STATEMENT ON

THE PRESIDENT'S STRATEGIC DEFENSE INITIATIVE

BY

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BEFORE THE

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INTRODUCTION

Two years ago President Reagan expressed the conviction that free people should live secure in the knowledge that their security did not rest upon the threat of U.S. retaliation to deter a Soviet nuclear attack. At that time, he described the threat posed by increasing Soviet nuclear arsenals, and he proposed bold steps, embodied in a new initiative, to address that threat. This initiative calls for a comprehensive and intensive research effort to pursue recent advances in defense technology that have the potential for strengthening deterrence by introducing a defensive component to our deterrent posture.

The SDI research program seeks to prove the potential for providing defensive alternatives to the current situation. As SDI research bears fruit, the U.S. may find ways to enhance deterrence and reduce instability by increasing the uncertainties that an aggressor, in contemplating an offensive strike, must face. A potential aggressor will be far less likely to mount an attack if he harbors grave uncertainties about the outcome of such an attack. Reducing, and eventually eliminating, the military utility of ballistic missiles is also significant. If deployed in significant numbers these systems can permit an aggressor to reduce rapidly an opponents ability to retaliate effectively. We can significantly improve overall stability and enhance deterrence if we can reduce the Soviet potential for conducting "first strikes".

Deterrence based upon an increasing contribution of defenses has the advantage of enabling the West to bring to bear its technological strength on defensive systems that emphasize non-nuclear solutions to nuclear problems. These systems offer the prospect of being far more compatible with the basic values and beliefs of our society. Finally, in the unlikely event deterrence should fail whether through irrationality or accident, defense offers the possibility of saving many lives. SDI is unique in that it offers the potential for protecting civilian assets as well as military resources. In an attack scenario, ranging from accidental launch to full scale war, a future SDI system could save lives and cities as well as preserving the strength and retaliatory capability of the U.S.
The Strategic Defense Initiative is designed to answer a number of fundamental scientific and engineering questions that must be addressed before the promise of these new technologies can be fully assessed. It is a research program, not a program to deploy weapons. The question of whether to proceed with deployment of an actual ballistic missile defense system would arise in the years to come after the SDI research has generated the technology for effective defenses that are achievable and affordable.

Today I would like to describe for you the goals of the program and what is required to meet those goals; our approach to achieving the technical capability to support defensive options; the planned development pace; what our research and development program is designed to do and how it is structured; the current program status and plans for FY 1986; and the resources required.

PROGRAM GOALS

The goal of the Strategic Defense Initiative Organization is to conduct a vigorous program of research on emerging technologies in search of a better basis for a credible deterrence and to strengthen the stability of peace through strategic defense. We envision that such a pursuit will offer incentives to the Soviet Union to join with us to reduce significantly or even eliminate ballistic missile forces. The higher goal, of course, is increasing security of both nations, our allies, and the survival of humanity.

In achieving these goals the U.S. will continue its efforts to achieve meaningful and verifiable reductions in offensive nuclear forces. Soviet reaction to our initiative already demonstrates that they have taken seriously the impact of the emergence of these technologies on their own strategic plans. The Soviet Union has had a large SDI-equivalent program of its own for some years. They obviously appreciate the vast potential of the technologies and the bold objectives. It seems both prudent and necessary that first we fully understand the potential of such a defense and, second, that we use our best talents to bring these technologies along
for what they may bring to the higher purposes of peace. The challenge to
the SDI is to provide viable defensive technology options that permit a
future decision on whether or not to implement an effective defense against
ballistic missiles.

DEVELOPING DEFENSIVE OPTIONS

As you know, the U.S. is taking steps necessary to underwrite
stability in the near term via the President's strategic modernization
program and our complimentary arms reductions negotiations. Even as we do
so, we must also consider the nature of stable deterrence in the future.
For the past twenty years, we have based our concept of deterrence on the
ability to threaten retaliation against any attack and impose costs on an
aggressor that clearly outweighed any potential gains.

