



[www.ndu.edu/WMDCenter](http://www.ndu.edu/WMDCenter)

# PROCEEDINGS

## Star Wars Rebooted: Global Missile Defense in 2017

October 2012

By Bruno Gruselle

At present and for the near future, missile defense (MD) is not in peril of dismemberment. Indeed, the level of political consensus on the need for a missile defense runs high, as demonstrated by the Obama administration since 2009.<sup>1</sup> But there probably will be questions about the most appropriate policy and technical options going forward when the President and administration take office in 2017 either as incumbents or new arrivals. While the debate in Washington will probably concern such matters as whether the United States needs a maritime or land-based MD and where within the program the Nation should place its budgetary chips in what could become a very tense financial atmosphere, events elsewhere around the globe may confront the 2017 administration with some delicate strategic dilemmas and force it to make difficult choices.

### Complications of a Regional MD

Thanks to a constant policy effort launched by the George W. Bush administration, MD will be integrated in the U.S. allies' defense strategy "software." But that does not mean the United States will have been successful in replicating a similar and global MD architecture based on

interoperable technical solutions everywhere, from Asia to Europe and throughout the Gulf region. As illustrated by the Gulf Cooperation Council's difficulties in finding a political agreement on operating their future assets—including the United Arab Emirates' Terminal High Altitude Area Defense (THAAD) and Kuwait's PAC-3—or by North Atlantic Treaty Organization (NATO) hardships in funding national or common programs, things will probably not be as smoothly coherent as a rational mind would hope.<sup>2</sup> Nonetheless, in most regions, America's allies and some of its partners will possess more or less evolved MD capabilities that are more or less coordinated or plugged in (integrated) with the U.S. global MD command and control.

The challenge for the 2017 administration will probably lie in hammering down regional differences so groups of countries are able to protect themselves in an independent yet coordinated manner. One of the questions stemming from that challenge is how Washington will decide on its level of participation in various regional defense systems given what will definitely be finite available assets. Differences between Democrats and Republicans may appear—as they have in the fiscal year 2013 budget discussion—on whether it is useful to pursue a substantial effort in regions with no

Bruno Gruselle is a Senior Research Fellow and Engineer at the Foundation for Strategic Research in Paris. His is the first international contribution to the Proceedings series and is part of the Center for the Study of Weapons of Mass Destruction effort to make international perspectives available on issues important to the U.S. counter-WMD community.

immediate interest for Washington or to invest more in places where the threat of use of ballistic missiles is high.<sup>3</sup> For instance, the question may hang on the need to rebalance the effort between the Middle East and Europe on theater missile defense. It is indeed arguable that the development of Iran's ballistic missile programs will have a graver potential impact on allies and partners in the Gulf than on European allies.

Precisely because of these differences and because some regional situations may have evolved to the point where missile defense not only has to be considered but will soon need to be deployed and fully operational, the 2017 administration may need to reconsider some of its policy priorities. The 2012 announced "pivot" to Asia may require, for instance, that more is done to protect some allies and partners in that region who, like South Korea, are not willing to invest massively in MD solutions for their own security. New challenges to U.S. homeland security or a drastic change in Iran's trajectory may also affect the decisionmaking process and existing plans including technical development. As Steven Pifer writes, "the United States might slow development of and/or in consultation with NATO choose not to deploy the SM-3 Block IIB interceptor if it were clear that Iran were not making significant progress toward achieving a longer-range missile capability."<sup>4</sup>

## Programmatic Issues Could Derail Plans

Such a decision may also be made inevitable by plausible obstacles in the development of new high performance capabilities, which are now running on very strict timetables. For instance, the Block IIB version of the SM-3 is a brand new interceptor that is supposed to be as fast as a Ground-Based Interceptor (GBI) and will need to be integrated *before* 2020 on evolutions of existing and future *Aegis*-equipped cruisers and destroyers. The Government Accountability Office's recent analysis of the ability of the Missile Defense Agency (MDA) to respect its own timetables for such a project and the usual delays in such complex defense programs make it unlikely that Block IIB will be ready anywhere near that date.<sup>5</sup> Notwithstanding the priority the current administration gives to naval MD and the early success of the SM-3 Block IA, other programmatic challenges may well affect the ability of the United States to deliver on its own plan, including anticipated difficulties in integrating key new systems into existing platforms.<sup>6</sup>

Hedging bets on MD could also be a challenge if still unproven solutions are used to provide defense for all of the continental United States. The test track record of the GBI and its Exo-atmospheric Kill Vehicle (EKV), particularly the system's failure to intercept a target in 2009, pushed the MDA to slow deployment and reconsider the whole program.<sup>7</sup> The EKV performances are particularly relevant if the 2017 administration plans on using that kill vehicle (or an evolution of it) for the future SM-3 Block IIB, which will be the only interceptor other than the GBI capable of engaging intercontinental ballistic missiles.<sup>8</sup>

