062216 Center for Strategic and International Studies Forum with Army Colonel Brant Dayley, Chief, Fires Division, HQDA G3/5/7; Colonel Donnie Wilson, Operations Officer of the 263rd Army Air and Missile Defense Command; retired Army Major General Francis Mahon, former Director for Strategy, Policy and Plans at U.S. NORAD/NORTHCOM; retired Army Lieutenant General Richard Formica, former Commander of U.S. Army Space and Missile Defense Command; Thomas Karako, Senior Fellow in the CSIS International Security Program; and Kathleen Hicks, director of the CSIS International Security Program, on “The Future of U.S. Army Missile Defense.”

MS. KATHLEEN HICKS: Well, hopefully you can hear me. I apologize, I’m going to lean over General Formica a little here. Hi, good afternoon, I’m Kathleen Hicks. I direct the International Security Program here at CSIS. Thanks so much for coming today for this great discussion on Army missile defense. I can tell you it’s great because the pre-discussion in the green room was very lively and full of really interesting conversation that I think you will enjoy out here.

This is part of an ongoing series that we have run out of our Missile Defense Project that Tom Karako runs for us in the International Security Program. I would just say a few comments and then I’ll get off the stage and hand it over. We want to thank our sponsor today, and that is Boeing, who is sponsoring this year-long missile defense speaker series, so thank you to Boeing.

And also, some may know that I have just finished serving on the National Commission on the Future of the Army, where we did talk about missile defense issue quite a bit. I think in that effort we simply validated what is well-known inside the Defense Department and inside the Army, which is that there is a serious gap between the requirements for Army missile defense and the existing structure and personnel to support it. And I think this will be something that our speakers will get into in depth today.

This problem may only get worse, frankly, in the sense that we now have the prospect of the Russia threat and how to think about the Army missile defense systems in that context, which is not something that we’ve had to grapple with in the past when we’ve been thinking about how to size our inventory. Significant, again, personnel and resource implications of that, different approaches that could be taken by the Army and the Defense Department, but fundamentally some real tensions over the size and shape of missile defense within a fully scoped and balanced Army program.

So I, as I said, am going to turn the floor over entirely to Lieutenant General Formica. He’s the former Commander of Army Space and Missile Defense Command and he is a member of our Marshall Center Missile Defense Project Board of Advisors, that I chair. I wish to thank you very much for moderating today. He’ll introduce the remaining speakers. Thank you.
GEN. RICHARD FORMICA: Thank you, Ms. Hicks, I appreciate it. Welcome to everybody, it’s good to see some old friends in the audience. We’re happy to be here. The topic of today’s panel, as Kathleen Hicks just said, is the future of Army Missile Defense. It’s an important topic.

Again, as she said, the demands for Army and air missile defenses continues to climb. That climb comes at the same time that the Army is strained to balance end-strength, readiness and modernization accounts. So CSIS has gathered a small panel of experts in key areas. Let me introduce them, and then I’ll let them make their introductory remarks.

Our first speaker will be our CSIS Senior Fellow, who does international security program in the Missile Defense Project, Dr. Tom Karako. He’s going to set the stage by providing the strategic and fiscal environment that the Army faces with respect to its missile defense forces.

He’ll be followed by Major General Fran Mann, U.S. Army retired. Fran retired in 2013 after more than 30 years of service to our nation. He commanded the 32nd Air and Missile Defense Command. He was the director at test at the Missile Defense Agency. He completed his service as the Director of Strategy, Policy and Plans for U.S. NORTHCOM. He’s been asked to address COCOM, demands on Army AMD capabilities, and discuss the challenges on the AMD force as he sees them.

He’ll be followed by Colonel Donnie Wilson from the South Carolina Army National Guard. Donnie serves as the G3 and the Operations Officer for the 263rd Army Air and Missile Defense Command. He’ll discuss IAMD from the National Capitol region and he’ll bring an Army National Guard perspective to the demands being placed on AMD forces by NORTHCOM and the other combatant commands.

Finally, after laying out all of the problems and challenges, Colonel Brant Dayley, who serves as the Chief Fires Division at Headquarters Department of the Army in the Office of the G3/5/7, he’ll present the headquarters’ D8 perspective and discuss those Army strategies that have been identified to try to grapple with the challenges that have been identified and that we’ll talk about today.

Each panelist will have about seven to 10 minutes for their opening comments. That should leave us 40 minutes for discussion, questions and answers. I’ll start by inviting Dr. Tom Karako to provide his introductory comments, and then his opening remarks on the strategic and fiscal environment.

Thank you.

MR. TOM KARAKO: Thank you, General Formica, for both moderating today but also helping to pull this panel together and for serving on the advisory board. I always go to General Formica for all things Army missile defense if I’ve got a question. I think my job here is to, in a way, state some of the obvious, that the strategic and the
fiscal environment is getting worse.

Of course, there’s no surprise there. I’ll come at this and just hit some of the major topics, and then leave it to these gentlemen about the expert solutions to these. I’ll come from both an Army perspective but also from a broader international perspective.

On the technical side of the threat, there’s no surprises here. There are getting to be a lot more missiles out there and they’re getting a lot more sophisticated: longer range, more survivable, more solid fueled and mobile, and more hybrid and maneuverable. We’re seeing a lot more different kinds of them and different countries acquiring them. It’s the full spectrum, really, from the low end RAM threats to anti-ship ballistics and anti-ship cruise missiles, to medium-range solids and maneuvering threats as well.

It’s interesting, we’re going to get into this, I think, very quickly in terms of the Army’s capacity, the top-line capacity, the end-strength capacity, to deal with these things, but missile threats often make the speeches, as some of the more highlighted threats to both ourselves, to the United States forces, and to our allies. It’s the sort of thing, I think, that captures our imagination. But in terms of the Army and in terms of other things, it doesn’t necessarily get the kind of direction that one might expect.

So let me run through a couple of regions and just hit some of the obvious things. In terms of the Middle East, for the Army it might not be as big a threat, but of course Patriot intercepts of missiles fired in anger there in both Iraq conflicts has been pretty important. The continued development of missiles by Iran, notwithstanding JCPOA and 2231 restrictions, means that ain’t going away anytime soon. It’s not merely a matter of U.S. perception, of course. If you look at all of our partners in the region that are doubling down on sensors and spending real dollars on capabilities there, I think we see a reflection of that.

The utility of missile defense is also, I think, seen in a particular episode that has not really been appreciated, and that’s the Yemen conflict. If you just count up the number of press reports on this point, by our count it has just hit 20 as of this week, of what Saudi or Emirati claims are for intercepted missiles fired in anger. That’s the most missile intercepts in any conflict in history. Now that number is perhaps a little high. There’s always a little bit of doubt about these kind of press reports. But that is, I think, a reflection of both the continued demand and the continued threats in that space.

In the Asia-Pacific, North Korea yesterday finally got one right, in terms of the Musudan test. We knew they would, sooner or later. With respect to ROK or Japanese protection, it’s not merely the Musudan. It’s not merely the Nodongs, but of course also lots of short-range KN-02s that doesn’t get nearly as much news attention.

I’ll just say I think from my perspective of course we should be deploying a THAAD battery in South Korea. Folks will say it’s not a matter of if, but when. In some ways, I’d say it’s surprising we haven’t done it already, given the fact that we’ve now seen this demonstrated tier threat.
Finally, let me talk to Europe and NATO, which I think is in some ways the least comfortable to talk about. We have struggled and bent over backwards to avoid putting Russia and missile defense in the same sentence. U.S. policy has been very consistent across administrations and for a number of years, that U.S. air and missile defenses are not about degrading the strategic deterrent with regards to Russia.

But that doesn’t mean that we’ve never said, in any policy statement, that we would restrict ourselves from providing a defense for air and non-strategic missile threats. I think that’s kind of where NATO is right now. Although I don’t expect anything to happen at the Warsaw Summit, I think the increased appetite for air defenses, whether it’s Germany or Poland or other Eastern nations, I think you’re going to see a lot more of that.

We’re not concerned here about aircraft threats from Iran for NATO. This is about Russia. And the first way to get at this problem is to admit that we have a problem openly and in our policy discussions, whether it’s Iskanders or cruise missiles, both INF compliant and not, the appetite for IAMD for NATO, I think we’re going to need a policy pivot in how we talk about it for Europe. This past week, or two weeks ago, with the Anaconda exercise, you also saw, for instance, a U.S. military officer remarked that there’s no rockets left back in Europe. There’s no ATACMS or MLRS, the kinds of things that along with SAMs, along with air and missile defenses that you might want to slow down an aggressive invasion. That’s a remarkable thing.