This basic idea also served as the foundation for the U.S. approach
to the SALT process. At the time that process began, the U.S. concluded
that offensive deterrence was not only sensible, but necessary, since we
anticipated that neither side could develop the technology for a defensive
system that could effectively deter the other side.

Today, however, the situation is different. New technologies offer
the possibility of defenses that did not exist before. Of equal impor-
tance, the trends in the development of Soviet strategic forces, both
offensive and defensive, as well as the problems of Soviet deception
and non-compliance with existing agreements, will over the long term,
increasingly call into question the fundamental assumptions upon which our
current strategy is based.

Concerning offensive forces, the Soviet Union's relentless improve-
ment of its ballistic missile forces has steadily eroded the fundamental
survivability of our land-based retaliatory forces. And, concerning
defensive forces, the Soviet Union has continued to pursue strategic
advantage through the development of active and passive defenses with
increased capability to counter surviving U.S. retaliatory forces.
These trends indicate that long-term U.S. dependence on offensive forces alone will likely lead to a steady erosion of stability and deterrence effectiveness. Should these trends be permitted to continue and the Soviet investment in both offensive and defensive capability proceed unrestrained and unanswered, the resultant condition will seriously undermine our ability to deter aggression against ourselves and our allies. It is crucial, therefore, that the United States and the West as a whole keep options open in both the offensive and defensive area.

For that reason, on March 23, 1983, the President announced his decision to take an important first step by directing the establishment of a research program, the Strategic Defense Initiative, with the aim of exploring the potential of defense technologies to support a better basis for deterring aggression, strengthening strategic stability, increasing the security of the United States and our allies, and eventually eliminating the threat posed by ballistic missiles.

The SDI research seeks to provide future decision-makers with technologies which could:

-- Improve significantly the stability in the nuclear balance.

-- Create a future environment that would serve the security interests of the Soviet Union as well as those of the U.S. and our Allies.

-- Enhance prospects for negotiated reductions in nuclear arsenals.

-- Help improve the chances for survival of humanity.

The United States does not view defensive measures as a means of establishing military superiority. Because we have no ambitions in this regard, deployments of defensive systems would most usefully occur in the context of a cooperative, equitable, and verifiable arms control environment that regulates the offensive and defensive developments and deployments of the United States and Soviet Union. We are, of course, aware that
when a shift is made to a different and enhanced basis for deterrence, careful consideration must be given to preserving a stable environment. While the SDI research is proceeding to identify defensive options, we are doing so with this in mind. At the same time, the U.S. Government is examining ways in which the offense/defense relationship can be managed to achieve a more stable balance that includes offensive arms reductions. We seek above all to ensure that the interaction of offensive and defensive forces removes the potential for destabilizing first strike options.

The SDI program directly responds to the ongoing and extensive Soviet anti-ballistic missile effort, which includes all the actual deployments permitted under the ABM Treaty. It provides a powerful deterrent to any Soviet decision to rapidly expand its ballistic missile capability beyond that permitted by the ABM Treaty. This, itself, is a critical task.

However, the overriding importance of SDI to the United States, our Allies, and the world in general is that it offers the possibility of radically altering the dangerous trends I mentioned earlier by moving to a better, more stable basis of deterrence, and by providing new and compelling incentives to the Soviet Union for seriously negotiating reductions in nuclear arsenals.

Therefore, as we look to the future, the U.S. objective is a radical reduction in the power of nuclear ballistic missiles, as well as the stabilization of the relationship between offensive and defensive nuclear arms, whether on earth or in space. If the promise of SDI is achieved, we will have the opportunity to enhance deterrence significantly by turning to a greater reliance on defensive systems—systems which do not threaten anyone.

