The Global Ballistic Missile Defense System: Implications for International Security Relationships

"The Defense Department will develop and deploy missile defenses capable of protecting not only the United States and our deployed forces, but also our friends and allies".

President George W. Bush
December, 17, 2002

The development and deployment of a Global Ballistic Missile Defense System (BMDS) poses interesting questions regarding the nature of international partnerships and national security relationships. These questions center on two factors that will be inherent in any Global BMDS framework. The first is the need for a worldwide network of sensors and interceptors. The second is the need for the US develop ways to encourage allied partnerships while still maintaining the tight command and control framework necessary to manage the BMD engagement as a single program.

The Global BMDS is a significant benchmark in judging how Cold War security relationships have been altered and how nations view deterrence. In Asia, Japan, a nation that for 50 years has espoused a non-militaristic approach, has fully embraced missile defense, while, conversely, the Republic of Korea, faced with an overwhelming threat from North Korean ballistic missiles, has not. In Europe, traditional allies such as France and Germany have expressed some reservations regarding the global nature of missile defense, while former Soviet Bloc nations, such as Poland, have been more supportive. It is becoming clear that, as nations make decisions on their respective level of support for missile defense, there is no one clear framework on how they might view their participation. Each nation, based on its own history and political culture, will come to their own independent conclusion on how missile defense fits into their national security goals, and these conclusions may change over time.

Based on this, the Department of Defense needs to carefully develop approaches to missile defense cooperation in a tailored way. The rationale for cooperation will differ for each prospective partner nation. Each individual nation's perceptions of threat, deterrence and regional security will have to be carefully considered by the US in any approach towards missile defense cooperation.

Due to the political complexities inherent in any global system, it may be difficult to achieve the full operational capability and system synergy that would otherwise be possible technically between US and allied missile defense elements. Although missile defense related international partnerships are certainly realistic and useful, full weapon engagement sharing and sensor fusion between the US and allies is probably impractical because the Global BMDS must operate as a single management and operational entity.

This global framework is the result of President Bush's recognition that defense of friends and allies is necessary for US freedom of action and his consequent decision to redirect the US missile defense program away from just US homeland defense. The withdrawal from the 1972 ABM treaty was necessary to implement this objective. By the late 1990's, it had become clear that the ABM treaty would obstruct the technical integration necessary to defeat the full range of ballistic missiles. The Services had developed ground and sea based systems that worked well against theater ballistic missiles but could not be used to their full technical potential because sensor integration and sea based national defenses were prohibited by the ABM treaty. The 2001 withdrawal from the ABM Treaty freed the US to develop a framework that could integrate these missile defense elements into one global system.

The strategic and political implications of a global BMD are challenging and thought provoking. An Inter-Continental or Intermediate Range Ballistic Missile (ICBM / IRBM) travels through space and across countries, continents, and various alliances. Each alliance and nation along the path of the ballistic missile has an interest in its flight and interception: these interests revolve around such major issues as sovereignty and Command and Control of any potential missile defense interceptors, and include subjects such as where does the engagement debris fall and how might high-speed interceptor launches be interpreted or misinterpreted.

By exploring how certain nations and regions have responded to the offer to engage in missile defense related cooperative activity with the US, we can examine how traditional Cold War era security relationships have been altered and, additionally, how missile defense is an indicator of how nations view deterrence in a post-Cold War environment.

Japan

Other than the US, and perhaps Israel, no other nation has made more of a security and budgetary commitment to missile defense than Japan. Its unique self-defense focus has also made it create the most conducive international environment for the deployment of missile defenses. This is based on the Japanese choice to frame their decision on missile defense not as a break with the past but as a logical extension of its Cold War era self defense focus. Missile Defense has been portrayed by the Japanese as wholly defensive in nature, and thus not in conflict with their long standing principles on non-agression.

Japan's commitment to Missile Defense centers on it decision to procur and co-develop SM-3 equipped AEGIS destroyers equipped with SPY radars. Japan's 2006 budget commits $1.2 billion dollars for a full array of missile defense related equipment: the procurement of SM-3 Block 1A missiles, the co-development of a follow-on SM-3 variant, PAC-3 and missile defense sensors. The Japanese co-development effort will

concentrate on the SM-3 two-color seeker, advanced signal processing, nose cone and divert and attitude control system.

