# Russian-European Cooperation on TMD: Russian Hopes and European Transatlantic Experience

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Dependence of the entry 1990s. Since the entry 1990s of Russia's uneasy relations with NATO. At the beginning of the current decade, the concept of cooperation received a new boost from the launch of the European Union's Common Foreign and Security Policy (CFSP). To many Russian observers, of the many possible directions the Russian-European security cooperation could take, one appears most promising—that of missile defense. Official Russian policy—even after the U.S. with-drawal from the Anti-Ballistic Missile (ABM) Treaty in June 2002—envisions a cooperative Russian-European effort to create a joint nonstrategic missile defense system with theater missile defense (TMD) capability.

For Russia, missile defense as a field of cooperation seems attractive for several reasons. It is perceived as a key area because of the prominent role of ballistic missile defense (BMD) in U.S. security discourse and current policies. Missile defense is also important to Russia because of the Soviet nuclear legacy. Along with a nuclear arsenal, Russia inherited corresponding priorities in its international agenda. These priorities manifested themselves in Russia's strong, vocal, and obdurate opposition to the U.S. policy of dismantling the ABM Treaty. From this perspective, if Russia can become a partner with the West in a field as technologically challenging and politically sensitive as missile defense, it would advance many steps forward in its integration into the European security system and enhance its international status. On the domestic level, it is widely believed in Moscow that the Russian defense industry has unique technologies and products that could make an important contribution to international cooperation in this area, and in return can benefit from contracts and investment critically needed to revive the currently underfunded sector.

While this point of view has some validity, this article critically examines the notion that missile defense can realistically become a major field of Russian-European cooperation. It also questions the central assumption that such cooperation can help revive the Russian defense industry. Whether Russia likes it or not, the possibilities for a Russian-European collaborative missile defense project will be constrained by the realities of the U.S. ballistic missile defense program, the European role in that program, and current multifaceted U.S.-European cooperation in this field. The main constraint in this respect will be the attitude of the European defense industry that, driven by the funding prospects, strongly favors cooperation with U.S. companies and has established extensive transatlantic partnerships for current and anticipated collaborative projects in missile defense.

By contrast, the hypothetical European-Russian missile defense partnership would have a less firm industrial foundation. Such a partnership would face challenges from European companies' preference for their own technologies and products and would be hampered by the current state of the Russian defense industry, which remains structurally unfit to engage as an equal partner in international industrial alliances. Another complication is that Russian-European missile defense cooperation would rest on a coalition of disparate groups in Russia who are pursuing not entirely compatible goals. Expectations of the benefits for the Russian defense industry of such cooperation constitute the one area of consensus among these groups. Sound analysis of potential Russian-European missile defense cooperation depends on a realistic and comprehensive view of all factors involved in the context of Russian-European and Russian-U.S. relations.

This article begins by looking at the domestic political climate in Russia for prospective Russian-European cooperation on missile defense. It analyzes the divergent motives of its proponents and notes the current absence of a coordinated and clear line of action on the topic in Russian relations with Europe and the United States. The article then examines the institutional (NATO) and defense industrial ties in the missile defense arena between Europe and the United States. The article then draws on conclusions from an analysis of U.S.-German-Italian cooperation on a medium-range air defense system (MEADS) to highlight the importance of providing an industrial foundation for the potential Russian-European political partnership on missile defense. It concludes with a guarded assessment of the prospects of sustainable cooperation in building the all-European missile defense system between Russia and Europe.

### "EUROTMD": RUSSIAN CONSTITUENCIES

Within Russia, the idea of Russian-European missile defense cooperation rests on domestic stakeholders with agendas that are not necessarily compatible. Its origins can be traced to the early 1990s cooperative outlook of the newly democratic Russian state, which at the time had a clear disposition toward alignment with the West and hoped to enter Western security institutions. Cooperation with Europe was seen as a key part of this overall strategy. In particular, a cooperative approach to missile defense was advocated by then-Foreign Minister Andrei Kozyrev to the Western European Union (WEU) in 1993-1994. However, this idea gained a more permanent place in Russian political discourse during the presidential election campaign of 2000. It was advanced by a Westernoriented group of analysts who shaped the political platform of the liberal presidential candidate Gennadi Yavlinsky. Even though Yavlinsky was promoting the specific idea of a joint Russian-European effort in missile defense as early as 1999, he clearly implied it should fit within a larger cooperative framework of U.S.-Russian relations post-ABM Treaty.<sup>1</sup> Thus, a "pro-Western," rightist faction of the Russian political spectrum has supported a vision of Russian-European joint missile defense, consistent with its general insistence on discarding Cold War attitudes and developing a true partnership with the United States and Europe. Therefore, the first time President Vladimir Putin (not very liberal but still sharing a pro-Western orientation with Yavlinsky) publicly spoke of international cooperation on missile defense, it was a natural turn of thought (later on reinterpreted by the military as a mistaken slip of the tongue) to conceive of it as involving partnership with the United States.<sup>2</sup>

The Russian Ministry of Defense apparently supports the same missile defense initiative, but on opposite grounds. Throughout most of 2001, active lobbying by Russia for its concept of an all-European joint missile defense ran parallel with energetic U.S. efforts to enlist European support for plans to build a national and later global missile defense system, at some level incorporating an anti-intercontinental ballistic missile (ICBM)-i.e., strategic—capability. The political intent of the Russian initiative was to dissuade the Europeans from endorsing the U.S. intention to withdraw from the ABM Treaty and build an extensive missile defense system. In this context, the Russian proposal for a joint European missile defense project acquired an anti-U.S. dimension that was widely recognized by commentators but not often admitted openly by the Russian military, which indeed had that dimension in mind. A rare direct reference to this motivation came from the First Deputy Chief of the Russian General Staff Yuriy Baluyevskiy in a 2003 interview: "If we really do develop by collective resources a collective missile-defense system in Europe or in Asia, this would prevent to a considerable extent a monopoly on the part of the United States, which we today perceive and which our European colleagues perceive."<sup>3</sup>

Another important group-the Russian defense industry-would support the prospect of Russian-European military and technical cooperation on missile defense. But its interests, owing to the current structure of the Russian foreign policy process, are invoked only indirectly, and (therefore) not necessarily accurately by the traditional policy actors. While the motives of joint missile defense proponents remain diverse, their central argument is the prospective benefit for the national military-industrial complex. In the words of Yavlinskiy, "our plants and design bureaus would have funding for at least twenty five years."<sup>4</sup> Both the Russian "Westernizers" and the Russian military seem to be confident that "Russia has everything necessary to put its military-industrial complex and its technologies at the foundation of the joint missile defense."5 Official comments from the Russian Foreign Ministry imply the same analysis: "...we have our own anti-missile systems that might be useful, and they are among the world's best. In such cooperation we are not the beneficiaries, we are very serious partners."<sup>6</sup>

Such references to the high quality of Russian military-industrial products may sound promising to a domestic audience, but selling Russian-European TMD cooperation internationally is a wholly different task. To accomplish that objective, Russia has to present a consolidated position covering both divergent domestic interests and the direction of its international alignment. Here, Russia runs into a number of difficulties. Russian concepts of joint European missile defense coalesced into a practical proposal during the final stage of the concerted U.S. campaign to secure European support for U.S. BMD plans and withdrawal from the ABM Treaty. Under these circumstances, it seemed clear that the principal purpose of the Russian undertaking was to oppose the U.S. policy and prevent Europe from supporting the United States. Once the initiative took hold, this particular objective became a liability for the Russian approach. On the one hand, statements by the Russian Ministry of Foreign Affairs and Ministry of Defense usually mention the issue of missile defense cooperation in the context of participation of three parties-Russia, Europe, and the United States-and the possibility of U.S.-Russian cooperation on missile defense is sometimes invoked at the top executive levels. On the other hand, the official Russian position on missile defense still discriminates between the global strategic-viewed as unnecessary and prone to complications—and nonstrategic—"really needed" and stabilizing—types of missile defense.<sup>7</sup> This distinction prevents the trilateral cooperation formula from sounding sincere.

