

**ADMIRAL J. D. WILLIAMS:** First, thanks for inviting me. It gives me an opportunity to talk about a serious subject with an issue with the country, is also actually one of my favorite subjects. But first, I'd like to state that although Admiral Morgan and I agree on most things, the major disagreement is I'm a Red Sox fan. [applause] But I'm probably one of the few Red Sox fans if they don't win, I root for the Yankees. [laughter]

Ever since Reagan's Star Wars speech in 1983, we have been talking about ballistic missile defense. Even the Secretary General of NATO earlier this month in The Netherlands stated for the first time that NATO recognizes ballistic missile defense as a threat and they must resolve the solution to that. We started talking about Navy ballistic missile defense in 1991 when I was DC&O of naval warfare. It was during this period that I convinced the CNO and the Secretary of the Navy that the Navy should participate in the program. Admiral Kelso made that decision to study the issue after a very long brief including all the three stars in the Navy and the DC&O. And after several discussions to the exact three, he made a statement to me with a couple expletives which I won't use today, is "J. D., you can tell Hank—" And by the way, Ambassador Cooper is somewhere in the audience, so at least I'm glad he's here because I'm quoting him a couple of these times. "You can tell Hank that the Navy will play if he will pay."

And I knew I had him then because Ambassador Cooper had talked one on one for four or five months before the brief was given by then-Captain Rod Rempt, who's the head of my air division in '07, gave the brief. But I would say that at that time, although Ambassador Cooper and I made the agreement on he would pay for everything to do with ballistic missile defense, all—And this included the SM3, was his exa (?), which was all ballistic missile events, and the terminal is an upgrade of a block 4A at that time. So I knew once the CNO said that that we could work out an MOU to satisfy the CNO's request.

The two key arguments against the Navy's participation were that the CINCs would control Navy ships and if the program lost Congressional support, Navy would end up

having to pay for the program out of their budget. The first one, I agree, was a valid concern. The second one I thought was somewhat childish. However, with the help of several people, including Ambassador Cooper, Admiral Jeremiah was the then-Vice Chairman of the Joint Chiefs and Jim Woolsey, I think most of you know him, and Captain Rempt, the CNO decided that the Navy should participate.

Subsequent to that, Ambassador Cooper gave the Navy \$4.85 billion over the fit up to develop an Aegis ballistic missile defense. Our vision at the time was that the Navy could perform missile defense for the most part while doing other required missions, so the Aegis would still be a multi-mission ship. This was based on velocity burnout of the first intercept being 4.5 kilometers per second, which is a fairly large defended area, and I've got some slides at the end of the program and I'm going to give you a quiz on them, so stay awake. Actually trying in late 1992, Captain Rempt, now Vice Admiral Rempt, was a key active duty person that kept the program sold and funded. In spite of the lack of support from that time ballistic missile defense office and OSD, Star Wars, which Ambassador Cooper led up, was renamed after Clinton I to Ballistic Missile Defense Office. You can imagine what some of the other names was—For the demdo (?) was, were. Clinton won the presidential election and became President in January, 1992. After Congress kept the program alive by conducting or giving several Congressional plus ups and to keep it alive.

Captain Rempt at that time made the right decision by building the first interceptor using available component parts, which by the way limited the speed of the first SME block 1A missile to 3+ kilometers. That was the right decision then because it would fit into 21 VLS tube—21X VLS tube. After a well disciplined engineering development, the Navy now has a deployable BMD system and plans to install it in a total of 18 ships, growing to 65, the destroyers received their midlife modernization. By the way, all the ships have insufficient number of the standard missile three 1A missile.

The Navy has seven early warning ships which were built to support the ground base missile defense program by giving early warning tracks to that system. The test program,

by the way, has been very successful with nine of eleven shots resulting in intercepts. That does not count the one for one that the Navy finally tested with the formal SM2 block 4 system, which was a success. The success of Aegis ballistic missile defense program has arrived at a critical time in our history and has given the Navy an opportunity to become a major contributor in global missile defense. I'll compare the timing of the Aegis program to beginning of the Polaris program in the late 1950s. The Navy needs to take some bold decisions and inform both the Office of the Secretary of Defense and Congress of its potential capabilities to provide another layer in defending the homeland, and I emphasize homeland, our friends and allies.

The Navy's advantage of mobility over the 70 percent of the world's surface will allow it to position Aegis ships along any future threat axis. We have never been able to accurately predict the long term threat to the country. We come up with one thing, and when a war starts we find out, in most cases, that were not in the analysis. Having the capability to reposition our defenses and respond to any threat provides a country major political, military and resource advantages. As you know, it could come very expensive to move a land based site. It only takes the fuel to move the Navy.

