-SW and ADF-E; coordination with RFC authors for requirements clarification; provide technical assessments for SOERB and GMM ERB; coordinate and conduct design reviews, technical reviews, program management reviews, and other technical forums as required; ability to coordinate across multiple customer domains and contractors; approximately 15% travel with customer to support reviews as needed.

Applicants selected will be subject to a government security investigation and must meet eligibility requirements for access to classified information.

Standard Job Description Performs technical planning, system integration, verification and validation, cost and risk, and supportability and effectiveness analyses for total systems. Analyses are performed at all levels of total system product to include: concept, design, fabrication, test, installation, operation,



maintenance and disposal. Ensures the logical and systematic conversion of customer or product requirements into total systems solutions that acknowledge technical, schedule, and cost constraints. Performs functional analysis, timeline analysis, detail trade studies, requirements allocation and interface definition studies to translate customer requirements into hardware and software specifications.

Security Clearance Top Secret/Special Security Requirements

Typical Minimums Bachelors degree from an accredited college in a related discipline, or equivalent experience/combined education, with 9 years of professional experience; or 7 years of professional experience with a related Masters degree. Considered an emerging authority.

LMCareers Business Unit ESS9995 EI GROUP (S0807)

Business Area Info Systems & Global Services

Program P606

Department 8N3D:NPD\_ISU-P606 Clin 5 Field\_18

Job Class Systems Engineering: Other

Job Category Experienced Professional

State New Mexico

Virtual No

Relocation Available No

Req Type Full-Time

Direct/Indirect Direct

[http://www.ihirelogistics.com/PremiumJobResponse.asp?  
PJobID=338058&campaigntype=SearchEngine&Campaign=IndeedOrganic](http://www.ihirelogistics.com/PremiumJobResponse.asp?PJobID=338058&campaigntype=SearchEngine&Campaign=IndeedOrganic)  
[Accessed 2010-08-10]

**Job Title:Supply Chain Mgr K at ADF-SW**

**Company:Boeing**

Location:Las Cruces, NM

Job Description: Manages and integrates employees activities across more than one area in materials management and transportation. Develops and executes project and process plans, implements policies and procedures and sets operational goals. Acquires resources for projects and processes, provides technical management of suppliers and leads process improvements. Develops and maintains relationships and partnerships with customers, stakeholders, peers, partners and direct reports. Provides oversight and approval of technical approaches, products and processes. Manages, develops and motivates employees. Supply Chain Logistics Manager is responsible for day-to-day management of all Supply Chain Management efforts, including but not limited to Transportation and Mail Processing, Property/Asset Management, Support Services which includes Conference Center Support, Cafeteria Services, Copier Maintenance, Fleet Services and other associated support services. Because of the critical mission being conducted by the customer, close coordination with customer stakeholders is required to maintain 100% mission critical infrastructure and minimal interruption to ancillary operations. This requires 24 X 7 attention to operations including daily teleconferences and meetings with customer and Site Manager and Staff to ensure continuity of mission. In this role, the Supply Chain Logistics Manager reports to Site Manager and has direct interface with multiple customers. The Supply Chain Logistics Manager will lead a management team and workforce of approximately XX personnel executing the logistics and support functions. Workforce consists of logisticians, transportation specialists and trades skills. The Supply Chain Logistics Manager will insure standard operating procedures are being followed and ad hoc events (site emergencies, system failures, delivery interruptions) are handled and to the customers satisfaction. The successful candidate will also work with other Supply Chain Logistics Managers to coordinate, develop, and implement common practices that will enhance operations by developing standard approaches across multiple sites. In addition, the successful candidate will develop processes and systems that allow for analyzing and forecasting for strategic warehouse utilization, strategic resource allocation, transportation network optimization and innovation. Manages and integrates employees activities across more than one area in materials management and transportation. Develops and executes project and process plans, implements policies and procedures and sets operational goals. Acquires resources for projects and processes, provides technical management of suppliers in support of strong supply chain methodology to include Just in Time Logistics, vendor managed stocking, and leads process improvements. Develops and maintains relationships and partnerships with customers, stakeholders, peers, partners and direct reports. Provides oversight and approval of technical approaches, products and processes. Manages, develops and motivates employees. Position is located in Las Cruces, New Mexico.

<http://manassas-virginia.olx.com/facilities-engineering-sr-mgr-iid-268393487>  
[Accessed 2012-07-16]

Facilities Engineering Sr Mgr — Manassas  
Location: Manassas, Virginia, United States  
Date Posted: October 23 [2011]

#### Description

Req ID 215968BR

Industry Job Title Facilities Engineering Sr Mgr

Standard Job Code/Title L1516:Facilities Engineering Sr Mgr

#### Required skills

- \* Visionary
- \* Technical expert in facility engineering or related discipline
- \* Proven Full Spectrum Leader
- \* Excellent oral and written communication skills
- \* Strong track record of success
- \* Current, active TS/SCI clearance

#### Desired skills

- \* Licensed Professional engineer
- \* Other related professional certification
- \* Sustainability experience

**Specific Job Description** CFOAM is a \$25M/ YR CPAF contract covering 3 sites: ADF-E, ADF-SW and customer HQ. As a subcontractor, LMC provides the following services at ADF-E: facility operations and maintenance (including some continuous shift), construction services, construction project management, security systems O&M, vehicle management and maintenance, janitorial, registry, courier, waste destruct, grounds maintenance (including snow removal), Environmental Safety and Health, facility help line, work flow management, process improvement, video system installation and maintenance as well as some web design.

-Technical: **Responsible to the Boeing (Prime) site manager** for the strategic direction of facility infrastructure maintenance, recapitalization and improvements. Develops and implements a long range plan to meet customer goals regarding Facility Condition Index. Thought leader on the continuous discussion and annual submittal of the recapitalization, site road map and preventive maintenance review CDRLs. Ensures recapitalization planning is in synch with customer priorities.

Works closely with the customer and monitors mission plans and their impact on facility infrastructure requirements. Matches the site's power and cooling capacity with new and emerging requirements, including required reserves, and mitigates with sustainable solutions.

Identifies and champions the implementation of equipment and facility related sustainability programs including construction materials and techniques, power and cooling solutions and maintenance practices.

The successful candidate will have continuous interaction with the government customer and our industry partners. Strong communication, technical writing, presentation, team building and negotiating skills are keys to success in this challenging environment.

-Functional: Full spectrum leaders for a team of 150 mission focused LMC service professionals with 8 subordinate managers as the major subcontractor on an enterprise facility O&M contract. CFOAM has adopted a "one team" approach that often blends working groups from multiple industry partners under the day to day direction of a Boeing or LMC leader. Additional duties in a program leadership role as assigned by the prime contractor.

Standard Job Description: Manages the planning, design, and oversight of the reconfiguration, maintenance, and alteration of equipment, machinery, buildings, structures, and other facilities. Responsible for coordinating subordinate employee recruitment, selection and training, performance assessment, work assignments, salary, and recognition/disciplinary actions. Oversees the gathering and review of data concerning facility or equipment specifications, company or government restrictions, required completion date, and construction feasibility. Monitors the coordination with architecture/engineering firms in developing design criteria and preparing layout and detail drawings. Directs the preparation of bid sheets and contracts for construction and facilities acquisition. Oversees the review and estimation of design costs including equipment, installation, labor, materials, preparation, and other related costs. Directs the inspection of construction and installation progress to ensure conformance to established drawings, specifications, and schedules.

**Security Clearance: TS/SCI w/Poly**

Typical Minimums: Appropriate degree from an accredited college, or equivalent experience/combined education, with professional experience and specialized training commensurate with assignment.

LMCareers Business Unit ESS0160 IS&GS-NATIONAL (S8200)

Business Area Info Systems & Global Sol

Program CFOAM

Department 6351001:CFOAM\_SI

Job Class Facilities

Job Category Experienced Professional

State virginia

Virtual No

Relocation Available Negotiable

Work Schedule STANDARD-Mon-Fri/8 hours a day

Req Type Full-Time

Direct/Indirect Direct

Shift First

<http://www.employment.harris.com/viewjob.html?erjob=206351&eresc=EINSH>  
[Accessed 2010-08-11]

**Training Instructor - Las Cruces, NM - HITS06101035**

Description:

Training Instructor  
Job Code:HITS06101035

**Job Description:**

- Work as part of a team of contract and government geospatial intelligence analysis instructors that will provide instruction in AGI, SAR, imagery analysis, Geographic Information Systems (GIS), Remote Sensing (RS) and sensors
- Teach the application of AGI with a prime focus on SAR, analysis techniques and instruct on the theory, techniques, procedures and sensors used to produce digital and hardcopy AGI products from radar imagery
- Development and revision of AGI (SAR) courses that are instructional systems design (ISD) compliant. To include the integration of multi-media course instructional materials, equipment and non-traditional (NTM, commercial, advanced geospatial intelligence) data
- Provide instruction in tailored intelligence analysis and production utilizing SAR to support customer requirements from offices in NGA/P and the rest of the intelligence community
- Classroom management
- Delivery and support of mobile training team, provide SAR training to external customers
- Prepare for possible Mobile Training Team assignments

**Qualifications:**

- BS degree in image science, remote sensing, earth science, physics or related discipline, plus a minimum of 10 years related work experience
- Demonstrated experience providing instructional materials in classroom setting
- Experience with SAR AGI
- Demonstrated skills and abilities necessary to provide SAR subject matter
- Expertise to NGA and community customers
- Knowledge of spectral imaging systems technology and collection parameters
- Experience with applied image processing and analysis
- Knowledge of process improvement techniques for improving customer support

**Preferred Additional Skills:**

- Excellent oral and written communication skills

This position requires the candidate to already possess an active TS/SSBI clearance and to maintain the clearance.

<http://careers.northropgrumman.com/tasc/getJobPostDetail.do?sequenceNumber=206468>  
[Accessed 2010-08-11]

Title: Engineer Info Assurance 5

Category: Security

Location: Las Cruces, NM / USA | Sector: TASC

Posting ID: TA/116505

### Description:

General Description: TASC is seeking an Information System Security Engineer (ISSE) to join our team of qualified, diverse individuals. This position will be located in Las Cruces, NM. The qualified applicant will become part of TASC's Team, and with minimal supervision, design, develop, and implement specific Information Assurance (IA) countermeasures for network environments. An ISSE is a senior level security professional who provides consistent application of security best practices in the areas of information systems, network security, telecommunications security, and Technical Security Countermeasures (TSCM), product evaluations and other related security technology to the Intelligence Community (IC) and IC sponsored facilities. Represent the USG at federal and industrial sponsored meetings and symposiums, facility and systems security policy committees, and working groups. Have direct interaction with senior USG officials and various contractor personnel. Ensure that network system designs support the incorporation of IC and DoD-directed security guidelines, requirements matrices, and IA vulnerability solutions. Develop and implement security designs ensuring the design of hardware, operating systems, and software applications adequately address IA security requirements. Assess the effectiveness of information protection measures used. Develop approaches to mitigate vulnerabilities and recommend changes to network or network system components as needed. Review and write Certification and Accreditation (C&A) documentation to ensure compliance with security requirements. Review and provide comments on IA documents and instructions. Candidates with these desired skills will be given preferential consideration: Microsoft, Linux, or VMWare and Cisco certification with in-depth experience in security engineering. CISSP and other certifications a plus. Candidate must possess strong problem solving/analytical, communication, organizational and team-building skills; as well as the ability to write/review corresponding documentation using the MS Office Suite. Experience with the Information Assurance Technical Framework or ISSE Processes, DIACAP or NIST C&A processes & documentation a must. **Must be a U.S. Citizen and possess an active TS/SCI security clearance with CI Polygraph.** Some travel may be required. Start date contingent upon contract award estimated on 1 December 2010. Position Summary / Responsibilities Designs and implements information assurance and security engineering systems with requirements of business continuity, operations security, cryptography, forensics, regulatory compliance, internal counter-espionage (insider threat detection and mitigation), physical security analysis (including facilities analysis, and security management). Assesses and mitigates system security threats and risks throughout the program life cycle. Validates system security requirements definition and analysis. Establishes system security designs. Implements security designs in hardware, software, data, and procedures. Verifies security requirements; performs system certification and accreditation planning and testing and liaison activities. Supports secure systems operations and maintenance. Additional Requirements: Knowledge, Skills and Ability Apply advanced technical principles, theories, and concepts. Contributes to the development of new principles and concepts. Problem Solving Work on unusually complex technical problems and provide solutions which are highly innovative and ingenious. Discretion/Latitude Works under consultative direction toward predetermined long-range goals and objectives. Assignments are often self-initiated. Determine and pursue courses of action necessary to obtain desired results. Work checked through consultation and agreement with others rather than by formal review of superior.

Impact Develops advanced technological ideas and guides their development into a final product. Erroneous decisions or recommendations would typically result in failure to achieve critical organizational objectives and effect the image of the organization technological capability. Liaison Serves as organization spokesperson on advanced projects and/or programs. Acts as advisor to management and customers on advanced technical research studies and applications. Typical Minimum Education / Experience 14 Years with Bachelors in Science; 12 Years with Masters; 9 Years with PhD. Security Clearance Required.

[http://www.clearancejobs.com/index.php?action=view\\_job&jobID=1293474&ref=indeed](http://www.clearancejobs.com/index.php?action=view_job&jobID=1293474&ref=indeed)

## Software Engineer - Las Cruces

RadiantBlue Technologies

Posted on: 7/30/10

Minimum Security Clearance

Top Secret/SCI

We are seeking forward thinking technologists and software developers who apply cutting edge technologies to solve problems of national security. The software engineer will work in a prototyping environment to build and integrate COTS, open source, and proprietary technologies to deliver novel solutions to challenging problems. Will be responsible for choosing the right technologies to solve problems. Must be able to work independently and as part of a team to see a vision successfully implemented. Will work closely with users and stake-holders to help understand needs and shape requirements.

### Position Requirements:

- Java, C++, or C# programming expertise
- Web services/Service oriented architectures (SOA) expertise
- Familiarity with SQL database development
- BS in Computer Science or related discipline
- Selected applicants will be subject to a government security investigation and must meet eligibility requirements for access to classified information. An active TS/SCI clearance is required.

### Preferred Experience/Knowledge:

- Familiarity with the intelligence community
- Experience with highly-scalable and highly-available Web service environments
- Experience with Oracle

### About RadiantBlue Technologies:

RadiantBlue is a specialized provider of information technology development, consulting, and program support services for the Defense Department and the Intelligence Community. We are focused on the rapid development, integration, and delivery of innovative technologies that provide value for our customers. As a RadiantBlue employee you will have the opportunity to apply your talent and ideas to solve challenging problems that are of importance to the nation's defense and security. Please visit our web site [www.radiantblue.com](http://www.radiantblue.com) to apply or to get more information about the company and employee benefits. RadiantBlue Technologies is an equal opportunity employer.

Preferences

5+ yrs experience

Employee

Industry Category: IT Software-Prog



https://cp-its-  
rmprd.saic.com/main/careerportal/Job\_Profile.cfm?/1Y5MH31XYYO20MZHNRJ5CLJ7HITQB4VHI  
YY4VQTUUFVQMET1T815QEEACWFMX26PM9DG1E7KVOK9ICUANP15W9K1NQKXQHMKM  
VGIVSCN4H5D4W9IL47TIN7G5SELOIZ9KGMUSCMET5NFA7VRV65BNVTIQ0KVTIQ0L3H  
7ATQ8  
[Accessed 2009-05-25]

Job Category FAC - Facilities / Physical Security

Req ID 142634

Able to obtain security clearance? Top Secret/SCI w/ CI Polygraph

Currently possess security clearance? Top Secret SCI

Location Las Cruces, NM

Relocation No

Requirements: SAIC seeks a highly qualified mid-level Information Security Engineer to perform as an Information Systems Security Officer (ISSO) supporting a high-priority real-time operational center that directly impacts US national security. The position is in the Las Cruces, NM area.

