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NATIONAL DEFENSE UNIVERSITY

NATIONAL WAR COLLEGE

Protection, Propaganda or Profit?

An Analysis of Commercial Satellite Imaging in Wartime

Michele Brunngraber

COURSE 5603

THE INTERAGENCY PROCESS

SEMINAR L

COURSE 5705

SPACE POLICY AND STRATEGY

PROFESSORS

DR. CHARLES STEVENSON and COL. GENE POWELL

ADVISOR

MR. NORM IMLER

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“In our opinion, a large customer that purchases a right to imagery has nothing to do with preventing imagery from getting out to the public and everything to do with a solid business transaction” Mark Brender, Director of Washington Operations, Space Imaging.¹

“We are happy to enhance the commercialization of remote-sensing imagery as long as it supports our national security interests.” Mark Berkowitz, Space Policy Director, DoD.²

“According to reports, the decision to shut down access to satellite images was taken last week, after reports of heavy civilian casualties near Jalalabad.” Dr. David Whitehouse, BBC News.³

“The [defense] department’s decision not to sell, release, distribute or share images to any other entity has acted to deprive the media of all high-resolution imagery of Afghanistan from the single most efficient civilian satellite...RTNDA is concerned that taxpayer dollars are being used to preclude the media from adequately informing the public about matters of critical importance that in no way implicate the national security.” Barbara Cochran, President Radio-Television News Directors Association (RTNDA)⁴

INTRODUCTION:

Dual use technology is technology that can be utilized for both civil and national defense purposes. For example, classified government technology could have important industrial uses (image detection software used for breast cancer screening) or commercial technology could have national security applications (weather modeling supercomputers used for nuclear bomb development). The regulation of dual use technology has always been a balancing act for the government.

In August 1960, the first classified U.S. imagery reconnaissance satellite CORONA was launched. By 1972, imagery down to two-meter resolution was being received. In September 1999, Space Imaging Corporation activated the first U.S. commercial imaging satellite. Today, the Space Imaging IKONOS satellite provides images of as little as one-meter resolution. There are presently dozens of

¹ Pamela Hess, “DoD Locks Up Commercial Satellite Pix”, *United Press International*, October 12, 2001.

² Mary Motta, “Eyes in the Sky a Growing Concern”, *space.com*, 17 March, 2000.

³ Dr. David Whitehouse, “US Buys Afghan Image Rights”, *BBC News*, 17 October, 2001.

⁴ Radio-Television News Directors Association news release, November 7, 2001.

commercial remote sensing satellites in orbit. Applications include: media and journalism, independent defense analysis, environmental research, mineral and petroleum exploration, urban and land use applications, geologic studies, mapping, agriculture, forest and ecology, as well as U.S. and foreign national defense. Merrill Lynch estimates the market for commercial remote sensing products at over \$6 billion per year. France, Russia, India, China, Israel, and the U.S. now have commercial remote sensing satellites.

In order to protect national security, the U.S. government includes a clause in every license that retains the ability to restrict operations of the satellite for reasons of national security. This is commonly known as “shutter control”. When these regulations were written, there was significant concern from journalists over possible attempts to stop the news media from using satellite pictures to report on crisis overseas.

Flash forward to Afghanistan. When asked in September 2001 if the Secretary of Commerce, Donald L. Evans, had invoked "shutter control", Doug Brauer, Assistant Licensing Affairs Officer in the Commercial Remote Sensing Licensing Office, replied, "No, he has not."⁵ We find out instead, what the government did was to purchase exclusive rights to all U.S. commercial imagery through the National Imaging and Mapping Agency (NIMA).

The goal of this paper is to analyze the “shutter control” issue and the decision making process which led to the government purchase of IKONOS imagery. *What were the competing interests with respect to commercial imagery regulation? Was the decision part of an interagency process? What are the government’s objectives with respect to the purchases? And what are the precedents and implications these new de facto policies set forward?*

⁵ Ernest Miller, “US Wields \$ Not Law to Censor Satellites”, *wartimeliberty.com*, October 19, 2001.

