The Significance of Joint Missile Surveillance

by John Steinbruner

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American Academy of Arts and Sciences

Project on Joint Missile Surveillance

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John Steinbruner

At a summit meeting in Moscow in September of 1998, the presidents of the United States and Russia signed an agreement to share information on the launch of ballistic missiles. The announcement was not received as a major accomplishment. There had been a minimum amount of bureaucratic preparation within the two governments and only cursory negotiation between them. The essential details were yet to be worked out and would obviously be troublesome. Moreover, at the time of the meeting neither of the individuals involved commanded the personal political authority normally considered necessary to sponsor a meaningful venture. The visiting President Clinton was entangled in the blooming phases of an impeachment proceeding. The hosting President Yeltsin was widely believed to be in the waning stages of personal health and political stature.

Despite the burdens of the moment, however, the agreement was intrinsically significant. It addressed an underlying problem grave enough to compel attention regardless of the circumstances. There were reasons to take the core idea seriously whatever immediate sentiment might be.

The problem was then and still remains a legacy of the cold war. Although not proclaiming themselves to be strategic opponents, Russia and the United States nonetheless continuously maintain thousands of nuclear weapons in an operational state poised to initiate a massive attack within a few minutes. As a result of that practice, each country constantly presents to the other the greatest physical threat that it encounters from any source. The force configurations are justified as protective deterrent threats, whose overwhelming destructiveness are meant to assure that no such attack will ever occur. But as an unavoidable corollary of that logic, each side must also convey credible reassurance that no error of judgment would ever be made. Both countries for their own safety must be absolutely certain that the forces of the other side are not susceptible to false alarm. The two societies entangled in this active deterrent relationship are forced to trust each other on that latter point.

Their capacity to sustain that trust differs substantially. The United States operates a comprehensive warning system which provides reliable assurance that any large scale attack emanating from Russian forces would be detected by infrared sensors in space a few minutes after launch and would be confirmed by ground based radar approximately fifteen minutes before impact. Since the United States can detect attack with high confidence, it can also assure Russia that it would not falsely perceive an attack that had not in fact been launched and would not retaliate by mistake. Russia is not in position to offer comparable assurance. The warning system it inherited from the Soviet Union is not complete and does not provide either continuous or comprehensive surveillance of attack corridors with even a single method of detection.[1] As a result, Russia is inherently more susceptible to confusion and cannot offer comparable assurance against false perception of attack. That fact is a problem for the United States, and it creates a very serious incentive to strengthen the Russian warning system — the implicit purpose of the 1998 agreement.

The United States operates a comprehensive warning system which provides reliable assurance that it would not falsely perceive an attack. Russia is inherently more susceptible to confusion and cannot offer a comparable assurance. That fact is a problem for the United States.

Unfortunately, acknowledgment of the problem has not matched its intrinsic importance. At the height of cold war confrontation when the inherent interest in conveying mutual reassurance was most pressing, that feature of the deterrent relationship was not explicitly articulated or broadly appreciated. The security bureaucracies were generally aware of it in their inner deliberations, but clearly subordinated it to their predominant commitment to preserve the capacity for overwhelming destruction. When the sense of confrontation dissolved in the aftermath of the cold war, a massive deterrent capability was preserved but that fact and the reasoning behind it receded as a public concern. To put it mildly, the American and Russian security bureaucracies were not prepared for intimate collaboration at the time of the 1998 summit, and their respective constituencies were not insisting on it. The prevailing instinct was to treat the summit initiative as a symbolic exercise that would not meaningfully

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1 Geoffrey Forden, Pavel Podvig, and Theodore Postol, "False Alarm, Nuclear Danger," IEEE Spectrum (March 2000): 31-39.

alter national surveillance practices and certainly would not reveal their operational details. The implementation discussions that followed the summit reflected that attitude. Even that reluctant exercise was suspended in the Spring of 1999 as a result of sharp Russian objections to the NATO air campaign against Yugoslavia during the Kosovo crisis.

