DEFENSE ACQUISITION PERFORMANCE ASSESSMENT PROJECT

1560 Wilson Blvd, Suite 400,

Arlington VA 22209

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Attendance:

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Ms. Eileen Giglio

General Richard Hawley

Mr. Don Kozlowski

Mr. Dave Patterson

ORIGINAL

M E E T I N G

Mr. Hutchins: What is supposed to happen is that when you run up to a milestone or to a major contracting event, the program office -- this is how it's supposed to work, I'll tell you how it really works is supposed to sit down with the contracting officer and these are two independent entities, by the way.

Ms. Brandt: By statute.

Mr. Hutchins: The program manager contracting officers are supposed to sit down and write an acquisition plan and we'll get to that later and then after they write an acquisition plan in terms of RFP's and contracts the next most important thing they're supposed to do is sit down and write a source selection plan. The source selection plan may sit down and write outlines of what it is they wanted to buy, outlines and a lot of the top level sorts of considerations you should have in there, well, gee, how are we going to go out and invite participation, how are we going to manage participation, how what are our thoughts about incentivization, how are we going to construct the process of source selection, including source selection evaluation board, source selection advisory committees proposed, and the guidelines and [inaudible] by dollar amount of contract to the source selecting officials should be, and all of this planning gets rolled together into a source selection plan

which is then supposed to go up to the milestone decision authority, actually, the head of contracting to be signed off. So that's the first most important thing. Typically in parallel with that, but it doesn't have to be heel to toe, people go about starting creating the solicitation for the RFP professional proposals. The program officer and contracting officers are supposed to work together on constructing new offers evaluation factors for award both of which should have been covered in the source selection plan and any special considerations in this particular activity they become H clauses. When all of that is captured the process typically goes through there may be industry, they would invite industry to participate, there would be a requirement for draft, solicitations go out, get industry comments before the final RFP comes out which is the government believes that industry has talked about proposals when the RFP is issued and then 45 to 60 days later proposals are due and the source selection process begins. That's how it's supposed to work.

All too often source selection plans are written entirely independently of creating the RFP. One, in creating the RFP section L&M are often developed by two entirely different sets of people. People who developed L&M may or may not be integrated into the program office where they've been discussed and this does lead to some very, very, very

difficult processes when you actually then get proposals from industry and you have to actually try and make sense out of what you've got and award as you said you were going to -

Mr. Kozlowski: Why the disconnect in the intellectual people?

Mr. Hutchins: Good programs pull them together, programs that maybe have not done it recently.

Mr. Cappuccio: Normally, if industry gets involved with the RFP they'll bring in like SM&A or maybe they'll bring in Tom and we will bank the RFP together and we'll try to get the selection audit and they can use it or not use it but it's the responsibility of the program manager on their side to make sure that section L&M are matched and a lot of times they're just not matched so what we have to do is when we shred it we actually shred the [inaudible] and do a cross check and that is what brings -

Mr. Turner: You said you bring these guys on board, we bring contracting people on board to do proposals. A lot of times they come in and do proposals and then shred and do the analysis or section L&M for engineers because the engineers don't know what the hell to write and they get there and they just write and what we bring these other guys in for is to match L&M and when you look at the EN process or the ECP process the efficiency reports, most of those are associated with the conflicts in L&M and that's when confusion comes

into the system because when I write a response to a DR or a CR that EN comes under the contract and as a part of my contract, not my proposal, and so the thing that John Young talked about when he said they want to have a tamper proof system when it came through the system and I got it to read, I said, look, they don't even know what they want. I'm not going to bid it. They don't know what they want, we don't know how to do it, and so when we wrote the response to the EN we narrowed, I mean, we spent about a week putting together three pages and it really narrowed because we knew that would turn out to be the legal document in the contract. And so how EN's are in the contract and how they fit in and how they limit it's a problem. That is not to mention how fast people move.

General Hawley: When we first brought this subject up early in our discussions I thought we came to the conclusion that, yeah, this is an important subject and somebody needs to work on it but probably not us and what we ought to do is tee it up suggest that they have a whole separate look the contracting process.

Ms. Brandt: And it also may be a people and training issue that we have to really look at.

General Hawley: With the key problems being it takes forever and it's so complex that lots of good people don't want to do business with us.

Dr. A'Hearn: It seems to me the real issue here, and this is just one example of it, is timing. It takes a year or more to get through the JCID's process, it takes a year or two to get a program through the AT&L staff, it takes a prolonged amount of time to get through contracting. I'm reminded of a year ago when we were working on the tanker lease thing, I think I can attribute this without breaking any confidence, Mr. Wynne said to us, he said, you know, the issue on the tanker lease, one of the issues was that an analysis of alternatives, and he said, I've got some people who tell me I can do this in an afternoon on the back of an envelope and I've got other people who say I need to study this for two years. And he said, literally, that is almost verbatim his words, and he said, you know, the answer is somewhere in between. Maybe there's a symptom of time running away with itself at every layer of this process.

Mr. Cappuccio: That's why Patterson keeps getting back to the time and independent variables. Look, you could do [inaudible] really on the back of the envelope. It would be about 80 percent right. Okay. And the executive takes that 20 percent risk with Congress that he's wrong or he could spend two years and have that much data justifying everything. It all depends on how much he believes it and you still have 10 percent risk.

[Off the record discussion]

Mr. Cappuccio: This is a complicated story.

General Hawley: I'm not sure you've got the right people here. That's why I say tee it up, say this is a big problem, if it takes too long, if it's too hard to do business with us, let's make it better so get the right group together and we'll go work on it.

Mr. Hutchins: What we'll know for everybody there's a best practices that's substantially improved completely [inaudible] because we did it to implement these. Among the best practices are very strong linkage between strategy being directed to programs, how they write the acquisition plan, and flowing out-source selection plan from that. Among the best practices is when NR writes a contract they integrate in structural offers and evaluates factors [inaudible] of what's called section L, structural offers, and right underneath it they say and here's how we're going to evaluate it. That would significantly help this process. The third thing is back to the leadership issue, and one of the fundamental things that is different between how NRO did things and the greater acquisition system is that NRO contracting with industry was always a conversation, always aimed at through this whole process making sure that industry understood what government wanted and government understood what industry could provide. So too much of acquisition [inaudible] more like we're going to create the perfect example exam and then

grade the industry's papers. So it's not where we issue to industry an [inaudible] whether it's a draft RFP or an RFP don't talk to them about what we may or may not have intended. Look at the proposals and then we grade the proposals. In the leadership side of contracting as we've now been calling it [inaudible] gains could be made with the fundamental thought process when it moves from grade the exams to working more like the space community has done is to make sure we both understand each other.

General Hawley: It's a collaborative process. You get everybody involved.

Mr. Hutchins: [Inaudible] 15, oh, by the way, allows you to run major competitions and source selections in exactly the way the NRO has been doing it. Nothing precludes you from doing anything. I talked about -

Mr. Kozlowski: In both the acquisition and the contracting in any other process the bureaucracy will expand the work to the time available. And you talk about time as an independent variable. What Dave's [inaudible] is contracting or building to a schedule. That is not independent variable, that is a fixed requirement. It's a semantics problem but there's a big difference. And our directives which existed in 1991 there was a big effort in the department DOD to try to kill that because they wanted -- they didn't like the fact that the NRL had that process which

they could acquire things quicker, faster, cheaper and they wanted to try to make it -

Mr. Hutchins: What I've take away from this in the report. We will have a discussion of this not in the context of other things where we're making specific recommendations but rather to thoroughly outline the issue and tee it up as someone needs to be directed and go look at it.

Mr. Cappuccio: You can tee it up by the acquisition process between LNM and say between that in that context there's a broader issue.

Mr. Rixse: If you do all the things you recommend that would improve it, if you really want to do something, you would have to do this part of it -- this is part of a broader issue we want to touch on and that is that one of the reasons that the system has lost confidence or that we have difficulties is that time keeps getting stretched out and this is just another example of time. If you look at almost every major acquisition for the last 50 years it has -- it is -- the growth is not in production side, it's in the development side and this is just part of that development function. And if you want to influence contracting behavior and the get the best practices one way to do it is in the contracting process with the big C and you can also adversely affect it.

Mr. Hutchins: Okay. I don't think there's any idea

what the contractor incentives are to begin with.

Mr. Cappuccio: They probably vary. They vary by program managers. What incentivizes me is not what incentivizes the guy on JSF. You know Dan Nielson, contracting head of the Navy, I mean, we fought all the time. I could get a contract through him in less than two days. Now the program manager, the girl in the Navy, it takes them six months. They want to fight. Nielson and I would get together and say our role is to represent two different interests, so let's get this fight over. Here's my view, here's your view. Let's get together and get it done.

Mr. Kozlowski: It's a leadership issue when people allow that stuff to drag out.

Mr. Rixse: Maybe some program managers are intimidated by the CO's.

Dr. Abbott: When Sid and I we had to brief the tanker lease study up the chain and we got up to the secretary and he cleared the room of all the strap hangers, the two or three of us just sitting in the room, one of the questions he asked is, how can you manage the system, what things would you do? Manage time. You can manage time and ALA does not have to take 18 months. If it's that important get 60 guys, lock them in a room and tell them you're not going to feed them until they come out with something. You can incentivize time if you choose to. All the rest of it is exceptionally

difficult to manage because there's always a regions stretch top out.

Mr. Hutchins: Well, I hate to do this but do we want to spend any time on this?

Dr. Abbott: I think we have a time management problem here as well.

Mr. Cappuccio: We said we wanted to revisit the time but why don't we go through your charts. I think Dave wants to be around for the time discussion. It's not an independent variable.

Mr. Hutchins: All right. These are the slides selected from the first meeting in August. This particular presentation was from L3 and this the discussion of how large scale integration was having in impact on next year down in the [inaudible] base.

Mr. Kozlowski: We've got the LSI issue covered.

Mr. Cappuccio: We said we're going to do it offline. I don't remember anything about sub-contractors or the big tent.

Mr. Hutchins: When you talk about capital budget that has a very strong impact on what happens on the street in terms of return and the context of variability or flexibility of funding which then drives you back to the propensity to invest in capital in R&D so it indirectly ties back to how they structure themselves. That's the only place we're going

to touch on it at this point.

Mr. Cappuccio: Large scale integration to me is a government issue and how they want to cope or what they want to do. The second tier, the mezzanine suppliers, like the [inaudible] and those guys one of the things we did touch upon is we said you need to do something with suppliers and sub-contractors that represent 60 percent of the parts that are required but are invisible to the mainline government. And so in the process you need to get them involved there particularly when most of those contractors, whether they be the computer people or the engine people, are on the critical path for the program. Lockheed's stop in manufacturing is never, ever, on a critical path. There's always a landing gear. On the critical path or a forging and so to successful execute on time on budget the level of program management or sub-contract managers is a big issue. The issue of whether of not government wants companies like Boeing or Northrop or even Lockheed to be large-scale systems integrators like FCS, do they really want to delegate that responsibility to a contractor running the risk that the contractor will buy vertically? Do they want to do that? That's not an industry decision. That really is, I mean, I think that's not -

Mr. Kozlowski: It's part of the acquisition strategy.

Ms. Brandt: And if they do want to do that, which I agree, but I think that is not but if the government does

want to do that they ought to do that in the context of then saying, if Boeing is a large-scale integrator, then and is somewhat or almost completely vertically integrated, then there has to be some statement on the part of the government about competition for their sub-contract components.

Mr. Kozlowski: And there's nothing new about that. You could go back in time and say, hey, that a certain amount of this job has to be farmed out to sub-contract. Secondly, we reserve the right to review your sub-contract management plan. In fact, the government can insist on the right to improve the selection of every sub-contractor. It's happened many times before. The fear sub-contracts management systems engineering is still a very critical element of program management for both the government and industry but the issue here is just from a strategy standpoint deciding what it is you want to do. Just because companies are vertically integrated doesn't mean that that's going to put sub-contractors out of business but left to its own demise it certainly could go that way and so there's a fear here. By a guy who by the way has lost a lot of the acqui -- also add on the acquisition trail building himself a big empire he could be vertically integrated one tier down. It's a consistent fear that has been there infinitum.

Mr. Hutchins: On a number of occasions we've talked about acquisition strategy and all of the conversation about

acquisition strategy has been about some fairly fundamental global issues, vertical integration, supplier based maintenance, a number of other very large topics. Is it really appropriate to ask a program manager to add an acquisition strategy then or rather should an acquisition strategy be written by someone else?

Mr. Cappuccio: You see the issue you have is when they let industry vertically integrate it bought up some portion of the supplier base that it normally dealt with because they knew them. They didn't change their structure, they just owned them. In order to get the economies of scale in order to break even on the acquisitions, cost and the price that was paid for things like good will there's a tendency of giving in to that supplier not because he's a Lockheed badge but a Boeing badge but that's the guy you would have given it to anyway had you run a competition in the past.

Dr. Abbott: Part of the problem in both the contractor's side and the government's side in the vertical integration forgetting the issue of whether vertically integrating destroys competition in the marketplace and putting that issue aside is essentially a [inaudible] cost responsibility. One of the reasons companies buy up their suppliers is it reduces transaction cost dramatically. They no longer have to go out and contract and there's an enormous savings there, plus the fact they can get security of supply.

One of the problems with the government when all this happens is you say let's have a plan in which we go and you have to compete everything is how far is the government going to go down in its oversight function of the contract and how much effort is it going to have to expend and do you have the capability and the resources in order to do that, and the answer largely is no. So even if I write a plan that says you're going to have to compete 70 percent of your 60 percent, that's our standard, and I'm going to make sure you do it, all I'm going to rely upon is your reports largely that you did it and I'm not sure I'd get anything for that. And you're going to expend a lot of cost when you have to go outside your own house.

Mr. Cappuccio: This could take a study all by itself.

General Hawley: Well, it's part of the source selection discussion. It's also part of the contracting problem. I'm not sure we can do anything about it. If we're looking for something to back into the big recommendations for Gordon I'm not sure this is the one.

Dr. Abbott: If the vertical integrations would have constrained trade it probably would have been stopped by the Federal Trade Commission if the companies were significant. If little companies they probably wouldn't have been seen but if Lockheed-Martin buys up the last forging house in the country and says to Boeing, hi, guys, we own the only

forgury, you have to come to us and by the way we're going to charge you [inaudible] prices, the Federal Trade Commission would stop it.

General Hawley: They'd catch it. I was involved in one for what was it, it was the actuator for ejection systems. [Inaudible] and there was two guys involved in that and they were going to come together.

Ms. Brandt: Very limited.

General Hawley: The little tiny companies, they've got 200 people working for them.

Dr. Abbott: When two companies end up controlling the whole market that's almost prima fascia evidence.

Mr. Hutchins: I don't want to tee this issue up similar to the way we're discussing and indicate to the secretary that he needs to put some attention on this.

Mr. Cappuccio: I think he has one on the industrial policy and another where the industry [inaudible] to the committee this whole business of is the U. S. government to provide or are they and can they provide adequate insight into what large-scale systems integrators do, how they behave.

Mr. Kozlowski: It isn't just the large-scale integrated contracts, per se. In the acquisition, in the development of the acquisition strategy, the government has to take a more educated look at who the hell they're contracting with and

what the vertical chain is to your principle suppliers. At first blush you could go out and contract with Boeing and Lockheed today if you knew nothing else you would still assume business as usual, you get all this competition for next year's suppliers, but unless you provided for it these guys could come in and say, oh, by the way, we're doing [inaudible] 95 percent of it's going to be on our own so it's a vertical integration issue, it's not just the LSI contracting, it's a big fear for LSI subs.

Mr. Cappuccio: We will make vigorous [inaudible] decisions. Our own contracting people will insist that we have a paper trail so the question gets to be to what extent are they geared to be fair. In the case of Alonzo on the JSF program he did not gear to be fair. I will tell you when he was working for Lockheed and his company got the award, he needed to be very fair. Once he left the company and he didn't own the company any more he viewed it not to be fair but that's the issue. It's not that we don't do it and I would say less than 30 percent of the time Lockheed will pick an internal company because internal companies are hard to deal with.

Mr. Rixse: Our view of the different units of Lockheed shows that to be true.

Mr. Cappuccio: You don't have the contracting clout. The money is transferred into a whole different financial

system.

Mr. Kozlowski: If you do work for some other authority they can go around you whereas an independent contractor you have to have customer supplier relationship.

Mr. Cappuccio: We don't make money on it, we don't double-book profit, when it's internal to us.

Mr. Kozlowski: Maybe things have changed but companies do not go out and do this level of vertical integration for the purpose of making a homogeneous bid. They do it to maintain a very flexible revenue stream in times of ups and downs and a whole bunch of other kinds of things, but there is a fear, there is a fear by outsiders that once you have this castle built nobody else can compete, and it's a bit unfounded but you still have to address it. And Frank's very right.

Mr. Hutchins: We've talked about this with the capital account. We have not discussed this part of their requirements but that's back to program management and leadership again.

General Hawley: Well, this gets back to the separation of the budgeting and the requirements and acquisition. They're an integrated piece, then the impacts of these kind of -- of this kind of turbulence are felt in the right place.

Mr. Hutchins: And there, unfortunately, too many government program managers that haven't figured out they can

say no. They have the authority to do that. That's a cultural, educational, leadership sort of thing.

General Hawley: The way we budget, too, has changed. I mean, there was a day when the old [inaudible] command, for example, actually had budget levels so they to an extent these things got integrated at the Tac so Tac was less willing to drive turbulence in the requirements set because eventually it affected them, whereas today the operating commands don't have much budget clout so they can say, well, it's going to be the air staff's problem, the air staff does the budget. So I'm going to just throw this ball up there.

Mr. Hutchins: We have talked about SDD on the government's side where observation of industry as I've worked with them is there's a propensity there to, gee, I can always make it better, gee, if we go one more iteration, gee if we [inaudible].

Mr. Cappuccio: If the government on the government's side if the government program manager does not know that the engineers need to be shot there's no shooting.

General Hawley: In risk averse system the engineer says, hey, I can reduce risk by doing the extra wind tunnel test.

Mr. Cappuccio: The IPT structure only aggravates this because you have silos now that you didn't have before.

Mr. Kozlowski: How do you mean, Frank?

Mr. Cappuccio: In an IPT structure you have many groups, nobody is matrixed in any more, they're totally deployed into the IPT structure, so in that structure what you have is, let's say, a landing gear grip, you will have the landing gear grip that has its own weight margins and the landing gear has its own costs and its own design, its own structures, its own requirements. It optimizes for the best landing gear that you're ever going to have. It can actually, I mean, we're watching this go on -- it can actually have a 30 percent reserve weight book capped and saved while the avionics guy desperately needs it, don't know about it, don't know how to get it.

Mr. Kozlowski: That's your systems engineering job.

Mr. Cappuccio: And the systems engineering job and the chief engineer is what's missing, that chief engineer that goes in there and says, well, stop -- stop optimizing that landing gear, I need that weight for here.

Mr. Kozlowski: Unless you've got the arbitration either you've got a functional matrix organization that can maintain vigilance or you have to have the chief engineering scenario. If that stops changing in industry they're dumb.

Mr. Cappuccio: What's happening is the U. S. government when they evaluate proposals does not have an organizational group that says what's good, what should a good organization look like to manage this kind of effort. Some organizations

will not manage, are not structured, you have too many levels of management. Resistance engineering is put over here, you know that. The U. S. government needs, does not have anything that looks at an organization and says that organization inherently will work. It has the right communication links, there's not too many levels, there's a way to communicate, the systems engineering guy truly does report, he truly comes across. There is no evaluation of organizations by the U. S. government and that's a hole.

Mr. Kozlowski: It may be a hole. In the last 10 years I have no knowledge of what's happened in that arena but circa mid to late '90's this was all well understood by all the services and you could tell in a instant what was good implementation of IPD and what wasn't and so I don't really know what's happened. Maybe it sounds like the pendulum has swung completely the other way, people have gotten their knives out and sharpened pencils and maybe we've cut off systems engineering in some of these things that don't have an apparent added value and so we have corrupted the system with silo approaches again even in IPD.