With the Russian initiative now under consideration in NATO, the Russian leadership will inevitably have to devise a consistent strategic line addressing the U.S. presence in and importance for current and planned NATO TMD programs. It will be increasingly difficult to maintain the duality that earlier Russian proposals have exhibited. Domestically, the Russian government will have to deal with the still strong anti-NATO and broader anti-U.S. attitudes from those within the Russian military who occasionally give vent to their annoyance.<sup>8</sup> A series of "warnings" against the perceived anti-Russian strategies of NATO made on the eve of the NATO Defense Ministers' meeting in Colorado Springs in October 2003 by the Russian president and defense minister struck a sharply dissonant note against the cooperative tone that had settled in NATO-Russia relations since May 2002.9 The October 2003 statements signal that a noncontradictory and durable view of NATO's role in Russian security has yet to take hold in the Russian leadership. In this light, it is clear that the Russian government has yet to recognize and examine the long-term implications of a proposal for joint missile defense, initially brought forward as a tactical device, and to correlate the budding cooperation with NATO with the overall framework of Russia's international alignment.

The Russian initiative on joint European nonstrategic missile defense was undoubtedly prompted by the emerging European Security and Defense Policy (ESDP), that aimed to establish purely European structures within the European Union (EU). The first official Russian proposal for the joint development of a Euro-TMD system came from President Putin during his visit to Italy in June of 2000. While the European press hailed Putin's proposal as a sensation, its most notable aspect was its confusing character. Putin appeared to have called for building a pan-European nonstrategic missile defense system.<sup>10</sup> At that time, the offer was a general one, not addressed to any concrete institution or partner. Logically, however, NATO appeared to be the most obvious counterpart in terms of its specialization, organization, and established mechanism for relations with Russia. Later in 2000, in a paper given by the Russian Defense Minister Igor Sergeyev to NATO Secretary General Lord Robertson, the Russian military offered a concept of "joint, mobile, defense formations"

that Russia and NATO could deploy together as part of a rapid-reaction force.<sup>11</sup> In February 2001, the Ministry of Defense sent a new document to Lord Robertson and the Defense Ministries of Great Britain, Germany, France, and Greece. This second proposal was clearly designed to score political points and was manifestly free of specific details. It used the formula of a pan-European nonstrategic missile defense system and emphasized political and conceptual preconditions on the way to this objective.<sup>12</sup> The descriptions of the proposed substantive areas of cooperation were both sweeping and vague. However, this was a set of ideas that provided a basis for further consultations and, eventually, collaboration.

From 2001 through 2003, the subject of building a European TMD routinely popped up in summaries of Russian-European meetings within the EU and NATO institutional frameworks. As the EU security structures during this period were not much more than a vision, there was no alternative to channeling the initiative into the NATO organization as part of the newly reinvigorated Russia-NATO cooperation. This move took material form in the NATO-Russia Council Ad Hoc Working Group on Theatre Missile Defense (TMD AHWG, in NATO jargon). The first session of the working group took place in the Hague on July 31, 2002, in which aims, principles, conditions, and stages of cooperation were determined.<sup>13</sup> According to Chairman Robert Bell, the Group is to meet on a regular basis and its work is to be divided into five areas: terminology, TMD experimental concepts, TMD joint Concept of Operations, Training and Exercises, and TMD Systems and System Capabilities, each with a dedicated Support Working Team composed of experts from different nations, military authorities, and NATO agencies. At the May 2003 NATO-Russia Council meeting in Moscow, NATO's General Secretary Robinson hailed these discussions of missile defense as "perhaps the flagship program" and "a major breakthrough area" in Russia-NATO cooperation.<sup>14</sup> According to the NATO view, the goal of the current Russia-NATO TMD cooperation is very clearly (and somewhat narrowly) defined as analysis and evaluation of "possible levels of interoperability among respective NATO and Russian TMD systems."15

The NATO formulation draws a much more accurate picture of the scope of possible joint Russian-European activities than do many of the Russian analyses of this topic. It reflects the current state of NATO experience with the issue and the ongoing planning within NATO that had gained momentum before incorporation of the Russian dimension.

#### NATO AND PLANS FOR MISSILE DEFENSE

In the early 1990s, NATO started to give systematic consideration to strengthening the anti-ballistic missile capacity of the European air defense system.<sup>16</sup> Since then, a number of studies and development projects have examined the possibility of European missile defense. A study conducted by industrial representatives from nine NATO countries from 1992 to 1993 looked into complementing the then-existing underlay of protected air space below 35 kilometers (km), with a prospective pan-European overlay defending against ballistic and cruise missiles. This study assumed a precondition of limited available funding. In 1994, the U.K. Ministry of Defense contracted a multinational team lead by British Aerospace to conduct an 18-month ballistic missile feasibility study. The study concluded that the extent of the missile threat to the United Kingdom did not warrant the development an actual BMD system, but the U.K. government agreed to fund an assessment program designed to keep abreast of the technology.<sup>17</sup> By 1995, several European governments (Germany, France, and Italy) decided to join efforts with the United States to develop a MEADS, which would have an anti-ballistic missile capability.

Throughout the late 1990s, in the wake of these developments, NATO considered plans for a layered theater missile defense system. In February 2000, the North Atlantic Council (NAC) decided to launch the Stand Alone Project on TMD based on the concept of extended integrated air defense (EIAD).<sup>18</sup> The project involved conducting two simultaneous independent studies on the feasibility of an active layered theater ballistic missile defense (TBMD) capability for NATO. These studies aimed to determine an architectural solution allowing for the integration of "widest range of national systems" and to identify possible industrial strategies to pursue the acquisition, in-service operation, and support of active layered TBMD.<sup>19</sup> But before two industrial teams lead by Lockheed Martin and Science Applications International Corporation/Boeing completed the \$15-million study in January 2003, the United States, supported by some NATO countries, proposed to expand it beyond the original task of devising a system for defense of the deployed NATO forces to explore the possibility of protecting populated areas and territories. The resulting NATO decision to commission a new industry study on protecting "all" NATO territory-to be launched in 2003-signaled a shift in the European guarded approach to the U.S. plans on national missile defense. This decision was correctly viewed as a step toward linking the NATO program to the U.S. strategic missile defense enterprise.<sup>20</sup> A French diplomat admitted: "It is a pretty big change of position and a significant step for NATO."<sup>21</sup> Prior to this decision, many NATO members had been skeptical about U.S. missile defense plans. It did not escape the notice of some analysts that France reversed its "principled" opposition to expanding the TBMD study to the territory-defense level once the French company Thales was offered the chance to participate on the study team of the program.<sup>22</sup>

