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Interview by Dr. Charles Gross, Air National Guard (ANG) Historian, NGB-PAI-H,
With Col. Keith Coln, NGB/AQ.

Subject: Weapons Modernization

DR. GROSS: Today's date is 14 March 2001. I'm Dr. Charles J. Gross, the Air National Guard Historian in the National Guard Bureau. I will be interviewing Col. Keith Coln, spelled C-o-l-n, the director of acquisition here in the Air Directorate of the National Guard Bureau concerning weapons modernization in the Air Guard.

Okay, we can talk about process.

COL. COLN: I think our situation in the Air National Guard as a reserve component of the active force is a unique situation in that we basically have to serve many masters. One is the corporate Air Force itself, the active component.

In the process arena we want to make sure that all of our processes, right from the point at which requirements down to satisfying that requirement with equipment that we're going to use to perform a war fighting mission follows the very strict guidelines, the processes that are laid out by the active component in a series of requirements, documents and acquisition policies and procedures and regulations.

At the very same time, we also have 54 states and territories that we serve to make sure that we try to satisfy their needs and requirements within the construct of the overall larger regulatory requirements that exist within the corporate Air Force itself.

So sometimes those two conflict with one another. What state A might want may not necessarily be what the corporate Air Force wants or Air Guard component per se. The state has very good reasons why they may want that equipment. The Air Force may have very good reasons why they don't want that equipment for that particular state or that particular mission.

And sometimes we have to act as somewhat of a facilitator between those two to try to satisfy war fighting CINC requirements. That's probably the main thing that we try to remember that we use our processes for, that our processes are more or less a means to an end, not an end to themselves.

So therefore, we try to use those processes to satisfy war fighting CINC requirements. What does a war fighting CINC want for the war fighters that are going to come into his theater to conduct

warfare? What type of equipment do they want? What type of airplanes do they want? How do they want the organization to be structured?

We take care of -- the organize, train and equip piece, we take care of the equipment piece. And sometimes that is also termed as the modernization piece. That term, "modernization," has gained more popularity here of recent because of all the press and all the stuff that's out there that -- all of the pundits are out there saying that the military needs to be modernized.

It's important to remember that modernization for us in the Air Guard is somewhat different from how the Air Force views modernization. For us in the Air Guard we have a lot of legacy systems that we try to keep modernized by making sure that they have the same or equal capabilities to that type of equipment that might be hosted within the active component.

To the Air Force, modernization means new weapons system to replace an older weapons system with a new weapons system. To them, that is modernization. To us, while our modernization plan includes new weapons systems in the aircraft, it is mainly focused on bringing the older legacy systems we have up to date to an equal capability status with those that are hosted on active duty.

Our requirement process generally, from an overarching view, the requirements process we use in the Air National Guard for modernization requirements can more or less be termed as a bottom-up review, and that means that every year we have -- we conduct, host out at our Air Reserve and National Guard Test Center in Tucson a weapons and tactics conference.

At this conference, weapons and tactics officers from all of the different MDS's and many of the different squadrons and units within the Air National Guard and from other components and from other service components attend this weapons conference.

It's at that conference that they formulate requirements based on war fighting CINC needs about equipment that they need in their particular units, right down to the unit level, about what they need on their MDS to satisfy the war fighting CINC requirements.

So it starts at the very bottom level; i.e., the fighter pilot of the squadron or the electronic warfare officer in the squadron or the intel officer in the squadron or at the very unit basic level.

That's somewhat different from how the Air Force does it. The Air Force is more of a top-down directed approach; i.e., there's a lot of research and development that goes on. Take the F-22, for example. Twenty years ago they were researching and developing -- beginning to research the development on the F-22 to determine what the next generation fighter should be.

Through that analyzation or analyzing all that research and development data, they began to formulate what type of system needed to be on this airplane to conduct warfare in the 21st century. And therefore, that begins to coalesce into a particular piece of equipment or a particular type of airplane that needs to do certain things.

I doubt if they went out and they asked the squadron unit pilot, you know, "What type of weapon system are you looking for in the 21st century?" It was probably more of "This is what we've come up with to conduct warfare as we see it as it's going to exist in the 21st century and this is what you're going to get."

That's not necessarily a bad approach, because there's many things that you have to do in order to make those predictions about what type of equipment you need to satisfy those requirements in the future.

DR. GROSS: Yeah.

COL. COLN: But I also think it's important to go down and ask the guy that's actually using the equipment he has today about how would you improve that equipment or what equipment do you need or what shortfalls do you have to satisfy that mission that you have in your doc statement today?

So we use a slightly different approach. But, at the same time, by using that approach we still go through the standard acquisition or requirements process that the corporate Air Force uses, and that is that anything that we buy out of this office or anything that we seek funding for to buy out of this office has a documented requirement behind it.

Now, you might ask: What's a documented requirement? A documented requirement -- there's an operational requirements document; a MNS, a mission needs statement; a combat MNS, a combat mission needs statement. [Inaudible.] So that there's a document. It's not just a wish list or, you know, boy, I would like to have new mag wheels on my F-15. It's a bona fide and structured process to developing that requirement so that you can satisfy and go out and acquire the equipment to put on that airplane.

And there are many reasons for that. That's so that money won't be misspent or misappropriated from what Congress gives us. And it keeps us legal and clean, so to speak, about how we actually go about acquiring equipment that we put on the airplanes.

Lots of -- in many cases, in fact, our goal is to acquire the very same equipment that the Air National Guard -- that the Air Force component has and if not the same equipment, at least the same

capability that the Air Force is seeking for their airplanes that are on active duty.

DR. GROSS: Well, would you describe, starting from that sort of bottom-up weapons and tactics conference, how the process proceeds? You get these documents that you just spoke of, and what happens to these documents? You put them over to the Pentagon somewhere and I assume that something happens. How does that process, from once you've had your development of those requirements, what happens then?

COL. COLN: Well, there's -- it goes through a lot of -- and maybe we can discuss it in some more detail. But it goes through a lot of structured review in the corporate Air Force, through either an Air Force requirements oversight council or a joint requirements oversight council to make sure that that -- for example, let's use a current case that's going on. Right now we're in the process, just beginning the process of re-engineering our F-16 block 42 aircraft at Tulsa, Toledo, and Des Moines with a new engine. And this new engine is a Pratt and Whitney 229 -- F-100 229 engine, which is an increased thrust engine for the block 42.

There is an ORD that calls for an increased thrust of that particular block airplane. Years ago, and this has been, gosh, back in 1990 or the late '80s -- I think 1990 is when this ORD came out that talked about an increased thrust on block 42. So that requirement has been out there for quite a while.