ACHIEVING A TECHNICAL CAPABILITY

We see as our chief purpose the opportunity to offer a high confidence basis for decisions to pursue a defensive option. To do so, our research and technology program must do several things. It must conduct a broad-based research effort that expands and accelerates the progress of
the relevant technologies. It must identify and evaluate the potential effectiveness of candidate ballistic missile defenses that could be assembled and deployed from those technologies. It must show how those defense options can be operated and maintained to do the job.

Our current program does not harbor a preconceived notion of what an effective deployment would contain. It proceeds from an initial identification of promising technologies and related concepts molded into a defense architecture. It includes a wide range of such concepts with emphasis on nonnuclear technologies. It has no single design or construct identified as the best or the most appropriate.

To achieve our major goal, we must bring along the emerging technologies in a logical, timely way. The overall research task is expected to bring the technologies to maturity in three developmental thrusts. First, we need to validate the most mature technologies to provide the opportunity for our national leadership to decide whether or not to pursue initial defense options based on those technologies that are affordable, survivable, and effective. They could decide on an initial step which implements a defense against the threat we believe will be in place at least until early in the next century; or they could decide to reserve the options as a simple hedge against Soviet breakout and development of a defense against U.S. ballistic missiles. Second, we need to insure the long-term viability of future defensive options by demonstrating by the early 1990s the feasibility and readiness of technologies to support the validation of more advanced defense options. And third, we need to conduct research that encourages the innovation of the U.S. scientific community in a response to the President's challenge to aid SDI research in identifying exciting new approaches for eliminating the threat of ballistic missiles.

THE TECHNICAL DEVELOPMENT PACE

With these goals to guide the research program and the tasks to be performed, the SDI pace is being geared to allow decisions as early as the 1990s on whether to deploy advanced defensive options. A notional schedule for research and possible development and deployment would be comprised of four phases:
-- A research phase, begun by the President in his 1983 initiative, would run into the early 1990s when decisions could be made by a future President and the Congress on whether or not to enter into systems development. This research activity would be conducted within the constraints of our current treaty commitments.

-- The systems development or full-scale engineering development phase could begin as early as the 1990s, assuming a decision is made to go ahead. During this period prototypes of actual defensive system components would be designed, built and demonstrated.

-- A transition phase would be a period of incremental, sequential deployment of defensive systems. This phase could be designed so that each added increment would further enhance deterrence and reduce the risk of nuclear war.

-- The final phase would be a period of time during which deployment of highly effective multi-phased defensive systems would be completed and during which ballistic missile force levels would be brought to a negotiated nadir.

As a research program, SDI is focused on the research phase to bring defense options to the point where U.S. leaders, after consultations with our allies, could make decisions on whether or not to proceed to the system development phase and subsequent deployment.

THE RESEARCH AND TECHNOLOGY PROGRAM

To provide the technological solutions needed, we are exploring all facets of a layered defense-in-depth. Experience with strategic defenses has taught us that a layered, defense-in-depth offers the best chance of achieving the required effectiveness against a broad range of existing and potential future threats and attacks. In pursuing the technology for such defenses, we seek to:
Capitalize on the synergism derived from repeatedly engaging enemy ballistic missiles with a mixture of weapons, enabling the progressive layers to work together to mitigate any weaknesses of the individual elements.

Exacerbate the uncertainty of a potential attacker in his ability to succeed in his attack by presenting him with a complex defense suppression problem.

Deny damage from limited ballistic missile attacks and limit damage from full-scale attacks should deterrence fail.

In pursuing defense-in-depth options, a broad range of technologies must be developed in order to perform the five basic functions of any defense:

- Detection of the threat and alerting the defense elements
- Acquisition and tracking of the threat to locate it in time and space
- Identification of the threat and discrimination against decoys to insure efficient allocation of the defense resources
- Interception and destruction of the threat
- Assessment of the results of the engagement

These five functions are performed repeatedly in the separate engagements of the ballistic missiles in their four phases of flight (boost, post-boost, midcourse, and terminal).