Notwithstanding some progress, however, the achievement of an EIAD faces multiple complications. On the political side, TMD, to say nothing of the more extended version under examination by the current NATO study, remains far outside the area of consensus of European governments and public opinion. The core problem is that of committing funds from the restricted defense budgets. European members of NATO are not keen to increase defense spending. Within NATO, TMD is just one of 58 elements of the Defense Capabilities Initiative, and its priority ranking is anything but clear.<sup>23</sup>

On the technical side, enormous effort is needed to provide integration within and across the main components of the possible European missile defense system. The Air Command and Control System (ACCS) is being modernized under dedicated NATO programs to integrate the national systems of the NATO newcomers, address the ballistic missile threat, achieve interoperability with European naval assets, and integrate with similar U.S. systems. Another challenge is the modernization of the radar network surrounding Europe and the development of early-warning systems. At present, NATO benefits from having access to the U.S. space- and ground-based networks via a long chain of data relays. For the active defense components of the system, European firms will have to compete hard with U.S.-produced interceptor missiles, such as the Patriot-3 (PAC-3). Of the developed European hardware, the only anti-tactical ballistic missile (ATBM) -capable missile system is that of the Franco-Italian Eurosam Future Surface-to-Air Family (FSAF) missile project. Its SAMP/T Block 1 system with the Aster 30 missile is claimed to have several advantages over the U.S.-made PAC-3, but so far it has not reached the production stage.<sup>24</sup> At the same time, the Aster family of missiles is being jealously promoted as a solution for theatre missile defense for Europe.<sup>25</sup> Since the deployed air defense systems in Europe are American made, building a TMD capability based on air defense systems could heighten tensions over which side of the Atlantic would provide for its upgrade and further development.

### TMD IN EUROPE: THE EUROPEAN DEFENSE INDUSTRY PERSPECTIVE

When analyzing even European or Russian developments in missile defense, terms of reference are set by U.S. policies and politics. Most of the European discussions and practical steps in this area have been driven by the dynamics of the U.S. BMD "theology" and programs. Since the early 1990s, the United States has made a concerted effort to bolster the transatlantic dimension of its growing missile defense enterprise. The Department of Defense has cited three reasons for this focus:

- Politically, this cooperation was designed to strengthen the military and industrial foundations of the common security relationship.
- Militarily, it was driven by the need to provide defense for U.S. and allied troops fighting in coalition operations in areas not covered by any of the U.S. missile defense systems.
- Economically, international cooperation was seen as one of the few remedies for the ever-increasing costs of the new systems and constrained defense budgets.<sup>26</sup>

In a general sense, the main U.S. interest in involving Europeans in defense cooperation comes from the technological and productive power of the U.S. defense industry, impelled by a desire for "reciprocal, inclusive access to one another's markets" and "adequate market size on both sides of the Atlantic." With the growing development of the ESDP, U.S. companies appear to be increasingly worried by "the sense...that the European security and defense policy has an implicit industrial tail" and "intra-European armament agreements may diminish the ability of U.S. companies to compete."<sup>27</sup> The U.S. defense sector, which owing to consolidation consists of a handful of powerful research and manufacturing giants, has intensified efforts aimed at "building the transatlantic bridge" by means of common programs, common research and development, joint ventures, mergers, and partnerships.

For their part, the European defense companies have to cope with spiraling development and production costs and growing international competition generated by shrinking government expenditures and declining international and domestic markets. Their survival strategies have involved privatization, consolidation, and international collaboration. In the early 1990s, Germany, the United Kingdom, and Italy relaxed state controls over the defense industry. Consolidation occurred both within and across countries. From 1996 to 2001, a series of mergers led to the establishment of MBDA, the largest European player in the field of research and production of missile systems.<sup>28</sup> At the final stage, MBDA was the result of a merger of the Franco-British Matra BAE Dynamics, the French EADS-Aerospatiale Matra Missiles, and the Italo-British Alenia Marconi Systems. The new group has a large industrial and technological base located in three countries and carries out 32 production programs and 23 development programs embracing all major European cooperation projects.<sup>29</sup> A 37.5 percent interest in MBDA is currently held by EADS, the largest European aerospace company active in the fields of civil and military aircraft, space, defense systems, and services. EADS itself was born in 2000, emerging from the linkup of the German DaimlerChrysler Aerospace AG, the French Aerospatiale Matra, and CASA of Spain. In 2002, 20 percent of its revenues came from the military market.<sup>30</sup>

For these major European military-industrial actors, shrinking domestic funding increases the attractiveness of collaboration with the U.S. firms. The United States is currently spending about \$8 billion a year on BMD. The projected long-term cost of a layered BMD system is an estimated \$238 billion by 2025 to \$800 billion-\$1.2 trillion by 2035.<sup>31</sup> The magnitude of these numbers demands the attention of the European defense industry. The year 2001 witnessed intense, but not very productive, political lobbying of the European governments by U.S. envoys, who hoped to move them to endorse U.S. BMD plans. As soon as the United States withdrew from the ABM Treaty on June 13, 2002, however, the desired turnaround in the European disposition toward the US-led BMD enterprise began to emerge, not from European governments, but from the defense industrial quarters. At the July 2002 Farnborough Airshow in Great Britain, the U.S. defense giant Boeing announced BMD ties with the top European defense firms BAE Systems, EADS, and Alenia Spazio. Memoranda of understanding (MOU) signed by the transatlantic partners committed them to "support all aspects of global ballistic missile defense." Statements made by the companies' representatives following the agreements struck notes consonant with the already wellestablished U.S. rhetoric of BMD promotion. In the words of the Boeing Company chief executive officer (CEO), "U.S. and European industry came together today to show unity of purpose and appreciation of a common global threat. We will work together on ballistic missile defenseadding a new dimension to transatlantic cooperation." On the European side, the EADS CEOs stated: "EADS is proud to partner with Boeing in the area of ballistic missile defense. We believe ballistic missile defense to be an important focus in the shifting defense environment, and key to ensuring peace in the free world."<sup>32</sup> The European military-industrial leaders also emphasized that "the key to meaningful European industrial participation is national government commitment to a missile defense program."<sup>33</sup>

The political implication of the attitudes of the European defense industry is clear: European defense companies would like their governments to provide a reliable political framework to enable industrial cooperation with the United States on missile defense. In the case of prospective U.S.-European missile defense cooperation, the attitudes of the respective European and U.S. defense industries and their existing ties constitute a very solid base for possible collaborative projects. Pending appropriate political decisions, the practical preconditions for cooperation are robust. The prospects of Russian cooperation on missile defense with international partners are less certain: Even in a favorable political climate, the industrial foundation of such cooperation would be incomparably weaker. A glimpse into the specifics of the existing international partnership in missile defense between the United States and Europe helps to outline some of the problem areas inherent in a similar cooperative defense project between Russia and Western partners.