And that doesn't mean that just because there's a requirement out there that there's a particular need for it. However, because there's a documented requirement out there for it, that is one of these squares that you can check off to make sure that if you do get money that you can spend against that particular equipment that at least you have the requirement to spend that money. You have some document that justifies the need for that equipment on that particular MDS.

Then you might get into many arguments about well, okay, you have a requirement for it but we can't afford it or we don't have the need for it. Well, yeah, some of those might be valid. You've got an argument saying we might have higher priorities for the money that you might get steered towards buying that equipment.

But the fact of the matter is that there's still a documented requirement and in the case of the user, a documented deficiency for the present equipment, the present engine that they have in that airplane. So therefore, you need something new. You have a documented, validated requirement for it. Now we have funding to go against that requirement and we have a contract that we can go out and spend money on without doing a lot of extra up front costs for establishing contracts and competitions and all the things that need to be done if you were doing a straight line acquisition.

And therefore, you can go out there and do this relatively easy as long as we have the money to do it. Depending on the type of equipment that's acquired, it goes through different areas of review in the process. Like SADL, for example, the situational air data link that we're installing in the F-16s and the A-10s and here soon, I just saw yesterday, the HH-60.

When we first did that mod to our airplanes, which is a data link, a situational air data link we put on the F-16s, we did it through what's called a 1067, Air Force Form 1067. What that is is that all the interested parties; i.e., the LG, the DO, the AQ types, everybody kind of signs off on this document that yes, you can do a modification to this airplane and the reason why you can use the 1067 is because it does not exceed certain monetary limits. And that limit, I believe, is $66 million.

VOICE: $10 million?

COL. COLN: It was certainly above $65 million. $65 million.

DR. GROSS: Okay.

COL. COLN: At the time when we were putting SADL in the F-16, it did not exceed $65 million. So we validated the requirement through the 1067 process, we went out --

DR. GROSS: Here within the Bureau?

COL. COLN: Here within the Bureau and within the --

DR. GROSS: With the Air Staff?

COL. COLN: And with the Air Staff also.

DR. GROSS: Okay.

COL. COLN: -- because it required the SPO to sign off on the 1067, for example, the system program officer to sign off on the 1067 in order to have that equipment installed on fleet-wide Air National Guard and Air Force Reserve block 30 airplanes, as well as active duty block 30 aircraft.

So then after that, once we move above the threshold for that system, above $65 million, by putting it on the A-10 and here on the HH-60, it now moves into a different category. Now you can't do it with just a 1067 anymore because there's monetary limits that you've exceeded.

You'd have to go the ORD route and you have to make up the operational requirements document.

You have to offer the numbers and requirements document for that particular system. And because this system is going to operate out and around; i.e., it's a data link, so it's operating out of cyberspace, okay, and it affects -- this is an original Army system so there's some amount of jointness there right off the bat because we're using an original Army system being installed on Air Force aircraft.

But because it's a data link and you're operating in the realm of information technology or combat information technology, it's out in a world where there may be many other parties that will be affected by this information that's floating around out there.

Therefore, the Joint Staff determined that it had to have JROC review, joint requirements oversight council --

DR. GROSS: JCS joint staff, that is?

COL. COLN: Yes.

DR. GROSS: Okay.

COL. COLN: And we are going through that process right now for that review so that -- and it seems like that, you know, well, we're kind of going back and fixing the things that we didn't do to start with. Well, when we first started this, it was below the monetary threshold for a 1067 and it was signed off by all the interested parties in the Air Force and on our side.

But now, because the system works so well, it's expanding its sphere of influence into other MDS's and out into other areas, so we had to go out and satisfy those requirements, those processes that are needed for this system to operate out there in the joint world and out in the world where many other systems might be.

DR. GROSS: Well, all these things cost money. How does the Air Force decide whether or not they'll make the money available for them to us?

COL. COLN: Well, that takes a lot of politicking and influence. And what I mean by that is that -- let's take target pods, for example.

DR. GROSS: Ah, yes, a favorite theme.

COL. COLN: Something here a couple years ago, something happened that -- a few things kind of coalesced together, came together, that really heightened or increased the intensity of the spotlight on the precision engagement world for the Air Force in particular. One of those things was the Air

Expeditionary Force, and I'm sure -- I know that you're familiar with the Air Expeditionary Force, but what it did was divided our contingency operations in our 10 AEFs, in which all of our Air National Guard and Air Force Reserve forces are allocated into those particular 10 AEFs.

Within those 10 AEFs, there were different types of operations that they wanted each AEF to be able to do. Precision engagement was one of those types of operations that they wanted an AEF to be able to conduct that type of warfare, and that goes back to years ago different CINCs established that if you were going to come into our theater and conduct war fighting operations, we wanted you basically to have equipment that's able to do four different types of operations.

One is precision engagement, the primary need, because we're all going to a much cleaner, antiseptic type of precision war instead of the old "drop it anywhere" type of approach. And the ability to conduct operations 24 hours a day; i.e., night vision technology or night goggle type technology.

Survivability; i.e., electronic warfare type of equipment. And data links -- data links kind of being the wave of the future for data transfer and the way that you have this information technology, for the military to make use of information technology so you can have a more efficient kind of warfare.

He wanted you to be able to do those four things, okay, which kind of roll into the AEF itself, so that each AEF had some type of requirement or some type of component that was made up of precision engagement. They wanted to have some segment of that AEF to be able to conduct precision engagement, okay.

Well, at that point here a couple of years back, we only had one squadron in the Air National Guard, the entire Air National Guard, that was precision engagement capable. That was the 150th Fighter Wing out of Albuquerque, New Mexico.

DR. GROSS: Right.

COL. COLN: They had block 40 F-16s and had the LANTIRN equipment that allows them to do precision engagement. Nobody else in the Air National Guard had that equipment or that ability to do precision engagement, whereas in the Air Force, most of the precision engagement capability was hosted within the active component.

We had been saying for years here that well, we're fearful that that will be a discriminator for future conflict or future contingency operations or future major theater war type of operations; i.e., that if you have precision engagement you'll get to go and if you don't have precision engagement you won't get to go.

That actually came to pass here about three years ago, two or three years ago when Richmond -- the 192nd out of Richmond and I believe Alabama and Colorado, I believe, were all excluded from a contingency operation because they had no precision engagement.

DR. GROSS: I believe that was early 1999 -- what, in Southwest Asia?

COL. COLN: Yeah, it was in Southwest Asia. I can't recall whether it was Northern or Southern [Watch].

DR. GROSS: Yes.

COL. COLN: But they were excluded because they didn't have any precision engagement.

DR. GROSS: Yes, but it's kind of like they're really fast, clear air mass World War I fighters. [Laughter.]