Our challenge is complex; however, we are supported by three decades of research into ballistic missile defense to give us insight into the critical issues that must be resolved before we can field an effective defense. As the first step in formulating our program we formed the 1983 Defensive Technologies Study Team (DTST) to examine of the potential of emerging technology to provide robust defenses. DTST took an optimistic view, and concluded that:
o powerful new technologies are becoming available that justify a major technology development effort offering future technical options to implement a defensive strategy;

o focused development of technologies for a comprehensive ballistic missile defense will require strong central management;

o the most effective systems have multiple layers, or tiers;

o survivability of the system components is a critical issue whose resolution requires a combination of technologies and tactics that remain to be worked out;

o significant demonstrations of developing technologies for critical ballistic missile defense functions can be performed over the next ten years that will provide visible evidence of progress in developing the technical capabilities required of an effective in-depth defense system.

This team based its conclusion, to a large extent, on its ability to identify rapidly emerging and/or maturing concepts for all the functional requirements of a layered defense — technology that will create major new increases in our capability to, among other things,

-- Perceive the threat and the ensuing engagement at great distances and at high resolution.

-- Process the sensor data, create information, and assimilate and display the large volumes of information and data in near-real time.

-- Erect large lightweight space structures and the computational capability to control the structures in a dynamic environment.

-- Repair and maintain satellites while on orbit and achieve new economies in operating in space. Miniaturize and package high density capabilities in sensing and computation.

-- Deliver destructive energy to the target over thousands of kilometers at speeds not yet attained before.
The DTS also cited four specific issues that “have an impact on the viability of a defensive strategy” in the presence of a responsive threat unconstrained by arms control that guide is in our investment strategy:

--- Achieving efficient boost- and post-boost phase intercept
--- Achieving effective discrimination in post-boost and midcourse phases
--- Survivability of all space-based defense assets against nuclear and mirror-image threats
--- Small, low cost midcourse interceptors.

To focus our efforts we have grouped our activities into five program elements. These elements are designed to (1) advance the technology base, (2) conduct experimental demonstrations that validate the technology, and (3) conduct concept and development definition efforts which focus the overall technology development on those critical issues that must be resolved to establish feasibility.

The Sensors Program includes a mixture of some of the most and least mature technologies being developed by the SDIO. It includes technology base efforts to support surveillance, acquisition, tracking, and kill assessment that provide data on the observables from ballistic missiles and their warheads; new radar and optical sensors capable of obtaining detailed imagery of warheads and warhead deployment; and on-board signal and data processing capable of performing necessary computations right at the sensor. The demonstration experiments include three general classes; boost phase surveillance, midcourse tracking, and terminal phase tracking and discrimination. Space-based surveillance experiments are planned for the early 1990s to demonstrate survivable means of detecting and tracking boosters from very high altitudes in space. Other space-based sensor experiments are to be conducted in the same timeframe to explore our ability to track tens of thousands of objects during midcourse. Such platforms may ultimately include active sensors to aid in discrimination. An airborne sensor experiment will determine whether forward-based aircraft can perform
as an adjunct to ground-based radars to aid in target discrimination. A terminal imaging radar experiment is planned to demonstrate rapidly evolving ground-based radar capabilities.

The Directed Energy Weapons technology program is advancing the state-of-the-art in the technologies for (1) high powered beam generation; (2) optics and sensors for correcting and controlling the high powered beam; (3) large, lightweight mirrors and lightweight magnets for focusing the beam on the target; (4) precision acquisition, tracking, and pointing to put and hold the beam on target; and (5) fire control to capitalize on those unique features of directed energy weapons such as the ability to measure and control the energy delivered to the target. The DEW technology program includes major demonstrations at the subsystem level in the four concepts currently being examined: space-based lasers, ground-based lasers, space-based particle beams, and nuclear driven directed energy. These concepts are candidates for boost and post-boost phase intercept and for discrimination functions in the other phases. In addition, selected subsystems for these concepts will be integrated in on-the-ground experiments designed to test interface approaches and resolve technical issues arising from the integration. The work on nuclear driven directed energy is largely pursued by the Department of Energy and is designed to establish its technical feasibility. Equally important, the work insures that the U.S. understands the potential impact of these emerging concepts on future military capabilities.