Background: The Development of an Interagency Regulatory Mechanism

A Slow Start:

Throughout the 1980's the U.S. government encouraged the commercial remote sensing industry. Wanting to develop a stable commercial base for remote sensing systems, the government focused on NASA. A first step was commercialization of the NASA LANDSAT program.

In 1984, President Reagan signed the Land Remote Sensing Commercialization Act (P.L. 98-365). This law directed the Department of Commerce to select a private contractor to operate LANDSAT and market the resultant product commercially. The act also established licensing and oversight mechanisms. A commercial industry didn't materialize primarily because of market factors. The law required that imagery be sold to anyone at a set, non-discriminatory price. Key to profit was the ability sell "exclusive footage" at "market prices".

This policy was changed in 1992 when Congress passed the Land Remote Sensing Policy Act (P.L. 102-555). Price restrictions were withdrawn and exclusive contracts were allowed. "The overwhelming determination, made on a bipartisan basis, was to take steps to encourage U.S. industry to enter this market and to encourage the administration to help pave the way."⁶

In 1994, President Clinton issued Presidential Directive 23 that further loosened restrictions of the sale of high-resolution imagery to foreign entities. These new policies generated substantial interest in the commercial sector and a plethora of contractors quickly applied for licenses. Today, seventeen licenses have been issued for 40 satellites and two U.S. systems have been activated.

⁶ Brian Dailey (VP Lockheed-Martin) and Edward McGaffigan (Senior Policy advisor to Senator Jeff Bingaman's office), "US Commercial Satellite Export Policy: A Debate" part 2, ch. 7 of "Fighting Proliferation: A Debate", *Air University Press*, January 1996.

Operating Restrictions:

Under the above-mentioned laws, the National Oceanic and Atmospheric Administration (NOAA) licenses all U.S. commercial remote sensing satellite systems. Satellite operators must make pointing/collection information available to the U.S. government and all encryption devices must be approved. In addition to these restrictions, the government determined that there had to be a way to protect the homeland in times of national security. To accomplish this, the law provides for the Secretary of Commerce, in consultation with the Secretaries of State and Defense to restrict operation, collection or dissemination of remote sensing platforms in order to not compromise national security or international obligations. It is a cabinet level decision, and one that cannot be delegated.

Resolution Restrictions:

In the early 1990's when the first licenses were being issued, the defense department, intelligence community and industry struggled with whether to limit the technical capabilities of the proposed satellites. The basic issue came down to how to ensure that the companies were commercially viable, while protecting specific "sources and methods" technology. It was an interagency and joint commercial-government endeavor. In fact, one of the first meetings was a "breakfast with industry" that the DCI chaired.⁷

Contrary to popular belief, there wasn't a lot of controversy regarding resolution. From the government side, the limit requested didn't require classified and sophisticated "boutique" technologies to generate this level of detail. It was a veritable "knee in the curve", and not an attempt

⁷ The Honorable Mr. Jeffrey K. Harris, President and General Manager Lockheed-Martin Space Corporation, Missiles and Space Operations, interview with M. Brunngraber on January 9, 2002. Mr. Harris was also the Director, National Reconnaissance Office and President of Space Imaging.

by the government to protect its rice bowl.⁸ From industries side, they initially discussed a limit of five-meters based on their current business plan. Jeff Harris, former Director of the National Reconnaissance Office (NRO) recalled discussing the process used if new limits were requested. Issues revolved more around the time required to issue a new license should the contractor request reduced limits. The interagency review process was considerable, cumbersome and time-consuming. Note: This concern proved true when Space Imaging requested .5-meter resolution for its block II satellites.⁹ Space Imaging reduced its initial request to one-meter resolution, which was approved. No limits were placed on location or customer other than what was called for in the PDD with respect to “shutter control”.

Implementation Plans: Agreements but nothing solid

So the question arises, how well did the interagency process work during the development of shutter control policies?

