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PRESIDENT BUSH’S 1990 POLICY ON THE COMMERCIAL SPACE LAUNCH INDUSTRY: A THORN IN ECONOMIC AND POLITICAL REFORM IN THE FORMER SOVIET UNION: A PROPOSAL FOR CHANGE

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PREFACE**

ALMOST TWO years ago, the Soviet Union, as the world knew it, ceased to exist. It split into independent sovereign states, with Russia taking the title of the continuing state of the Soviet Union. Presently, the exact role of Russia in the world is uncertain. However, two things are evident. First, it is likely, if unfortunate, that President Clinton will continue President Bush’s policy, originally aimed at the Soviet Union essentially banning the use of Russian commercial space launch vehicles, launched from Russian sites, to carry U.S. manufactured commercial communications satellites. Second, Russia has stated that it will, and to date has, continued to carry out the international obligations of the Soviet Union. It is

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** After acceptance for publication of this article, the United States and Russia began negotiating an agreement concerning Russian entry into the U.S. commercial space launch industry. As of press, an agreement was reached in principal, but not officially concluded.
with this viewpoint this article has been written to reflect today's realities. In these times, however, today's realities are not always those of tomorrow.¹

I. INTRODUCTION

President Bush in his 1990 Policy Statement on the Commercial Space Launch Industry² (Commercial Space Launch Policy) specifically excluded the Soviet Union, and therefore, Russia,³ from participating in the marketplace for contracts for the launching of U.S. manufactured commercial communications satellites. The only exceptions were for extraordinary circumstances or at a single mutually agreed upon location outside of the Soviet Union with technology transfer safeguards imposed and enforceable agreements relating to free and fair trade and ballistic missile non-proliferation.⁴

To date, President Clinton has yet to issue his own Commercial Space Launch Policy, and he has given little indication that he intends to abandon the 1990 Commercial Space Launch Policy statement in the near future. Early indications from President Clinton signal that he will continue his predecessor's ban on Russian launches of U.S. manufactured commercial communications satellites.⁵ Instead of continuing President Bush's ban, Presi-

¹ As is apparent from recent news reports, the survival of non-Communist Russia remains uncertain. The United States, nonetheless, may be able to assist in the final defeat of Communism by allowing the Russians full entry into the United States commercial space launch marketplace. Regardless, should Russia revert back to Communism, the United States may want to consider more stringent trade and technology transfer measures than proposed in this article.


³ See Anthony J. Blinken, Cold War Static on Fiber Optics, N.Y. Times, Jan. 4, 1992, at 19 (discussing President Bush's ban on the export of sophisticated telecommunications technology to the former Soviet Union); Quayle Advises White House to Approve Use of Russian Launches, Satellite Wk., June 19, 1992, at 3 [hereinafter Quayle Advises White House] (stating that the "Bush administration is looking at all United States-Russian deals with great caution").

⁴ Launch Policy, supra note 2, at M-4.

⁵ See Russia's Proton Rocket Chosen for INMARSAT III Launch, Satellite Wk., Nov. 16, 1992, at 2 [hereinafter Russia's Proton Rocket]; BILL CLINTON & AL GORE, PUTTING PEOPLE FIRST: HOW WE CAN ALL CHANGE AMERICA 152 (1992); see also IN-
dent Clinton should vigorously pursue the laudable goals, and the criteria to meet them, concerning the former Soviet Union, laid out in the 1990 policy statement. This will allow President Clinton to achieve something that President Bush failed to during his incumbency: provide Russia with the opportunity to market a reliable service in the United States in exchange for concessions on trade, technology transfer, and ballistic missile proliferation.

The 1990 Commercial Space Launch Policy does not expressly state the specific criteria for allowing the former Soviets full entry into the U.S. commercial space launch market to offer launch services at Russian sites. A thorough reading of the policy statement as a whole, however, should lead the Clinton administration to the conclusion that there are three criteria that Russia should meet for this ban to be lifted. These criteria are: 1) full entrance of Russia into the U.S. commercial space launch marketplace must be consistent with U.S. national security through U.S. technology transfer objectives; 2) an agreement must be reached with Russia that will ensure compliance with free and fair market pricing in offering commercial space launch services to the U.S. communications satellite industry; and 3) an enforceable agreement achieving the non-proliferation of ballistic missiles with Russia must be concluded. These criteria should be pursued swiftly by the Clinton administration and should not be used, as they were by the Bush Administration, as a tactic to delay reaching a mutually beneficial relationship between the United States and Russia.

Technological transfer and economic objectives sought by the United States can be achieved by entering into executive agreements containing, where appropriate, verification procedures and withdrawal provisions which will

MARSAT Awards Launch to Proton; Forges Ahead on Project 21, SATELLITE NEWS, Nov. 16, 1992, at 1-2 [hereinafter INMARSAT Awards Launch to Proton] (stating that Vice-President Gore is likely to take a pro-U.S. launch industry stance in setting U.S. space policy).
ensure Russia's compliance. Furthermore, ballistic missile proliferation, a more serious national security and foreign policy concern, can be controlled through interim measures until a multilateral treaty regime can be established.

If President Clinton actively pursues the objectives of these criteria, Russia should be allowed to enter into the U.S. commercial space launch market in the not so distant future. Offering commercial launches conducted at former Soviet sites will assist in Russia's transition to a free market economy and a democratic society, an important goal of the Clinton administration.

II. TIME FOR A CHANGE

Throughout the Cold War the United States was preoccupied with the Soviet Union as a long term military, political, and ideological enemy. This preoccupation was apparent in all aspects of U.S. foreign policy. Although the Communist regime has dissolved it would be an error, as President Clinton has recognized, for the United States to disengage its one-time unrelenting interest from the former Soviet Union while it is in the process of converting to democracy. U.S. foreign policy must adapt to meet these changing circumstances.

The portions of the 1990 Commercial Space Launch Policy issued concerning the former Soviet Union are now part of the same bygone era as the Communist regime. While a restrictive policy might have been necessary dur-

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6 See infra part VI.A-B.
7 See infra part VI.C.
8 CLINTON & GORE, supra note 5, at 138 (asserting that the Clinton administration would aspire to "help the people of the former Soviet empire . . . build free political and economic institutions"); Thomas L. Friedman, Clinton Likely to Seek Even More Russian Aid, N.Y. TIMES, Mar. 30, 1993, at A8 (proposed aid includes monies fro Russian start-up companies).
9 CLINTON & GORE, supra note 5, at 197 (citing as an example of a failed policy of the Bush administration the length of time it took to recognize and assist "the new nations of the former Soviet Union"); see Gwen Ifill, Clinton Meets Russian on Assistance Proposed, N.Y. TIMES, Mar. 25, 1993, at A14; Steven Greenhouse, Christopher Backs Yeltsin in Vote Plan; Seeks More U.S. Aid, N.Y. TIMES, Mar. 23, 1993 at A1.
ing the Cold War, a new generation of Americans recognize the need for easing technology transfer restrictions and pursuing free and fair trade to foster a union with a one-time enemy who is now a potential ally of the United States. This new generation recognizes that lifting technology transfer restrictions and engaging in high-technology trade with Russia is an important impetus for Russia to leave its centrally planned economy behind and to progress toward a free market economy. This in turn will help lead it down the road toward forming a politically stable democratic society.

The United States has consistently held itself out to the world as an on-going successful experiment in democracy and free market principles. In line with this, the United States has welcomed, encouraged, and protected those who aspire to these same values. Today's events in Russia offer the United States the greatest historical opportunity to promote these values and to nurture a democratic nation and free market trading partner which will contribute to global economic, military, and political stability. President Clinton should pursue this opportunity while a newly independent Russia has the chance to evolve into a democratic nation.

A change in the Commercial Space Launch Policy to allow Russia to enter the commercial space launch marketplace is necessary now. It is unnecessary to tie Russia's hands by limiting space launch services to a single launch site outside its territory based on technology transfer restrictions and economic grounds. Russia will agree to restrictive criteria in both areas in order to offer space launch services to the U.S. commercial communications satellite market, thereby receiving the benefit of an influx of much needed hard currency.

Basing the opening of the U.S. payload market to Russia upon a ballistic missile non-proliferation agreement is an important U.S. foreign and national security policy

10 See infra part VI.A-B.
goal which will assist in achieving world stability and peace. Interim measures restricting Russia’s transfer of ballistic missiles to other nations for peaceful uses only, however, are sufficient until an effective multilateral treaty regime can be negotiated and concluded after the opening of the U.S. communications satellite launch market to Russia as a full launch service provider.

III. THE POLICY ITSELF

The 1990 Commercial Space Launch Policy was adopted by President Bush with the intention of fostering the speed and development of the U.S. commercial space launch industry. However, a residual effect of this policy has been to serve as a thorn in the side of the former Soviet Union in its transformation to a free-market economy and a democratic nation.

The Commercial Space Launch Policy, officially announced on September 5, 1990, provides:

**POLICY FINDINGS**

A commercial space launch industry can provide many benefits to the United States including indirect benefits to national security.

The long term goal of the United States is a free and fair market in which United States industry can compete. To achieve this, a set of coordinated actions is needed for dealing with international competition in launch goods and services in a manner that is consistent with our non-proliferation and technology transfer objectives. These actions must address both the short term . . . and those which will have their principal effect over the long term . . .

— In the near term, this includes trade agreements and enforcement of those agreements to limit unfair competition. It also includes the continued use of United States manufactured launch vehicles for launching United States government satellites.

— For the longer term, the United States should take actions to encourage technical improvements to reduce
the cost and increase the reliability of United States space launch vehicles.

IMPLEMENTING ACTIONS
The United States government will enter into negotiations to achieve agreement with the European Space Agency (ESA), ESA member states, and others as appropriate, which defines principles of free and fair trade.

Non-market launch providers of space launch goods and services create a special case because of the absence of market-oriented pricing and cost structures. To deal with their entry into the market there needs to be a transition period during which special conditions may be required.

— There should be no change in the United States government's longstanding policy to deny, except in extraordinary circumstances, exports of satellites and satellite components to the Soviet Union.

— The United States will seek to limit the use of Soviet launch vehicles, launch equipment, technology or training to a single mutually agreed upon location outside the Soviet Union. In addition to technology transfer safeguards, United States support for such use of Soviet manufactured launch vehicles will be contingent on enforceable agreements related to free and fair trade and to ballistic missile non-proliferation.

— The United States will also seek an agreement that launch services offered commercially will be in compliance with a common approach for the entry of non-market economy countries as negotiated by the United States government with foreign launch providers, as appropriate. There must also be an effective means of enforcing international agreements related to space launch goods and services.11

IV. THE SPECIAL INTERESTS OF THE UNITED STATES GOVERNMENT AFFECT THE UNITED STATES COMMERCIAL SPACE LAUNCH POLICY TOWARD THE FORMER SOVIET UNION

Before examining the 1990 Commercial Space Launch Policy, and how President Clinton can meet its policy goals so that Russia may soon gain entrance into the U.S. commercial space launch marketplace, it is important to examine the involvement of several U.S. governmental agencies in developing and implementing this policy.12

The bulk of the agencies that have input into the former Soviet Union's entry into the United States marketplace for the launching of United States manufactured payloads in the recent past have taken a dim view of its competition against American space launch providers.13 In other words, these agencies have been extremely pro-American when it comes down to who will launch U.S. manufactured commercial satellites into orbit. This policy position is unlikely to change dramatically under the Clinton administration.

The only exception to this pro-American outlook has been that of the U.S. Department of State.14 The Department of State has taken the view in enacting its policy that the United States must not establish trade policies aimed at the former Soviet Union that would bar beneficial relationships for U.S. companies, unless the policies are adverse to the United States national interest and security. The Department of State, under Warren Christopher, is

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12 The agencies that will specifically be discussed in this context are the U.S. Department of Transportation, the U.S. Department of Defense, the U.S. Department of State, the International Trade Commission, and the U.S. Department of Commerce. The Department of State is the only U.S. governmental agency that has consistently advanced free trade with the Soviet Union in the commercial space launch field.