Mr. Cappuccio: I think you'll find every program has a systems engineer. I think the question gets to be in the management, that you've been shrinking those in size, 20 pages, 30 pages, I mean, 40 page or 50 page volume to manage a $3 billion, $10 million dollar program you have thousands

of pages so you're going to say what does the system engineer really do. Yeah, he's on the block, in the chart, what does he do?

Mr. Hutchins: I have observed, although it's not uniform across industry, many places where system engineering is being treated as a staff function.

Mr. Cappuccio: It's treated as a process.

Mr. Kozlowski: I understand that symptom. People say, oh, by the way, we have to -- you have to have this because the government says so as opposed to what systems engineering can really do for you, what the essentials are. As I go back one of the things we've consistently heard from a lot of outsiders not just this panel, systems engineering is hurting in the government and in industry.

Mr. Hutchins: How do we crisp that up then to some top level solution? What would you suggest?

Mr. Kozlowski: As a part of the acquisitions strategy kind of issues you look at the organizational structure, put particular emphasis on systems engineering contracting, some of these other things we've mentioned.

Mr. Cappuccio: The way you do it is you say, look, more emphasis has to be paid by the government and industry on how, what are their plans to execute the contract and then why does the government or industry feel that that plan is successful. If executed to the plan why do they believe they

will bring the product in within cost and schedule. As you know, Alan, the stuff we did on JSF, that was never asked. It was never asked and if you executed to this way of doing business and we actually generated a document on ours which we threw out later where we actually said here's an IPT, here's the core management, this is his role, this is his role and more importantly this is the interrelationships, this is how they should function.

Mr. Kozlowski: And they threw it out.

Mr. Cappuccio: They threw it all out. They said no.

Mr. Kozlowski: Because it was not asked or something?

Mr. Cappuccio: They threw it out because what happened is it got into like every program gets into this big, you get into a how am I going to organize, how many levels do I want, who wants to be a vice-president. You get into this organization structure.

Mr. Kozlowski: But you very -- which are very sensitive emotional issues.

Mr. Cappuccio: Right. And in the process of doing that nobody says, okay, you can do that now. We've got to convert this document and say here's your function.

Mr. Kozlowski: The thing I was getting at, did the government throw it out because it wasn't required under the solicitation or did they throw it out because they just didn't want to wrestle with it? It doesn't mean the

information was wrong.

Mr. Cappuccio: I don't think the government threw it out as much as the program threw it out and the government never went back and said, wait a minute, you said you were going to run it like this, are you running it like this, that audit function.

Mr. Hutchins: That document was part of the proposal, the joint [inaudible] fighter proposal was hugely hyperlinked and so in the actual proposal management approach was discussed and it was all hyperlinked to this monster document, 28,000 pages of documents hyperlinked in there. How much of it was considered source selection, obviously, we'll never know.

General Hawley: So the government didn't throw it out.

Mr. Cappuccio: They didn't enforce it.

Mr. Hutchins: The only thing that goes under contracting such as [inaudible] assistant specification then anything else enters in the H clauses.

Mr. Cappuccio: The proposal is useless which for the life of me I cannot imagine what the U. S. government was thinking.

Mr. Kozlowski: There's a lot of precedent. You can take certain sections of the proposal and just [inaudible] this particular piece will be incorporated in the contract.

Ms. Brandt: If the government said that it's within the

purview of you, the contractor, to organize in the best way, most efficient, most effective way and I, the government customer, don't want to necessarily, you've proposed it but I want to necessarily [inaudible] because God knows [inaudible] of other things, should that not be the purview of the contractor to say, gee, and so at what point do you want to stop. I'm hesitant about saying everything ought to go into the acquisition strategy. We'll make an acquisition strategy that is so large, so cumbersome and takes so long that we'll never be able to do it. And I'm loath to sort of say the government should have more control and more responsibility over some of the kinds of things within industry because I don't think we have the capability.

Mr. Cappuccio: I'm not talking about putting that in auditing. What I'm saying is someone in the acquisitions, somewhere in the acquisition process. The government should at least ask, just ask, not audit, but ask the senior management not the program manager or the program but the senior management, somewhere they say, all right, are you confident the organization, are you personally confident that the organization you put in place will execute the contract and why. They should at least ask.

Ms. Brandt: But if they ask -

Mr. Cappuccio: If they make, if the government, if the contractor makes all sorts of organizational changes the

question should always be asked, is it better or worse and why. Not audited. I'm not asking for auditing. It's like change control.

Ms. Brandt: I don't disagree, I'm just saying we have a tendency on the government's side then to get carried away.

Mr. Cappuccio: You're right.

Mr. Hutchins: Actually, this is one of the things best handled in the source selection. To give you an example, on a major satellite program with the source selection included two weeks on site. With each of the opposing offers where a number of topics were addressed in depth so the management organization was one of them so it wasn't strictly trying to say give me a management, again, plan and I'll evaluate your management plan. Far 15 already is perfectly within the purview of the government to do that.

Mr. Cappuccio: We were talking about the NPOES program, a lot of the guys who were familiar with the JSF contractors were working with Darlene. Darlene wasn't dressed the way we had structured our response because we were coming from behind from JSF and how we structured what she did was she pulled what four guys who were working from me and set them up and said, okay, what did you learn on JSF. How did Lockheed get from A to B? And then let's try that to say while suppliers or contractors can help us write, can help industry write proposals, why aren't we turning to that same

group that has the experience and scar tissue to structure the proposal of the generation process right the first time. So they pulled the stuff off and they did an experiment on NPOES.

Mr. Hutchins: We wrote the acquisition strategy, wrote the source selection plan, wrote the whole, did the whole communication process all the way from [inaudible] all the way to issuing the RFP, ran the source selection process, we did all that.

Mr. Rixse: It's so much easier that way.

Mr. Cappuccio: The procurement went good, it was one of the lowest proposal costs that Lockheed did, a little confusion about L's and M's, we didn't win it but it went very, very quick through the organization. It moved.

Mr. Hutchins: That's a 100 percent Far 15 compliant organization. My only point is government already has the ability to do all of these things and it comes back to leadership experience.

Mr. Cappuccio: You have one example but if you structure it right it gets through the system fast. Our guess assistance engineering, our requirements constantly changing, the question in my mind is I believe you can hold requirements constant up to some phase on the program and then go into a block.

Dr. Brandt: There has to also be some flexibility in

negotiative flexibility on the part of the program, the acquirer and the requirer or else you're stuck on the other end with the crazy requirements that make no sense so there has to be some flexibility. At some point maybe it's a loss of flexibility.

Mr. Hutchins: As we've imagined the pick process milestones I would suggest that same process would be appropriate [inaudible].

Mr. Kozlowski: I think that basically happens. Once you've selected a contractor it's easy to do that.

Mr. Cappuccio: Everybody's has requirements, the questions is you can look at it two ways and we've statistics on this. Remember, somebody gave us some statistics about the caliber of requirements.

General Hawley: The Navy gave us those sheets and said the Army changed more requirements than they had. The Air Force changed them about one for one.

Mr. Cappuccio: Somebody else gave us one that had clarified the kinds of changes, had lumped them into categories.

Mr. Rixse: Your point about requirements is somebody has to allow it.

Mr. Cappuccio: But when industry says creep it means a lot of different things.

General Hawley: The problem is somebody's got to allow

it to change without providing cost and scheduling to do it.

Mr. Kozlowski: That's the art of managing change.

Mr. Cappuccio: The act of changing requirement and supporting at the time of budget forces somebody to say can I afford it and do I want to do it now.

General Hawley: And the decision has to include the bill payer. The problem is that too often today it happens without the real bill payer being involved.

Mr. Rixse: The budget allows him to change when he comes up.

Mr. Cappuccio: I'll give you a real life example of one of the programs going on right now. In one particular IPT the government wants to make, there's three changes. One change is a mistake. You've got to do it. The second change is nice to have because if I give it it would help me five years down the line, and the other change is a new RPT need on the government's side so I don't think I want you to do it that way. Now, that's all well and good.

Mr. Kozlowski: If it is a design change.

Mr. Cappuccio: Yeah. Now, that RPT happens to be going very, very well. That RPT, he can absorb that money so he can absorb that cost of that change so his reaction is I'll absorb it, but from a top level program reaction what he has just done is he has given away reserves. He just gave it away to some guy who may or may not do it but he thinks

they're doing the right thing and in actuality that reserve could have been used for another problem that showed up.

Mr. Kozlowski: And maybe increasing risk for everybody else.

Mr. Cappuccio: When say creep they don't really define creep . All they know is change has happened and some of the changes you catch you've got to fix.

Mr. Hutchins: We're going to wrap it up here so have maybe 10 minutes on break and we'll pick it up here when we finish.

[Recess]

Mr. Hutchins: I would like to introduce our next speaker, Mr. Disbrow. Mr. Disbrow is the Deputy Director of Operational Requirements, Deputy Chief of Staff for Ahrens Space Operations, headquarters, United State Air Force. In this position he establishes policy for operational requirements. Prior to this assignment Mr. Disbrow was chief of the QDR monitoring division at the Air Force, he was an F15 driver and served in a number of operational and staff positions. Mr. Disbrow.

Mr. Disbrow: I appreciate the opportunity to come over and discuss Air Force capabilities based requirements. We've been at this for some time. I think the first capabilities based briefing I saw was the Air Force XL about six or seven

years ago and when I was at a briefing called Road Less Traveled that started looking at some capability base for ground targets. General Jumper, of course, responding the secretary's direction pushed us off to the -- when he came onboard and what I'll go through today is where we live in the joint world what we've done within the Air Force and try and relate to you successful I think we are in all of those areas.

I'm sure everyone has seen the JCIDs analysis. We have now about three or four capabilities based assessments that have come through the JROC and the tank. One went through the JROC yesterday, as a matter of fact. They have varying degrees of acceptance and success. Some of them are very good but I'll tell you that each of them is getting better and better as they come through the process as people are starting to understand exactly what the expectations are of senior leadership and the functional area analysis and functional needs analysis on the integrated air defense that was led by the Army. The SMDC, it was an excellent piece of work.

General Hawley: How long did it take to get through that process?

Mr. Disbrow: About six months.

Dr. A'Hearn: And relative value added for those six months of time?

Mr. Disbrow: In the case of integrated air and missile defense we had years of study [inaudible] but we didn't have the facility based. We had a roadmap that had been published but it wasn't capable of being informed. The real value of that in integrated air and missile defense was to cause us to bring into question our level of integration required across defensive systems, particularly the ETM two pack three and ETM two et cetera. How much do you want to spend and what kind of band width do you want to take up past each other? Is that useful or does it provide you with near the same capability and what that's done is it caused us to stop for a minute and go to a functional solution analysis and do the analysis on an integrated system to inform all the functional solution analysis so it did add that [inaudible]. That we may over scoped the solution in the old process, that was providing us capability that really might not be as useful.

General Hawley: Where did the technical input come from, from industry or the labs? How do we figure out that this was high cost stuff?

Mr. Disbrow: We had participation by SMDC folks who were well-versed in program offices inputs in E10 AWACS ack three but primarily it was the communicators who started questioning the band width required, the band width requirements associated with that and so having the right people in the room when you do these things is very

important, having folks that understand operations and understand acquisition and understand tests and understand engineer is important. When we get to the Air Force process I'll show you how we address some of those issues.

Mr. Cappuccio: Would a CoCom service that problem? Would a CoCom have serviced that problem faster? Because you've said you've relied on a lot of this.

Mr. Disbrow: It depends on if they have the right people in the room, if they were working with developers and program managers that probably would have come up, but it takes someone to say do you have any idea how much band width you're talking about when you say that, when you draw a lightening bolt on a chart do you understand what that cost is and how long it takes to integrate those source effects? At any rate, we have done that. There's two or three of them have progressed on to functional solution analysis which really takes you from capabilities to planning to capabilities development. All of them have got an OPF analysis and some of that is very good, some of it is shallow. One in the report out yesterday had a good OPF analysis that suggested some changes in doctrine. Here's what happened to the one yesterday. It was joint undersea superiority capabilities based assessment. When it went to the tank the chief said not good enough. What you did was you took the CoCom's concept of operations and you used that

as your baseline and that's all you analyzed. So if you're going to do dock OPF we also want you to do alternative concept of operations to see if we do this job different. Can we do it with what we have or with less or more or better or cheaper? So they had to go back and do alternative concepts in this particular case because the mission area was so well known there weren't very many alternative concept of OPS surfaced. Mining and courter-mining and submarine warfare are not new mission areas and there's not a lot of new threats so it didn't produce a whole lot but at least they went and looked at it and it added that to the process, the tank added that to the process and said we want to be informed on how you did alternative concept or OPS and what effect that had. So that is a good add, a good catch by the chiefs.

General Hawley: How long did that turn take? When the chiefs looked at and said not good enough how long did it take to get back to them?

Mr. Disbrow: About two months and that's kind of a rough guess on my part. It may have been three but it wasn't forever. It was fairly quick turnabout. That was a Navy led.

General Hawley: I'm asking all these time questions because we're getting feedback that this process takes a long time.

Mr. Disbrow: It does and they vary depending upon how difficult a bite they're taking but we can look back at how long mission area planning took and how long requirements took and years ago or eight years ago or six years ago and we're faster than that now. The question is, is time an ally or an enemy in doing this process.

Dr. Brandt: Is this an additive when you said we can look back and see how long requirements took and they did take a long time, but does [inaudible] requirement P step the services is still doing take that long and then this is an additive time?

Mr. Disbrow: No, it's a parallel process and I'll kind of show you here in a minute that requirements are generated from a number of sources but because we didn't implement capabilities based planning when we implemented [inaudible], we did the development piece of it at first, planning is lagging the fight by two years and so the services are still relying on the internal processes to produce their capabilities, and I'll show you ours here in a minute. I think you know there are functional capability boards that report to the JTBM and then report to the JROC and those functional capabilities boards General Carlson tried to line up that your work is what these evolved from with mission areas of the concept of OPS. He cut to down from about 23 to 14 and then General Cartwright cut it down to this. These

are the three bodies that review the working capabilities based planning. This is just -- you folks have probably spent a long time on this. This is just a review to kind of set the stage for how we blend in with this process. And in your handout there are the four steps of the JCIDS process and exactly what they're supposed to do and what input and what output should come out of that. The functional needs analysis, the real output, is the JCD of the joint capabilities document that documents what is needed, how much do you have, how much is programmed, what is the remaining gap.

Mr. Cappuccio: Do you have a national strategy? Is there a document for that?

Mr. Disbrow: There is a national strategy and there's a national military strategy and that is the flow-down. On the top block there, strategic guidance, is in fact the national strategy, the national military strategy, and then there's this strategic planning guidance put out by the secretary every year. And so that is now I'll tell you that the top half of this chart is where the fuzz is and we've got to get that straightened. It is not -- we don't have the logic flow that the Air Force has in the joint process. We haven't gotten there although we've preached it for a long time.

Mr. Cappuccio: But the strategy that comes to you does not come with a cost?

Mr. Disbrow: No. It is not cost constrained. As a matter of fact, it's not even cost informed. And we have frequently found that in order to meet the strategy that it comes with a significant increase in TAO. So now you have to determine what risk do you take on the strategy and those are very tough decisions and we're going through one of those now.

Mr. Cappuccio: But if it was cost constrained would it stop you from doing different things? One of the criticisms of the JCIDS process is it's a system that is designed for the cold war legacy. That the war against and terrorism and stuff like that, this ain't the right approach.

Mr. Disbrow: I don't buy that.

Mr. Cappuccio: I'm just telling what we're hearing.

Mr. Disbrow: When we do the analysis now we use a regular as well as traditional to do the analysis and so I think that that may have been true a year ago but I think since that strategy came out these capability based assessments have migrated to make sure they cover all the quadrants in the strategy.

Mr. Cappuccio: But you can't turn quickly. You can't turn them in a week.

Mr. Disbrow: No.

Dr. A'Hearn: One of the things the Deputy Secretary of Defense has asked of this panel is are we buying the right

things. Does this process ask that question in any kind of a rigorous way?

Mr. Disbrow: It could if it is fully implemented and we fully understand all of the details but it has never been fully implemented and there's still some gaps in the process that are keeping us from getting a toll of that. I don't know that we'll ever get a 100 percent of the answer but we certainly get more than we have right now.

Let me go back to that first block though and tell you, this is Harry Disbrow's thought, this is not an official Air Force position, but what I do is I think what we ought to do on the top is we ought to anchor into war fighting and we haven't done that yet. We've anchored it to the strategy and we have come up with functional areas and some concepts but we have the [inaudible], no one knows what all the relationship is. I intend that in OA/06 in the operational availability cities I've just recently briefed out the CoComs. I've been through the tank and to the secretary a number of times run by J8 but a collaboratively process that is the war fight and the CoComs have a major role in establishing the concept of OPS and the effects to be achieved for their scenarios within OA/06. I think it's the CoCom's responsibility to establish the concept of OPS and to describe in some detail what effects have to be achieved on the battlefield to be successful when that concept evolves.

If you then understand the effects you now can drill down into the capabilities that achieve those effects and that is what we should be analyzing. What capabilities are required to achieve the CoCom's effects and first do it unconstrained. We should never constrain the war fighter up front. We ought to know what the entire 100 percent solution is and then figure out how to constrain it physically. Otherwise, we'll never be able to define risk in the end, what risk we took.

Mr. Kozlowski: There are some bounds in terms of force size. Does the secretary provide that there's only going to be so many wings and so many divisions and so on?

Mr. Disbrow: Exactly. And there's also the UCP then allocates those things to CoComs so you do have an awful lot of guidance that the CoComs use that in planning their war fight because they do know what forces will allocated in traditional war fights. They don't always know what forces would be allocated in non-traditional and irregular or catastrophic scenarios. That's where OA/06 comes in handy because it is -- it does help the force sizing.

General Hawley: What time frame does OA/06 look at?

Mr. Disbrow: 20/15. We ought to take that OA/06 that everyone is signed up to because it's one of the few things in the department that anything is signed up to and everyone has pretty much accepted OA/06 as a good piece of work and how the department should look at the war fight, we ought to

take that as the analytic engine to drive capabilities based planning and development because right now where we are is we're devoid of the analytics.

General Hawley: How does OA/06 relates to the scenarios that OSD generates for the planning process?

Mr. Disbrow: It uses those scenarios and we should be using those, those iterative planning scenarios that OA/06 uses and all the flow-down analysis that we do. What we do right now in the department is analysis is an event and not a process and so every time that we do analysis we start with let's get the assumptions right. Let's get the scenarios right. Let's establish a time line. All of that has been done in OA/06 and everyone has signed up to it so you have a set of assumptions and scenarios that are approved. That is what we ought to use in the flow-down modeling. That is not to say that you couldn't do sensitivity analysis outside of those and you should. You should challenge assumptions, but if we do that it ought to inform the analytic engine so that we can change the engine when we find out that we have a bad assumption or something's changed that changes our assumption. The up front piece then should be driving functional area analysis if we knew what functional area analysis, if we knew what are the functional areas were. They have never been well-defined and so we're doing analysis around what kind of what the chiefs have given us in the

tank, global strike, integrated air missile defense, undersea superiority. Those are chunks that they want to knock down but it is not an organized thought process that relates to the war fight, much like concept of OPS, and the services have probably a better idea as to how to chop up the war fight into meaningful chunks throughout.

Mr. Cappuccio: The need to say I need undersea superiority, that premise, because it drives money in spending, who vets that premise?

Mr. Disbrow: The CoCom should say that. The CoCom understands what effects have to be achieved then we are to allow the new capabilities -- undersea superiority is a capability -- that one might argue that it might an effect but it is fairly large.