Let me hit a couple of things as well about capacity and capability, and I’ll just turn it over to the other gentlemen to really answer them. Let me just hit Patriot and THAAD. Right now we’ve got 15 Patriot battalions globally. If I’m not mistaken, this is some of the highest operational and personnel tempo in the Army. That is, above all, I think a reflection of the combatant commander demand for these things.

On the THAAD side, and there’s lots of other lower end SHORAD and air defense things here too, but on the THAAD side the Army has had a requirement for nine THAAD batteries. So far, the funding is in the plan for seven, maybe eight. But there’s not even a plan right now to get to nine. That, I think, is unfortunate.

I would also point out that the requirement for nine was put together pre-Crimea. I’ll throw it out as a question that others might take up, whether that needs to be looked at? You’ll see MDA slides, for instance, that always has THAAD out there as a potential surge for Europe to supplement the EPAA. When the DDPR -- when NATO’s Deterrence and Defense Posture Review of 2012 came out and said none of this is directed at Russia, it had been four years since Russia had invaded one of its neighbors. Post-Crimea, I think we need to just take a look at all that again.

Let me just say a little bit about Patriot modernization. Patriot has been around -- I was at the birthday party last year, its 50 birthday. It started out as an Army program and then it got switched to BMDO later on, and then it got transferred back to the Army
in 2003. I think it’s fair to say that although the Patriot has seen a lot of success and a lot of experience, there’s probably a lot more modernization there that unfortunately the funding has not been forthcoming for.

And then finally, let me hit two other things. One is cruise missile defense and the final is IBCS. Cruise missile defense, if the recent defense bills in Congress are any indicator, JLENS is dead. But in terms of capability, we’re going to have to find a way to say, long live JLENS. It may be built by somebody else. It may be called something different, but if we’re serious about going after the cruise missile problem, we’re going to have to find some way to have an elevated sensor that looks at these things.

The memes of the JLENS thing last year are very unfortunate, but put all that aside. We’re going to have to find a way to do that. Admiral Gortney has been out there banging this drum, saying when Russia is displaying these Kalibr to Syria, it ain’t for the Syrians benefit. It’s for our benefit.

Admiral Winnefeld was right here in this room last May and he said that in his mind, cruise missile threats have now taken precedence over regional ballistic missile defense in terms of priority. Yet you take a look at what we’re actually doing on that, and it’s astonishingly little.

And finally, let me just say that the Army’s number one priority -- a couple of years ago, the number one priority for the Army was MEADS. The Army’s number one priority in this area right now is IBCS, that has the promise of a sensor and shooter, of tying all this stuff together. Let’s hope that is the case, with both U.S. Army assets and also on an international basis, getting our allies and partners to talk to us and share information. Let’s hope that’s the case, but I think at the end of the day there’s going to be real limits on our willingness to do that. And so it really comes down to capacity for that as well.

So I’m going to leave it there and turn it over.

MAJ. GEN. FRAN MAHON: Thank you, and thanks for the opportunity to participate in today’s panel and discussions. When I think of COCOMS and operational demands for the Army’s IMD force, I usually summarize it as they want more, they want it now, and they want it forward in their region. That’s a challenge for the Army because it’s like a pizza, it’s only so big, how much you’ve got.

If you look at CENTCOM today, you’ve got a detachment of the 32nd forward in the AOR. The 32nd is the force provider. All the CONUS-based units of the 32nd. So in addition to managing the CONUS-based AMD force, they’ve got a section of their command forward in the AOR today performing the operational mission.

CENTCOM has got a brigade headquarters. CENTCOM has three Patriot battalion equivalents, 11 firing batteries. EUCOM sits with the 10th AAMDC, which is really a super brigade level headquarters trying to do a AAMDC mission. It’s not
designed, not organized the same as the other AAMDCs, but it is focused on care and feeding of one battalion. It worried about Turkey when we had Patriots forward in Turkey. It’s worried about Anaconda, the exercise in Poland. It’s worried about foreign military support, and it’s a brigade size headquarters, commanded by a colonel.

PACOM has got the 94th AAMDC. That has a brigade headquarters on the peninsula with two Patriot battalions, and there’s another Patriot battalion on Okinawa. And it has the THAAD battery on Guam, which is soon to be forward stationed there. Currently it’s still in a deployed status.

But what do they all want? I think they’d all like to have a THAAD battery forward. I think they’d all like to have another brigade headquarters in their AOR and another Patriot battalion in their AOR so they’d have some flexibility between operational mission and theater security cooperation mission, which they’re all tagged to do, because that’s how they build partner capacity.

The reality is neither the Army nor any service has the capacity to simultaneously meet all the demands of the combatant commanders’ collective requirements for forward presence and forward basing. Balancing global demand and the desire for forward basing of presence, when you have limited assets, is an extremely challenging risk that has to be accepted. You must have force depth to enable rotational cycles.

It takes four units to do a one to three rotational cycle. If you guess wrong in forward base and have to extract a unit from one COCOM to go meet the requirement of another COCOM, that’s not an easy thing to do. You sometimes run into diplomatic issues, trying to take from COCOM A to give to COCOM B, and you also sometimes run into the dynamics of the strategic lift requirements, because where that guy is in COCOM A may not be conducive to whether the strategic force deployment platforms are.

Today we find ourselves with three significant challenges in the force. One is capacity. One is capability. The third is training, or readiness, if you’d prefer. All are influenced by the ever changing operating environment and evolving threat, limited fiscal resources, the burden of bureaucracy, and if not a lack of vision maybe it’s a willingness to accept significant risk.

With respect to capacity the reorganization of the Army under modularity cost the air defense community 11 battalions from its SHORAD force. It also impacted the rest of the fires force, the field artillery. We accepted risk in SHORAD because I don’t believe we recognized at that time that the unmanned aerial system would be a threat we would have to deal with. And we would have to cut an entire active component SHORAD to focus on dealing with the counter-rocket artillery and mortar mission that has emerged. More than one senior armor leader has commented to me, we accepted operational risk in the air defense community and we fully knew that at some point we’d have to buy back that AMD capability.

Now although modularity’s reorganization did leave a significant gap in capacity,
especially in the SHORAD force, it did have a silver lining. We transitioned the 32\textsuperscript{nd} to a full active component command. We created the 94\textsuperscript{th} as a command. We did create the 10\textsuperscript{th} as a AAMDC minus for EUCOM, and we grew two additional Patriot battalions.

But even with today’s 15 Patriot battalions and their 60 firing batteries, the Army has not met its standing requirements for high altitude air and missile defense capabilities. With more than 48 percent of the available Patriot force, either forward stationed or deployed, it has a BOG:Dwell ratio of one to two on one year deployments, not nine months, not six months, and the Army standard is one to three.

The SHORAD force is even more challenged. There are two battalions left in the Active component and two separate batteries. With the battalion performing the indirect fire protection capability aka C-RAM mission, the active component really only has four air defense batteries and four C-RAM batteries, and their BOG:Dwell is one to one. They’re gone a year, home a year, gone a year.

Modularity’s impact on the National Guard was less drastic, and Colonel Wilson can talk to this. They went from 12 battalions to seven. Today the Guard is performing the Capitol region defense. They perform the national special security event missions, and they periodically augment the C-RAM mission with sense and warn units.

When you think of capacity you have to consider not only do I have enough to do what I’m asked to do today, it’s do I have enough to sustain what I’m being asked to do today and to prepare for tomorrow’s modernization and tomorrow’s missions? And I would venture the answer to that question is, no.

As for THAAD, we could very well be on the road to an air defense groundhog day. The Army’s requirement is nine batteries. The Army has identified force structure for eight batteries, and MDA has funded seven batteries.

Today there are four fully equipped and trained batteries. One of those is forwarded in Guam. Battery five and six should attain full operational capability by the end of fiscal year ‘17, and battery eight by the end of fiscal year ‘18.

For the next two years we have three, maybe four, batteries available to do other missions. I recently did a tabletop exercise and had a captain who for his five-year career -- four of them in units, in THAAD batteries -- that captain had spent two of those four years forward in Guam. In Guam a year, home, back to Guam. He’s about to take a command and he will probably be the battery commander in Guam who is the forward stationed battery.