13 See Quayle Advises White House, supra note 3, at 3.

14 See id. The State Department was in favor of lifting the ban on Russian commercial space launches for an INMARSAT mission using a U.S. commercial satellite. Id.; see also Edmund L. Dandrews, INTELSAT to Lease Russian Satellites, N.Y. TIMES, Mar. 22, 1993, at D3.
likely to continue this policy stance.\footnote{\textit{See, e.g., Gwen Ifill, Christopher and Aspin Named for State Department and Pentagon, N.Y. Times, Dec. 23, 1992, at 1, 13 (quoting Warren Christopher as saying that "'[i]n today's world, that means that foreign policy and domestic policy must be addressed simultaneously... or else neither will be successful for very long").}}

The U.S. Department of Transportation is the first agency that will be discussed in the context of the pro-American bias that exists in the carrying out of the Commercial Space Launch Policy by governmental agencies.\footnote{\textit{See Quayle Advises White House, supra note 3, at 3 (noting that the Department of Transportation was one of a handful of governmental agencies that was skeptical in clearing the way of a Russian launch of a U.S. satellite for an INMARSAT mission).}} The Department of Transportation plays a large role in regulating the commercial space launch industry in the United States. In November of 1983, President Reagan created the Office of Commercial Space Transportation (OCST) in response to the regulatory confusion that accompanied the first commercial space launch of a satellite by a U.S. company.\footnote{\textit{Nathan C. Goldman, American Space Law 167 (1988).} By 1986, OCST had enacted a complex web of regulations that U.S. industry has to meet in order to obtain governmental approval of space launch licenses. \textit{Id.}}

OCST has demonstrated its commitment to facilitating U.S. industry's participation in space launches by promoting and trying to increase the United States' share of the commercial space launch market.\footnote{\textit{Id. at 171.}} In doing so, OCST has relied upon its mandate, to "nurture a versatile national launch capability."\footnote{\textit{Id. at 173.}} This mandate also provides OCST with the impetus to act as the liaison between the U.S. commercial space launch industry and the Department of Transportation.\footnote{\textit{Id. at 181.}}

The importance of OCST's role in carrying out the Commercial Space Launch Policy is demonstrated by two recent events. First, on October 31, 1991, an industry advisory group to the Department of Transportation was established to "take a quick look at the impact the shakeout in the Soviet Union's space effort is likely to have on the
United States space launch industry." The Commercial Space Transportation Advisory Committee (COMSTAC) put together this task force after its international competitiveness working group forewarned that the changes occurring in the former Soviet Union would have a "profound impact" on the U.S. commercial space launch industry. The task force’s mandate is to study the "situation in the Soviet space industry and to ‘look at the options and alternatives and where they lead’." Not surprisingly, the task force set up by COMSTAC has not looked at ways to open up the U.S. commercial space launch marketplace to the former Soviet Union. Instead, this industry-led task force is examining ways to divert Russia from entering into commercial space launch ventures with U.S. payload manufacturers. For example, Richard L. Grant, chairman of a task force working group and Boeing Program Manager for the Space Station Freedom, suggested that one way to mitigate the potential impact that Russia would have on the U.S. commercial launch industry is to provide Russia with economic aid as it shifts to a free-market economy. Alternatively, he suggested subcontracting to Russia "in terms of technology and components and things that might be useful to improve our abilities to launch cost-effectively or do a better job technically with our launch vehicles, and do that as a way of giving them a different target than the U.S. launch market." Therefore, COMSTAC and its task force are searching for ways to disengage Russia’s interest from entering the U.S. marketplace for commercial space launch services.

Secondly, COMSTAC members engaged in extensive

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22 COMSTAC is an industry advisory group to OCST.
23 Soviet Shakeout, supra note 21, at 181.
24 Id.
25 See id.
26 See id.
27 Id.
lobbying of the U.S. government to encourage them to keep the needs of the commercial space launch industry utmost in mind as the now-canceled National Launch System was being developed.\textsuperscript{28} As Steve Dorfman, Hughes Aircraft corporate vice-president and president of its space and communications group, explained, "DOT [the Department of Transportation] should be taking a leadership role here to assure that the United States government investment in development of expendable launch vehicles keeps the United States industry competitive in the international environment . . . . I recognize that it is national policy to do that . . . ." \textsuperscript{29} Should the Clinton administration choose to reactivate the National Launch System program or create a similar program, it is likely that the Department of Transportation will once again be advised by the U.S. launch industry to be wary of Russia's entry into the commercial space launch marketplace.\textsuperscript{30}

The U.S. Department of Defense also has an important role to play in determining and carrying out the commercial space launch policy. The Department of Defense is one of a handful of agencies involved in determining technologies that are of militarly significance and that should not be exported to nations which are deemed hostile to the interests of the United States.\textsuperscript{31} The Department of Defense is the primary agency concerned with the proliferation of space technology by the former Soviet Union and, therefore, has been hesitant about allowing the export of such technology to Russia.\textsuperscript{32}

\textsuperscript{28} \textit{Id.} The National Launch System program was canceled in late 1992.

\textsuperscript{29} \textit{Id.}

\textsuperscript{30} \textsc{Clinton & Gore, supra} note 5, at 152. President Clinton has made his support of developing a competitive U.S. launch industry publicly known. \textit{Id.}

\textsuperscript{31} See Gary Wilmarth, \textit{The New World of Export Control}, \textsc{Conn. Law.}, Sept. 1992, at 9; see also Public Notice, 57 Fed. Reg. 14,673 (1992) (noting that the U.S. Department of Defense is also involved in a national security working group to determine which dual-use satellites should be taken off the U.S. Munitions List).

\textsuperscript{32} See, e.g., Charles Aldinger, \textit{U.S. Fears Flight of Soviet Arms Technology}, Atwood Says, \textsc{The Reuter Library Rep.}, Nov. 15, 1991, available in LEXIS, Nexis Library, Current File; Martin J. Hillenbrand, \textit{Export Control Policy in the 1990s: the Diplomatic Perspective}, in \textsc{Export Controls in Transition} 62 (Gary K. Bertsch & Steven Elli-
This hesitancy has been consistently expressed by high-level officials of the agency.\textsuperscript{38} For example, former Deputy Defense Secretary Donald Atwood recently discussed at length Russia's (and its predecessor's) financial desperation, which he feels may lead to the proliferation of dual-use space launch technology.\textsuperscript{34} He told reporters that officials at the Soviet Space Center openly discussed with U.S. visitors the exchange of rocket technology for outside investment to assist in supporting their space program.\textsuperscript{35} Mr. Atwood said that Soviet Space Officials appeared desperate for hard currency to keep their space programs viable.\textsuperscript{36} "[The Soviets] talked very openly about wanting us to encourage the use of the proton rocket outside the Soviet Union."\textsuperscript{37} Mr. Atwood explained, "That's a space launch booster. It also happens to be the core of a marvellous intercontinental ballistic missile."\textsuperscript{38}

Mr. Atwood has repeatedly stressed his desire to stop the flow of technology that gives nations with unstable governmental structures, or a history of aggression or terrorism, the ability to make weapons of mass destruction.\textsuperscript{39} In this respect, Mr. Atwood is particularly worried about the former Soviet Union causing problems for the new world order.\textsuperscript{40} Technology proliferation fears such as Mr. Atwood's undoubtedly played a role in the formulation of the 1990 Commercial Space Launch Policy statement and, of course, will have to be answered by Russia for this pol-

\textsuperscript{38} For example, during the Reagan administration the Department of Defense dominated U.S. policy-making in the area of export controls.

\textsuperscript{34} See Aldinger, \textit{supra} note 32.

\textsuperscript{35} Id.

\textsuperscript{36} Id.

\textsuperscript{37} Id.

\textsuperscript{38} Id.

\textsuperscript{39} Id.

\textsuperscript{40} See id. (discussing concern over possible sale of Soviet arms technology to unstable governments).
policy to be changed by the Clinton administration.\textsuperscript{41}

The International Trade Commission (ITC) has a role in enforcing the international trade parameters of the United States commercial space launch policy.\textsuperscript{42} The ITC was created to protect the United States’ interests and predominant position in international trade.\textsuperscript{43} International trade in space goods and services is an important up and coming issue on the ITC’s agenda through the Office of the United States Trade Representative, which plays an important role in determining unfair trade issues.\textsuperscript{44} For example, in 1984, Transpace Carriers, a U.S. commercial space launch company, complained to the ITC under section 301 of the 1974 Trade Act regarding subsidies provided for the European Ariane Rocket to Arianespace by the European Community (EC).\textsuperscript{45} The U.S. Trade Representative (USTR) brought the company’s complaint to President Reagan, who rejected the retaliatory relief requested by Transpace Carriers under section 301.\textsuperscript{46} President Reagan found that the EC did not subsidize its launchers any more than other nations with companies that participate in the commercial space launch industry.\textsuperscript{47} As this example demonstrates, the ITC has an important and presumably growing role in investigating and determining unfair trade issues in the commercial space launch sector.\textsuperscript{48}

The State Department, in contrast to the other agencies discussed, has been pro-competitive in its policy stance toward the former Soviet Union in the policy area of com-

\textsuperscript{41} See infra part VI.C.
\textsuperscript{42} GOLDMAN, supra note 17, at 174.
\textsuperscript{43} Id.
\textsuperscript{44} Id.
\textsuperscript{45} Id.; see also 19 U.S.C. §§ 2411-2420 (1988).
\textsuperscript{46} GOLDMAN, supra note 17, at 174.
\textsuperscript{48} Id.; see infra part VI.B.2., note 201. Under the 1988 amendments to section 301 of the Trade Act of 1974, the USTR now determines whether the trading practice in question is unfair. REYNOLDS & MERGES, supra note 47, at 235.
mmercial space launches of U.S. manufactured payloads. The State Department has as its mandate overseeing and coordinating the affairs of the U.S. government and nationals among the rest of the world. However, the State Department must ensure that the business of U.S. nationals dealings with foreign countries and their citizens does not violate either U.S. national policy or negatively impact national security. It accomplishes this task by balancing U.S. private and public interests before taking action. In general, free and fair trade, as opposed to restrictions, is the road that the State Department has taken when Russia (and its predecessor, the Soviet Union) has been involved.

Specifically, the State Department determines, under the authority of the Arms Export Control Act, technologies that are military in nature and that should accordingly not be exported, except under narrow circumstances, to foreign countries. The Department places these items on the United States Munitions List. It also makes decisions on what technology and products should be removed from the United States Munitions List and placed under the jurisdiction of the Department of Commerce. In 1992, the Department of State eased ex-

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49 See Quayle Advises White House, supra note 3, at 3.
50 The United States State Department is also charged with the registration of space objects under the 1975 Registration Convention. Goldman, supra note 17, at 176.
51 Id. at 177.
52 Id.
53 See Quayle Advises White House, supra note 3; see also David J. Jefferson, Lockheed and Russia's Khrunichev Form Commercial Satellite Launch Venture, Wall St. J., Dec. 29, 1992, at A3 (citing example of a joint venture between Lockheed Corporation and a Russian aerospace company).
55 Id.; see also 22 U.S.C.A. § 2778(a) (West 1990); 22 C.F.R. § 121 (1992). In deciding whether to grant an export license on these items the State Department must take into account the opinion of the Director of the Arms Control and Defense Agency as "to whether the export . . . will contribute to an arms race, support international terrorism, increase the possibility of outbreak or escalation of conflict, or prejudice the development of . . . arms control arrangements." 22 U.S.C.A. § 2778(a)(2) (West 1990).
57 See, e.g., 57 Fed. Reg. 14,671 (to be codified at 22 C.F.R. § 121) (proposed
space launch policy

port restrictions on most communications satellites by removing them from the United States Munitions List and transferring export control of these products to the Department of Commerce under the jurisdiction of the Export Administration Act.\textsuperscript{58} Hence, the State Department, by removing most commercial communications satellites from the Munitions List, has taken the first step toward relaxing export controls of these items to the former Soviet Union. However, even though communications satellites are now subject to the less stringent export restrictions of the Export Administration Act, the Department of Commerce is mandated by the Commercial Space Launch Policy to continue the ban placed upon their export to countries of the former Soviet Union.

The specific role of the Department of Commerce in administering the U.S. commercial space launch policy is complex. In 1992, under the Export Administration Act, the Commerce Department officially took jurisdiction over the granting of export licenses for the majority of commercial communications satellites. These rules, as discussed later,\textsuperscript{59}, while relaxing the controls on the ex-

\textsuperscript{58} See 57 Fed. Reg. 48,312-13 (to be codified at 15 C.F.R. §§ 770, 799). The State Department still issues licenses for certain commercial communications satellites that come within its jurisdiction under the Arms Export Control Act and are listed on the United States Munitions List. These include satellites with the following characteristics: military in nature; capable of remote sensing; anti-jamming capability; designed, modified or configured for intersatellite data relay links that do not involve a ground link; spaceborne baseband processing equipment that uses techniques other than frequency translation that can be changed on a channel by channel basis; employing certain cryptographic items; employing certain radiation-hardened devices; having propulsion systems permitting acceleration of the satellite on-orbit at rates that are greater than 0.1g; and having orbit transfer engines which remain permanently on the satellite and which are capable of being restarted after achievement of mission orbit and providing acceleration greater than 1g. 57 Fed. Reg. 48,315-17 (to be codified at 22 C.F.R. § 121). This article does not argue that these satellites be released by the United States for export to the former Soviet Union because they are a restricted export based upon genuine national security concerns.

