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MEMORANDUM

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SUBJECT: In Defense of SDI

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"SAFEGUARD"

A "Low Numbers" Interim Space Defense
against
Misuse and Proliferation of Nuclear Systems

Summary: The purpose of this memorandum is to outline a graduated approach toward achieving the SDI objectives - with important interim capabilities. Such an approach is deemed necessary in light of the tremendous opposition and real obstacles the SDI program will encounter.

It is argued that SDI has to assure itself of the 'Intellectual High Ground' and that this is assured by the achievement of a demonstrated "Low Numbers" Interim Space Defense Capability. "Safeguard" is suggested as a possible name for denoting such an interim goal.

The Merits of SDI: The merits of the President's Space Defense Initiative are obvious to most men of good will. The initiative is equal in importance to the Manhattan Project or the Apollo program. Among the merits of SDI can be listed

- * the removal of the constant Soviet threat of mass destruction, which constitutes a major change in the outlook for international stability and sanity of relations;
- * the maintenance of a broad US technology push across a whole spectrum of 'Leading Edge' research and development areas;
- * the advancement of US leadership in Space for decades to come.

You may be able to add several more.

Examples of technology advances pushed by SDI are many and include: electronic devices, sensors, information processing electronics, communications, large platform technologies, displays, radars, shortwave lasers, energy systems (nuclear, solar), artificial intelligence, robotics, propulsion and control. Again, one may be able to add many more examples.

Because of the very importance of SDI, the opposition will be fierce, and hypocritical self-righteousness will know no end.

Soviet Opposition to SDI: The persistent Soviet interest in starting talks on the "demilitarization" of Space, earlier efforts of the Soviets in the use of international legal and regulatory protectionism aimed at preventing the accrual of significant US advantages, such as provisions in the "Outer Space" treaty, the opposition to the Space Shuttle program from its inception (late 1950's), approval (1972) and implementation, and the prompt call by Soviet leaders to highlight the claimed military uses of the Space Shuttle at the time of the first launch, are all indications of

- * the extreme interest by the Soviets in any matters relating to Space and
- * a realization of their own enduring inferiority in Space technology matters.

It is the clear intent of the Soviet Union to prevent a US expansion of capabilities in an area where the US has a substantial lead and where an increase of US activities may well relegate the Soviet Union to a position of permanent technological inferiority in the decades to come, made worse by a lack of economic resources and an infrastructure hindering innovation.

To understand the depth of the Soviet concern it is important to recall the central place Space has occupied in Soviet minds:

- 1) The secretive "surprise" launch of Sputnik (1957) was presented to the world as proof of the superiority of the Soviet system;
- 2) The similarly "surprising" first launch of man into space (1961) was taken as further evidence of the inexorable advance of the Soviet system;
- 3) The illusions nurtured by these early Soviet successes, which are most acutely reflected in the 1961 program adopted by the Soviets to overtake and "bury" the West by 1980;
- 4) The decision by the United States to land man on the moon by the end of the 1960's, and the accomplishment of this task,

put a serious damper on early Soviet hopes:

5) The realization by the Soviets in the late 1960's of the remaining wide technology gap in favor of the United States, as by then the initial assessment of the inability of the Soviets to meet the US challenge in space was borne out by US Space successes and Soviet failures (launch systems, CCC, intelligence, materials, quality control, industrial base):

6) The Soviet strategy of legal obstructionism: The provisions in the Outer Space treaty outlawing means of mass-destruction and - more important - the outlawing of property rights in Space - are a good example of the Soviet Union achieving basic security objectives at the conference table that it could not achieve in open technical competition:

7) The elevation - to near religious status - of Soviet accomplishments in Space as a substitute for any other spiritual values, particularly noticeable in the 1970's and 1980's (eg. chapel like constructions for the likes of cosmonauts):

8) The persistent advancement of ideological notions detrimental to free market systems ('common heritage of mankind', denial of property rights to Space resources, government - rather than private - responsibilities in Space activities, 'fair access' to geosynchronous orbit) and US defense uses of space ('demilitarization of Space', prohibition of 'means of massdestruction' in Space, limitations of ABM capabilities, presentation of the Space Shuttle as a military program).

Finally, the Soviet Union indeed can not afford the diminution of its nuclear blackmail potential, the only element that currently gives any relevance to the Soviets in world affairs.

Domestic Opposition: Without trying to be overly paranoid, it is a fact that this deep Soviet concern on matters relating to US Space developments has been paralleled by an equally sustained domestic movement to oppose US advances in Space. The major opposition comes from

- * anti-technology groups, that see any change as inherently bad, i.e. 'conservatives' in the very sense of the word;
- * 'status quo' elements in the existing structure of industry and government bureaucracies;
- * 'negative interest groups' opposed to the broader goals of the US, be it for ideological, political, or other reasons (such as resentment, academic or economic neglect, etc.). Last but not least, the
- * targeted intervention - direct or indirect - by the Soviets. This may be unpleasant to admit, but only the most naive would have one believe that the Soviets would forgo the opportunity of such means of limiting advers US developments.