COL. COLN: Well, luckily at that point when this actually occurred; i.e., that this exclusion took place, we had already launched an acquisition to satisfy that precision engagement piece of that combat quadrangle I described between data links, electronic warfare, night vision and precision engagement.

That acquisition that we had launched was for the Lightening [phonetic] 2 targeting pod , 160 of which -- about 50 percent equippage for all of our F-16s out there in the Air National Guard to satisfy that precision engagement.

DR. GROSS: Only 50 percent?

COL. COLN: Only 50 percent. It's only a 50 percent equippage, and I'll get back to --

DR. GROSS: We'll get it, okay.

COL. COLN: -- why that is here in a few minutes, which is kind of an interesting story in itself. But yes, it was only a 50 percent equipment.

Now, before we started that acquisition, when I first came up here to the Guard Bureau, I was one of the guys that went down and talked to ACC about -- we saw this looming on the horizon where, you know, we've only got one squadron in the Air National Guard that has precision. They all were hosted within the active component. That could be a discriminator for us to go to, you know, the ticket to the dance type of thing. You don't have a ticket to go so you can't dance.

We saw that that might become a discriminator, so we went down to ACC to talk over with them about a transfer of equipment from the active component to the Air National Guard, precision engagement equipment.

DR. GROSS: Yes.

COL. COLN: Now, we weren't asking for this equipment for free, so to speak. What we were going to give back to the active component in exchange for the transfer of this equipment was a reduction of ops tempo for the active component.

In other words, you guys have got guys going over into Northern and Southern Watch now on a pretty regular basis. They're going there because you need that precision equipment. You're the only guys that have the precision equipment. How about you give us some of that precision equipment and, in return, we will take some of those contingency operations for you over in Northern and Southern Watch and therefore reducing your ops tempo and making life in the active component happier and allowing your people to be home for Christmas occasionally and how would you like that?

Well, it didn't come to pass. That equipment -- they turned down our request for the transfer, which basically was the status quo until the AEF came along. When the AEF came along and essentially it was at such a level for the AEF -- and then remember that one of the goals of the AEF was to make the contingency operations more predictable for everybody that participated and to reduce the pers tempo for everybody all around. It actually increased the pers and ops tempo for the Air Guard component, but it decreased the pers and ops tempo for the active duty component.

But there are certain things in there that you have to have, as I described to you, to do the missions for the AEF, and one of those is precision engagement. So that's the reason why we went out there and conducted, launched this acquisition for the targeting pods was because we had a niche that we had to fill and we had to have equipment to fulfill that.

Now, how do we go about getting them to do that? Well, this is where the NGREA account comes into play. The acquisition that we launched, it was very -- the SPO -- at the time it was called the Lantern SPO at Wright-Patt because the only precision engagement equipment that existed out there was Lantern type equipment.
They were very cooperative with us. They also realized that there was probably a shortage of precision engagement equipment overall between the active and the reserve component, that we were going to need to buy equipment to fill that shortfall. The present equipment that existed out there with old technology.

While we could go out there and purchase that, it was expensive and it was older technology and there were other alternatives out there for equipment that we could purchase and that would be cheaper and would be better technology. So they helped us launch the acquisition for the targeting pods.

We started that acquisition. Now, the reserve component was a team with us in that competition. We kind of launched it jointly. They had enough money to buy all of their target pods that they required. They basically had their money in their pocket because they've only got four squadrons worth of F-16s. They only needed 32 targeting pods, whereas we needed 160. So they had basically all their money in their pocket. They only needed $150 million or so. At the time, we only had $12 million, and that $12 million bought us eight targeting pods that --

DR. GROSS: Eight?

COL. COLN: Eight. That we started our acquisition with. That's what we signed up to guarantee that we would buy from the Air Guard side of the house with that $12 million that we had.

DR. GROSS: And these were new pods?

COL. COLN: Brand new, yes.

DR. GROSS: Okay. I know what you're talking about, the 754.

COL. COLN: So that $12 million was money that we had in our miscellaneous portion of our National Guard reserve equipment account.

DR. GROSS: Okay.

COL. COLN: If we had not had that vehicle, that National Guard Reserve Equipment Appropriation, or if we hadn't had it in a miscellaneous area that gave us the flexibility to spend it on what our needs were, we would have never been able to start the acquisition. We would have never been able to buy a targeting pod. We would have never been able to satisfy that need that we had and we would have never been able to even begin to satisfy the needs of the war fighting CINC.
So having the flexibility of having that money that we could kind of fall back on to start an acquisition and go out and acquire the equipment we needed specifically to do this job was very advantageous for us.

Since that time, there was a -- after Virginia, Richmond -- and I'm not sure I have the units right, but

I believe those were correct. After Virginia, Alabama and Colorado got knocked out of contingency operations, you might remember that it was in the press. It was reported in the press.

DR. GROSS: Yes.

COL. COLN: That these units were pulled out of contingency ops because they didn't have the proper equipment. It received wide coverage in the press and therefore got the notice of those on Capitol Hill, got the notice of those on the Air Staff and there subsequently there was a supplemental appropriation that came out to the tune of about $85 million, I believe, that allowed us to buy 56 more targeting pods.

DR. GROSS: For a total of 64?

COL. COLN: For a total of 64.

DR. GROSS: And your requirement was again?

COL. COLN: 160 [pods]. So in a kind of a convoluted kind of way, them actually being pulled out did have a good side to it in that it did raise everybody's awareness about equipment shortfalls that existed in the Air National Guard and about what we need to satisfy those equipment shortfalls so that we can send them over into the AEF so that they can do the missions that they're designed to do.

And through some other programming actions that we've got going on right now we're bringing our targeting pod buy up to a total of about 75. And also during this time the Air Force -- when we launched this acquisition for the targeting pod, we went down to ACC to tell our MAJOM that is responsible for that particular area, what we were doing; i.e., we're going out, and we're going to the competition to select a targeting pod for the F-16. It's going to be for the F-16 block 30. We're writing new software for the airplanes so we'll be able to accommodate this new equipment.

Your Air Force, your active component block 30 F-16s will be included. Now, Air Force, would you like to join us on this contract and would you like for us to establish options on this contract for you to purchase targeting pods should you need to do so at some point in the future? The Air Force declined. They said no, thanks, we'll handle it our own way or another way that they had planned. I'm talking now about the contract that resulted in the first Lightening 2 targeting pods made by Rafael and Northrup-Grumman. Subsequent to that, the Air Force decided that they do need more and newer targeting pods and they decided that they would launch an acquisition program for equipment called the Advance Targeting Pod, ATP. The present Lightening pod that we have in that upgraded fashion will be a competitor for that particular contract.