The Kinetic Energy Weapons technology contains some of the most mature technology and its efforts include interceptors and hypervelocity gun systems for midcourse intercept, terminal intercept, defense of space platforms, and boost phase intercept. Technology base efforts include developments needed for fire control, guidance and control, warheads and fuzing for guided projectiles, hypervelocity launchers, and high performance interceptors. The program calls for hardware demonstrations of kinetic energy weapon systems capabilities.
The Lethality, Survivability, and Key Technologies Program provides critical supporting R&D. Understanding the vulnerability of ballistic missiles to the various kill mechanisms is fundamental to assessing their effectiveness against current and responsively hardened targets. Survivability to mission completion, particularly of any defense space assets, is fundamental if defensive options are to be viable. Economical space transportation, on-orbit logistics and maintenance, kilowatt/megawatt sources of power, and multi-megajoule energy storage and conversion are potentially key needs in an affordable defense deployment. Lethality and target hardening efforts will provide the basic theory underlying kill mechanism/target interactions, the resulting damage, and the response of the target to damage, and fundamental limitations in hardening countermeasures.

The survivability problem includes substantial technology development, particularly in the case of space-based components. It also includes identification and assessment of innovative survivability hardware and tactics and evaluations of the survivability of conceptual designs. Space transportation, logistics, and space power efforts are designed to take advantage of existing DoD and NASA definition efforts and to expand them into the definition and satisfaction of the more demanding requirements of a defense-in-depth.

The Systems Concepts and Battle Management Technology Program is designed to allow intelligent choices among competing approaches to defense architectures and to develop the technologies necessary to allow eventual implementation of a highly responsive, ultra reliable, survivable, endurable and cost effective battle management/C3 system. We will perform threat analyses, mission analyses, formulation, conceptual design of defensive architectures and performance requirements definition, and system evaluation for all levels of a multi-layered ballistic missile defense. The battle management/C3 efforts will provide the tools, methods and components for development and eventual implementation of the system and to quantify risk and cost of achieving such a system.
STATUS AND PROGRESS

As you may recall, the President directed the creation of the Strategic Defense Initiative Organization to be placed directly under the Secretary of Defense. We were purposely organized for centralized planning and direction with decentralized execution through the Services and Defense agencies of the DoD and in cooperation with other departments and organizations of the Government. We had established an initial program with intermediate goals and a pace that would allow us to reach our main objectives. Reductions in FY 1985, however, have necessitated postponement of some new starts and enhancements to existing programs.

Many of these ongoing activities are already showing substantial progress. For example, last June, the Army Homing Overlay Experiment demonstrated the capability of a non-nuclear missile to intercept and destroy an incoming warhead outside the earth's atmosphere. Directed energy research devices are already operating at several laboratories. These include a neutral particle beam device at Los Alamos, and free electron and chemical laser devices at Los Alamos, Livermore, and contractor facilities. Additionally, progress is exceeding expectations in many areas, including railgun technologies as well as sensors and cryogenic refrigeration devices.

As we now complete our initial year we have assimilated existing programs, organized them into groupings of major efforts, and organized the start of some new activities. Our FY 1986 program will complete this beginning process. We are requesting $3.8 B for expenditures in five program elements consisting of some 73 tasks. I will only cite a few examples that characterize our planned FY 1986 activities. The details of what we plan are in classified summaries provided to Congress and we are prepared to discuss these details in classified testimony or briefings to you and your staff.

In Surveillance Acquisition and Tracking we will:

--- Begin to bring on-line new capabilities for signature and background collection.
--- Initiate important new technology efforts in optics and radar imaging.

--- Complete the initial concept definition of several major surveillance demonstrations.