The Japanese commitment brings to the forefront the significant challenges of integrating another nation's missile defense interceptors into the US Global BMDS system. Japan's upgrade of its AEGIS destroyers armed with SM-3 interceptors will provide a substantial contribution to the defeat of a ballistic missile attack from North Korea. However, based on political realities, it will be difficult to fully integrate this technical capability within the operational construct of the US BMD system.

Hypothetically, if Japanese SM-3-capable AEGIS vessels are fully tied into the Global BMDS Command and Control, Battle Management and Communications (C2BMC) network, Japanese maritime forces could have the first opportunity for the interception and destruction of a North Korean Taepo-Dong 2 ICBM bound for the US. Shot doctrine and sensor sharing could, theoretically, be coordinated with US AEGIS vessels in the Sea of Japan, with missile defense interceptors in Alaska and with US X-Band radars.

While it is unclear if this technical capability will ever be fully realized, a major step toward this goal was recently taken. In October, 2005, the Japanese stated that they desire "close coordination between respective BMD command and control systems" and that they desire "close and continuous policy and operational coordination at every level of government, from unit tactical level through strategic consultations".[1] While this is encouraging from a BMD perspective, it is perhaps still unrealistic to assume the US and Japan would ever fully incorporate their two respective BMD systems. Even though the Japanese decision to participate in missile defense is a significant step in the US/Japanese alliance, it is doubtful that the Japanese Government would ever agree to such a close, operational alliance with the US. It is also difficult to believe that the US Government would wait for the Japanese military to take the first shot at a possibly nuclear-tipped ICBM inbound for the US. Therefore, at least in the case of Japan, political restraints, by both the Japanese and US Governments, may very well inhibit the full technical capability of the Global BMDS.

This, however, does not deflect from the fact that Missile Defense has served as the catalyst for a Japanese reanalysis of long held security policies and principles. The Missile Defense debate in Japan has touched upon, and influenced, changes in their approach to collective self-defense, weapons acquisition and Command and Control. The Japanese decision to co-produce high tech SM-3 related technologies required that the Japanese review their long-standing Three Principles on Arms Exports.[2] Their decision that the Three Principles would not apply to SM-3 components is consistent with their

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[1] *Interim Report on US Forces' Realignment in Japan*, Joint US/Japanese statement, 29 October, 2005

[2] The Three Principles are the prohibition of arms to communist states, to states under UN embargo and to states involved in, or likely to be involved in conflict.

self-defense focus but a break with past policies on weapon exports and indicates a strategic flexibility towards a more energetic and less constrained weapons production program for appropriate missions.

Republic of Korea

In contrast to Japan, the Republic of Korea (ROK), despite formal treaty commitments, a long standing security relationship and a large number of US troops stationed on their soil, has not made a significant budgetary and political commitment to missile defense. Due to the nature of the threat to the ROK from North Korean ballistic missile attack, a ROK procurement of PAC-3 or THAAD systems would seem to be prudent, however, despite many approaches by the US, the Koreans have not made any commitment to missile defense.[3]

The reason for the hesitancy on part of the Koreans lies, in part, in their view that a full scale deployment of missile defense capabilities on the peninsula would hinder relations with China and would not be relevant in a post-reunification Korea.[4] Related, over the last 10 years, an amazing transformation in views have been made in Korean public opinion regarding the perceived threat from North Korea; ROK citizens no longer see North Korea as an overriding threat to their security; the US is now viewed as the largest impediment to national reunification. This attitude has made it difficult for the ROK to fully appreciate the missile defense threat from the North and has resulted in Korean hesitancy to commit to missile defense. [5]

Additionally, some have maintained that the real threat to the South comes not from ballistic missiles but from the large number of North Korean artillery pieces threatening Seoul.