It reminded me of my experience as a Patriot battalion commander. When I deployed my battalion in 1995 to Southwest Asia, the battalion had not been home a year since its previous deployment. It was the battalion’s fourth deployment.

Let me remind you, Desert Storm was 1990-91. It was my third deployment,
personally, and I had battery commanders and NCOs, it was their fifth. We broke the Patriot force in the 1990s and we’re playing strategic chess in Southwest Asia and Korea right now with the total AMD force.

With respect to threat and capability requirements, I would say we’ve come full circle, and the circle has expanded and we have a significant capability gap. The unmanned aerial system is a threat to be countered. Hezbollah and Hamas have demonstrated it against Israel. Iran and North Korea have developed their own. And the Ukraine has demonstrated how to integrate it with devastating effect in the Crimea.

The land-attack cruise missile, that challenge is growing also. Not only are more nations developing and acquiring them, they are simply a very tough target to deal with. Both threats present a relatively small target and a 360 attack azimuth that we have to deal with.

Given our limited capacity and the dynamics of the mission set, what really is our capability to deal with the total threat spectrum at adequate keep out range? The Army is on path to bring us some new capabilities. IBCS, as mentioned, will redefine the future weapons system of air and missile defense and it will leverage all sensors and all shooters and will offer a potential solution to the 360 challenge when I’ve got a mature sensor architecture to support it.

The pursuit of the multi-missile launcher also offers a solution to the UAS and the cruise missile. There may be other near-term low cost options if we really take our hats off and start thinking here about multi-mission systems vis single mission systems. Are there ways to leverage other programs for a more cost efficient and effective interceptor?

What about the Navy’s Standard missile family? Is there some way for the Army to integrate those into our systems? Will IBCS allow us to integrate a family of interceptors under one unit’s command? Can left of launch and non-kinetic options lighten the load? The capability challenge may be easier to solve if we really start to think a little bit out of the box, assuming we write realistic requirements, accept good enough versus outstanding performance, and have the fiscal resources and the fortitude to see a program through development and fielding.

As for the third challenge, training, it may be easy to solve if we have capacity and if we have capability. Modularity’s reorganization took the air defense force out of the maneuver Army. We have a generation of leaders who have never worked in air defense units or with air defense units.

We have a generation of air defenders who have never maneuvered with a ground force. In many respects, we are the Army of the early 1970s when it comes to air defense operations. We need to re-acquaint ourselves with combined arms operations and synchronized employment of all the battlefield operating systems.

And finally, the air-breathing threat is back. It’s back with its nap-of-the-Earth
following capabilities. It’s back with maneuverability. It’s back with all the classification/identification challenges. It is a threat our air forces are not well suited to counter, and it is one the Army IAMD force must learn to deal with by getting back to the fundamentals of air defense artillery and air-space management.

I’ll close with this, the combatant commanders are tasked to read and deal with the operating environments that exist today and into the near future. The Army is challenged to provide the nation a force that can meet today’s needs and one that can lead and perform in the longer term future. Today we have a resurgent Russia. We have China demonstrating island building versus nation building. We have the proverbial loose cannon in North Korea and an Iran that is expanding their regional influence. All of these nations are advancing their offensive air and missile capabilities and have or seek to create anti-access/area denial environments.

As the Army re-evaluates how it will spend its limited structure and dollars, it must invest in air and missile defense capacity and capabilities. Europe really does require a full up AAMDC so that it can focus on its deputy air defense mission responsibilities, as well as be a brigade headquarters. And we need to rebuild and modernize the SHORAD force and solve the challenges of dealing with the full threat spectrum. We need to reintroduce IAMD operations to the maneuver force and re-scope our training programs to address the full threat spectrum.

Thank you.

GEN. FORMICA: Thank you, that was very comprehensive. I appreciate it.

Now Colonel Donnie Wilson from the National Guard and the 263rd AMDC.

COL. DONNIE WILSON: Thank you, sir. It’s a privilege to be here today with you to give you kind of an overview of what the National Guard provides to the force. Just a little bit about the Guard, we make up about 80 percent of the SHORAD force. That’s kind of dramatic to me, sir, the numbers you gave out of what we’ve been missing.

I will say currently in the National Guard today we have one AAMDC that’s assigned to NORTHCOM, and we provide direct support daily to the continental NORAD region and to the other two regions and CANR and Alaska NORAD region. This year we will actually deploy a minimum deployment package with Avengers and Sentinels and tie into the architecture in Canada. It will be the first time that an air defense unit has actually crossed over into Canada. This will be part of an FTX in support of CONPLAN 3310. It’s a very huge thing for us to deal with, to go in and integrate with the Canadians and work within their infrastructure.

We have three ADA brigades. Currently those three brigades provide a C2 structure in the NCR. They command the JDAT Task Force. They provide the C2 for day-to-day activities for the national defense for the Capitol region. It’s a 24/7/365 capability that’s here today. I’m not sure how much everybody knows about it, but it
happens and there is an air defense capability here in D.C.

We have seven battalions. Those seven battalions are all Avenger forces. However, they do cover down on a couple of rotations within C-RAM. They currently have one scheduled to deploy in the next year or so to support in Afghanistan, and they have already deployed four other times previous in support of C-RAM.

The Guard also has the ground-based missile defense. I don’t have a whole lot to say about them because I’m not a part of that organization. But as a Guard asset, they do have Guard units in California and Colorado, and, of course, Alaska where they provide the Ground-Based Midcourse Defense against an intercontinental ballistic missile.

In the NCR-IADs construct, there’s three brigades basically about every 20 months rotate through. So they have the capacity to do other things because there’s an (inaudible) that allows them to still maintain the full brigade structure. We’re currently in coordination with 32nd AAMDC to be able to find a training CONOPS that would allow these National Guard air defense brigades to provide C2 for Patriot forces in theater. This is several years out to do, but we are working to provide the capability to do that in discussions in the way ahead.

Our battalions do their rotation at about one-to-three. That’s pretty significant for National Guard rotations. Out of those seven battalions with support of the NCR-IADs mission, as well as the C-RAM rotations, that’s a quick turn, one-in-three. I think the OSD guidance is about one in five for National Guard units, so they are very busy.

We’re also being tasked to get back into the maneuver fight. Currently about three to four batteries per year are supporting CTC rotations at our national training center and our JRTC. They’re having a hard time because they’ve not went back to the old days, as General Mann had mentioned, as providing ground-based air defense, with SHORAD and deploying forward to go and maneuver. It’s a real struggle for them.

So we’ve partnered up, using some of our old people like myself as well as with the First Army Training and Support Battalion, and they’ve come up with a leader’s training program. We go out for about two days and they institute this to get those soldiers back into an MDMP looking at the aerial IPB and doing the task of air-space management for a brigade or division type element. So this is something new that we’re having to work through, but we do not have the force structure or ability to keep up with the 11 or 12 rotations that it would take to meet all the requirements for the combat training centers.

Our brigades are also actively involved yearly. At least one per year rotates through a war fighter for a division top level. This helps them understand what the real jobs are. These brigades are relatively new to the National Guard and they don’t have Patriot assets to provide command and control for. So we’re struggling right now to provide that type of training to those soldiers to prepare them in case they were needed to be a brigade in EUCOM or PACOM and possibly even CENTCOM, as we move
forward. So we don’t know that those will happen, but those are things that we’re trying to aggressively engage our brigades in, train them and provide capacity for future use.

As the AAMDC we’re fortunate enough to stay involved with all of the other COCOMS. Yearly we have a couple of soldiers that will deploy to CENTCOM with the 32nd. They’ve been with the G3/4. They’ve participated as the active defense TEL chief (inaudible) and also we have a couple of intel officers that support the 32nd. That enables us to stay very involved.

We also support the 10th in EUCOM exercises such as Juniper Cobra. With the 94th, we participate in Key Resolve and Ultra Freedom Guardian. So we stay very involved in supporting our sister AAMDCs and are always prepared to go in support in any capacity available.

We do fight the structure piece. We do not have a full capability to provide cruise missile defense. Even in the NCR today we struggle to provide this overhead persistent capability such as JLENS.