--- Continue the development of advanced architectures for high speed signal processing.

In Directed Energy Weapons Technology we will:

--- Complete initial concept definition of a space-based laser, define required demonstrations to validate that technology, continue the definition on Space Laser experiments, and continue the identification of feasible and promising approaches for advanced SBL concepts and components.

--- Complete key experimentation of the feasibility of critical components in ground-based laser technology; complete experiments to support high brightness excimer lasers and short wavelength, free electron lasers; and continue basic technology development for the ground and space segments.

--- Establish neutral particle beam concepts feasibility through experiments using the Accelerator Test Stand and continue theoretical and laboratory experiments designed to prove technologies for beam generation, control, pointing, and propagation, along with exploration of exciting new concepts for charged particle beams.

The Kinetic Energy Weapons technology program will:

--- Complete initial investigations of the key technologies for the homing payload of an endoatmospheric terminal interceptor and initiate brassboard demonstrations.

--- Continue validation of component technologies for exoatmospheric nonnuclear kill interceptors.

--- Select hypervelocity launcher technology baselines and complete initial concept design.
Initial design and assessment of requirements on an exoatmospheric reentry vehicle interceptor technology will be completed in FY 1986. We will define a fundamental configuration and formally approve it by the end of that year.

We plan to investigate through experimentation the feasibility of integrating guided, high-g tolerant, hit-to-kill munitions in FY 1986.

During this current year we are establishing baseline requirements and candidate configurations for fault-tolerant computation concepts; developing software methods and tools; developing methods for weapons release and protection against malfunctions; and generating the vast number of algorithms that will be required for a multi-layered, large-scale battle management capability. Our efforts in FY 1986 will continue these investigations.

Our Systems Analyses activities are focused on the development of architectures, models, and simulations so that we can determine performance and evaluate effectiveness of the SDI technologies in all phases. In FY 1986 we will begin to evaluate technologies and designs and start detailed analyses of major issues and architectures. Our new Battle Management/C³ Development Evaluation Facility will support this effort when completed.

Survivability experts are already involved in supporting the architecture and research activities associated with SDI. In FY 1986 they will increase their activity in surveying and assessing ongoing work. To develop the whole technology base, projects in passive and active countermeasures work will expand appreciably as candidate concepts are selected for design which could be tested in the coming years. Contracts will also be initiated to stimulate innovative ideas for enhancing survivability.

The lethality experts are bringing their various projects into line so that comparable results will be available on the relative vulnerabilities resulting from the kinds of kill mechanisms we are investigating. In FY 1986 we will be validating effects models, bringing facilities up to
capabilities to test, and performing experiments of specific kill mechanisms or specific materials and structures in specific environments.

The multi-organization activity investigating the SP-100 nuclear power subsystem will shift to selection and awarding of a contract to do detailed design work for test articles. The multi-megawatt project will concentrate on a final feasibility decision and the awarding of follow-on studies for approximately six concepts.

Our efforts investigating logistics will concentrate on the completion of the studies on both immediate and longer term goals for promising technology pursuits and a reasonable investment strategy; such as how to reduce significantly launch costs.

RESOURCE REQUIREMENTS

The ongoing activities and resources that the Strategic Defense Initiative received at its inception consisted of many service and agency programs, plus resources for investing in new starts and for tailoring the existing programs to SDI needs. One ongoing effort was the Army Ballistic Missile Defense program. A second effort involved improved missile launch detection programs for warning of nuclear attack. The majority of the resources previously planned for this first group of programs were, in fact, applied by the SDIO to that group. Intensive planning and evaluation activities over an 18-month period from March 1983 by independent study groups and the SDIO staff, supported by DoD Services and Agencies, NASA, and DoE, resulted in plans to invest additional resources to refocus and enhance these existing programs and begin needed new ones. Such planning activities will continue for at least the remainder of FY 1985.