The idea of joint missile surveillance enjoyed some revival and a brief practical demonstration as a result of concern over possible threats to computer operating systems with the arrival of the year 2000. Although the United States was reasonably confident that its surveillance system would not be disrupted, that judgment admitted to some uncertainty and did not extend equally to Russia. Since public discussion of the millennial transition featured speculation about the possibility of unintended missile launches and warning system failures, there was an incentive for both sides to collaborate in a demonstration of prudent precaution. From December 21, 1999 to January 16, 2000, eighteen Russian military officers worked with American counterparts at a temporary missile monitoring center established at Peterson Air Force Base in Colorado, near but not actually at the principal national surveillance center located within Cheyenne Mountain. The experience was reported to be very congenial to both sides, and the millennial transition presented no major problems.

By the Spring of 2000, Vladimir Putin had been elected to the Russian presidency and the divisive emotions inspired by the Kosovo episode were receding. Russian resentment was also mitigated somewhat by muted American reactions to their own entanglement in Chechnya. It was a natural occasion to revisit the security relationship with the United States, and in that context efforts to implement the 1998 agreement were revived. But there was a new complication as well. In July of 1999, President Clinton had signed legislation declaring it to be the intention of the United States to deploy a national missile defense (NMD) system as soon as technologically possible. No such system could be legally deployed without amending the 1972 Anti-Ballistic Missile (ABM) treaty. Russia, as principal successor to the Soviet Union, considered the treaty to be a fundamental pillar of all security agreements with the United States. In pursuit of the legislated policy, the United States had advanced insistent demands for treaty amendments that would allow what was represented as a limited

national missile defense deployment. Russian military planners had concluded that they could not accept the terms offered.

By the time that Presidents Clinton and Putin met for the first time in June of 2000, it was apparent that the disagreement over the ABM treaty would not be quickly resolved and would pose an indefinite problem for the security relationship between their countries. After lengthy delay, the Russian Duma had ratified the START II treaty providing for a scheduled reduction of actively deployed nuclear weapons. That outcome, however, would not fundamentally alter the operational configuration of forces, their destructive potential, or the traditional deterrent relationship. Moreover, legal implementation of the treaty would not occur as a practical matter until the ABM treaty question had been resolved. In an apparent effort to work around the impasse, the two politicians turned again to the joint missile surveillance idea. They signed a Memorandum of Agreement to establish a Joint Data Exchange Center (JDEC) in Moscow "to ensure the uninterrupted exchange of information on the launches of ballistic missiles and space launch vehicles."[2] The agreement specified the information to be exchanged, the location of the center and a number of legal and administrative arrangements. The announcement proclaimed it to be the first time that the United States and Russia would conduct a permanent joint operation involving military personnel. In December 2000, the United States Secretary of State Madeleine Albright, and the Russian Foreign Minister, Igor Ivanov, signed a follow-on Memorandum of Understanding, specifying in greater detail how the JDEC system for exchanging notifications of missile launches would operate.[3]

One month later, however, the inauguration of George W. Bush as President of the United States effectively suspended the project. His administration arrived in office more dedicated to the deployment of missile defenses, less inclined to collaborate with Russia and generally suspicious of

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2 Memorandum of Agreement Between the United States of America and the Russian Federation on the Establishment of a Joint Center for the Exchange of Data from Early Warning Systems and Notifications of Missile Launches, June 4, 2000. See the document at http://www.state.gov/www/global/arms/treaties/moa-jdec.html

3 Memorandum of Understanding on Notification of Missile Launches. Bureau of Arms Control, Department of State, (released January 19, 2001), http://www.state.gov/www/global/arms/treaties/mou_msllaunch.html

anything that the Clinton administration had done. The JDEC agreement was submitted to internal political review along with many other pending actions, and it did not emerge from that process when Bush and Putin met for the first time in June of 2001. The general idea of sharing missile launch information appears to have been on the agenda for discussion, but there was no indication the two leaders even attempted to engage contentious details, such as Russian tax policy, that had immobilized the project. As the two presidents met in Slovenia, the building designated to house JDEC sat abandoned in Moscow on an overgrown lot and was reportedly being used by local teenagers as a drinking hangout.[4]