Mr. Cappuccio: What we're trying to understand to what extent do the CoComs -- should and could the CoComs drive the process and to what extent should the acquisition community get somewhat involved in the requirements, excuse me, the requirements people get involve din the budgeting process so that there is some level of responsibility felt by the requirements generation process that says, look, don't keep on trying to throw the requirements over to the NTL boards because they're already trying to get 50 pounds in a two-pound box, under-funding programs. And so the premise was thrown out there, if the requirements people understood

the budget constraints from the get-go that the whole acquisition process would be somewhat more successful in terms of program overruns. It's a premise. We don't know if that's true or not but that is a general consensus that is coming out of the briefings we're seeing. We're trying to kind of understand -- I'm telling you why we're getting to the questions.

Mr. Disbrow: Let me get into the Air Force piece of it and I think that will address some of what you have. General Jumper when he came onboard, and General Hawley will remember this, came up with the concept of OPS, the six concepts of OPS, and then there are some overarching enablers. The one that has remained is the combat support and it has its own kind conOPS's, but General Jumper told us that we will center our thinking around the war fight is what the nation asked the Air Force to do and that is our concepts of OPS. Global mobility, global strike, global system attacks, I think you're familiar with all of those. We took the Caper which was an acquisition centered quarterly acquisition program review that was the help of the program and acquisition and we turned around and we called it capabilities review and risk assessment and we shifted from program review to how do our programs contribute to the war fight and so it was back to the mission.

Mr. Kozlowski: Is that a gap analysis?

Mr. Disbrow: Yes, it is, and I'm going to show here in just a second, those are the six conOPS's, agile combat support, and how they tie to the vision. This is what the CRRA does. In XOX those six conOPS's there is a Colonel who is champion for that particular conOPS's. Within that conOPS's they do capabilities planning with the MAGCOMs. The CoComs are invited but don't show very often to service level efforts. To be truthful the other services are invited but they don't show very often in Air Force efforts and so it ends up being more an Air Force effort until we roll it out into the joint community and then we get our first -

General Hawley: Excuse me. When you say you've got someone responsible for conOPS's do you mean like Korea?

Mr. Disbrow: For a global strike, for these six conOPS's, and IL is responsible for the combat support conOPS's and they have a champion within IL who's responsible for that. I'll tell you if you ever want to see a great piece of work look at what the IL folks have done in the combat support area. They've spent a great deal of time and a great deal of effort and have given great visibility to the combat support requirements. They used to do their own requirements that went outside of the operation piece and we've drawn them in and they're doing great work.

General Hawley: How do you connect these effects within one of the Air Force conOPS's to the effects generated in

OA/06 of the CoComs for their war fighting conOPS's?

Mr. Disbrow: That is the problem is that without having those effects generated by the CoComs the services will often invent their own.

General Hawley: So the CoComs don't identify them.

Mr. Disbrow: That's right. In our process right now out of OA/06 which is done in the building by J8 there is not informed by the concept OPS and the effects from the CoComs. They participate in the process, we use their war plans but no one sits around and provides the mental investment in drilling down from this is our concept of OPS and how we fight what effects are we trying to achieve on the battlefield. The benefit of effects and capability based thought is in the solution phase and if you go right to a solution at that point and say I need tanks instead of I'm trying to achieve this effect these are the capabilities. Now I'm in the solution phase. How can I achieve that capability? To achieve that effect how many ways are there?

I'll give an example. Let's say an enemy has an air operation center. We could kinetically attack the air operation center but there are other ways to achieve the effect. What effect are we trying to achieve? We're trying to deny the enemy the use of his air power so can we get into their command and control structure, information-wise, and have a much greater effect across the battlefield than just

bombing an AOC and forcing them into an alternate command and control structure? Can I, in fact, without a smoking gun, without them understanding it, disrupt their command and control so bad that their airplanes and their air power goes places where they're ineffective, where they never launch? So now you should have competing solutions to capabilities. Even if you think you have the capability covered, we can bomb AOC's but if they're a better way to do the job and that is what our analysis ought to be showing us not just that you can bomb AOC's so there's no gap. Is there a new concept of OPS and a better way to do that?

General Hawley: So take me back to OA/06. If it doesn't include these effects what does it include for you?

Mr. Disbrow: It does what the services have done. It has gotten a lot of smart people from the CoComs from the services in the room and have taken and come up with the facts but they're not effects that were originated or the folks that wrote a war plan who sat around and thought about I'm going to write a [inaudible] plan or a com plan. First of all, what effects am I trying to achieve on the battlefield and have that and conOPS's in an iterative process to optimize the war fighter.

General Hawley: So the issue for you then of J8 leads that process as opposed to having the CoComs generate it based upon their vision of the future fight, the 2015 fight?

Mr. Disbrow: Exactly. ConOPS's champions led by a one-star who wants each of the six conOPS's champions has gone through their process, this process, they then get together because as you know capabilities and effects overlap between the concept of OPS and you have to integrate those. In some cases they're additive, in some cases they're mutually exclusive. And you have to determine when you start this sufficiency review everyone needs this capability. Does everyone need at once? Or what is the sum total of the capability required?

Mr. Kozlowski: Are the people doing the work there, are they part of the joint staff or the Air Force?

Mr. Disbrow: The Air Force but they come from MAGCOMs and product centers and the air staff. It is not as collaborative a process as it should be. The collaborative process, the all-inclusive process, ought to be JCIDS. These are things the services have done themselves. The Air Force did it originally to inform JCIDS but as it is evolving you really could do this within JCIDS and not do the process eventually.

Mr. Kozlowski: Are these people assigned to a particular [inaudible]?

Mr. Disbrow: Some of them are. For each conOPS's there is a small staff of about four or five folks that are the facilitators for the process but the people who actually do

the work come from outside and they meet periodically and they're sometimes in some forms it's a very large group and some forms it's a smaller.

Mr. Kozlowski: But the facilitators and the staff functions, where do they reside?

Mr. Disbrow: XOF in the air staff.

Mr. Hutchins: Please help me out with this. You say there's an OA/06 process currently operating that can be used to define effects but it could be improved by having in informed by or to include the CoCom conOPS's and as a result of that that process would result in defining effects essentially at the CoCom joint level which then could be used as a basis for determining capability, and I thought I heard you say that one of the interesting issues for the current process in determining capability is that all of the current officers are based on functional area analysis but the functional areas are not rigorously defined.

Mr. Disbrow: They're defined but they don't tie directly back into effects.

Mr. Hutchins: Now, when you go down and start looking at the service level and looking at the Air Force application the Air Force process you've gone through, conOPS's, capabilities, effects process, but there's currently no rigorous linkage between the service conOPS's capability effects and what could be the outputs of this OA/06 at the

joint staff process that comes up with identifying effects and capabilities.

Unknown Speaker: Obviously they are close. They're probably the 85 percent solution just because the war fight is the war fight an if folks are looking at the war fight you can come up with kind of the same things but they're service specific and they don't tie one to one. In other words, we're not flowing down the thoughts from the joint process.

Mr. Hutchins: I just want to make sure I captured it correctly in my mental model.

Dr. A'Hearn: You're right. Here the chart shows the requirements process culminating in a program. We've had briefings on the panel indicating that in many cases people aren't calling it a program until milestone B or in pinning the rose on a program manager until milestone B. Does this imply the Air Force is ahead of the game?

Mr. Disbrow: Actually, that shows that after a capability's production document -

Dr. A'Hearn: So in your view or in your experience with what the Air Force is doing when is the appropriate time to call something a program and put a leader in charge of it?

Mr. Disbrow: When you identify the gap and you start establishing the requirements you should have someone in charge of that and we do. We change responsibility at different phases. I'll show you that here in just a minute.

When we have our gaps and our requirements process our capabilities development process as we call it now that generates requirements. When it identifies a need for us to do that it comes from a number of different sources. It comes from those capability based assessments that are done in the JCIDs process, it comes from the Air Force internal process, because that ICRRA involves the chief and the secretary and all the four stars in the Air Force validating the tier one short falls for the Air Force for that planning cycle. Those that are passed formally to the requirements communities task to the MAGCOMs to begin requirements generation process. The MAGCOMs take those back, they are tasked as OPRs to develop the requirements. One of the first steps they go back and they work on the requirements strategy.

Now, years ago, several years ago, we reengineered the requirements process. This happened in about '98, '99. We found when we went in and looked at how we were doing the requirements and why it was taking so long to do the requirements we found the first problem we had was that at the MAGCOMs level we had very little, almost no training program in requirements. So a lieutenant colonel or major who's assigned to this within the DR or XP or MAGCOMs would do this. What's in their career, there's no learning curve. And we weren't training them very well and so now we have a

formal three-day training course and we have full-time facilitators assigned to each one of these [inaudible] who are requirements experts upon which they can rely to help walk them through the process.

I look at every single requirements effort in requirements strategy review. We stole that from the acquisition community. They do acquisition strategy reviews. We had a one size fits all process and it is not one size fits all. Some efforts are much more difficult that others and so I sit down and look at the schedule, what it is they're trying to do, what their approach is to the problem, what kind of schedule, what funding they have, and what coordination is required between the joint staff, OSD, and the MAGCOMs in order to be successful. I also look at who is on their high performance team because the way we write requirements now is the MAGCOMs brings in a draft of a document with all of the analysis that informs that and we put together a group of smart people in the room all at one time, cross discipline folks, and they spend two weeks refining the document. In the room are testers, the program manager, acquisition experts, operators, and sometimes other services or other agencies or other departments. In the case GPS we have the Department of Commerce, the Department of Transportation, the only people I think we didn't have was Bassmasters. Everyone else was there. And we made sure that

we had [inaudible] up their requirements and accurately stated them in the document.

Mr. Kozlowski: You say the program manager is in that room? This is before you've actually formalized the requirements.

Mr. Disbrow: This is when there's only a need. Now, is some cases there is no program manager and those people come from product centers if there's not a program yet established and it's a command and control system. Then ESC will come to, will come and provide the expertise.

Dr. Brandt: Do you have lab or tech folks there?

Mr. Disbrow: Sometimes but we expect the functionals in the HPT to reach back into their organizations that do those sorts of things. For example, we expect the AQ representative to go to AQ, AQR and AFRL and gather data if it's necessary to inform the group while the HPT is convened and we have before we ran out of money last year we had all of them in the Washington, D. C. area because they can go to PA&E and discuss their analysis, they can go to the joint staff and discuss their interoperability KPPs and make sure that they've got buy in from the other staffs so where there's not someone in the room they can go and accomplish that kind of coordination here in the Washington, D. C. area and it helps. Early buy in from OSD and the joint staff, it helps us a great deal on the coordination phase so we do this

HPT then it goes around for staffing and I'll tell you the part of the nut that we haven't cracked yet is staffing, takes way, way too long. Because of the requirements of staffing you have to do 06 level staffing, then you have to do general officer level staffing and all of this stuff we're trying to do it in parallel. It used to be you did it inside the service staff and then you did joint staffing. We at least now do those somewhat parallel to try and cut down the time, but the joint staff, for example, requires I think 45 days.

Voice: It's down to 21 days.

Mr. Disbrow: 21 days to staff the document. You can see if you add all those together it adds up to a considerable amount of time just to staff the document.

General Hawley: Do you have to do that in a circular fashion?

Mr. Disbrow: We have got them not quite parallel but close to parallel. We will start it in joint staffing before we have finishing general officers staffing but we want the 06 staffing complete in case we have a major war during this thing and we want to catch it there and that's the most rigorous piece of it.

General Hawley: Do you have a recent example of how long this process took the completion of the HBT?

Mr. Disbrow: No, sir, and not all of them are the same.

It kind of depends upon the document. We have turned them in as fast as three months from the HBT convening to the JROC but that's kind of a world record. Most of them are longer than that. Six to nine months is probably the norm I would think.

Voice: Upwards of a year.

Mr. Cappuccio: If you were king for a day in the process could you get it faster, streamline it? I mean you're living in a process. We have an opportunity here to say, you know, maybe the requirement process needs to be changed. How might it be changed to do it faster? Do what extent do your have consensus and the consensus waters down what you're going to buy only to surface in the middle of a program with requirement creep and somebody really, really wanted it the first, could get it through and creeps it in. Help us. You have a process. Is it the best process to get what you want? How can we help the war fighter get his requirements into the system faster, better, and get the contractors to step up to satisfy the requirements better, quicker, faster? That's what we're trying to do. This system you're describing is doable but it's cumbersome and how you describe it comes out cumbersome. Now, is it effective, is it efficient? That's what we're trying to get our hands on because we're hearing a lot of negative things about the JCIDs process. People are expecting them to walk

on water. That's what we're trying to struggle with.

Mr. Disbrow: I would challenge the precept that faster is better in the process. Every time we've gotten in trouble it's because we've been speedy. And this is a time where probably it is, you ought to put enough rigor into this process to make sure we're not doing something goofy and we ought to question of the amount of money we're spending on some of these programs, we ought to take the time to make sure we fully understand what we're doing and question it. I hear complaints from my folks all the time about OSD and this process and how they slow down this process and how they interfere in the process and my comeback to them is they have a responsibility in this process just like you do and their responsibility is to make sure that we've done our homework and to make sure we fully understand why we want to go out and spend $3 or $4 billion dollars of taxpayer's money and what it is that the war fighter really needs. So I will admit that sometimes we overdo all parts of the process but we ought to have enough rigor in the process so that we are not able when we do something not able to do something goofy easily.

Dr. Brandt: Do you think the cross checks and balances really do keep us from doing something goofy? In other words, is the output of this process significantly different than a different or speedier process might be? Do you see

changes as it goes through, the time stream so to speak?

Mr. Disbrow: Yes, absolutely. Things change as we go through these and I'll give you a good example. We just finished getting approval and an ADM for the CSAR[X] program. What the Air Force had intended to do with CSAR[X] is not where we ended up because the acquisition strategy was altered by AT&L and really what they did was they said we understand the first part of this. The second part of it we don't understand. You've got homework to do. We will let you go out and do block zero but we're not going to sign up to block 10 until you come back to us with some homework. So we had looked at an alternative to go directly to block 10 to see if we could get it quicker and they said not so fast and we had asked them to sign up to block zero and in the RFP they passed to block 10. They said not so fast. We can go to block zero but not to block 10 so they put some rigor in the process and to be quite truthful with you we probably owed them those answers. We probably would have gotten to them but our AOA was about three years old and we didn't update it. We probably needed to go back and update it. So, yes, things change as they go through the process.

Okay. At any rate, that's our process and I'll finish up here and we'll probably run out of time in a little bit. This is what we do in the requirements strategy review. Like I say, I do almost all of those. Schedule is really

important to me. As we have done HPTs more and more folks are getting used to them and almost all the folks in DRs have participated in HPTs. Certainly the acquisition community program managers have all done them so they're getting much more efficient and I spend less time instructing them during the strategy review and more time going over the actual requirement strategy.

Mr. Cappuccio: But you don't take a look at budgets when you do a strategy review, you say what do I need, is it going to have the effect I want, can I get it when I need it?

Mr. Disbrow: I do look at budget. Yes, sir, I do, and I'll tell you why because budget and schedule are so tightly tied together that if we have someone who is putting money at risk with the over-ambitious schedule then they need to know that and the MAGCOMs needs to be informed of that so they can better scrub their funding line because some folks will come in and say we want to meet with the JROC in six weeks or else we put money at risk next year. And my input to them is you need to move the money because it's going to be at risk because you're not getting through the JROC in six weeks so if you're worried about that money you need to restructure your funding.

General Hawley: Who provides the program funding line for the CSAR[X]?

Mr. Disbrow: In the case of CSAR[X] we have a program

manager. That was stood up in '05 but the funding line generally comes out of the cave. I'm not sure because I don't do that part of the process. I'm just informed by that part of the process. I'm not sure what program managers get.

General Hawley: When you do this you have a funding line, you say $500 million in '07.

Mr. Disbrow: It depends. If I'm doing an ICD, initial capabilities document, I rarely have a funding line. If I do a CMD I always have it.

General Hawley: How do you inform the money issue in an ICD? How do I know how much I'm going to spend?

Mr. Disbrow: At that point you don't. You haven't done the solution analysis yet. You haven't done an AOA that really is the granularity you need to be able to do that. The acquisition community will tell us frequently, well, that this is an estimate, only an estimate, we really won't understand this until we get responses back from an RFP.

General Hawley: How about CDD? Do you have a program line?

Mr. Disbrow: Yes, normally we have a CAIG estimate. If you remember General Willmer when he was at ACC Institute [inaudible] ACC that you could not even go to a milestone one if you weren't funded. So that was -- that put additional rigor on the XP community of ACC to establish -- one thing you knew for sure it wasn't right but at least you had a

wedge in the budget that didn't allow you to create some sort of huge bow wave because you never looked at it and that kind of affordability analysis probably is important.

General Hawley: So we don't have that?

Mr. Disbrow: Well, Dr. Kominski, because he saw this bow wave, instituted an affordability analysis at milestone N2 now milestone B. In the CSAR meeting last week Mr. Cready talked about the same requirement so I think that he is anticipating that the services are going to have to have an affordability analysis of some sort before he is going to allow them to let RFPs out to industry. When we let the RFP out to industry, you have the expectation that you are, in fact, assuming the capability in industry, start spending money.

Mr. Cappuccio: My understanding was you could not send out an RFP unless it was backed by money in the budget years.

Mr. Disbrow: I said back by affordability analysis. You have to have a funding stream.

Mr. Cappuccio: But 50 percent of the RFIs and RFPs coming out from the labs are not backed by money and yet they get through the contracting process.

Mr. Rixse: A lot of agencies specify that.

Mr. Cappuccio: Let me interrupt. You talk schedule here and on the RSR is there any TRL levels that are looked at at all relative to whether or not it's technically

feasible?

Mr. Disbrow: If it's a CDD it is. Here's where the MAGCOMs comes in when they get their gap. An ICD only establishes the gap and then you can start on your solution analysis, the functional solution analysis. The functional solution analysis at this level is really the first phase of an AOA and what happens is the MAGCOMs will call AFMC and AFMC will then let an RFI or tent to industry, to academia, and the labs, not just the Air Force lab, then will ask to do a concept call. All of those concepts will come in for a small -- but a bomb, for example, I think we have close to a 100 concepts come in. And then we ask the acquisition community to cull those down based upon a couple of criteria. One is the [inaudible] maturity of concept. Does this require a six or seven inventions but it's going to take you a long time. Another one is a rough estimate as to what the cost will be. Is it affordable, et cetera. And then the operators look at it. Does it meet the operational concept, is it something that is operational feasible. And then you cull those down as to the alternatives you will take into a formal AOA or some sort of formal analysis but that technical evaluation is done within AFMC and usually at their product center.

Mr. Kozlowski: By what organization of the products?

Mr. Disbrow: I don't know. Our product centers are SMC

and ESC and ASC but, sir, I can't tell you what the mechanics are of that inside of the products.

Mr. Kozlowski: Like small diameter bomb, where would it go? Is there a home in these product centers? This goes back to the XR function. Where do you ask these advanced questions?

General Hawley: Probably the XRs because that is where they're beginning to reestablish the developmental planning capability which is what I'm sure performs this analysis but it's relatively new. You'll only begin to establish developmental planning in the last year.

Mr. Hutchins: Where would the requirement strategy be?

Mr. Disbrow: For a CDD I also look at the AOA study plan and the AOA study plan comes through the AFROC and so we see what they got back on their concept call, would they use this criteria to reduce that to some number, what they ended up with and then how they intend to study those in AOA. So I see those, the requirement strategy review, then we do the -- committed those into the AFROC, of course, is the MAGCOMs staff agencies. I chair the monthly AFROCs. We have an executive AFROC once or twice a year and that is a two star XLR and XPs and DRs, E8s from the MAGCOMs. We also have AFOTEC at the table, we have AQ at the table and we have FM and XP at the table.

Mr. Kozlowski: Who normally does AOAs? Are they farmed

out or do you do some of them in-house?

Mr. Disbrow: We do some of them in-house, the MAGCOMs do some themselves with their organic analytic capability.