\textsuperscript{59} See infra part VI.A.
port of many U.S. manufactured communications satellites to the free world, continue strict export restrictions on these same products to the former Soviet Union. For example, a validated export license must be obtained from the Commerce Department for a U.S. company to export a communications satellite to the former Soviet Union, in contrast to the general license that is required for export of this same technology to the Western world. The Department of Commerce must consider a number of factors before granting the validated license, including: "1) the nature of the technology; 2) the destination; 3) the United States security interests; and 4) the technology's availability outside the United States."

Since the Commercial Space Launch Policy bans, for the most part, exports of manufactured communications satellites to Russia based upon U.S. national security considerations, the Commerce Department cannot issue validated licenses for export to Russia on these products, unless advised otherwise by the White House. Hence, unless President Clinton lifts the Commercial Space Launch Policy ban, the possibility of the Commerce Department issuing export licenses for communication satellites to the former Soviet Union is remote.

Recently, however, it appeared that the aforementioned governmental agencies had loftier goals in mind about free and fair trade with the former Soviet Union in commercial space launch services. In February of 1985, a report was published by the Senior Interagency Group (SIG) on International Communication and Information

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61 See id. at 48,312, 48,314.
63 See, e.g., Quayle Advises White House, supra note 3, at 3 (stating that the Department of Commerce expressed its hesitancy in authorizing the Russian INMAR-SAT launch); HoyA, supra note 62, at 84.
Policy.64 In this report, the SIG found that a foreign and domestic policy goal of the United States should include "[p]ursuing a nondiscriminatory satellite launch policy."65 However, the SIG suggestion was never enacted as U.S. policy.66 This slip in agenda has caused the former Soviet Union to suffer economically because it is not able to offer its commercial launch services to U.S. commercial communications satellite manufacturers. President Clinton now has the opportunity to shift the policy stance of the governmental agencies that participated in the 1985 White Paper so that the agencies may return to their former position instead of continuing to follow the protectionist policies formulated under the Bush administration. These policies served only to promote the interest of the United States commercial space launch industry.

V. EXCEPTIONS

Before examining in detail the three criteria that this article finds as the primary reasons that President Bush issued the Commercial Space Launch Policy and before discussing measures for the Clinton administration to follow to meet these criteria, it is necessary to examine a joint space venture between the United States and the Soviet Union, two exceptions expressly provided by President Bush in his 1990 policy statement and eventually

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64 Senior Interagency Group on International Communication & Information Policy, A White Paper on New International Satellite Systems (1985) [hereinafter White Paper]. The SIG consisted of representatives from the Departments of State, Justice, Defense, and Commerce; the Offices of Management and Budget, Science, Technology and Policy, Policy and Development, and the U.S. Trade Representative; the National Security Council; the Central Intelligence Agency; the U.S. Information Agency; the Agency for International Development; the Board for International Broadcasting; and the National Aeronautics and Space Administration (NASA). See id.

65 Id.

66 Quayle Advises White House, supra note 3, at 3. Even with Vice-President Dan Quayle and the National Space Council urging a lifting of the ban contained in the Commercial Space Launch Policy so that Russia could launch a U.S. satellite for INMARSAT, the Departments of Defense, Commerce, and Transportation remained skeptical. Id.
approved, and China's favored treatment in the commercial space launch field.

A. A Joint Governmental Space Launching

President Bush in his 1990 policy statement did not exclude the Soviet Union from launching U.S. governmental non-satellite payloads from its own territory. By not foreclosing this opportunity, President Bush allowed the United States to participate in a historical and scientifically important joint space launch mission with the Soviet Union.

In August of 1991, the first U.S.-Soviet joint space venture occurred since the history-making 1975 Apollo-Soyuz space linkup. During this venture, a Total Ozone Mapping Spectrometer was launched by a Soviet booster rocket from a formerly top secret Soviet military rocket base. This historical event is the only time that the Soviet Union, or its successor, has been allowed to launch any U.S. manufactured payload from its own soil. While this joint space launch effort was not easy to set up, it is an example of how the United States and the former Soviet Union can work jointly and successfully in the commercial space industry using United States payload technology and advanced Soviet manufactured booster rockets. It also evidences how the national security interests of the United States will not necessarily be jeopardized by a commercial space launch of a U.S. manufactured payload, and therefore, presumably a commercial communications satellite, by Soviet manufactured boosters from a Russian launch site.

The then Soviet Union, via Moscow radio, expressed hope shortly after the launch that in 1993 a Soviet cosmo-

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67 The Total Ozone Mapping Spectrometer, a U.S. device designed to monitor holes in the earth's ozone layer, has certain properties that are similar to a satellite.
69 Id. For example, it took two years to put this deal together.
naut may take part in a United States space shuttle flight and that a U.S. astronaut may join a Soviet crew aboard the Mir space station. These joint missions, if accomplished, will be significant breakthroughs for Russian and U.S. space and political relations. As will be discussed later, however, even greater space-related milestones can be achieved if the U.S. ban on the use of one-time Soviet equipment and sites to launch U.S. manufactured payloads is lifted by the Clinton administration.

B. THE ONE ALLOWED FOR LAUNCH SITE

On August 22, 1990, President Bush authorized the State Department to approve a U.S. commercial payload company’s license to participate in Australia’s proposed Cape York commercial space port. Australia had chosen Soviet manufactured booster rockets to launch U.S. manufactured payloads. Australia and the Soviet Union had to meet the four requirements laid out in the 1990 Commercial Space Launch Policy in order for a U.S. manufac-

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70 Now that the Commonwealth has risen, it is fair to say that a Commonwealth cosmonaut would participate.
71 With the recent changes it appears likely that if such a project occurs, it will be with a Commonwealth crew.
72 Dahlberg, supra note 68, at A13.
74 See infra part VIII.A.
76 The corporation USBI, a division of United Technologies is manufacturing the payloads. Telephone Interview with Gonn, Counselor, Australian Embassy (Nov. 4, 1991) [hereinafter Telephone Interview with Counselor Gonn]; see also President Bush Clears Way for USBI Role at Cape York Spaceport, Australia, SATELLITE NEWS, Aug. 27, 1990, at 1 [hereinafter President Bush Clears Way]. At that time, the State Department issued export licenses on commercial satellites. See 22 C.F.R. part 121 (1991).
77 President Bush Clears Way, supra note 76, at 1.
tured commercial communications satellite to be launched by Soviet booster rockets.\textsuperscript{78} These requirements included 1) an agreement that Cape York would serve as the single location outside the Soviet Union where the Soviets would participate in a launch of a United States manufactured communications satellite; 2) the imposition of technology transfer safeguards; 3) an enforceable agreement relating to free and fair trade; and 4) an agreement relating to ballistic missile non-proliferation.\textsuperscript{79}

The Cape York location in Australia was mutually agreed upon by the United States and the Soviet Union.\textsuperscript{80} The Soviets also agreed that they would honor world prices and attract business based on the reliability and effectiveness of their product.\textsuperscript{81} The interests involved also agreed to certain U.S. national security measures to allow Soviet boosters to lift U.S. manufactured payloads. These measures included: 1) the Soviet Union and Australia would observe the Missile Technology Control Regime;\textsuperscript{82} and 2) U.S. regulations on technology transfer\textsuperscript{83} to the Soviet Union would be observed.\textsuperscript{84}

This agreement set an important precedent that dem-
onstrates the former Soviet Union’s willingness to comply with strict restrictions in order to participate in the marketplace for launching U.S. manufactured payloads. Presumably, Russia will live up to the obligation agreed to by its predecessor, and hence, the Clinton administration should continue U.S. support of the Russian-Australian launch venture.

Since the Russians are only allowed to participate as a supplier of launch services from one site outside of the former Soviet Union, they are effectively cut out of competing for more than a marginal amount of the marketplace for the launching of U.S. manufactured communications satellites. In this respect, as discussed later in this section,\textsuperscript{85} there has been a large disparity between the way that Russia and China have been treated by the United States, most notably by the Bush administration.

### C. AN EXTRAORDINARY CIRCUMSTANCE

The 1990 Commercial Space Launch Policy specifically allowed for a commercial space launch of a U.S. manufactured payload by the former Soviet Union on its own territory only if there were "extraordinary circumstances."\textsuperscript{86} An "extraordinary circumstance" occurred in June of 1992. After pressure from his vice-president and the National Space Council, President Bush agreed to allow the Russians to launch a U.S. commercial communications satellite from Russian soil for an International Marine Satellite Treaty organization (INMARSAT) mission in 1994.\textsuperscript{87} President Bush forewarned that his approval was for "this launch only" and that it did not mean that "all

\textsuperscript{85} See infra part V.
\textsuperscript{86} Launch Policy, supra note 2, at M-4.
\textsuperscript{87} Russia’s Proton Rocket, supra note 5, at 1-2 (INMARSAT officially chose the Russian Proton rocket for a future launch in November of 1992); Proton Launch of INMARSAT Satellite Approved, SATELLITE Wk., June 22, 1992, at 1; see Quayle Advises White House, supra note 3, at 3.
future missions will be okayed."\textsuperscript{88} Furthermore, the agreement for this one commercial space launch by the Russians will be subject to safeguards that the United States will prescribe prior to launch.\textsuperscript{89} Additionally, the United States secured agreement that the Russians would not "undercut American prices, terms and conditions."\textsuperscript{90}

There are two likely rationales for President Bush's leniency in this area. First, a U.S. satellite manufacturing company would have had to forfeit a satellite launch for INMARSAT, thereby possibly diminishing American competitiveness in seeking, and success in obtaining, international satellite business.\textsuperscript{91} Second, President Bush could have been facing the reality that the U.S. launch industry, even with a ban against Russian launches of U.S. commercial communications satellites, is not able to compete as successfully on an international basis as its satellite industry.\textsuperscript{92} Therefore, President Bush may have recognized that economic realities dictated that this launch should be approved to keep the U.S. satellite industry commercially viable, even at the cost of the U.S. commercial launch industry.\textsuperscript{93}

To date the Commerce Department has not granted an export license to Martin Marietta Astro Space, the company supplying the satellite for this mission.\textsuperscript{94} Therefore, although officially approved, this deal could still meet op-

\textsuperscript{88} Proton Launch of INMARSAT Satellite Approved, supra note 87, at 1 (quoting President Bush).

\textsuperscript{89} Id.

\textsuperscript{90} Id.

\textsuperscript{91} See infra part VIII.C.; Proton Launch of Inmarsat Satellite Approved, supra note 87, at 1 (stating that the U.S. presently has approximately eighty percent of the commercial satellite market).

\textsuperscript{92} See Proton Launch of INMARSAT Satellite Approved, supra note 87, at 1 (stating that the the United States only has fifty percent of the commercial space launch market).

\textsuperscript{93} Id.

\textsuperscript{94} INMARSAT Awards Launch to Proton, supra note 5, at 1-2; see Comsat and Bush Hit for Promoting Chinese and Russian Satellite Launches, SATELLITE Wk., Oct. 19, 1992, at 2-3 [hereinafter Comsat and Bush Hit] (stating that the United States government will go through a long and politicized process before issuing export licenses to GE for the Russian INMARSAT launch); Russian Proton to Launch INMARSAT-3 Satellite in 1993, AVIATION Wk. & SPACE TECH., Apr. 19, 1993, at 25.
position from the Clinton administration in the export stage. President Clinton should, however, allow this precedent-setting mission to go forward as agreed. He should also recognize that economics require a total lifting of the prohibition on Russian launches of U.S. commercial communications satellites.

D. China's Exception

The 1990 Commercial Space Launch Policy statement does not expressly prohibit the People's Republic of China from launching U.S. manufactured payloads, and as a result there has been much leniency toward China in this area.\(^95\) In 1990, the United States and China entered into an executive agreement which permits U.S. communications satellite manufacturers to export satellites to China for launching.\(^96\) This agreement is the subject of certain conditions, including:

1) China's willingness to limit the number of launches planned; 2) China's agreeing to adjust its launch prices to reflect more clearly its actual cost, so that United States launchers would be able to compete favorably in the world commercial space launch market; 3) China's agreement to indemnify the United States for all amounts the United States may be liable in connection with China's launching of satellites under the Convention on International Liability for Damage Caused by Space Objects; and 4) China's agreeing to abide to certain technology transfer restrictions mandated by the Coordinating Committee on Multilateral Export Controls.\(^97\)

Another condition reportedly imposed upon China for entry into the United States commercial space launch ser-

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\(^96\) Id.