From the start, there was broad support from across the community and a strong consensus that given the gulf war, the rest of the world would move quickly to develop more remote sensing systems. U.S. industry was poised to compete based on their experience on classified remote sensing programs. The argument was that it would be better to have U.S. contractors dominate the industry. The post-cold war era forced decreased defense spending due to peace dividends. NRO satellite procurement cycles were plagued by long periods of down time between satellite builds. Developing a viable commercial base could alleviate high non-recurring costs and brain drain. In light of these facts, initial debates to allow commercial remote sensing were relatively benign.¹⁰

⁸ The Honorable Mr. Keith R. Hall, Director National Reconnaissance Office/Assistant Secretary of Defense for Space, interview with M. Brunngraber, December 14, 2001.

⁹ Jeff Harris interview.

¹⁰ Keith Hall interview

It was becoming painfully obvious that the question wasn't one of whether high-resolution imagery would be available on the market, but how. Subsequently, the Clinton administration moved very rapidly on this issue and initiated a very comprehensive interagency policy review. Participating were the Commerce Department, DOD, and the intelligence community. The team spent considerable time consulting with Congress and with the civil space community, looking at all issues associated with the worldwide availability of high-resolution satellite imagery products. The Joint Chiefs of Staff (JCS) and the intelligence community were satisfied that national security concerns could be adequately protected with the policy that was ultimately drafted.¹¹

The interagency process used to develop the policy worked splendidly. However, when it came time to create rules to implement policy the interagency process became challenging.

THE POLICY ISSUE: Competing Interests

From the start, government remote sensing policy has been trying to balance commercial interests with national security and foreign obligations. For over four centuries, the U.S. has maintained a dominant lead in classified reconnaissance. U.S. industry has played a key role in this dominance, and as we've seen with the Internet and telecommunications, when the right enablers are there, industry explodes.

In the early 1990's, the Community Management Staff (CIA/CMS) worked a research project on the role of the U.S. government in developing commercial communications satellites. Under the Kennedy administration, the U.S. played a leading role in transitioning classified capabilities to commercial programs and played a leading role in forming the INTELSAT consortium.¹²

¹¹ Brian Dailey (VP Lockheed-Martin) and Edward McGaffigan (Senior Policy advisor to Senator Jeff Bingaman's office), "US Commercial Satellite Export Policy: A Debate" part 2, ch. 7 of "Fighting Proliferation: A Debate", *Air University Press*, January 1996.

¹² Jeffrey Harris interview.

The government side

The governments interests are a dichotomy between the ability of commercial remote sensors to provide burden sharing with classified systems and concerns for protecting national security from those same capabilities. For example: “Islamic Jihad could get its hands on one-meter resolution picture of...a US Air Force General’s headquarters in Turkey, convert the shot to a precise three-dimensional image, combine it with data from a GPS device...and transmit it to Baghdad, where a primitive cruise missile, purchased secretly from China could await its targeting coordinates.”¹³ On the other hand, “agency officials say the deal (purchase of commercial imagery) has already proved useful because the unclassified commercial images can be shared with U.S. allies more easily than those taken by highly classified reconnaissance satellites.”¹⁴

The war fighter should be particularly enamored with commercial imagery. Users can directly task the systems, and data can be read out directly from the satellite. Washington is completely bypassed. Unclassified imagery can be distributed easily electronically and can be shared with coalition partners. However, with the exception of a small Air Force program called Eagle Vision that used prototyped deployable commercial satellite imagery receiving and processing systems, the military hasn’t showed major support for commercial systems.¹⁵ This is consistent with the maturity level of commercial imagery for dissemination and the militaries ability to provide in-theater analysis. On both sides, the teams are just not ready yet.

¹³ Charles Lane, “The Satellite Revolution”, *The New Republic*, August 12, 1996, p. 24.

¹⁴ James R. Asker, “Shutter Control”, *Aviation week and Space Technology*, October 22, 2001, Vol. 155, No. 17, pg. 25.

¹⁵ Mr. Dennis Fitzgerald, Deputy Director, National Reconnaissance Office interview with M. Brunngraber, January 11, 2002.