We estimate that the SDI will cost about $26 billion between fiscal years 1985 and 1989. This amount represents less than 2% of the defense budget, and less than 15% of the Defense research budget for this period, and is less than is proposed for strategic offensive research and development. The Department of Defense and Department of Energy had planned to request between $15-18 billion during this period for related research.
activities, even without a new focus on ballistic missile defense. Indeed, many of the new technologies, such as sensors, were already recognized to have great potential for a wide range of defense missions.

In the SDIO proposed budget, the largest single item is the sensors program, which represents almost half of the total program. Work in weapons-related areas is about evenly divided between directed energy and kinetic energy weapons. It is particularly important to note that about 5% of the SDIO budget has been reserved for innovative science and technology programs.

**SDIO BUDGET SUMMARY**

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<th>SDIO PROGRAM</th>
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**CONCLUDING OBSERVATIONS**

-- If one had collected newspaper and periodical coverage over the two years since the President’s call for a defense initiative, one could have easily assembled nearly a yard high stack of material on what the press has become fond of calling "Star Wars."

-- As one whose job is, in part, to insure that the nation understands our Initiative, reading that material is a frequent reminder of one’s failures to communicate.
I suppose those failures to communicate are hardest to take
when reports suggest that we are developing systems to deploy
in the near term that may not

- Contribute to our security, or
- Be effective, affordable, or survivable

and may, in turn,

- Be destabilizing, and
- Violate arms control agreements

and half a dozen similar negative arguments.

But I also see an encouraging trend away from the hard line and
frequently simplistic postures taken in the early public dis-
cussions.

The trend I see is away from posturing toward hard nosed debate
between individuals with honestly held convictions on these
critical issues.

The trend is away from "it will or it won't" toward creating
the best definition of the achievements needed before the
nation could make a decision to proceed with confidence down
this new path.

And that is my primary job—to provide the technical achieve-
ment that can give substance to this very important debate.

Which brings to mind a second important trend; we have gotten
better at articulating what the program is and presumably the
press is getting better at listening to what we are saying.

Incidentally, I measure this trend by how often I see the
phrase "so called Star Wars" in print and how few times someone
discovers a long articulated facet of the program and describes
it as a "change in direction."

The key points that correctly describe the SDI to the nation
are appearing more frequently.

For example:
o We are conducting a research and technology program; there has been no decision to deploy defenses. A decision on whether to develop and deploy on effective defense cannot be made until the Initiative yields the necessary technical options and the technologies to support such a decision.

o The program is pursuing more than exotic beam weapons based in space designed to "zap" ballistic missiles as they rise from the earth; its success depends on demonstrating the technical feasibility of ground, air, and space-based concepts for multi-tiered defense that can be assembled in various architectures to enhance deterrence, increase stability and ensure our security and that of our allies while moving us away from our current dependence on the threat of prompt nuclear retaliation.

o These options may or may not contain defense weapons based in space. But if they do, they will threaten attacking missiles and not threaten people on earth.

I hope my appearance today can advance this dialogue and understanding of what the SDI is about.

I am excited by the challenge and the responsibility for bringing this much needed Initiative to fruition.

In accomplishing this goal we will have pushed the level of technical achievement across a spectrum of technologies that are broadly applicable to defense needs.

We will have resolved many outstanding issues about the future role and impact of such emerging technologies as directed energy.

And, of course, we will give a future President, the Congress, and our allies the necessary ingredients for taking the first step on the road to eliminating the destabilizing threat of ballistic missiles.
I am pleased that I have had and will have the opportunity to work with you and your staffs so that together we may insure that the nation and our allies understand what we are doing, why we are doing it, and how we plan to evaluate whether we have succeeded. I am also looking forward to engaging in that challenging dialogue between opponents and advocates that will ultimately define that criteria for success. And finally, I am resolute in opposing the preconceived solution, the ill conceived criticism, or the notion that we are preordained to failure in this enterprise.

Thank you for this opportunity to present our research program.