Lines of Attack:

The major lines of attack will be the usual:

- 1) Denigration of the rationality of the enterprise on technical, economic and political grounds (see e.g. NYT op.ed. article "Freeze the Blarney" of July 8, 1984 - my condolences, Jim);
- 2) Overstatement of goals, costs, time schedules, technical requirements;
- 3) Understatement of the important contributions of the SDI capabilities to the security of the United States and its Allies;
- 4) Duration of the program vs. short-term needs, lethargy, change in administrations. Even under the best of circumstances, any twenty year program is likely to fail, for reasons most often of its own making.
- 5) Opposition on budgetary and plain bureaucratic grounds, including the deliberate derailment, reduction, delay or any other technique to achieve the ultimate goal of seeing the President's initiative undone;
- 6) Semantic pre-emption, the so-called "war of words" or better yet "war of labels", to which the media all too often happily succumb to.
- 7) Other uses of the public media, which of course are most effective after the enterprise has been put in difficulty - including ridicule - under the above items.

In the case of SDI the opposition already has won round one by labelling the SDI program 'Starwars'. The foremost example of "semantic pre-emption" is the much discussed "neutron bomb" issue, a weapon indeed designed to minimize any population casualties.

Based on the above, it is my opinion that a consistent, intellectual, semantic, conceptual defense of SDI is of critical importance to the survival of the SDI the program.

In Defense of SDI: An Interim Milestone with long-range implications.

In designing a defense of SDI it seems important to me that any such defense include

- 1) A 'tight' intellectual defense: This defense should - if possible - be argued on the very grounds of the concerns expressed by the opposition. Nothing works like using the same language and rationale, as well as fears expressed in the past by those opposing the initiative;

2) Some interim milestone: this will allow a fair evaluation of significant progress made, a milestone which by itself constitutes a significant advance in US defense capabilities.

If the Interim Milestone (item 2) also allows the accomplishment of a tight intellectual defense (item 1), then the chances of SDI will have been significantly improved.

An intellectually ideal interim step for SDI is offered by the achievement of an initial "Low Numbers" missile defense capability: the ability by the United States to guard itself and Allies - and where appropriate also others - against a "Low Numbers" accidental, or terrorist, or "human factor", or "small nation" nuclear strike, up to say by twenty or fifty missiles. This "Low Numbers" defense capability will allow the rapid development of all the basic technology components needed for the full SDI system.

The name for this interim milestone obviously is of the greatest importance. Suggestions might include: 'Interim Space Defence-ISD', 'Limited Missile Defense-LMD', 'Safeguard'? (e.g. forget 'Limited Space Defense-LSD'). My preference is "Safeguard".

"Safeguard" achieves several basic, profound objectives that have been long standing concerns in the debate about and against nuclear systems and military activities in Space:

- 1) The US could defend itself and its Allies against nuclear attack by nuclear mini powers;
- 2) Such a proven capability would in turn be a disincentive for smaller powers to aspire to such capabilities;
- 3) The United States could defend itself -and others, including the Soviets - against accidental or deliberate unauthorized launches of strategic systems by its own forces or that of other nations;
- 4) The systems requirements for such an interim worldwide capability would be substantially simpler, therefore making progress toward a demonstrated capability that much easier;
- 5) Even 50%, and certainly 80%, 90%, or 95% success rates would constitute significant deterrence and capabilities in this limited context. This answers the 100% performance requirement artificially imposed by the opposition of SDI.
- 6) The budgetary (i.e. Congressional) defense also improves significantly given the two year Congressional attention span and the four year Executive horizon. It is difficult to implement eight year programs, it is impossible to implement effectively fifteen to twenty year programs - whatever the merit and the initial enthusiasm.

7) The intellectual defense would become a true delight, in that concerns expressed against nuclear armaments because of the possibilities of unauthorized use can now be put to good use in defense of this important initiative (remember Dr. Strangelove?).

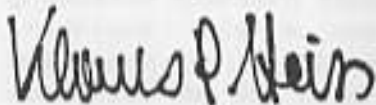
8) Most important: the accomplishments of "Safeguard" by themselves are such that the SDI program is amply justified - irrespective of any agreement or disagreement on the ultimate, full SDI goals.

The advantages of the "Safeguard" approach seem overriding to me. I do not know whether you share my concern on the level and persistence of the opposition to the Space Defense Initiative, domestic and by the Soviets. To re-iterate, the Soviet - and concurrent domestic - opposition to the SDI will be particularly insistent and the need for an intellectually sound and "tight" defense is all the more important. The 'Safeguard' approach may provide such a defense.

The analogies to the economic 'defense' of the Space Shuttle system to OMB and Congress are many - and provide useful precedents to apply and improve upon once more - this time to SDI.

I would be most delighted to help you in this matter, if help you need.

With kindest regards



Klaus P. Heiss

Enclosures

P.S. One of the better books on strategic issues is by Oskar Morgenstern, The Question of National Defense, New York, Random House, November 1959. Morgenstern advocates a mobile ocean based defense - to the exclusion of domestic land-based systems. His rationale can be nicely extended to include space-based systems. I tried to do so in an article "Technology and Alternative Security Systems", written in 1979 and published in 1981.