In wartime the Defense Department has specific concerns regarding our continuing ability to inflict strategic surprise like the “left flank” in Desert Storm. In addition, they are concerned with force protection issues. For example, in Operation Enduring Freedom, the US Navy has stopped listing port calls and ship locations on their websites.

The DoD has been especially careful about interaction with the media. Instead, the Pentagon prefers to manage the media and craft messages providing carefully “spun” stories. Their concern with commercial imagery is that a picture isn’t always a thousand words and that “the media have already made major mistakes, misinterpreting images of everything from Chernobyl in 1986 to the Indian nuclear test just last year (1998).”¹⁶

The Commercial Sector

Industry is primarily concerned with profit. Their ability to profit is based on both the capabilities they are able to provide as well as the reliability of their products. Space Imaging has spent over a billion dollars of private investment money to get to where they are and must make several hundred million dollars a year to be profitable.¹⁷ To their credit, business has doubled every year, but their ability to continue to grow depends on diversifying their customer base.

Foreign military and intelligence services obviously make up a large part of their customer base. Herein lies the conflict. More than the immediate loss of revenue, a loss of a portion of the customer base would be far more devastating. Therefore, it is in industries best interest to judiciously court both foreign and domestic military interests. Shutter control, even if compensated, makes them a less reliable provider to the customer bases they need to cultivate.

The Media

¹⁶ Ann M. Florini and Yahya A. Dehqanzada, “No More Secrets? Policy Implications of Commercial Remote Sensing Satellites”, *Carnegie Endowment for International Peace*, May 26, 1999.

¹⁷ Jeff Harris Interview.

The media are the most vocal commercial customer who disagrees with shutter control policy. Purchasers for military purposes by hostile governments are probably also concerned, but they have remained silent for obvious reasons. Farmers, oil corporations and other customers used to waiting months for aerial photography aren't apt to complain about short-term shutter control.

The media has become addicted to satellite imagery. They claim that the use of satellite images tell vital stories which are accurate, independent and in the public interest. In Afghanistan in particular, watchdog groups want to track human rights violations (mass graves) and targeting errors. Since the IKONOS satellite has been in space, journalists and organizations have provided the public with extraordinary images of previously "denied areas" such as Chinese airbases, Pakistan and India's weapons sites, North Korea's missile installations and the super-secret "Area 51" Air Force test range.¹⁸

Arguments against shutter control from the media generally revolve around the first amendment and FOIA issues. The First Amendment ensures that the press is free of government control and restraint. The Supreme Court has insisted that the government must take its case to a court of law and present evidence to show why publication should be forbidden. In addition, the government must show clear and present danger for national security interests.

The media's argument against the "commercial contract" aspect of the case is that it is not a simple transaction between two market players. Their concern regards the "data rights" provision of the contract. They claim that data rights, which prevent Space Imaging from reselling or licensing the images, are being purchased solely to prevent distribution of the information. When the government prohibits distribution of information, they believe that there is a case for First Amendment review.

¹⁸ "Satellites Change How We See the Earth", *CBS News*, May 18, 2000

In Afghanistan, “shutter control” has effectively been issued without review at the Cabinet level. They are careful to point out that the government may have entirely legitimate reasons for withholding information, but the reasons are subject to review.

A Foreign Interest Example - The Israeli Lobby:

U.S. – Israeli strategic relationship has been highly dependant on U.S. security guarantees as well as constant support to prevent the degradation of Israel’s technological “edge” in the region. When the United Arab Emirates (UAE) submitted an application in 1992 to purchase an imaging satellite from Litton/Itek, there were strong objections, and the effort was blocked by the State Department.