## TMD COOPERATION: THE TRANSATLANTIC DIMENSION

In this respect it is worthwhile to examine the record of the U.S.-European codevelopment of MEADS to replace the older Hawk, Nike, and Patriot air-defense systems deployed by European countries and the U.S. Marine Corps and U.S. Army in Europe. As noted above, in 1994 the United States reached a preliminary agreement with three European countries—France, Germany, and Italy—for a transatlantic cooperative program to develop a modern missile defense system involving highly integrated software, hardware, and operational management. As a replacement for earlier air defense systems, MEADS was to introduce an anti-ballistic missile capability and have the greater mobility and maneuverability required by modern warfare. The system has been advertised as light and highly mobile—transportable by C-130 plane and once deployed having an immediate "plug-and-fight" capability (i.e. able to plug into a variety of sensors and systems and maneuver with the troops with little support). MEADS is designed to perform in difficult electronic countermeasure and weather environments and to be able to defeat simultaneous ballistic and air-breathing threats in multiple attack scenarios. It is also designed to be open ended to allow for added components and future upgrades.

Originally, the project was to proceed in two stages, each launched under a separate multilateral governmental MOU, which fixed the distribution of funding and responsibilities. For the first phase, Project Validation and Definition (PVD), the U.S. Army was to competitively select two out of three bidding U.S. industrial teams. At the same time, contractors from the participating European countries were setting up a "joint European industrial entity," EuroMEADS, that was later to form two equally staffed teams comprising representatives of all its constituent companies, still later to be paired in a blind draw with each of the two selected U.S. teams.<sup>34</sup> The resulting "transatlantic industrial entities" were eventually to be awarded contracts for completion of the PVD phase. Only one of the two teams was to be selected for the second phase, Design and Development (D&D), with the provision that the European staff from the unsuccessful contender would join the winning team. The second phase would require a new MOU to allocate the funding commitments for an estimated cost of \$3 billion.<sup>35</sup> The project was run within the NATO framework, by the NATO MEADS Management Agency (NAMEADSMA) located in Huntsville, Alabama. The participating companies created MEADS International, a multinational joint venture that in 1999 was designated as a prime contractor to develop the system. It includes Alenia Marconi Systems, Spa, in Italy; European Aeronautic Defence and Space (EADS Deutschland GmbH-formerly DASA); Lenkflugkörpersystem (LFK, a subsidiary) in Germany; and Lockheed Martin in the United States. The charter agreement provides for a tri-annual rotating leadership of the company and the board of directors, ensuring representation of all participating countries. In May 2001 the position of the president was taken by a representative of Lockheed Martin and that of the executive vice president by a representative of EADS/LFK.<sup>36</sup>

The elaborate procedural arrangement suggests a special effort to emphasize the cooperative and equitable nature of the project. However, contrary to official statements, from its outset MEADS has been an asymmetric partnership. France's Aerospatiale—one of the major producers of the Aster weapon system developed within the joint Franco-Italian consortium Eurosam and at that time lacking an ATBM capability—voiced a skeptical attitude about the prospects of integrating its technology into the design of the new system. Aerospatiale also questioned the participatory nature of the project as a whole. Although also worried about ending up with a "back seat" role in the program, German and Italian companies showed more enthusiasm, driven by hopes of reciprocal access to technologies and an increase in sales to the United States.<sup>37</sup> Given the inequitable weight of the two sides, it has proven hard to maintain symmetry.

The project had a difficult start in 1996, with a French decision to drop out. The statement of intent initiating the first phase of the project was then signed in May 1996 by three partner governments instead of four. France's withdrawal from the project upset the 50-50 ratio agreed for cost-sharing between the U.S. and European participants, who initially envisioned a further breakdown of 20-20-10 for the respective shares of France, Germany and Italy. The United States chose to compromise and proposed a 60 percent share for itself, a 25 percent share for Germany, and a 15 percent share for Italy. At the present stage, the cost breakdown is 55-28-17, respectively.

Another asymmetry in the project is the level of domestic political support in each country. The U.S. Congress has been repeatedly unwilling to allocate funds to a multinational missile defense undertaking. In 1998, it refused the Department of Defense request for MEADS funding for FY1999, instead placing a higher priority on other U.S.-developed missile defense programs.<sup>38</sup> The project came close to termination as a result, but was saved in a compromise that included adding an intermediate phase of Risk Reduction Effort (RRE), and a European commitment to an increased share to 45 percent. In 2003, the U.S. Congress went as far as subsuming MEADS into the U.S. Patriot program, whose prime contractor is Raytheon, a U.S. company that lost its bid to develop MEADS at an earlier stage. From the perspectives of the U.S. senators, merging the two programs makes eminent sense, as MEADS and Patriot use the same PAC-3 interceptor, and parallel development of largely similar systems will result in unnecessary duplication of funds and effort. The proposed solution was to cut the whole \$276 million line item for MEADS in the U.S. Army's 2004 budget and \$175 million for PAC-3 interceptor development and move the money into the Missile Defense Agency (MDA) budget to fill a Patriot line with \$415 million. Of this money, \$221 million would go to support "MEADS legacy program efforts," and the two programs would "eventually evolve into a [Patriot] system with all the attributes the MEADS program is intended to fill." For Germany and Italy, who have been largely consistent in paying their respective shares of the MEADS project costs, these were discouraging developments.<sup>39</sup>

Still another disparity concerns the choice of technologies and products that go into the system. During the three-year risk-reduction phase, the United States succeeded in achieving the designation of the Lockheed Martin PAC-3 as the interceptor for MEADS rather than agreeing to joint development of a multinational missile. The reasoning behind the selection was that integrating an already developed missile would reduce the cost and risks of the program. Still, the move was perceived in Europe as predominantly benefiting the United States. In the words of an MBDA representative, "We do not believe the U.S. ever wanted a cooperative program...The U.S. said early on: 'It's our missile.' Now we are trying to get some radar work and I would be surprised if that does not end up using a U.S. radar with only some European subcontract work."40 This European frustration has lead to a recent compromise decision to accommodate a second "complementary" missile into the system architecture, with each nation free to pursue its own solution.<sup>41</sup>

With the final D&D phase due to start in 2004, the project continues to generate controversial predictions about its future, from optimistic expectations that Britain and even France will come back onboard to doubts related to U.S. defense budget politics. According to the MEADS contractors, system development is moving forward with simulation tests. The demonstration in Rome, Italy, scheduled around March 2004 to mark the completion of the RRE phase, is expected to include a live firecontrol radar with real software, a simulated PAC-3 flight against a simulated theatre ballistic missile, and demonstrations of the system's ability to roll-on/roll-off a C-130 transport.<sup>42</sup> If the next phase starts as scheduled, the first systems are expected to be delivered to customers in 2011.