The Relentless Problem

That will not be the end of the story. Whatever the ultimate fate of the specific JDEC agreement, the underlying problem of reassurance will certainly persist and is likely to become ever more serious as Russia struggles to regenerate its economy. Given the monumental burdens of that process, Russia cannot reasonably afford the financial investment that would be required to operate its inherited deterrent force at high standards of safety.[5] Its command system is subject to internal deterioration, and the implications of that fact are significantly more demanding than has yet been admitted in the ebb and flow of presidential politics.

Whatever the ultimate fate of the JDEC agreement, the underlying problem of reassurance will certainly persist and is likely to become ever more serious as Russia struggles to regenerate its economy.

The act of creating JDEC or some equivalent successor would not alone solve the problem. The specified arrangement is politically cautious in that it limits the information to be exchanged well short of what the national surveillance systems actually collect. If that limited exchange were to be accepted by both sides as a reliable source of reassurance, that would be a seminal development with broad implications for global security relationships. If it turned out, however, that the imposed limitations generate

4 Peter Baker, "Failure to Construct Joint Warning Center Suggests Bigger Problems on Missile Defense," The Washington Post, June 13, 2001, p. A23.

5 The pressures imposed on the Russian military establishment are discussed in more detail in John Steinbruner, Principles of Global Security, Washington DC, the Brookings Institution Press, 2000, chapters 2 and 6.

suspicion rather than reassurance, the consequences could be directly dangerous. As with most human activities, it probably is possible for JDEC or its equivalent to muddle along without decisive consequence one way or the other, but in guiding its development and assessing its ultimate significance it is important to consider both the good and the harm it can potentially do.

The difference between an arrangement that conveys reassurance and one that breeds suspicion turns primarily on the scope and the timing of the information that is exchanged.

The difference between an arrangement that conveys reassurance and one that breeds suspicion turns primarily on the scope and the timing of the information that is exchanged. If the parties to the arrangement were to share all warning sensor data as it is generated, if they were to apply exactly the same interpretative algorithms at exactly the same time, and if they were completely confident of the integrity of the system—that is, that it could not be subverted or suddenly terminated for aggressive advantage—then the possibility of deliberate deception or inadvertent confusion would be minimized and reassurance would be as robust as the most advanced capacity for surveillance is able to make it. To the extent that there are categorical restrictions, interpretative filters, and/or time delays imposed on the exchange, however, then the scope for suspicion and the risk of perverse effects would increase—by amounts that unfortunately do not admit to definitive measurement. It is evident that the JDEC agreement as announced in June of 2000 does not provide for the comprehensive exchange that would set the highest imaginable standards of reassurance. It is not evident whether the more limited exchange projected will exceed the uncertain threshold necessary to assure that the result does more good than harm.

The information to be provided under the JDEC agreement does appear to be extensive enough to indicate constructive intent. Article 3 of the document determines that information "shall be exchanged" on surveillance observations of:

- all launches of ICBMs [intercontinental ballistic missiles] and SLBMs [submarine-launched ballistic missiles] of the United States of America and the Russian Federation;
- launches of ballistic missiles, that are not ICBMs or SLBMs, of the United States of America and the Russian Federation;

- launches of ballistic missiles of third states that could pose a direct threat to the Parties or that could create an ambiguous situation and lead to possible misinterpretation;
- launches of space launch vehicles.