An active and current Top Secret SCI clearance is required, with the ability to obtain a CI polygraph.

#### JOB DESCRIPTION:

The position involves information security analysis and engineering; and participating in various information security activities required to ensure the integrity of the customer's networks, applications, and information. The selected candidate will assist in developing and maintaining the overall system security documentation in accordance with the DCID 6/3. In addition, the individual will work closely with certifiers to navigate the customer's certification & accreditation process and produce all appropriate accreditation documentation.

Duties include ensuring systems are designed, operated, maintained and retired in accordance with established policies and procedures; that users are properly briefed on information security responsibilities and processes; initiating protective or corrective measures in response to security incidents; and conducting periodic reviews to ensure compliance. The candidate will interact with government and other contractor personnel on a regular basis to provide IT security consulting for other security documents such as security incident reports, equipment/software inventories, operating instructions, technical vulnerability reports, and contingency plans.

Occasional travel to government and contractor facilities within the continental US may be required once or twice per year.

EDUCATION: Bachelor's Degree required, preferably in a technical discipline. Candidate must possess at least 5 years of relevant information security experience associated with the certification and accreditation of classified systems.

REQUIRED SKILLS: Current TOP SECRET SCI is required. Candidate must have expertise in securing networks and systems with a thorough understanding of network topologies and associated hardware and software; and operating systems (UNIX, Windows, and Linux). Knowledge of systems engineering and system development lifecycle is required. The ISSO shall possess strong communication and interpersonal skills as he/she operates as part of a multi-contractor team and directly engages in a customer-facing role. Must possess experience with DCID 6/3 standards along with computer security best practices.

DESIRED SKILLS: Ideal candidate should have expertise with IDS-SourceFire, Trusted Guard, Firewalls and Solaris Log analysis; knowledge of Cisco and Juniper devices. A current Certified Information Systems Security Professional (CISSP) or similar security professional certification is highly desired.

<http://www.3001inc.com/GeoHome/careers.asp>

► **IMAGERY ANALYSTS/IMAGERY SCIENTISTS, Las Cruces, New Mexico**

3001 is currently seeking Imagery Analysts and Imagery Scientists for our **anticipated** openings at our Las Cruces, New Mexico location. These individuals will work as members of an Advanced Geospatial Intelligence (AGI) team.

Qualified candidates will meet the following general criteria:

- Must have current TS/SCI security clearance
- Must have completed an Imagery Analysis course GTP or equivalent, plus SARTAC training or equivalent
- Experience with geospatial data manipulation and product production
- Experience with the use of tools such as Remote View, IMAGINE, MET, IMX, DROID
- Experience analyzing geospatial data to provide assessments of facilities and activities
- Experience preparing analysis and reports for community personnel and agencies
- Experience coordinating with intelligence agencies on tasking strategies
- Experience working with Advanced Geospatial Intelligence (AGI) (i.e., MASINT)
- Demonstrated strong writing and briefing skills
- Bachelor's Degree or higher desired.

There are four levels of Imagery Analysts employed at this site and the levels of experience are indicated below:

- Senior Imagery Scientist – formal intelligence training, plus ten (10) years experience as an Imagery Scientist
- Senior AGI Analysts – formal intelligence training, plus ten (10) years of experience as an Imagery Analyst, or 20 years Imagery Analysis experience
- Journeyman AGI Analysts – formal intelligence training, plus four (4) years as an Imagery Analyst, or 8 years Imagery Analysis experience
- Apprentice AGI Analysts – formal intelligence training or eighteen (18) months Imagery Analysis experience.

We offer a competitive compensation package, commensurate with experience and education, plus benefits. Interested applicants should e-mail their resume to [jobs@3001inc.com](mailto:jobs@3001inc.com). Please reference "Imagery Analyst, New Mexico" or "Imagery Scientist, New Mexico" in the subject line.

U.S. Government security investigation required. EOE.

<http://www.3001inc.com/GeoHome/careers.asp>

► **ALL SOURCE INTELLIGENCE ANALYST, Las Cruces, New Mexico**

3001 is currently seeking an All-Source Intelligence Analyst for our **anticipated** openings at our Las Cruces, New Mexico location.

The incumbent in this position will have the following responsibilities:

- Research, review, edit, plan, and prepare briefings on all-source strategic, operational, tactical, regional and/or functional products.
- Coordinate, monitor, and integrate valid intelligence while ensuring a timely, comprehensive, and accurate response.
- Develop innovative analytical approaches and validation of analytical conclusions.
- Serve as a team member on multi-agency, multi-disciplinary efforts that involve critical strategic, operational, tactical, regional and/or functional analysis issues.
- Collaborate with agency liaisons on general military threats and trends.
- Collaborate in developing and strengthening substantive ties with other government organizations, as well as analysts throughout the intelligence community.
- Regularly participate in briefings and meetings to provide awareness regarding GEOINT requirements and provides an all-source perspective of the requirement.
- Research and route information to IOC-SW analysts to enhance knowledge of production requirements presenting the highest quality products to the customer and warfighter.

A Bachelor's Degree in Geography, Geospatial Sciences or related area of study is preferred. Seven years of related experience in the intelligence field and/or military is desired. Must have current TS/SCI security clearance.

We offer a competitive salary commensurate with education and experience, plus benefits. Interested applicants should send their resume to: [jobs@3001inc.com](mailto:jobs@3001inc.com) and reference "All-Source Intelligence Analyst, New Mexico" in the Subject line. U.S. Government security investigation required. EOE.

<https://www.usajobs.org/jobs/69463709/Project%20Scientist.htm>

## JOB DESCRIPTION

**National Geospatial-Intelligence Agency**

Job Announcement Number:

080473

Project Scientist

SALARY RANGE: 36,030.00 - 59,895.00 USD per year

Salary may vary depending on locality. Please refer to [www.nga.mil/careers](http://www.nga.mil/careers) for additional salary information. OPEN PERIOD: **Monday, March 10, 2008 to Friday, March 21, 2008**

SERIES & GRADE: NI-0000-02/02 POSITION INFORMATION: Full Time This is a permanent position.

**DUTY LOCATIONS: 1 vacancy - White Sands Missile Range, NM**

WHO MAY BE CONSIDERED:

All Sources

ONLY ELECTRONIC SUBMISSIONS WILL BE ACCEPTED.

## JOB SUMMARY:

The National Geospatial-Intelligence Agency (NGA), the World Leader in Geospatial Intelligence. Imagine being able to identify anything on, above, or beneath the Earth's surface and display that information visually to provide a meaningful foundation for decision-making to ensure the safety of the world. That's the job of the National Geospatial-Intelligence Agency. We analyze imagery and data from many sources and incorporate it into visual displays of essential information for use in national defense, homeland security, and safety of navigation. Central to the success of our mission are the extraordinary talents and skills of our teams of analysts and other professionals. We need the best minds to provide the information edge, continuing NGA's role as the premier provider of Geospatial Intelligence worldwide.

NGA - Know the Earth . . . Show the Way.

**JOB DESCRIPTION:** Project Scientists are responsible for the day-to-day execution and technical oversight of a variety of scientific activities. They develop project schedules, determine resource requirements, provide technical guidance and oversight, and report results. Project Scientists apply in-depth expertise from a variety of scientific disciplines (e.g., Photogrammetry, Geodesy, Computer Science, Mathematics, Image Science) to develop, analyze, evaluate, and apply new technology; develop expertise and tradecraft for the Agency; and advise senior management on new and evolving technology. They participate in strategic planning, propose and defend program plans, and communicate and market results to customers and decision-makers. They may additionally serve as COR.

## KEY REQUIREMENTS:

U.S. Citizenship  
Drug Testing  
Security Investigation

Send Mail to:

NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY

12310 Sunrise Valley Drive

Reston, VA 20190

For questions about this job:

Recruitment

Phone: 703-755-5900

## JOB REQUIREMENTS

080473

## Project Scientist

### QUALIFICATIONS REQUIRED:

**MANDATORY QUALIFICATION CRITERIA:** Experience that equipped the applicant with the particular knowledge, skills, and abilities to perform successfully the duties of this position, and that is typically in or related to the work of this position. For this particular job, applicants must have experience in the following: Customer Service; Interpersonal Relationship Development/Networking; Oral Communication; Briefing and Oral Presentation; Non-technical Writing; Leadership; Planning and Scheduling; Problem Identification, Analysis and Resolution.

**DESIRABLE QUALIFICATION CRITERIA:** In addition to the mandatory qualifications, experience in the following is desired: a demonstrated knowledge of Intelligence Community (IC) membership, mission, goals, and priorities; Customer service principles; Decision-making processes; Civilian agencies (e.g., USGS, DOS); Technical writing; Testing and Evaluation.

**EDUCATION REQUIREMENTS:** A. Education: Bachelor's degree in Engineering, Mathematics, Physical Science, or a related discipline that includes 24 semester (36 quarter) hours in Physical Science and/or a related Engineering Science. Such coursework includes, but is not limited to, Astronomy, Cartography, Chemistry, Computer Science, Dynamics, Electrical Engineering, Geodesy, Geology, Geophysics, Geospatial Information Systems, Mathematics, Orbital Mechanics, Photogrammetry, Physics, Remote Sensing, or Surveying. Although not mandatory, coursework in differential and integral calculus is preferred. -OR- B. Combination of Education and Experience: A minimum of 24 semester (36 quarter) hours of college education in any areas listed in option A plus experience that demonstrates the ability to successfully perform the duties associated with this work. As a rule, every 30 semester (45 quarter) hours of college work is equivalent to one year of experience. Candidates should show that their combination of education and experience totals to 4 years.

### SPECIAL INFO:

- Direct Deposit Required
- Two Year Probationary Period
- U.S. Citizenship Required
- Position Subject to Drug Testing
- Security Clearance Required
- Top Secret
- Sensitive Compartmented Information
- Polygraph Test Required

**SPECIAL REQUIREMENTS:** You must be able to obtain and retain a Top Secret security clearance with access to Sensitive Compartmented Information. This process may take up to one year or more to be completed. In addition, you may be required to successfully complete a polygraph examination for the current position you applied for and/or for any future position(s).

**NARRATIVES REQUIRED:** The following required narratives will supplement the information contained in the applicant's resume.

Applicants are **REQUIRED** to submit a narrative on the following KSAs. Entire narrative **CANNOT** exceed the specific limits provided on the KSA field. Pages exceeding this limit will not be considered. **FAILURE TO SUBMIT NARRATIVE RESPONSES TO THE KSA WILL DISQUALIFY AN APPLICANT FROM FURTHER CONSIDERATION.** Applicants should place their narrative information in the appropriate field at the Job History and KSA Text Page.

The KSAs are:

1. Demonstrate your ability to effectively manage multiple assignments within established time constraints.
2. Demonstrate your ability to communicate effectively both orally and in writing.

JOB RESPONSIBILITIES, DUTIES, TASKS  
080473

Project Scientist

Additional Duty Location Info: 1 vacancy - White Sands Missile Range, NM

ADDITIONAL INFORMATION: The employee selected for this position will have an important role in the Advanced Geospatial Intelligence (AGI) work being performed through the Geospatial Intelligence Advancement Testbed (GIAT) Portfolio (IIG) efforts to acquire and exploit advanced sources for geospatial intelligence and to integrate these sources into AGI analysis and problem solutions. Duties include analysis, test and evaluation of commercial software applications; scientific problem solving and development of prototype processes and applications for customers in the **Integrated Operations Center - Southwest (IOC-SW), NGA, IC and DoD**; investigation of potential new sources of AGI; the use of Multi-Intelligence data sources (SIGINT, MASINT) to develop future capabilities for IOC-SW intelligence initiatives; information visualization; and engaging in collaborative partnerships for rapid solution development.

PERMANENT CHANGE IN STATION: Travel/Transportation expenses are not authorized.

HOW TO APPLY

JOB BENEFITS AND OTHER INFORMATION  
080473

Project Scientist

BENEFITS:

Pay is only part of the compensation you will earn working for the Federal Government. We offer a broad array of benefits programs and family friendly flexibilities to meet the needs of you and your family. Here are some highlights. Look for additional information along with links to pages that spell out the details below.

You may participate in the Federal Employees Health Benefits program, with costs shared with your employer.

More info: <http://www.usajobs.gov/jobextrainfo.asp#FEHB>

Life insurance coverage is provided. More info: <http://www.usajobs.gov/jobextrainfo.asp#life>

Long-Term Care Insurance is offered and carries into your retirement. More info:

<http://www.usajobs.gov/jobextrainfo.asp#ltci>

New employees are automatically covered by the Federal Employees Retirement System (FERS). If you are transferring from another agency and covered by CSRS, you may continue in this program. More info:

<http://www.usajobs.gov/jobextrainfo.asp#retr>

You will earn annual vacation leave. More info: <http://www.usajobs.gov/jobextrainfo.asp#VACA>

You will earn sick leave. More info: <http://www.usajobs.gov/jobextrainfo.asp#SKLV>

You will be paid for federal holidays that fall within your regularly scheduled tour of duty. More info:

<http://www.usajobs.gov/jobextrainfo.asp#HOLI>

In addition to federal benefits, NGA employees are also eligible for a suite of benefits offered only to the Intelligence Community (IC). The Compass Rose Benefits Group (CRBG) offers insurance products and services to all IC civilian employees. Compass Rose benefits include: Term Life Insurance, Group Accident Plan, Income Replacement, and Long Term Care Insurance. For more information on this highly-restricted opportunity, please visit the Compass Rose website: <http://www.compassrosebenefits.com>

<https://jobs.latinosforhire.com/jobdetails.cfm?jid=22428>

## Source Strategies Analyst

### Job Information

Post Date: May 22, 2009 Type: Full time

Start Date: - n/a - Salary: - n/a -

Location: New Mexico - White Sands Missile Range Job Reference: - n/a -

### Job Details

#### Description

Open date: 2009-02-09

Close date: 2009-02-20

The National Geospatial-Intelligence Agency (NGA), the World Leader in Geospatial Intelligence.

Imagine being able to identify anything on, above, or beneath the Earth's surface and display that information visually to provide a meaningful foundation for decision-making to ensure the safety of the world. That's the job of the National Geospatial-Intelligence Agency.

We analyze imagery and data from many sources and incorporate it into visual displays of essential information for use in national defense, homeland security, and safety of navigation.

Central to the success of our mission are the extraordinary talents and skills of our teams of analysts and other professionals. We need the best minds to provide the information edge, continuing NGA's role as the premier provider of Geospatial Intelligence worldwide.

NGA - Know the Earth . . . Show the Way.

**ASSIGNMENT DESCRIPTION:** Source Strategies Analysts collaborate with customers and source providers to develop comprehensive multi-INT, multi-source strategies to address intelligence problems. They create tasking and dissemination requirements, adjudicate requirements, analyze and investigate collection performance, assess and report on end-to-end GEOINT system performance data, and advise customers in support of the National System for Geospatial-Intelligence (NSG).