Mr. Kozlowski: Do the centers do some of them?

Mr. Disbrow: Not usually. We have had Rand do a few, Whitney, Bradley and Brown have done a few, Ott has done some, but our Air Force studies and analysis generally oversees an AOA if it's done outside of the Air Force. They don't necessarily oversee it if it's done by a MAGCOM but they evaluate it when it comes in. Now, our LAS folks at Kirtland at every AFROC that has an AOA with both the study plan or the results coming back they have to certify it to the AFROC, that it's met all the requirements for the study plan, they agree with the study plan, they tell us if there are schedule problems, what kind of risk we're assuming in the study plan, and results come out. They grade the homework and they certify to the AFROC these areas are green, yellow, or red and based upon that then the AFROC either approves or sends back for more work the AOA output but OAS are our experts. Now, what I require them not just for ACAT1 programs is as specified in the 5000, I require that for all analysis that supports any program that we go to PA&E and get their opinion on it before we proceed on it to make sure that they have -- we've got another set of eyes on the analysis, we've got some experts to take a look at it, we've got their

buy-in so we don't get to a DAB or get to a program review and have PA&E say we don't agree with your analysis. We want buy-in from them early to keep them in the process so we don't get slowed down later on in the program.

Mr. Kozlowski: Suppose they said we don't agree, can they stop it?

Mr. Disbrow: That does stop us. It doesn't make a difference why they don't agree.

Mr. Kozlowski: They don't stop you because they have the power, they stop you because it is a cog in the political wheel? In other words, do they have regulatory authorities?

Mr. Disbrow: On the regular programs, they do, but not for the ACAT2 and lower but that doesn't keep us from listening to them and getting their opinion.

Mr. Kozlowski: Why does TA&E have power to stop an ACAT program? The DA guys can overrule.

Mr. Disbrow: The 5000 says at the DAB PA&E will, in fact, certify the AOA.

Dr. Abbott: But there's no legal requirement to call a DAB. It's all regulation.

Mr. Disbrow: Yes.

Voice: Is it regulation or guideline?

Dr. Abbott: It's not in the statute.

Mr. Kozlowski: What I did is had PA&E certify data.

Mr. Disbrow: They are by 5000.2, they are required to

certify the AOA.

Dr. Abbott: And .2 is the old reg?

Mr. Kozlowski: Yeah, but people are going to follow it on biggies.

Dr. Abbott: If you go and look at what Congress chides us about when we don't follow our process it's because we don't follow our own guidelines.

Mr. Disbrow: We argue with them a lot. It's a battle sometimes. We don't agree with them sometimes as to the amount. They're a lot more risk averse than the analysis piece, I think then the services are, and it causes some problems when we go to PA&E but it's part of the process, it adds to the process, so we do it even when it is not regulatorially required just because we feel like it helps us in the end to have their buy-in to what we're doing.

Mr. Kozlowski: Do you have contractor support help?

Mr. Disbrow: The only contractors that can help us are those that have signed non-disclosure agreements.

Mr. Kozlowski: But you have some on your staff and so does PA&E. Do you ever see a conflict between these outside service contracts? Are they a help or are they hindrance or does it make a difference?

Mr. Disbrow: It's case dependent.

Mr. Kozlowski: That answers the question.

Mr. Disbrow: Sometimes they're helpful, sometimes

they're harmful. It depends are you speaking of like IDA or FFRDCs or Whitley, Bradley, Brown or those kind of organizations.

Mr. Kozlowski: Even lower than that.

Mr. Cappuccio: You were talking about the on-site contractors.

Mr. Disbrow: They work this stuff all the time, absolutely. We couldn't do a lot of this without them.

Mr. Cappuccio: What's the ratio?

Mr. Disbrow: We have 54 contractors and about 120 military and civilian. Sometimes it's been as high as 50 percent but it's not that high right now. We've been forced to cut it down some. They took a lot of our contractor money away.

Mr. Kozlowski: I can just visualize the scenario where you're armed with whatever your contractor support team is and you go up to PA&E and they've got maybe the same, maybe a different contractor, and getting some stuff. All of this material from an analytic standpoint is not necessarily organic Air Force kind of stuff. Do we ever encounter these contractors competing amongst themselves? This goes back to the '70's. There was a day when one contractor who is very imminently qualified in air to air combat theory models and another contractor who is also very competent but a different model and behind the scenes, this is way back, those two

contractors coming up through the seams in the support role.

Mr. Disbrow: That does happen. One of the things that OSD does frequently is even if we go out and do an AOA and say if AMC is going to do the AOA identically within AMC they will, in fact, task IDA who is their primary point of contract to do a parallel study and bring it in and so they never agree. Sometimes they're close but they're never a 100 percent. There's always differences that we have to adjudicate in [inaudible] analysis. As a matter of fact, when we did the IAMD analysis they tasked IDA to do a parallel analysis. When we went to the OIPT the results were significantly different and we argued for about 45 minutes in the OIPT about who was right. So it happens all the time. I didn't realize that's exactly what the question was. It hasn't been fixed.

Dr. Abbott: In you view is the marginal benefit of this worth the marginal cost?

Mr. Disbrow: I personally think that professional judgment and intuition will give you the 90 percent solution. The problem is you can't prove it without analysis.

Dr. Abbott: It's trust. Maybe it's a reflection of the lack of trust.

Mr. Disbrow: You at least inform it with analysis.

Mr. Kozlowski: You make people feel comfortable, they've got something to hide behind, but you'll never prove

it with analysis. That's my opinion.

Mr. Disbrow: This is what our HPTs see. Like I say, we have a person, we have a person right here who is over here in our HPT facility in Rosslyn who does this all the time, every day, not once a career, to sit down and to work with the HPT lead to help facilitate all the things required for a successful APT and then to be in the room so that when they come to the fork in the road they take it. What we did between us and the acquisition community and us and the test community is we tried to line up our processes so that we did what Dr. Samur called collaborative requirements and what AFOTEC calls the test or the test community calls sequence verification so we don't retest things in OT&E that we were satisfied with in DT&E. So the OT&E folks are present in DT&E when those things are being tested so that they can verify that portion of the test and then they don't repeat that. That cuts down some test time. The acquisition community participates in the requirements process and the requirements folks and operators participate in the acquisition process. Here's what was asked of me by General Jumper one time, he said, how come we don't write spiral requirements? I said because the operator never spirals unless forced to because I like to have all of tomorrow for nothing but the real world says that's not true so we write requirements that say you go out and give us all of it and

then they come back and say all of it is either too expensive, too technically risky, or takes too long. So how do we get the next capability to the field faster? We pare down what we're willing to accept to begin with knowing that we have a path to get to the 100 percent solution on time.

General Hawley: Can you give me an example of a program where we've done that recently?

Mr. Disbrow: I'd be hard to give you an example of a program we didn't do it, to tell you the truth. The FA22 has -- the spiral was 3A. Originally that word was not a spiral word but as the cost of the airplane and the technical risk started to become apparent we broke it down into a number of spirals and they each have a theme. One of them is -- the first one we did was enhanced air ground capability. The next one we did was increased [inaudible] activity. The F16 [inaudible] then received the next one we will do is [inaudible] and some other programs and so we've had to take that -

General Hawley: So we have institutionalized this idea. That's where I'm getting.

Mr. Disbrow: Yes, sir.

General Hawley: This is not something we've just streamed up or going to implement, we've done it.

Mr. Disbrow: CSAR[X] we went in here saying here's what we want. The industry came back with an RFI to AMC and said

for our input we can't get you to there, we can get to here. We can get there but we can't co it right now and by the way you can't afford it right now but it will delay you getting your solution if you wait for all of that capability. Two of them came back and said we can get you there today and that is what they will say when they respond to the RFP probably. Two of them have said it will take us a while and so in order to keep competition in that program we changed the requirements document to say we want block zero now but we're willing to wait for block 10 otherwise we would have locked out two of the editors in CSAR[X]. And for all the reasons and all of us around the table know that's not a good idea. So we are forced sometimes. SFFRDs we have a spiral JSF, a spiral particularly software JSF spiral, it is odd that we can get everything we want up front in the budget or on time.

General Hawley: Why is SFFRDs such a horror story is we use this approach?

Mr. Disbrow: First of all in SFFRDs -

General Hawley: People blame the requirements for SFFRDs.

Mr. Disbrow: That's right. I'll tell you the requirements have been stable since 1996. They've been validated 13 times by the JROC and have not changed once. Not a single requirement in that document has ever changed.

General Hawley: So why are requirements a problem?

Mr. Disbrow: Requirements were technical. Requirements -- Lockheed Martin thought that everyone that walked in the door wearing a blue uniform was an operator and every time they said something to them they went and did it.

Mr. Cappuccio: I'm from Lockheed Martin. I was just explaining that cultural problem we've had. That's exactly right.

Mr. Disbrow: At the program level the requirements were unstable because they continued. It was a management issue at the program level. The operational requirements -- we got accused of this before when we went back and looked at it and the operational requirements have not changed since 1996.

General Hawley: This is an important input.

Mr. Kozlowski: You're damn right.

General Hawley: Because the assertion comes from many places, the requirements are unstable.

Mr. Cappuccio: But they're creeping .

Dr. Brandt: The other assertion which may be again using SFFRDs as the poster child of, gosh, everything is that if the requirements were stable could some of the difficulty have been [inaudible] there had been an iterative process which might have been able to negotiate some of those stable requirements. In other words, perhaps in this case there should have been some mechanism to change those requirements. I'm just asking because that's the other thing we hear.

Mr. Disbrow: SFFRDs is a really weird program and I'll tell you why. The requirements are divided up into to missile warning, missile defense, technical intelligence, and battle space characterization and the most important requirement because we were asked to prioritize them one time, the most important requirement is missile warning, national missile warning. Theater missile warning is the next most important. Missile defense is the next most important. And then technical intelligence and battle space characterization are second tier requirements in the SFFRDs program to the operator. To the engineer you can't do missile warning unless you do technical intelligence so you have to have a certain amount of that in order to be able to do the missile warning and the Army doesn't care when you get to theater missile defense. The Army has to have battle space characterization. That's huge today. They want to know where it came from, where it's going, and where these forces are so they want to know, they have to know, that is, that type of missile, here's where it was launched from and here's, in fact, where it's going to impact.

Dr. Brandt: But they're not using SFFRDs in many cases we hear about. Again, requirements creep and change and then the other thing we hear again is rigid requirement iterative process. Is it also kind of a bum rap? Is there a capability to go back and relook at some of those?

Mr. Disbrow: I'm going to tell you it's personality dependent. We have some programs where there is a very iterative process that goes on all the time. Then we have some programs where the communication between the operational community and the acquisition community is lacking and you don't get that kind of interaction.

Mr. Cappuccio: He said something before, program execution does not execute to operational requirements. There are program requirements. They are different. Those are not regulated. They can be moved and bounced around as you decompose, as you decompose the bigger problem down to an IPT it generates a whole bunch of systems of specs as you convolute or dissect the problem. So at the top level it says let's give an example, at the top level it says, okay, JSF has to fly its mock point five and it has to kill this tank. Okay. Now that means absolutely nothing to the sensor guy. He has to go back and say I really need -- I have to go back and say I have a sensor that can compensate for speed [inaudible] over. The requirement creep comes at that lower level where somebody says, no, you need thus two [inaudible] four times faster. The top level requirement hasn't changed. The programatic requirement for execution's changed. That drives the supplier, that drives cost, right, and that's a dialogue between two guys that say, well, you know I think it's four times better. An IPT guy will say, you know,

really I think you really want to put some conservatism in.

General Hawley: The important piece of this conversation is this requirement's turbulence and creep and all the other stuff seems to be internal to the little A.

Mr. Cappuccio: It's at a lower level.

General Hawley: We call it big A little A. Big A includes budget requirements and little A is program execution.

Mr. Disbrow: I would contend it probably comes from all places but that certainly is the prevalent case but we will frequently get direction from outside of the Air Force sometimes that says you have to by 2005 incorporate JTTRS into that airplane and that has a huge impact and when you're on a tight schedule like JSF to integrate that into the system, put it into the program, has schedule and other implications to it. Sometimes things happen like a chief will ask for a small diameter bomb and says I don't want the F15E to be the primary airplane for a small diameter bomb, I want F22. That changes what we have at our spirals. That changes what those are in the program office.

General Hawley: When the chief says that who goes to him and says here's the schedule impact and here's the cost impact?

Mr. Disbrow: He asks for that usually. General Jumper got it when he asked for that.

General Hawley: And he accepted it, he said I'll pay for it and I'll accept the schedule?

Mr. Disbrow: I'll pay for it and accept the schedule. He actually got some options that said we can add it and it costs this much and this much schedule or we can take this content out and put that in and it does this.

General Hawley: At what level in the Air Force must an operationally derived requirement change be approved if ACC decides they want to change some capability in the joint strike fighter, they want to impose a requirements change?

Mr. Disbrow: In the joint strike fighter the chief has to approve it.

General Hawley: How about other programs?

Mr. Disbrow: The chief signs all ACAT1s or CDDs so he has to do it.

General Hawley: So changes to them have to go back through him?

Mr. Disbrow: And through the JROC if it's a KPP.

General Hawley: How about if it's not a KPP.

Mr. Disbrow: Sometimes a designee with the capability to change at the service level.

General Hawley: That would still go to the chief?

Mr. Disbrow: It would still go to the chief.

Dr. Brandt: Is there hesitation to bring to the chief not increases in capability but decrements in capability,

again, given that in negotiative process with the acquisition community?

Mr. Disbrow: No. When you go to decrements usually there's a reason for it in the developmental piece of it and the acquisition community brings that forward. If it is an increase in capability it normally comes from the MAGCOM that wants to add something into the program for one reason or another but it's different people bringing in changes. But I'll tell you I don't think that requirements is the big culprit here. Funding instability is a big culprit, a huge culprit, in the program. Funding instability probably costs us 10 to 15 percent, a conservative estimate, in our acquisition business every year.

Mr. Kozlowski: Any ideas how to fix that?

Mr. Disbrow: Well, where it comes from is internal, trying to get eight pounds into a five pound bag and so you squeeze it [inaudible] which means you sub-optimize everything. Sometimes it is during program review at the OSD level as they pay DOD bills, sometimes it's Congress, they pay national bills or establish priorities so there are -- funding instability cause us to have to do a lot of [inaudible] we do right now. Certainly if you look at a program office an engineer puts down his engineer pencil, picks up his 10-key four or five times a year just to restructure the program so that's got to be disruptive.

Mr. Cappuccio: And the government pay for it.

Mr. Disbrow: Right. So while requirements instability might be a culprit in a lot of cases, sometimes the requirements instability is a symptom and not the problem. The problem is the fact that you've had funding instability in the program.

Mr. Cappuccio: Is that 10 percent a guess or pretty reasonable guess?

Mr. Disbrow: It's a wild guess. It could be lot more than that you would think.

Mr. Cappuccio: We already have 14 percent by using the wrong inflation factors. We've had 10 percent, I mean, we're already like at 25 percent of a 36 percent problem.

Mr. Kozlowski: Even if it's smaller than that on a cumulative basis if happens every year, year after year, then you're back into inflation.

Mr. Cappuccio: In F22 I was involved in four re-baselinings. I will tell you whenever re-baselining happens it's a double whammy. You lose those engineering people so you lose that money and then you lose the time associated when they should have been doing the right job.

Mr. Disbrow: Exactly.

Mr. Kozlowski: There's an awful lot of commitment once you open the door.

Dr. A'Hearn: Related to the funding instability you

mentioned a few moments ago that sometimes additive requirements come from outside the Air Force. You put -- such as you put JTTRS on this platform, does it typically come with money?

Mr. Disbrow: No, never.

Mr. Cappuccio: JTTRS is an example.

Mr. Disbrow: Well, sometimes we have gotten direction and funding but it is the exception not the rule.

Mr. Rixse: Did you or your organization have regular or routine relationships with the SAE?

Mr. Disbrow: As we're preparing for every milestone review we go back over requirements and analysis and so forth. At the SAE level it is not a formal standardized interface.

Mr. Rixse: Did you personally ever talk to the SAE?

Mr. Disbrow: Every day.

Mr. Rixse: How about the PEOs?

Mr. Disbrow: Frequently, a lot. I mean, I'm right down the hall from the AQ front office. General Hawley will remember from when he was the AQ the XO folks were in his office many times -- four or five times a week at least.

General Hawley: Not as often as the XP guys were looking for money.

Mr. Disbrow: But you were happier when we were there rather than the XP guys.

Mr. Rixse: Do you think your relationship with the SAEs is comparable in the other services?

Mr. Disbrow: I don't know. I've worked with other services SAEs and they're not surprised to see the operators come in although I suspect they're used to it. I've never had them say who the heck are you and why are you here. And General retired Bolton and Secretary Young and those folks are very active through the operational communities. I see them and their folks in meetings together all the time so I think it exists. As a matter of fact, I think it's a necessity. I don't know how you could survive without the AQ communities.

General Hawley: Has your interaction with the PEOs decreased since they left Washington?

Mr. Disbrow: In the case of weapons, probably. Since Judy Stokely left and went down to AAC, it was awfully nice having her in every meeting that we went to on weapons, but she's frequently there now. She or General Chedestor but the rest of them I think there wasn't a whole lot of change. I think in that case we saw some change. Of course, she had so many programs I spent a lot of time with her over there.

Okay. I'll finish up here and let you folks get back.

Mr. Cappuccio: Before you leave that schedule I notice that you have SRSRs in front of every milestone. The perception is that the JCIDs process, and this gets back to

perception, the JCIDs process has numerous entry points about which to protavate programs, particularly when they add requirements that do not come with them. How do you feel about that? Is that just an illusion of the chart or indeed do you believe the JCIDs program -- I mean, according to this you get disrupted at least three times.

Mr. Disbrow: Actually the RSR is to go over the strategy for the next milestone so you can see the RSR proceeds the CPD. It is simply to go over the strategy of producing the documentation required, the requirements documentation required for the next milestones.

Mr. Cappuccio: But not change the operations?

Mr. Disbrow: No. As a matter of fact, in an RSR we never set, we just set the strategy.

Mr. Cappuccio: So when in the milestone process are the requirements truly established to move forward? The requirements document comes out of JROC at milestone B?

Mr. Disbrow: When a what requirement? I'm sorry.

Mr. Cappuccio: The requirements that kick off the STD program. In the current system when are those requirements?

Mr. Disbrow: When you write the CDD following concept refinement and technology development we then are informed enough to be able to write a fiscally informed, technically informed, operationally informed document and that then is what we take into milestone B.

Mr. Cappuccio: And then add CPD through test?

Mr. Disbrow: Or through developmental test. CPD allows us to go into LRIP with our test articles.

Mr. Kozlowski: But you have to start with something. I'm not sure what the right technology is but at milestone A you have to have a pretty good idea of what you're aiming for.

Mr. Disbrow: We have a great idea at milestone A because we're down to, we have done the AOA, we understand we're not talking capability any more, now we're talking specific solutions and in technology development is normally where the acquisition community will incentivize industry to refine something that is going to go into competition.

Mr. Kozlowski: Most of this is polishing the apple as opposed to figuring out what the problem is.

Mr. Disbrow: We pretty much by that time understand the solution. We've done an AOA and so we know that it is a missile. What we don't know are the specific system level characteristics that the missile will have.

Mr. Kozlowski: But you have a pretty good idea. You know payload range and all the fundamental drivers where the 10, 20 percent comes, you've got some degree of maybe finessing on trades and polishing and maybe even tailoring to one contract as opposed to another one downstream.

Mr. Disbrow: It is possible, by the way, to never see a

milestone A. If we come out of the AOA and the solution is a guts solution you go direct to a milestone C. There is no technical development and if it is very mature technology, then you could go direct to a milestone B but I'll tell you that while that is written into the regulation it doesn't happen very often.

