Launching unarmed intercontinental ballistic missile.

Satellite system simulation, Guardian Challenge.

DOD (Scott Wagers)

30th Communications Squadron (Cherie A. Thurlby)

SPACE

The Next Area of Responsibility

By KERRY L. KIMBLE *and* RUDY VEIT

In the years ahead military operations will become ever more dependent on space services such as global communications, reconnaissance and surveillance in near real time, missile warning, navigation, and weather forecasting. These capabilities will integrate the effects of widely dispersed platforms and forces, provide dominant battlefield awareness, and facilitate precision engagement and dominant maneuver. U.S. national interests and investments in space must thus be protected to ensure freedom of action. Space systems must be synchronized with warfighting capabilities. In turn, commanders must shape, protect, and defend space. It is time to recognize that space is a center of gravity and a critical national security responsibility.

Lieutenant Colonel Kerry L. Kimble, USAR, is assigned to the Combined Intelligence Center (J-2) at U.S. Space Command, and Lieutenant Colonel Rudy Veit, USA, serves in the Policy and Plans Directorate (J-5) at U.S. Space Command.

55th Signal Company (Aaron Robert Kughen)

Tracking friendly vehicles with GPS sensors.

Space has only recently been considered a vital strategic region. Its assets constitute a node that an enemy might seek to disrupt or destroy in the early stages of a conflict to neutralize the U.S. force advantage. This threat, coupled with a growing web of dependence on such assets for civil, commercial, international, and military operations, suggests that now is the time to establish a space area of responsibility (AOR). There should be a single military focal point for all space assets which support national interests and warfighting requirements.

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Interests and Threats

The *Report of the Quadrennial Defense Review* (QDR) issued in May 1997 outlined several national interests that in some cases require unilateral use of military power. One is "ensuring freedom of the seas and security of international sea lines of communication, airways, and space." The basis of this approach lies in the *National Space Policy* (September 1996), which declares:

National security space activities shall contribute to U.S. national security by deterring, warning, and, if necessary, defending against enemy attack; assuring that hostile forces cannot prevent our own use of space; and countering, if necessary, space systems and services used for hostile purposes. The United States will develop, operate, and maintain space control capabilities to ensure freedom of action in space and, if directed, deny such freedom of action to adversaries.

Space assets are integral on the strategic, operational, and tactical levels. *Joint Vision 2010* states that, "Each CINC must be able to tap into this global network and connect forces worldwide that would be available for theater operations." Not doing so restricts the ability to employ forces.

Because of the reliance on these systems, their survivability is a critical node. In the words of the QDR report:

Unless we provide an adequate measure of protection for our forces, these new operational concepts will be highly vulnerable to disruption. We will achieve this . . . protection through the concept of full dimensional protection. . . . Active measures will include battlespace control operations to guarantee the sea, air, space, and information superiority that is needed to gain the degree of control to accomplish assigned tasks.

The report further describes critical enablers that shape power projection, impact ability to shape the international security environment, and provide the capability to react to a range of crises.

Global intelligence collection, navigation support, meteorological forecasting, and communications rely on space-based assets. To maintain our current advantage in space even as more users develop capabilities and access, we must focus sufficient intelligence efforts on monitoring foreign use of space-based assets as well as develop the capabilities required to protect our systems and prevent hostile use of space by an adversary.

But the region is becoming a crowded area of competition in which the United States can no longer act with impunity. It is not necessary to invest billions in the development of satellites, launch vehicles, or networks to monitor, control, and receive data. There are two ways for a state to gain access to such assets. The first is to join a consortium, a global or regionally oriented body such as the European Space Agency, AsiaSat, or ArabSat. The second is to buy specific products such as transponder time on communications satellites or high resolution imagery.

Satellite reconnaissance is a particular concern. The National Defense Panel issued a report in December 1997 that explained the problem:

The commercial development of information technology is so widespread, accessible, and cheap that it promises to create both opportunities and risks for our Nation. The entity that has greater access to, and can more readily apply, meaningful information will have the advantage in both diplomacy and defense. This information area will also create new vulnerabilities as we depend more and more on computer systems and telecommunications to manage financial operations, public utilities, and other key elements of economic systems.