**ADDITIONAL INFORMATION:** The Source Directorate, Source Strategies Office, Source Fusion Center Southwest is seeking a highly qualified and motivated individual to support a key element of its distributed Source Fusion Center "Community Support" operations team that will enable multi-intelligence collection initiatives with mission partners and the IC customer base. The selected individual will champion horizontal integration between a wide range of national technical means, maximizing the value of GEOINT as a mechanism to drive analytical and complementary intelligence efforts in a real time environment. The individual must have a fundamental understanding of all intelligence disciplines, with an emphasis on GEOINT, SIGINT, ONIR and other technical means and must be capable of operating in dynamic situations, and responding to stakeholders within and outside their direct supervisory chain. The selected individual will be required to exercise verbal and written communication skills in the preparation and presentation of technical analysis, position papers, operational briefings, and operational procedures. The selected individual will also be required to maintain a close working relationship with the NGA analytical elements at multiple physical locations and will be required to provide direct support for both the Integrated Operations Center South West (IOC-SW) and Integrated Operations Center Special Programs (IOC-SP) while maintaining a basic understanding of the architectures that support such activities.

<https://bah.taleo.net/careersection/10020/jobdetail.ftl?lang=en&job=676646>  
[Accessed 2009-06-28]

Technical Writer-01076817  
Description

Key Role:

Write, develop, and deliver Advanced Geospatial-Intelligence (AGI) correspondence, articles, policies, and a CONOPS plan for delivery to the geospatial intelligence community. Aid in content decisions on various media and staff responses thru various communication means. Create AGI graphics and materials that creatively portrays all programs to customers, both internal and external. Support the intelligence community director with AGI and other miscellaneous written materials, including draft and edit executive briefing materials, such as PowerPoint slides and notes for presentation to other directorates, IC partners, service schools, associations, and public industry. **This position is located in Las Cruces, NM.**

Qualifications

Basic Qualifications:

- 2+ years of experience with technical writings and reports
- Experience with reviewing and editing technical reports for formatting and accuracy
- Experience with Microsoft Word, and PowerPoint
- Experience with graphics design
- TS/SCI clearance**

Additional Qualifications:

- Ability to show participation in or directing the activities of highly skilled technical and analytical teams with analytical and intelligence problems
- Ability to work alone and share information with team members and customers in a timely manner
- Possession of excellent oral and written communication skills
- Possession of excellent customer support skills
- BA or BS degree preferred

Clearance:

Applicants selected will be subject to a security investigation and may need to meet eligibility requirements for access to classified information; TS/SCI clearance is required.

Integrating the full range of consulting capabilities, **Booz Allen** is the one firm that helps clients solve their toughest problems, working by their side to help them achieve their missions. Booz Allen is committed to delivering results that endure.

We are proud of our diverse environment, EOE, M/F/D/V.

Job Writing

Primary Location

United States-New Mexico-Las Cruces



<http://www.simplyhired.com/job-id/kyuwtokka6/software-engineer-jobs/>  
[Accessed 2009-06-29]

Software Engineer  
SAIC - Las Cruces, NM

The Space and Geospatial Intelligence Business Unit currently has an opening for a Software Engineer at White Sands Missile Range located in Las Cruces, NM. Candidates must have an active Top Secret/SCI security clearance and must be able to obtain a CI Polygraph.

POSITION DUTIES: The Software Engineer will work with other SAIC Software Engineers analyzing requirements, developing and integrating appropriate technical solutions, and delivering and maintaining business support capabilities for a government customer. At a minimum, the Software Engineer will: 1) Work with the customer and developer staff to identify and prioritize tasks as well as provide analysis and recommendations for the appropriate technical solutions to customer requirements 2) Promote a collaborative work environment with...

http://seeker.dice.com/jobsearch/servlet/JobSearch?  
op=101&dockey=xml/c/d/cd7c8747b0bd1545e2cb88ee616038a5@endecaindex&c=1&source=21&cid=simplyhired

**Location: Las Cruces, NM**

Area Code: 505  
Tax Term: FULLTIME  
Pay Rate: tbd  
Length:  
Position ID: HITS06091008  
Dice ID: harrisme  
Travel Required: none  
Telecommute: no

Title: Software Engineer  
Skills: Previous software development experience

**Date: 6-25-2009**

**Job Description:**

Responsible for research, design, and development of computer software systems, in conjunction with hardware product development  
Analyze software requirements to determine feasibility of design within time and cost constraints  
Consult with electrical and/or mechanical engineers and other engineering staff to evaluate interface between hardware and software, and operational performance requirements of the overall system  
Develop and direct software system testing procedures, programming and documentation

**Qualifications:**

Successful candidates will have a Bachelors Degree (or the equivalent ) in Computer Science (or related technical field) as well as 5 years relevant professional experience  
Requires the application of the principles and techniques of computer science, engineering, and mathematical analysis  
Previous software development experience  
Experience working in a team environment with minimal direct supervision  
**This position requires the candidate to be able to obtain a TS/SCI security clearance.** In order to obtain a clearance you need to be a US Citizen and show proof of citizenship.

By submitting your resume for this position, you understand and agree that **Harris Corporation** may share your resume, as well as any other related personal information or documentation you provide, with its subsidiaries and affiliated companies (including Harris Stratex Networks, Inc.) for the purpose of considering you for other available positions.

Harris  
MS D-11B  
Melbourne, FL 32919  
Web: <http://www.careers.harris.com>

This is Google's cache of

[http://www.jobcentral.com/jobs/The\\_Boeing\\_Company/NM/Facilities\\_Mechanical\\_Engineer\\_3/010520541/job](http://www.jobcentral.com/jobs/The_Boeing_Company/NM/Facilities_Mechanical_Engineer_3/010520541/job).  
It is a snapshot of the page as it appeared on May 7, 2009 22:50:50 GMT.

Title : Facilities Mechanical Engineer 3

Company : The Boeing Company

Location : Las Cruces, NM 88004

Date Acquired : 4/24/2009 11:32:58 PM

Date Updated : 5/4/2009 1:23:48 AM

Facilities Mechanical Engineer 3

Requisition Number: 09-1004080

Job Status: Activated -

Posting Type: Posted Internally and Externally. -

Posting Status: Available

Location Las Cruces, NM

Business Unit Integrated Defense Sys

Division Global Services & Support

Program Defense & Government Services

Relocation Money Available? No

Date Posted 04/24/2009

Closing Date

(Things you should know about closing dates) 06/23/2009

Position Description

Develops moderately complex conceptual designs, final designs, cost estimates and provides maintenance support for the mechanical phases of buildings, equipment installations, utility systems and grounds. Reviews mechanical designs to assess compliance with customer requirements, building codes and applicable regulations by applying knowledge of construction principles, practices, and materials. Ensures accuracy of drawing archives/libraries by reviewing contractor redlines. Identifies errors and documents construction changes to comply with regulatory requirements, facility standards, and record retention requirements. Manages or supports construction projects by providing input on vendor selection; reviews contractor proposals; interfaces with government/regulatory agencies; monitors project progress and vendor/consultant performance. Prepares and presents project information to ensure compliance with applicable construction documents and jurisdictional requirements and to meet project objectives. Produces or procures detailed design documents. Uses appropriate resources to produce project drawings, specifications, and permit application packages in accordance with project parameters. Coordinates designs. Reviews and approves documents. Translates customer requirements into design options with documents and estimates. Identifies appropriate materials, equipment, and services by applying engineering principles and methodology. With limited supervision, develops and updates design standards and site-specific operating procedures in order to establish common practices. Provides input to strategic, short-term, and long-term infrastructure planning; completes studies; analyzes current conditions and future requirements; recommends capital improvements; gathers and analyzes data; and works with both internal and external customers in order to identify and assess alternatives and impacts. Translates customer requirements into conceptual design by analyzing intended use/occupancy and desired aesthetics, conducting code research, developing preliminary design elements, determining interdisciplinary engineering support requirements, estimating resource costs/requirements, identifying materials, equipment, and services, and developing initial project schedule in order to establish project scope in response to customer requirements. Plans, manages, and executes projects. Leads a team of stakeholders in the acquisition and modification of assets to enable the customer to achieve the defined business objectives in accordance with company and accounting policies.

Manages project expenditures within authorized budgets. Creates, maintains, and communicates project management information. Assists in the creation of contract scope. Ensures suppliers comply with all contract obligations. Interprets and analyzes applicable regulations, standards, codes, and ordinances with respect to project requirements. Offers project alternatives in order to assure compliance. Provides support, as required, to secure permits.

#### Competencies General

*[deletia]*

#### [ + ] Planning And Organizing

Identifies more critical and less critical activities and assignments; adjusts priorities when appropriate. Determines project or assignment requirements by breaking them down into tasks and identifying types of equipment, materials, and people needed. Allocates appropriate amounts of time for completing own work; avoids scheduling conflicts. Takes advantage of available resources (individuals, processes, departments, and tools) to complete work efficiently; coordinates with internal and external partners. Uses time effectively and prevents irrelevant issues or distractions from interfering with work completion.

*[deletia]*

Typical Education/Experience Degree and typical experience in engineering classification: Bachelor's and 5 or more years' experience, Master's degree with 3 or more years' experience or PhD degree with experience. Bachelor, Master or Doctorate of Science degree from an accredited course of study, in engineering, computer science, mathematics, physics or chemistry. ABET is the preferred, although not required, accreditation standard.

Other Job related information This position is located in Las Cruces, NM. Candidate is preferred to have a current TS/SCI clearance with CI Polygraph, or must have the ability to obtain these clearance requirements. US citizenship is required of candidate. Subsidiary Benefits. This position is contingent upon contract award.

\*\*\* Please note that depending on the specific position, you may be required to pass additional medical tests, credit checks, and/or other requirements. These additional items are required for the Company to comply with various laws and regulatory rules.\*\*\*

[http://www.jobsontheline.com/index.php?post\\_id=26445](http://www.jobsontheline.com/index.php?post_id=26445)

JAVA Programmer Analyst - Paragon Dynamics - Las Cruces, NM

Posted date: 2009-Jun-07

Location: Las Cruces, NM

JAVA Programmer Analyst - Paragon Dynamics - Las Cruces, NM

Date: Sat, 06 Jun 2009 21:40:30 GMT

requires US Citizenship and a Top Secret\SCI Security Clearance and ability to successfully pass a polygraph examination. Job Location: Las Cruces, New Mexico.

<http://tbe.taleo.net/NA3/ats/careers/requisition.jsp?org=PARAGON&cws=1&rid=58>

Paragon Dynamics, Inc

JAVA Programmer Analyst

Location: Las Cruces, NM

Job Code: 15830

# of openings: 1

#### Description

JAVA Programmer Analyst - Software engineer responsible for development, maintenance, and enhancements of existing proprietary collaboration software application. Candidate will be responsible for overall user requirements, system design and analysis, coding, test & integration, and general system administration. Application is a web enabled, sophisticated virtual collaboration environment developed using J2EE, JBOSS, MySQL, Eclipse, and CVS running on Windows servers with Unix and Windows clients.

Candidate will perform software engineering and produce architecture and requirements documentation products. Qualified candidate will monitor system reliability, develop process improvements and ensure system interoperability across future systems development efforts as well as legacy systems. Technical writing skills are necessary to develop user and system administrator documentation. Must be able to interface daily with customers and users.

Minimum requirements: Two years of specific experience in software engineering expertise to include analysis, design, and coding experience; experience developing JAVA applications using J2EE on a Windows based operating system using object oriented techniques; knowledge of application servers, web servers, data bases; ability to work in a team environment or independently to perform design, coding and unit test of software units of work; one year demonstrated Java software design and development experience; experience in developing Java applications and applets to monitor and control automated processing systems; and experience and ability to develop software using Java on Windows platforms. UNIX and Windows system administration skills are critical for success in this position.

#### Education:

A Bachelor's degree in engineering is required with two years experience, however, a substitute degree (listed below) with equivalent experience may also qualify. Typical degrees include: Computer Engineering, Computer Science, Information Systems, Information Technology, Computer Information Systems, Computer Systems Engineering.

This position requires US Citizenship and a Top Secret\SCI Security Clearance and ability to successfully pass a polygraph examination.

Job Location: Las Cruces, New Mexico.

<http://www.paragondynamics.com/about.html>

Founded in 1997, Paragon Dynamics, Inc. (PDI) is a wholly owned subsidiary of KOR Electronics, Inc and is a small business with headquarters in Aurora, Colorado. PDI provides innovative systems, software and mission engineering solutions to a variety of Department of Defense and Aerospace clients. We specialize in system design, architecture and integration; software development and implementation; and mission operations, analysis and support.

Our expertise is applied to government and aerospace National Systems Programs through the dedicated professionals at PDI who consist of highly qualified engineers with direct experience in government and commercial satellite, DoD Intelligence Community, and IT infrastructure programs.

Our projects -- past and present—include: on-orbit space programs; ground based processing programs; C4ISR system development programs; and analysis, design and integration programs. Our engineers, scientists, and project managers possess extensive experience in all aspects of systems development and integration from conception to implementation of complex ground and satellite systems.

Paragon Dynamics is strategically located in major defense and mission operational hubs - Colorado, California, and the Washington, DC metro area - to completely serve our customer segments.

[http://seeker.dice.com/jobsearch/servlet/JobSearch?  
op=101&dockey=xml/7/0/70622872baf700c759eda4f4b9eed913@endecaindex&c=1&source=21&cid  
=simplyhired](http://seeker.dice.com/jobsearch/servlet/JobSearch?op=101&dockey=xml/7/0/70622872baf700c759eda4f4b9eed913@endecaindex&c=1&source=21&cid=simplyhired)

Location: Las Cruces, NM

Area Code: 505

Tax Term: FULLTIME

Pay Rate: tbd

Length:

Position ID: HITS02091056

Dice ID: harrisme

Travel Required: none

Telecommute: no

Title: Electrical Engineer - TS/SSBI Required

Skills: Position requires a current Top Secret/SSBI Security Clearance

Date: 5-23-2009

Description:

Job Responsibilities:

- \* Responsible for designing, developing, modifying and evaluating electronic parts, components, or integrated circuitry for electronic equipment or other hardware systems
- \* Determines design approaches and parameters. Analyzes electrical requirements to determine feasibility of design within time and cost constraints
- \* Analyzes equipment to establish operating data, conducts experimental tests and evaluates results
- \* Selects components and equipment based on analysis of specifications and reliability
- \* May also review vendor capability to support development

Qualifications:

- \* Requires a Bachelors degree and 5+ years of experience
- \* Knowledge of basic AC and DC power and grounding principles. Knowledge of heat dissipation and cooling principles
- \* Experience in hardware systems installation / integration
- \* Experience in the use of Electronic Test equipment to include oscilloscopes and multi-meters
- \* Experience in basic system evaluation, design, modification and repair
- \* Computer skills to include basic administration for MS Windows, Linux and UNIX
- \* Use of MS office for documentation generation/updates
- \* Working experience of Autocad and Visio drawing programs
- \* Applicants selected will be subject to a government security investigation and must meet eligibility requirements for access to classified information. Position requires a current Top Secret/SSBI Security Clearance

By submitting your resume for this position, you understand and agree that Harris Corporation may share your resume, as well as any other related personal information or documentation you provide, with its subsidiaries and affiliated companies (including Harris Stratex Networks, Inc.) for the purpose of considering you for other available positions

Harris

MS D-11B

Melbourne, FL 32919

Web: <http://www.careers.harris.com>



<http://www.simplyhired.com/job-id/rsc23cvttq/technical-writer-jobs/>  
[Accessed 2009-05-29]

\*

TECHNICAL WRITER 3

CACI International - New Mexico

Duties and Responsibilities: Part-time (20 hours/week) technical writer/subject matter expert (SME) supporting the National Geospatial-Intelligence Agency in White Sands, NM. TS/SCI clearance required. SME will assist IOC-SW Director and all elements of IOC-SW develop, propose, provide, advise, update, and maintain an active program of information sharing both within and external to IOC-SW, using a variety of media and formats. Must possess superior writing skills and have an advanced level of understanding of Advanced Geospatial-Intelligence sensors, tools, and techniques. These tasks include: \* Must write, develop and deliver basic, intermediate and advanced levels of AGI correspondence, articles, policies, CONOPS Plan focusing on SAR for delivery to NGA and other geospatial intelligence community...