The RFP for this was just released on Friday, for the ATP was just released on Friday. The Norfhrup- Grumman Lightening pod in an upgraded fashion will be a competitor against that acquisition, with others. Lockheed Martin and Raytheon, I think, also will have a competitor in that competition.

And during this time when the ATP program was being formulated, the Air Force in the form of the Chief of Staff and Gen. Weaver came to an agreement that -- Gen. Weaver made it very clear to Gen. Ryan that he wanted the Air National Guard to be included in any future acquisitions for precision engagement equipment that the Air Force was going to do.

DR. GROSS: Pods and missiles?

COL. COLN: Exactly. Basically it's his goal that we be equipped for equal capability as the Air Force, as I previously described. So he made it very clear that on this particular ATP competition, when we got word of it and what was going on, he made it clear to Gen. Ryan that, "Hey, I want my guys to be covered in the ATP. If you're going to be buying targeting pods for the active component, then you're going to have to buy them for us, too."

Because as I described, we have a requirement for 160. At that point we only had about 64 that was on the books, so we want to be included in this acquisition. We want you to cover us.

Gen. Ryan and Gen. Weaver came to an agreement on a program that is now referred to as a 60-40 split. Any adds or any programming actions that come down for precision engagement for targeting pods, 60 percent will go to the Air Force and 40 percent will come to the Air National Guard.

In fact, the ATP program itself is laid out through the FYDP up through [FY] 07 as 60 percent for the Air Force and 40 percent for the Air National Guard, which will eventually get us almost to our full requirement of 160. We'll still be a little bit short, but it will almost get us to our full requirement of 160.

The only problem with that is that you're talking about '07 before your requirement is finally satisfied. As we've seen, we're at least -- in the Air Guard side of the house we're at least five years late for this precision engagement equipment, and now we're talking five years hence.

So at that point, by the time our requirement is fully satisfied, we're very late to need on satisfying that precision engagement. So that's why we have been working to accelerate that move to the left, getting funding to go out and buy and satisfy that requirement early.

Now, I mentioned before about how 50 percent equipment [inaudible] Air Force. Well, that's one of

those things that -- you have to remember that all of these F-16s that we're buying targeting pods for, and at the time there was 20 squadrons. That's how we came up with the 160 number. Twenty squadrons, eight pods per squadron equals 160 pods.

Those are general purpose F-16 squadrons. In other words, their primary mission is not precision engagement. However, they can be expected, even within the general purpose rule, that if they conduct combat in a war fighting theater, that they're going to be expected to be able to perform precision engagement and precision attack. Of course, they've got to have the equipment to do that.

But because it's not their primary goal, we settled on a 50 percent equippage for those squadrons rather than having one pod per airplane, as the Air Force does in their equippage. However, since that time many inputs from the field and many others are out there -- there are many people out there that think that we need to increase that number of pods that we have so that we have a better ability to satisfy our precision engagement needs. In other words, bring our equipment to higher than 50 percent.

So that's something we're working through right now to determine if we want to go that route and try to buy more pods or try to get us at a higher equipment level. I think it certainly makes sense and there's certainly a lot of merit to that argument.

DR. GROSS: Where are we on the rest of this combat quadrant you described earlier, getting that into the Guard?

COL. COLN: The 24 hour operations and the night vision side of the house is looking pretty good. It was started a few years back by my predecessors here in the job, so it was one of those programs that were started again with seed money from the National Guard Reserve Equipment Appropriation that allowed us to go out there and install night vision imaging equipment and buy -- there's two pieces. There's the lighting on the airplane, both internal and external, and there's the goggles for the pilots that they wear themselves.

We used NGREA appropriation to go out there and start that program and seed that money out there so we could find a low cost alternative. In fact, the competition that we did uncovered a low cost alternative to modifying the airplanes that resulted in a significant savings to the Air Force. It was a program that the Air Force ultimately adopted for all of their airplanes. So it resulted in a significant saving for the Air Force on the work that was done there by lots of people here and my predecessors.

But that – here sometime next year all of our F-16s will be equipped with night vision devices through the night vision imaging system, NVIS we call it; the internal and external lighting and the goggles. We've got all the goggles bought and for that particular airplane it will be accomplished.

Now, there's lots of other airplanes out there that need night vision equipment. Again, you go back through the process to determine does it have a requirement for night vision on that airplane? The tanker, for example. Does it meet the requirements for installing night vision? How expensive is it to modify that airplane with night vision equipment? What will it really accomplish by spending -- for a tanker you'd have to spend a lot of money to bring it up to night vision standards. Is it really worth the money to do it when that's not an airplane that's actually going to be in, you know, the combat theater; i.e., I mean he's going to be in the combat theater but he's not going to be over the fence.

DR. GROSS: Yeah.

COL. COLN: So to speak. Those are all the trade-offs you make about, you know, what type of night vision. There's also some interim measures that we put in some of the airplanes to satisfy night vision so that they can fly at night with night vision and the night vision goggles. Christmas tree lighting it's called which is a string of night vision compatible lights we put around the cockpits.

That's something that's continually in the works for us to upgrade all of our airplanes with night vision.

DR. GROSS: What about the A-10s, the F-15s?

COL. COLN: The A-10s were night vision compatible previously, so they're well on their way.

DR. GROSS: Okay. They're there.

COL. COLN: They're there. The F-16s are there. We're working the C-130 piece. We're working some of the bigger airplane pieces, working the F-15s with the Christmas tree lights. There's different levels of different pieces, but that's one side of that quadrangle that we're still pursuing, we're still trying to satisfy.
On the electronic warfare side of the house, electronic warfare is one of these things that is kind of like exercise. You have to pay attention to it nearly every day, but most people are not religious enough to do it.

DR. GROSS: Yeah.

COL. COLN: And it's just like --

DR. GROSS: And be careful, you're being quotable here. [Laughter.]

COL. COLN: Again, it's just like exercise. You don't realize that you should have done it until you get to the situation where your chest is beginning to hurt and you realize that that's something you should have done many years ago.

And I'll give you Desert Storm as an example. When I went to Desert Storm, of course, you know, occasionally you'd fly with an ECM pod and you'd look down at that control panel and you'd say, "Yeah, I think this is what that does when I do those switches." There's not a lot of places around the country here in the CONUS where you can actually use your electronic warfare equipment. You know, we kind of -- we knew what it was and we kind of knew how it worked and what it did.

DR. GROSS: But, it didn't kill anybody.