I will tell you that JLENS was on a path to be very successful, short of the slight mechanical malfunction that happened. I was very involved with that program and I’ve seen a lot of the capabilities. If JLENS was put back on schedule to complete its test, I think it would be the major game changer for IBCS that it needs to be able to provide proper sensor coverage for a theater.

You can read somewhere else about the capabilities that JLENS has at detecting the very low, slow, small at great distances, as compared to any other radar that we have. We currently are working in NORTHCOM now to find some type of solution on the East Coast for surveillance. If you can’t see it, you definitely can’t kill it. So we’re working diligently to find the capability within NORTHCOM to provide the East Coast coverage to be able to integrate into the NCR in both the shooter and the sensor capabilities.

Like I said, we’re getting back to the basics in a lot of things in our training cycle, but that also takes funding. I think General Milley has done a great job at providing funding to support exercises both in EUCOM, PACOM, and also other national training centers. The Guard has been very involved in doing this and we certainly see the Army as an Army of one now. Beforehand we never had the funding to go participate in these things.

The COCOMs, when they have their major exercises come up, a lot of times they’re strapped for enough people to be able to fully develop. This year there were brigade and battalion level units that went and supported Anaconda just last week in EUCOM. These are significant. These made the headlines in Army Times and everywhere else, that the Guard is helping to support these training activities to make us a stronger force.

I think the Guard stands ready to accept the responsibilities for the shortcomings
that the force has taken upon itself. Like I said, we lost 12 SHORAD battalions when we decided to go to COIN. We took a risk, a huge risk. We took additional risk when we said we didn’t want to keep SL-AMRAAM. We’re now paying the price for that, and I think we’ll continue to pay the price.

We still have -- as Colonel Dayley is going to tell you, we’re still a couple of years out from being able to provide a good capability against cruise missiles. As everybody reads today, the drones and UAVs have the ability to provide significant intel. In the Ukraine the Russians used them and within minutes they were using indirect fire -- I’m not talking about precision, I’m just talking about artillery shells, blind -- in order to devastate brigade-level assets.

A lot of work is being done. The National Guard is still involved in S&T. We play with everybody from SMDC, U.S. Secret Service and everybody else as they move forward to provide capabilities to defend against these. So the Guard is actively involved and will continue to be.

That’s all I have. Thank you.

GEN. FORMICA: Thank you, Colonel Wilson. Now Colonel Brant Dayley will give the Headquarters DA perspective on the strategies to address some of these challenges.

COL. BRANT DAYLEY: Good afternoon, everyone, and thanks to General Formica for the opportunity to present the Headquarters DA perspective. For me, it’s a personal pleasure to be up on a panel with two of my former bosses, although between those gentlemen as well as Tom, it sounds like I’ve got some work ahead of me to talk about this afternoon. So if anybody feels like pinch-hitting for me, please let me know. But I do hope that this afternoon’s panel facilitates some great Q&A, so I’m going to try to keep my comments really brief and frame my comments succinctly.

The first of which is, for myself, my theme in talking to you today would tell you that we do have some holes in our swing today as it relates to integrated air and missile defense. That’s obvious from the discussions and what all of you, as experts, are aware of. We do have some emerging material and non-material solutions that the Army will be fielding or modernizing as we go forward that is going to help us to ameliorate some of the challenges that we’re facing right now. That pipeline is fairly narrow and it would be great for that to broaden.

We are making progress in some areas, but arguably at a slow rate as it relates to how likely we are to accept relative risk when it comes to the mission of integrating air and missile defense for the joint force and our geographic combatant commanders. Both the Vice Chief of Staff, General Allen, and the Chief of Staff of the Army, General Milley, are actively involved in assessing the challenges within the fires portfolio, and particularly as we talk air and missile defense. During recent capability portfolio reviews on air and missile defense, and Army Requirement Oversight Council activities on these
programs, the Vice Chief has been galvanized in his support towards how we can accomplish an improvement to support the maneuver force with air and missile defense protection. The Chief of Staff of the Army has certainly been very interested in how well we can address some of the regional cruise missile defense challenges and has tasked individuals like myself working on the Army staff that we can certainly do better, and that is an effort that we’re undertaking every day.

But setting the conditions in this strategic environment, the necessity of assuring allies and protecting our fielded forces are imperative, and that’s what we do as the Army and the Army Air and Missile Defense. Integrated air and missile defense is and continues to be a credible deterrent function. We have to continue to sustain the capabilities we have and to expand those in the areas where we find the emergent threats or the growth of the threats that we’re facing today.

The recent activities in Europe notwithstanding, I think everybody has a clear picture as it has been portrayed by this panel, how the strategic environment has changed. The potential of full spectrum operations is evident. We have to be prepared to provide capabilities that we haven’t been called upon to provide during the war on terror and fighting an insurgency.

Resourcing, manning, and funding certainly are challenges in this endeavor, and that’s a part of our overall Army complexity, as we have to look at the appropriate balance of our resources between readiness and future modernization. Those are imperatives one and two, priorities one and two, for the Army Chief of Staff.

As we talk about holistic solutions, in 2014 Admiral Greenert and General Odierno jointly signed a document that was called the eight-star memo. It primarily focused on ballistic missile defense but it endorsed the pursuit of a holistic solution set that looked at left of launch, cyber, electronic warfare and a number of other attributes as it relates to integrated air and missile defense. The Army continues to pursue those cross-domain, cross-portfolio capabilities not only within the Army but also with our sister services so that we can support the joint commander.

Some examples of that are the development of the counter-UAS strategy that essentially is being promulgated across the Army and the Defense Department now. All the stakeholders understand where their role is and then we can get back to the aspects of the training challenge, and then re-learning how to be in support of the maneuver force, like many of us had done in the ‘80s and ‘90s. We’re assessing holistic solutions in near-term capability gap opportunities, which is everything from commercial off-the-shelf capability to rapid acceleration of capabilities and technologies.

Space Missile Defense Command is investigating those in a study. The Army acquisition executive made some recent comments associated with that jointly with General Hodges. Those products and deliverables will be coming to the Army staff and senior leadership later this summer, and those are going to be important for us to really take a look at.
The OSD-led Joint Staff executed studies, that we call JCM and JRCM, are invaluable to having a complete understanding of joint campaign planning challenges. And then those holes in the swing that we see to support the combatant commander, and the Nimble Fire and Nimble Titan exercises, are just as important to us. There are many studies: TRAC, the Center for Army Analysis, they are numerous. But what I would tell you is that we’re simply not just admiring the problem. We’re attacking the problem as aggressively as we can and I suspect that we’ll have some questions relating to that.

So we are focusing on what we can do today with our kinetic capabilities, which are the foundational, in the near-term and likely into the mid-term, as we look at future capabilities such as acceleration of directed energy capabilities and non-kinetics that I mentioned earlier in terms of electronic warfare and the cyber domain. The Missile Defense Agency has been an invaluable partner in delivering capability. PEO Missile and Space and RDECOM have provided great technological study, as well as certain special access program capabilities that we’re assessing and in some cases employing in theater and in exercises. And, we are conducting things like a National Capitol Region Modernization Strategy with support of Donnie and his team.

Donnie, thanks. You didn’t put any rocks in my ruck, so I appreciate that very much.

COL. WILSON: You’re welcome.

COL. DAYLEY: So the department has been reorganizing. We’ve looked at our departmental processes in terms of how we could do things better, as the chief assessed, how we could be more innovative as an Army, the reinvigoration of the AROC process, the refinement of the capability portfolio review, some refocus of tasks and functions within the Army staff principals to move more expeditiously and to align better within the Joint Requirement Oversight Council process. So to be in parallel or in concert with the Joint Staff and OSD helps us move faster to deliver capability.

I did want to touch upon some comments that Tom made as it related to our coalition partners and collaboration or integration. I think that that’s an imperative. We want to build partner capacity through our joint training and exercises, through robust foreign military sales of U.S. technologies and capabilities, and ensuring that we have seamless integration between the host nation and the United States. It adds robustness and frankly, it’s deterrence. Our battle is phase zero to phase two, in most cases, because we have to be on the ground or deterring our adversaries. Because once the shooting starts, we can’t buy our way out of some of the ballistic missile, cruise missile and rocket challenges that we’re facing. So for us, we have to have a strong deterrent capability which in many cases means a larger standing force than we have. Policy, also, is an important aspect of that.