\(^97\) David J. Kuckleman, Regulation of Exports for Commercial Space Launches Outside the United States, 38 Fed. B. News & J. 135, 138 (1991) (citations omitted). Unlike the former Soviet Union, China was found to have provided sufficient safeguards against the unauthorized transfer of U.S. technology. See also White House Authorizes Export Licenses, supra note 95, at 53.
vice marketplace was cessation of supplying ballistic missiles to Libya. This basically mandated that China abide by the Missile Technology Control Regime, even though it is not a formal member.

Since this agreement was concluded, there have been several instances of "misbehavior" by the Chinese that have caused it to have its launch privileges revoked, including human rights violations and alleged ballistic missile proliferation. China, however, has consistently been able to get the privileges reinstated by the Bush administration. The leniency of the Bush administration's policy toward China, as demonstrated by its continued support of China's entry into the United States commercial space launch market, continued despite China's poor track record in living up to its international agreements in this area. This reflects President Bush's uneven treatment of Russia in entering the U.S. marketplace for commercial space launches. President Clinton should level the playing field and allow non-Communist Russia at least the same ability to launch U.S. satellites as China.

VI. AN ANALYSIS

This section will examine alternative methods for President Clinton to meet the three criteria that were implied by President Bush in his 1990 policy statement. President Bush introduced these criteria as necessary for allowing the entry of the former Soviet Union into the U.S. com-

98 Kuckleman, supra note 97, at 138.
99 Id.
101 See Comsat and Bush Hit, supra note 94, at 2-3; see also People's Republic of China Receives Nod from Bush Administration, SATELLITE NEWS, Sept. 21, 1992, at 1-2 [hereinafter PRC Receives Nod].
102 This leniency has occurred despite the fact that China is still a full-fledged Communist nation, has a non-market economy and is an infamous ballistic missile proliferator. See PRC Receives Nod, supra note 101, at 1-2.
103 There is some indication that President Clinton will take a tougher policy stance towards China, with respect to expecting that nation to live up to the letter of its international agreements. See, e.g., CLINTON & GORE, supra note 5, at 139.
mmercial space launch marketplace to provide launch services from its own territory. If these criteria are met, President Clinton should not hesitate to lift the ban on Russia and allow it to fully enter the U.S. commercial space launch marketplace.

A. Technology Transfer Objective

President Bush’s primary intention for banning U.S. manufactured payload launches by the former Soviet Union from its own territory was clearly to meet U.S. technology transfer objectives and hence, to protect national security. Technology transfer objectives, and corresponding national security objectives, however, can still be protected if President Clinton allows Russia direct entry into the U.S. commercial space launch marketplace.\(^\text{104}\)

In the United States, national interest dominates the course that is set for policy in the area of space technology transfer restrictions. U.S. technology transfer objectives, in general, are reflected by the objectives of the Export Administration Act of 1979\(^\text{105}\) and the Coordinating Committee on Multilateral Export Controls (COCOM), as discussed later in this section.\(^\text{106}\)

The desired effect of practically every technology transfer restriction is to diminish the potential of the target country’s military.\(^\text{107}\) There is no difference with U.S. space technology transfer restrictions placed upon the former Soviet Union. In the area of commercial communications satellite exportation to the former Soviet Union, however, the cost of these technological control efforts exceed the likely benefits. Attempts to facilitate space

\(^{104}\) President Clinton has stated that one goal of his presidency is to stop the spread of weapons technology. See id. at 42.


\(^{106}\) See supra part VI.A.2.

technology transfer for commercial purposes in Russia's changing political and economic climate is too important for the United States and the world to be disrupted by extensive export controls.\textsuperscript{108}

Instead, the United States, under the presidency of Bill Clinton, should pursue the policy goal of protecting technology from transfers to nations that pose a genuine danger to U.S. national security while freeing other technology restrictions. For example, the United States could allow free transfer of payloads that use non-military communications technology whose transfer, even if an unfriendly regime resurfaced in present day Russia, would not greatly threaten national security.\textsuperscript{109}

As an added safeguard for U.S. technology, as discussed later,\textsuperscript{110} the United States and Russia can enter into a bilateral executive agreement controlling the amount of access and exposure the Russians may have to U.S. manufactured payloads. In addition, a withdrawal provision can be included in case the United States finds its national security jeopardized by Russian launchings of U.S. manufactured commercial communications satellites.

\textbf{1. United States Technology Transfer Restrictions}

By 1940, Congress gave the President authority to control the export of "militarily significant" goods and technology.\textsuperscript{111} By late 1948, the United States, in a precedent-setting decision, began to control exports to the Soviet Bloc. Shortly thereafter, Congress formally recognized the need for continuing these technology transfer controls during peacetime in the Export Control Act of 1949.\textsuperscript{112}

The original policy objective of the Export Control Act

\textsuperscript{108} \textit{Finding Common Ground}, supra note 107, at 61-63.
\textsuperscript{109} See \textit{id.} at 111.
\textsuperscript{110} See infra part VI.A.3.
\textsuperscript{111} This was codified in section 6 of Public Law 703 "An act to expedite the Strengthening of the National Defense." \textit{Finding Common Ground}, supra note 107, at 62-63, 310-11.
\textsuperscript{112} 50 U.S.C. §§ 2021-2032 (repealed 1979).
was to prevent improvements in Warsaw Pact military capabilities through its acquisition of the advanced technology produced and utilized by the West. 113 An outgrowth of this policy was the control by the United States government of the export of goods and technology that had commercial as well as military applications. 114 These "dual-use" technologies are still controlled for export purposes today by the United States government. 115

The Export Control Act of 1949 was superseded by the Export Administration Act of 1979, which is still in effect today. 116 The Export Administration Act controls the export of commercial goods and technologies that the United States deems would significantly contribute to the military capabilities of an actual or potential adversary. 117 One of the primary objectives of the Act is the national security objective "[t]o restrict the export of goods and technology which would make a significant contribution to the military potential of any other country or combination of countries which would prove detrimental to the national security of the United States." 118

To implement the national security objective of the Export Administration Act, the Secretary of Commerce 119 is required to list the countries, technologies, and commodities that are to be controlled for export purposes based upon the national security needs of the United States. 120

113 See FINDING COMMON GROUND, supra note 107, at 61-63.
114 Id. at 62.
115 Id.; see PANEL ON THE IMPACT OF NATIONAL SECURITY TRANSFER CONTROLS ON INTERNATIONAL TECHNOLOGY TRANSFER, BALANCING THE NATIONAL INTEREST 81 (1991) [hereinafter BALANCING THE NATIONAL INTEREST]; see also 50 U.S.C. app. § 2401-2420. It should be noted that in 1992 Congress failed to reauthorize the Export Administration Act. Hence, the U.S. export control laws continue to exist only under the President's emergency economic powers. Time Runs Out on Export Administration Act Despite Last Minute Deal, INSIDE U.S. TRADE, Oct. 9, 1992, at 1-3.
116 FINDING COMMON GROUND, supra note 107, at 62.
117 Wilmarth, supra note 31, at 8.
119 The Secretary is to act with the advice of the Secretaries of State and Defense, and other agency heads, as necessary.
120 50 U.S.C. app. § 2403(b); Exec. Order No. 12,214, 45 Fed. Reg. 29,783 (1980); see 22 U.S.C. § 2570(f) (1988); see also FINDING COMMON GROUND, supra
Once again, these controlled technologies and commodities include dual-use items. At times onerous restrictions are imposed on the export of goods and technology. These restrictions act as an export ban. The rationale behind these export controls is that if such equipment and technology is denied to controlled countries, their military potential will be severely impaired.

Under the Export Administration Act, the former Soviet Union is considered to be a controlled country, and communications satellites are included as a controlled dual-use technology. Therefore, commercial communications satellites cannot be exported from the United States to the former Soviet Union except within extremely limited circumstances.

2. Coordinating Committee on Multilateral Export Control

U.S. export controls are often analogous to multilateral and bilateral agreements with foreign countries. The United States is a founding member of COCOM, an informal, non-treaty organization comprised of all NATO countries, Australia, and Japan. Created in the early days of the Cold War, COCOM has continually administered a uniform system of multilateral export controls over three categories of products: munitions, nuclear energy, and dual-use. Products and technologies that are subject to COCOM export controls are also subject to U.S. export controls. In addition, the United States has

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121 See FINDING COMMON GROUND, supra note 107, at 62.
122 Id.
123 See generally 50 U.S.C. app. § 2404(b); 22 U.S.C. § 2370(f).
125 See 50 U.S.C. app. § 2404 (1991); see also supra part IV.A.
126 FINDING COMMON GROUND, supra note 107, at 64.
127 All NATO countries except Iceland are members. Id.
128 Id. at 62, 106; see also Wilmarth, supra note 31, at 8.
130 See generally 50 U.S.C. app. § 2404(i), 2405; see also Wilmarth, supra note 31,
a number of bilateral agreements with non-COCOM countries, which implement export controls on certain technologies that are deemed to be in the interest of United States as well as world security. In respect to commercial satellite exports from COCOM countries to the former Soviet Union, COCOM restrictions parallel, for the most part, those that the United States has enacted under the Export Administration Act.

In the forum of COCOM, decisions on the amounts and types of technology to release to nations outside of the consortium are based upon the need for Western security. With the recent political changes in the former Soviet Union, however, security needs in general, and in particular, technology transfer controls, should take on a new form. No longer is the former Soviet Union a menacing force, but instead a group of sovereign states looking to develop their political and economic stability and, of equal importance, a growing potential market for COCOM nations, including the United States.

at 8. Although at times, the U.S. has stricter export restrictions than are required by COCOM. See, e.g., 57 Fed. Reg. 14,671 (1992) (to be codified at 22 C.F.R. § 121).

For example, Australia agreed to COCOM controls to move forward with the proposed Cape York project. See supra part IV.B.

In general, there are stricter requirements placed on the export of communications satellites with certain military capabilities in the U.S. than required under COCOM. See 57 Fed. Reg. 48,312 (1992) (discussing the limitations on U.S. satellite exports).

See, e.g., David Silverberg, Export Control Policies Uncertain as Changes Sweep Europe, DEF. NEWS, Mar. 6, 1990, at 12; see also Keith Bradsher, U.S. and Allies Ease Sales to Former Soviet Republics, N.Y. TIMES, June 3, 1992, at D18; FINDING COMMON GROUND, supra note 107, at 106.

FINDING COMMON GROUND, supra note 107, at 106.
Block nations might break out from COCOM. The threat of breakout is more likely now that the perceived security threat of the former Soviet Union has diminished. This movement to do away with COCOM or at least constrict its focus is even more acute with the formation of the European Community (EC) Single Market in 1992, as the EC looks for new markets to expand into, and former Eastern block nations gain associated, and possibly, permanent member status to the EC.

Not surprisingly, break out has occurred already within the COCOM regime by Japan and Norway. In the 1980’s these nations jointly sold submarine propellers, a controlled technology, to the former Soviet Union through the Toshiba Corporation of Japan and Kongsvinger Vaapenfabrikk of Norway. As Japan looks for markets to penetrate in these recessionary times, it might be formally willing to break out or withdraw from this voluntary regime. The likelihood of breakout by other COCOM countries continues to increase, albeit at a faster rate, as Russia continues to establish a free market economy.

Since President Clinton has stated that he recognizes that the Cold War threat is over, he should officially recognize that lifting certain technology transfer restrictions in the long run would be a politically wise move primarily for two reasons. First, it would serve to mitigate the chance of breakout from COCOM, which serves as an important international organization to advance U.S. pol-

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136 See, e.g., Silverberg, supra note 134, at 12; see also FINDING COMMON GROUND, supra note 107 at 106.
137 FINDING COMMON GROUND, supra note 107, at 106.
138 See id.
140 “Western European countries and Japan generally perceive more opportunities and less risk in trading with the Soviet Union. . . . They generally resist controls for foreign policy purposes.” Amy Kaslow, U.S. Companies See Missed Chances, CHRISTIAN SCI. MONITOR, Dec. 5, 1989, at 9 (quoting Henry Nau, co-director of the U.S.-Japan Economic Agenda).
And secondly, the United States should be the world leader in opening up free trade in high-technology goods and services with Russia. President Clinton's predecessor recognized this reality when he agreed with the other COCOM nations to alleviate many export restrictions on advanced telecommunications equipment, such as fiber optics, to the former Soviet Union.