COL. COLN: Right. However, when we were preparing to go to Desert Storm we had -- Bob Beasley is the guy who actually came down and briefed our squadron about all of our different electronic warfare equipment we had and how to use it. And I can tell you, there were 35 guys in there that were paying rapt attention to what he said because we realized it's a very essential piece that you have to have in combat in order to make yourself survivable.

The problem is that it's one of those things that, you know, when there's peace time going on, not a lot of people pay attention to electronic combat. But everybody pays attention to it when a war starts, because you know you've got to have it. But it's one of those things that's on a low priority list or not a lot of money gets thrown at it even though it's very expensive stuff.

It's just one of those things that you have to pay attention to all the time. The problem is that the threat increases, therefore countermeasures against the threat have to increase, which causes the threat to increase their capability again, which causes an escalation of countermeasures. So it's a constant escalation game that goes on in electronic warfare.

But we're doing a lot of different things with some of our MDS's now. An antel relocation on our F-16s is one of the programs that we're doing now to make our RAW gear more compatible to identifying and locating threats. The OIR (?) program is an IR covert flare that we're just acquiring for the F-15s right now that will make them more survivable in a visual missile environment.

The C-130J, one of the shortfalls that we have in the C-130J right now is the defensive suite on the airplane. It's a software-driven airplane. There wasn't enough money put into it before to accomplish the defensive measures that we need to in the airplane to make it survivable and make it really mission ready.

So that's a fight we fight all the time, because it's a bill payer. You know, they take the money away from that particular area to pay for other things in the airplane, and it's one of those things that, you know, you're not going to realize you need it until your chest starts hurting.

But it's just one of those areas that we have to pay constant attention to and we have to always look for good alternatives to satisfy the requirements that we have more cheaply and we have to have constant vigilance.

The last side of the triangle or excuse me, the quadrangle there for the data links, we're pursuing that in a variety of fashions. SADL, as I mentioned before, which was an Air Guard designed system on the F-16, has been gaining more attention and popularity here of late.

They did a JFX exercise, JFX I believe, earlier last year, that got COMAC's attention about how -- and it was used in the CSAR, combat search and rescue, arena. They used data links to help locate the survivor, pinpoint where the survivor was. It proved to be so effective that subsequently COMAC ordered that SADL be installed on all of the HH-60s. So that was a success and that's good.

We've also got it targeted for the A-10. We're going to put the SADL system out on the A-10, as well as all of the block 30 F-16s. So we're making good headway there in data links for those particular MDS's with that particular equipment.

For the F-15, we were successful here a couple years back in getting money added to go out and acquire the fighter data link for the F-15, which is in the link 16 family of data links. Now the SADL family, which is in a different message format than link 16 is, we're going to have to be able to communicate between those two systems and the way that we're going to do that is to use -- most people term it as a gateway, which is basically a translator to enable one system to talk to another so I can see what the F-15 guy is saying on my data link and he can see what I'm saying on my data link.

DR. GROSS: Okay.

COL. COLN: And we'll be able to talk and transmit back and forth. Which also, by the way, will allow us to talk to the ground component, the Army. Yeah, it was interesting. I think with more stuff that comes out about this -- this happened a couple of days ago with that Hornet over there in --

DR. GROSS: Kuwait, yeah.

COL. COLN: That bombed the guys there on the ground. SADL equipment in that particular arena could have -- I'm not saying it would have prevented it, but it could have gone a long way towards preventing it by showing that they were friendlies at that particular spot on the ground and, you know, not to go drop bombs here. So it could have helped, maybe. You know, every -- every time and again we kind of relive some of those lessons that show where we can use some our equipment to help out in situations like that.

So the fighter data link that we're putting in 15s is going to be very -- is going to help them from that side of the combat quadrangle, and the link 16 family of data links which is going to be installed also on the block 40 and 50 F-16s as part of the CCIP that constantly -- or excuse me, the combined configuration improvement program, that's going to be installed as part of that program for the 40s and 50s.

Now, eventually our goal is to get data links for everyone in theater that will need them. Now, again, you come back to an argument of well, what aircraft need them and what don't. Does a tanker need them, for example. Well, you know, it's my opinion that they probably do, and the reason for that is because I think back to some of my operational experiences in trying to find the tanker when you really need gas, you know.

DR. GROSS: Yeah. [Laughter.]

COL. COLN: If you can do that quickly with a data link, you know, a data link installed in his airplane and on your airplane, then that certainly helps you, prevents you from running out of gas when you need it the worst.

So that there's potential for all of these different equipments that cross all of our MDS's and some type of level of capability that we basically use that combat quadrangle as our requirements model.

Now, that combat quadrangle is more or less a short- term type of approach to the modernization of our legacy systems. You know, those are our immediate needs that we're trying to satisfy to go out and do the mission the war fighting CINC wants us to do.

DR. GROSS: By short term, how many years do you see that?

COL. COLN: Five years.

DR. GROSS: Five years?

COL. COLN: Yeah, and we basically have -- we have recently formulated a book, if you want, a

modernization plan that's divided into short term, medium term and long term.

DR. GROSS: Yeah, right. You gave me a copy of that.

COL. COLN: Yeah, okay. Well, that is basically how we take a look at things through about 2020 or so. And there's many different factors that will affect that in years to come. You know, how many airplanes will trickle down from the active duty depends on how many F-22s we buy. How many JFS's that we buy. Whether we get a tanker re-engining, you know, from the E to the R model, how much we're going to get to do that. Whether we get a KCX and when we get it, which will affect how many engines that we need to buy for the E model.

The C-130J buy, you know, how many will we actually end up getting and what will they be used for. The C-17 buy. The existing --

[End side A, tape 1.]

COL. COLN: There's many things that will affect that plan in the medium and the long term based on basically the Air Force's decisions about how many airplanes they'll buy and when they'll buy them and how that will affect the Air Guard and the Air Reserve component.

As far as new airplanes are concerned, that's kind of been our long look. We fully expect that we want some of those newer systems, the F-22 and JSF, certainly; the C-17, KCX - all of those things to replace our legacy systems. We want to try to maintain -- our goal is to maintain common equipage with the active component and at least common capabilities with the active component.

DR. GROSS: How did you all -- what process did you all employ to develop your current equipment modernization plan?

COL. COLN: The short term, medium term and long term?

DR. GROSS: Yeah.

COL. COLN: It comes about from a variety of means. We used the strategic plan that we make up here in the Air Guard to help us lay out about where we want to go and what we want to be able to do. We use a QDR process to -- you know, we have different models of the QDR about what type of conflict we expect to fight and how we expect to fight those as that reflects the equipment you need to go out and accomplish the different missions that are laid out in the QDR.

There's lots of -- and it's a bit esoteric because you're thinking about -- I mean, you're trying to

project what the future force structure will look like for future types of conflicts and what you need to cover two major theater wars or whether you need to just cover contingency operations in a theater war or whether you - homeland defense, whether that takes a piece.