Appendix 3 of the agreement determines that the reported information is to include the launch time down to the minute; geographic coordinates of initial launch position down to the minute of latitude and longitude; the generic missile type (SLBM, ICBM, etc); the launch azimuth down to the degree of azimuth; the estimated impact area to an accuracy to be specified later; estimated time of payload impact down to the minute; and a determination of whether single or multiple objects have been launched. All of that specified information is to be previously processed and filtered in the respective national surveillance systems. Sensor information is not to be directly shared. The reported information is to be provided "in a time frame that is near real time, if possible." Under those terms Russia will receive essentially the same information from the United States missile surveillance system that has long been circulated to its allies and to those regional military commands not directly involved in the main nuclear force operations. To the American participants those provisions are sincerely considered to be a major gesture of good faith, and they are indeed remarkable when assessed against historical practices.

When assessed in terms of the central problem, however, the JDEC agreement is less remarkable and its adequacy is more questionable. The information exchanges are to be implemented over time, in specified stages that are not associated with particular dates. It is not clear how soon the final stage will be accomplished or what additional conditions might be attached. Even at the most advanced stage, the agreement does not provide for any specification of the statistical uncertainties associated with the launch parameters to be reported. Without that information it will be very difficult to compare the filtered JDEC data with nationally acquired data. The specification of launch time, position and azimuth is much less precise than the standards that prevail within the American national system, so much so that the specification of impact position and impact time based on the reported parameters would be too crude to be operationally useful. Similarly the categorical distinction between single and multiple launches

would not tell operational commanders what they would most need to know – the exact size and targeted locations of any attack. These limitations are clearly designed to protect the underlying surveillance systems from direct scrutiny by the participating partner. That manifestation of residual distrust clearly overrides the desire to convey reassurance. The result is that JDEC as currently contemplated will not provide the supplemental surveillance capacity to Russia that would be necessary to solve the fundamental problem of reassurance. The question of whether on balance JDEC would be constructive or detrimental depends heavily on how the initial arrangement would evolve over time.

Incremental Improvements

In principle there are four basic options for pursuing incremental improvements in the JDEC agreement. First, the context under which it operates could be improved by extending financial and technical assistance to the Russian surveillance system, thereby diminishing the burden of compensating for its deficiencies. Second, JDEC's own operations could be improved by increasing the specificity of the information exchanged in managed stages for the entire surveillance area, so that it begins to approach complete integration of the national systems. Third, comprehensive information exchanges could be initiated in limited areas and then gradually expanded to approach geographically inclusive coverage. Fourth, additional participants could be introduced, thereby giving the initial bilateral effort multilateral standing and creating the possibility of a more globally inclusive system in the future. And, of course, various combinations of these approaches could be devised.

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There has been some technical and political exploration of a project to improve the respective Russian and American national surveillance systems by joint development and operation of two satellites which together would provide stereoscopic imagery in the infrared spectrum using advanced processing techniques. In principle such a program, being advanced under the label RAMOS for Russian-American observation satellite, would allow both countries to improve their current ability to detect and track ballistic missiles in their boost phase. Simultaneous imaging from

widely separated viewing angles would allow infrared sensors to determine trajectory information with considerable precision and would therefore enable accurate estimates of warhead impact to be made at the moment of boost termination. The same technique would also provide three dimensional background data that would be useful for tracking missile payloads beyond the boost phase as well as for broader purposes such as weather prediction and environmental monitoring. A joint effort to enhance the national surveillance systems would reinforce JDEC operations and would diminish the risk of perverse consequences. Russian early warning capacity could also be improved through direct American technical and financial assistance, but bilateral aid would not have as strong a reinforcing effect as an integrated joint venture.[6]

As yet, however, the RAMOS program has not been enacted, nor has the proposal been connected to the JDEC initiative by either government. With regard to JDEC, the expressed American inclination is to pursue the second of the options for incremental improvement and to do so in cautious stages that would depend upon successful implementation of each stage, beginning with the initial agreement. The apparent Russian inclination is to pursue some combination of the third and fourth options. In implicit critique of the initial agreement, at least some knowledgeable Russians are suggesting these latter forms of expansion as an immediate priority likely to be helpful, perhaps even necessary in implementing the initial agreement.