Many South Koreans can not believe that their brethren to the north would ever engage in large scale ballistic missile barrages to the south. It is inconceivable to many South Koreans that their fellow countrymen would unleash ballistic missiles with chemical and biological warheads on the south, resulting in the death of hundreds of thousands. Conversely, traditional historical animosities between Koreans and Japanese have apparently convinced the Japanese that such an attack on their territory is a very real possibility.

Europe and NATO

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[3] *Missile Defense in Asia*, The Atlantic Council Policy Paper, June 2003

[4] *Missile Defense and Counter-Proliferation Planning on the Korean Peninsula: Exploring U.S. and ROK Responses and Options, The Institute for Foreign Policy Analysis*

[5] Missile Defense in Asia, page 15-18

As a generality, European views on missile defense are shaped largely by their history of security vulnerability and reliance on political institutions over technological and engineering breakthroughs. Based on this perspective, many Europeans view missile defense as a threat to long standing security guarantees and as a technology that provides a false degree of security to the US.[6] Interestingly, however, there appears to be a difference of opinion emerging between the nations of Western Europe and Eastern Europe regarding missile defense cooperation. While some Western European nations have expressed concern with the global nature of the BMDS, Eastern Europe has been more supportive.

Poland, in particular, has been very forward leaning in its support for the placement of a Ground Based Interceptor (GBI) site in their territory[7]. Polish Government officials have met on a number of occasions with US representatives in exploratory discussions regarding placing GBIs in their nation. Poland's interest, as a junior member, is to forge a significant, unique role in NATO. A GBI site in Poland would, indeed, significantly advance Poland's standing in NATO and would, overnight, enhance its security relationship with the US. While the US views a GBI site in Europe as a reaction to a ballistic missile threat from Southwest Asia, Poland sees a missile defense site in their nation in the context of a guarantor of their long term security[8].

A missile defense site in Europe would be the first serious manifestation of the Bush's emphasis on a global approach to missile defense vs. the Clinton emphasis on a National Missile Defense. If this deployment occurs, it will be significant for a variety of reasons: It would be the first deployment of a GBI outside the US and will be the first permanent US military base in Eastern Europe. Additionally, it would provide, for the first time, missile defense coverage for Europe against a threat from Southwest Asia and would significantly expand existing coverage of the US.

The deployment of a missile defense site in Europe may also have implications for the Foreign Military Sales or Direct Commercial Sales of missile defense interceptors. A GBI site in Eastern Europe would not be able to address a short- to medium- range ballistic missile from Russia and Southwest Asia. Therefore, a potential Eastern European host of a GBI system may demand that the deployment, purchase or co-development of a "lower tier" system such as PAC-3 or THAAD be a pre-condition for the agreement to host a GBI site.

The host nation's possible insistence on a lower tier system may be based on a threat perspective that differs significantly from that of the US. While the US may view the threat of a Russian attack as small, an Eastern European nation may not see this threat

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[6] *European Perspectives on U.S. Ballistic Missile Defense, Dr Colin S. Gray, March, 2002, National Institute for Public Policy*

[7] *US - Poland Discussing Missile Interceptor Base, Wall Street Journal, November 16, 2005*

[8] *Polish News Bulletin, December 22, 2005*

as so benign. Therefore, the US may be forced to tie, formally or informally, the placement of a GBI site in Europe to the deployment or host nation procurement of lower tier systems. Considering the small number of interceptors available, it would be very difficult to justify, politically or operationally, the deployment of a large number of lower tier interceptors to a site where the US does not see a threat.

Command and Control (C2) of missile defense operations will be the single most critical element in integrating a US controlled missile defense element on European territory. A host nation will most likely demand a certain level of input into the C2 of a missile defense site on their territory. Their request will rest on the valid concern that, by agreeing to host a US missile defense site in their nation, they become a target for ballistic missile attack or even special forces attacks. A host nation may even desire some measure of control over weapon's engagement and employment.

It is possible that the US would allow the host nation some degree of influence in these matters, however, the short time line for interception of an incoming ballistic missile will not allow for the deliberation and group consensus found in NATO decision making. The flight time, from launch to impact, of a ballistic missile from Southwest Asia to London is approximately 17-20 minutes. This short engagement timeline will not allow for the host nation to be consulted to any large degree and, operationally and politically, the US probably could not allow any host nation veto power over this engagement.