Last but not least, budgetary issues could irrevocably impact the carefully crafted plans of the current administration, especially the delicate calendar of the European Phased Adaptive Approach. With a little under \$8 billion, the MDA fiscal year 2013 budget request is not as constrained as it could have been (which reinforces the view that MD is here to stay as a military and strategic tool),<sup>9</sup> but with the specter of sequestration looming ahead—that is, a 10 percent cut on all government budgets—phase IV of the European Phased Adaptive Approach may well not be achieved before the middle or the end of the next decade. This may not prove such a terrible problem provided Iran or North Korean missile threats do not grow to the point of threatening the continental United States but could be catastrophic if other less optimistic scenarios materialize.

If the "threat factor" indeed has influence on future U.S. choices on MD, the natural evolution of MD as a military tool will also change the way programs are handled. MD is a relatively young military capability for the United States. Although the first research and development (R&D) efforts were conducted in the 1950s, it was not until the late 1990s that most enabling technologies became mature enough to make key advances possible, such as hit-to-kill.<sup>10</sup> For the last 15 years, missile defense has been mainly about scientific innovation and the integration of technological advances into real operational systems. But now, as it has matured into deployable systems, MD will enter a different phase where production, procurements, and upgrades (replacements) will become more important than R&D.<sup>11</sup> This is, for instance, already the case with the need to modernize the PAC-3, which was designed in the beginning of the 1990s and has been in service for almost a decade. In 2017, the Pentagon (and

MDA) will have to worry more about production difficulties and component upgrades than how to make an exo-atmospheric intercept possible.

## Russia, China, and the Nuclear Equation

Although technical and budgetary as well as programmatic issues will almost certainly complicate future efforts, the international political equation may prove so difficult to solve that it could derail some of the 2017 administration's missile defense policy.

As the need for more advanced systems continues to grow, Russia will surely get even crankier about European efforts to deploy new systems. Moscow's posture is almost certainly the result of an internal political calculus by the Kremlin that it needs to continue demonstrating that the West is conspiring to isolate Russia in order to weaken it. But Moscow's reaction is also the result of the natural paranoia of nuclear planners who must calculate in terms of preserving Russia's capability to devastate the rest of the world, and notably the United States, with its strategic weapons. In theory, as Dean Wilkening proved, the planned U.S. missile defense system is not remotely capable of defeating a salvo of Russian nuclear warheads with associated penails and decoys.<sup>12</sup> In practice, though, the Russian military by its nature will react as if future SM-3 Block IIBs—which will be capable of intercepting simple intercontinental ballistic missiles (ICBMs)—have that capability. This worst case assessment of U.S. future capabilities, which is characteristic of nuclear planners,<sup>13</sup> explains in turn why the question that planners ask concerns the net balance between their deployed ICBMs and sea-launched ballistic missiles and their worst-case fears of a future U.S. naval-based MD rather than whether SM-3 Block IIB will really have the capability to intercept their nuclear assets. Even if the whole intellectual construction is intrinsically flawed because it is based on the assumption that Russia and the United States would actually threaten one another with nuclear annihilation, it nonetheless constitutes the unmovable horizon of the Russian position. The 2017 administration will have to deal with it at some point if it wants to continue to progress with Russia on such matters as negotiated nuclear disarmament or security in Europe.

Although it is set on another level, the management of the People's Republic of China's posture on missile defense

is even more complicated. Beijing is in fact confronted with a strategic dilemma an order of magnitude greater than the one Russia has artificially created for itself. Chinese nuclear capabilities are and will be more vulnerable to the mix of offensive and defensive strategic capabilities that the United States and its allies in the region are developing. China's current efforts to modernize its nuclear deterrent were launched before MD became a technical reality, and Beijing is expected to continue to possess far fewer strategic nuclear ballistic missiles than Russia.

China, however, will take into account the development of MD in the regional and global environments.<sup>14</sup> As Brad Roberts put it in 2004, "there will be responses [to the evolution of missile defenses] in China's posture of strategic forces."<sup>15</sup> The ambivalence of Washington's position on the role of Conventional Prompt Global Strike and (theater as well as global) missile defenses to check Chinese military developments will be seen in Beijing as evidence that in the long run it will have to be able to overcome an existing regional MD architecture. But China may not have the means to start a full-fledged arms race with the United States. Such a race could cause a crash of the country's already fragile economic equilibrium and in turn threaten the primacy of the ruling Communist Party.<sup>16</sup> The risk is that China will instead put more emphasis on enhancing its nuclear deterrent not only by accelerating the modernization of its weapons but also by developing new capabilities that could support an undesirable transformation of its nuclear doctrine.