Dr. A'Hearn: When a new capability goes through the AFROC and JROC process for the first time and has emerged successfully through that, is there any statement made about this new capabilities military criticality relative to whether new capabilities -- in other words, are new capabilities created equal of do we make some statement about this is really important and this is nice to have?

Mr. Disbrow: We do that in the up-front process. In the capability planning process is where we tier capabilities and tier one shortfalls are the most important, most important to the war fight, shortfalls in the Air Force.

General Hawley: Is there a JROC counterpart to this like the JCIDs?

Mr. Disbrow: No, not yet. The JROC looks at the results but they don't look at the combined results yet but they know they need to do that and the J8 is working on that and are looking at the Air Force processes as possibly a template that they can use to do that. But that is an excellent point, is the capabilities planning in JCIDs, we

didn't implement them. We just capabilities development so we did business as usual for a long time. That is now starting to spin up but that's the piece that is missing and not even in the process much less in the plan.

That's it.

General Hawley: All right, Harry. If you were going to fix acquisition to deal with our problem what would be the requirements and contribution to the fix? What would your contribution be to the fix on our problem? We have a loss of confidence is the basic problem because we can't seem to get things delivered on the schedule that we led people to believe we could and at the price that we led people to believe we could and with the performance characteristics that we led people to believe we could.

Mr. Disbrow: It could cost more than 50 percent confidence level. That would be the cost to solve it. That would help. In some cases we're forced to do that. We couldn't leave the OSD CAIG war because they tend to be closer than other folks even thought we disagreed with their assumptions a lot. Our CAIG and them argue constantly but I will tell you that usually we end up somewhere between the OSD CAIG and the Air Force CAIG.

General Hawley: Usually closer to the OSD CAIG.

Mr. Disbrow: Usually closer to the OSD CAIG and we used to require independent cost estimate as a third cost estimate

all the time and we don't require that all the time any more and it's probably not a bad idea.

General Hawley: Okay. Are we technically well enough informed? Do we sometimes get too hopeful?

Mr. Disbrow: Sometimes.

General Hawley: That leads to the question of how good is our expertise to diagnosis snake oil?

Mr. Disbrow: In some areas it's very good and in some areas it's not so good.

General Hawley: Why is it not so good in some areas?

Mr. Disbrow: Because I don't know that we have -- it is leading edge technology, it's developed out of industry, it's not stopped at our labs and our folks have expertise in.

General Hawley: But these are areas where we just don't have just don't have NL's expertise because it's not a focus area for the labs that somebody in industry brought it to us.

Mr. Disbrow: Or it's brand new, somebody brought it to us. A lot of that stuff resides in the black world but not all of it but we have had folks come in and give us briefings on things that just came out of the blue.

General Hawley: So who do you go to when you get one of those? Who do you go to for technical evaluation?

Mr. Disbrow: AFMC.

General Hawley: So you go to Perry Lamey and what is Perry says, gee, I don't have anybody that knows anything

about that?

Mr. Disbrow: They'll sit down with the folks that know as much as they can close to it and try and get some sort of insight, but you know the requirements community has to stop impulse buying because that drives the acquisition community crazy from time to time where we just all of a sudden just pop stuff on them. And in order to do that we have to take money from everyone else in order to get this [inaudible] through the process.

General Hawley: Is that an example of an influence buy?

Mr. Disbrow: I could give you an example but then I would run the risk -

General Hawley: I don't want to get you in trouble, although we could go off the record.

Mr. Disbrow: We have, we have from time to time had the marketing department of industry come in at senior levels in the Air Force and sell them on an idea that is not very well thought out, not staffed, not been through the process, but assure them that this is absolutely the way to go and we hop onto it only to find out that it's very expensive or it's very technically difficult to do or doesn't contribute much to the war fight in the end but it doesn't keep us from spending a lot of money finding that out.

General Hawley: And so do we bypass your process? In most cases is that what happens?

Mr. Disbrow: Yes. And what we end up having to do is back require the solution.

General Hawley: That is what we call speedy.

Mr. Disbrow: Absolutely.

General Hawley: But your real focus seems to me not on the technical issues, it's on money issues.

Mr. Disbrow: It's on both. It's on both. I have to ask industry guys when they come in and start talking to me where do you work in the company because the engineers will not sign up to some of this stuff that the marketing department is perfectly willing to talk about. So we have to be careful that we're not being told this is easy to do only to find or not very expensive to do only to find out later we really haven't done all the work to be sure that it's true. So I think we bite off -- and you might have seen the Early Bird or someone said, I think it was Mr. Wynne said sometimes we fall out of the trench on technology. We are so far out in front of technology that we're over-ambitious in the technology area and it ends up getting us in trouble. I think that the answer to your question of what can the requirements process do is I think the requirements process has to be part and parcel with the acquisition process and I don't think we can herd these things over to the developers and acquirers and walk away and come back in a few years and be upset because things have changed.

General Hawley: You say you don't do that?

Mr. Disbrow: We don't. Now there's a proposal out at AFMC to build a university that is requirers, acquirers, and testers. General Morton started this and General Carlson is excited about it. We don't have a large formal training program for requirements people like we have for the acquisition folks. We don't certify requirers and so we have a lot of folks around who come and do this for three years and then leave who don't really understand analysis or technology or tests or the acquisition business or the funding business and so you don't have sometimes the expertise at the table. Even though it's an operator in the requirements business, they are not as expert as they need to be in order to fly so we can do that job. So we are participating with them and this is not a three day course. This is a tech training course that when you are assigned to the requirer you go and you learn a lot about requirements and a good deal about acquisition and tests. If you're going to be a tester you learn a lot about testing and a good deal about requirements and acquisition.

Mr. Patterson: Would you say that's so unique as to require a specific Air Force university as opposed to rolling it into DAE, for example, as something that would be universally applicable?

Mr. Disbrow: Since this was an AFMC analysis I don't

know if they pursued that as a possibility. Certainly it is not so unique that it's a Air Force only issue. You can almost be assured of that.

General Hawley: On the other hand, probably a good way to stifle it and make sure it never happens is to call it joint and get everybody else onboard.

Mr. Patterson: That was cynicism so early in the morning?

General Hawley: But this is the second day this week, Dave, so I'm allowed to go there earlier on day two.

Mr. Patterson: I think if you find that there are problems that cross the service lines and they don't seem to be particularly unique you may get legislation.

General Hawley: My vote would be to let this thing get to the point where it proves itself as a good idea then make it joint.

Mr. Disbrow: Yes, sir. If there are no other questions -

General Hawley: Harry, thank you. Wait. I've got one more. You sound like you really like JCIDs.

Mr. Disbrow: As opposed to the vacuum that existed before JCIDs it is a step in the right direction. It is a process that has an in-basket and an out-basket and has expectations associated with it. It is a long way from being where it needs to be but it is a start and so I think what we

need to do is if we don't plan jointly then developing and requiring jointly is impossible. The only way you do joint programs is to do it joint up-front. We have to solve the joint planning piece of it or we'll never get at the program level with joint programs. I like JCIDs.

General Hawley: You like the concept of JCIDs but it could stand to be mechanically improved a little? Is that fair?

Mr. Disbrow: It is improving itself over time because of the senior leadership attention to it in the tank and in the JROC.

Mr. Patterson: Do you have a program that's made its way through JCIDs?

Mr. Disbrow: We just completed the first capability based assessment with an assessment that was offered to the JROC yesterday so that started as a joint functional concept, it went all the way through the functional area analysis, functional needs analysis, and joint solution analysis and the joint solutions came out.

General Hawley: It took how long?

Mr. Disbrow: It was the undersea superiority, when I talked about it they started I think about the first of the year and it just reached the JROC, so nine months.

General Hawley: Thank you.

Mr. Patterson: Thank you. Sorry I didn't make it.

Good to have you here. Thanks for taking the time to do this to look at it to create the briefing. If we can put the results up on the screen. And so, with that in mind. Steve, if you will begin and walk us through the results.

Mr. Hayes: Certainly. Today I'm going to give you the interview process. Talk about the results from the close ended questions and the open ended questions. And leave some items for consideration and conclusion.

First, on the interview process. We conducted a structured survey and interview of 87 government industry labor union and trade association leaders. We also took Dr. Abbott's 52 ICAF faculty and students survey that he did for a data cross check. And we didn't find anything new in the trends. Mirror the interview data that we collected. And the purpose was to obtain views from people who were actively engaged in the acquisition process.

This slide shows that we had a good cross section of the services involved in this process. When you look at the wiring diagram, it shows the whole process that we used. We had a questionnaire created. Then we did formal training of the interview team, which consisted of interviewers and scribes. Then we conducted interviews. Part of that interview was a multiple choice, check the block type closed ended survey. And they we had eight questions that allowed oral response. And open end characteristics of the

questionnaire. Once we got all that data we began the analysis process. The focus of that was to gain quantitative insights from the closed ended questions. Take a look at the demographics for significant differences. And then take the qualitative insights we could gleam from the open ended responses, that the interviewees gave. And we're in the process of drafting a report.

This slide shows the demographic breakout of the respondents.

Mr. Patterson: Do we still have some more trade unions to do? And have we completed all of the other interviews?

Mr. Hayes: Two associations left.

Dr. Abbott: This is the breakdown of the 87?

Mr. Hayes: Yes. I will talk about the results. Do you recall from the preliminary brief we gave you in August. We asked in up front questions for the respondents to prioritize how the 12 study areas, there top three. And these three clearly stood out. With the added data we have been gaining from that time, nothing has changed.

This is to give you an idea of the overall distribution, in total of the closed ended questions with all respondents lumped into it. And as you can see in terms of whether or not there's a belief that the acquisition process is functioning as it should, or as best as it could. There is disagreement in that.

General Hawley: Can you explain?

Dr. Abbott: They strongly agree, neutral, disagree, strongly disagree.

Mr. Hayes: This is the break out of all the responses of the multiple choice questions.

Dr. Abbott: It's a pretty damn close standard distribution.

Mr. Hutchins: Pretty close too standard. But, if that is the distribution of all responses to all questions then I assume from your conclusion, where you say that this indicates that people disagree that the acquisition system is running well. You structured all of your questions, so a response in any where in disagree was an indication of disagreement with the correct operation of the system, is that true?

Mr. Hayes. That's right. This just gives you an overall picture.

Dr. Abbott: The questions were asked if you want an negative response. It was, you viewed the system, if you will negatively.

Mr. Hutchins: All negative responses were a negative reflection on the system?

General Hawley: More respondents replied with a neutral to positive than did with negative.

Mr. Patterson: This chart just simply says it is your

population predisposed to be negative about this whole thing or positive about this whole thing. And to have a reasonably well distributed numbers up there, tends to say that while the population was pretty -

Mr. Kelly: Steve, can I make a couple of comments? I might be able to add a couple of insightful things here. First of all, the real intent here, as you remember maybe the questionnaire had some negatively phrased questions, some positively phrased questions. We realigned them all to be positive for the data. So, that's the only way you can do a comparison like this. So, we did that.

Now a couple observations I will offer you, as far as why the neutrals are as high as they are. Both industry, and labor union, and trade associations opted to go neutral on a lot of questions. I don't think - this is an assumption, I don't think they felt comfortable answering because they refer to government processes that they may not have had total insight to. So, rather than be critical one way or the other, they just kind of went to neutral. So, we had - those brought some high neutral responses into the thing. Which causes it to be the way it is. So, I guess the way I would capture it, is what we saw was a group of people who were well schooled and experienced in the acquisition process. Tended to believe when everything was listed positively more than disagreed then agreed on those statements by a little

bit.

Mr. Patterson: What did you do with the I don't knows?

Mr. Kelly: That's the neutrals.

Mr. Patterson: That's different.

Mr. Kelly: N/A's and neutrals, both. If people elected to opt out of the questions all together and put N/A - or in many cases it is hard to tell on a neutral whether they had no opinion, or whether they just weren't bold enough to put N/A down. You don't know. It could be either.

Mr. Patterson: I made the distinction that people I interviewed, if you absolutely do not feel as though this is a part of your world, nothing about it. Then you simply say I don't know, and that's fine. If on the other hand, you're neutral then that would constitute a number 4.

Mr. Kelly: Well I think one of the differences too, is you specifically in your interviews asked the closed ended questions to them, is that correct?

Mr. Patterson: That's correct.

Mr. Kelly: No on else did that.

Mr. Patterson: They were suppose to.

Mr. Kelly: That was not in the original training. No one else did that.

Mr. Hutchins: Looking at this then, I would take from this that, if I considered the responses on any individual question and those responses in the main lined up in the

agree or agree plus, or strongly agree. That that is sort of a first order indication that there is a strong result. As a result of this question, because it so different from the nominal distribution of responses, is that correct? And so in other words if I had 100 responses on question number 13, and 70 of them ended up in the A or A plus area. The comparison without overall questions all the community responded. That would tell me that on question 13 something is different here?

Mr. Kelly: Yes.

Mr. Hutchins: Good. Press on.

Dr. Abbott: It would only tell you statistically something was different.

Mr. Hutchins: Not why. Just that something was different.

Mr. Rixse: Did you have that chart broken out by each of the categories?

Mr. Hayes: We're going to get into significant differences in demographics shortly. We have things that were in significant areas of observations.

Mr. Hutchins: Next chart.

Mr. Hayes: Here in total overall - all respondents in the top areas are significant areas of agreement.

General Hawley: Was there anything in the questions or the interview process that would differentiate between

operational level requirements and program level requirements, engineering level requirements?

Mr. Hayes. No, there wasn't.

General Hawley: So, we can't derive from this any difference between whether it's the highest level operational requirement, that's the problem, a lower level requirement?

Mr. Rixse: You probably only infer that when you get the demographics that that answer was given by an industry person who might only have insight.

General Hawley: They might only see part of it.

Mr. Rixse: So, you might be able to derive that based on the demographic of what group is answering the question.

Mr. Hutchins: Now, so to interpret this, just like the last question. The last question showed overall responses. Survey population looked at it somewhat negatively. Now, these are ones where quite aside from that on the specific questions, this percentage of the population responded over in the positive side. So, we can take from this that in these particular areas something is different.

Mr. Kelly: But, not all of these questions are positively aligned. We just did that positive alignment for that last chart. That second question there takes to long. Is a negative thing. That's the way the question was in then questionnaire.

Mr. Holly: Both of the requirements are phrased

negatively here. So, you reverse those?

Mr. Kelly: Yes. That was one of the problems with the questions.

Mr. Hutchins: If that's the case then the previous chart needs to be redone. Because you guys need to report the data as the data as the data, as the data, quit trying to change it around to fit something.

Mr. Kelly: Then you can't do that previous chart for it to mean anything, I don't think. Because the questionnaire has both positive and negatively aligned questions.

Mr. Hayes: And it tracks the questions that are similar in reverse?

Mr. Hutchins: I just want to see the chart with the data, as the questions, how they laid out. Otherwise, you're trying to create something that is not in the data. You're trying to generate an a priori or a conclusion.

Mr. Patterson: Okay.

Mr. Hayes: These were mapped through the study areas. The top three study areas.

General Hawley: Allen, I'm not sure that's true. Take question number 2. 90 percent say it takes to long, and what they've done is said, 10 percent say it doesn't take to long?

Mr. Hutchins: That wasn't the previous chart. The previous chart was simply a head count of how many people lined up in the totals.

General Hawley: They reversed it.

Mr. Hutchins: That's right. And that's analytically inappropriate.

Mr. Kelly: It was analytically inappropriate to have a question here that had a both positively and negatively worded questions in it.

Mr. Hutchins: A true statement. But, the previous chart should be just [inaudible] otherwise you're trying to fit a result. We can't have that.

Mr. Kozlowski: This doesn't necessarily follow. Just because 90 percent said it takes to long, doesn't necessarily mean that the other 10 percent -

General Hawley: What you're saying is if we had asked the question a different way and said, said it takes about the right amount of time to generate and validate requirements. We wouldn't necessarily have got a 10 percent positive answer.

Mr. Kelly: You don't know that.

General Hawley: I'll buy it.

Dr. Abbott: In terms of the distribution chart, I don't see it's use. It is much to macro.

Mr. Hutchins: The only purpose of this distribution chart in my mind is just to show me the data. Because a priori or you want to see what the population looks like, so you can then proceed with something like this, where

something is different. That's the only value of that first chart. If you go in and then [inaudible] I'm going to change the sense of a particular question around. You're trying to make that a priori look at what the overall distribution is. That a pre-conceived notion you have. This particular effort is suppose to stand on the merits of the data. And if we start doing that, it won't stand on the merits of the data.

Mr. Hayes: Here's what was done. Here's an example.

Mr. Hutchins: Don't dig yourself a deeper hole.

Mr. Patterson: Let's go on.

Mr. Hayes: So, those are the agreements for the requirements management. Here are areas in total of disagreement for requirements management.

General Hawley: So, that says 77 percent were in the D, D plus, or SD category?

Mr. Kelly: Exactly.

Mr. Rixse: You're saying 77 percent disagreed with that statement?

Mr. Hayes: Yes.

Dr. Abbott: Look at the distribution.

Mr. Hayes: Which confirms if you look back at the requirements at the top of our green bars, shown earlier. They're saying that the requirements process has an issue.

Dr. Abbott: Look at number 4 down there. Changes in requirements do not usually not adversely impact programs. We

don't know which kind.

Mr. Patterson: But, they disagree.

Dr. Abbott: They disagree. There point is that changes in requirements do. It's 96 percent.

Mr. Hayes: Very strongly.

Dr. Abbott: Does statistical breakdown in the respondents there wouldn't be much help. But, in the 66 percent area it might be insightful. If the group is unique.

Mr. Hutchins: That's the point of the data. As a whole shows they're slightly off to that side. Then 66 percent may be either be something or not.

Dr. Abbott: It could all be company people, trade unions, and the labor unions who make up these 66 percent. They alone make up 52 percent.

Mr. Hayes: This shows the other two study areas that were selected in the top three, in the areas of disagree.

Dr. Abbott: The trouble with the second one down, is if you don't know whether the answer is we should allow less profit or more profit from that question. Granted I understand the requirements, but the profit question usually is based on more profit allowing more or greater profit. Would get better performance or these guys get to much money and they're wasteful. And therefore they should have less profit.

Mr. Hayes: That's probably a point of reference on that

question.

Dr. Abbott: A point of reference on regulations. It's almost you don't know which way is the reading about right, about the right amount? Yes, no? Well it could be, the no could be there should be more. Or it could be less. You don't know the answer.

Mr. Patterson: Okay.

Mr. Hayes: Now I would like to take you into some noteworthy observations that we have. These are areas where there were some significant differences between the demographics or some agreement. But, they're some interesting things.

Dr. Abbott: Internal differences. This is where it gets interesting.

Mr. Hayes: In this chart reads. As this show 100 percent of the government responses. The respondents industry, and labor and associations. This being agreement, and this side being disagreement. And in this case changes to requirements are mostly driven by budget or other finding issues. We had agreement that between government, and labor, trade associations. But, industry was on the opposite end of the spectrum.

Mr. Rixse: Trade associations represent industry, don't they?

Mr. Hayes: These are industry PM's and executives.

Mr. Rixse: But, trade associations represent industry.

Dr. Abbott: But, maybe the presumption the industry people don't see the budgetary decision to throw over the requirement change. All they see is the requirement articulated.

General Hawley: Could it be that -

Dr. Abbott: They don't know the genesis of the change.

General Hawley: Could it be that they view the definition of requirements differently.

Mr. Kozlowski: Certainly, it gets into this operational requirement versus some of the intermediate stages.

General Hawley: They could go so far as union guys might see it as how many do we need.

Dr. Abbott: From the industry point of view, it might be the requirement changes resulting with technical issues. Not the original genesis was a budget issue. But, they don't see the budget.

Mr. Patterson: What the unions believe is that requirements mean that you stop work change something. Go back, redesign and put something on the line again. And that they've concluded that that was driven by budgetary or particularly funding.

General Hawley: It's counter-intuitive to me. But, okay I'll believe it.

Mr. Hutchins: This is particularly interesting, that's

for sure.