[http://www.clearancejobs.com/index.php?action=view\\_job&jobID=1323326&ref=indeed](http://www.clearancejobs.com/index.php?action=view_job&jobID=1323326&ref=indeed)

Systems Engineer I

Raytheon

Posted on: 8/9/10

Minimum Security Clearance: Top Secret/SCI

Location: Las Cruces, New Mexico 88001 (map)

Workplace: On-Site/Office

Travel: 25% - defined as 25% of your time traveling

Job Description:

Raytheon is currently seeking a System Engineer who will support the Double Eagle Program, a program that is responsible for Mission Management and Command and Control functions for an operational system.

Responsibilities include performing technical planning, system integration, verification and validation, cost and risk, and supportability and effectiveness analyses for total systems. Analyses are performed at all levels of total system product to include: concept, design, fabrication, test, installation, operation, maintenance and disposal. The individual selected for this position will also ensure the logical and systematic conversion of customer or product requirements into total systems solutions that acknowledge technical, schedule, and cost constraints, performs functional analysis, timeline analysis, detail trade studies, requirements allocation and interface definition studies to translate customer requirements into hardware and software specifications.

This position is responsible for developing, integrating and verifying a conflict free resource schedule. This plan serves as the basis of daily communications and special applications testing. The position requires interactive responses to complex operational and engineering software as well as real time analysis of test results to obtain desired outcome. Internal and external segment coordination is required to generate recurring, unique and special test activities. The position is also responsible for the initiation of timely contingency planning activities as a result of system problems or abnormal circumstances.

Specific responsibilities include but not limited to:

- \* Supporting operational procedure development to include identifying necessary cross-functional procedural requirements
- \* Supporting the successful completion of major program milestones
- \* Executing real-time control activities, and monitoring operational systems
- \* Interacting with external personnel on technical matters often requiring coordination between organizations

Required Skills:

- \* Must have a B.S. degree in Engineering or related discipline or possess equivalent experience in lieu of a degree
- \* Must have strong system engineering, analytical, and problem solving skills in a team environment
- \* Must be able to work productively in a complex, multi-customer, contractor and technology environment
- \* Must have basic computer skills sufficient for use of multiple proprietary software systems simultaneously
- \* Must be able to work with general directions and determine and develop approaches to solutions
- \* Must be able to frequently interact within the organization as well as have frequent outside customer contacts
- \* Must be able to ensure that projects are completed on time
- \* Must be able to complete training to comply with positional certification requirements
- \* Must have strong analytical Skills

\* Must have strong communication and interpersonal skills

\* Must be available to work a Rotating Shift work schedule involving a variety of fluctuating schedules including work shifts, rotating through days, nights, weekends and holidays.

Qualified applicants may be subject to a security investigation and must meet minimum qualifications for access to classified information. U.S. Citizenship with eligibility to satisfy requirements for a TS/SCI SSBI security clearance required .

<http://careers.boozallen.com/job/Las-Cruces-Geospatial-Analyst-Job-NM-88001/1464112/>

## Geospatial Analyst Job

Date: Sep 22, 2011

Location: Las Cruces, NM, US

Geospatial Analyst-01112197

### Description

#### Key Role:

Perform research, contribute to the preparation of analytical and technical reports and publications, prepare graphics, and maintain hard and soft copy files, including target folders, film files, collateral files, and other publications. Create and maintain databases, summary data, spreadsheets, and graphic documents and maintain Intelink Web sites. Use Geographic Information Systems (GIS) to extract or access geospatial information, derivative information, and multi-intelligence data to provide requirements, currency, accuracy, readiness, responsiveness, data integrity, and relevancy recommendations that support the analysis and visualization of geospatial data available for use by the military, intelligence, and policy-making communities. This position is located in Las Cruces, NM.

### Qualifications

#### Basic Qualifications:

- 18+ months of experience in working with Geographic Information Systems (GIS)
- Experience with ERDAS Imagine, SOCCET, GXP, or ESRI Arc suite, including ArcGIS, ArcMap, ArcIMS, and ArcSDE
- Experience with modeling, spatial regression analysis, or human terrain analysis
- Top Secret clearance
- BS degree in Remote Sensing, Earth Science, or Physical Science; or equivalent experience with the military

#### Additional Qualifications:

- Experience with NGA
- TS/SCI clearance preferred

### Clearance:

Applicants selected will be subject to a security investigation and may need to meet eligibility requirements for access to classified information; Top Secret clearance is required.

Integrating the full range of consulting capabilities, Booz Allen is the one firm that helps clients solve their toughest problems, working by their side to help them achieve their missions. Booz Allen is committed to delivering results that endure.

We are proud of our diverse environment, EOE, M/F/D/V.

Job: Intelligence Analysis

Primary Location: United States-New Mexico-Las Cruces

Travel: Yes, 15% of the time

<http://www.job.com/my.job/jobdisplay/page=jobview/pt=2/key=101873444/>

Configuration Analyst II

Company: Raytheon

Location: Las Cruces, New Mexico

Salary: Not Specified

Category: Administrative / Clerical

Date Posted: 10/11/2011

Job Description: Raytheon is seeking a Configuration Analysts II that will be responsible for configuration control of the operational baseline, managing the Configuration Management database (CMDB) and performing the analysis of proposed product changes to determine effect on overall CMDB system. Ensures all configuration items (CI) are identified and controlled and that status accounting and audits are performed. Also responsible for providing advice and guidance on methods, procedures and requirements to individuals responsible for entering CI's into the CMDB. Position is located in Las Cruces, NM Required Skills: Must have a BS Degree in an IT related field or possess equivalent experience in lieu of a degree Must have a minimum of 2 years related experience in creating Change Requests and maintaining documentation for IT networks Must have experience in overseeing Change boards Must have experience in maintaining Interface Control Documentation Must be proficient in use of VISIO or similar drawing package Must have Security + certification Must become 8570 Certified within 6 months of start date! Qualified applicants may be subject to a security investigation and must meet minimum qualifications for access to classified information. U. S. Citizenship and an active TS/SCI security clearance with a CI Polygraph required. Qualified applicants may be subject to a security investigation and must meet minimum qualifications for access to classified information. U. S. Citizenship and an active TS/SCI security clearance with a CI Polygraph required.

<https://www.employment.harris.com/viewjob.html?erjob=223957&eresc=EINSH>  
[Accessed 2011-10-17]

Job ID: HITS09111223

Scientist - Las Cruces, NM - HITS09111223

Description:

Job Title: Scientist

Job Code: HITS09111223

Job Description:

Leads the assimilation of new algorithm processes into operations.

Design the research approach and structure proof-of-concept demonstrations to determine operational feasibility of new algorithms.

Possess experience and knowledge of basic SAR AGI systems and platforms, operations, phenomenology, the impact on SAR processing, analysis and exploitation.

Possess knowledge of, and demonstrated ability to perform, SAR AGI analysis.

Experience in conducting research and development activities.

Act as a liaison between operators and the research and development scientists.

Lead the refinement of algorithms and processes and in the migration of mature processes to automated main-stream systems.

Independently seeks sources of knowledge to share with operations team.

Assists engineers on maintenance with preliminary investigation of reported software and hardware anomalies.

Assists operators as needed in performing manual product processing using new and mature algorithms.

Provide Help Desk support.

On-call will be required.

Qualifications:

Requires a MS degree (or the equivalent) in a related field with a minimum of 6 years of related experience.

Proficiency in Microsoft Office (Word, Excel, PowerPoint) required.

Ability to solve complex problems.

Preferred Additional Skills:

Familiarity with various programming, UNIX, MatLab preferred, but not required

This position requires the candidate to already possess an active TS/SCI clearance and to maintain the clearance.

<http://jobs.builderjobs.com/jobs/detail/41762025>

SAR Scientist - Booz Allen Hamilton, Las Cruces, NM

Location: Las Cruces, NM

Date: 10/17/2011

Job Code: 985107

#### Job Details

SAR Scientist-01108836

Description

Key Role:

Work in a team environment with other multidisciplinary remote sensing scientists and engineers supporting AGI processing and exploitation. Provide scientific analysis and products from the exploitation of SAR data from multiple sources for the customer, who will leverage the value-added support to sharpen their assessments of current issues. Use knowledge of SAR to direct and support research and development in support of SAR, use current TPED processes to task, process, exploit, and distribute data, and design new TPED processes for future sensors. Provide results to the customer in the requested format and content, such as Web dissemination, databases, or direct reporting to analysts and management. Provide ad-hoc informational briefings to educate analysts and managers about the capabilities of SAR and its benefits. Support and participate in community exploitation and technology forums on a limited ad-hoc basis, sometimes requiring presentation of technical information of case studies resulting from operational support requests. Monitor the community and industry for new near-term technologies that can be inserted for operational use. This position is located in Las Cruces, NM.

#### Qualifications

Basic Qualifications:

-4 years of experience with using AGI processing and exploitation software

-3 years of experience with radar science

-3 years of experience with programming, including developing with C, C++, IDL, or MATLAB executable code

-2 years of experience with using software development tools, such as MATLAB

-Knowledge of advanced radar AGI collection systems, operations, and phenomenology and their impact on radar AGI processing, analysis and exploitation

-TS/SCI clearance

Additional Qualifications:

-Possession of excellent oral and written communication skills

-PhD or MD degree in Remote Sensing, Earth Science, Physical Science, Engineering, or Mathematics

Clearance:

Applicants selected will be subject to a security investigation and may need to meet eligibility requirements for access to classified information; TS/SCI clearance is required.

Integrating the full range of consulting capabilities, Booz Allen is the one firm that helps clients solve their toughest problems, working by their side to help them achieve their missions. Booz Allen is committed to delivering results that endure.

We are proud of our diverse environment, EOE, M/F/D/V.

Job Imagery and Remote Sensing

Primary Location United States-New Mexico-Las Cruces

Travel Yes, 20% of the time

**CVs**



[http://www.jigsaw.com/scid49209218/tom\\_tijerina.xhtml](http://www.jigsaw.com/scid49209218/tom_tijerina.xhtml)  
[Retrieved 2012-07-16]

## **Tom Tijerina**

Chief/ADF-SW/Facilities BRANCH

**Join to view email and phone**

**National Reconnaissance Office**  
PO BOX 190  
Organ, NM 88052-0190  
United States

<http://www.linkedin.com/pub/dan-wright/12/b97/776>

[Accessed 2012-07-16]



## Dan Wright

Commander at NRO ADF-SW

Las Cruces, New Mexico Area | Military

### Dan Wright's Experience

---

#### **Commander**

**NRO ADF-SW**

December 2010 – Present (1 year 8 months)

#### **Dir, Navwar/PNT**

**OSD**

June 2008 – December 2010 (2 years 7 months)

#### **Commander**

**2SWS**

June 2005 – June 2007 (2 years 1 month)

#### **Chief, Space Doctrine**

**Air Force Doctrine Center**

2003 – 2004 (1 year)

#### **Systems Engineer, Exec Officer, Legislative Liaison**

**NRO IMINT**

1998 – 2002 (4 years)

#### **Air Force Intern**

**Air Force**

Government Agency; 10,001+ employees; Defense & Space industry

1996 – 1998 (2 years)

#### **Chief, Stan/Eval**

**2SWS**

1993 – 1996 (3 years)

<http://www.linkedin.com/pub/marcus-johnson/1b/65b/341>

[Accessed 2012-07-16]

## Marcus Johnson

Lieutenant Colonel / USAF

Santa Barbara, California Area | Military

### **Commander, Operations Support Squadron**

**ADF Southwest**

June 2007 – June 2009 (2 years 1 month)

### **Operations Officer**

**ADF-East**

June 2005 – June 2007 (2 years 1 month)

<http://www.linkedin.com/pub/dir/Glen/Santos>  
[Accessed 2012-07-16]

## Glenn Santos

[View Full Profile](#)

### Military Officer at USAF

Las Cruces, New Mexico Area | Defense & Space

Current: Squadron Commander at ADF-SW

Past: Operations Officer at ADF-SW, Command Lead at AFSPC/A5D, Flight Commander at OD-4,  
Executive Officer at SMC/CI (DMSP), Chief, Small Tactical Term...

Education: Webster University, San Diego State University-California State University, Northrop University

<http://www.linkedin.com/in/javierrgil>

## Javier Gil's Experience

\*

Principal Analyst

EWA

June 2008 — Present (1 year)

Electronic Warfare Associates, Herndon, VA.

Defense and technology solutions company, providing contractual intelligence support to government customer.

Provides government lead course development updates.

Remains abreast of current GEOINT node operations, evolving technology, assesses technology and training methods to tailor training to class population.

Student base includes soldiers, sister service members, Federal Service civilians and contractors.

Maintains equipment inventory and ensures readiness of collection sensors.

Performs duties as a Training Developer and instructor for MOS specific training programs and courses in Measurement and Signature Intelligence (MASINT); trains Soldiers on/and integrates MASINT sensors and products into tactical, operational and strategic intelligence and force protection architectures; schedules students for MASINT and AGI courses.

\*

Lead Imagery Analyst

BAE Systems

October 2005 — March 2008 (2 years 6 months)

BAE Systems Information Technology, Washington, D.C.

Provide enterprise IT solutions and support to technical and program management activities for governmental agencies.

Worked within the UFAC to support NGA and outside customers for all underground issues within our AOR. I am one of two subject matter experts in our country/region for all underground issues as well as nuclear sites.

Worked hand in hand with UFAC 1 on Nuclear and Ballistics issues for targets in our country of interest. Producing numerous construction chronologies, baseline reports and facility assessments.

Helped other members of our contract on exploiting and authoring reports for nuclear sites in their country of interest.

Facilitate inter-agency and intra-agency group participation nationwide, provide technological support to personnel, and integrate new technology into current working environment. Manage project orders at multiple locations nationwide and systematically increased the customer base.

\*

#### SAR MASINT Analyst

L-3 Communications

October 2003 — June 2005 (1 year 9 months)

L-3 Communications Government Services Inc, Las Cruces, NM Provide Advanced Geospatial Intelligence support to clients.

Worked as a SAR MASINT Analyst exploiting and disseminating MASINT products to the DGS-1, DGS-2, and DGS-4. On a daily basis I also provided System Specific Products, such as Color Multi-Views, Dynamic Images and Coherent Change Detection products.