China's efforts to create a more efficient early warning radar network, as well as its 2007 and 2010 tests of an exo-atmospheric kill vehicle, could well be foretelling the emergence of a limited Chinese missile defense capability.<sup>17</sup> But they also could mean that Chinese military leaders are contemplating options for the use of their nuclear assets, such as launch on warning. In any case, the 2017 administration will at least have to continue and maybe deepen its dialogue with China on stability in Asia in the hope of finding a way to avoid worst-case scenarios. That dialogue must eventually include questions related to the deployment of missile defense systems in the region. Obviously, this will require that Beijing works to make its own strategic objectives and strategies more transparent to Washington.

Finally, the United States will have to deal with the question of India (and the related issue of Pakistan). As New Delhi is set on establishing its own missile defense architecture, it will increasingly look to Washington for support and at some point may try to have its capabilities interconnected with U.S. regional systems. The 2017 administration in its discussions with India will have to consider how its moves will affect Pakistan's determination to be capable of circumventing any Indian defense. For instance, Islamabad's development of dual-capable cruise missiles may fuel the nuclear ambiguity in the region with possible adverse repercussions in times of crisis.

Eventually, the 2017 administration's policy on missile defense will have to deal with an environment where MD has become a reality more than a possibility or a project. Moreover, it will be confronted with the fact that the external perception of MD will be influenced by more than a decade of continuous U.S. support and the articulation of a largely coherent strategy (exemplified by the 2010 Ballistic Missile Defense Posture Review). Whoever will sit in the White House will indeed find the margin for maneuver to be very limited internally as well as internationally.

## Notes

- 1 Andrew Futter, "The elephant in the room: U.S. ballistic missile defence under Barack Obama," *Defense & Security Analysis* 28, no. 1 (April 2012), 3–16.
- 2 "U.S. Seen Pursuing Differing Strategies for Gulf, Europe Missile Shields," *The New York Times*, August 9, 2012.
- 3 "House Lawmakers Not in Agreement on U.S. Missile Defense Plans," *Defense News*, May 15, 2012.
- 4 Steven Pifer, *Missile Defense in Europe: Cooperation or Contention?* Paper 8 (Washington, DC: The Brookings Institution, May 2012).
- 5 "GAO: Five Missile Defense Programs at Risk For Delays, Inefficiencies," *Inside Missile Defense*, July 25, 2012.
- 6 "AMDR Still Faces Key Technology Challenges, GAO Says," *Aerospace Daily & Defense Report*, April 19, 2012.
- 7 Government Accountability Office (GAO), *Missile Defense: Actions Needed to Improve Transparency and Accountability* (Washington, DC: GAO, March 2011), 80.
- 8 "Republicans Seek Kill Vehicle for Block IIB, GMD," *Aviation Week*, April 23, 2012; Dean A. Wilkening, "Does Missile Defence in Europe Threaten Russia?" *Survival: Global Politics and Strategy* 54, no. 1 (2012), 31–52.
- 9 NTI Newswire, "Pentagon Says Missile Defense Remains Key Amid Cutbacks," August 15, 2012.
- 10 Arguably before that the only possible technical solution to intercept a ballistic missile with a range greater than 1000 km was to detonate a nuclear war-head near it.
- 11 Amy Butler, "New Challenge for MDA: Field More Interceptors," *Aviation Week*, August 15, 2012.
- 12 Wilkening.

13 Gordon S. Barrass, "The Great Cold War: a Journey Through the Hall of Mirrors," *Stanford Security Studies*, 2009, 98–99.

14 Atlantic Council, "Chinese general warns that new missile shield may spark China nuclear upgrade," July 17, 2012.

15 Brad Roberts, "China and Ballistic Missile Defense: 1955 to 2002 and Beyond," *IDA Paper*, Institute for Defense Analyses, September 2003, 33.

16 Valérie Niquet, "La réunion de l'APN et les turbulences politiques : évaluation de la stabilité du régime chinois," *Notes de la FRS*, July 3, 2012.

17 *IMINT & Analysis* 2, no. 2, May 2012.

The mission of the Center for the Study of Weapons of Mass Destruction is to prepare U.S. national security leaders to address the challenges posed by weapons of mass destruction through its education, research, and outreach programs.

### CENTER FOR THE STUDY OF WEAPONS OF MASS DESTRUCTION

**Dr. John F. Reichart**  
Director

The Proceedings series presents key discussions, ideas, and conclusions from National Defense University symposia, workshops, strategic exercises and other research, and occasionally those of international counterparts. The opinions, conclusions, and recommendations expressed or implied within are those of the contributors and do not necessarily reflect the views of the Department of Defense or any other agency of the Federal Government. For information on NDU Press, visit [www.ndu.edu/press](http://www.ndu.edu/press).