Mr. Patterson: If you take something off of a widget, because reduced funding causes you to do something, but you know when you take money away and change things, it costs you something.

Mr. Hutchins: What this also shows is that when you have a discussion with an industry personnel or the government person, and you're chatting about the impact of requirements growth or [inaudible] for a change. You have to be using the same words that people in the audience are apt to have two entirely different understandings of what you're saying.

Mr. Kozlowski: The significance of that chart is the difference between government and industry. The labor and associations, first of all the sample pool was much smaller. But, they have a different perception. But, it is amazing to me that there's that much of a disconnect between the industry and government.

Mr. Hayes: It might be something to do with the government. Is policy regulation legislative driven? Many of the things we do where industry is contractor, that may be something.

Mr. Hutchins: It really indicates you can't have an intelligent conversation on the topic. Because people have to different conceptionalizations.

Dr. Abbott: The question is asking what drives the requirement change? And the government guys know, at least for the chart that money is what's going to drive the requirements change. Industry might say, I don't know. All I know is I've got a requirements change.

Mr. Rixse: Frank, gave you the examples. It's funding.

Dr. Abbott: It's a technology - I could be a technology change.

Mr. Patterson: If you take out the associations -

General Hawley: I don't think we can derive these answers from these questions. All you can say is you've got an anomaly. You can guess it while you have an anomaly, but it's just a guess.

Mr. Patterson: If you take the associations out of the bottom, and put it either as a separate line. I would say that just about everybody, since I asked the question verbally, I kind of know what the answers were. That I'll bet you that line on the left would go away.

General Hawley: Do you mean the industry?

Mr. Patterson: No. On the associations. I'm not positive about that.

General Hawley: Would we disagree?

Mr. Patterson: Would be 100 percent agreement.

General Hawley: Labor says everything is driven by budget and funding.

Mr. Patterson: I don't know that for a fact.

Dr. Abbott: Clearly, this is an unusual answer set. When you look at the other questions that are in the - let me call it the requirements block of questions. Do you see much greater consistency between these three groups. And that's why, is this an anomaly just because it stands alone, or is there some other set of - a larger set of data called, the requirements questions? Where you have multiple requirements.

Mr. Hayes: We have another requirements coming up. This is where they're in clear opposition.

Dr. Abbott: I understand that.

Mr. Hayes: And we wanted to point that out, so that the panel could get and opportunity to see there are some things that just kind of fell out of what you might expect. The next thing shows agreement. On the question, industry is not involved enough in the requirements process. And so they all agree they're not involved enough.

But, when you look at the government, they're almost sitting on the fence. Compared to much stronger feelings between the industrial side.

Dr. Abbott: The government believes it's consulting, and the industry doesn't think it's being consulted enough.

Mr. Hayes: Under organization responsibility, authority, and accountability there seems to be a much

stronger believe in the government PM's and executives that they're held accountable. Where it is not so strong on the industry side.

Mr. Kozlowski: Frank's not here, but I think he would probably agree. My assumption of this is the reward, punishment cycle is much more visible in industry. Where it is tempered and diluted in all the things on the government side.

Mr. Hutchins: The industry side just doesn't see the daily interaction with Program Managers and PEO's. Where as Program Managers may have inside the government, a much clearer view of how they're held accountable. It's just never seen outside. It would be an expected result looking like this.

Dr. Abbott: There's also a difference in the perception of an act that would slow you career down. It would depend upon what's side of the fence you're sitting on.

Mr. Hayes: The interesting thing about this one on regulatory policy hinders efficient program execution. Industry was split 50/50. Where we had some clear preference on the agreement side with that question from government and labor.

Mr. Kozlowski: Any guesses how the government would weight in on the right side of that?

General Hawley: Because to some extent the program

office is a filter or a buffer between regulatory constraints and industry.

Mr. Hutchins: I remember the Program Managers and PEO's are the ones the IIPT, and the OIPT is inflicted upon.

Mr. Kozlowski: I can relate to that. If this is an indirect measurement of the complexities and hurdles, and strap hangers that the bureaucratic boras we're in. If that is what they're going to talk about - if the inference here in the regulatory policy got us there, I don't think the regulatory policy has anything to do with it. It is just a lot of people want to come to the party.

General Hawley: They see the implementation of the policy. And if I'm a Program Manager I see WIPT's and OIPT's as policy.

Dr. Abbott: If you're a Program Manager all regulation is a constraint on your independence of action. And you chaff under it regardless of how much or how little it is.

Mr. A'Hearn: And your term about office serving as a filter is exactly like the filtering takes place in terms of the contract. Which is what industry has to live with.

Mr. Patterson: That was particularly true with the CAA, the inspectors, and they see all of these folks in the line. And that was their take. But, that represented regulation and policy.

Mr. Hayes: An interesting thing on Goldwater-Nichols.

There were two questions addressing that. 40 percent of the people had no position.

Mr. Patterson: Did anybody ask if they know what Goldwater-Nichols was?

Dr. Abbott: When I was in college, I was in there to run a test on the street and interview people, and ask them what they thought about the pending Non-ferrous Metals Act in Congress. Were they for it or against it? 70 percent of the people were against it. There was no such thing. So, these people, at least are being honest and saying I don't know what Goldwater-Nichols is. I suspect that probably half of the people who did respond, if you ask what it was wouldn't know either?

Mr. Hutchins: I wonder if the other phenomenon is all the practitioners in the field really see the policy implementation of the Act as opposed to seeing the Act?

Dr. Abbott: They don't even understand - may not even understand the specifics.

Mr. Hayes: The next slide on you hard copies, please mark this would be read [inaudible] on your hard copy.

Mr. Hutchins: So, labor lights by America.

Mr. Patterson: This was designed to make sure we didn't have any ringers in the unions. I want association out of the labor unions. There will just be five. In fact if you want to put it somewhere, since they represent the industry

it might well go in the industry side.

Mr. Hayes. Okay.

Mr. Patterson: Obviously.

Mr. Hayes: That would be more appropriate.

Mr. Patterson: This tells you that the organized labor part of this, basically didn't loose there roots.

Mr. Kelly: That's an easy change.

Dr. Abbott: They guys in the companies are very interested in allowing profit to occur. So what?

Mr. Patterson: Okay.

Mr. Hayes: Okay. I'm going to take you from the closed ended questions now, over to what we did in the qualitative side on the open ended questions.

Mr. Patterson: Question 3, was did we miss anything.

Mr. Hayes: Right.

Mr. Kelly: What additional areas besides the 12?

Mr. Hayes: What this did is it gave an opportunity with the open ended questions to gain insight. And also through their views, and how they mention things. Understand a little bit more in the areas of the closed ended questions. How they felt, and it confirmed the top three 12 study areas that emerged from that.

But, in addition to that there was a lot of mention of funding and technology maturity. There's also some other areas that have touched upon in leadership and the test

community. Levels of oversight review.

Mr. A'Hearn: Is the amplification on leadership, or did they simply list that topic?

Mr. Hayes: It's all how they phrased it. Sometimes in the decision making. They would say a PM this week would advocate his decision making ability. And those around him, or other group who make decisions and move forward, which is clearly a lack of leadership. If you're not a player in process. Because of weak leadership.

Dr. Abbott: It's also hard to tell which level of leadership you're talking about.

Mr. Hayes: Present, but not participating. But, this is just kind of summarizes the key things that came out of these questions. That gave them an opportunity to discuss things. Which leads us to some emerging themes that came out of the joining of the close ended and open ended questions, through the analysis process.

Again, you're familiar with this, where we started out to identify these top three areas that were - and many of these things that were in here were discussed and mentioned. As if they had key themes when they were answering these questions down here. They kept plugging them in along the way. Then we also had the majority of the interviewers hitting funding instability and tech maturity that were not part of the 12 study areas. And then that brought us to a

focus on five top themes. Requirements management, funding instability, technology maturity, organizational responsibility, authority and accountability, and regulatory policy and legislative impacts.

Dr. Abbott: I got the first top four, what is regulatory authority and policy impact mean?

Mr. Hayes: That was one of the 12 study areas that came out third. This is this one right here.

Dr. Abbott: Got you.

Mr. Hayes: But, these other two emerged very strongly through the dialog.

Dr. Abbott: You added two more to the three. I got it.

Mr. Hayes: Which is good. There was opportunity for them to talk to this. And then what I would like to leave you with, in conclusion are considerations. That from our analysis these were the top hitters that the community had to say. We had requirements - the requirements management process, funding instability, technology maturity, the organization responsibility, authority and accountability, and regulations and policy interpretation. And what that is, comments were going to the point that there were a lot of regs out there. There's a lot of people that have different interpretations. We are our own worst enemies. We look at guidelines to use for tailoring, and so forth. And yet we're treated as if it's statutory and so forth. And that

concludes my briefing.

Mr. A'Hearn: Can I ask please - will you go back to the previous chart, just for a second. I remember that at the onset of the study, looking at these. And having thought about them several times since. What occurs to me is that these are not mutually exclusive categories. And that maybe those upper three - the green horizontal bars would be even more pronounced if some of these things were amalgamated. I know you loose fidelity of data when you amalgamate. But, for instance the second one is organizational responsibility. And the fifth item down is organization. Right about in the middle is the acquisition planning process. But, we also have pre-acquisition planning, we have strategy. So, in oversight while I'm somewhat surprised where that comes out in the middle, what occurs to me - oversight. As well as a part of the issue of responsibility authority and accountability, which is item number 2 on the chart.

Mr. Hayes: That is correct. And this is - what I meant as far as they were kind of scattered across the map. And they knew what they were trying to say, but everybody interpreted each of these study areas, some what a little differently on where to plug it in. And some actually plugged it in all of them just along the way. But, IPT's, for example above the PM level, they would be all over the map. But, you have to put them in to get some relevance.

You have to put them somewhere so you can see the big picture.

Mr. Patterson: I think on the second line that it raises the key issue of responsibility authority and accountability. And organization is a modifier. Whereas an organization is totally different. Do you think that's the way which this whole system is organized, is good, bad, or indifferent? And how important is that?

Mr. A'Hearn: For instance since the days of David Packard, who said we ought to have a Program Manager who has the responsibility, and authority, and accountability, that kind of thing. There's many that used that phrase. Is closely related to the issue of the Program Manager, that says yeah, but I got 10 level service side to keep me busy all the time. Those are sort of wrapped up with each other.

Mr. Patterson: I agree. But, I'm saying is I'm not so sure you want to - you want organization. Because of the way it exists in the context.

Mr. A'Hearn: I agree.

General Hawley: But, what I think I mean - I guess what I would read into Frank's comment here is that we shouldn't take it with to much fidelity. Those green bars on that five top themes, you could well say that organizational responsibility, and so on is at least as big a problem as if you did some amalgamation.

Mr. Patterson: I think if you're going to -

General Hawley: So, those are - those are five important areas. Let's not get to carried with ranking them. Maybe -

Mr. Patterson: I'm saying if you compare the top and the bottom, surprisingly enough nobody seemed to think that decision making was that big.

Mr. Hayes: I think the bottom line is these clearly stand out. And if you looked at the sound bites and so forth, of people for example. In responsibility, authority, and accountability when they start talking. It's not having sufficient authority issue. They're describing there.

Dr. Abbott: If you were to take the last chart, of the five biggies you're talking about - this here, the five can go through the presumption that the people who took this survey, and you interviewed said, here's what you ought to do to fix this system. How would you take those particular titles and make them into actionable statements? Do the following about requirements. What did they tell us? Besides the fact that's an area of great concern. Was there anything that came clearly out of the surveys, or the interviews that said, like the questions we've asked, how would you fix this system, or how would you fix your portion of the system? Because all we've got in the end here are topical areas, if you will. There's no verbs attached there

for one thing.

Mr. Hayes: There were some people when they gave responses in there that made statements that you could construe as being recommendations on what they would do. Some seemingly achievable, and others reaching much higher than being able to achieve them. And we again intended to try to find a place in the appendix of the report to pull those things in.

Mr. Boykin: Steve, don't you have in your analysis a summary? An executive summary?

Mr. Hayes: We've been working that into the draft report. We're building - those are interesting quotes and things like that.

Mr. Patterson: Okay.

Mr. Hayes: Thank you.

Ms. Giglio: Can I make an announcement?

Mr. Patterson: Go head.

Ms. Giglio: We got information about General Kadish's mother. And the viewing is tonight and Sunday. And she'll be buried at the Catholic church in Philadelphia, in Pennsylvania on Monday. We were going to collect to send flowers to the home, to General Kadish's home when he returns. And so anybody that wants to make a contribution, we'll be happy to collect.

The other announcement is General Kadish was asked by an

organization to come to Sedona, Arizona on the 11th of November. He cannot go. There's a contracting conference. I was wondering if any of the panel members would be interested in taking the speaking engagement? That's the 11th of November. And I will send the e-mail - I mean if there's somebody that wants to grab it, that fine. But, I'll have to send an e-mail out to them, out to the panel.

Dr. Abbott: If you have any indication of what they want to talk about or the theme of the conference, it would be helpful.

General Hawley: I'm off the hook. That's for sure.

Ms. Giglio: The last thing is, General Kadish wants to come in and work on the 21st of October. That's the day after we have a session on the 19th in the morning open, closed in the afternoon. Working all day on the 20th, with General Welsh coming in the afternoon of the 20th. But, General Kadish called last night and asked if you would be available to meet on the 21st, so that we can continue to work on the report.

Dr. Abbott: We'll be out of town.

Ms. Giglio: There will be other times like this. But, if you're here and can participate.

Dr. Abbott: I can work on the morning on Wednesday.

General Hawley: Have you given up on that Saturday? Maggie called and wanted to know about Saturday as well.

Ms. Giglio: No. The 20th is Thursday. The 21st is Friday. And if we still needed to be in session, I offered actually that Al, and Dave, and I would be available through the weekend.

Mr. Patterson: And I guess I complied. It's a wonderful idea.

Ms. Giglio: That's all I have. So, no one - and anybody for the 21st?

General Hawley: I can be here for the 21st.

Dr. Abbott: I cannot.

Mr. Kozlowski: I can't.

Ms. Giglio: We'll meet in our office in the Pentagon. That's not a problem. It's not a formal [inaudible] thing.

Dr. Abbott: I still have a day job.

Mr. Patterson: Let's take a break.

Dr. Abbott: A recess.

[Recess]

Mr. Patterson: Let's go back on the record.

Mr. Cappuccio: If we're going to define the change, this might not be a bad subset.

General Hawley: I think we already answered this one in public comments that say, it's not broken, but it can certainly be improved.

Mr. Hutchins: It's fundamentally more broken now, than it's been in the last 20 or 30 years. The average overrun

was 40 plus.

General Hawley: We don't of anybody who actually does it better.

Mr. Cappuccio: GAO, process is not broken, it's an equilibrium.

Mr. Patterson: That's [inaudible] point is non [inaudible]. You don't have to answer it.

Mr. Hutchins: So, it's GAO, then like the tension.

Dr. Abbott: The QDR in the middle. We think that's leadership or lack thereof. When we pull it apart leadership challenge.

Mr. Cappuccio: I thought the only problem on GAO, is while we are - is everybody gets what they want. We lost the advocacy and the Achilles heel in the system. There's a lot of other things we're doing.

General Hawley: That the system runs on advocacy.

Mr. Cappuccio: The system may not be broke. But, when the system runs of advocacy it tends not to close.

General Hawley: And the advocacy is not balanced.

Dr. Abbott: The first presumption, the first going in presumption about this system is wrong. And that is that somehow the people on the outside think the system is built for efficiency.

Mr. Cappuccio: It's not built for efficiency.

Dr. Abbott: It's not build for efficiency. It's maybe

build for equity. It may be built for equal access. It may be a variety of stake holders to have a say. But, it's not built for efficiency.

General Hawley: It's a compromise system to particularly achieve a lot different goals.

Dr. Abbott: And it reflects the government systems under which it operates. Which is negotiated solutions to really pressing problems.

Mr. A'Hearn: And shared disbursed power.

Mr. Hutchins: This chart came up when we were arguing the push to put acquisition back to the service chiefs. Might be ill advised, because after all how well are they doing on the budget requirement side?

General Hawley: Of course the premise is wrong there. Because it says it says they control those two processes. When, in fact they're just participants.

Mr. Hutchins: We've, I think thoroughly addressed the second bullet.

General Hawley: Yep. We've got the second one.

Mr. Cappuccio: We said fundamentally disagree here.

Mr. Hutchins: I think the discussion was that perhaps the acquisition executives should be the service Undersecretary, which would then go very nicely with the establishment of a four star acquisition command. Responsible for the training.

General Hawley: We never finished yesterday talking about what the chain of command would be for the Program Managers.

Mr. Cappuccio: Why don't we go through the rest of the charts. Why don't we keep this out. Why don't we keep it out and put and org chart on the board.

Mr. Hutchins: I think I know the answer to your question. It ties in.

Mr. Cappuccio: Tab number 12.

General Hawley: We've got this one down.

Mr. Hutchins: We could help it. We had a long discussion at the last panel meeting about whether or not the panel wanted to take, as an improvement area matrix and decided against it. As it mostly fell into the how to bucket.

Mr. Cappuccio: Let's not get down, trapped in the process please.

Mr. Hutchins: Going once, going twice, gone. We've answered that as yes, I believe.

Dr. Abbott: I wouldn't use the word model. I would use Packard as a frame of reference.

Mr. Hutchins: I like that.

Dr. Abbott: Model comes with to much baggage.

Mr. Cappuccio: I would argue that the key features of success for military programs are exactly the same.

Mr. Hutchins: In fact we captured that.

Mr. Kozlowski: If you say a commercial transaction is going to the cleaners and getting your shirts laundered. A, it's beautiful, it's very predictable. But, if you talk about building bridges, or particularly structures that have never been build before, where you're doing some R&D and technology development as you go. You've had some major failures. I can give you whole list of engineering catastrophes, I can give you a whole list of programs that have grown from a requirements point of view for a cost and schedule -

General Hawley: Let's stick to things comparable to what we are generally talking about here. Airplanes, and vehicles, and ships.

Mr. Kozlowski: It's just as bad.

General Hawley: Is Boeing's experience with commercial airplanes?

Mr. Kozlowski: That's not a parallel.

General Hawley: Why not.

Mr. Cappuccio: Because all the technology ratings are six, and sevens, and eights.

General Hawley: That's part of the process.

Dr. Abbott: But, their process has to be - the process isn't mature technology. Because they're talking about mature technology. The process isn't mature technology,

because their customer demands mature technology for the security of the people who are traveling. Boeing isn't going to press the state of the art.

General Hawley: How about when they make the next deep pit mining vehicle machine.

Mr. Cappuccio: The last one you made was overrun.

Dr. Abbott: By 300 percent. They were cutting through chalk, not cutting through granite.

Mr. Patterson: That's a very good example. Because the 787, that they're going to produce looks nothing like they had in mind at the very beginning. I mean it was really streamlined. It was totally composite. And super critical wing. And they were going to develop a brand new wing, and they went out to the customers. And the customers said, no that's not the right size. We want a 767 size.

Mr. Kozlowski: They wanted an economic seat mile.

Mr. Patterson: But, they put some of that technology - I'm mean there's probably more composite than any other airplane. Wouldn't you say, of it's size?

Mr. Kozlowski: All of the composite stuff, the fuselage barrels, large wing spans, were all developed from a demonstrator standpoint, three to five years ago. And I paid for a stitching machine to show how to do it. I don't think there stitching, but we paid for a very complicated machine. There is some parallel Dick, between the new commercial

aircraft and sort of a cookie cutter kind of an airplane you might have today. But, it's more like putting the S-3 back into production or something as opposed to -

Mr. Cappuccio: Let's take Cessna's, none of Cessna's airplanes really rock. Because there's no new technology.

Mr. Kozlowski: When they did their first jet, they had problems. And, now it's a polished mature process. If you take the automobile industry today, there's very little risk. It's all bells and whistles. It's a mature industry. It's hey, if I can save a penny, I will on a production unit cost. It's a totally different mentality.