A first step the new administration should take is to push for COCOM to remove technology transfer restrictions on the export of commercial communications satellites to the former Soviet Union for launching. This will allow other members of COCOM to contract with Russia for commercial space launch services without the need to withdraw from the organization. Furthermore, by reducing the technology transfer restrictions on Western commercial communications satellites to Russia, it is likely that COCOM will have the impetus to reduce other technology transfer restrictions. This will eventually give Russia the ability to trade with the West on a more equal footing.

In a plea to the Group of Seven Industrialized Nations in July of 1991, former Soviet President Gorbachev asked that COCOM restrictions on technology transfers to the Soviet Union be dropped as part of the reforms currently taking place in Soviet Union. In the same meeting, he told of a forty billion dollar program to convert the defense industry into a civilian-based one. President Boris Yeltsin has continued the Gorbachev legacy as demonstrated by his recent attempts to sell critical milit-

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142 See Silverberg, supra note 134, at 12; see also Finding Common Ground, supra note 107, at 317-8.
143 Finding Common Ground, supra note 107, at 317-18.
144 Bradsher, supra note 134, at D18.
145 See id.
146 See Silverberg, supra note 134, at 12. "Western European diplomats . . . are arguing that technology that is allowed into other Eastern Bloc nations should be allowed into the Soviet Union.” Id.
148 Id.
tary technology to the United States and its allies, as opposed to nations the United States and its allies view as hostile. Furthermore, President Yeltsin continues to take measures to downsize Russia's defense industry in the attempt to convert to a civilian free market economy. These are key indicators that the Soviet Union was, and Russia is, willing to convert a large portion of their military complex into civilian industry so they can enter into greater amounts of world trade. Therefore, a concession on the part of Western nations of dropping technology restrictions on the export of commercial communications payloads will assist in the demilitarization of Russia by engaging its one-time military industry in part by the commercial launching of Western payloads.

3. A Bilateral Executive Agreement Can Ease Technology Transfer Concerns

Three international conditions have influenced the development of U.S. national security restrictions that exist today. First, since World War II the objective of denying the former Soviet Union and former Warsaw pact countries access to military technology has been vigorously pursued by Western nations. Second, this policy's viability depended upon the fact that almost all advanced military and dual-use technology was developed and produced in and by the United States and its political allies. Finally, export controls were significantly effective in achieving their goals because the former Soviet Union and its allies were committed to isolating their economy from that of the nations that comprised the free world.

These three conditions fostered cooperation among the United States and its allies, in their imposition of export

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149 Id.
150 FINDING COMMON GROUND, supra note 107, at 106.
151 See supra part VI.A.1.
152 FINDING COMMON GROUND, supra note 107, at 106. See generally Carter, supra note 136, at 1168-77.
153 BALANCING THE NATIONAL INTEREST, supra note 115, at 106.
controls, in order to retard the development of the Soviet Union's military capability. This was an impetus to United States and COCOM export controls.\footnote{Id.}

At first, East-West trade was barely effected by such technology transfer controls because of "the prevailing market disjunctions—between military and commercial products and between free market and centrally planned economies," like that of the former Soviet Union.\footnote{Id. at 107.} The United States found its competitive position barely affected because its commanding economic and technological position in the world ensured that export controls would only have a nominal impact on its preeminent position in international trade.\footnote{Id.} But, by the beginning of the 1980's, these advantages had slipped away and the adverse consequences of export controls on international trade reared their ugly head in the United States.\footnote{Id. at 107.}

In the 1990's "radical economic and political changes in the [former] Soviet Union" began to occur, creating a new basis for political and economic relationships between the East and the West.\footnote{See BALANCING THE NATIONAL INTEREST, supra note 112, at 107; see Ferdinand J.M. Feldbrugge, West-East Technology Transfer in the Context of Perestroika, in LAW AND POLITICS OF WEST-EAST TECHNOLOGY TRANSFER, 245-50 (Hiroshi Oda ed., 1991).}

Hence, the conditions which initially determined national security export restrictions on products and technology have changed in dramatic ways mandating that the nature of the current Western security alliance must change as well.\footnote{Primarily because of the strengthening of the European Community in the realm of foreign affairs. BALANCING THE NATIONAL INTEREST, supra note 115, at 107.} Therefore, "[t]he current challenge is to fashion a response that capitalizes on the enormous political and economic opportunities presented by the changes in . . . the (former) Soviet Union, while managing

the rise associated with legitimate national security concerns."\(^{160}\)

It is now in the United States' interest to permit the free flow of dual-use technology, apart from a few truly critical military items to Russia the Soviet Union's political successor.\(^{161}\) In fact, by relaxing export controls on technology, President Clinton could formulate a policy strategy to encourage the process of economic and democratic reforms occurring in Russia, thereby in the long term strengthening world economic, political, and military stability and security.\(^{162}\) This is precisely the case of allowing the export of non-military communications satellites to Russia.

To calm fears of certain U.S. constituencies that Russia will expropriate such technology for its own maniacal purposes,\(^{163}\) President Clinton can make his policy of permitting U.S. produced communications satellites to be exported to Russia and to be launched on Russian rocket boosters contingent upon entering an executive agreement detailing the amount of contact the Russians may have and the specific types of U.S. payloads allowed to be exported for launch. An executive agreement setting out such restrictions could also incorporate provisions allowing Americans to supervise the launching of payloads to ensure that the Russians do not have direct access to certain technology that is in the U.S. national interest to protect. This could be done by limiting both the number of Russian personnel who can come in contact with an American manufactured payload and the amount of time that a U.S. payload may be on Russian territory prior to

\(^{160}\) Id.

\(^{161}\) See Finding Common Ground, supra note 107, at 169; see House Comm. on Science, Space & Technology, supra note 11, at 85.


\(^{163}\) For example, the Center for Security Policy has expressed fear that allowing Soviet launches of U.S. payloads might endanger U.S. technology. Conditions of Commercial Space Launch Policy Will Get Close Look, Aerospace Daily, July 13, 1990, at 69.
launching.\textsuperscript{164}

To ensure that Russia does not circumvent technology transfer restrictions, the agreement can contain on-site verification procedures.\textsuperscript{165} Furthermore, a withdrawal provision can be included for the United States if a Russian violation of the agreement is discovered or if the United States' interests are jeopardized.\textsuperscript{166}

President Yeltsin should consent to such an agreement since the Russians are diligently seeking hard currency to turn the one-time state controlled economy into a free market. It is doubtful that he would disagree with restrictions on technology transfer that would serve to unblock any trade, much less in high-technology goods, with the West. Precedent for Russia consenting to such an agreement was already set when the former Soviet Union agreed to limited access to U.S. manufactured payloads at the Cape York launch site.\textsuperscript{167}

B. A Free and Fair Market Which United States Can Compete

A basic goal of the 1990 Commercial Space Launch Policy is to ensure a free and fair market for the U.S. commercial launch industry in which to compete. Therefore, the Commercial Space Launch Policy states that any participation in the U.S. commercial space launch market would require "agreements to limit unfair competition."\textsuperscript{168} President Clinton should allow the former So-

\textsuperscript{164} Officials of the former Soviet Union have stated that they will allow U.S. satellite owners to remain with the satellite while it is on their territory. \textit{House Comm. on Science \& Technology}, supra note 11, at 87.

\textsuperscript{165} Many arms control treaties contain on-site inspection provisions. \textit{See, e.g.,} The Strategic Arms Reduction Treaty (START) (1992); Conventional Forces in Europe Treaty (CFE) (1991). Both are available through the Arms Control and Defense Agency, as neither have been codified as of yet.


\textsuperscript{167} \textit{See supra} part V.B.

\textsuperscript{168} \textit{Launch Policy}, supra note 2, at M-4.
viet Union to accede to this stated U.S. practice. As discussed in this section, allowing the Russians full entry into this market, even under this condition, will serve as an important step toward fulfilling a Clinton goal: improving future trade relations between Russia and the United States.169

Former President Gorbachev's acceptance in 1986 that democracy was essential for the Soviet Union to thrive was a crucial catalyst for change in that nation. However, this meant that domestic political and economic destabilization would follow in the then Soviet Union, hence making a peaceful international environment which would spur on the international trade absolutely essential to the success of his plan.170 President Yeltsin, as demonstrated by his recent reform efforts, has followed his predecessor's lead in this area, while retaining the same needs. This "economic perestroika" has led the Russians to depend upon receiving help from the West through both aid and the lifting of trade sanctions and export restrictions on goods and technology.171

The three arguments advanced to increase international trade with Russia are as follows:

First, aid and trade can act as a catalyst to bring about or facilitate further desirable economic and social changes. Second, economic assistance and trade agreements can function in a more political context as a direct quid pro quo for specific concessions.172 Third, . . . failing to grant aid or permit trade risks further serious deterioration of

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169 See CLINTON & GORE, supra note 5, at 139; see also Craig Covault, Ariane Launch Operations Slowed by Satellite Problems, AVIATION WK. & SPACE TECH., Feb. 8, 1993, at 24, 25 ("[S]ome managers believe the new Clinton Administration could advocate siffer guidelines [than the Bush Administration] on Russian [launch ser-vice] marketing").

170 See Reshaping the Soviet Economy: 500 Days to Shake the World, THE ECONOMIST, Sept. 15, 1990, at 13 (hereinafter 500 Days to Shake the World) (explaining that the proposed plan to reform the Soviet economy was based in part on fair market principles and private ownership of property).

171 Id.

172 These concessions can include, as discussed in this Article, the entry of the former Soviet Union into a treaty regime for the non-proliferation of ballistic missiles.
the internal political, economic and social fabric of [the former Soviet Union], the consequences of which would be unpredictable and undesirable.173

The likely result of the United States engaging in trade with Russia will be a greater stake for the United States in the success of the economic and political reforms underway in Russia. This increase in trade will eventually lead to the East's greater integration with the West. Russia itself recognizes this reality, as demonstrated by its desire to participate in international trade in space technology. Roald Sagdeev, the former Director of the Soviet Space Program, stated in a recent interview that "[o]ur space industry must be accountable not only to its Soviet but also to its foreign scientific customers."174 This demonstrates that the former Soviet Union recognizes that accountability is crucial to providing space-based services to the United States and other international customers. Therefore, President Clinton, as discussed later in this section,175 should act early in his incumbency and enter into a bilateral executive agreement concerning fair pricing with Russia.176 Such an agreement should focus upon Russia offering its commercial space launch services on a free market basis, thereby allowing Russia to compete fully and fairly in the United States commercial space launch service marketplace. The opening up of former Soviet launch services to the U.S. communications satellite market is extremely important for Russia's transformation to a free market economy. Since the former Soviets are technologically advanced in this area, by offering space launch services, they will be able to bring in a

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173 Finding Common Ground, supra note 107, at 50.
174 Stewart, supra note 73, at 56, 62.
175 See infra part VI.B.2.
176 For example, President Bush in the INMARSAT launch agreement with Russia sought and received an agreement on fair pricing. Proton Launch of INMARSAT Satellite Approved, supra note 87, at 1; see Jeffrey M. Leonorovitz, Russian Proton Booster Offered in Indonesian Launch Competition, Aviation Wk. & Space Tech., Apr. 12, 1993, at 61-62.
large influx of much needed hard currency\textsuperscript{177} while selling a solid, reliable product and decreasing their reliance on the defense industry.\textsuperscript{178} A residual effect will be to demonstrate first hand to Russia the attributes of free market trade, spurring other free trade ventures onward. This should lead eventually to a new trading partner for the United States.

1. A Survey of the Commercial Space Launch Industry

There is a consensus that the commercial space launch industry is profitable. Despite growing competition in the United States from Arianespace\textsuperscript{179} and China,\textsuperscript{180} there is still room for other nations to compete for business.\textsuperscript{181} Furthermore, the advent of low earth orbit satellites opens up even more commercial space launch service opportunities for all nations.\textsuperscript{182}

In 1990, the eight commercial space launches occurring in the United States generated revenues of $520 million for the U.S. companies that participated.\textsuperscript{183} By the end of 1991, the Department of Transportation had issued licenses for thirty-four commercial space launches to be performed by the U.S. commercial space launch industry by 1995.\textsuperscript{184} By the end of the century, activities in the area of commercial space products and services could

\textsuperscript{177} "The Soviet space program is no longer looking for glory. It's looking for survival." Stewart, supra note 73, at 63 (quoting Roald Sagdeev).


\textsuperscript{180} See supra part V.D.