We sat down and kind of thought about all those things together and we tried to bounce that off the reality wall about how --

DR. GROSS: "We," you mean here in the staff --

COL. COLN: Here in AQ.

DR. GROSS: In AQ, okay.

COL. COLN: We tried to look at -- you know, bounce that off a reality wall. Well, can we realistically expect to replace all of our C-130s with C-17s? No, we probably can't expect that, but we can expect that we'll have at least some amount of presence of the C-17 within our force.

Can we realistically expect that we're going to have F-22s or a large number of F-22s replace our F-15s? No, but we can expect that we can get at least a squadron or two of F-15s or at least --

DR. GROSS: Or 22s, yeah.

COL. COLN: Excuse me, of F-22s, at least convince the Air Staff that that's something we'd like to -- a goal we'd like to try to reach.

So what does that mean? That means that all those F-15s that we still have out there are still going to need modernization. And, the models that we use for that modernization, whether it be a combat quadrangle or whether it be a longer range look or things is why I have all these smart people around to help me figure out what equipment we're going to try to satisfy for those airplanes to make them viable and valuable to a war fighting CINC in future years, realizing that the F-15s, for example, might go out there all the way to 2015.

So, not only is it going to include the avionics and weapons systems, but there are also structural and propulsion requirements that are going to be needed to take that airplane out there.

DR. GROSS: Well, you know, once you folks develop your ideas here in AQ, what happens then? I'm sure you say hey this is it guys. What about the rest of the directorates and the states and the units? How do they play into this process of putting together that plan that you gave me?

COL. COLN: As I described about the weapons and tactics conference before, when we come back from a weapons and tactics conference we here at AQ have a pretty good idea of what our field is thinking and what our field feels about what equipment they need to satisfy the war fighting missions.

So we relay that information to General Weaver in the form of our modernization requirements book that we put out on a yearly basis, and it talks about all the different MDS's, the different equipment we're looking at for that modernization, how much it will cost, when we expect or a time line for what we would do to satisfy those requirements.

And General Weaver uses that in a variety of ways. He uses it in his contacts with the Air Staff. Last year SECAF requested a copy of it, which, of course, he gave to him. He was very pleased with that product. He thought it was a good product, that it outlined our requirements very well, very succinctly.

So General Weaver uses it in his contacts with the Chief and with the SECAF. He uses it in contact with the states to show the states that this is what your people, your worker bees, I guess, if you want to call them that, talking to the TAGs, now, this is what your people down in your units have told us that they need. We want you to know -- close the loop there. -- we want you to know that this is the feedback that we're getting from them on the equipment they need and we want you to know that we're trying to satisfy their needs the best that we can to help them with the equipment they need.

And, of course, he uses it in his contacts with Congress. He goes over to Congress and they ask him for what shortfalls he might need. He can use that as a reference to show here's all of my requirements for all my different MDS's. Here's what they cost. Here's the states that are impacted, the states that might impact you locally, politically. Here are all the different issues. He uses that in a variety of ways.

SPEAKER: Can I just add one comment?

DR. GROSS: Yeah.

SPEAKER: Our book initially, the first publication goes out to the senior leadership conference. That's when it gets validated by all the states.

DR. GROSS: So they can get feedback that way.

SPEAKER: It goes to weapons and tactics and senior leaders --

DR. GROSS: Okay.

SPEAKER: And we develop the requirements from the field and then it goes to the senior leadership conference. Then by the first of the year, he gets feedback from the states and it will be finalized.

DR. GROSS: Okay. Is that the same thing as the plan that you gave me, or is that requirements document a little bit different than the modernization plan you gave me when I was down here about a month ago?

SPEAKER: I think we gave you our modernization plan, the book that has all the MDS's.

DR. GROSS: Yeah, okay. Yeah, it's the same thing. Okay, good.

COL. COLN: Did he get the latest revision?

SPEAKER: I'll get him one.

DR. GROSS: Okay.

COL. COLN: Here's one. You can take this one.

DR. GROSS: Okay.

COL. COLN: This is revision one.

DR. GROSS: Revision one, okay.

COL. COLN: Some changes we had to make, or additions. Now, at the same time there's a -- of course you know about the Air Force's planning, programming, budgeting system.

DR. GROSS: PPBS, right.

COL. COLN: Yeah, their POMing processes and their budgeting processes, their formulation of budgets processes. We participate in those also, because ultimately we want the Air Force, as the active component, and we want our MAJCOMs for our different MDS's, depending what MDS, to buy us this equipment. We want them to pay for it.

DR. GROSS: Yeah.

COL. COLN: I mean, after all, we are a reserve component that services the larger Air Force, corporate Air Force, and services those different MAJCOMs with war fighters.

So in order for us to gain acceptance into that system, we have to go through inputting our requirements up through the Air Force's corporate system, and we do that with the Air Force group here that formulates different budget inputs, UPLs and so on.

Now, I'm not going to tell you that this list that we've made up exactly matches what comes out of here on our side of the house for a UPL exactly that is submitted to the Air Force. There are different constraints in each area. This is basically unconstrained.

DR. GROSS: Okay.

COL. COLN: This is -- you know, this is --

DR. GROSS: Our plan.

COL. COLN: This is our plan. This is what our field says they need. This is -- now, I mean, we inject a little bit of common sense into it; i.e., we don't go ask for a billion dollars to do everything immediately. We cut it up into little chunks to make it more easier to swallow. But basically it's somewhat unconstrained as to -- we don't try to hide any requirements that we have certainly.

DR. GROSS: Yeah.

COL. COLN: Through the Air Force budgeting process, because of the type of command we are; i.e., being a bureau and basically getting O&M dollars, not procurement dollars, it's different. There are different processes and different constraints that are imposed upon the Air Force's PBBS system that's not imposed in this area.

But even still, we try to make our requirements known. We want our MAJCOMs and we want the Air Force to know that we have requirements that this is how much it would cost, and we expect them to budget appropriately for those requirements.

DR. GROSS: But I mean, how have we fared recently in that process?

COL. COLN: Well, not as good as we would like.

DR. GROSS: Okay.

COL. COLN: We've had some successes, but there's many areas that we still are quite short on. The successes that we have had, we talked about the supplemental that we got, which was the supplemental that we got for the targeting pods.

One thing that we have been able to do here recently, instead of -- you know, you talked about NGREA appropriation previously. What we try to -- when Gen. Weaver uses a particular document in Congress, he makes -- what we put in this document are particular PE lines in the Air Force budget where money can be gone in and added to those particular PE's and be in the Air Force budget, not the Air National Guard's budget.