Dr. Abbott: If you look at the things in the commercial aircraft liners that have been aggressed forward for technology, it's usually it's usually done by Airbus, not by Boeing. Because Airbus doesn't have to worry about the customer having to absorb the cost. Or, at least it has in the past, until recently.

General Hawley: I surrender.

Mr. Cappuccio: Consequences, we never talked about. We never really talked about behavior and consequences.

Mr. Hutchins: We have a bullet on the chart that said, where's the accountability? That's about it.

Mr. Patterson: I would take this to a higher level. And simple say that what we're talking about, that instability in the system is a consequence of - in a system

like this. The way people behave is a consequence of something. Something happening is instability. Anybody buying that?

General Hawley: Not quite. We could capture this though. If we get into this idea of shorting the time lines. Which we're going to talk about later. We were waiting for you to back. The part of getting time line as sure as you need to do that in order to allow for accountability and consequences.

Because, if you stretch a program over 15 years, none of the people who were there, who ought to be held accountable can be held accountable. What is it? Don't be the last Program Engineer, or the third Program Manager? You could capture that.

Dr. Abbott: Promise them everything and then leave.

Mr. Patterson: I don't know what to do with this. Save it?

Mr. Hutchins: All we need is a top level solution that talks about accountability.

Mr. Kozlowski: Somewhere in the report you're probably going to have to address this commercial comparison to the DoD environment. The environments different. There's a whole bunch of things that are different. I'll take a stab at that Al, if you wand me to.

Mr. Cappuccio: We need perception appendix. We really

need a perception appendix that says, capture Jerry's thought. What makes you think the system was ever to be streamlined sufficient, fast? It wasn't set that way. What makes you think the commercial contracts that have complicated technology infusion, right as witnessed by all the satellite companies that are out of business. You almost need a perception line set up by somebody else.

Mr. Patterson: It has nothing to do with commercial or government. It has to do with the common complexity. If complexity is introduced into a commercial system, they'll have as much problem as we do. They, because of their technology cycle insure that they take complexity out.

General Hawley: Maybe we ought to call this section, acquisition base.

Mr. Cappuccio: I think it would be very useful to the report, for people to say, I mean for people to understand that the perceptions -

General Hawley: Many times what they perceive is fiction.

Mr. Cappuccio: You could have that done by the group.

Dr. Abbott: It needs two terms. Have you ever heard anybody suggest at a commercial enterprise that they would do well to replicate the government acquisition system to improve their processes? No one has ever said that. Government acquisition system is the only economic exchange

system in which the supplier gets to sue the buyer for not buying his product.

I track with Lockheed and Boeing takes me to court. I'm the buyer.

Mr. Cappuccio: God bless America.

Dr. Abbott: It would be like you buying a Chevy and you discovered a subpoena on your door from Ford because you didn't buy their car.

Mr. Hutchins: We're going to talk a lot about oversight. We've already got the top level solutions. Considering the space.

Mr. Patterson: That is good speech grist.

Mr. Hutchins: The one point I'll probably suggest we write about is - and it's almost a behavioral thing. There's a concept inside of how DoD organizes itself. That people will come forward with results and there should be an independent look at things. And that by and independent look, somehow value is added. That fundamental premise is of course logically flawed. In that, how do you know? How do you know you're independent look is anymore valid than the other one?

General Hawley: When it validates your independent notion, it's a good independent look.

Dr. Abbott: It also provides you cover.

Mr. Hutchins: There's an awful lot of, I have to keep

the boss out of jail thought process that goes on.

Dr. Abbott: How many chops do you want in you letter before you send it to the boss to sign off on?

Mr. Patterson: I'll tell you what. You've heard this before, is that the most frequently used phrase to justify oversight by people who have no stake in the outcome is, well I need to see this. Because we need to keep the Secretary out of jail. And my comment is, you don't need to see it. We've got a GC. The General Counsel keeps the Secretary out of jail. You keep the Secretary informed. That's your job, nothing more. Thank you.

Mr. Hutchins: Well, we're all going to have tough solutions about appropriate way to essentially have more appropriate oversight. We'll probably write about the flawed logic of an independent review conducted by people who've never been in the business being a valued decision aide.

Mr. Kozlowski: I don't know that that's such a big issue.

Mr. Hutchins: It is. IPT's, OIPT's, and WIPT's are embodiments of that.

Mr. Rixse: From the panels point of view, will you be defining oversight and deciding what is acceptable and appropriate oversight? Because people use it different ways.

Mr. Hutchins: We captured that already in the top level

solution from the last meeting. Going from regulatory to decision support.

Mr. Patterson: I want to say it's not based on a lack of trust. Trust has nothing to do with any kind of interaction that goes on in the Pentagon. It's absolutely risk aversion. The more people I have signing my document, the less risk I personally have to take. And responsibility for my paper.

Mr. Kozlowski: What you just said was personal risk aversion. Not program risk aversion.

Mr. Patterson: When you add up all the people -

Mr. Kozlowski: It may well be. But, it's driven by personal interest.

General Hawley: There's also lack of trust.

Dr. Abbott: I'm not sure it's a lack of trust. I think that essentially what you have in the system it a principal/agent relationship. The agent or the Congress or the top level of DoD says I want to produce an airplane. Congress says, yeah you can produce an airplane. Congress doesn't know about airplanes, and so they have little knowledge about it.

And therefore, the way they're going to control you're behavior is through some other mechanism, GAO, your budget, and then as you move to the government, and the acquisition business contract - the contractor Lockheed-Martin build an

airplane. The answer becomes they know more about building an airplane. They know a heck of a lot more, particularly about this particular airplane. So, what we're going to do is send a couple of hundred auditors. And sit in your shop for the next five years. Counting everything they do, because we don't trust them. Why? Because they have more knowledge than we have. And, so it is not the idea that everybody's a bunch of thieves. It's that you don't have enough knowledge. There's not market place.

General Hawley: My assertion that there's an element of lack of trust is not based upon what people think of people - are just thieves. It's that they don't trust their motives. Because, there's lots of people who don't think the services motives are pure, for example. We're going to pursue our own agenda. Which is contrary to the general welfare. The services don't trust OSD. Because, there's elements in OSD who the services think are pursuing their own agenda.

They services don't trust each other, the services don't trust the joint staff. I mean there is an element of trust involved.

Dr. Abbott: But, our whole economic system is based upon that same idea of competing interest. People operating in their own self interest, and by clashing with each other you will get competition and you will maximize welfare.

Mr. Patterson: That's called communism.

Dr. Abbott: We're trying to impose a communist system upon democracy.

Mr. Cappuccio: You're going to have to attack the oversight issue in the areas of to much oversight dilutes responsibility, and accountability, and chain of command. You have to approach it from that standpoint. Because the trust takes you down a really slippery slope.

General Hawley: Two or three charts ago we substituted trust for accountability.

Mr. Cappuccio: That's how you have to attack it.

Mr. Patterson: This actually dovetails nicely into this slide. Where here's a relative new comer to DoD. And he has some thoughts about how this whole thing sorts out. He calls it tiered accountability. That's what happens when you push down authorities. So, that the people you give that responsibility to feel accountable. And in fact are. Everything does not have to be done by the Deputy Secretary.

Mr. Cappuccio: The question I have for this guy Paul, is given that he knows this. After this enlightenment came to him, what did he do the next day? The next day what did he do?

Mr. Patterson: He established an organization and an agency that reported directly to the Deputy Secretary of Defense.

Mr. Cappuccio: Does it work?

Mr. Patterson: It's not all put together yet.

Mr. Cappuccio: So, when did he force the systems to stop? So, now he has an organization who puts together the nine bullets, justifies an organization that reports to another king pin.

Mr. Kozlowski: He can change the whole structure.

Mr. Patterson: In fact he took on IBM. And we were pouring money into IBM, and stopped it.

Ms. Giglio: 500 contractors.

Mr. Patterson: 500 contractors.

Mr. Cappuccio: The reason I asked, has this guy changed anything?

Mr. Patterson: Yes.

Mr. Cappuccio: So, he's a good guy. So, that if someone says who's a good change agent to execute this.

Ms. Giglio: The BMMP had a bad repetition, they changed the name to business transformation. It's no longer BMMP.

Dr. Abbott: I bet it's based on capabilities too.

Mr. Patterson: The guy that was the scientist in the fly was transformed. I mean does anybody realize that?

Mr. Hutchins: The question I have here is, should we in the report pick out and note and model any parallelism in the business transformation effort that is just completed? In this panels work, should we emphasize where similar results have been developed? This study came out with tiered

accountability. We're talking about somewhat similar things. Should we, in the report point out to, oh by the way, this other big study you just completed just found the same thing?

Mr. Patterson: I would tie it to management 101 principles. Which is what we're talking about. And that oh, by the way, we're not the only ones who figured it out.

Mr. Cappuccio: The answer is yes, if you had a chart that said these guys looked at the problem similar to ours. This is what they came up with. Look at our problem. Okay. Instead of horizontal business, get he COCOMS involved to realign to the war fighter. I mean you could go right across a different set of words, but guys, but under - if you say management 101.

Mr. Hutchins: Or it could even say Packard Commission management precepts.

Dr. Abbott: Or Harvard Business School organizational theory 101.

Mr. Kozlowski: There is a major issue tied to the words oversight and information. These guys have the chart or develop the business systems that will give you the financial viability and presumably others - other forms. And right now the point has been made that DoD can not tell you what they spend, where then spend it, et cetera, et cetera to some degree of fidelity.

So, these guys are suppose to go out and overhaul all these business systems and come up with a common system. If they knew that they're filling a major hole. And I think that is one of the fundamental flaws in the access to information. Somebody made a statement, one of the key wheels made a request, and it took two or three weeks. In fact I think it was Brinkley, said it took two or three weeks to number crunch it before he could answer the Secretaries question. It's crazy.

Dr. Abbott: I would suggest at the risk of people throwing things at me, that the government doesn't want to know.

Mr. Kozlowski: I think there's a lot of people that's right.

Dr. Abbott: Because - and that's driven by a couple of things. First of all we don't account for things the way you do. If you say we're going to put a program office up to create the C-17, well the research and development account is totally separate from the cost of running the program office. You've got military people in the program office who's retirement fund isn't even - doesn't exist anywhere. I mean if you start to add up all of the real overhead costs of everybody putting anything together, including this meeting. You would probably say, what are we doing here? In terms of the money involved.

So, maybe we don't want to know what the costs are. Having said that those portions of the cost, we probably do want to know we're talking about developing a C-17. And we're talking about that R&D to production money. Or the R&D to production development of production to money, we probably want to know that. The fly away cost and life cycle cost, those things.

But, the single most costly element in every weapons system is only one item. An item that gets ignored almost in every program is personnel. That's the single most life cycle cost element. That is the highest in almost every program. Put to guys in an F-18, and opposed to one that life cycle cost goes crazy in comparison. Maintenance man hours per flight hour change, life cycle cost goes up. But, yet until we know, we don't know. Ask them how much it costs to do the Wilson Bridge. They don't know that either. They know how much they've got a contract for. So, do we.

But, all those Safety Engineers in the Department of Transportation from DoD or DOT down to VDOT, to Maryland Department of Transportation over there all the time. They're not costing them out.

Mr. Kozlowski: Let's play God for a minute. If you were the taxpayer, all that money was yours. Would you not want to know?

Dr Abbott: No. We don't want to know either. All you

want to know is if is my tax bill going up or going down?

General Hawley: I want to know. As a MAJCOM Commander with a $10 billion dollar budget, I wanted to know how much things would cost. And I couldn't find out most of the time. I wanted to be able to move money from things that I thought was outrageously expensive to stuff that was better. But, I couldn't figure out what was out what was outrageously expensive.

I'll give you a short anecdote. I was at COMUS-J, and I had all this pressure on my O&N budget, so I said you know I spent a lot of money on phone bills. So, I had the communicator. I said well when our phone bill money came in. And he said well you've got a dedicated cosmic cop - whatever flash precedence six hot line. That goes here, there, and the other place. I said how many times has it been used? He said I don't know. They put a peg count on it. Two months later it hadn't been used. I said good, I'll turn it in. How much do I save? $30,000 dollars a month, great. With a command like mine, that was real money. The only problem is, I don't get it. Guess who gets it? And DSSA says Hawley, you can get rid of that line. Fine. We'll take it away from you. And we'll give it to Korea. Because the lines going to be there.

Mr. Kozlowski: Sometimes nobody gets the savings. It goes back into the infamous treasury.

General Hawley: I have two points. Rarely can you figure out what things cost. And even if you could, you probably can't reap the savings. There's not incentive to save any money because you're not going to be able to do anything with the savings.

Dr. Abbott: And in addition when you do get the money, you don't get it for two months. Okay. And then when you finally get it they tell you, two months before the end of the fiscal year. Don't spend it then either. So, you've got eight months in which to spend 12 month money. And if things slip, you're dead.

Mr. Patterson: You're right. The truth is that I think that you want to know at some level of granularity what's being spent.

General Hawley: If we could have implemented activity based budgeting the way it was intended. I would have found that incredibility useful.

Mr. Patterson: As you say, for example I was the program element monitor for exercise support for JCS exercises. What I found was is that we would sent tents and packages down to South America or the Middle East. And we set those up, and can you bring those back to the United States? No way. They're invested. They can't get them back through Ag. It costs me more - I could have bought two sets for what it cost me to debug. So, I just left them there. I

didn't tell anybody. I just left them there. I and would go down and find programs that were unexecutable for the amount the money to buy new. And I would go buy them. Take money from somebody's poor program that couldn't execute. I would take it in - bring it all in. Have the comptroller say yeah, great, thanks.

Mr. Kozlowski: Who's the sheik who's now got the surplus business going on selling tents?

Mr. Hutchins: Pressing on. Anything here?

Mr. Patterson: No.

Mr. Hutchins: Business process, realignment status?

Mr. Rixse: Wasn't one of the things he did was to cut staff?

Mr. Cappuccio: You've got some nice verbiage there. I mean they've got some nice verbiage.

Dr. Abbott: Policy creation, delegation, execution, direct accountability.

Mr. Cappuccio: The one on the bottom. I don't know that there's a lack of managerial confidence in decision making.

General Hawley: I think what he meant there was managers lack of confidence in their inability to make decisions. Because they haven't got the background to do things we ask them to do.

Dr. Abbott: The contractors don't have customer

orientation. The bottom line.

Mr. Patterson: Back up.

Mr. Cappuccio: I think we all have customer orientation.

Mr. Hutchins: Remember, in his briefing he was defining the customer out in the war fighter. And this is talking the business process. Meaning contractors support of the business process. It ultimately goes towards the customer.

Dr. Abbott: I have a slightly different definition of customer. A customer is Congress. It's the people with the money.

Mr. Rixse: Today, if you say you had a [inaudible], if they think they have the ability to make decisions. They make a decision, what happens is somebody else challenges that decision. So, that it goes up to the Assistant Secretary. And it gets kicked up until somebodies says - somebody who is really is able to make the decision, and says, you can't make that decision. Does that still happen? There's no just constantly going up the chain.

Mr. Patterson: The only thing we don't have is the really nice OSD stationary. Because, whenever a decision is made it's really just an invitation to debate.

Dr. Abbott: That's a leadership challenge as well.

Mr. Cappuccio: You can't write a report that says, you know act responsible, do you job. How the hell do you say

that without everybody being insulted? The system should police itself.

Mr. Hutchins: Our take on this is a little different. People that are buying stuff, there should be one system for buying stuff. This seems to argue there should be a different way of procuring information systems.

Mr. Cappuccio: We talked about three different systems.

General Hawley: What he talked about was we tried to specify all these requirements. And then build a system to satisfy the requirements. Wasn't he the one, when he talked about this stuff?

Mr. Kozlowski: My view on all of this, is you take a standard system. And if some things can be short circuited, or deleted, or tailored, or whatever to make this work - even if you take the master system and you break it down to buy it off the shelf. Buy brand X as is. You can do that with advanced single piece purchase order.

General Hawley: I thought his point was there are examples where, on a small scale there have been successful implementations. But, when we try to scale them up and try to make them enterprise wide they fail.

Mr. Kozlowski: That was one of his points.

General Hawley: I think that was one of his points. Therefore, you ought to let 1000 flowers bloom. Don't try to create a single system that does everything for everybody.

Figure out how to make the 1000 flowers feed an information system -

Mr. Patterson: He was talking about the ERP system in the Navy. And they got slapped on the hands for doing it.

General Hawley: Because they were doing - they weren't using the enterprise model or whatever.

Mr. Patterson: They were using the integrated enterprise model. This follows the Packard Commission. The senior leadership engaged the customer has their imperatives drive you. The tiered accountability pushing down the responsibility and accountability.

Mr. Hutchins: Okay. Anything here? One, twice, gone. We've captured all of this already. Now, what we have not captured explicitly - we said in the top level solutions we need to be able to be responsive to requirements in at least three areas. Very short term, mid term, and long term. Is this where we want to capture what that topical solution may be?

Mr. Cappuccio: Say that again.

General Hawley: This is not a solution. But, I agree that we need a solution.

Mr. Hutchins: I don't know if this is the right place to talk about it.

General Hawley: We need some approach that can tell the department - that can help them deal with the differences,

that don't let everything fall into the same process. We have a different - have to have a different way to deal with things that are different. Short, medium, and long term. IT vice airplanes. They're all different. And they require tailored approaches.

Mr. Cappuccio: I got a different take on this. I thought the point he was trying to make was, when you're in this sustainment and upgrade mode. And you go through the acquisition process. You already should be making sure the contractors have innovative ways of reducing what they are doing. Not produce better. Produce faster, more efficiencies, as opposed to in the SMT phase, don't spend a nickel on anything but process innovation. Because, your looking for the product innovation.

So, I thought the point he was trying to say is we get the two confused. When we get to production we're still putting in next best manufacturing systems. The next best this, the next this, and it's driving down cost. As opposed to saying at that cycle make a conscientious decision that you really want the contractors right to minimize cost of what they produce. Don't make it anymore innovative. Don't try to be cleaver. Don't take promises. That if I put this machine in, I'll produce it better.

Mr. Hutchins: It starts addressing defense acquisition as portfolio management. Why do you always put leading edge

technology into everything? Sometimes, all I really want to do is reproduce what I've got. Just - we don't need the new stuff. It's the only thing - if you're going to put a lot of money in termination technology, it's not likely. Because, you want to put your advanced money in some new ideas. And then the third axis of that paradigm, we talk about investment portfolios maturity of the process. Is this thing about some things are happening in zero to two years. And new surprises - some things are happening in zero to five years. This change in security environment.

But, the single, unified process we have, we try to fit everything into is a 10 plus year process. And so there needs to now an addition to these two ways of looking at things. There's the third axis that talks about urgency of need in the field. So, some how we have to articulate a solution to integrate.

Mr. Cappuccio: Let me ask you something. I know we're going to get a lot of milage out of this. But, if you really did - well up front, wouldn't one of the outputs from the PEC be a characterization of the kind of product? Where you say look here - your product by the way. This a four year product. Do it that way. Wouldn't that be an expectation, if you're really out front planning some of this stuff?

General Hawley: Yeah. But wouldn't it be nice if out of that decision there as a separate process, a place to plug

it into? That says this is going to go into the 18 month process. This one's going to go into the three year process. This one's going to go into the 10 year process.

Mr. Kozlowski: I have a problem that's 21 month in cycle. Where does that fit?

General Hawley: Eighteen.

Mr. Kozlowski: I think you have to have regulations and ends. And everything has to be mapped out for the human being. So, we don't let them think, well maybe we can't afford to. I really don't know. One of the reasons I was told the regs exist is to just get people to do stuff. And yet we seem to encumber ourselves with all sorts of rules, regulations, compartments, and without it I can do nothing.

General Hawley: Well, let me tell you why you can't do anything. Because you can't get the money for an 18 month process. You can't get the money until two years from now. We need a process, and an account. We need an account and a way to access the account for things that can and should done in 18 months.