So what I’d like to do in summary is just say that we do have a number of challenges. We also have approaches. Some of those fit neatly into a strategic
framework, others not so much. But even with those prudent first steps to help ameliorate or mitigate some of the risks, we have a number of areas where we need help. With the contributions of our sister services and our allies, and then the help that we receive from industry, academia and essentially forums like this, we can see the problem better and can more aggressively attack those problems.

Thank you.

GEN. FORMICA: Okay, well that was a pretty comprehensive view from the panel. What I’d like to do, and we’re pretty much about where we said we’d be. We’ve got a little bit more than 40 minutes, an opportunity for discussion and dialogue with you.

I’m going to stand up so I can see everybody in the audience. I apologize for that, but I want to be able to field all of your questions. So why don’t we open up the floor? Does anybody have a question from the floor for any of the panel members?

Ambassador?

QUESTIONER: In view of the scarce resources, are we pushing very hard to sell to our allies an international version of IBCS, so that there’s an infrastructure in place universally? Are we pushing that hard or not?

GEN. MAHON: I think we are -- I wouldn’t say we’re pushing. We’re offering foreign military sales. We had an initiative for the NATO partners that they could bundle procurements of U.S. systems, air and missile defense systems. That was back in the fall. I can’t remember the proper name for it.

The challenge you run into with the partner nations, and then the challenge today is, it’s not all on the same level of advancement or configuration of systems, so you get into interoperability issues with command and control systems. You get into foreign disclosure issues and security. We may have all brought standard -- I’ll call them U.S. three-prong plugs and receptacles -- the radios on their side may not be to the same security level as our radios.

Then you get into the dynamic of, can I pass the data? And do they protect the data the way we protect the data? So that’s a challenge. It’s a challenge that can be worked through, maybe with some relaxation of standards on our side, maybe some better opportunities to provide them a more capable security on their side, and their willingness to embrace our standards to protect information.

COL. DAYLEY: I’d just like to add two points. The first is that as we look at it - - and it may sound like an Army-centric view -- in many cases when foreign military sales activities are being pursued or in discussion, in many cases our foreign partners are looking at what the United States is accomplishing and when we’re actually going to deliver capability and field it to the force. So we’re at the cusp of beginning our fielding of IBCS for our first Patriot PAC-3 Config 3 Plus battalion. That will likely increase that
interest or dialogue.

But I would also say that we’ve also seen that some of the foreign nations are looking at bundled solution sets. That’s a kind of novel approach towards the ability to deliver capabilities, whether those are IBCS-equipped or other capabilities, which in many cases provides kind of a total fielding package for their capabilities as they look at nation defense.

GEN. FORMICA: Sydney?

QUESTIONER: Thank you. Gentleman, a question, especially for Colonel Dayley, but all of you we welcome to chime in. If you could walk us through the different systems and upgrades the Army is planning, things like IFPC, like Patriot, MSC, IBCS, all the others in the bright glorious future, perhaps lasers on trucks, and some kind of jamming system or offensive cyber, how do those pieces fit together both in time and in concept?

GEN. FORMICA: Well thank you for that simple question.

COL. DAYLEY: I’m wishing I had the chart that we like to call the tuxedo chart, which is essentially a holistic look at this across the spectrum of time, our level or lines of effort, and then as we assess risk in accordance with joint standards. But as we look at the platforms that we have in the Army today, Donnie mentioned the Avenger system. We are fielding IFPC -- I’ll talk about that very briefly.

We’re modernizing Patriot, both the current Patriot system to Config 3 Plus, and then we’re also going through a radar modernization activity. We’re receiving THAAD, and then we’re looking at future capabilities that I may be able to describe and we can possibly talk offline. But with the Avenger weapons system -- the Avenger weapons system has essentially gone into sustainment. It has been in sustainment for a number of years as the Army had made a decision several years back that they were going to pursue the SL-AMRAAM weapons system, which ultimately was a terminated program.

So Avenger has been addressed from the aspect of obsolescence. There are some minor improvements in what we’ll just call simply a service life extension so that it’s actively supporting the National Guard and its battalions in the four active batteries that we have. But there are a number of potential capabilities that could be included, as well as improvements to the Stinger missile, which we call a proximity fuse, which is on the horizon perhaps by the middle of fiscal year ‘19.

Patriot has undergone modernization throughout its lifespan. I know Tom mentioned it had celebrated its 50th birthday. For those of us -- the Patriot system has evolved so significantly over the course of our careers. It’s not the same system, nor will it be in the future.

But as it stands now, the system is improving significantly with aggressive
modernization radar. We are procuring the missile segment enhance, which is the MSC interceptor, which is the state of the art missile, to complement the family of PAC-3 and PAC-2 generation family of missiles. We just completed the analysis of alternatives for what we call LTAMs, which is essentially a study for the modernization or replacement of the Patriot radar.

The Missile Defense Agency does modernization and improvement of the theater Terminal High Altitude Air Defense System, THAAD, as well as the forward-based radar, what we call the AN/TPY-2 radar forward base. We have a number of challenges and actions that we undertake in our communications equipment, our vehicle fleets that support all these capabilities. It’s a myriad of modernization endeavors that are supported across the different program executive groups or PEGs within the Army staff and its budget.

The future is essentially, where are our investments in science and technology paying off and what do we have in research and development that will actually make it across from RDT&E into procurement? We’re aggressively approaching directed energy capabilities and other kinetic means, which can include the miniaturization of missiles or simply increasing kinematic effects of missiles.

I know that’s kind of a one over the world for a very complex discussion, but certainly I value the questions. Given an opportunity I can give you a more comprehensive review of that.

GEN. FORMICA: Anybody else from the panel want to comment?

QUESTIONER: Hi, Colonel Dayley… good to see you again. When last we spoke there was a big discussion that there was a discussion about the European capabilities. This is sort of the flip side to the question regarding FMS. Ms. McFarland, when she was at Eurosatory, spoke about the fact that the Army had just done a complete review of the possible short-range air defense capabilities in Europe, and there was more to come. The question is, have you gotten anywhere with that? Are there any capabilities in Europe that look like they might fit into the U.S. requirements?

COL. DAYLEY: I figured that question was mine, so if anyone wants to dog pile on that, that’s great. We expect that the Army acquisition executive is going to present essentially initial findings and recommendations to General Milley in August. That’s kind of a parenthetical, within that month. There are other activities ongoing with Space and Missile Defense Command, but as it relates directly with Europe I would say that the capabilities are assessed as to not only include the potential deployment or utilization of CONUS-based air missile defense forces, but also the potential of deploying other long-range surveillance capabilities, passive capabilities, a number of potential technologies that could be employed in support of European Command.

Our discussion earlier had to do primarily with counter-rocked artillery mortar-like capabilities. That’s a very interesting discussion to have. That’s a big challenge for
the Army. There are very finite resources. I’m not aware of aggressive dialogue as it relates to the counter-rocket component, but certainly counter-precision munitions, counter-air and counter-ballistic missiles.

GEN. FORMICA: The gentleman here in the front.

QUESTIONER: I have a question about – so Forbes released an article saying that Russia successfully tested one of their ballistic hypersonic missiles and that could easily penetrate our U.S. THAAD shield. Do you feel like that is a concern? Do you feel like we should be worried, especially since I believe you mentioned that our air defense is about where we were at in the 1970s? Do you feel like there’s something we should be doing to combat that?

GEN. MAHON: Let me back up and get my comment straight. Our short-range and our experience in operating with maneuver forces -- in 1968 short-range air defense was not in the U.S. battalions. When we fielded in 1968 the Vulcan and the Chaparral, we created battalions inside the divisions, so we were with the maneuver forces and we grew our experience base.

Modularity removed us from the divisions. So that’s distinct from a training issue and a culture issue. We have to relearn because the maneuver force is different than the rest of the force, in a sense.

They speak a different language. They operate differently than the Patriot guys normally do today. So that’s something that has to be learned and get back into the family fold, so to speak.

Brant and I have both walked both ways. I started as a divisional air defender and went to Patriot. He started as a Patriot guy and went to divisional and then came back to Patriot. When we had this conversation on the ride over, it’s a different culture. You’ve got to learn it. It’s a different speak and a different tempo of operations.

In 1968, air defense was not in the divisions. As we realized the helicopter threat was coming, and we had to get after the helicopter threat, we created the short-range capability to do that and we integrated into the division and the maneuver force. Over time, we grew that capability and it performed very well in multiple missions, when you think of Desert Storm and you think of OIF.