Built up and trained the SAR AGI team; facilitated the transition between old and new programs. Served as a liaison between managers, GPOCs, course developers, instructors, system administrators, maintenance personnel, and system integrators. Supported SAR AGI instructor teams

*[Note: SAR apparently means “synthetic aperture radar” here]*

\*

Product Quality Engineer

Boeing Satellite Systems

December 2001 — October 2003 (1 year 11 months)

Boeing Space & Intelligence Systems, Las Cruces, NM

Defense and technology solutions company, providing contractual intelligence support to government customer.

Worked within the Joint Processing Center (JPC) conducting MASINT product processing and quality assessments. Additionally, perform system/software integration and testing to ensure proper software and tool performance.

I provided on-site customer support and training and System Specific Products, such as Color Multi-Views (2CMV's, 3CMV's), Dynamic Images (DI's) and Coherent Change Detection products (CCD's). As well as Hi RES DEM's, DEM's, TERCAT's, POLCAT's, Glint Smear Reduction (GSR's) and Real Site 3D Site Models to requesting clients outside the local production footprint.

Provided subject matter expertise for the development and revision of SAR AGI courses.

\*

Imagery Analyst

US Army

July 1997 — June 2001 (4 years)

United States Army, Ft Bragg, NC

Provide imagery interpretation in support of national security.

Managed daily exploitation including target assignment, edit, release, and archival of imagery reports. Applied advanced softcopy exploitation analysis techniques to imagery from national reconnaissance systems in a time sensitive, current intelligence environment. Initiated tasking and re tasking of national systems. Produced cables, reports, and comprehensive intelligence documents in support of national intelligence requirements and to the Department of the Army.

Exploited and disseminated SPOT 1, SPOT 3 and SEARCH imagery. Processed, exploited, and disseminated raw imagery and finished intelligence products derived from the PREDATOR, GLOBALHAWK, U2, SYERS and ASARS platforms, as well as (EO), (IR), and (SAR) platforms.

<http://www.linkedin.com/pub/michael-sanjume/9/849/9b1>  
[Accessed 2010-08-10]

Michael Sanjume

Squadron Commander, ADF-SW/OSS at US Air Force

Las Cruces, New Mexico Area

#### Current

- \* Squadron Commander, ADF-SW/OSS at US Air Force

#### Past

- \* Chief of Staff, SIGINT Directorate at US Air Force
- \* Chief, Ground Integration Group at US Air Force
- \* Program Element Monitor, MILSATCOM Programs at US Air Force
- \* Squadron Operations Officer at National Reconnaissance Office
- \* Chief, Program Management Division at National Reconnaissance Office

#### Education

- \* Joint Military Intelligence College
- \* University of California, Davis
  - University of Southern California



## Kenneth Zang - Current TS/SCI SSBI w/CI Poly

### Educational Experience

Brigham Young University

Provo, Utah

Degree: Associate of Science

Major: Genealogical Research

Dates: 9/68 - 4/73

NGA College

Las Cruces, NM

Degree: Certification

Major: SAR 110 & SAR 210

Dates: November 2007

## Ted Cope's Experience

\*

Special Functional Exec (FX) for NSG R&D  
NGA

Currently holds this position

\*

NGA Space Radar IPO Deputy Director for TPED  
National Geospatial-Intelligence Agency

September 2003 — December 2007 (4 years 4 months)

\*

Director, Integrated Operations Center Southwest  
National Geospatial-Intelligence Agency

October 2005 — December 2006 (1 year 3 months)

\*

Colonel  
US Air Force

1973 — 2005 (32 years)

\*

Chief Science Advisor for RADAR  
National Geospatial-Intelligence Agency

August 2002 — August 2003 (1 year 1 month)

\*

CIO Deputy Director  
National Reconnaissance Office

February 2000 — August 2002 (2 years 7 months)

\*

Deputy Director, IMINT Systems Engineering  
National Reconnaissance Office

September 1998 — February 2000 (1 year 6 months)

## **Additional Information**

<http://www.simplyhired.com/job-id/cz5vm45dua/sr-systems-jobs/>

Sr Systems Engineer - Collaboration Cell Manager with Security Clearance

Apply Now

Company: Raytheon

Location: Springfield, VA

Job Description: Raytheon is currently seeking a Collaboration Cell Manager who will represent the organization as the prime technical contact on contracts and projects in support of the Double Eagle Program. This is a shift position that is responsible for 24x7 operations as well as coordination with the on-duty Government Point of Contact (POC). The Collaboration Cell support the intelligence community (IC) and the war fighter (DOD) by assisting users in requesting the appropriate products to accomplish their mission from a variety of up to date intelligence products and services. The candidate is required to work a 12 hour rotating shift. 24x7 operations include the following; monitoring multi-security level chat and user group traffic, transform intelligence needs to the facilities...

From ClearanceJobs.com - 17 days ago [*Accessed 2010-08-10*]

<http://www.simplyhired.com/job-id/txo3lpsrd4/systems-engineer-jobs/>

Systems Engineer Staff

Company: Lockheed Martin

Location: Lorton, VA

Description: This position, called the Collaboration Operator, is a 12 hour shift position on the Double Eagle Program. It is part of a Collaboration Cell that supports the intelligence community (IC) and the warfighter (DOD) by assisting users in requesting the appropriate products to accomplish their mission from the sites most accurate and up-to-date geospatial intelligence products and services. The candidate will establish a collaborative relationship between intelligence users and the site's product and service providers. Personnel will operate in a 24x7 shift work environment, monitor multi-security level chat and user group traffic, translate intelligence needs to the site's available products and services, connect users (new customer) to service providers within the cell and...

From Monster - 11 days ago [*Accessed 2010-08-10*]

[https://sjobs.brassring.com/1033/ASP/TG/cim\\_jobdetail.asp?SID=&jobId=171689&type=search&JobReqLang=1&recordstart=4001&JobSiteId=5010&JobSiteInfo=171689\\_5010&GQId=0&partnerid=25037&siteid=5010](https://sjobs.brassring.com/1033/ASP/TG/cim_jobdetail.asp?SID=&jobId=171689&type=search&JobReqLang=1&recordstart=4001&JobSiteId=5010&JobSiteInfo=171689_5010&GQId=0&partnerid=25037&siteid=5010)

**Lockheed Martin - Colorado**

Req ID 164437BR

Industry Job Title Systems Engineer

Standard Job Code/Title E1462:Systems Engineer

*[Accessed 2010-08-10]*

**Required skills** The ability to work in small groups is essential and occasional travel may be required. Attention to detail, self motivation and the ability to think outside the box are all required traits for the PA position.

**Desired skills** Data analysis, processing and reporting, and Mission Planning. Familiarity with military functions, operations, and philosophies. Former military experience as 98J, CTT, or 1N5. Familiar with **STK**, or similar products. Experience with national-requirements-populated databases.

*[98J- -Electronic Intelligence Interceptor/Analyst*

*CTT -- Cryptologic Technician (Technical)*

*1N5 – Imagery Interpretation*

*STK – Satellite Tool Kit]*

**Specific Job Description** **This position is on the Double Eagle (Denver) program** in the Enterprise Mission Optimization Group as part of the Planner Analyst (PA) team. The PA primarily defines and builds database products from tasking. The PA works closely with customer counterparts to assist in mentoring and training of their personnel, to strategize and to ultimately design sophisticated engineering solutions that satisfy national requirements. The PA also works closely with support staff, technical advisors and calibration experts to assist in developing strategies and optimizing products. Responsibility is shared for the scheduling of products, and as such, the PA works closely with Scheduling Branch, to advise and ensure scheduling of tasks. Performs functional analysis, timeline analysis, detailed trade studies, requirements allocation and interface definition studies to translate customer requirements into hardware and software specifications.

Optimization studies, what if analyses and general performance assessment are performed to ensure optimal task satisfaction. A comprehensive OJT program is in place, as a thorough knowledge of capabilities; software and mission are required to perform the job. The PA may be called upon to support Mission Planning (MP) Staff. Frequent use and application of technical principles, theories and concepts in the field is required.

**Standard Job Description** Performs technical planning, system integration, verification and validation, cost and risk, and supportability and effectiveness analyses for total systems. Analyses are performed at all levels of total system product to include: concept, design, fabrication, test, installation, operation, maintenance and disposal. Ensures the logical and systematic conversion of customer or product requirements into total systems solutions that acknowledge technical, schedule, and cost constraints. Performs functional analysis, timeline analysis, detail trade studies, requirements allocation and interface definition studies to translate customer requirements into hardware and software specifications.

**Security Clearance** TS/SCI

**Typical Minimums** Bachelors degree from an accredited college in a related discipline, or equivalent experience/combined education, with 2 years of professional experience; or no experience required with a related Masters degree. Considered experienced, but still a learner.

<http://www8.nationalacademies.org/cp/CommitteeView.aspx?key=48977>

#### Committee Membership Information

Project Title: Review of the Department of Homeland Security's Approach to Risk Analysis

PIN: DELS-O-08-01-A

Major Unit: Division on Earth and Life Studies  
Division on Engineering and Physical Sciences

RSO: Parker, Stephen

Committee Membership  
Date Posted: 10/17/2008

Ms. Katherine Hall  
BAE Systems

Katherine Hall is Director of Strategy and Plans for Global Analysis at BAE Systems. Prior to joining BAE, she directed the analysis and production section of the National Geospatial-Intelligence Agency (NGA), which is responsible for the management and strategic direction of several thousand intelligence analysts. Ms. Hall led the NGA's Integrated Operations Center in Denver which was cited by the DNI as a model of interagency cooperation. Prior to moving to NGA, she was a Senior Intelligence Officer with the CIA. As part of CIA's Office of Military Support, she directed CIA's Representative to NORAD/USSPACECOM where she acted as a senior intelligence advisor to the Commander. Ms. Hall was also a national intelligence officer and head of the National Intelligence Council's Analytic Group, an organization of senior intelligence officers responsible for the production of national estimates. She personally drafted several national intelligence estimates and with others was the developer of the first US Government model to estimate the spread and impact of AIDS. She also served in several senior positions in CIA's Directorate of Intelligence such as Deputy Director of the CIA's Office of Asian Pacific and Latin American Analysis and Director of the Office of Africa and Latin America. She began her career as a military and weapons analyst. Ms. Hall received her BA in history and physics from Mount Holyoke College and her MA in international relations from George Washington University. Ms. Hall's inclusion on this committee will ensure that the committee has an understanding of the quality of inputs upon which DHS must base its counter-terrorism risk analyses.

<http://www.theseretofhennybogan.com/aboutmark.html>

I rejoined government civilian service in April 2002, accepting an appointment with NIMA. I served as a Branch Chief for Future Concepts and was given responsibility for NIMA's Persistent Surveillance portfolio, including Space Base Radar (SBR), the New Imaging System, Laser Imaging Detection and Ranging and Airborne Integration Program efforts, including Global Hawk, Predator, JSTARS and the U-2. I was later assigned as the NIMA SBR Program Manager and helped establish the NIMA Persistent Surveillance Office. I was promoted to the Executive Service (Defense Intelligence Senior Level) in November 2003. I am currently the Deputy Director, Integrated Operations Center-Special Projects, Analysis & Production Directorate, National Geospatial-Intelligence Agency, Bethesda, Maryland, with duty at the Washington Navy Yard.



[http://www.americasjobexchange.com/seeker/jobsearch/quick?action=JobSearchViewJob&JobSearch\\_JobId=536002977&source=juju&utm\\_source=juju&utm\\_medium=feed&utm\\_campaign=organic](http://www.americasjobexchange.com/seeker/jobsearch/quick?action=JobSearchViewJob&JobSearch_JobId=536002977&source=juju&utm_source=juju&utm_medium=feed&utm_campaign=organic)

[Accessed 2010-08-11]

## Senior Image Quality Systems Engineer

LOCKHEED MARTIN HAS ANNOUNCED PLANS TO DIVEST MOST OF THE ENTERPRISE INTEGRATION GROUP (EIG) LINES OF BUSINESS. THIS JOB OPENING IS PART OF THE CURRENT EIG BUSINESS THAT WILL BE DIVESTED. IF YOU ARE A CURRENT LOCKHEED MARTIN EMPLOYEE, PLEASE CONTACT THE IS&GS STAFFING TEAM (FC-LMISS, LM CAREERS) MAILBOX TO DISCUSS THIS DEVELOPMENT.

Provide technical product quality assurance operational support as a member of NGA's Image Quality and Utility (NIQU) Program resident within the NGA Integrated Operations Center-Special Projects (IOC-SP) analytical workspace at the Washington Navy Yard. Interface with IOC-SP analysts to provide technical understanding of key concerns and issues encountered with IOC-SP products. Support NIQU in assessing the image and product quality impacts of IOC-SP and NSG systems and processes used in the collection, processing, exploitation, storage, and dissemination of IOC-SP GEOINT data. Ensure that products produced by IOC-SP systems meet predefined standards and specifications. Coordinate the review of IOC-SP operational product quality issues with other IOC-SP NIQU members, IOC-SP analyst personnel, and IOC-SP Mission Partners. Support the planning, coordination, development, and execution of product quality IOC-SP system transition checkout activity, as well as the testing of IOC-SP segments and software.

Applicants selected will be subject to a government security investigation and must meet eligibility requirements for access to classified information.- Bachelors degree in image science, physics, engineering, or related technical discipline

- Basic technical understanding of image formation and processing techniques
- Several years experience in Image Quality, Systems Engineering or an associated field
- Proficiency in using the RemoteView Electronic light Table software package
- Proficiency in using other Electronic Light Table software packages: SOCET GXP, ERDAS IMAGINE, ENVI
- Familiarization of the NSG systems architecture and its dissemination, processing, storage, and exploitation of imagery and imagery products
- Programming experience (C, C++, or scripting)
- Proficiency with MS Office software
- Ability to work with NGA Analysts in an operational environment
- Strong writing skills with special proficiency in test plan and technical report writing
- Presentation experience

As deputy director of the National Geospatial-Intelligence Agency, Lloyd Rowland assists the director in formulating policy and managing agency activities in order to accomplish NGA's mission. Before his appointment as NGA deputy director in October 2006, Rowland served in numerous leadership positions throughout NGA, including business executive, deputy director of the Office of Business Transformation, director of global operations, associate deputy director of operations, director of geospatial information, deputy director of the Central Imagery Tasking Office and associate director of assessments. He was appointed to the Defense Intelligence Senior Executive Service in 1996.

During his 24 years in the Air Force, Rowland commanded a squadron in Operation Desert Storm and had various postings around the world. Most of his career involved reconnaissance force employment and imagery management. His awards include the Distinguished Flying Cross for combat operations, Presidential Meritorious Rank, Legion of Merit, Defense Superior Service Medal and the Air Medal. Rowland has degrees from Memphis State University and the University of Southern California.

Rowland was interviewed by MGT Editor Harrison Donnelly.

Q: What are some of the operational improvements you expect to gain once the agency is installed in its new headquarters?

A: What's really important about the new campus is not the building, but it's about moving the mission to our facility in Springfield. The new facility will be a place where intelligence analysts from across the community can come together to accomplish the intelligence mission. We're on course and glide-slope to start moving our analysts in January 2011. We'll be fully operational there by September of that year.

Right now we're located in seven or eight locations around the Washington, D.C., area. Admiral Murrett and I and other leaders in the agency spend a lot of our time every day moving from location to location. That will slow down certainly; but first and foremost, we're going to be able to bring together all of our analysts from around the Washington area to one central location, where they'll be able to work and collaborate together more easily. That's a huge benefit—collaboration on high-profile intelligence issues will be much easier.