Analysis of the MEADS experience once again demonstrates the interdependence of political factors on the one hand, and economical and industrial factors on the other, in this kind of international partnership. International codevelopment and manufacturing cooperation in the sphere of military security appears problematic even under otherwise favorable conditions, including political and military relations among allies and strong industrial interests wishing to cooperate. The following observations drawn from the MEADS experience outline several possible "problem" areas caused by the overlapping and sometimes conflicting strategic, political, and economic interests of the participating actors.

- 1. Political commitment by governments is the starting point of any kind of defense collaboration. The U.S.-European cooperation is grounded in the long-standing and institutionalized allied relationship. However, strong allied ties and animated declarations are no guarantee of participation in concrete projects. While Great Britain has been the single-most trusted and devoted ally of the United States, throughout the 1990s and the early 2000s it consistently abstained from active participation in BMD cooperation and did not join MEADS despite invitations to do so. Even a genuine strategic partnership does not guarantee a responsive attitude toward a specific cooperative project.
- 2. A solid political commitment to cooperate is mostly a function of domestic politics. International cooperation in defense and security areas will not make real progress unless it is supported by a broad domestic political consensus. At the domestic level, no amount of cooperative rhetoric from the political leadership can compensate for political groups focused on competing constituencies rather than meeting expectations of foreign partners. In the case of MEADS, U.S. congressional decisions on funding have clearly been guided by the priorities of the larger U.S. BMD program and its domestic ramifications. Preserving the transatlantic balance of fairness took second place.
- 3. Despite the obvious importance of top-level political support, industrial initiative is indispensable and at times a primary factor in initiating cooperation. According to an analysis of trends in and prospects for the transatlantic defense community, "[m]ore than ever before in recent history, the transatlantic regime will be shaped by companies' initiatives and behaviors. Governments are currently behind the curve of industry discussions of joint ventures, strategic partnerships, and acquisition opportunities."43 With missile defense, top defense companies on either side of the Atlantic have been voicing forceful support for a cooperative transatlantic effort. European industry spokespersons tend to speak on behalf of "Europe." In the words of an MBDA official, "The perception of Europe is that there needs to be a trans-Atlantic program."44
- 4. When cooperating with the United States, European companies are very sensitive to the issue of equal sta-

tus, measured by the selection of technologies and products. For MEADS, they were eager to offer extensive lists with their own possible inputs, from development to testing to production.<sup>45</sup> Throughout the MEADS project, the Europeans have been trying to resist the stronger American hand in designating the baseline technologies and systems. In considering European missile defense architecture, they will give preference to European-developed systems.

5. Suspicions related to technology sharing and transfer may run deep irrespective of the level of relationship (collaboration, partnership, alliance) between the partners. With MEADS, this suspicion has been one of the major impediments to timely development. The restrictive technology transfer regime practiced by the United States in particular has slowed the project. Such suspicions are present even in intra-European cooperation, but are more pronounced in dealings across the Atlantic.

## TMD: Russian Hopes in Light of the European Experience

The issues of concern that have arisen in the current U.S.-European missile defense codevelopment project can inform an assessment of the feasibility of similar cooperation between Europe and Russia. In such an assessment, it is useful to separate political and economic factors and recognize the significance of economic and industrial preconditions that are often glossed over in many Russian analyses. On the other hand, such an analysis would be incomplete without considering the impact of U.S-Russian missile defense cooperation.

The general Russian discourse on the topic does not clearly draw distinctions between the political and practical aspects of the Russian-European joint approach. Most of the expert analyses seem to converge on acknowledging at least a prospective political value of the initiative. They may be critical of poor public relations strategies in marketing the proposal or unfounded hopes that Russian systems will be readily embraced by Europeans, but they may also attach importance to setting the process of political consultations in motion.<sup>46</sup> However, some of the analyses proceed to conflate the political process with more practical outcomes. Dmitri Trenin thus analyzes the political significance of the cooperation: "If we speak of joint analysis of threats, it practically means cooperation between intelligence services. Coordinated consultations practically mean political union. Joint weapons systems, their joint testing, selection of people for joint operations amount to integrated armed forces with integrated command."<sup>47</sup> In a similar manner, pronouncements by Russian officials tolerate this type of analytic stretch. While the Foreign Ministry characterizes the Russian initiative as an "invitation to dialog" with practical cooperation possibly coming several stages down the road, the Russian military talk of "joint commercial products" and "collective means of establishing collective defense."<sup>48</sup>

It is important to establish that a joint commercial project of such magnitude—building a joint missile defense system for Europe—is very different from the process of threat assessment and conceptual definition. The decision to start such consultations is indeed a substantive step toward Russia-NATO and Russia-EU political cooperation. However, it would be unrealistic to believe that such consultations will directly translate into codevelopment projects or even European orders to buy Russian ATMB air defense systems.

In the practical sense, the possibility of cooperation on TMD within the emerging ESDP does not substantially enhance the prospects for Russian participation in system development and production on the scale that appears to be anticipated by many Russian proponents of the idea. Although European governments like the prospect of a more independent military capability for the EU, "European proper" missile defense is not likely to be given budgetary priority over plans for the rapid reaction force or the European Armaments Agency. The European defense budgets can barely accommodate the cost of the EU and NATO military modernization programs. If these governments arrive at a decision to go ahead even with a more cost-effective system based on the concept of mobile nonstrategic TMD units, the effort would still involve enhancing the existing air defense infrastructure, which represents decades of work on integrating its components. For the Europeans, creating the integrated systems of command, control, and communication has been an ongoing process that is being continuously developed in the framework of numerous programs. From this perspective, a realistic agenda for TMD cooperation with Russia could include no more than achieving some level of interoperability among respective NATO (or European) and Russian TMD systems. By itself, this step could be an extensive and serious task, including research and manufacturing collaboration as well as political and military cooperation. Yet this possibility is quite different from the expectations of some Russians of much more sweeping collaboration leading to the construction of a new European missile defense on the basis of Russian technologies.

Russian calculations somehow tend to overlook the interests of the European defense industry. Its position is in some respects similar to that of Russian companies: They have ideas (technologies) but not adequate funding. Unlike the Russian defense industry, the Europeans are better placed to play a visible role in the political process. At present, the position of the European defense companies in regard to missile defense is defined very clearly. They are entering into industrial alliances with their U.S. counterparts to be able to participate in the projects supported vigorously by the Bush administration. Their representatives are outspoken in making their position known to their governments. At the same time, because the stakes are very high, the field of missile defense R&D and production is extremely competitive. Nevertheless, even with government support, avowals of commitment to balanced relationship, elaborate procedures, and considerable international experience, European companies are still finding it hard to compete even in their domestic markets to defend their interests in "collaborative" projects.49