The role of NATO is also something that needs to be considered when the deployment of missile defense interceptors in Europe is considered. NATO has recently completed a feasibility study of missile defense of alliance territory and population.[10] This study examines various architecture options to protect Europe against the full range of ballistic missile threats. It will likely result in the recommendation to develop some form of GBI-like European missile defense system under NATO control. This system would, presumably, have the capability to be operationally and technologically interoperable with the US GBI site in Europe. A NATO missile defense system and the US GBI system could provide synergies that would enhance the capabilities of both systems. However, it is difficult to envision any close operational relationship between the two systems. The US system would be tied to the BMDS C2BMC world wide network of sensors and interceptors while the NATO system would be Euro-centric and tied into the political decision making structure of NATO. Although, perhaps, common situational awareness nodes may enhance each effort, weapons engagement sharing between the two systems is probably impossible politically and operationally.

Kinetic Energy Interceptor

[10] "SAIC Team wins NATO Ballistic Missile Defense Feasibility Study Contract", SAIC News Release, 29 January, 2004

While the deployment of fixed site GBIs in Europe will be a challenge, an even more interesting issue, with far ranging international cooperation implications, will be the deployment of the Mobile Kinetic Energy Interceptor (KEI). This boost phase system is envisioned as a risk mitigation effort for the Airborne Laser (ABL). If developed and deployed, it will have significant advantages to the fixed site GBIs. Mobile KEI will allow for rapid deployment, via C-17s, to trouble spots around the world. Additionally, a large scale infrastructure may not be necessary. These advantages, however, may be offset by the difficulty in developing international frameworks for the deployment of the system. While a fixed GBI site is visible and geographically constrained, a mobile KEI may have the ability to move freely from area to area. A potential host nation may be unwilling to allow an important strategic asset, like a mobile KEI system, to be placed in their nation especially in time of turmoil or conflict.

Additionally, some nations desire the permanent presence of a GBI site that a mobile KEI does not provide. A large scale base provides a visible security presence and thus, a visible manifestation of US commitment. For example, Poland's forward leaning position on missile defense is greatly based on its belief that a US presence on it territory could serve as a deterrent to Russian ambitions.

Although there is certainly operational value in mobile missile defense systems, the very factors that make them a valuable asset may also make it difficult for developing the necessary international partnerships that would be necessary for its deployment. As the Department of Defense makes decisions in the next few years regarding the production and deployment of the ABL or Mobile KEI systems, they should consider the structure and content of the international agreements that will ensure that these systems can operate and deploy overseas.

Conclusion

The technical goal of designing and deploying a global network of missile defense sensors and interceptors is daunting; however, the development of the international cooperative framework for that global system is perhaps equally challenging and must be done in parallel with the work on the technological issues.

It is the intent of the Missile Defense Agency to manage and operate this system as a single integrated global system and not merely as a loose confederation of individual weapon and sensor platforms. This operational and programmatic construct will require a high degree of innovative and novel forms of international cooperative initiatives. These initiatives will need to engage each potential partner nation in a manner that emphasizes their individual security and historical viewpoints, while also emphasizing how they can fit into the Global BMDS structure. Each partner nation will provide some benefit to the overall BMDS; the main contribution of a host nation for a GBI or sensor is land while another nation's contribution may be technology. One nation may join as a

partner to respond to their own threat perception (which may differ from the US threat viewpoint) while another may join to enhance their position with the US or NATO. For a nation to agree to cooperate with the US, the US may be forced to consider providing terminal defense systems that will be in short supply. These considerations will require the Department of Defense to be flexible and innovative in its approaches with potential partners.

The key for the US missile defense program in the coming years will be how to include allied nations into the Global BMDS while still maintaining tight operational and programmatic control over the system. A solid foundation is currently being built for missile defense cooperation. However, as more sensors and interceptors are fielded, it will be an increasing difficult challenge to foster and develop missile defense related cooperative programs with friends and allies.