The NGA Integrated Operations Center, which is now dispersed among our operating locations, will be put together centrally and located within the same operational footprint. They will be surrounded by the regional and functional intelligence experts, and will be able to work together as a more cohesive team. Thirdly, the new Campus East allows us to consolidate our East Coast libraries and information repositories, thus providing analysts with faster and broader access to our entire collection of research holdings.

Additionally, the large conference center that we'll have there will provide an opportunity for the entire community to come together at NGA to collaborate on intelligence problem sets and issues of mutual concern. So as you can see the new campus will provide us with many mission improvement opportunities.



# **Imagery**



***White Sands Complex / TDRSS Ground Station  
32.50 N, 106.61 W  
As of 27 May 2007***

***The White Sands Ground Terminal is at the bottom of the picture and  
the Second TDRSS Ground Terminal is at the top.***



*WSGT as of Sunday, October 3, 1998*









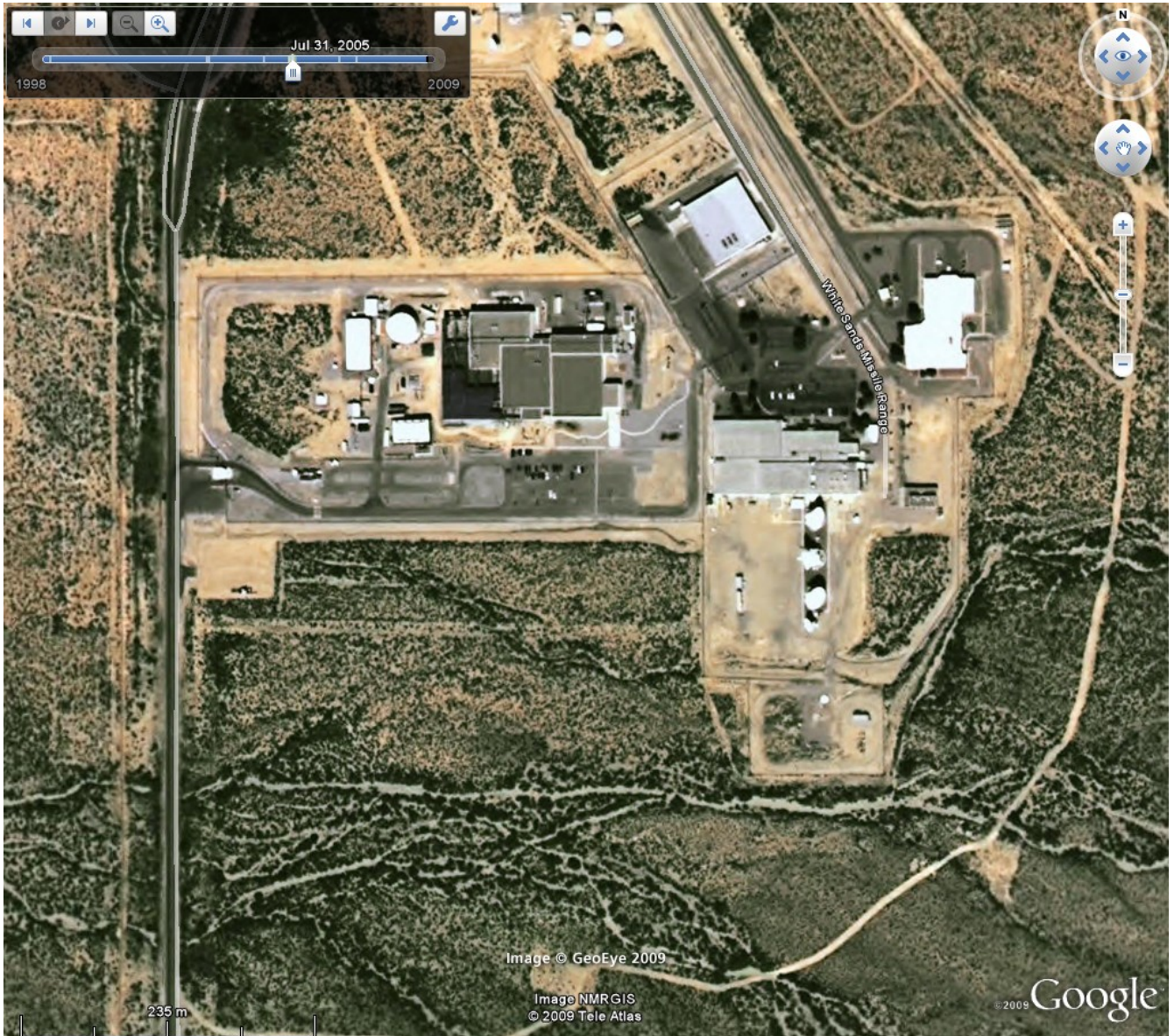
*WSGT as of Sunday, March 9, 2003*



***WSGT as of Monday, October 11, 2004 (Columbus Day, a US federal holiday).  
The appearance is essentially unchanged since the first available imagery of October 3, 1998.  
Note the large number of unused parking spaces in the parking lot at the center of the image.***



*WSGT as of Monday, July 4, 2005 (Independence Day, a US federal holiday)  
What appear to be construction materials are present to the left of the large building  
at the center of the image.*

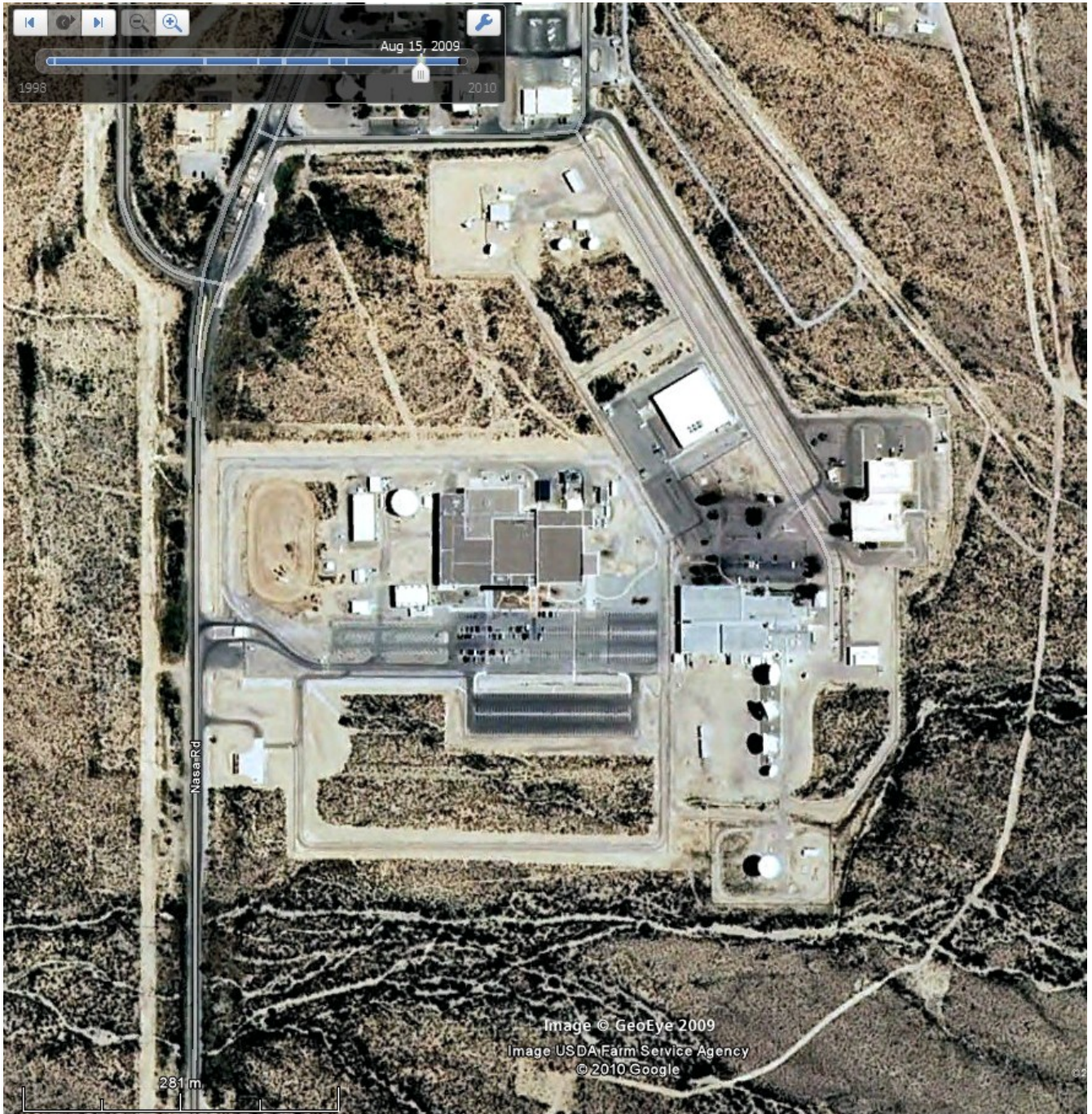


*WSGT as of Sunday, July 31, 2005 [This date may be in error.]  
Construction has begun on a large addition on the central building.*



***WSGT on Sunday, May 27, 2007.***

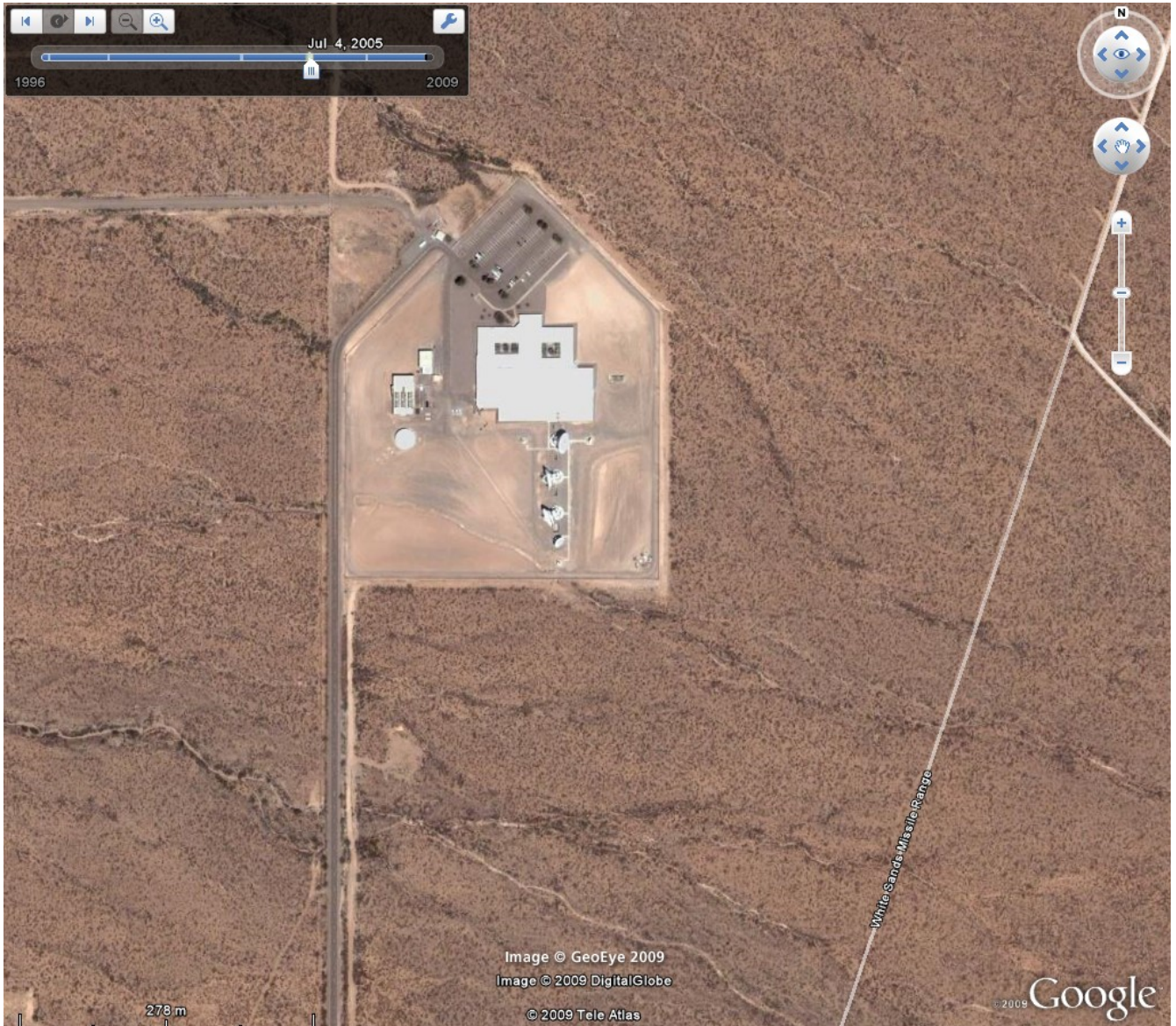
***The building addition appears complete, an extension has been added to the east side of the existing parking lot and a new lot has appeared to the south of the old one. A new 20-meter dish antenna, perhaps WS-1, has been installed to the south of the existing three.***



*WSGT on Saturday, August 15, 2009.*

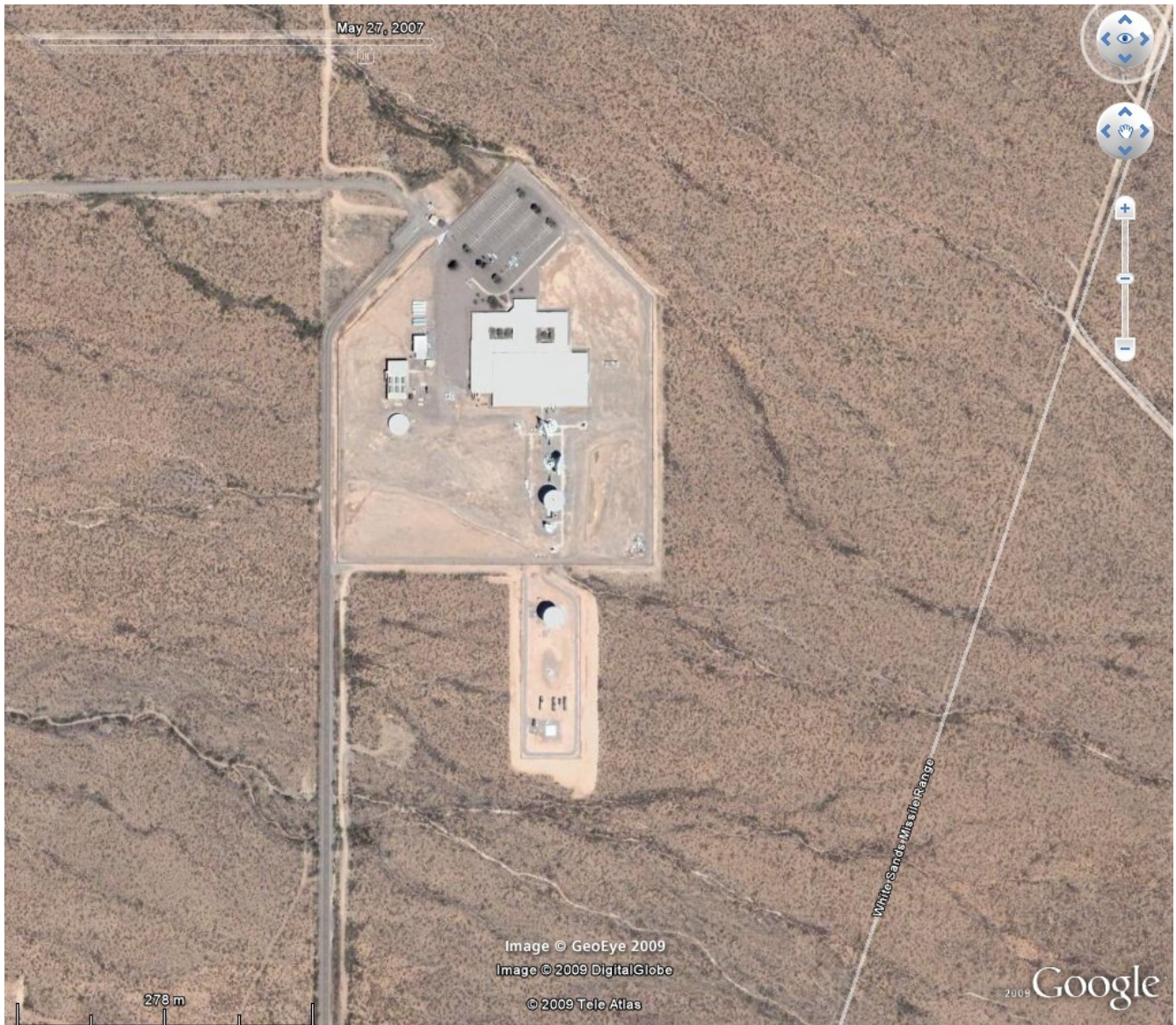


*WSGT on Sunday, April 17, 2010.*



***STGT as of July 4, 2005.  
The appearance is essentially the same as in previous Google Earth images.***

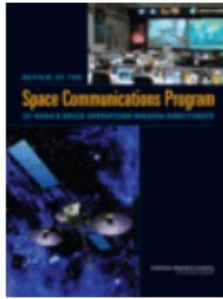




***STGT as of May 27, 2007.***

***A new area containing a 20-meter dish antenna and what appear to be the foundations for one or two more has appeared to the south of the existing antennas. These may be the antennas meant to support the Solar Dynamics Observer mission***