A key point is that a full-scale Russian-European collaborative project in missile defense would require the formation of transnational business alliances similar to the one developed for the creation of MEADS. Russian defense companies, however, are not yet ready assume an equal role in such partnerships vis-à-vis their European or U.S. counterparts. The Russian defense industry has just started the consolidation process that the U.S. and European defense industries already passed through after the end of the Cold War. In Russia, strong governmental supervision is a characteristic feature of defense industry restructuring. The restructuring involves consolidation, privatization, and streamlining of the state funding for defense R&D.<sup>50</sup> Consolidation has made headway in the most technologically advanced and competitive fields, notably the aircraft industry. Among the biggest players are Sukhoi Aviation Holdings, a joint-stock company with 100 percent state ownership, and NPK Irkut, the privately managed producer of Su-30 fighter jets, which is planning a merger with the Yakovlev design bureau despite the disapproval of the government, which views private businesses in the defense sector with suspicion.<sup>51</sup> In the field of missile defense, Air Defense Concern Almaz-Antei-producer of some of Russia's most advanced air-defense and antimissile systems, including the S-400 and S-300-still cannot be considered a fully integrated viable market player. The creation of this company has required the Russian government to use its administrative leverage to produce a unified firm, but it still has not entirely overcome the conflicting interests of the companies that are being merged to create the new entity.<sup>52</sup> The Machine Building Scientific and Production Association (NPO Mashinostroenia) is another new corporation with a familiar name that produces cruise and ballistic missiles. Both Almaz-Antei and NPO Mashinostroenia figure in the lists of the top Russian defense exporters, but the aircraft producers have been the absolute leaders in the Russian defense industry.<sup>53</sup>

On a world scale, the biggest Russian defense exporter is Sukhoi, whose annual sales of around \$1 billion would make it about the 30th-largest defense export firm in the world.<sup>54</sup> Only a few other Russian defense companies would make it into list of the top-100 defense exporters. Russian defense exports are directed almost exclusively to the markets of the East and South Asia and some other third-world markets. European or U.S. markets are practically closed to Russian arms makers. To date, international partnerships involving Russian defense companies are very rare. The only recent joint venture in missile production was established between NPO Mashinostroenia and the Defense Research & Development Organization (DRDO) of India to design, develop, manufacture, and market anti-ship cruise missile systems.<sup>55</sup> There are currently no other cooperative ventures on this scale involving Russian defense firms.

The U.S. and European defense giants, Boeing and EADS, have begun approaching the Russian aerospace companies. EADS was nine years late behind Boeing in opening an engineering center in Russia, a joint venture with the Kaskol Group begun with the intention to achieve a competitive edge over Boeing by subcontracting some of the Airbus design and production work to Russian companies.<sup>56</sup> In the field of missile defense, the Russian defense industry appears to have more experience with cooperation with U.S. firms than with their European counterparts. While the large government-level Russian-American Observation Satellite (RAMOS) experimental satellites project has, to date, been a mostly negative experience, on the company-to-company level initial contacts for cooperation in missile defense have been made.<sup>57</sup> In August 2002, soon after the U.S. withdrawal from the ABM treaty took effect, Lockheed Martin discussed cooperation on "missile defense and other space-related work" with the Khrunichev Space Center, its long-time partner in space cooperation.<sup>58</sup> In August 2003, Boeing signed an MOU with the Russian firm RTI Systems Concern on joint architectural analysis of radar systems. The two companies expressed interest in "cooperation in the area of missile defense, subject to the requisite approval of the U.S. and Russian governments."<sup>59</sup>

It appears that Russian and European companies are driven by the same logic: They are motivated to join the most promising partners—U.S. corporations—in order to participate in what, by all appearances, is a long-term and well-funded BMD project. Given the political foundation for a similar European program, the same logic of teaming up with the strongest players would dictate an appropriate response by Russian firms. Anticipating future political decisions about European missile defense, both European and U.S. industrial giants are ready to explore possible openings with their own products. Assuming that simply by beginning structured political consultations with Europe on missile defense Russia could bolster the competitiveness of its technologies or products is, at the very least, naïve. Mere claims that the Russian systems are "far better" in performance than European or U.S. analogues may sound encouraging to a domestic audience, but they alone do little to help Russian companies enter the European market.

Politically, plans for a European missile defense project need a reevaluation of the original assumptions that shaped its objectives and content. Employing this idea to play on EU-U.S. tensions over international and domestic politics is short sighted for the simple reason that no cooperation with Europe on missile defense is realistically possible outside of the larger international environment in which the United States runs most of the assets, programs, and partnerships. The September 2003 meeting between Presidents Putin and Bush showed that Russia remains undecided about the possibility of BMD cooperation with the United States. While a reference was made to such cooperation in the joint statement about the results of the meeting, it was the U.S., not the Russian, president who actually mentioned this problem during the final press appearance.<sup>60</sup> The approaching Duma and presidential elections in Russia are causing additional caution for the Russian leadership since the issue continues to be divisive domestically.

Notably, the views of the Russian defense industry are almost nonexistent in a debate that directly effects its wellbeing. Some analysts argue that the Russian militaryindustrial complex is an influential and staunchly anti-U.S. (or anti-Western) domestic political actor due to the present geopolitical location of its main customers.<sup>61</sup> The reality, however, is that the Russian defense industry does not exist as a homogenous entity, and ongoing restructuring is adding to its increasing heterogeneity and not necessarily consolidating its interests into a single bloc. It is hard to speculate about the possible priorities and orientation of its constituent parts, but it is certain that enfranchising the defense industry in the foreign policy process would make Russian discourse on international military cooperation more realistic and representative.

The promise of Russian-European missile defense cooperation appears to lie predominantly in the political sphere. It should be viewed as a long-term prospect. Even in the medium-term, future Russian industry is not likely to gain any ground-breaking benefits from the emerging TMD cooperation with Europe. Rather than focusing on unrealistic hopes for sweeping missile defense cooperation in the short term, the Russian government and firms in the defense industry should lay the foundation for a more effective future partnership with Europe by perusing other opportunities for defense and security cooperation with Europe and developing more effective forms of partnership between themselves inside Russia.

<sup>&</sup>lt;sup>1</sup> Grigorii Yavlinsky, "Strategiya oboronnoi initziativy," *Vostochno-Sibirskaya Pravda*, February 24, 1999, <http://www.yabloko.ru/Publ/Articles/yavl-73.html>.

<sup>&</sup>lt;sup>2</sup> See Pavel Podvig, "Putin's Boost-Phase Defense: The Offer That Wasn't," PONARS Policy Memo No.180, November 2000, <http://www.csis.org/ruseura/ ponars/policymemos/pm 0180.pdf>.

<sup>&</sup>lt;sup>3</sup> "Colonel General Baluyevskiy on Relations With NATO, War With Iraq," *Nezavisimoye Voyennoye Obozreniye*, February 21, 2003.

<sup>&</sup>lt;sup>4</sup> Grigorii Yavlinsky, "Strategiya oboronnoi initziativy."

<sup>&</sup>lt;sup>5</sup> "Grigorii Yavlinsky zayavlyaet o neobkhodimosti sozdaniya rossiisko-evropeiskoi sistemy PRO na baze tekhnologii i VPK Rossii." ("Grigorii Yavlinsky states the need to build a Russian-European system of missile defense on the basis of Russian technologies and VPK."), <http://www.yabloko.ru/Press/2000/0003204.html>. The same statement was made by Russian Defense Minister Igor Sergeev, "Russia has the technical capability to provide for the European missile defense...", February 21, 2001, <http://www.rbc.rru/freenews.arc/2001/02/21/20010221125625.shtml>.