\textsuperscript{181} The U.S. launch industry has approximately fifty percent of the world market. Proton Launch of INMARSAT Satellite Approved, supra note 87, at 1.


\textsuperscript{184} Filep, supra note 182, at 15.
provide the U.S. economy with almost three hundred billion dollars in revenue, as well as ten million jobs annually.\footnote{Art Dula, Private Sector Activities in Outer Space, 19 INT’L L. 159, 163 (1986).}

Despite this success, there is a fear on the part of the commercial space launch industry.\footnote{Richard L. Grant, chairman of a working group on the former Soviet Union formed by the Commercial Space Transportation Advisory Committee, an industry advisory group to the U.S. Department of Transportation, discussed the possibility of U.S. launch firms joining forces as a consortium to combat overseas competition. Soviet Shakeout, supra note 22, at 181; see also supra part IV (discussing the influence of U.S. governmental agencies on the U.S. commercial space launch policy). But see Lockheed in Space Venture with Russians, N.Y. TIMES, Dec. 29, 1992, at D5 (noting that Lockheed and the Russian manufacturer of the Proton rocket formed a commercial space venture to market Russian launchers for satellite launches).} The basis for this fear, which Vice-President Gore shares,\footnote{Vice-President Gore stated, “the emergence of [space industry] competitors’ from non-market economies increases the opportunities for predatory pricing - the very same economic weapon that foreign countries employed in the 1980s to target and destroy the American manufacturing base.” Daniel Green, Flying Start for Russia’s Satellite-Launch Industry, FIN. TIMES, Nov. 18, 1992, at 4; see also INMAR-SAT Awards Launch to Proton, supra note 5, at 1-2. Gore “has said that he wants to protect the U.S. [launch] industry from artificially low-priced foreign competition.” Id.} is that the former Soviet Union will enter the U.S. commercial space launch marketplace but not compete on free market terms.\footnote{While many aerospace industry officials believe that the former Soviet Union offers numerous business opportunities in the long-term, most remain reluctant to enter into business ventures until the Commonwealth builds on the eight pillars of a normal market economy: private property; ownership and enforceable contracts; stabilization of the macro-economy; liberalization of prices; privatization of enterprise; opening the economy to international market forces; liberalization of trade; and limitation of governmental intervention in the economy. Anthony L. Velocci, Jr., Soviet Coup Collapse to Speed Defense Industry Shift to Civilian Use, AVIATION WK. & SPACE TECH., Sept. 2, 1991, at 68, 69.} President Clinton can avert these fears, as discussed below,\footnote{See supra part VI.B.2.} if the United States allows Russia to compete in the commercial space launch industry under a bilateral executive agreement that mandates competitive pricing.

Even without the aforementioned executive agreement, it is possible that Russia would offer their commercial
space launch services at competitive market prices.\textsuperscript{190} For example, when the Soviet Union entered the remote sensing business by launching their own satellite, it charged twenty-six cents \textit{more} per square mile for an image than Spot, the French remote sensing company.\textsuperscript{191}

Contrary to the views of the commercial space launch industry, the majority of U.S. domestic industry, and in particular the U.S. payload industry, are fearful of continuing outdated restrictions on doing business and trading with the former Soviet Union.\textsuperscript{192} Currently, members of the U.S. aerospace industry who would like to work on business ventures with Russia in the commercial space launch industry find its doors barred to them because of the 1990 Commercial Space Launch Policy.\textsuperscript{193} These companies fear that such domestic constraints and international competition will cause the United States to miss out on space related business opportunities in Russia.\textsuperscript{194} The primary concern of these businesses is the continuance of the Bush administration's reluctance "to commit itself forcefully to the sweeping reforms" in the former Soviet Union, with the toughest restrictions placed on high technology trade.\textsuperscript{195} Therefore, to alleviate such domestic concerns, and to open new opportunities for U.S. business, President Clinton must act now to open up trade with Russia.\textsuperscript{196}

Although President Bush was correct that the U.S. commercial space launch industry needs a free and fair market in which to compete, his Commercial Space Launch Policy

\begin{flushleft}
\textsuperscript{190} \textit{But see Quayle Advises White House, supra note 3, at 4 (stating that McDonnell Douglas claims that Russian launches are "cheaper and have always been supported by the government").}
\textsuperscript{191} \textit{Soviets Launch Almaz I Remote Sensing Satellite, SATELLITE NEWS, Apr. 15, 1991, at 10. But see Green, supra note 187, at 4.}
\textsuperscript{192} \textit{See FINDING COMMON GROUND, supra note 107, at 167.}
\textsuperscript{193} \textit{See Kaslow, supra note 140, at 9.}
\textsuperscript{194} \textit{See, e.g., supra part IV (discussing U.S. governmental agency positions on the U.S. commercial space launch policy).}
\textsuperscript{195} \textit{Kaslow, supra note 140, at 9.}
\textsuperscript{196} \textit{CLINTON \& GORE, supra note 5, at 139. Clinton has stated that U.S. industry should be encouraged to trade with the former Soviet Union "to ensure that the United States is not shut out of the regions lucrative markets." Id.}
\end{flushleft}
SPACE LAUNCH POLICY

statement amounts to an economic protectionist measure by barring the export of commercial communications satellites outright to the former Soviet Union for launching. The inevitable result of the continuance of this protectionist policy by the Clinton administration will be to hinder reforms in Russia, and in the long run, hurt the U.S. domestic satellite industry and U.S. foreign policy.

2. A Suggestion

By ensuring market prices through a bilateral executive agreement and encouraging Russia’s commercialization of space launches, stability in the economic and political sphere of the former Soviet Union would emerge. If a Russian commercial space launch business can compete fairly and successfully in the world arena, it would give Russia an impetus to enter into other free market ventures, this would in turn benefit the former Soviet Union, the United States, and the world.

To ensure that Russia competes in the commercial space launch industry by using free market pricing, President Clinton and President Yeltsin should enter into an executive agreement that mandates Russia’s use of set criteria to determine prices for space launch services offered to U.S. commercial payload manufacturers. Two examples of pricing schemes that could be used as criteria for an American-Russian fair market pricing agreement are: 1) basing space launch service prices on an average of prices of similar launches performed by nations with free-market economies over the past year; or 2) constructing a pricing scheme for commercial space launch services

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197 United States industry has “no problem” with non-market economies entering the commercial space launch industry assuming that they enter the arena “under a suitable set of timing and (other) conditions that make that playing field reasonably level.” Lovelace Warns on Non-Market Economies and Space Launch Business, AEROSPACE DAILY, June 28, 1991, at 533 (quoting Alan Lovelace, head of General Dynamics’ Commercial Launch Services Unit).

198 For example, former Soviet President Gorbachev had indicated his intention to integrate the Soviet economy with the international economy, based at least in part on market principles. See, e.g., 500 Days to Shake the World, supra note 170, at 13; Russia’s Proton Rocket, supra note 5, at 1-2.
based upon the actual cost of the service, the existing competition to provide the service and the demand for the service. In either of these fair pricing scenarios, or by using any pricing scheme that might be imposed, President Clinton would want to include an escalation in the base price of the commercial space launch service to compensate for the time lag involved in the international transaction and the foreign exchange risk that exists. This would raise the base price of the space launch service to reflect the economic realities of doing business with Russia. President Clinton should also include a withdrawal provision in the agreement in case Russia undercuts the agreed-upon free market pricing arrangement for space launch services. This would provide additional protection against unfair competition by the former Soviet Union to the U.S. domestic commercial space launch industry.

The 1974 Trade Act provides the United States a final protection against unfair pricing by the former Soviet Union of commercial space launch services once a trade agreement is entered into by the two space powers. The Act empowers the ITC through the USTR to evaluate foreign trade policy under a standard set by the United States for unfair pricing. But, even more importantly, this statute provides for mandatory retaliation when an

200 See id. at 454.
201 See id.
203 The United States anti-dumping statutes are not applicable to commercial space launches performed by Russia. See 15 U.S.C. § 72 (Supp. 1991). Under the U.S. anti-dumping statute a "good" must be exported into the United States. Id. The same conclusion is reached under the U.S. countervailing duties laws for the subsidization of exports of foreign "products." 19 U.S.C. §§ 1505, 1671 (Supp. 1991). Therefore, the only redress available to the United States in the unfair pricing of launch services by the Soviet Union would be under section 301 of the 1974 Trade Act, as amended. This is because services are not covered by the U.S. anti-dumping and countervailing duties laws. See 19 U.S.C. §§ 2411-2420 (1988).
204 19 U.S.C. § 2411 (1988) provides in part:
§ 2411. ACTIONS BY UNITED STATES TRADE REPRESENTATIVE.
(a) Mandatory Action. . . .
act, policy, or practice of a foreign country violates a trade agreement with the United States. If retaliation against

(1) If the United States Trade Representative determines under section 304(a)(1) that -
   (A) the rights of the United States under any trade agreement are being denied; or
   (B) an act, policy, or practice of a foreign country -
     (i) violates, or is inconsistent with, the provisions of, or otherwise denies benefits to the United States under, any trade agreement, or
     (ii) is unjustifiable and burdens or restricts United States commerce; the Trade Representative shall take action authorized in subsection (c) of this section, subject to the specific direction, if any, of the President regarding any such action, and shall take all other appropriate and feasible action with the power of the President that the President may direct the Trade Representative to take under this subsection, to enforce such rights or to obtain the elimination of such act, policy, or practice.

(c) Scope of authority . . .

(2)(A) Notwithstanding any other provision of law governing any service sector access authorization, and in addition to the authority conferred in paragraph (1), the Trade Representative may, for the purposes of carrying out the provisions of subsection (a) or (b) of this section -
   (i) restrict, in the manner and to the extent the Trade Representative determines appropriate, the terms and conditions of any such authorization, or
   (ii) deny the issuance of any such authorization . . . .

(C) Before the Trade Representative takes any action under this section, involving the imposition of fees or other restrictions on the services of the foreign country, the Trade Representative shall, if the services involved are subject to regulation by any agency of the Federal Government, consult, as appropriate, with the head of the agency concerned.

Id. § 2411.
Section 2414(a)(1) provides:

(a) In General
   (1) On the basis of the investigation initiated under section 2412 . . . the Trade Representative shall -
      (A) determine whether-
           (i) the rights to which the United States is entitled under any trade agreement are being denied, or
           (ii) any act, policy, or practice described in (a)(1)(B) or (b)(1) of section 2411 . . . exists, and
      (B) if the determination made under subparagraph (A) is affirmative, determine what action, if any, the Trade Representative should take under subsection (a) or (b) of section 2411 . . . .

Id. § 2414(a)(1).

205 The United States Trade Representative must take action if he or she finds
a foreign government is pursued by the USTR, its value must be equivalent to the burden or restraint imposed on U.S. commerce.\textsuperscript{206}

To impose such a retaliatory measure, the USTR must first determine the amount of monetary loss to U.S. industry caused by the unfair trade practice of a foreign government.\textsuperscript{207} Next, the USTR must decide how to determine an equivalent burden, better known as retaliation, to be placed on that foreign service.\textsuperscript{208} This practice allows the United States to recover any monetary benefit that the former Soviet Union gains by circumventing a trade agreement with the United States for commercial space launch services. Therefore, section 301 of the Trade Act of 1974 can act as an additional and important check upon any trade agreement on commercial space launches entered into by the Russian and the U.S. governments.

C. Linkage to Ballistic Missile Non-Proliferation

An important goal of the 1990 Commercial Space Launch Policy statement is to help stop the proliferation of ballistic missiles.\textsuperscript{209} President Clinton states that a high priority of his administration is to cease the world-wide proliferation of ballistic missiles.\textsuperscript{210} Therefore, if Russia is to enter the U.S. commercial space launch industry as a full participant, President Clinton would most likely expect Russia to enter into a non-proliferation treaty.

