



November 4, 1985

Lt. Gen. Daniel O. Graham
USA (Ret.)
Director

Dr. George Keyworth
The White House
Office of Science and Technology Policy
Executive Office of the President
Washington, DC 20500

Dear Dr. Keyworth: *Jay*

On 31 October, I was briefed at Harris in Melbourne, Florida on the SDI C3 issue. There is no doubt that the problem is solvable.

I concluded, however, that the parameters of the problem have been stated in a way that unnecessarily and illogically complicates the solution.

For one thing, the engineers seem to be stuck with trying to handle a bolt-from-the-blue scenario. This introduces the "president in the men's room" delay factor which becomes critical. The C3 problem should be bounded by the "period of high tension" scenario. Bolt-from-the-blue has proved the deadly enemy of all US strategic system proposals, - defensive or offensive.

Man-in-the-loop aspects of C3 should be confined to day-to-day defcan levels, primarily to guard against the "few missiles" accidental or deliberate attack scenarios, and even then, those studying the problem should not be confined to a fire/no fire decision by the president. His control should be over defense condition, i.e., over level of autonomous operation of the system.

Another problem, related to the above, is the specification of the mass of objects to be tracked and engaged. Those large numbers are postulated as if the boost, post-boost phase defenses have been completely useless. Finally, there is the system vulnerability problem inserted by the demand for man-in-the-loop response to and battle management of a bolt-from-the-blue attack.

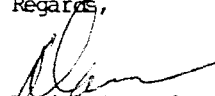
We should postulate a C3 system parallel to that of a naval command mine-field - - harmless until activated, autonomous thereafter. But the system should become active if command links are destroyed by hostile action.

I suspect that many of these enormously complicating specifications for SDI C3 result from the failsafe criteria for offensive nuclear systems, and perhaps to our opponents' arguments about "turning security over to computers." We should bound the C3 problem bearing in mind that an unwarranted use of a defensive system against a ballistic missile will indeed cause a serious international flap, but, it will kill no one and start no accidental war. It is the increasing reliance on autonomous technology and computer in control of offensive systems that carries the dangers.

I strongly urge a second, less demanding, set of specifications be provided the C3 contractors for study - - not to the exclusion of current instructions, but in addition.

Also, please rest assured that Harris did not put me up to writing this letter. They seem convinced they can handle the problem even with unnecessarily constricting specifications.

Regards,



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DOG/mdo