# **NASA Facilities**



## Review of the Space Communications Program of NASA's Space Operations Mission Directorate

Committee to Review NASA's Space Communications Program, National Research Council

ISBN: 0-309-66447-0, 98 pages, 8 1/2 x 11, (2006)

**This free PDF was downloaded from:**

<http://www.nap.edu/catalog/11718.html>

## INTRODUCTION

The Space Network is a major element of the Space Operations Mission Directorate's (SOMD's) space communications program. It consists of a constellation of Tracking and Data Relay Satellite System (TDRSS) communications satellites and a series of ground tracking and relay stations to provide services to NASA, other government agencies, and commercial and international customers 24 hours per day, 7 days per week (Figure 2.1).

The Space Network's mission is to "provide global coverage tracking and data acquisition services during launch, early orbit, and operations in low Earth orbit, and satellite anomaly investigation via a constellation of geosynchronous satellites, and associated ground systems located in New Mexico and Guam."<sup>1</sup>

Since the 1980s, NASA has operated the TDRSS to provide communications links between Earth and low-Earth-orbiting satellites at S-, Ku-, and Ka-band frequencies. The TDRSS satellites are located in geosynchronous Earth orbit and are positioned in orbital locations that are in constant view either of the White Sands Complex (WSC) at NASA's White Sands Test Facility in New Mexico, or of NASA's Guam remote ground terminal (GRGT). The assigned orbital locations provide continuous or full-period telemetry, tracking, and command coverage for near-Earth-orbiting satellites.

The original TDRSS constellation was intended to provide three fully operational satellites, one in the East (or Atlantic region) at 041 degrees West longitude, one in the West (or Pacific region) at 171 degrees West longitude, and a fully functional spare at 079 degrees West longitude. The baseline configuration is depicted in Figure 2.2. Over the years the robust performance of the TDRSS satellites, as well as additional loading requirements, resulted in NASA's expansion of the system and the use of more spacecraft.

The current TDRSS constellation consists of six first-

generation (F1 and F3-F7) and three second-generation (F8-F10) satellites, with three of the nine satellites being stored on orbit. The first-generation spacecraft support three categories of service: single access, multiple access, and tracking at the S and Ku bands. The second-generation spacecraft added Ka-band forward and return services in addition to the S- and Ku-band capabilities. Figure 2.3 depicts the current TDRSS constellation orbital placement, Table 2.1 gives the launch dates, and Figure 2.4 indicates the overall health of the TDRSS constellation. Figure 2.5 shows projected TDRSS constellation capacity based on failures experienced to date and long-term reliability models. The lower portion of Figure 2.5 shows anticipated user demand for service (hours per day), representing in excess of 60 different missions through 2017. The on-orbit health issues reflected in Figure 2.4 have had limited impact on tracking and data relay services at this time due to built-in redundancy and operational rescheduling. Specific failure trends are closely monitored and used in individual satellite as well as constellation end-of-useful life projections.

The TDRSS satellites are controlled through the WSC and the GRGT. The WSC consists of two functionally equivalent ground terminals that provide network scheduling and command and control of the TDRSS satellites, as well as serving as the relay points for customer data to the necessary control and data collection centers. The GRGT is used to support the TDRSS satellite located at 085 degrees East longitude (275 degrees West) and the customer satellites serviced through that relay. Major ground system upgrades were completed in 1994 (second TDRSS ground terminal) and 1996 (White Sands ground terminal upgrade). The GRGT became operational in 1998, expanding system capability to global coverage for near-Earth missions. A Space Network expansion project is under way to add up to two additional ground terminals to increase available TDRSS capacity. For more than 20 years, the Space Network has supported a wide variety of near-Earth missions, including

## The Space Segment—9 Satellites

- 5 operational
- 3 in storage
- 1 residual (dedicated to the National Science Foundation)



## The Ground Segment

- **White Sands Complex**
  - White Sands Ground Terminal
    - 2 Space-Ground Link Terminals
  - Second TDRSS Ground Terminal
    - 3 Space-Ground Link Terminals
  - Data Services Management Center
    - Scheduling
    - Monitor and control
- **Guam Remote Ground Terminal**
  - 1 Space-Ground Link Terminal



FIGURE 2.1 NASA's Space Network, comprising the TDRSS space segment and a ground segment. SOURCE: Ken Ford, NASA, "Space Network," briefing to the NRC Committee to Review NASA's Space Communications Program, Washington, D.C., January 26-27, 2006, p. 6.

scientific, environmental, and human spaceflight missions, as well as launch vehicles and other non-NASA efforts. This capacity for global coverage and connectivity is expected to continue and expand as NASA defines future science and exploration missions. Planning for Space Network continuation apparently has started, but no details were available for assessment by this committee.

## ASSESSMENT

### Formulation of the Project Plan

#### *Project Objectives*

The Space Network's objectives are clearly articulated in the mission statement; they are aligned with the NASA Strategic Plan<sup>2</sup> and are traceable to the NASA Vision for Space Exploration.<sup>3,4</sup> The principal focus of the Space Network is day-to-day operation of the space and ground segments of the TDRSS to provide global tracking and data relay services. Continuity of these services represents a significant technical and budgetary challenge to the Space Net-

work as the existing architecture ages and new demands for service are identified.

The agency-wide Space Communications Architecture Working Group (SCAWG) addresses the communications and navigation architecture needed to support future (25 years) NASA science and exploration missions. At this writing, specific details are pending on both the architectural roadmap and a realignment of management responsibility for space communications.

#### *Project Deliverables*

Current Space Network activities are well structured to provide documented services to a broad range of users.<sup>5</sup> The Space Network interacts daily with the user community, providing services within the network's established capacity and capability. Formal project service-level agreements or memoranda of agreement with both the NASA and non-NASA user communities document the specific Space Network services to be provided. The project service-level agreement is a formal agreement between the project office and the customer for services, at a specific cost, within a

[http://www.nasa.gov/mission\\_pages/LRO/news/ka-band.html](http://www.nasa.gov/mission_pages/LRO/news/ka-band.html)

### **NASA Unveils New Antenna Network in White Sands, N.M.**

11.08.07

Engineers from NASA's Goddard Space Flight Center in Greenbelt, Md., showcased the new 18-meter Ka Band Antenna Network, the first such system in agency history, during a ribbon-cutting ceremony at the White Sands Test Facility in New Mexico on November 8.

“Ka band” refers to a section within the microwave portion of the electromagnetic spectrum. Much like how listeners can't pick up FM waves on AM radios and vice-versa, Ka band signals require special equipment to receive them.

The three new dishes help meet the growing demand for ground stations to handle high volumes of science data generated by today's new satellites. The Ka band system allows satellites to transmit more data to the ground than ever before, in the area of 45 terabytes a month. That's about the equivalent of 1,152 fully loaded 40-gigabyte iPods, or 67,408 CDs!



**Two of the new 18-meter Ka band dishes installed at the White Sands Test Facility in New Mexico. Credit: NASA**

The dishes are 18.2 meters in diameter, and they need to be able to rotate quickly to acquire satellite signals. To make the dishes lighter they are largely held together with glue, rather than bolts and other fasteners. But this is no ordinary wood glue.

The network makes use of a two-part epoxy developed at NASA's Jet Propulsion Laboratory in Pasadena, Calif. Tests have shown the glue and the dishes will last for decades, according to Raymond Pages, chief of Goddard's Ground System Development Office.

The first missions to use the network will be the Solar Dynamics Observatory (SDO) and the Lunar Reconnaissance Orbiter (LRO). SDO will study solar variations that affect life on Earth. LRO will focus on selecting landing sites, identifying lunar resources and studying how the moon's environment will affect humans. Both probes are slated for launch in late 2008.

"The design, development, and delivery of three 18-meter Ka band antenna systems in just over two years is a major accomplishment for Goddard and NASA," Pages said. "People will be munching on data [from these missions] for years to come."

Once SDO and LRO conclude, the antenna network will be available for other missions.

White Sands was chosen as the location for the new antennas because of the existing infrastructure available there, making it a cost-effective option. Weather was also a factor in the decision, because data must be able to reach the antennas with as little weather interference as possible for optimum quality.

Datron Advanced Technologies in Simi Valley, Calif., built the antennas. Honeywell Technology Solutions Inc. in Columbia, Md., built and assembled the ground station. The Cospal Composites Srl in Ambivere, Italy, manufactured the primary reflectors. Honeywell, Datron and Goddard helped to design the antennas. Goddard manages the White Sands Complex for NASA.

The total development cost of the new antenna system was \$20 million.



# NASA Ground Network Support of the Lunar Reconnaissance Orbiter

Stephen F. Currier and Roger N. Clason  
*Ground Network Project, NASA Goddard Space Flight Center,  
Greenbelt, MD 20771, USA*

Marco M. Midon  
*Microwave and Communication Systems Branch, NASA Goddard  
Space Flight Center, Greenbelt, MD 20771, USA*

Bruce R. Schupler and Michael L. Anderson  
*Near Earth Networks Services, Honeywell Technology Solutions  
Inc, Lanham, MD 20706, USA*

# Overview

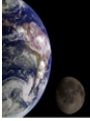
- **The Lunar Reconnaissance Orbiter is the initial mission in NASA's Robotic Lunar Exploration Program**

- Launch Planned for October, 2008 on an Evolved Expendable Launch Vehicle
- 1 year mission at 50 km altitude followed by a possible extended mission in a low maintenance orbit
- Six primary instruments and one technology demonstration
- S-band TT&C link and Ka-band data downlink



- **The NASA Ground Network has primary responsibility for fulfilling LRO's communications and navigation requirements via the Ground, Space, and Deep Space Networks**





# Overview

- Focus of this paper is support from the Ground Network with emphasis on the design and implementation of the new 18-meter S/Ka-band station, WS1, at the White Sands Complex in New Mexico
- Tracking network support of LRO must be in place by November, 2007 to support network and mission readiness testing
- LRO's requirements include both TT&C and high rate data downloads
- Support will be provided by a combination of NASA and commercial antennas



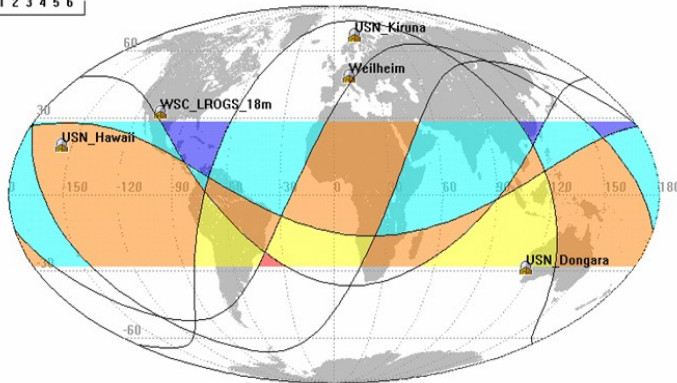
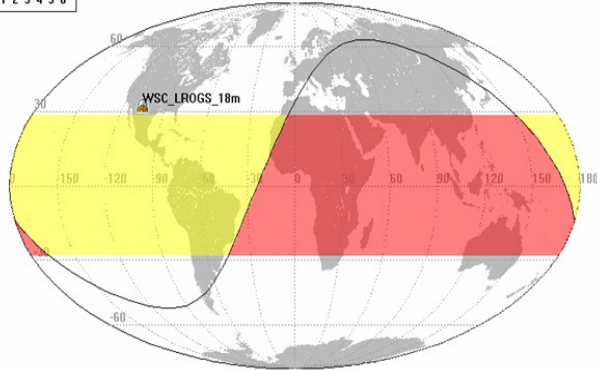
# LRO Routine Operations Support

- LRO's routine support requirements include:
  - 30 minutes of S-band tracking per 113 minute lunar orbit
    - Range measurements
    - Range rate measurements
    - Commanding
    - Realtime housekeeping telemetry
  - 600 Gbits per day of Ka-band downloads
    - Recorded science data
    - Recorded housekeeping telemetry
    - CCSDS CFDP protocol with loop closed via S-band

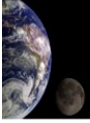


# Routine Operations Network

The WS1 station will provide the Ka-band download service as well as S-band coverage for all of the LRO orbits visible from White Sands (approximately 45% of all LRO orbits)



A five station network (WS1, Dongara, Weilheim, Kiruna, and Hawaii) provides nearly complete S-band coverage above 5° elevation with 81% multistation coverage for scheduling flexibility. January, 2009 tracking is shown in the following movie.

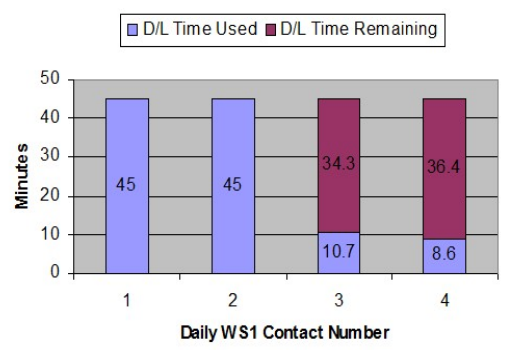


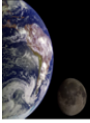
# Routine Operations Scenario

	04:00 GMT		08:00 GMT		12:00 GMT		16:00 GMT		20:00 GMT	
S-Band Supports										
Ka-Band Supports										
LR Supports										
S-Band HK Telemetry										
S-Band Tracking										
Ka-Band Data Dumps										
Ka Data MOC Transfer										

LRO S-band support consists of alternating 56 minute view / no view periods for TT&C functions.