<sup>&</sup>lt;sup>6</sup> Interview with Sergei Kislyak (Deputy Foreign Minister), Vremya Novostei, September 24, 2003, <http://www.nns.ru/interv/arch/2003/09/24/int10821.html>. <sup>7</sup> "On the U.K. consent for the U.S. use of radiolocation station in Fylingdales Moor," Russian Ministry of Foreign Affairs, January 17, 2003.

<sup>&</sup>lt;sup>8</sup> For example, in November of 2002, the chief of Russia's military air command, Vladmir Mikhailov, told the leading military weekly that participation in a strongly centralized EuroPRO runs contrary to state security interests. "We cannot place our security at the discretion of NATO," he said. Vladmir Mikhailov, "EvroPRO ne dlya Rossii," *Nezavisimoye Voennoye Obozreniye*, November 5, 2002.

<sup>&</sup>lt;sup>9</sup> "NATO prompts Russian nuclear rethink," October 10, 2003, <http:// www.euobserver.com/index.phtml?sid=13&aid=12901>.

<sup>&</sup>lt;sup>10</sup> Putin actually expressed two ideas: one in an NBC interview on cooperation with the United States, and another some days later on cooperation with the EU. The military consequently made clear that the offer concerned exclusively the cooperation with Europeans on nonstrategic missile defense. See Podvig, "Putin's Boost-Phase Defense: The Offer That Wasn't." Indication of the ongoing work on the proposal was an appeal by Foreign Minister Igor Ivanov to the CIS Defense Ministers to support Russia's initiative on building the "all-European" TMD later in June 2000.

<sup>11</sup> Robert Bell, "Ballistic Missile Threats: a NATO-Russia Strategic Challenge," *Krasnaya Zvezda*, February 27, 2003,

<www.nato.int/docu/articles/2003/a030227a.htm>.

<sup>12</sup> "Zamysel i etapy sozdania obsheevropeiskoi sistemy protivoraketnoi oborony," <http://www.armscontrol.ru/start/rus/docs/evropro.htm>.

13 "Colonel General Baluyevskiy on Relations With NATO, War With Iraq."

<sup>14</sup> U.S. Department of State, "Robertson Press Conference at NATO-Russia Council," May 13, 2003, <http://usinfo.state.gov/regional/eur/russia/030513robertson.htm>.

<sup>15</sup> Robert Bell, "Ballistic Missile Threats."

<sup>16</sup> James Fergusson, "NATO, Europe and Theatre Missile Defense," *Canadian Military Journal* 3 (Spring 2002), pp. 45, 49.

<sup>17</sup> Nick Cook, "Europe's Missing Shield," *Jane's Defence Weekly*, April 29, 1999, pp. 24-27.

<sup>18</sup> Extended Integrated Air Defense may be defined as "extension of existing counter-air operations and all of their elements to counter the entire threat which is posed by satellite vehicles, ballistic missiles, aerodynamic missiles, manned aircraft or unmanned air vehicles." For an extensive overview of the EIAD capability for NATO, see Fergusson, "NATO, Europe and Theatre Missile Defense."

<sup>19</sup> Alexis Kemper, NATO: NATO Active Layered Theatre Ballistic Missile Defense Feasibility Study, Commerce Business Daily, August 7, 2000, PSA#2658, <http://www.fbodaily.com/cbd/archive/2000/08(August)/07-Aug-2000/ Bsol002.htm>.

<sup>20</sup> Luke Hill, "France stalls NATO missile defense study expansion," *Jane's Defence Weekly*, October 30, 2002.

<sup>21</sup> Luke Hill, "French turnaround on NATO missile defense," *Jane's Defence Weekly*, November 13, 2002.

<sup>22</sup> Ibid. A transatlantic consortium for the new study is led by Science Applications International Corporation (SAIC). It also includes Boeing, EADS, Germany's Diehl, Raytheon, Italy's Alenia Spazio, Thales of France, and ACSI, a Raytheon-Thales air-defense consortium. Luke Hill, "NATO selects team to study missile defense," *Jane's Defence Weekly*, October 8, 2003.

<sup>23</sup> James Fergusson, "NATO, Europe and Theatre Missile Defense," p. 47.

<sup>24</sup>Kerry Gilde, France, Italy Close To Sealing SAMP/T Surface-to-Air Missile Deals, Defense daily International, September 27, 2002, <a href="http://stage.defensedaily.com/VIP/ddi/previous/ddi0927.htm#A5>">http://stage.defensedaily.com/VIP/ddi/previous/ddi0927.htm#A5></a>.

<sup>25</sup> Kerry Gildea, "MBDA Positions To Enter U.S. Market for Ballistic Missile Defense Work," *Defense Daily International*, June 7, 2002, <http://www.defensedaily.com/cgi/catalog/sample?DDI>.

<sup>26</sup> U.S. House of Representatives, Statement to House Armed Services Committee, Statement of Brigadier General Curtis H. Emery Director for Theater Air and Missile Defenses, Ballistic Missile Defense Organization, Department of Defense, March 19, 1997, <a href="http://armedservices.house.gov/testimony/105thcongress/97-3-19Emery.htm">http://armedservices.house.gov/testimony/ 105thcongress/97-3-19Emery.htm</a>>.

<sup>27</sup> Conference on Transatlantic Defence Industrial Cooperation, Comments by Tom Culligan, CEO Panel: Views Of U.S. and Europe Defence Industry, July 18, 2003, <http://www.nato.int/docu/speech/2003/s030718d.htm>.

<sup>28</sup> The name of the company appears to be composed from the initial letters of Matra BAE Dynamics Alenia, although the company officials were reported to state that "the initials do not stand for anything." See "European missile company named," In Brief, *Jane's Defence Weekly*, November 8, 2000.

<sup>29</sup> See MBDA website, <http://www.mbda.net>.

<sup>30</sup> Roxana Tiron, European Firms Energizing U.S. Defense Market, National Defense, December 2002, <http://www.nationaldefensemagazine.org/ article.cfm?Id=997>

<sup>31</sup>The first figure is given in the January 2002 study of nonpartisan Congressional Budget Office (CBO), "Estimated Costs and Technical Characteristics of Selected National Missile Defense Systems," <a href="http://64.177.207.201/pages/16\_282.html">http://64.177.207.201/pages/ 16\_282.html</a>; the higher figure is offered by Economists Allied for Arms Reductions and the Center for Arms Control and Non-Proliferation, "Report on the Full Costs of Ballistic Missile Defense," January 2003, <a href="http://www.ecaar.org/">http://www.ecaar.org/</a> Press/BMD UN.pdf>.

<sup>32</sup> EADS Space Transportation, Press Release, July 24, 2002, "Boeing and EADS announce transatlantic partnership," <a href="http://www.lanceurs.aeromatra.com/">http://www.lanceurs.aeromatra.com/</a> actualites/actu\_communique\_en.asp?contenu\_id=1543>.

<sup>33</sup>United Kingdom Parliament, Select Committee on Defence, Appendices to the Minutes of Evidence, "Memorandum submitted by the Campaign Against Arms Trade," January 20, 2003, <http://www.parliament.the-stationeryoffice.co.uk/pa/cm200203/cmselect/cmdfence/290-i/290ap22.htm#n115>.

