

**Hearing before the
Subcommittee on Strategic Forces
Committee on Armed Services
United States House of Representatives**

**“NATIONAL SECURITY SPACE: 21ST CENTURY
CHALLENGES, 20TH CENTURY ORGANIZATION”**

**Testimony of
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September 27, 2016

Chairman Rogers, Ranking Member Cooper, and members of the Subcommittee, it is a pleasure to appear today to discuss the challenges confronting National Security Space assets, operations, and organizations. I served with ADM Ellis as a co-chair of the National Research Council study on Space Defense and Protection which this Committee chartered, and I will comment from time to time from the study but I come today in my personal capacity. In that regard, I bring a range of experience gained over several decades of involvement in the space field as a government official, company executive and corporate director. This includes service as Director of the NRO during the first Gulf War sometimes called the first space war and certainly the first major conflict in which space assets including NRO systems played an important role at the tactical level.

The Subcommittee itself and my colleagues have developed well the point that space has become so important that our adversaries fully understand the advantage to them to deny those capabilities to us. Several nations routinely demonstrate impressive capabilities clearly intended for us to see. They see the opportunity expressed by Sun Tzu 2500 years ago: *The supreme art of war is to subdue the enemy without fighting.* We can't allow that to happen.

For a view of just how important space it to modern combat capability, I was struck by the statement a few years ago by Army Lieutenant General Richard Formica who said, "every company commander depends on space, and takes it for granted." He was saying that dependence on space begins at the first level of command, the Captain who commands just over 100 soldiers.

Today, our discussion of response to these threats to space systems is termed resilience. That term tends to conjure up thoughts of hardened satellites making quick maneuvers in space to avoid attacking missiles. That is a view that is too narrow. The attack might well be by means of attack by jamming, cyber or laser. We need to think of the problem as one of mission assurance. That is, assuring that the mission currently assigned to a space system, for example communications, is provided in conflict and that may include non-space backup, switch to commercial satellites or other means.

I know that my colleagues will develop the organizational issues that you raised in your invitational letter. While I will comment on those issues, I'd like to do it from the perspective of acquisition which is a key component of the challenges that confront us.

During the conduct of the NRC study, we recognized that operating in an era where our presence in space will be challenged, requires that acquisition to acquire, modify, backup or replace space capability must be more flexible and more rapid than today. In current times, an analysis of alternatives takes two years to complete. At the end of that time, it commonly recommends continuation of the current system with little change. Gen. Hyten has recently complained that sometimes the underlying data presented in the AOA suggest substantial change that would improve resilience but that information is not carried through to the recommendation. When the authors were asked why, they replied that they received no requirements for resilience so they didn't know how to treat it. This is not a desirable answer but an understandable one. The Combatant Commands are only beginning to study and understand their needs for resilience

including backups and they have few tools for simulation and analysis that would help them like the robust tools that exist for analysis of ground, air or naval combat
Once requirements are set and programs underway, we know that they take far longer to accomplish than they should and that we can tolerate in this era of contested space.

Programs are accomplished by Program Managers. They are my favorite and most admired people. When I was Director at NRO, we had about a dozen Program Managers among about 3000 total people, most of whom worked for those PMs. A point I repeatedly made was “Program Managers are the most important people in the organization and the job of all of the rest of us, including me, is to support them in getting their job done”. I hope the Director would say the same thing today.

That is not the life of a Program Manager in DoD today. In its recent report on Defense Space Acquisitions, the GAO noted that for some programs, PMs are reviewed by 56 organizations at 8 levels above the PM. Needless to say these long processes consume months and much of the time and energy of the PM who I would like to see managing his program, interacting with his staff, his contractors, and his ultimate users. Moreover, in a recent conversation with a PM for a mid-sized program, he related that he had been through all of the steps to appear before the Under Secretary for AT&L but the Secretary has a very busy schedule and his appointment is several months away. I asked what he was doing in the interim. He replied, “wait.” I will return to this point later.

PM authorities today are often tempered by “permissions.” If I ask a PM whether he has the authority to do a particular thing, he is likely to reply, “yes, but I don’t have permission.” What he means is that levels above him have required that before he exercise authorities previously granted, that he receive their permission. This effectively removes authority thought to be granted.

When I watch the life of Program Managers today, I am reminded of a statement made by President Theodore Roosevelt in 1908:

"It is not the critic who counts,
not the man who points out how the strong man stumbled,
or where the doer of deeds could have done them better.

The credit belongs to the man who is actually in the arena;
whose face is marred by dust and sweat and blood;
who strives valiantly;
who errs and comes short again and again;
who knows the great enthusiasms, the great devotions,
and spends himself in a worthy cause;

who, at the best, knows in the end the triumph of high achievement;
and who, at the worst, if he fails, at least fails while daring greatly,
so that his place shall never be with those cold and
timid souls who know neither victory or defeat."