The other aspect of hyper-glide, you know that’s a threat that’s probably coming but we’ve got a more critical threat to deal with that’s here today. So we’ll get to the hyper-glide, and I think there’s effort going on in MDA to get to the hyper glide and the services are thinking about the hyper-glide, but it’s still experimental for the adversaries. But there are capabilities today that we need to be able to counter that we don’t have a capability to line up against and we don’t have the depth in the force to be able to deal with the air-breathing threat that’s here today.
GEN. FORMICA: Over here, please.

QUESTIONER: …You just answered part of the question I had, but it seems like we all have identified that air defense needs to be back with the maneuver, like we need to be able to defend those guys and they need to be integrated. You were talking about how it’s a different culture and I think we all know that. But what is the actual -- what is the biggest challenge to integrating these guys back with these maneuver brigades?

GEN. MAHON: The challenge right now is to have somebody to integrate. I have four short-range battalions or batteries in the active component. One is in Korea. Two are forward in Afghanistan. One is at 18th Corps.

So the guy at 18th Corps, he can integrate, but there’s nobody else until we go to the National Guard. And so, Donnie, how many days a year do you get to train, 39, unless you’re on mission? So how does a battalion of Avenger from a National Guard or handful of batteries go through a training session to get ready to go to a maneuver training center?

When I was a battery XO we trained for four to five months with that brigade before we went to the national training center, and I mean in the field for 10 days, home for 10 to 14, back into the field for seven. If we’re willing to give the National Guard 180 days of training a year, we could probably get those guys spun up and they could probably get pretty good at doing the mission. But you’ve got to be willing to give those battalions 180 days of training a year. Or, you just bite the bullet and say I really need it in the active force, build the active force back up -- maybe don’t take it all the way back to 10 battalions, maybe take it to six or eight battalions -- and the National Guard retains their homeland responsibility and becomes that strategic fallback force that you go to when the big thing happens.

COL. DAYLEY: I would simply add kind of an illustration. As we had built our air and missile defensive capabilities in Europe during the Cold War, we had defense in-depth. We had low, medium and high altitude air defense systems that spanned everything from the Redeye, or later Stinger system, all the way through Hawk, Patriot,Nike, Hercules. Over time, weapons systems attrited and were removed from the structure, ultimately with SHORAD and the divisional air defense battalions.

So it left a void, obviously, where we lost that force structure. So when you ask that question about the greatest challenge, and General Mahon certainly made a number of valid points, the Army has to assess over the course of time what the appropriate investment needs to be and what that capability should be: the kinetic capabilities that we have today or potential near-term capabilities that we can employ or to a directed energy type of capability with lasers. So we’re dependent upon some of the technologies that we can employ, but more-so about the available structure to provide that type of support, because it’s highly unlikely that we’ll be able to re-grow all the battalions back to support all of our maneuver divisions, and frankly what we employed also within the corps that we had throughout the world.
COL. WILSON: I’ll make one quick one. The Guard and 180 days, I know a lot of people in the Guard would love to see that for our battalions. I don’t think the employers or the families of the people -- there are a lot of people that didn’t sign up to do this day-in and day-out. We pay a huge price for the rapid turn of capability we provide to the force. We’re capable of continuing to do a lot of that, but it does stress the force and over time the force structure on the AC side has to carry the large burden because I don’t know that the Reserve component was ever set aside to do this for 10, 15, 20 years.

And thank goodness we do have our seven battalions, it’s a pretty comfortable rotation the way we do it now and most of the people that come come totally voluntarily to support, because the numbers are not over an entire battalion. I think if we used our forces a little smarter and used entire battalions to do multiple type missions, carry that flag one time during that rotation every third or fourth year, that really enables not only the Guard but the units itself, so we’re not piece-mealing and grabbing soldiers two weeks here, two weeks here and five weeks here, and employers are not getting upset. So that’s something you’ve got to think about as far as when we set the force structure for AC high, the Guard is not as important. But when we’ve cut them as we have in the air and missile defense community, the Guard has been playing very seriously for the last 14 years.

QUESTIONER: The Army tested the Israeli-U.S. co-produced Iron Dome out of MLM in April. We’re about to see an extension of the agreement to assist Israel for another 10 years, from 2019 to 2029. Recently the Congress has been putting up $600 million in the Israel cooperation account for missile defense. Since we’re going forward another 10 years, we have a 12-year horizon of -- today it’s $600 million, almost 10 percent of MDA’s budget, right? So the question is this, since the Army has tried it on the MLM and since we have a predictable funding stream for 12 years for buying these full batteries, and since the interceptors are co-produced, because there’s a Raytheon part of it and so forth, and of course David’s Sling is coming on also and will be co-produced, is there not a logic for the Army to piggyback on the volume that exists and the MDA funding that will exist to make some economic buys to build the force?

COL. DAYLEY: All heads turned left on that question. I guess I’ll tackle that one, especially I’ll put on my former programmer hat from the G8. But moreover, the efforts that the Missile Defense Agency is undertaking in the development of the Stunner and Tamir missiles have been recently tested on the multi-mission launcher, the MML, as part of our IFPC program. So the Missile Defense Agency, in collaboration with PEO Missiles and Space, is continuing to assess the feasibility of utilizing a variety of interceptors. I know they fired five missiles: several Hellfires, AIM-9X, AI3, Tamir and Stunner.

What that said is it’s important for us to look at how we can leverage all of those technologies, particularly when we can use OPM, other people’s money, is great. The Army doesn’t have a lot of money today, so we’d like to leverage that. But on a serious
note, I think that for us we have to look at, what are the types of threats that we want to be able to intercept with a specific type of missile, at that point, whether it’s a cruise missile or an aircraft.

But as you get to the discussion about Iron Dome and David’s Sling, the Army continues to employ what you referred to as C-RAM, and that’s essentially the gun off the Phalanx system or LPWS. For that we have a finite capacity and we have modest or maybe limited improvements for that particular capability as we go forward without substantial investment. The challenge for the Army, just like all nations would have, is what’s the enduring need for requirement for that capability?

It is a program of record, but in the determination of whether or not we’re looking to replace the C-RAM system with an alternate system, whether it’s Iron Dome or it’s developed by Rheinmetall or any other potential vendor, is really a discussion that needs to come to the forefront. It’s not an active decision at this time, but I believe that this confluence of activity within integrated air and missile defense is creating opportunities because we’ve never really been this relevant since likely Desert Shield and early Desert Storm. So for us the time for opportunity for advocacy and improved capability is now. So I think you asked very fair questions. I believe the Missile Defense Agency and their industry partners work pretty hard.

GEN. FORMICA: Dr. Karako, then the gentleman in the blue, and then back to Sydney is the sequence we’re going to go here.

MR. KARAKO: I wanted to hit both parts of your question, first the multi-mission part and then the Israel question. On the multi-mission part, I think there’s this glittering vision where all the world is MML and all the world is IBCS and everything is connected to everything and every sensor, every shooter, is magically connected. I think in some ways the long litany that has been put together here is I think series of miscarriages of cancelled programs: MEADS, SL-AMRAAM, JLENS, forces us to ask the question, could we do this differently? Could you have a more distributed and less silo-based force that spreads out not only radars but shooters across a broad area?

I think that question, listening to everything here is, is there a way of coming at this differently so you kind of tackle and break the operational and the personnel tempo problems in some radical way? Maybe that’s a glittering vision too far, I don’t know.

And then on the Israel question, I just think it’s important to kind of draw attention to this highly unpopular point here, which is that, as you pointed out, nine percent -- it was a couple of years ago -- nine percent of the Missile Defense Agency’s budget went to Israel. Now there is a strong U.S. interest to support both procurement and RDT&E for Israel. That relationship is strong. It’s productive and it has been going on for a long time, including before the ABM Treaty was gone. That’s a good thing.

But I think that unfortunately we’ve put ourselves in a very unfortunate position whereby, I’m sorry, but U.S. missile defense and Israel missile defense dollars are in
competition with one another. The way that the funding is structured, there is -- nobody I 
think wants to draw attention to this, but all missile defense is not created equal. Those 
dollars, when it comes to a particular subcommittee in appropriations, come into 
competition.