Few would question that superpower cooperation is unabated in deterring the proliferation of ballistic missiles.\textsuperscript{211} Russia, surrounded by numerous potential proliferators, has very strong incentives to join efforts to

\begin{flushleft}
\textsuperscript{207} Id.
\textsuperscript{208} Id.
\textsuperscript{209} See Launch Policy, supra note 2, at M-4.
\textsuperscript{210} See Clinton & Gore, supra note 5, at 43.
\textsuperscript{211} See Finding Common Ground, supra note 107, at 55.
\end{flushleft}
stop the spread of missile technology.\textsuperscript{212} However, multi-
lateral, not just superpower cooperation, is necessary to
keep missile technology out of the hands of nations that
are likely to misuse it.\textsuperscript{213}

A multilateral treaty regime based upon the non-
proliferation of ballistic missiles will probably take some
time to negotiate.\textsuperscript{214} Therefore, this Article proposes two
alternative interim measures that could take effect imme-
diately and allow Russia to enter the U.S. commercial
space launch marketplace as a full service space launch
provider while treaty negotiations are pending. These
measures include Russia formally joining the Missile
Technology Control Regime (MTCR) or Russia and the
United States entering into a bilateral executive agree-
ment banning ballistic missile proliferation.\textsuperscript{215}

1. The Missile Technology Control Regime

The MTCR, formed in 1987, is a non-treaty consortia
of missile supplying countries led, at least informally, by
the United States.\textsuperscript{216} The MTCR's purpose has always
been to restrict the export of goods and technology that
could be used to produce a missile with the capability of
carrying a nuclear warhead by a nation hostile to the re-
gime.\textsuperscript{217} In June of 1992, the MTCR revised its mission to
include restrictions on exports of goods and technology
that can be used to produce missiles carrying "all kinds of
weapons of mass destruction."\textsuperscript{218} The MTCR has
adopted controls on the export of ballistic missiles and

\textsuperscript{212} See Vladimir Petrovsky, \textit{New Technology and Security Prospects After the Cold War},

\textsuperscript{213} See \textit{Finding Common Ground}, supra note 107, at 134-35; see also \textit{Russia's Pro-
ton Rocket, supra note 5, at 2.}

\textsuperscript{214} For example, the START treaty took over nine years to negotiate.

\textsuperscript{215} See also infra part VIII.B. (explaining that covered ballistic missiles must be
destroyed under some modern strategic and tactical arms control treaties).

\textsuperscript{216} Leonard S. Spector, \textit{Nuclear Ambitions: The Spread of Nuclear Weap-
ons} 1989-1990 15 (1990); see also \textit{Finding Common Ground, supra note 107, at
70.}

\textsuperscript{217} Spector, supra note 216, at 15.

\textsuperscript{218} Munich Economic Summit, supra note 162, at 1221.
ballistic missile technology for the ten nations\textsuperscript{219} who are formal members and the four additional nations\textsuperscript{220} that have agreed to implement comparable controls.\textsuperscript{221} In 1991, the former Soviet Union agreed to complete compliance with the MTCR, and Russia has, for the most part, lived up to its predecessor's promise. Since 1991, there has been only one reported violation of the former Soviet Union's pledge, and this itself is an unresolved controversy.\textsuperscript{222} The former Soviet Union, by agreeing to MTCR restrictions, albeit informally, has made a first step in limiting ballistic missile proliferation. If Russia agrees to formally join the MTCR until a multilateral treaty banning the proliferation of ballistic missiles can be concluded, along with the other measures discussed earlier in this article, President Clinton should remove his predecessor's ban on Russia's entry into the commercial space launch industry.

2. \textit{A Bilateral Executive Agreement}

Another option, until a new treaty regime can be formally established, is that President Clinton can enter into an executive agreement with Russia barring ballistic missile proliferation except for unambiguously peaceful purposes. Such an executive agreement should include provisions:

1) to control trade in components and end products that could be used for ballistic missile weapon technology;

\textsuperscript{219} The nations are the United States, Canada, France, Great Britain, Japan, Italy, Germany, Belgium, Luxembourg, the Netherlands, and Spain. SPECTOR, supra note 216, at 15.

\textsuperscript{220} These countries are Russia, Australia, Switzerland and Spain. Id.

\textsuperscript{221} Id.

\textsuperscript{222} U.S. Accused of Protectionism on Sanctions Against Russia and India, SATELLITE Wk., May 18, 1992, at 4. The Bush Administration alleged that the Russians violated their agreement to uphold MTCR restrictions in conjunction with their deal with India to supply the latter missiles. The former Soviet Union was also invited to informal consultations with COCOM over instituting common procedures for insuring against diversion of 'sensitive items to military or other unauthorized users.' Bradsher, supra note 134, at D18; see also Steven Greenhouse, \textit{A Move to Restrict Export of Strategic Technologies}, N.Y. TIMES, May 28, 1992, at D8.
2) on the targets of ballistic missile export control policies. These could be on regions, areas of special concern or specified proscribed end users; 3) on the items to be controlled; 4) on the actual controllability of the targeted items; 5) on appropriate licensing procedures and enforcement measures; and 6) by Russia and the United States on accountability to each other and on sanctions for violations.

3. A Final Solution: A New Treaty Regime

President Clinton could also impose a condition to the aforementioned interim measures and the continuation of Russia's full participation in the U.S. commercial space launch marketplace that a binding multilateral treaty on the non-proliferation of ballistic missiles must be concluded within a set number of years, with Russia as a supplier party to the treaty. This regime, like the Nuclear Non-Proliferation Treaty, would help ensure that exported technology is used only for peaceful purposes. It should be enacted with the purpose of stopping the diversion of ballistic missiles from peaceful purposes by installing an enforceable international system of safeguards. Additionally, this treaty regime should have as its purpose the curtailing of the ever-growing number of nations building ballistic missile stockpiles that threaten U.S. and world security. This could be accomplished by establishing limits, albeit in different amounts, for supplier and non-supplier nations on the amount of ballistic missiles they may produce and/or hold in reserve.

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223 These areas could address peaceful users, for example.
224 Finding Common Ground, supra note 107, at 113.
225 See generally Michael O'Hanlon et al., Controlling Arms Transfers to the Middle East: The Case for Supplier Limits, ARMS CONTROL TODAY, Nov. 1992, at 18.
226 Unlike the Nuclear Non-Proliferation Treaty, the Ballistic Missile Non-Proliferation Treaty should curtail ballistic missile transfers for non-peaceful uses. See generally Non-Proliferation Treaty, supra note 166.
227 This can be done through a regime compliance agency similar to the International Atomic Energy Agency created in the Nuclear Non-Proliferation Treaty. See id.
228 Id. An aim of the Nuclear Non-Proliferation Treaty is to stop the stock-piling of nuclear materials.
To be effective, its membership should include the nations that are advanced in the aerospace field and the potential suppliers of ballistic missiles such as the United States, the independent sovereign states of the former Soviet Union including Russia, China, France, Britain, Canada, Israel, and Italy, as supplier parties, and the rest of the world's nations as non-supplier parties. The supplier nations would need to agree to cooperate to ensure that missile and space launch technology is transferred only to other nations that have unambiguously peaceful space launch programs. Therefore, this regime, like the Nuclear Non-Proliferation Treaty regime, would act to ease access to this technology when used for peaceful purposes, but discourage its diversion for military uses.

A large problem lies in preventing the retransfer from nations who only intend to use such technology for peaceful purposes to those who plan to use it for other purposes. Therefore, on-site inspection of technological goods transferred from a supplier country to a non-supplier nation would be a necessary part of this treaty regime, as it has been in the Nuclear Non-Proliferation Treaty regime. President Clinton, by agreeing to the aforementioned interim measures with the former Soviet Union and allowing Russia full entry into the U.S. commercial space launch marketplace, can negotiate a new treaty regime which will establish the cessation of the world-wide proliferation of ballistic missiles. This will not only serve immediate U.S. and Russian interests, but will benefit world stability over the long term.

VII. A PROBLEM NEGLECTED: DOMESTIC CONCERNS

President Bush, by not allowing Russia entry into the U.S. commercial launch marketplace from a former Soviet

229 Unlike the Nuclear Non-Proliferation Treaty, this treaty should not exclude, by date, countries which are presently not supplier countries. See id.
230 See generally FINDING COMMON GROUND, supra note 107, at 134-35.
231 Id.
site, failed to address the current status of the United States economy. The United States itself has faced a budget crisis and a severe recession for several years. President Clinton should recognize that the domestic economic climate is not right for economic aid to a former enemy.\textsuperscript{232} With growing economic concerns at home, aid to the former Soviet Union is not as politically viable as it once might have been.\textsuperscript{233}

Public opinion is turning towards a course of action where the Soviets are allowed into the United States to trade goods and services rather than the United States doling out economic aid. For example, one commentator has stated when referring to the possibility of the United States purchasing the MIR space station: "Why throw charity at uncertain Soviet bureaucracies when we can do something that’s good for us, good for the Russians and good for opening reliable long term trade?"\textsuperscript{234} This is also a rational for allowing Russia full entry into the United States commercial space launch marketplace.

Furthermore, by assisting in the transformation of the Russian economy through the opening up of trade restrictions in the commercial space launch industry, the United States would assist in giving the people of Russia a sense of worth in their own accomplishments. Russia then could take pride in their own civilian industry which, in the long run, should give a boost to their economy and decrease their reliance on the military-industrial complex. At the same time, a reduction in future and current aid to Russia would allow the United States to use the money saved to help pay for domestic programs during the recession in the United States.\textsuperscript{235}

The United States could also save money by cutting the

\textsuperscript{233} See id.
costs associated with enforcing export controls on satellites to the former Soviet Union. Export controls cause the U.S. government and industry to absorb both economic and non-economic costs.\textsuperscript{236} Economic costs include lost business transactions, damaged international business relations and loss of world market share, while non-economic costs include re-occurring international political frictions and domestic political tensions.\textsuperscript{237} Therefore, it is in the interest of the United States to permit Russia full entry into the U.S. commercial payload market under the aforementioned criteria since it would help not only the former Soviet Union’s economy, but the United States’ as well.

VIII. BENEFITS OF RUSSIA’S ENTRY INTO THE COMMERCIAL SPACE LAUNCH INDUSTRY

A. BENEFITS FOR THE UNITED STATES SPACE PROGRAM

"Right now Soviet Space Industries have the know-how to build the best launch vehicles in the world, and the cheapest. Even with a quick renaissance of launch technology in the West, its rockets for many years will be much more expensive than Russia’s."\textsuperscript{238}

As demonstrated by this statement by Roald Sagdeev, former head of the Soviet Space Program, one advantage that would accrue to the U.S. Space Program in lifting the ban on the use of former Soviet expendable launch vehicles to boost United States manufactured payloads, would be access to the “best launch vehicles in the world.”\textsuperscript{239} But clearly the biggest benefit for the United States in permitting the full entry of the former Soviet Union into the U.S. commercial space launch marketplace is the other space-based trade it could spur.

\textsuperscript{236} See Homer E. Moyer & Linda A. Mabry, Export Controls as Instruments of Foreign Policy, 15 L. & POL’Y INT’L Bus. 1, 150 (1988).
\textsuperscript{237} Id.
\textsuperscript{238} Stewart, supra note 73, at 56, 63, 122 (quoting Roald Sagdeev).
\textsuperscript{239} Id. at 63.
For example, Art Dula,\textsuperscript{240} president of Space Commerce Inc., is pushing the idea to the United States to use Soviet booster rockets to launch the space station Freedom into orbit.\textsuperscript{241} Dula claims the United States will save approximately four billion dollars by allowing the former Soviets to launch the space station and that this would be a logical course for the United States to take.\textsuperscript{242} Dula explained that the United States has stated its intention to launch the space station Freedom into orbit in seventeen pieces on the space shuttle, but that Soviet boosters, which are larger and more powerful, could launch it in just two pieces.\textsuperscript{243} Furthermore, Dula alleges that by using Russian booster rockets the United States could save the expensive and short-lived space shuttle for more important missions.\textsuperscript{244} To quote Dula: "We're going to have to give these guys foreign aid. I think it's better that we buy from them, let them be proud of what they sell, then just give them money. It just seems to make sense . . ."\textsuperscript{245}

In line with this, the Clinton administration has recently ordered NASA to work with Russia in redesigning the space station.\textsuperscript{246} NASA may include in its plans the use of the Energyia booster rocket to launch the space station.\textsuperscript{247}

Another residual benefit of allowing Russian entry into the U.S. commercial space launch marketplace is demonstrated by the results of a joint study by Stanford University, the Soviet Union, and NASA. This study found that a

\textsuperscript{240} Art Dula was the authorized representative of the former Soviet Union in selling Soviet space goods and services to the United States. He is continuing in the same position for Russia.


\textsuperscript{242} Id.

\textsuperscript{243} Id.

\textsuperscript{244} Id.

\textsuperscript{245} Id.

\textsuperscript{246} Broad, \textit{supra} note 141. This use is not at odds with Commercial Space launch policy.