DR. GROSS: Yeah.

COL. COLN: And there's a variety of reasons why we do that. It makes it easier from a budgeting standpoint for the Congress to actually add something into those particular areas, and it also illuminates the fact that after all it should be the Air Force and the MAJCOMs that pay for this, not as a Congressional add to the Air National Guard that pays for this.

So we try to stay within the constraints and the processes that the Air Force has established for that money. This year for the 03 APOM, for example, this year was the first time in recent memory that I can think of that the Air Guard was allowed to put in an unfunded priorities list. You know, the whole -- just the term "unfunded priorities" is kind of contradictory in itself. But it was the first time that the Air Guard was able to put in their own unfunded requirements list as an input to the overall Air Force's unfunded priority list.

DR. GROSS: Yeah.

COL. COLN: Now, I've read some stuff here recently where a month ago they said that there's not even going to be an unfunded priorities list, we don't have any of those, you know, in the new administration. So that's yet to be seen by how far it will go.

But this is a process that -- you have to realize that you're dealing with a lot of different personalities and a lot of different processes here that -- it's slow going and it takes work in order to get your requirements known, illuminated, and to try to get the budget to put against it in so you can --

DR. GROSS: Well, aside from the pod what have been the most important successes and shortfalls in the process in recent years?

COL. COLN: I think one of the more significant shortfalls I believe that we have, aside from the

pods, would be the KC-135 engines. Let's review that for a second. All of the KC-135s exist -- excuse me, KC-135E's exist within the Air National Guard and the Air Force Reserve. All of the KC-135s on the active component are the R model.

Now, what's the difference between an E and R? Well, the biggest difference is the engine. It's an increased thrust performance engine for the R model and a lower performing and lower thrust engine for the E model. But more significantly than that, the E model engine requires extensive maintenance to keep it running. And, not only that, not only does it require extensive maintenance to keep it running but those particular costs on the E model are accelerating at a rate of about 12 or 13 percent per year.

You can see that that's pretty significant when you start having to increase your budgets by that amount to cover the repair costs for that engine, that that can get to be very monetarily significant over the long haul.

So therefore, we have tried through the Air Force and through our own processes to illuminate the fact that we've got a lot of KC-135E's -- I think about 103, 105, something like that -- that we want to have re-engined to the R model for those reasons I just mentioned. There's some other structural work that's done on it when they do an R model -- when they turn an E into an R, but the main thing that they do is the engine piece.

But it's not cheap. It comes to about $22 million an airplane to do that. So you can see that 105 airplanes times $22 million is not a small chunk of change.

DR. GROSS: Yeah.

COL. COLN: Congress has been good to us in that they've given us money to do some of that over the years, but it's piecemeal. Last year I believe we got $52 million to do KC-135 engines, which basically could do two airplanes out of the 104. So I think that's a real significant piece.

The Air Force -- the main thing that we want the Air Force to do is acknowledge our requirement for KC-135R's and to just basically, you know, look at the program objectively and say yeah, you know, we've got engines out there that are accelerating in repair costs very rapidly and it will probably be cheaper over the long run, even though it's $22 million an airplane, to buy a new engine for it than it would to be keep repairing these old engines.

Because if you're going to have a KC-135, as the Air Force has said, it's going to be out there for a long time. There's nothing on the horizon short term. That's why the KCX program is coming. There's nothing out there on the short term that's going to replace these airplanes and we have to

have them not only for intra-theater combat operations but also for the air bridge for any type of combat. The next war we fight is probably not going to be in Canada or Mexico, so we're going to need an air bridge to get us over there, which requires tankers. An expeditionary air force or a mobilized air force doesn't go anywhere without gas.

DR. GROSS: Yeah. Well, which brings me to my next major topic. When he first became Director of the Air Guard, Gen. Shepperd said “leading the Air Guard is like herding cats.” And I use that as a way of introducing -- how does the NGREA, N-G-R-E-A, process work here from your perspective? It's not just a bunch of good old boys sitting around NGAUS and Capitol Hill saying "I think the Air Guard ought to have this." How does that process work?

COL. COLN: Well, now, this is the way I perceive it working. Now, I'm not sure what goes on -- I'm not privy to all of the things that go on behind closed doors between our boss and those on Capitol Hill that actually put --

DR. GROSS: Well, I'll talk to --

COL. COLN: This is the way I perceive that it works. He uses our inputs along with many of the other directorates from MILCON or --

DR. GROSS: Gen. Weaver, that is?

COL. COLN: Correct. For MILCON or for O & M. But he uses our book that we talked about previously for a basis -- a baseline, so to speak, for when he goes over and talks to those on Capitol Hill [inaudible]. So he lays this out on the table. "Hey, here's our requirements. Here's what the Air Force or here’s what happened to us in recent years when say money was put into the Air Force budget but our requirements didn't make the cut or they didn't make the line. But here's what our requirements are."

And then I'm sure that there's a variety of discussions that go on towards how we might get money added into certain areas to help us satisfy our requirements.

But one of the main pieces that we always try to get at least some piece of money in there for is the miscellaneous portion in the NGREA account, because I talked about that flexibility previously about how we can use that miscellaneous portion of that money to do things like start a targeting pod acquisition program or start a night vision program or install data links on our F-16s that weren't previously slated to have a data link in the Air Force program. Or do buy FDL to help out the Air Force's FDO program.

That's why we need that flexibility in the miscellaneous portion of the NGREA or there would not have been a Lightening pod without a miscellaneous portion. There wouldn't have been a SADL. There wouldn't have been a NVIS program without that miscellaneous portion of the NGREA.

Now, the reason why in that book that we put those PE numbers in there that I talked about is so that anybody that has influence in Congress that is willing to put the money in those particular areas, they can do it in the Air Force budget. They can go in and add money to that particular line with language that it's earmarked for the equipment of the Air National Guard, that we can use the Air Force budgeting process and the Air Force budgeting structure to help us satisfy those requirements that need to be directed to the Air Guard.

There are many -- there are people around that would like to see NGREA go away.

DR. GROSS: Yeah.

COL. COLN: OSD being one of them. And I'm sympathetic to that and I understand that to a certain degree in the perfect world type of thing. In other words, in a perfect world, if the DOD budgeting process took care of all of our requirements -- our KC-135 engines, our data link requirements, our targeting pod requirements, our C-130 defensive systems on our C-130Js -- if the budgeting system of the DOD took care of all of the things -- I mean, after all, we wouldn't have any need for showing that we have shortfalls or we wouldn't have the shortfalls.

DR. GROSS: Which has almost never happened historically. [Laughter.]