All you have to do is look at the appropriations mark this year. Guess what, the 
$600 million for Israel from the several committees, lots of Missile Defense Agency 
programs, including some pretty important ones, took haircuts to pay for that. So I think 
there has to be -- and actually I think the White House has pointed to this -- if that 
funding, which is after all a form of, a species of foreign assistance, if we could find a 
way to classify it as such in the State Department’s budget or something else, these are 
both very good things. It’s a tragedy they’re in competition with each other. And it’s 
also unfortunate we don’t recognize they’re in competition with each other.

GEN. FORMICA: Thanks, Tom.

QUESTIONER: Thank you, a simple question which may have a complicated 
answer. How much would this cost? If you were to try to bring missile standards, 
missile defense standards up to where you’ve all talked about with capability, capacity 
and training included, how much would the Army need?

GEN. MAHON: Lots.

(Laughter).

Here’s the dynamics. Think force structure. A short-range battalion is 600 men -- 
500 men.

COL. DAYLEY: Yes.

GEN. MAHON: So 500 men. BCT is 3,000 to 3,500. One BCT buys you six 
battalions of people. The dollars, with no-pay and all, that’s probably a wash.

Now I need the hardware. The Avenger is not the right weapons system to be 
bounding with the lead task force. It never was designed to do that.

So now I need a weapons system that’s survivable and can bound with the lead 
task force. It might be a Stryker-based vehicle, it might be to go back to the Bradley 
chassis, but there’s going to be a hardware investment. Then I need the interceptor or 
weapon to go on that capability. So there’s going to be a capital investment.

I was there when we made the decision in 2002 to stop funding Avenger’s 
development so we could get after SL-AMRAAM. The Army agreed to a single 
battalion of SL-AMRAAM. So we threw Avenger over the fence to the G4 for 
sustainment and we started to fund SL-AMRAAM’s development.
I don’t understand how the program went awry and the wheels came off and everything, because it was basically a non-developmental program. But that would have filled the gap capability-wise and gotten us a capability interceptor-wise that was up to snuff. I would still challenge -- it was going to be in a Humvee chassis, not the things that would be moving with the lead task force knocking UAVs out of the sky. But a weapons system in design that was simple, that the force structure was easy to move people to, and was there. We took that force structure away to build BCTs.

So it’s a challenge now of, you’re going to bring the Army down -- if you’re only going to bring it to 484 (thousand), it might be easy to recreate some of that SHORAD, but now you’re bringing it down to 450 (thousand) or 420 (thousand). So how is the chief going to create a force that can do the total mission out of 400 and pick the number, whatever it’s going to be, people? And then you’ve got to fund the hardware.

Maybe the right approach is not, don’t give me that wonderful PowerPoint vision, give me a non-developmental approach. You know, the C-RAM system that we kick around here that’s in Afghanistan, we received the requirement in June of 04 and we deployed the capability in the summer of ‘05. It was not beautiful. It was an ugly system.

But we surveyed industry and we surveyed science. We had the directed energy zealots saying I can do this; I can name that tune in three months. We didn’t go there because we knew they couldn’t.

We ended up going back to 1968. The Vulcan cannon, which had become the CIWS, we took that cannon. The initial ammunition was Vulcan ammunition, self-destructing, and we integrated it with Sentinel radars and Firefinder radars and lightweight counter-mortar radars. A bunch of smart guys with a lot of bailing wire created this capability and we met the requirement.

Now, if I was to say, was it an A quality system or an F quality system, it was probably a C quality system when you looked at how good it performed in tests. It’s probably better than a C quality or a C-, but when you ain’t got nothing, something is good. You know, Babe Ruth was a hero and he only scored 33 percent of the time. So that’s where you’ve got to put the perspective on.

Here’s an anecdote. My college roommate’s son came back from Afghanistan last summer and he was showing us photographs of the guys barbecuing on Bagram. Off in the corner you could see an aerostat. He said, you see that thing? I don’t know what’s on that balloon, but every time it comes down it start raining mortars. Every time it goes back up, the mortars go away.

Then he pointed to another picture and you could just see the top of that CIWS radar dome. He said, that is one sweet-ass machine gun.

(Laughter).
When it starts raining mortars that thing start ripping canvas. Not pretty, JLENS is not pretty. I was one of the original guys -- 1988 when I got introduced to JLENS as a mass target sensor. I said, there will be fist fights in the battalion S1 because nobody wants to be that platoon leader. But then when it’s done, he says, when you see what it could see and the data it could provide and how it extended engagement footprints, he said, wow, that’s a strategic capability. And the only way to get after cruise missiles is to go over the Earth’s curvature, and you can’t do that with a terrestrial-based sensor. And you can’t put that sensor on a fixed wing platform because you don’t have enough dollars to keep that thing in the sky. So not pretty.

MR. KARAKO: Earlier, General, you talked about co-locating different kinds of shooters together. A couple of things have been said along the way here makes me raise the question again. Is there a different way of doing this?

This may seem impolite on this panel, but is this something that maybe needs to be a little bit less of an Army-centric solution? Aegis Ashore is Navy. I realize that that might not be desirable on this panel, but given the absolute inertia down that has been emphasized on this panel, what could be done to make lower tier air and missile defense more purple? Is that possible?

GEN. MAHON: I don’t know if you can get more purple on the personnel side. I’ll tell you, we deployed, because I was responsible for the C-RAM program, so we worked hand-in-hand with the Navy at Dam Neck to get the system and get the components. I mean we took -- ships that were supposed to be receiving CIWS did not get them. The Navy gave us those weapons. We integrated them, we created the capability.

Navy chiefs taught the first couple of rotations on the maintenance. Navy chiefs deployed as the technicians because we had no 16-Romeos left in the Army. And then the Navy took a couple of those rotations so that the 5/5 and 2/4/4 guys could catch their breath.

There could be purple solutions out there. I don’t know if they’re purple solutions with respect to the personnel side. On the technology side, yes I think there may be purple solutions out there. As I’ve said, the Standard family of missiles, that’s a pretty gee-wiz missile, talking threes and sixes. Everybody has got their limitations and I can only go this far, but we need to open our eyes up to say, are there other alternatives for surface to launch missiles?

And we need to look at the radars. You can go back in history and you’ll see where the TPY-2 was going to be the SPY radar. For some reason, it didn’t become the SPY radar.

You can go back and find old briefs where the SM-3 was going to be the interceptor, or the nose of the SM-3 was going to be the nose of the THAAD. It’s who
was doing what in the technology as we were chasing science back in the ‘90s. But there may be purple solutions out there that we need to explore.

GEN. FORMICA: Sydney, back to you, sir.

QUESTIONER: In the context of everything you all have just said, to what degree is IFPC and MML, and I guess those are really two separate things although they get paired together a lot, are those the solution for SHORAD problem? Are they a piece of the solution that has to be complemented by other stuff, when we buy guys to actually run the thing?

COL. DAYLEY: I’ll take that. As far as the capability is concerned with when you were discussing the multi-mission launchers, it’s nested with battlefield radars that we have today such as the Sentinel radar or our family of Firefinder radars that are nested together in the construct. It provides a component of our ability to provide protection for maneuver forces on the battlefield.

I need to be very clear in how I answer that. The system is not a mobile firing system, so it is emplaced. It provides defense in an over-watch, primarily of critical nodes, assembly areas, infrastructure, high priority assets, which could include forces that are forward of or adjacent to.

Much of the panel discussion had to do with the modular brigade combat team in movement, conducting combat or stability operations or wide-area surveillance. If it gets beyond essentially the protection of the missile, because of the kinematic capability of the interceptor or the effective range of the radar system that provides surveillance, then those forces are forward of or not being protected. So that’s a half answer. It provides some of -- because really at the end of the day we paint a very bleak picture.

But we have Avenger weapons systems, we have Sentinel radars, we have multi-mission launchers essentially building our IFPC, modernized Patriot, and then other capabilities that are employed by essentially our sister services or our allies. There is an integrated network and there is a deliberate effort at defense design. So it isn’t that we’re alone and unafraid, but we’ve acknowledged that we have gaps and we may only be able to have capability at specific periods of time, because enduring capability is just as critical, and much of the discussion is about the need for elevated sensors and long-range surveillance systems that provide us with that. So I hope that answers your question.