\textsuperscript{247} Id.
joint United States/Soviet/European/Japanese mission could put astronauts on Mars within twenty-one years at one-third the cost of options the United States is presently pursuing if the project uses Soviet manufactured heavy-lift booster rockets.\(^248\) Future projects such as this, which could now reach fruition for less money and in quicker time periods, instead face the threat of never occurring since the collapse of the Communist regime has caused a severe loss of funds to Russia's space program.\(^249\) By allowing Russia to sell its space launch services to U.S. payload manufacturers, an influx of hard currency could flow to the former Soviet Union's space program, keeping it financially viable.\(^250\)

Of equal importance, a long term benefit of easing restrictions aimed at the former Soviet Union in the U.S. commercial space launch market is that perhaps one day Russia's entire space industry would be opened to the free world.\(^251\) This would allow the United States and our allies to take advantage of other portions of Russia's space industry which are preeminent.\(^252\)

**B. BENEFITS FOR RUSSIA**

The immediate effects of President Clinton lifting his

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\(^{250}\) See Covault, supra note 75, at 18. (recognizing that "[S]oviet space launch operations have dropped to their lowest levels in 25 years, and the evaporation of a stable central government has already begun to affect planning for future U.S. space cooperation."); Proton Launch of INMARSAT Satellite Approved, supra note 87, at 2 (stating that on June 18, 1992, NASA signed a commercial agreement with the Russians to conduct technical tests on some of their space equipment).

\(^{251}\) See, e.g., Stewart, supra note 75, at 62 (discussing Sagdeev's inventions while affiliated with the Soviet space program); Proton Launch of INMARSAT Satellite Approved, supra note 87, at 2 (discussing NASA-Russian commercial space agreement).

\(^{252}\) For example, in June of 1991, the Soviets announced plans to launch the world's largest and most powerful communications satellite system in 1993, using technology from its military satellites. The satellite will have European configuration spot beams and will cover parts of Africa and Asia. It will have the capacity to carry five television stations, high definition television, radio and telephone calls. The Soviet Union Satellite Launch, SATELLITE NEWS, June 17, 1991, at 8.
predecessor's continuing ban on the full entry of Russia into the United States commercial space launch marketplace would rightly fall on the latter. Such a new commercial space launch policy could provide the impetus for the former Soviet space program to start aggressively marketing its launch services around the world on a competitive basis. This in turn would bring in much needed hard currency to a newly independent Russia without it having to beg for aid from the industrialized free world. Analysts agree that the best way to help the faltering former Soviet Union's economy is for the United States to buy its advanced space goods and accept its numerous offers for space services.

Furthermore, since arms sales were always heavily relied upon for generating hard currency for the former Soviet Union, it is important for world security to allow commercial industries to develop and replace military industries. Therefore, if Russia agrees to cease proliferating ballistic missiles and agrees to restrictions on access to technology and free market pricing, it should be allowed to regain the loss of the monetary benefit from arms sales, in part, by the sale of launch services to the U.S. commercial communications satellite market. This would give Russia's economy the impetus to change from one based on the military-industrial complex into one based on civilian industry.

Furthermore, as discussed, an influx of currency is necessary to save Russia's space program. The space sector


256 Russian President Boris Yeltsin has recognized the importance of space-related international trade for Russia's future success. See James R. Asker, U.S., Russian Space Pact Pledges Unprecedented Trade, Joint Flights, AVIATION WK. & SPACE TECH., June 22, 1992, at 24-25.
in the former Soviet Union has been in a state of "massive confusion." This situation is particularly acute with the formation of the Commonwealth of Independent States. Therefore, to save the former Soviet Union's space program, as both an asset to Russia and the world, there needs to be a direct influx of hard currency. President Clinton could supply hard currency for this purpose by dropping President Bush's ban on the launching of U.S. commercial payloads on former Soviet rocket boosters. Easing communications satellite trade restrictions would also help compensate for the loss of jobs because of the former Soviet Union's crackdown on the military industry in the recent past. The military establishment workers could then be reemployed in the civilian space industry, which would further aid Russia's economic recovery.

Another benefit of easing U.S. trade restrictions to allow Russian booster rockets to carry U.S. payloads is to transform one-time Soviet military rockets into rocket boosters used for peaceful space purposes. An example of this type of conversion occurred when the former Soviets began their remote sensing business, using a converted military satellite to relay data to earth. Additionally, Russia under the START Treaty can retain strategic missiles in excess of the treaty's limits for the purpose of delivering objects into outer space or the up-

257 McCain, supra note 253, at 79 (quoting Marcia S. Smith, Soviet space expert for the Congressional Research Service).
258 See Covault, supra note 75, at 18; see also Russian Space Program Will Fall Short of 1980s Launch Pace, SATELLITE NEWS, Oct. 12, 1992, at 4.
259 See Veloci, supra note 188, at 68.
260 Booster rockets used for lifting satellites into orbit are generally modified ballistic missiles or technically similar equipment. See, e.g., Jeffrey M. Lennovitz, U.S. Entrepreneurs Seek Russian SLBMs, AVIATION Wk. & SPACE TECH., Apr. 19, 1993, at 22.
per reaches of the atmosphere. \textsuperscript{263} The peaceful use of such one time military equipment by the former Soviet Union will assist in easing tensions over security between the newly independent Russia and the western world.

Such conversion, however, was not allowed to occur with ballistic missiles that were the subject of several other modern strategic and tactical offensive arms control treaties. For example, under the Intermediate Nuclear Forces Treaty (INF), \textsuperscript{264} the United States and the then Soviet Union were under an obligation to eliminate their intermediate-range and shorter-range ballistic missiles, and not to have such systems afterwards. \textsuperscript{265} The INF Treaty required that the missiles covered by the treaty be destroyed by various methods, including demolition or burning, depending upon the type of missile. \textsuperscript{266} This process of elimination was to be completed within three years after the treaty went into force. \textsuperscript{267} Therefore, as of 1990, there were no longer any missiles covered by the treaty in existence.

Therefore, Russia, under several strategic and tactical offensive arms control treaties, could not convert covered ballistic missiles into commercial space expendable launch vehicles. This prohibition, if incorporated into future United States-Russian arms control agreements, has a negative and a positive side. On the negative side, Russia must spend additional monies to build expendable launch vehicles, as opposed to following the more economical route of converting treaty covered ballistic missiles into commercial space launch vehicles. On the positive side, U.S. proliferation concerns are lessened when ballistic missiles under an arms control treaty are destroyed under an accountable system and not converted

\textsuperscript{263} House Comm. on Science, Space, and Technology, supra note 11, at 84.
\textsuperscript{265} Id.
\textsuperscript{266} U.S. Arms Control and Disarmament Agency, Arms Control and Disarmament Agreements 422-30 (1990).
\textsuperscript{267} Id.
to commercial use. This is because accountability for ballistic missiles is less certain under a conversion program than a destruction program, since even transformed ballistic missiles retain their inherent dual-use capability.268

Another benefit for the former Soviet Union if allowed full participation in the U.S. marketplace for commercial space launches, is that Russia could eventually privatize its space industry and form corporations like General Dynamics and Rockwell.269 This too will assist in Russia’s transformation towards a free market economy. Additionally, Russia, by living up to U.S. restrictions on its entry into the commercial space launch marketplace, could prove itself as a trustworthy trading partner to the free world. This in turn would assist it in attracting other international trade.

C. Benefits to the Consumers of Telecommunications Services

A large benefit gained by allowing the former Soviet Union to offer commercial launch services to United States payload manufacturers is reasonably priced telecommunications services. A residual benefit for the United States will be the ability to carry out two treaty obligations and one statutory mandate, which also require the provision of satellite telecommunications services at reasonable rates. INTELSAT is the International Telecommunications Satellite Organization which provides various communications services to world-wide users.270 The United States is a party to the INTELSAT treaty.271 Under the INTELSAT treaty, the parties to the agree-

268 See supra part VI.C. (discussing ballistic missile proliferation concerns of the United States).
271 Id.
ment, in setting up a global commercial communications satellite system, state in the preamble that the organization is: “Determined . . . to provide, for the benefit of all mankind, through the most advanced technology available, the most efficient and economic facilities possible consistent with the best and most equitable use of the radio frequency spectrum and of orbital space . . . .”

INMARSAT is the International Maritime Satellite Organization. The United States is also a party to the INMARSAT convention. The INMARSAT treaty, in establishing a maritime satellite system, states in its preamble that one of the organization’s main purposes is: “to make provision for the benefit of ships of all nations through the most advanced suitable space technology available, for the most efficient and economic facilities possible consistent with the most efficient and equitable use of the radio frequency spectrum and of satellite orbits.”

The United States Congress, in establishing the Communications Satellite Corporation (COMSAT) in the Communications Satellite Act of 1962, stated in its declaration of policy and purpose:

The new and expanded telecommunication services are to be made available as promptly as possible . . . . In effectuating this program, care and attention will be directed . . . toward efficient and economical use of the electromagnetic frequency spectrum, and toward the reflection of the benefits of this new technology in both quality of services and charges for such services.

Therefore, under both the INMARSAT and the INTELSAT treaties, the organizations are charged with offering satellite telecommunication services at economical prices.

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272 Id. at 3814 (emphasis added).
274 Id.
275 Id. at 3 (emphasis added).
to their users.278 Furthermore, under the Communications Satellite Act of 1962, COMSAT must offer its services in an economical manner.279 Clearly, the United States is under two treaty obligations and one statutory mandate to offer economical satellite telecommunication services without compromising the quality of services.

For the United States to fulfill its international obligations and statutory mandates it must allow Russia to enter the U.S. commercial space launch marketplace. Russian launch services will presumably be more economical to use than U.S. commercial space launch services, even under the constraint of fair pricing agreements, and the quality of telecommunication services would not be compromised.280

Another consideration in allowing Russia entry into the U.S. commercial space launch marketplace is that if INTELSAT or INMARSAT did choose Soviet booster rockets to launch its telecommunication satellites into orbit, U.S. manufactured payloads would be prohibited from being launched upon them.281 Under the 1990 Commercial Space Launch Policy, U.S. manufactured payloads are not permitted to be launched by Russian expendable launch vehicles except under limited circumstances.282 President Clinton must act to change the 1990 Commercial Space Launch Policy in order to ensure that U.S. payload manufacturers have the opportunity to compete for INMARSAT and INTELSAT launches performed by former Soviet expendable launch vehicles.283 This will

280 See Quayle Advises White House, supra note 3, at 3. McDonnell Douglas claimed that Russian launch prices were cheaper than those of United States companies. Id.
281 In June of 1992, President Bush approved the first launch of a U.S. commercial communications satellite on a Russian booster rocket for an INMARSAT mission. Proton Launch of INMARSAT Satellite Approved, supra note 87, at 1; see also supra part IV.C.
282 Launch Policy, supra note 2, at M-4.
283 Despite President Bush's recent authorization for Russia to launch a U.S. communications satellite for INMARSAT, neither Russia nor the U.S. commercial
ensure that U.S. payload manufacturers can compete in big ticket commercial space telecommunications projects by international consortiums that have chosen Russia as the launch service provider. In the long run, the benefits of more economical launches would accrue to the ultimate beneficiaries of U.S. telecommunications services, American consumers.

IX. CONCLUSION

The opening up of the commercial space launch marketplace to the former Soviet Union could lead to other ventures which bring in capital to Russia, thereby assisting in its transformation to a free market economy, and ultimately, to a democratic ally of the United States. While allowing Russia full access to the U.S. commercial space launch marketplace might be greeted by staunch protests from home and abroad, President Clinton should be a world leader in heading off the return of Communism. President Clinton should take the initiative to negotiate executive agreements with the former Soviet Union, as his predecessor did with China, concerning technology transfer objectives and free market pricing. He should institute interim measures until a ballistic missile non-proliferation treaty regime can be formally concluded. In return for non-proliferation agreements, President Clinton should allow Russia full entry into the United States commercial launch marketplace and push for such reforms internationally.

The rationale behind opening up the commercial space launch industry to the former Soviet Union is best summed up by a Moscow commentator: "Understandably . . . the (Western) ban on cooperation with the Soviets was ideologically motivated, but it seems as though this obstacle crumbled . . . [a]nd if the Western countries enter into communications satellite industry is guaranteed that this policy will continue under the Clinton administration. See Proton Launch of INMARSAT Satellite Approved, supra note 87, at 1.

284 See supra part V.D.
normal cooperation with us, space could be one of the few areas where the U.S.S.R. has something to offer.”

In sum, the ideals and self-interest of the United States must continue to direct considerable energy and creativity at the former Soviet Union. This time, however, it must not be directed at destroying an enemy, but at fostering a democratic, free market, economic ally. President Clinton can further this goal by allowing newly-independent Russia to enter the U.S. commercial space launch marketplace as a full participant. Agreements covering free trade, ballistic missile non-proliferation, and technology transfer restrictions are the means to this end.