Israeli concerns skyrocketed after a Saudi company owned by Prince Fahd Bin Salman Bin Abdul Aziz signed a major agreement with Orbview that included a ground station in Riyadh and exclusive coverage of the Middle East (the ground station would allow near-real-time downlink of regional imagery). Congress took up Israel’s protest, and Orbimage subsequently announced that it would “exclude the territory of Israel from its viewing area and to put a technical fix on the satellite that would prevent such viewing”¹⁹

Israel’s concerns were complicated by their commercial endeavors to develop the EROS high-resolution imaging satellite. Had their initial schedule, with a 1997 launch been met, EROS would have been in operation 18 months before the first U.S. commercial system.²⁰ In addition, Israel is the only country in the Middle East with government (the OLFEQ satellite) and commercial (EROS) reconnaissance satellites. Even more importantly, the Israeli government has provided substantial financial backing to their countries commercial endeavors.

¹⁹ Statement of Senator Bingaman, Congressional Record, Hearings on National Defense Authorization Act for Fiscal year 1997, Amendment No. 4321, “Purpose: To Prohibit the Collection and Release of Detailed Satellite Imagery with Respect to Isreal and Other Countries and Areas”, *U.S. Senate, Washington, D.C.*, June 26, 1996.

²⁰ Testimony of Brian Dailey, Vice President of Space and Strategic Missiles Sector, Lockheed Martin Corporation, before the House Subcommittee on Space and Aeronautics, *US Congress, Washington DC*, July 31, 1996.

The Israeli lobby has been persistent and successful. In 1996, the US Senate passed the Kyl-Bingaman amendment to the 1997 Defense Authorization Act entitled, "Prohibition on Collection and Release of Detailed Satellite Imagery Relating to Israel and Other Countries and Areas". The amendment prohibited the sale of imagery over Israel with a resolution below two meters (based on the best Russian "commercially" available images). The amendment was controversial with industry, but they have not acted on it because it hasn't hurt their business yet. However, in recalling the event, they felt "certain that the Armed Services Committees and the Foreign Relations Committees of the two houses were not included"²¹. In 1998 when the U.S. reduced the limit to one meter, Israel again protested and the blackout stayed at two-meters.

Israel's paranoia is not without merit. In 1997, Dubai (UAE) signed an agreement for the establishment of an imagery receiving station, operated by Dubai Space Imaging (DSI), a joint venture between Space Imaging (US) and a group of UAE investors. This station will provide customers with real-time (within 20 minutes of collection) access to detailed imagery in an area within a 2,300 km radius (including all of Iraq and Iran) from the receiving station.^{22 23} To support its customer base, Space Imaging has either marketing rights or owns a constellation of various remote sensing satellites including the IKONOS satellites, U.S. LANDSAT, the Indian Remote Sensing Satellites (IRS), Canada's RADARSAT, and the European Space Agency's Radar satellite. The Dubai ground terminal is capable of receiving both IRS and LANDSAT 5 imagery. Company officials and sales material explicitly note that the system "is easily capable of detecting and

²¹ Brian Dailey (VP Lockheed-Martin) and Edward McGaffigan (Senior Policy advisor to Senator Jeff Bingaman's office), "US Commercial Satellite Export Policy: A Debate" part 2, ch. 7 of "Fighting Proliferation: A Debate", *Air University Press*, January 1996.

²² "Space Imaging EOSAT Forms United Arab Emirates Partnership", *Florida Space Today Online*, November 18, 1999.

²³ "Middle East customers to obtain detailed space imagery", *Jane's International Defense Review*, Jan 1, 1998, Vol. 31:1, p. 8.

identifying individual vehicle movements, mobile missile launchers and other military activities under clear weather conditions”.²⁴ A permanent ground terminal is now under construction that will also receive IKONOS data.

After the U.S. allowed these restrictions, Israel subsequently launched a 1.8-meter imaging satellite, EROS. The second-generation “commercial” satellite has gotten major funding from the Israeli government. In addition, on October 8, the French Defense Ministry barred the sale of satellite pictures of Afghanistan. The SPOT Image Company “was required...to restrict distribution and diffusion of the region including Afghanistan. The only customer for pictures would be the defense ministry and the blackout included all SPOT subsidiaries, including the US SICORP unit in Washington.”²⁵ Our Israel allies have yet to impose such restrictions on their commercial imaging and have been selling Afghanistan imagery. It appears national defense restrictions aren’t reciprocal with Israel - competitive interests take precedence in time of war.