Navigation, critical in responding to global or regional crises, is another area in which asset protection has gotten high level interest. According to the QDR report the package designation

Atlas II in launch complex at Cape Canaveral.

RVITS Still Image Laboratory

Checking handheld GPS units for pilots.

51st Communications Squadron (Lance Cheung)

Space communications, Kapaun air station, Germany.

DOD (Ken Wright)

and description file on global positioning systems (GPS) directed the Department of Defense in March 1996 to pursue the protection of access to positional information in the face of potential electronic jamming and also develop an ability to deny an enemy use of GPS.

Why an AOR?

U.S. Space Command (SPACECOM) responsibilities have been expanded in recent years to resemble those of a regional CINC. The services organize, train, equip, and provide forces to CINCs, who conduct warfighting missions in AORs. The unified command plan (UCP) defines the location of AORs within which this authority is exercised. Today every CINC employs forces and has warfighting missions in AORs except for SPACECOM. Presidential authority, under UCP, does assign warfighting missions in the areas of space control and force application but does not define the AOR in which missions will be conducted. Delineating it would clarify relationships in terms warfighters understand, enabling more effective joint operations and seamlessness between air and space.

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The current mission of SPACECOM includes both space and force application operations. Space control is defined in the draft version of Air Force Doctrine Directive 4, *Space Operations*, as:

> *all missions whose objective is to gain and hold control of the aerospace environment. This includes those terrestrial air, naval, and space operations that employ lethal and nonlethal means to disrupt an enemy's freedom of action in space. Counterspace operations, such as counterair, are divided into offensive and defensive space control missions. Antisatellite, missile defense, and attack operations against ground facilities to support offensive or defensive counterspace missions are included. . . .*

Force application operations are also emerging as a principal component of space warfare. Future systems may provide the means to strike ground targets from space or attack space targets with terrestrial-based weapons.

Since assigned UCP warfighting responsibilities now include control and force application, it is time to revisit organizations for space operation. SPACECOM is responsible for a wide range of missions but UCP does not assign it an AOR where it will conduct these missions or counter the threat. A single point of contact for the AOR is also needed to develop and exercise command over security assistance programs and provide military representation to national and international organizations which support national security interests and warfighting requirements.

Why Now?

Many factors drive the need for designating space as an AOR. Interoperability shortfalls during the invasion of Grenada revealed the inability of the services to effectively communicate and share information. One outcome of the operation was the Goldwater Nichols Act of 1986 which mandated that only CINCs have authority to employ combat forces. We must extend the intent of this legislation to space operations, which cut across a range of functions and organizations. It is increasingly vital that a single warfighting CINC be responsible for integrating and synchronizing space activities. Improving integration centers on enhancing communication between components, especially for systems managed by one service but used by several.

Making space an AOR calls for recognizing that it bounds every terrestrial AOR assigned to geographic CINCs. Whenever CINCSPACE undertakes military activities in another AOR, those operations and their respective command relations will be coordinated with the appropriate CINC. Moreover, like his geographic counterparts, he will be assigned land, sea, and air components and be given warfighting missions such as space control and force application that contribute to battle space dominance. CINCSPACE will accomplish these activities through command over assigned space control, space support (including launch and on-orbit operations), and force enhancement forces, as well as elements that provide strategic ballistic missile defense.

Delineating space as an AOR will change doctrine and tactics, techniques, and procedures; clarify supported and supporting command relationships; and focus both training and exercises on such relationships. It will also force development of operations and contingency planning wherein CINCSPACE is the supported commander.

A clearly established AOR for space will help the Armed Forces to better understand and support national interests, conceptualize operations and develop strategy for this unique medium, and enhance existing UCP-assigned responsibilities.

This AOR is appropriate for the times. It recognizes an existing reality, aligns authority with responsibility, and establishes a single point of contact for detecting and countering threats to space assets. It also clarifies the responsibilities of civil, commercial, and international actors and moves SPACECOM from supporting from space to operating in space. **JFQ**