The American approach implicitly assumes that the critical threshold will be exceeded at the outset and that the process of evolution will be constructive at whatever pace it is able to occur. The Russian approach implicitly questions whether the critical threshold will be exceeded by the initial agreement and suggests that additional initiatives may be immediately necessary to assure a constructive result.

The differing approaches reflect the differing circumstances of the two governments. It is natural for the United States to want to protect the tech-

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6 Some who doubt that a sufficient level of direct exchange could or should ever be accomplished believe that bilateral aid to the Russian national surveillance system should be the primary method of reassurance. See Geoffrey E. Forden, "World War III? Now?" The New York Times, Op-Ed, September 6, 2000.

nical and operational details of its more advanced surveillance network. It is natural for the Russians to be less concerned about revealing the inner workings of its less capable system—given that its limitations are clearly known—and to be more interested in the operational significance of the information received. The Russian judgment seems to be that they have a better chance of acquiring high quality information if it is focused on a third party of mutual concern – on Iran, for example – than if they attempt to induce the United States to provide full surveillance detail covering the attack corridors that the United States itself might use. As a practical matter it is difficult to quarrel with that implicit judgment. Moreover, the fact that Russia has the greater surveillance problem is an intrinsic reason to accede to the Russian preference for incremental improvement.

If the United States is not willing to pay any significant price in the currency of secrecy, then it is not likely to achieve any meaningful progress on the problem of reassurance.

The obvious difficulty with that rule, however, is that American surveillance capacities do not fundamentally differ by area of application. If more detailed information were to be provided for missile trajectories emanating from Iran or from any other specified area, these data would document general capabilities and might give Russia a more precise understanding of American technology than it currently has. If JDEC were to include other participants, as the Russians have also suggested, most of the possible candidates probably would acquire a substantially improved understanding of American capabilities. The United States could still preserve its operational secrets as long as reports to the joint center consisted of interpreted results rather than the raw sensor output or the processing algorithms used to derive the reported data. Nonetheless, an incremental strategy that involves the sharing of advanced detail in a limited area poses a sharper and earlier conflict between secrecy and reassurance than does the currently preferred American approach.

Well, no pain, no gain, as the saying goes. If the United States is not willing to pay any significant price in the currency of secrecy, then it is not likely to achieve any meaningful progress on the problem of reassurance. It is not clear that this practical fact has yet been explicitly acknowledged. It is quite unlikely that an enduring balance of these competing interests has yet been set.

It is reasonable to assume that JDEC, however it might evolve, will not be directly harmful and probably will be modestly helpful under normal conditions – that is, outside the context of a potentially imminent military confrontation. A meaningful incremental improvement was achieved in the Albright-Ivanov Memorandum of Understanding, which extended the scope of prior agreements for reporting missile launches in advance and as they occur. Under the terms of that understanding, it should be easy to determine on any given day that a missile attack is not occurring and easy as well to identify and explain those missile launches that do occur.

But unfortunately normal circumstances are not the primary source of concern, nor are the occasional events when an unanticipated missile launch or a misperceived natural phenomenon causes some immediate confusion. A truly serious problem of reassurance would only arise in the context of a confrontation between the United States and Russia, but even the mildest version of such a situation—one similar, for example, to the tensions over Kosovo in 1999—would dramatically increase the danger of a false alarm. The disparities in capacity between the United States and Russia extend through all aspects of military operations, and as a result Russian deterrent forces are inherently quite vulnerable to preemptive attack, even from conventional tactical air forces. In compensation for that fact, Russia relies heavily on rapid timing of retaliatory operations in order to assure their credibility. That doctrine imposes a burden on their national surveillance system that it could not reliably carry if the United States chose for whatever reason to conduct air operations in or near Russia and the latter feared a systematic preemptive attack. Given that underlying condition, the burden on JDEC would intensify rapidly and dramatically in the initial stages of any military confrontation. Under those circumstances it is far from evident that in either its currently projected or incrementally evolved form JDEC could guarantee a constructive effect or even a neutral one. An ostensibly successful JDEC doomed by its limitations to fail under the pressures of a crisis would be a potential catastrophe waiting to happen.