SHUTTER CONTROL POLICY RULES: THE INTERAGENCY PROCESS

Throughout discussions with industry, the topic of compensation to the contractor for special government requirements (shutter control, encryption) was generally agreed to. However, the implementation was never finalized. No one was put in charge or given budget authority.

When the government initially proposed some rules regarding shutter control in 1998, the National Association of Broadcasters and other organizations strongly protested them. They met personally with the Secretary of Commerce, Bill Daley, hinting at a lawsuit based on FOIA. The rules became so controversial, that even today, the government has never issued a final version.

²⁴ *ibid*

²⁵ “French Defence Ministry Bars Sales of Satellite Pics of Afghanistan”, *AFP Paris*, October 19, 2001.

On the government side, after PDD-23 was issued it was becoming very clear that there were large disagreements as to who was in charge of the process. The Secretary of Commerce believed he had the most senior authority, whereas the SECDEF and SECSTATE didn't agree that he should be able to hold back a shutter control request from either of them.

The author also believes that some of the impetus for creating the MOU arose from the confusion surrounding the war in Kosovo. Prior to the launch of the first IKONOS in April 1999, there were a lot of discussions regarding what to do in the Baltics. There had also been discussions between Space Imaging and NIMA with respect to exclusive rights purchasing and serious DoD concerns for national security. However, the IKONOS satellite failed to reach orbit when the payload fairing failed to separate, and the "shutter control" question became theoretical once again. It was obvious that decision-making was done case-by-case, and that across the community, there remained an important need for consensus.

On February 2, 2000, after over a year of coordination, the Office of Space and Technology Policy (OSTP) and the NSC announced the conclusion of the Memorandum of Understanding (MOU) among the Departments of State, Defense, Interior, and NOAA/Commerce, along with the Intelligence Community. The interagency community believed that the MOU streamlined the licensing process with tighter timelines. In addition, the MOU stated that decisions involving "shutter control" or interruption of normal commercial operations would be made at the cabinet level. When the SECDEF or SECSTATE issued a shutter control order, the Secretary of Commerce would serve as an implementer only. Any challenges to the orders would have to occur at the NSC level.

This statement was designed to reassure US remote sensing operators and their customers that senior government officials would not impose restrictions lightly.^{26 27}

The Defense Department stepped out quickly. An OSD directive and instruction on shutter control was drafted and released by the Joint Staff. In addition, a classified Joint Chiefs of Staff Memorandum (CJCSM) was published which outlined the process by which the joint staff would draft, review and submit through the SECDEF a request for both domestic and foreign interruptions to commercial remote sensing operations.²⁸

Requests were to be forwarded from individual commands to USSPACECOM, validated by the CINCS, finalized by CINCSPACE, then go to the Joint Staff for final review, coordination, and signature by the SECDEF.

AFGHANISTAN: The Implementation of Policy

All the debate became a moot point on September 11. Although the government had a lot of discussion and coordination behind it, there had never been a test on how they would handle remote sensing restrictions in time of war.

It became immediately obvious that the commercial satellites were capable and available. World trade center pictures were taken and sold within days. Both foreign and domestic satellites were taking U.S. and Afghanistan pictures daily. President Bush briefed the nation on the damage at the Pentagon using Space Imaging commercial images, not degraded spy imagery.

The DoD, like the rest of the Bush administration went into information lockdown. Commercial imaging satellites were immediately perceived as a threat, and they began drafting material to justify

²⁶ Dr. D. James Baker, Under Secretary of Commerce for Oceans and Atmosphere, Administrator, National Oceanic and Atmospheric Administration, "Civil Space: Commercial Opportunities", Global Air & Space 2000 (conference), May 11, 2000

²⁷ Interview with DoD Senior Policy official, January 11, 2002.