COL. COLN: Exactly. Exactly. So that's why we do our whole formulation of our validating our requirements, our whole formulation of what shortfalls we have and therefore showing what shortage we may have in funding.

Now, there's another piece in that area on the political end of things that is very, very important, and that is the participation and the activity of the individual states. There are many states out there that have an extreme amount of influence over their Congressional delegations. Different states have different levels of influence. Different states have different levels -- and when I say "states" I'm talking about the TAGs in particular -- have different relationships or different influence with their governors.

But those states that have good influence over their Congressional delegations, we make lots of use of. Because they're able to, in many cases -- well, if you take the block 42 engines for the F-16s, for example, Tulsa, Toledo, Des Moines or Oklahoma, Ohio and --

DR. GROSS: Iowa.

COL. COLN: -- Iowa, were able to form a coalition together. They went and visited all of their Congressional delegations for those three states, convinced them that this was a valid requirement that they needed to bring increased propulsion on their block 42s, convinced them of the need, the combat need for those engines, and last year they were successful in getting $48 million put into the budget to begin to do that program.

Now, this next year we're going to need some more money to continue the program and we're going to need money every year for about four years at that particular level to be able to accomplish and complete the program. But I think that we'll get that participation.

But that's an example of how the states together can use their influence in the budgeting process to accomplish funding for some of the shortfalls that we've identified.

DR. GROSS: It is sometimes claimed by people, I believe, that don't really understand the process, that the Air Force discounts some of our requirements or needs because of this Congressional angle and the NGREA account. I mean I don't think, you know, the Air Force -- personally I haven't seen any evidence that the Air Force says, "Well, you know, we won't get them pods because Congress is going to take care of that anyway through this other thing." Is that -- do you see any evidence that that process takes place?

COL. COLN: I don't know if there's that much actual collusion that goes on. I mean, maybe to a certain extent, maybe, but I mean that kind of circumvents the process, you know.

DR. GROSS: Yeah.

COL. COLN: But maybe yeah, there might be a little bit of that in certain types of equipment in certain ways. But the fact of the matter is that for NGREA itself or for the whole Congressional interaction that we have would basically be unnecessary if our requirements were covered by the corporate Air Force or covered through the DOD budgeting process.

DR. GROSS: It doesn't seem to happen very much.

COL. COLN: No, it doesn't happen. It's a constant -- it's an ongoing relationship with us with the Air Staff and with our MAJCOMs to constantly turn the spotlight on our requirements and show them what shortfalls we have. That's why something like the AEF was a good thing, because it pointed out a capability and equipment shortfalls that we have within the air reserve component, which maybe previous to that had not been that well known outside of the people that worked with it

very closely.

DR. GROSS: It gave you more leverage [inaudible].

COL. COLN: Exactly.

DR. GROSS: Looking ahead a little bit and, you know, some of this may fall a little bit beyond AQ but certainly equipment modernization is part of this. I mean what kind of Air Guard does the Bureau and the Director see in 10 or 20 years from now? There are a lot of very, very expensive new aircraft and other systems entering the Air Force or planned to enter the Air Force inventory. Is it realistic for us to expect to replace what we have, particularly in the fighter arena and some others arenas on a one-for-one basis? I don't even think the Air Force expects to have one F-22 for every F-15.

COL. COLN: Right. No, I don't expect that we're going to replace our legacy systems on a one-for-one basis. I don't expect that. I do expect that we're going to have legacy systems that we in the Air Guard are going to have to maintain for maybe quite a long time, and therefore that's why we have to take a short term, medium term and long look as to what type of structures and what type of not just war fighting equipment but if there are any structural work that we need to do on some of these airplanes to keep them flying out to 2020 or 2025.

But no, I don't expect that we're going to be able to replace them on a one-for-one basis. But at the same time, while I don't think we necessarily have to connect the number of people or force structure on a number of persons type level with the number of airplanes we have, there's going to be, I think, room for expanded missions that the air reserve component and the reserve component overall is going to have to make good inroads to in order for us to participate in those areas.

Homeland defense, for example - I really think that over the next 10, 15, 20 years that homeland defense is going to be a primary importance to everyone that lives in this country. It's the -- in my opinion, the status of warfare is changing and it's not necessarily -- warfare to me won't necessarily be somewhere that we go off and fight some war and ultimately win and come back home. That there will be some levels of conflict and some levels of warfare that we fight right here within our own shores.

And that may be a terrorist threat. It may be attacks on our information systems or attempts to dominate our information systems. Chemical/biological. Many different forms that I think that homeland defense is going to be a key part of in order for us to be able to counteract against.

There's also the final frontier out there, space, that I think will be -- can be suited towards an air

reserve component type participation. That those are areas that we've got to look at to see how our force can fit in.

One of the unique things that I think that is good for us in the Air Guard or the National Guard is that because we are divided, I guess you could say, into 54 states and territories, is that that allows us an extreme amount of flexibility that I'm not sure that the big ship of the Air Force is as flexible in that regard as we are.

And that's not a bad thing. I simply point out that if a particular governor in a particular state decides that he wants his state to be more prepared in the area of homeland defense, then he can direct his TAG to explore options for accomplishing those things that he sees as appropriate to his state. Or if he thinks that he wants to be more exposed in a space mission, for example then he has that flexibility to start steering his staff and his citizenry towards something that allows him to do that.

So I think there's an extreme amount of flexibility because of our organization that allows us to do that. However, that part of the organization when I start talking about homeland defense, I think that we have to see a change in our structure, and I'm talking about our military organization, to allow us to accomplish the homeland defense mission efficiently.

What I mean by that is that the home land defense of our CONUS or of the United States, that that will have to be viewed as a war fighting theater just as many of the other war fighting theaters around the world are viewed. So therefore it will have to have that structure and it will have to have that type of means for accomplishment in that mission.

DR. GROSS: It seems apparent that the active force or active component may not see it that way, at least not yet.

COL. COLN: Exactly. I don't think that they see it that way yet. And I'm afraid -- I hope that it doesn't take some type of catastrophic event for that to be illuminated to us.

DR. GROSS: You know, according to [Brig,] Gen. [Ron] Bath, I mean, their answer is "Okay, something goes off once here in this country, our answer is a major theater war in your country." The problem with that, it seems to me, except for ballistic missiles, nothing necessarily leaves a home address or a return address. [Inaudible.]

Well, those are kind of my big questions. Are there any additional comments or observations or things I ought to be looking at to address here before I turn this thing off?

COL. COLN: I think we've covered it.

DR. GROSS: Okay. Well, what I'll do is --

COL. COLN: I did all the talking.

DR. GROSS: Yeah. Well, of course. You're doing good.

[The interview was concluded.]