Admittedly the chance of a catastrophe seems so speculative and so remote under normal circumstances that most people are willing to assume it can be safely ignored. If any nuclear reactor design were subject to a comparably evident failure mode, however, it would never be licensed; and

no nuclear reactor accident would be as destructive as an inadvertently triggered nuclear force engagement. It is doubtful that such glaring disparities in standards of safety can be indefinitely preserved.

More Venturesome Possibilities

The incentive to solve the underlying problem of reassurance and to remove the inherent risk of a catastrophic breakdown of the JDEC operation is certainly strong enough to warrant a serious exploration of more advanced arrangements. Those would presumably involve both substantial American assistance to the Russian surveillance system and a categorical rather than merely incremental extension of the information exchanged between the national systems. Such a program would require not only a significant revision of the JDEC agreement but also a reformulation as well of basic security objectives and operating principles. If the degree of collaboration envisaged under JDEC is to be developed to the point that it approaches a complete integration of surveillance operations, reliably protected against antagonistic national exploitation, then early in the process – probably at the outset – new concepts of security would have to be accepted.

One can argue on common sense grounds that a fundamental revision of security policy is long overdue at any rate. Other than institutionalized habit, there is no apparent reason for Russia and the United States to sustain deterrent force operations that have the same basic character and essentially the same lethal potential as those conducted during the course of the cold war. The residual requirement for protective deterrence can be adequately and far more safely achieved with smaller forces that are not operated under constant alert conditions and are not committed to the massive, rapidly enacted retaliatory attacks that impose so much pressure on the surveillance systems. That adjustment is particularly urgent for Russia, which cannot reasonably expend the financial resources necessary to maintain forces in the prevailing configuration. For the United States, as leader of an alliance system with comprehensive and overwhelming military superiority, there is no reason to fear the implacable forms of deliberate aggression that were once thought to justify an enormous deterrent force, actively operated. There is, by contrast, quite compelling reason to fear the deterioration of managerial control within a Rus-

sia military establishment subjected for a decade now to serious underfinancing. Reassurance is the predominant American interest and the primary Russian need. Deterrence is a secondary matter easily achieved.

If these inexorable facts of the situation are acknowledged, as they will ultimately have to be, then some important implications for the sharing of information can readily be derived. There is an assertive interest on both sides for immediate and extensive integration of missile surveillance information including the radar signals, the infrared sensor output and the interpretative algorithms used to derive tracking information. The risk of a catastrophic failure of reassurance that results from the limitations imposed on the JDEC agreement is not worth running, however uncertain it is considered to be. In setting up an extensively integrated surveillance system, neither side would be forced to reveal anything that is not in its interest to reveal. They could give complete access to the output of the sensors, for example, without describing their internal mechanics, if that technology is considered a legitimate state secret. In order to set an adequate standard of mutual confidence they presumably would have to reveal the interpretative algorithms applied to the sensor output, but that process is far more likely to improve the state of the art to mutual benefit than it is to introduce any meaningful national risk. The result would assure that no ballistic missile could be launched anywhere in the surveillance area without both sides knowing about it at exactly the same time with exactly the same precision. In setting up such an arrangement they would, of course, compromise their national capability to initiate a preemptive attack on the surveillance system partner – a concession that is more meaningful for the United States than it is for Russia. But the hard, bare bones, unemotional fact is that the security of United States is much better served by making that concession than by clinging to the option. One might reasonably take realization of that point as a test of whether the United States has in fact emerged from the grip of cold war mentality.