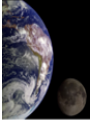
Ka-band support consists of at least four 56 minute views per day from WS1. Ka-band utilization is approximately 61% of capacity.





## WS1 Requirements for LRO

- 100 Mbps Ka-band downlink service from the LRO high gain antenna
- 32 Kbps S-band telemetry service from the LRO high gain antenna
- 4 Kbps S-band command via either the LRO high gain or omni antenna
- 1 mm/sec (1 sigma) S-band range rate measurements using the spacecraft high gain antenna
- 10 m (1 sigma) S-band range measurements using the spacecraft high gain antenna
- Autotracking capability on either S or Ka-band
- 98.5% Ka-band data recovery
- $10^{-9}$  bit error rate after error correction (S and Ka-bands)
- Readiness to support LRO readiness testing in November, 2007



## WS1 Requirements for LRO

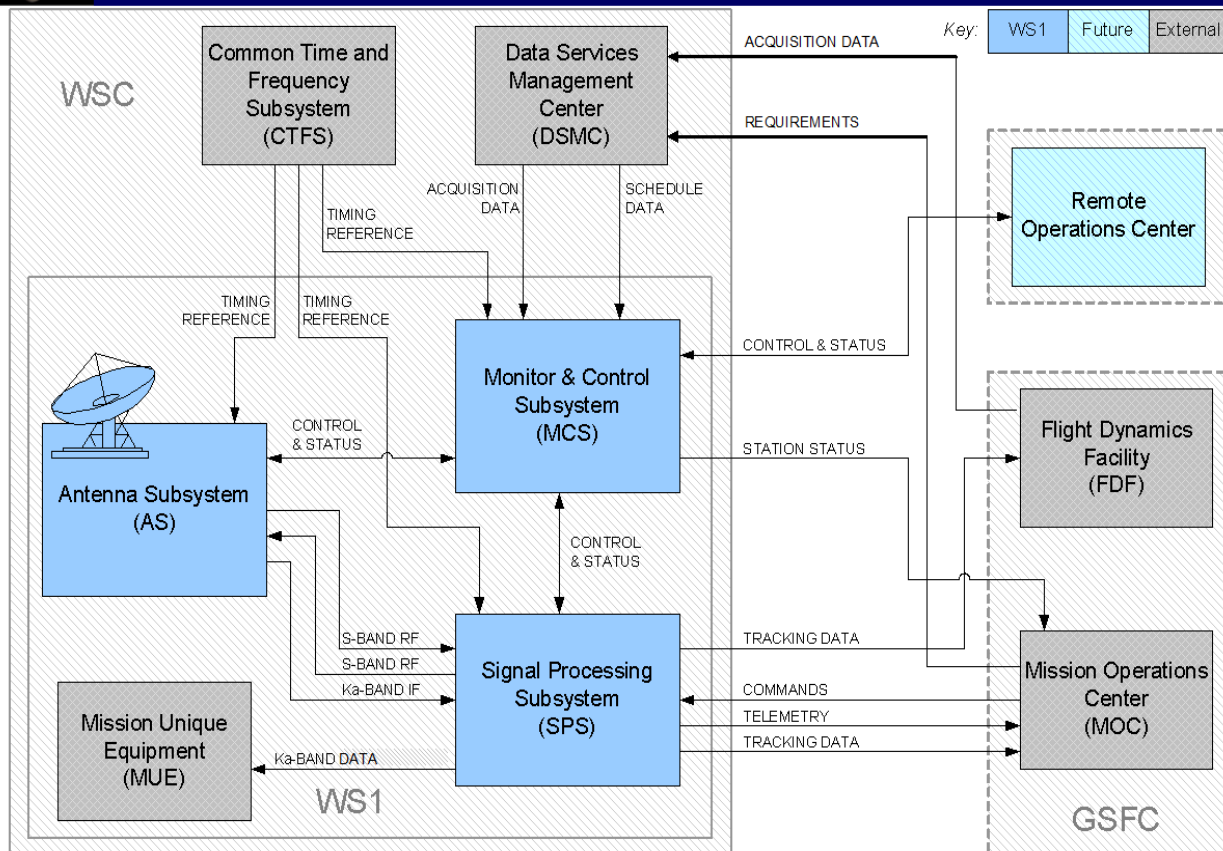
- 100 Mbps Ka-band downlink service from the LRO high gain antenna
- 32 Kbps S-band telemetry service from the LRO high gain antenna
- 4 Kbps S-band command via either the LRO high gain or omni antenna
- 1 mm/sec (1 sigma) S-band range rate measurements using the spacecraft high gain antenna
- 10 m (1 sigma) S-band range measurements using the spacecraft high gain antenna
- Autotracking capability on either S or Ka-band
- 98.5% Ka-band data recovery
- $10^{-9}$  bit error rate after error correction (S and Ka-bands)
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## WS1 Design Heritage

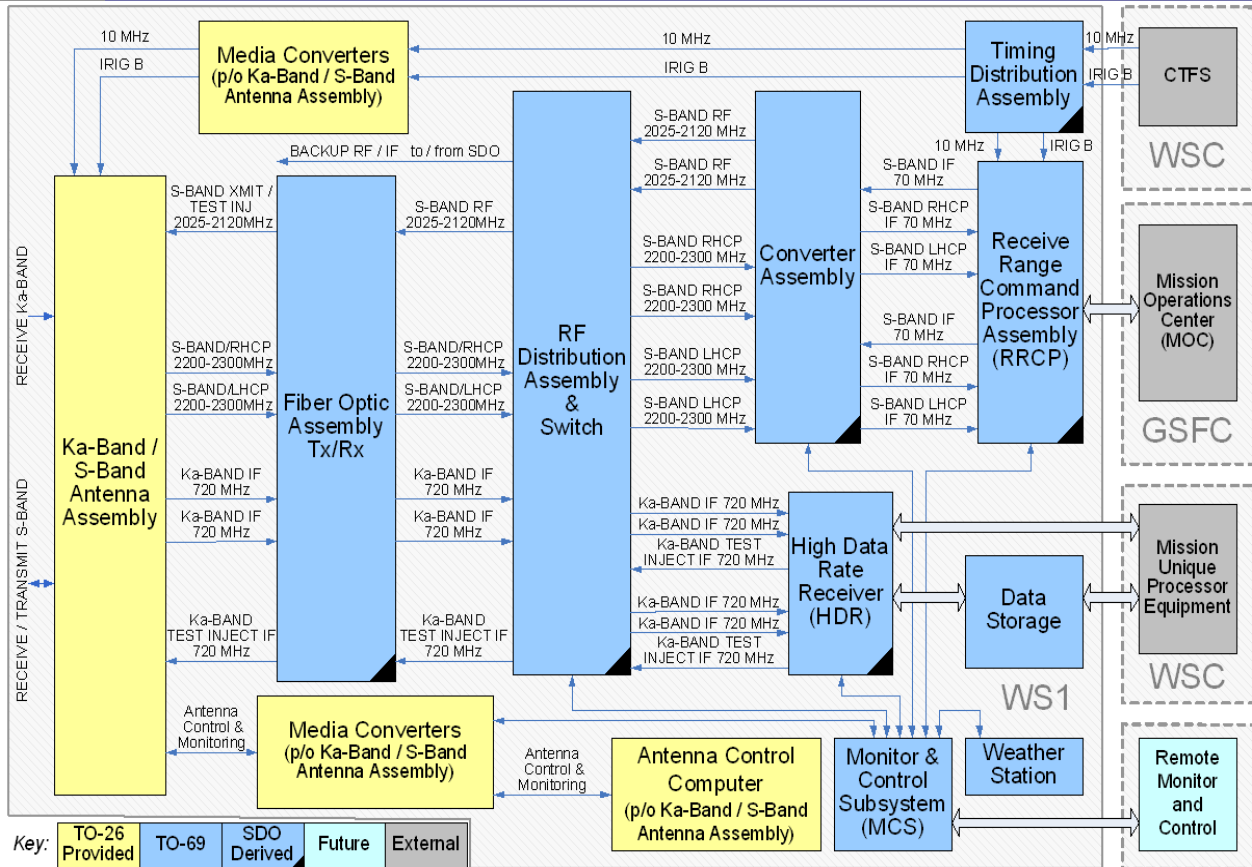
- Core of the WS1 design is the Solar Dynamics Observatory Ground Station Design
  - SDO and LRO communications requirements are very similar
  - SDO Ground Station design was at CDR when the need for LRO support arose
  - Cost and time savings realized by reusing the SDO design
  - Operational, logistics, training, support, and documentation savings also possible
- SDO antennas upsized to 18-meter diameter and can provide backup LRO support from WSC
- LRO support leveraged SDO contract vehicles for further cost and time savings

# WS1 External Interfaces





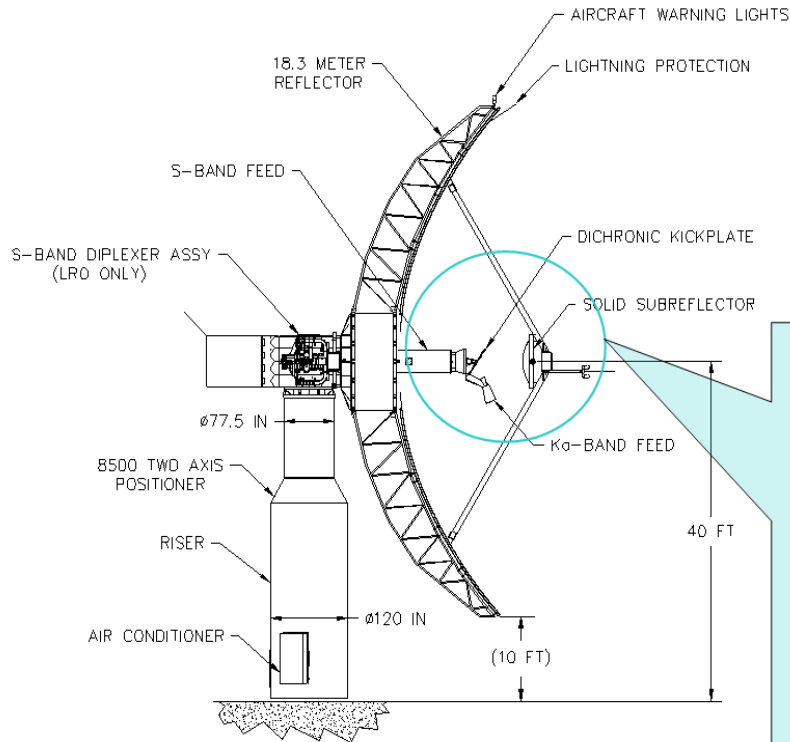
# WS1 Block Diagram



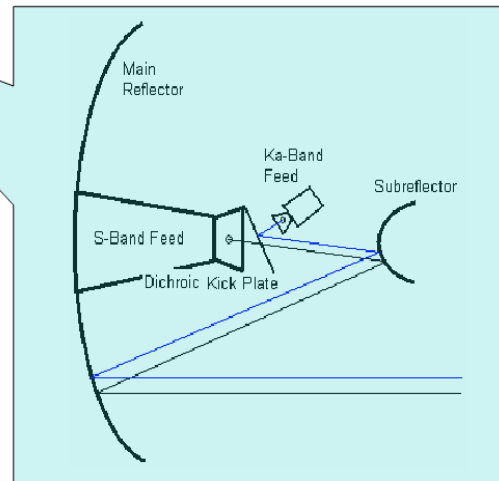
Almost all of WS1 is derived from a modified SDO design



# WS1 Antenna Design Features



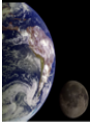
The WS1 antenna is a commercial design with the addition of a mechanically stable Ka-band dichroic subreflector and feed





# Key WS1 Antenna Characteristics

Parameter	Value
Main reflector diameter	18.3 meters
S-band receive frequency range	2200 to 2300 MHz
S-band transmit frequency range	2025 to 2120 MHz
Ka-band receive frequency range	25.5 to 27.0 GHz
S-band G/T (See Note 1)	28.8 dB/K
Ka-band G/T (See Note 2)	45 dB/K
S-band EIRP	79 dBW
Maximum slew and tracking rate	2° per second on each axis
Azimuth range	$\pm 400^\circ$
Elevation range	0° to +180°
Mount type	Elevation over azimuth
Note 1 - S-band G/T value is for clear sky and 5° elevation angle	
Note 2 - Ka-band G/T is for clear sky and 10° elevation angle	



## WS1 Status

- WS1 Electronics and Commercial S-band Network CDR held on June 8, 2006
- Antenna foundation has been poured
- Antenna delivery planned for July, 2007
- Backend electronics are on order
- Systems integration, subsystem testing, and compatibility testing planned for late 2006 and early 2007
- On schedule for network testing in November, 2007



# 18-meter Antenna Status



First 18-meter antenna reflector and riser under construction at the vendor in early 2006

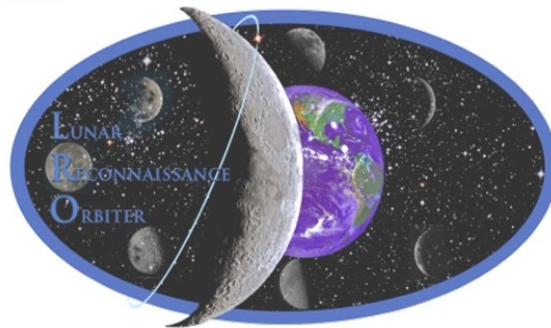


WS1 Foundation being poured at WSC in May, 2006

18-meter antenna riser in the foreground compared to a 13-meter antenna riser

# Conclusions

- LRO support from WS1 and the commercial S-band stations is on track to support project requirements
- The reuse of the recently developed SDO ground station design by WS1 and the cooperative efforts of the SDO and LRO projects as facilitated by the GN have been mutually beneficial to all parties
- WS1 is capable of multimission support and will be a general purpose GN asset with LRO as its highest priority customer





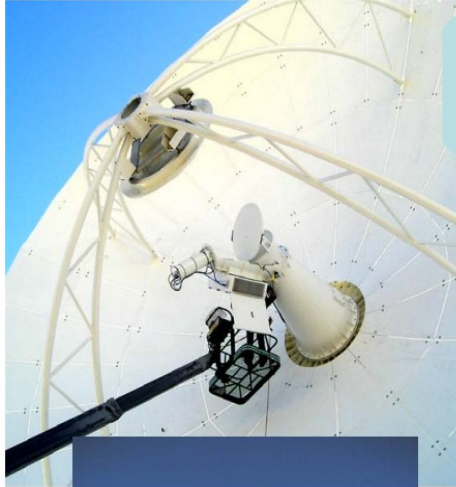
# Acknowledgements

Many thanks to:

- Lunar Reconnaissance Orbiter Project for supporting financially and maintaining confidence in this service approach
- Ground Network and Solar Dynamics Observatory project management for endorsing this engineering and operations collaboration
- Solar Dynamics Observatory Project for making their ground station design and contract vehicles available for WS1



# 18-meter Antenna Status



18m-antenna  
dual frequency  
feed system



LRO Reflector  
Mounted on the  
First SDO  
Pedestal During  
Acceptance  
Testing at the  
Vendor Facility