QUESTIONER: We’ve talked a lot about the future. Now I ask, let’s go back to the present. I ask each panel member, perhaps, to address this: Colonel Dayley from an Army staff perspective; Colonel Wilson as a tactical war fighter; General Mahon from a strategic view of the COCOM; Tom, outside looking in; and General Formica I want to put you on the spot as an ex-operational commander. What is the issue that most concerns you when you consider the sons and daughters of our air and missile defense force today?
COL. DAYLEY: I’ll take the first stab, because I think we’re going left to right on this one, sir. I think that I have two specific concerns as it relates to that discussion, one of which may not be intuitively obvious, at least it wasn’t to myself until you asked this question. The first has to do with the aspect of being able to deliver immediate capability where we have identified significant gaps, where we have unacceptable levels of risk. When we look at the competition or perhaps the friction between programs in development and either existing or emergent technologies or capabilities that could be brought either from the U.S. defense industry or from foreign nations. There’s an aversion or perhaps a difficulty in that because of political sensitivities and investments, but that’s an area where Army innovation is a necessity and that’s a cultural issue that I have concerns with.

The other portion of this has to do with -- for those of us that are air defenders or have sons that are air defenders, we have asked these young men and women to do incredibly difficult tasks. We are burning the candle at both ends of the force, both in the talent that we have and the capabilities of the systems that they use. We studied reducing stress on the Patriot force because the deputy secretary of defense identified that as a critical problem and tasked the Army to do so, and we provided those results with some success. But across the spectrum of the air and missile defense or the CMF-14 field, which includes some field artillery folks as well, I think our dwell rate, the frequency of deployment, the PERSTEMPO and OPTEMPO challenges that we face will essentially wear out or burn out our force and put those young men and women at greater risk in the future. Thank you.

COL. WILSON: Now we’re talking about kids and this comes near and dear to my heart because I love the soldiers and I love kids. The one unique thing about kids are is you plan and you put money aside to send them to college -- and that’s what we do in acquisition, we plan to have capability 10 to 15 years from now – my kids call me every once in a while with a flat tire or a dead battery, and I’m somewhere else. The only way I can do that, I can’t get money to them right now, all of them have a credit card. When you have a flat tire or a dead battery, that long-range plan for the new car, for the new capability that you need in the future, sometimes becomes an immediate need that has to be addressed now.

When you have to pull out the credit card, you may still have to figure out how you’re going to pay for the credit card the way we do in South Carolina, but the necessity is we have a gap between that long-range plan of getting that kid to college or getting that capability to the force in time. The enemy doesn’t give you the time -- they’re not saying wait until 2025 and I’m going to kick your rear-end. They may choose to do it today. Just like that flat tire, it could happen today. So we have to build plans to build access and do immediate things such as C-RAM. There’s an amazing story that Secretary of Defense Gates put as far as getting into acquisition and making those adjustments to get the things we need today. Put something else on hold.

Maybe that’s why SL-AMRAAM doesn’t make it. Maybe that’s why a lot of
programs don’t make it. We had to prioritize. Right now it seems from all the conversations I’m in that we have to put some prioritization on the air and missile defense community.

GEN. MAHON: I was going to ask you, seeing as how you have a young air defender. I have a medical service corps officer. But I’ll tell you, the biggest concern is, as Don touched on, we’re going to get the call and we’re going to go and we’re not going to have what we need to do the task.

We saw five cruise missiles (inaudible) and nobody talks about those. Luckily they didn’t hit anything of value other than the Sharq mall, and none of us were allowed to go down to Kuwait City to the Sharq mall anyway, so it wasn’t a big deal. But we have a major gap in capability and we need to get on it and we need to get on it quickly.

As Donnie said, there ain’t nobody planning to take us to war in 2025. We don’t know what they’re planning to do and we don’t know when we’re going to be called to go somewhere. And you’ve got to show up with the stuff and we don’t have the right stuff or the stuff that’s capable of doing the mission today.

The other one is the burning out of the force. Young captains with four years in units, two of them deployed, does anybody scratch their head and wonder why he’s single. You and I remember we had one young captain deployed for his fifth time with me. I brought him back, we got him sent to the Dutch squadron, and his return assignment they were going to send him to Southwest Asia after two years with the Dutch.

The response from the personnel guy was he’s not married. You wonder why he’s not married? With five deployments in four years of post-Desert Storm and he gets two years in Europe and now you want to send him back to Southwest Asia. I mean, we will burn the force out if we’re not careful, and they will vote with their feet. It is a volunteer force and they will vote with their feet.

We saw it in the AWACS force in the late ‘90s. We saw it with the Patriot force in the late ‘90s. The challenge is, if they vote, you can buy them back. You can start increasing the re-enlistment bonuses. You can’t buy back your officer corps. They don’t get re-enlistment bonuses. You can’t buy back your senior NCOs because they don’t normally get re-enlist bonuses.

And so you’re not going to be growing the quality leaders you need to move the mission area forward in the future. You’ll be constantly building and re-building, and you’re going to accelerate promotions because you’ve got to fill those leadership positions, but you’re not filling them with talented and experienced people. You’re filling them with the next guy in the OML, and there’s danger in that. It’s risk, you accept more and more risk.

So it’s the rule, pay me now or pay me later. You pay me later in combat
operations and the price is paid with blood. It’s paid in loss of operational capability and it is failure of mission. You gotta put that in perspective.

MR. KARAKO: I would say the say-do gap between what we identify as our priorities, as our priority threats, and then what we’re actually doing about it. These are the kinds of things that always make the speeches. You have heard this afternoon one way after another in which we’re not meeting particular requirements identified.

GMD -- I didn’t mention this earlier -- the BMDR identifies it as our first priority and its budget has gone way down. You heard today about the gap between THAAD’s nine battery requirements and the four that you might have today, for instance, the Patriot and its requirement. But especially I think the say-do gap and how that came about from a kind of forgetfulness, enjoying the peace dividend and the forgetfulness of great power politics, all of a sudden we’re kind of being thrust back into that, using systems that are pretty old.

Patriot has done a lot of great things. We miss seeing all those cruise missiles he mentioned. But looking at NATO in particular and looking at especially 360-degree cruise missile type threats, it’s not as if we didn’t see that coming.

Thirty years ago next year -- 1987 was when the Corps SAM concept, let’s look 360 for these kinds of threats -- was put out there. And so I think it’s tragic that we’ve had this series of miscarriages before. But we are, I think, at a bracing wakeup as this forgetfulness of these big problems occurs.

GEN. FORMICA: Thanks for the question, not only to the panel but to me. I don’t feel on the spot at all. That’s why we set up this panel, because we know we wanted to address, what are those challenges that we’re facing and how do we deal with them? So what is it that we’re concerned about?

What you’ve heard across the last hour and a half across this panel is a shortage of both capability and capacity in our air and missile defense force. It is recognized. The demand is continuing to increase across all of the combatant commands and the ability of all of the services to meet the increasing demands is challenged.

But when I think about it, and I am an advocate for more AMD capability in the Army today and in the future, and increased capacity for our AMD forces, but I also recognize that the challenges that we’re talking about are part of a bigger issue. I’m fond of saying that there’s not too many problems that the Army is facing today, but when you point to a trouble spot what it comes down to is you’ve got an Army that’s fundamentally too small for all that the nation has asked it to do across all three compos: Active, Guard and Reserve. It doesn’t have the topline that it needs to resource that increased end-strength in demands.

All chiefs have to balance end-strength, readiness and modernization or capital investments. Ultimately, that’s what the chief of staff of the Army and the secretary of
the Army end up having to do. With inadequate end-strength and inadequate dollars, it’s difficult to achieve any kind of balance and you have to take risks.

This chief has said readiness is his number one priority, and he’s going after near-term readiness across the force. We need to build that. and when you do it, it challenges your ability to address functional capabilities like this. I would submit to you that while as important as this is, and as critically important to our nation’s security as air and missile defense is -- and I can’t think of too many that I would put above it -- we could have a panel here for cyber or deep fires or acquisition capability. I mean, there’s BCTs and a whole variety of capabilities and capacity that fundamentally comes down to an Army that’s not big enough and not resourced enough to do all of the things our nation has asked it to do. And it’s manifesting itself in this very critical air and missile defense capability area, and we’re taking risks.

I think we’re past our five o’clock time. That was actually a great kind of wrap up question. With the permission of the host, I would say I think that concludes the panel. We thank all of you for attending. Thank you for your participation and your questions. We appreciate your being here.

Thank you. Thank you to the panel.

(Applause).