In setting up an extensively integrated surveillance system, neither side would be forced to reveal anything that is not in its interest to reveal. They would, of course, compromise their national capability to initiate a preemptive attack on the surveillance system partner.

A mutual commitment to an extensively integrated missile surveillance system with comprehensive coverage would have an interesting and potentially constructive effect on the unresolved dispute over national missile

defense. On the Russian side the JDEC agreement is compared to an earlier agreement announced by the American and Russian Presidents in June of 1992 to explore a jointly operated missile defense system, referred to in the United States as Global Protection Against Limited Strikes (GPALS). The participating American President was, of course, George H. W. Bush. Although the agreement called for exploration rather than enactment, the exchange of surveillance information envisaged for GPALS was much more extensive than that provided for under JDEC.[7] It outlined an arrangement that would make immediately available to both sides all the missile tracking data on which an interceptor would depend other than that gathered and processed by the interceptor itself. Since the performance of any NMD system would depend primarily on that shared capability, the prior establishment of such an arrangement would presumably make it much easier to work out agreed terms for suitably limited interceptor deployments. The current Russian objections have mostly to do with the potentially dangerous connection between a limited NMD deployment and an advanced capability for preemptive offense. If that latter element is removed from the situation and the core procedural principle of the ABM treaty is preserved – namely, that the essential conditions of any NMD deployment must be subject to mutual agreement – then Russian objections to a genuinely limited deployment could probably be negotiated away. At any rate the chances would be much greater.

If an extensively integrated missile surveillance arrangement were determined to be the immediate purpose of JDEC, then more significant incremental extensions could also be considered. It would be logical, for example, to expand the idea of prelaunch notification to provide for direct mutual monitoring of the operational status of all deployed missiles. Such an extension would require the introduction of new sensing and reporting technology, but the technology required is readily available. If accomplished, comprehensive prelaunch surveillance would provide the verification system that would undoubtedly be necessary to remove deployed nuclear forces from alert status in a manner that both sides would accept as reliable. Similarly

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7 George Bush and Boris Yeltsin, Joint United States-Russian Statement on a Global Protection System, June 17, 1992. http://www.fas.org/nuke/control/abmt/text/b920617m.htm

it would be logical to extend comprehensive missile surveillance to cover aircraft and space satellites as well. In both of these areas the balance of interest is more complex because a greater variety of military and commercial activities are involved. If a comprehensive ballistic missile surveillance system were to be successfully established, however, then it seems likely that the participating parties would discover significant mutual interests in these other areas as well. The underlying theme of reassurance has very broad application. If practiced for the core deterrent relationship, it would probably be extended to additional military activities.

The process of creating and extending a comprehensive missile surveillance system could be expected to include other countries as well.

At some early point, the process of creating and extending a comprehensive missile surveillance system could be expected to include other countries as well. Because of their current and historical involvement in missile surveillance operations, Canada, Great Britain, Denmark and Australia are natural companions for the United States. By the same reasoning, Belarus, Ukraine, Latvia and Azerbaijan are natural companions for Russia. A comprehensive global arrangement would ultimately have to include Japan, China, North Korea, India, Pakistan, and Iran. One cannot expect to assemble that coalition all at once, but if an expansion of JDEC participants is eventually to occur then it is important to have international involvement at an early stage. The United States and Russia have explicitly acknowledged the need for expansion, though not provided for it in concrete terms, in both the JDEC agreement and the Albright-Ivanov Memorandum of Understanding.[8]

Practical Aspirations

It must be considered unlikely that the American and Russian security bureaucracies will seriously attempt to transform JDEC into a comprehensive arrangement at their own initiative. Implementing the terms of the original agreement will be demanding enough; the creation of the center