<sup>34</sup> Aerospatiale and Thomson-CSF (France), Daimler-Benz Aerospace and Siemens (Germany), Alenia (Italy).

<sup>35</sup> Mark Hewish, "Providing the umbrella," *International Defense Review*, August 11, 1995.

<sup>36</sup> MEADS International Inc., Press Release, May 22, 2001, "Srtickland Named President of MEADS International as Company Prepares for Risk Reduction Effort Contract," <a href="http://www.missilesandfirecontrol.com/our\_news/">http://www.missilesandfirecontrol.com/our\_news/</a> pressrelease/01pressrelease/052201\_MEADS.htm>.

<sup>37</sup> Barbara Starr and Charles Bickers, "Statement of intent for MEADS is concluded," *Jane's Defence Weekly*, March 4, 1995; Carol Reed, "MEADS: Teaming up across the ocean," *Jane's Defence Weekly*, June 24, 1995.

<sup>38</sup> Scott Gourley, "USA may withdraw from joint MEADS programme," *Jane's Defence Weekly*, October 14, 1998; Center for Defense Information, "Germany questions U.S. plan to reorganize MEADS," July 8, 2003, <http://www.cdi.org/newsletter/topicView.cfm?topicID=28&listID=9>.

<sup>39</sup> Ann Roosevelt, "Senators would merge MEADS, Patriot programs," Space and Missile, June 9, 2003.

 $^{\rm 40}$  Kerry Gildea, "MBDA Positions To Enter U.S. Market for Ballistic Missile Defense Work."

<sup>41</sup>Michael Sirak, "Air-defense system reveals room to grow," *Jane's Defence Weekly*, March 26, 2003; James O'Halloran, "MEADS stays on track, says industry," *Jane's Defence Weekly*, September 04, 2002.

<sup>42</sup> Kerry Gildea, "MEADS to Accommodate Secondary Missile, Other Components," *Defense Daily*, June 14, 2002.

<sup>43</sup> Center for Strategic and International Studies, "The Future of the Transatlantic Defense Community: Final Report of the CSIS Commission on Transatlantic Security and Industrial Cooperation in the Twenty-first Century," January 2003, p. 54, <a href="http://www.csis.org/pubs/2003\_future.pdf">http://www.csis.org/pubs/2003\_future.pdf</a>.

<sup>44</sup> Kerry Gildea, "MBDA Positions To Enter U.S. Market for Ballistic Missile Defense Work."

<sup>45</sup> Wolfgang Erlewein and Wolf Krueger, "MEADS: Experiences and Possible Contributions by German Industry," *Bonn WEHRTECHNIK*, June 1995, pp. 19-21, < http://www.fas.org/news/germany/est95018.htm>.

<sup>46</sup> Nikolai Sokov, "Russian Missile Defense for Europe: The February 20 Proposal is More Serious Than It Seems," Center for Nonproliferation Studies, March 14, 2001, <http://cns.miis.edu/pubs/reports/sokrmd.htm>; Nikolai Sokov, "How Serious is the Russian Proposal for the missile defense of Europe?" *Jane's Defence Weekly*, April 11, 2001; Viktor Mizin, "Russian Cooperative Proposals for Missile Defenses with NATO. European BMD: "EuroPro"—Any 'Contra'?" Mountbatten Centre for International Studies, <http://www.mcis.soton.ac.uk/BMDConf.pdf>.</htp:// <sup>47</sup> Dmitri Trenin, "My ne pytaemsya zamaskirovat'sya," *Tzas* (Latviya), June 26, 2001.

<sup>48</sup> MID's Alexander Yakovenko cited in Dmitry Tchernogorsky, "Moskva ne vidit ugroz, opravdyvayushih sozdaniye PRO," *Nezavisimaya Gazeta*, March 21, 2001; Yurii Baluyevski in interview to *Nezavisimoye Voennoye Obozreniye*, February 21, 2003.

<sup>49</sup> According to estimates of MBDA, U.S. companies occupy 100 percent of the American, 50–60 percent of the European, and 70 percent of the world missile markets. MBDA, "Comparison of estimated missile markets," <http:// www.mbda.net/site/FO/scripts/siteFO\_contenu.php?lang=EN&noeu\_id=35>. <sup>50</sup> Alexander Goltz and Nikolai Novichkov, "Russian defence industry: Countdown to recovery?" Jane's Defence Weekly, May 8, 2002.

<sup>51</sup> Lyuba Pronina, "Irkut and Yakovlev Are Tying The Knot," *The Moscow Times*, August 21, 2003.

<sup>52</sup> Yulia Latynina, "Expect Swift Retribution for Klimov's Death," CDI Russia Weekly, June 12, 2003, <a href="http://www.cdi.org/russia/261-11.cfm">http://www.cdi.org/russia/261-11.cfm</a>>.

<sup>53</sup> Ruslan Pukhov, Konstantin Makienko, and Maxim Pyadushkin, "Preliminary Estimates of Russia's Arms Export in 2002," *Eksport Vooruzheniy*, 2002.

<sup>54</sup> Kto est kto v "oboronke"? Krasnaya Zvezda, July 19, 2003.

 $^{55}$  See the website of the BrahMos joint venture, <code><http://www.brahmos.com/</code> aboutus.html>.

<sup>56</sup> Lyuba Pronina, "Airbus Opens A Design Center," *Moscow Times*, June 4, 2003, <http://www.avia.ru/english/articles/doc137.shtml>.

<sup>57</sup> The Russian-American Observation Satellite (RAMOS) programme was initiated as early as 1992 to assess new ways of tracking ballistic missiles. More than a decade since then, it is still under negotiation. Michael Sirak, "Russia, USA near agreement on joint missile defence experiment," *Jane's Defence Weekly*, November 6, 2002.

<sup>58</sup> David Ruppe, "U.S.-Russia: U.S. Contractor, Russian Institute Pursue Missile Defense Cooperation," *Global Security Newswire*, August 23, 2002, <www.nti.org/ d\_newswire/issues/newswires/2002\_8\_23.htm>.

<sup>59</sup> "The Boeing Company," Jane's Defense Industry, September 1, 2003.

<sup>60</sup> U.S. Department of State, Press Release, September 27, 2003, "U.S.-Russia Joint Statement on Bush-Putin Talks at Camp David," <a href="http://usinfo.state.gov/">http://usinfo.state.gov/</a> topical/pol/terror/texts/03092701.htm>;

"Zayavlenia Prezidenta Rossii i Prezidenta Soedinyonnyh Shtatov Ameriki I otvety na voprosy po okonchanii pregovorov, Camp David, September 27, 2003," MID RF, Departament Informatzii I Pechati, September 29, 2003.

<sup>61</sup> A recent example is a list of "Five influence groups in Russia's political, business, and intellectual circles" in Oleg Khrabryi, "Irregular Relations. Russia and the U.S. are not changing policies for the sake of friendship," *Ekspert*, October 6, 2003, where the military-industrial complex actually stands to represent the anti-U.S. position.