Navy should seize the initiative by publicly acknowledging its strategic capability to defend the homeland, and I'll talk about more of that later. I recommend the Navy consider the following issues. One, develop Aegis BMD as a global missile defense system. And by the way, that includes the homeland. The Navy has a working BMD system today, the S standard missile three block 1A, and with the approved development of SME block 2 missile with the velocity to burn out between 4.5 and 5.0, all the U.S. Aegis ships who have the capability of defending most of the globe, including all of the United States and its territories. For maximum effect, now this is all the software development can be exported to all the Aegis ships with minimal cost.

And whatever system makes a few Aegis ships more effective will also allow all the Aegis ships working together to become a global system. So why not build it now as we

are building the program so when we get done, we will have a global system to protect not only most of the world, but certainly the United States?

In the above answers Jack has questioned this morning, there's where's the crossover between theater missile defense and national missile defense? And it's with the block 2 missile. With the Navy having the authority of sending ships anywhere in international waters, Aegis ships can defend friend, allies and the homeland against either land or sea based threats. Install BMD capability into all Aegis ships. And currently, the Navy plans to install that capability in 18 ships and then if they get the money, 65. But there are a total of 84 ships. So my recommendation is we install that capability in all of the Aegis ships and eventually our allied Aegis ships as well. By the way, Japan already has that capability in their first Aegis ships and they're going to put it in all their Aegis ships.

Insure missile defense agency completes its objective of any sensor, any shooter. This capability will extend the battle space or the defended area exponentially. For example, if an Aegis ship can shoot off the track of a forward based—Or a forward land based radar, the defended area can be increased by hundreds of square miles. Since the SM3 missile outflies (sic) the Aegis radar capability, this will significantly increase the defending footprint. Develop and engage remote capability. And this will allow Aegis ships to shoot off any track, on any radar that provides an accurate enough track for an intercept. And that's also an exponential gain in defended area.

Develop a boost phase capability. This will allow Aegis ships to intercept most missiles and boost, post boost, or early ascent phase. A boost phase capability will allow destruction of the missile before its warhead or decoy is deployed. This allows the most opportune time to destroy the missile since you don't need a determinant impact point before you shoot. Ambassador Cooper and I co-authored an article recommending this in 2000.

Buy more standard missile block 1A or 1B missiles. The currently planned by for the standard missile block 1A is about 150. We need at least 300 block 1A or 1B missiles to

defend against the threat. In fact, we could use a lot more than that. I'd like to start off with 300. Develop the SM3 block 2 system. The increased velocity burnout and increased defending footprint, that missile will allow Aegis to defend the homeland. And it will become the cornerstone of global missile defense. Concerning our allies, Japan as well as others, their standard missile 3 has the potential to become the sea based interceptor of choice for our allies. Both the U.S. and our allies will benefit from the faster and more capable standard missile.

The U.S. and allied Navy is loaded with SM3 missiles and supported by plan. BMD sensors around the world would become a major contributor to global missile defense. Look at Us and trident submarines as part of the global missile defense system. That interceptor could become a compatible KEI, a modified D5 or a new missile.

Since the picture is sometimes worth a thousand words, I'd like to show you three illustrations. The upper left starts off with today's capability using the current missile we have with the 1A missile. It shows you the number of ships that would be required to defend Europe. The second ship shows you the same thing except with a little more added capability like engage and remote. Really, the last one shows you what two ships would do if you do sensor—If you do the sensor or shooter, meaning any sensor or any shooter, and you apply the engage remote to the Aegis. That shows what that would do with the current missile.

This one shows starting off on the left, the current capability, the upper left, are the ships with the 1A missile to defend Japan. Then it moves on with increasing capabilities to the right. And finally, the bottom line shows Australia as first with the current capability, the 1A; and then on the second one, it shows if you move the ships forward, the stray and AAW ships, for which they are about to begin now, using that missile and a land based radar track with engaged remote, it shows what that missile will do today, even for Australia.

This shows the increasing capability of how velocity burnout affects on a theoretical— This is more theoretical, this is pretty well modeled, starting off with 4.5 which was initial value. We could go on our first missile, which we never made because of money. The second one is at 5.5 kilometers per second, and the last one is 6.5. So with a ship around Aleutians, you can see what it would defend with an increase in velocity burnout.

Vice Admiral Morgan stated to the NVA conference last March that the Navy with the Tridents, tomahawks and ballistic missile defense, can become both a sword and shield for the United States. And I'll be happy to answer any questions on the Red Sox or ballistic missile defense. Thank you. [applause]