[8] The December 2000 memorandum states that the implementation of JDEC "will create the conditions for the preparation and maintenance of a unified database for a multilateral regime for the exchange of [pre- and post-launch] notifications…The Parties shall seek the participation of other countries in providing such notifications. The Parties shall seek, as soon as possible, agreement on how the PLNS will be opened up to the voluntary participation of all interested countries…"

will almost certainly be seen by those directly involved as a significant accomplishment rather than as an unresolved problem set in motion. They are not likely to plead for higher standards. It would require an implausible amount of insight and will for either of the presidents to impose higher standards on the specialists who inform them. If more advanced arrangements are to be actively explored, then the initial effort will presumably have to be independent of the two principal governments. At any rate, the basic changes in the conception of security policy that presumably would have to accompany a categorical improvement in JDEC could only be achieved through extensive public discussion. Comprehensive joint surveillance is not a matter that would be entrusted to any committee. It would have to be vetted by the respective political systems.

The basic changes in the conception of security policy that would have to accompany a categorical improvement in JDEC could only be achieved through extensive public discussion. The looming collision over NMD deployment promises to create a prominent and relevant opportunity.

At first glance that appears even more unlikely. There are many other issues with greater immediate resonance preempting political attention in both countries, especially in Russia. Nonetheless the looming collision over NMD deployment promises to create a prominent and relevant opportunity. That issue pits intense emotion against fundamental principle and national prerogative against international obligation. It does have the potential both to engage and to reshape public consciousness. In that context, the broader implications of JDEC might come to be generally realized and its constructive possibilities might be seriously pursued.

A strong connection between JDEC and NMD is forged by the core fact that defensive technology has almost no serious chance against an unrestrained ballistic missile assault. If the very difficult problems of in-flight interception are to be solved at all, then both the numbers and the overall operating characteristics of the attacking warheads have to be far more limited than what even a modest opponent would be inherently able to launch. The necessary limitations can in principle be achieved by prior agreement, but in that case it is prudent to presume that the defensive deployment would have to be subjected to prior agreement as well. Alternatively the necessary limitations might be achieved by preemptive attack. Since current United States forces have a large and increasing advantage in offensive capability, any potential opponent is forced to consider this latter possi-

bility. To the extent that the United States refuses to subject its projected NMD deployment to internationally agreed limitations, it conveys the impression that it is actually pursuing a strategy of preemption. That is a very threatening prospect – most immediately to China, which has only a minimal deterrent force not held in continuous alert status. Over the longer term it is also threatening to Russia, which cannot maintain a deterrent force commensurate with that of the United States. Persistent American efforts to deploy an NMD system that is not assuredly restrained by international agreement virtually compel countervailing reactions from Russia and China and thereby entangle the rest of the world in the consequences. With no plausible resolution currently in sight, the issue seems likely to generate sufficient contentiousness to attract broad attention and to motivate some reconsideration. In the course of that process, the idea of a comprehensive surveillance system with the potential to limit the possibility and reduce the fear of preemptive offensive operations might come to be generally appreciated.

To the extent that the United States refuses to subject its projected NMD deployment to internationally agreed limitations, it conveys the impression that it is actually pursuing a strategy of preemption. With no plausible resolution in sight, the idea of a comprehensive surveillance system with the potential to reduce the fear of preemptive offensive operations might come to be appreciated.

With all this considered, it seems reasonable to advance four basic aspirations for the constructive evolution of JDEC. One can urge implementation of the RAMOS program supplemented by direct bilateral assistance in upgrading the Russian surveillance system. One can urge incremental improvements in JDEC operations providing for state of the art precision in the reporting of missile launch parameters and in the impact estimates inferred from them. One can also urge that this information be provided for every observed missile launch, without exception, and that it be exchanged as soon as it is available. One can additionally encourage the two governments to explore a supplement to the JDEC agreement providing for an experiment in a comprehensive surveillance information exchange for a limited area — in pursuit of the Russian strategy for incremental development. And finally one can urge that an international working group be formed to specify terms for a comprehensive and all-inclusive missile surveillance network. The world as a whole has a large stake in this matter and should not leave the entire burden of initiative to be carried by Russia and the United States.

About the Author

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