²⁸ Ibid.

shutter control restrictions over a wide range of geographic targets. In their zeal for secrecy, they requested a large number of areas. The initial request didn't meet the spirit of the law to minimally restrict satellite operation in both area and duration. Surprisingly, their request had gotten quite far in the chain of command before this was recognized and they were sent back to justify each location.²⁹

The intelligence value of imagery is not only restricted to resolution. Image analysts use the National Imagery Interpretability Rating Scale (NIIRS) to define and measure the quality of images and performance of imaging systems. In addition, the ability to mensurate (measure) accurately based on reference points on the image, positional accuracy of the satellite, timeliness and correct analysis are critical to image value. In the commercial world, the marketplace doesn't reward timeliness, in the defense world, it can mean the difference between life and death. All of these things needed to be taken into consideration in determining whether there was a national defense threat posed by commercial imagery.

At the same time, a number of officials were getting shocking answers on what shutter control really meant. Space Imaging's implementation of the shutter control restriction was black and white. The satellite is sent commands and it becomes physically impossible to take pictures over the restricted area. When a shutter control order is issued, NO ONE gets any pictures.

The President Bush briefing had obviously shown the utility of commercial imaging applications for conveying information to the public. The ability to use commercial images in a coalition environment would also be extremely beneficial.

In the meantime, industry was becoming keenly aware of government sensitivities and was an active participant in trying to address DoD's concerns. In fact, despite previous concerns in the

²⁹ Multiple senior government officials attested to these facts.

intelligence community regarding conflict of interest between national security and profitability, industry was very proactive and took self-regulating steps to be sensitive to government concerns.

And so, independently from DoD efforts, NIMA and Space Imaging began joint discussions on how commercial imaging could and should be used immediately after September 11. They agreed on a system they called “assured access”. On a month-by-month basis, NIMA would purchase **temporary** exclusive rights to theater imagery. During this time period, if NIMA requested pictures be taken, they would pay \$20/km². The images would be held in a separate database and held for 90 days there. If the government did not choose to repurchase exclusive rights to the imagery, the images would be released into Space Imaging’s consolidated imagery database. In fact, commercial imaging could and would play a big part in satisfying mapping and geospatial requirements as well as coalition releasable imagery of Afghanistan.³⁰

In fact, the end of the story has yet to be written. NIMA only purchased exclusive rights for two months. Their contract ended in December 2001. As operations continue in Afghanistan, there are probably only a few areas that remain of very high concern with respect to force protection and covertness.

In effect, the government punted. In an imaginative and expedient approach, the interagency process was circumvented. NIMA enacted virtual shutter control by doing an end run around the process. DoD shutter control action, which is still in play somewhere in the Pentagon, is becoming quickly irrelevant.

THE FUTURE: Precedents and Implications

Although an apparently effective outcome, “assured access” raises several issues and questions the effectiveness of ever issuing shutter control. In the final analysis, it was impractical for DoD to

³⁰ Multiple senior government officials attested to these facts

request shutter control and put the established policies into place. The **process** worked, but it was too difficult and time consuming. As of today, no formal decision has ever been made by the SECDEF with respect to either enacting shutter control or assured access.

The DoD shutter control requests were unreasonable. They requested many large areas for undetermined time periods. Many areas were accessible by other means. Their biggest opponent was common sense. There was universal agreement among the media, government and industry that if shutter control were not used judiciously the first time it was used (shortest possible time and the smallest area), it would be challenged in court, and lost forever. The DoD requests, perhaps justified to military strategists, were naïve, extreme and unrealistic.

There were never really any interagency agreements as to what kinds of scenarios would warrant shutter control, nor what needed protection. In the future, DoD needs rules of engagement. They also need to judiciously minimize area, duration and number of location restrictions.

The State Department and DoD played a role with respect to restricting **foreign** remote sensing satellites. While no demarches were issued, suggestions and desires were conveyed, leaving other governments to self-determine their course of action. French defense authorities acted to restrict SPOT imaging, but Israel did not.

In the future it will become more and more difficult to restrict foreign commercial satellites. The cat is out of the bag. In the recurring concerns of globalization, multinational global corporations have ways of creating power leaks outside sovereign politics.