Men in the arena have accomplished great things for our country including fleets of space systems that are the envy of the world. That's why people want to have the ability to attack them.

In it's report, the GAO also stated, "By contrast, the NRO's processes appear more streamlined than DOD's." Why is that? There are a number of reasons:

- The NRO has a relatively narrow mission whose high priority is widely acknowledged.

- The NRO is a joint activity of the DNI and the SecDef and the Director reports to them through a very short reporting chain. This joint activity arrangement of the last 50+ years is unusual but not unique. Another example is Naval Reactors which a joint activity of the Navy and the Department of Energy and is also very successful.

- The NRO can engage fully in the budget process of which it is a part. It would be unusual for significant pieces of NRO budget to mysteriously disappear as happens frequently to DoD PMs.

- The NRO is subject to reasonable oversight, although greatly increased in recent years.

- The NRO must and does follow the Federal Acquisition Regulations but not all of the DoD supplements.

- The NRO is an intelligence organization and understands that acquisition of reconnaissance satellites is only a means to an intelligence end. This means that NRO personnel are engaged with the Intelligence Community every day learning of their needs, offering assistance with the application of current systems and developing new concepts in company with their users.

- The NRO has a relatively small and highly capable staff. They're not alone. Naval Research Lab, many elements of NASA, Naval Reactors, the S&T element of CIA among others are examples of organizations that enjoy very strong staff.

- "Decision Rights" are reasonably clear within the NRO. Decision Rights is the concept that each person knows what decisions they can make and are expected to make and knows when to ask upward or delegate downward.

- Work at the NRO is exciting, challenging and rewarding. People are charged up about their work, something I have witnessed there within the last two weeks.

In addition to DoD and NRO space activities, there is a third element that needs to be mentioned. That is commercial space systems with national security application. Today, that is primarily satellite imaging and communications. The DoD buys lots of commercial satcom but often with short term contracts or on the spot market meaning to buy today what you need today but that means if it is available and also usually means at premium price. For years, Satcom operators have pushed the government to engage in longer term arrangements that might involve entire

satellites for their entire lifetime thus spurring investment in capabilities tightly tied to DoD needs.

There is an example of where the government did exactly this and it is in satellite imaging. NGA has a ten year, fixed price contract with DigitalGlobe to deliver imagery as a service. This meant that DigitalGlobe capitalized the satellites, had them built, launched them and operates them. NGA is entitled to a substantial portion of the capacity which, as a very large customer, it gets at a substantial discount from the normal commercial price. The imagery is simply delivered by cable to NGA servers every day. Pretty neat- avoid all of the acquisition complexities and just buy the service. Of course, this approach isn't applicable for systems with unique military needs and roles like Space Based Infrared System and others.

I'll close by offering some thoughts on organization. Ideas have been forth for many years of ways to organize space more effectively, to put one person in charge, to streamline, etc. We need to remember that acquisition of national security space systems is carried out almost entirely by three organizations: Air Force Space and Missile Systems Center, NRO and Navy's Space and Naval Warfare Systems Command. All are relatively small and capable organizations that work effectively with and on behalf of their users. Operations are carried out effectively by Air Force Space Command and smaller Navy and Army commands. The problem is the 56 organizations and 8 levels that the GAO described that sit above all of this. One common prescription is to establish a very senior position charged to pull it together. I worry that instead of solving the problem, we simply increase 56 organizations to 57. Moreover, space is a means to an end-military and intelligence capability. In my experience, the most important thing is to keep the acquisition process tightly tied to the mission, that is, the ultimate users.

One idea is to have an Under Secretary for Space and to have all national security space elements report to it. For the NRO, that means unplugging from the Under Secretary for Intelligence where it now reports and connect to another official at the same level. But, NRO is an intelligence agency and that's where it needs to be focused. I think similar arguments can be made for the military space acquisition elements that are connected to their operational commands.

Big organizational change comes with long term impacts. In 1992, I reorganized the NRO from an organization based on agency-Air Force, CIA and Navy- to one based on Intelligence function-Imagery and Signals Intelligence. I believed then and believe now that it was the right thing to do but it was wrenching change for the NRO for the next 10 years. In our current situation, I would start by asking the Secretary of Defense to review what all of the DoD parties involved with space do, and whether each is adding value. Are all participants really needed and can the DoD guidance, policy, budget and oversight processes be streamlined? The answer for some will be that their role is congressionally mandated so change may well require legislation. I would measure the response by constantly examining what happens to the Program Manager. When the person who is actually getting the job done starts on the journey, what happens along the way? If the Program Manager's life gets better, then we're on the road to success.

Thank you for the opportunity to offer my views today. I look forward to your questions.