Space Imaging and NIMA appear to have deftly sidestepped most FOIA and first amendment arguments. This came at a high price. The Space Imaging ME (UAE), which had pre-purchased exclusive rights for the Middle East, got superceded by the NIMA purchase and has sued. The good news was that it appears that when confronted with national security interests, multinational American companies supported America.

With respect to the media, if a majority of images are released in a timely manner, the media may remain contented. But this will not keep them from speaking out in the future as they become more captivated by overhead imagery. It remains a delicate balance between a contractor supporting national security and freedom of speech. This conflict is most evident in Mr. Mark Brender's statements. In 1996 he testified to the House of Representatives as Chairman of the RTDNA against shutter control and is now defending the assured access strategy as the director of Washington Operations for Space Imaging.

In addition, a costly precedent may have been set with the de facto policy of assured access. The strategy may work now when there are a few vendors. But as the number of vendors grows, so will costs. If shutter control is ever enacted, assured access would have set a pattern for future compensation. DoD appears to have been placated in the end by assured access and may have a tendency the next time to prefer that route for expediency.

There remain some unanswered questions. How do we restrict foreign satellites? What does the State Department do if a foreign country asks us to restrict our commercial operations? (e.g., Grenada invasion) Will commercial remote sensing be a viable business? What role will commercial imagery play in augmenting classified systems?

The U.S. goal in commercializing remote sensing had been to protect the unique expertise used to build and launch imaging satellites from the major defense contractors, not to the support commercial business endeavors of small subsidiaries. Government remains the largest single consumer for commercial imagery and will probably continue to be so for the foreseeable future. Industry studies have not revealed a viable market for high resolution or near real-time access. Therefore, the government remains one of the few customers of radar imaging and the only customer for high-resolution imagery. Future satisfaction of government requirements necessitates second and third generation commercial satellites, guaranteed purchases and assured access. Commercial second-

generation business cases do not close with government only requirements. As of today, no commercial imaging satellite, including LANDSAT, has yet become profitable. Until there is a true commercial market, the government will retain leverage over industry.

The NRO and NIMA have been the governments strongest advocates for commercial imagery. Although a 1999 Commercial Imagery Strategy (CIS) was not funded (a “hollow promise”, claimed industry), a new 2000/2001 strategy calls for over \$1 billion in new spending. And although the intelligence community and DoD remain strongly divided between operational security and operational support, DoD has put it’s money where its mouth is. They have added \$100 million a year in FY03-07 for commercial imagery in NIMA’s program in the Joint Military Intelligence Program (JMIP) budget.³¹

Industry lobbying has increased. Next generation satellites remain unfunded by private investors who have collectively already invested billions. The question remains will the government pay for the non-recurring expenses (NRE) to build these second generations systems? They have the future potential to offload all low-to-medium resolution imagery, especially for mapping and geospatial purposes to low cost satellites. An investment today could allow the government to focus on advanced technologies. But this investment will have to compete in a post 9-11 environment and require significant additional resources beyond current budget allocations. It is yet to be seen whether the government has the consensus or budget to intervene.

CONCLUSION:

In the shutter control issue, we have seen the realities of the interagency process. National security reviews of precedent setting commercial licenses are often contentious because of a

³¹ Multiple senior government officials attested to these facts.

bifurcation of views within DoD and the intelligence community. The sometimes tortured and slow process has resulted in a lack of meaningful policy implementation and insufficient funding³²

Commercial imagery hasn't turned out to be the panacea or iniquity imagined. It has been an important tool in Afghanistan, but has supplemented instead of replaced support from National and Airborne systems. It is the synergy *between* all of these platforms that has proved successful in Afghanistan. As Joan Dempsey, the Deputy Director of Central Intelligence said, "this is the way I always believed the Intelligence Community could operate".³³ It remains to be seen if we can retain the critical balance needed to maximize dual-use technology in this new and dangerous post 9/11 era.

³² Gil Klinger, NRO Director of Policy, Briefing to the Undersecretary of the Air Force, January 11,2002.

³³ Dennis Fitzgerald interview.