Mr. Kozlowski: We found out in recent years, the Secretaries got 100. I also heard something about a $300 million dollar account.

Mr. Patterson: We talk about those accounts. Those aren't authorities. There's not real money.

General Hawley: That's a license to go steal money.

Mr. Patterson: It's a license to take somebody else's money.

Dr. Abbott: Again, you have the problem with your accounting system and ours.

Mr. Cappuccio: It's really where you can rake in money and be challenged.

Mr. Kozlowski: I understand the game. I thought that was actually a appropriated.

Mr. Patterson: No.

Mr. Cappuccio: But, it maybe that's something that has to come out of this thing. And maybe you have to say, when you determine the need that needs to be satisfied in 18 months, or whatever it is. There needs to be budget consistent with -

Mr. Patterson: If you have a capital account that covers R&D and procurement. Then you can do it. That's real money. That is real money.

General Hawley: Before you bring it back out, let me go to the three to five year window. Wasn't that our second one? Okay. You've got to change the requirements process if you're going to have a three to five year window. Because, you can't spend two years figuring out what it is. If you're going to deliver it in three to five. So, you've got to have a separate way to define the thing that your going to buy.

Mr. Patterson: I think that's what we're really talking

about.

Mr. Hutchins: Trying to get a little more integrated into the discussion here. There's a lot in the record. And if all of the meetings we've had that discuss all of these issues already. What we need to do at this point is is it the panels desire to take a top level decision that talks about a segmented as opposed to a single unified acquisition process? Now this will integrate all of the things you talked about the requirements process.

General Hawley: I think we should.

Dr. Abbott: Let me suggest there's no single unified acquisition process to begin with anyway. That is my one comment. I would simply say we need to take the acquisition process - I mean you could do it - come up with a matrix. But, you could have the three temporal ones. And then you can have dollars and risk, and another matrix. And then say where do you fit?

Mr. Cappuccio: You don't want to do a program in a year. And there's a real urgency to write a program. We all know that this system can be worked to the under contract material happens. We've seen it happen. So, the system itself has the flexibility - what seems to be the problem is the effort associated with coming up with the money is based upon the hero complex. It's the hero guys. The hero guys can get the money. They guys that go out on the limb. That

push the flexibility and pull that system, and try out the lessons.

Dr. Abbott: But, if I were the guy in charge of the system, which I'm not. I would say to you that's exactly the way I want it. If you're serious enough about this requirement you'll go do it. If you're just looking for a way to get around the system and screw over me -

Mr. Cappuccio: Then the argument you would have, if the guy says I want to do it in 24 months. The initial reaction would be, you're trying to game the system. You can't really get it done in 24 months. So, I tend to agree with Jerry.

Mr. Patterson: I'm going to take exception to that. Because if everybody - you premise - what your premise assumes is that everybody knows how to do everything all the time, and they don't. If I need something really badly, and I'm sluggo down at CENTCOM, I can guarantee you I need it badly.

General Hawley: Don, had it right. It's more than being a hero. It is also having access to horsepower. You've got to be a hero with access to horsepower. And we need a system that allows things to get done at a little lower level.

Mr. Patterson: When things are done quickly, and you have a hero. I submit there's no system - there's no system that does that. We bypass the system. We find a way around

it. So, that we don't have to deal with it.

General Hawley: We waive the requirements of the system.

Mr. Kozlowski: Why are those requirements there in the first place, if you don't need them?

Dr. Abbott: We have the lawyer standing up here, remember? It seems like six months ago, and he basically said to us repeatedly that these laws are written with so much flexibility, we could drive a truck through them. Why? Because Congress doesn't want to tie your hands. The reality is, our hands are tied by ourselves.

Mr. Patterson: That's what we found. Almost without exception. But, I'll tell you that the authorities that we use allowed us not to have to deal with the established system. We dealt in some other way. And most of the time it was kind of on the fly. I get the comptroller in my room, and I said I need $224 million dollars. I need Predator's to go from four orbits to 12 orbits. How am I going to do that? He said, well who wants it? I said we had a meeting with the Deputy Secretary, we're going to go from four to 12. The Secretary said we're going to go from four to 12. I need $224 million dollars.

Okay? How are you going to do it? Well, I'm going to have Air Force cash flow it. And if they get in trouble at the end of the year, I'll come back.

Mr. Cappuccio: So, is the system - the system you do, is you communicate with the guy who has the authority.

General Hawley: Let me now give you an example of where it does it right.

Mr. Patterson: I don't think it's right, by the way. That should have never of come to me.

General Hawley: In about 1996 the Air Force set up a series of programs called Battle [inaudible]. The idea was they're going and play with something close to being off the shelf stuff. Find things that are really good to work, and we'll get them in the field. I'm not sure we ever fielded anything. Why? They would find stuff. It was good. It was working. But, it took two years lead time to put it in the POM. And by the time two years came, it wasn't needed anymore.

Mr. Patterson: It's all part of -

General Hawley: There needs to be a way for places like that. Which were good ideas, and I'm sure still produce good ideas. To have a system that they can access without having to get the Chief of Staff involved.

Mr. Patterson: Exactly right. And that's why we came up and talked about markets. That things fall - that you need things real quickly. We need things that have sort of development - but are the amalgam or the application of existing stuff. And then you need stuff your going to invent

out here. And what the times are we can argue about.

Mr. Kozlowski: You said the system exists for the short term, what is it?

Mr. Hutchins: It was originally conceived as ACTD's, they're recasting it JCTD's. But, if the panels decision that you want to put together, as a top level solution doing something like this. Then we can now start putting together the pieces.

General Hawley: I don't think ACTD's did that.

Mr. Hutchins: It does for the two to four year bracket.

Mr. Patterson: The criticism is probably right, is that ACTD's do not guarantee you that A, you'll get a production run that will be reasonable. Or that you have a sustainment.

Mr. Hutchins: ACTD was always intended to get something out there in the two to four year period. And buy two years of support after that. Which then bought you six years of time to fit it back into the normal process.

Mr. Cappuccio: And the downside of ACTD's from a legal standpoint, right? There wasn't a war going on. The ACTD process, was witnessed by Global Hawk set up the government for a major lawsuit by Lockheed on going out and sole sourcing. Something that did not meet spec or cost. And Boeing or Lockheed then Boeing brought suit.

Mr. Patterson: For not buying their product.

Mr. Cappuccio: No. For violating the acquisition world

that said that vehicles suppose to cost $10 million bucks, had cost $120 million bucks. You did not give two contractors the right to offer you a cheaper solution. You are illegally using taxpayers money to sole source.

Mr. Hutchins: Lockheed actually had two offers.

Mr. Cappuccio: No, no, no. When it changed. Particularly when they changed the wing.

Mr. Patterson: Are we of consensus that having buckets into which these things should fall and a system peculiar to that bucket?

Dr. Brandt: And a mechanism to tie it to funding.

Dr. Abbott: Something peculiar to that need.

Mr. Cappuccio: A path you can go on.

General Hawley: A defined path that the poor smuck out there has a good idea to figure out how to get to.

Mr. Kozlowski: I go along with that only in principle. I think the bureaucracy needs it. But I don't think you really have to do it that way.

General Hawley: But, in our system we do.

Mr. Patterson: I prefer to refer to it as a random.

Mr. Kozlowski: If these markets are going to be window driven.

Mr. Cappuccio: We still produce the best equipment in the world.

Mr. Hutchins: This chart and this chart are going to be

integrated into the discussion on the capital budget.

Mr. Kozlowski: And industrial policy.

Mr. Hutchins: Capital budget drives more stability in revenue, which drives down the interest point on the street. Which will then draw money to the stock price. Which makes it to expensive to buy back. Which then puts the investment back in. All of that will be tied together.

Dr. Brandt: And the bigger issue on industrial capability in terms of the R&D investment, and what we may be facing.

Mr. Hutchins: The whole argument goes like this. Let me back it on up. If you do a capital account, all of a sudden your revenue volatility goes down. Your revenue volatility goes down. You start looking like this. Which means it's going have his disparity on the street for investment decisions. You're much closer to where the street values at. Which means that you're stuck with a classic -

Dr. Brandt: I understand all that, but even absent a capital budget I think there are concerns about R&D and spending.

Mr. Hutchins: The way that ties in is if stock prices go up, it gets to be relatively less attractive to do that. Which means you now have two choices. Either keep cash on the books, or invest in yourself.

Mr. Patterson: Can we be off the record for just a

second please?

[Off the record discussion]

Mr. Patterson: Let's go back on the record.

Mr. Kozlowski: Let's make it clear, the capital account isn't designed to protect or generate industry revenue. The capital account was intended or suggested as a means of getting around budget and instability. I doesn't necessarily lead to increased commercial revenues. It's a steady stream. It minimizes fluctuation, minimizes change. But, it only takes care of the microscopic. But it has nothing for the major ups and downs.

Dr. Abbott: Agreed. But, to go along with Al's point, if commercial industry [inaudible] into one thing, if they vote for one thing, it would be certainty, predictability. And by getting rid of the peaks and valleys, and having a little knolls, if you will. You could end up with a stronger commercial investment.

General Hawley: It isn't going to take care of the big peaks and valleys. It's going smooth things out in between. But, when the country decides to reduce it's investment in national security because the Berlin Wall fell. We're still going to have that.

Dr. Abbott: There's two kind of forces, there's internal force that causes us to bump up, and then the

external ones. External global we can't deal with. And when 9/11 took place, bingo those defense docs went like that.

General Hawley: Those were global forces.

Dr. Abbott: Not for long, the market shifted.

Mr. Kozlowski: You had a premise though, the one thing industry likes is certainty. One thing industry likes about everything else, is higher returns.

Dr. Abbott: Absolutely.

Mr. Kozlowski: I'll take a higher return of a trade against more certainty if you will, any day. I will take my chances in the risk area, I will bet the company rather than having a lower return and having it sort of pseudo guaranteed. I'm not like a lot of people, but the big hi-tech companies are going to go for the higher markdowns.

Mr. Hutchins: Don't they. And really these kind of decisions subject all of those sorts of analyses to internal rate of return, where essentially they set the hurdle rates on the ILRs based upon the assessment of risk.

Mr. Kozlowski: In the textbooks yes. But let me tell you what J.S. McDonald said to me one time. And he said it to a whole bunch of other people, if you wanted a higher rate of return go get in the banking business. This is not the ball game. If you want to fly to airplanes, this is the place to be. And that's true of every business segment. And you get arguments about this, and I've been arguing with CEOs

for the last 10 years. And I've turned down a bunch of slots for that very reason. Companies exist to perform some socially redeeming function in society they don't exist just to make a buck. And boy you get a lot of people that disagree with that. You've got to make a buck. You've got to have food to feed the belly. But they're in it for the excitement of doing something, building airplanes, cars, whatever.

Dr. Abbott: I would start it slightly differently. Companies find themselves in a particular market and the market can be described as certain functions. Such as Defense Market, low rates of return, but gee you've got government money coming in and cash flows, you get 85 cents on every dollar you spend and Boeing doesn't do that when they put the 767 together they have to take risks. Having said that, that's the market you live in, live with it.

That's it. Bitching about the fact that you don't get 70 percent, you get 5 and 1/3 or something is irrelevant. Because you're not in that market. You want to go into that market then shift.

Mr. Patterson: Taking Don's point, to the other extreme the flip side of what you said is that we don't do that. When you have the [inaudible] and those kinds of folks buying airlines, they go under because their purpose is not -

Mr. Kozlowski: It's financial rate, their in it for the

financial gain. Icahn is still doing it.

Mr. Patterson: And I think that is the other side of what you just said. When it doesn't happen you're all in trouble.

Mr. Cappuccio: So we're going to leave those two charts.

Dr. Abbott: Remember, there's nobody pushing to get into the wide bodied aircraft market.

Mr. Patterson: The capital investment precludes them.

Dr. Abbott: The risk is too enormous, the capital investment would kill you. The only Airbus got in it was because governments created it with deep pockets.

Mr. Kozlowski: There's still other governments trying to get on board with the Airbus. E- phenomenon, there are people trying to nibble at it within the confines of what they can afford. But we are in certain markets where the risk is beyond the realm of plausibility for any commercial entity to undertake. You make certain decisions, and I'm sure Frank's been up against this. Once or twice a year you bet the whole damn company, the whole corporate structure, I don't care how big it is, vertically integrated on one decision. And boy if it goes belly up.

Mr. Cappuccio: Somebody says Frank, get down to Texas by yourself you've got a billion bucks and the exam question is when [inaudible] you just go in it. I don't care what it

takes it, you let me know what it takes, you go in it.

Dr. Abbott: If I recall the cash budget for the 767 all the cash in the company.

Mr. Cappuccio: What's interesting about the phenomenon, is the executives in this industry will take the big risks for the government, will put their companies at risk for a bunch of reasons. The return, the devil you know, loyalty, whatever it is, the problem is how does OSD capitalize on that. Sometimes they do, sometimes they don't.

Mr. Patterson: I would submit to you that the understanding that the government side has of the way in which industry is thinking and what they're doing is non existent. They do not understand what it is they're up against.

Mr. Kozlowski: In any private session with England and the Secretary, these guys have been there before. They've been on the industry side, they know how the mentality works, they get the private conversations, and all the elbow rubbing at the cocktail parties. I don't think it's any great surprise. The question is how much are they willing to lay out on the table as a publicized policy in front of Congress, in front of the leaders in DoD, in front of the military structure. I mean I see a lot of things going on, where my gut feeling as a taxpayer is why don't those guys have the guts to lay it on the table. There's usually a good reason

why they won't. But I don't know what they are.

Dr. Abbott: One of the reasons that you don't see risk taking by the political appointees, is I would submit, my colleague over here coined it, it is one of their goals in life is to get out of public service with their reputation in tact. Get out alive. And to say I spent 27 years at Boeing and I will know what they want, and here's what we have to do.

Mr. Kozlowski: You guys bring up I think an extremely valuable point. Congress periodically comes back and reaffirms civilian control of the military. And that's a good wonderful thing, it's in the Constitution et cetera, et cetera, but we're getting diluted in a lot of areas. People are afraid to act because they want to get out without a tarnished reputation. Well you can get in trouble a whole bunch of ways.

Is there something that this group can do that inherently protects the acquisition system by giving some protection to that civilian force, and for the military as far as that goes. There are certain times when they could do it just as well. So is there something we should be considering that would help. One, to allow quote this thing leadership to exert itself when in fact today there's a million incentives to don't go too far or I'll cut your head off. It's a separate thing that needs to be discussed.

Mr. Patterson: I don't think we can. I don't think we can effect a solution.

Mr. Kozlowski: We can certainly say it is a challenge.

Mr. Patterson: I'll tell you that, just an editorial point and we can take this off the record.

[Off the record discussion]

Mr. Patterson: Close on a org chart on this because we're about 80 percent on this one. Who wants an opinion. A very opposite opinion from Hawley.

General Hawley: This is a reporting chain.

Mr. Patterson: Actually what I'm erasing here is what we don't want to do. So I thought I could erase that.

[Recess]

Mr. Patterson: Do you have charts.

General Vane: I'm just going to talk, I can't have charts. I'm not sure exactly. We've been over here a couple of times. I'm not sure exactly what's on your minds here.

Mr. Patterson: What we're talking about is requirements. And the requirements process. And where essentially we are, we've had a bunch of folks come over and talk, but the fact is that the requirements part has been noticeably absent because the focus has been on acquisition. But what we're looking at the larger picture with budget acquisition and requirements and the part of our puzzle that is not as clear is the requirements part. And to have the

services view that, while I'm in the Joint Staff, so you might want to get a service guy to tell you about the services. But I know that we've had Bill Copper come over here a couple of times and talk to you about JCIDS. So I'm happy to do a number of things. I can talk to you a little bit about where we are in improving the system we have.

Not having a new system, or somebody saying get rid of the old system, your options are either to improve the one you have or wait for somebody else to give you a new idea. So I've been there about 120 days as a Vice J and so we've looked at, and I've looked in particular as what 3170, what the instruction calls the gatekeeper, I am the gatekeeper. And so we took a pretty good look at it. At least I thought we took a pretty good look at it, the first 60 or 90 days I was there with a few of the - there needs to be some changes made. This system was put together a couple of years ago, which I think you all know probably as well as I do. And it might have even been, your guess is as good as mine, maybe a 65 percent solution. Even when it was put in, missing a lot of pieces in terms of if you really want to get a top down joint. Which was the notion here it just didn't connect the dots to a lot of other pieces in the system.

The Alderidge study, described the capabilities based planning system, consists of far more than just JCIDS, and the requirements are generated by far more than just the top

down joint concept, in my opinion.

So the concept development business, which really isn't part of JCIDS strategy and the effects you want to achieve in the theater really isn't part of JCIDS. Acquisition and buying things, or DoD 5000 sort of is, sort of isn't. But really isn't specifically part of JCIDS, nor is the PPDE system. But everybody directed a lot of comments about the requirements to JCIDS.

Probably an unfair comment, and a lack of understanding of the larger DoDs four or six processes that are out there that allow for requirements to get into the system. So the first thing we did was what needs to change with JCIDS, and what needs to change with other piece parts of the capability based planning system to pull this together appropriately and properly.

So we've got a JROCM now, in the staffing of the joint requirements document to describe the next set of changes that need to occur for the DoD instruction to account for essentially two things. One is that not everything, and this is Vane's opinion primarily, but I think supported by most of the leadership at this point. Not everything needs to borne jointly. One can become joint somewhere in its life cycle. When you're 10, 15, 20 years old, I think everybody would agree that's the other aspect of transformation.

Transformation isn't just new thing, it's also

application of old things, in new ways. While the same for jointness. It may be best to build things interdependent and quote unquote joint at inception. But that doesn't mean there's not other ways. This is my opinion accounts for the services. All the services would tell you, and all of us military members come from the service, all of us would tell you that most everything the services are trying to do is joint. Almost every piece of equipment in the inventory, every TTP, every procedure in any service is trying to serve the Commanders. We fight jointly, we don't fight by service.

The Air Force doesn't go fight a battle, so this notion that everything has to be top down joint, I think needs to have a little adjustment in its execution from theory to practice if you will. That accounts for the fact that everybody is in this business to be joint. So that's the first thing is to adjust the system to be capable of accepting things at stages along the way, and not everything has to start at zero.

So a service might have a good idea. You might see a good idea of experimentation, a good idea in the ACTDs, JCTDs, the urgency of need, statement, theater, all those things ought to be able to also be independent jointly and so we're moving towards establishing criteria along the way, as opposed to you need to start everything with a concept.

Everything has to be a joint function. Or integrating,

or J-OPS, or a concept.

The second I think, big change - is really being more open about what you're doing. I think, and I don't want to criticize predecessors of mine. But I think were a little defensive, there's nothing wrong with JCIDs and the requirement system so we're trying to be more open about what needs to change and we held our first stakeholders conference with all the COCOMs functional capabilities board services agencies, OSD, in late July and said what needs to change about JCIDS, what's wrong with it. Now can we make this whole thing better. And I've got some things I could give to you here if you want to look at them. Just a whole series of changes that we are now adopting based upon that review and feedback from the services. They go from establishing standards within the portfolio that we're going to manage, what are the items in there, the use of joint capability areas, to try and get at interdependencies across stove pipe prioritizations. The generation of prioritization tools, prioritization analysis framework. One of the requirements from title 10 to the chairman, is to provide independent military advice, and in there he is supposed to prioritize programs, capabilities and forestructure to the National Security Council, to the Secretary of Defense and the President.

Being very candid and honest with you, I don't think

we've been doing that for about 15 or 20 years. We have been doing it with a few people in closets, and then you get the answer that ends up being a prioritized list. But the staff and the analytical tools and the processes, have not been serving the decision makers in Vane's opinion very well to give them an analytical basis from which they can prioritize and make decisions. And the decisions will always in my opinion end up being made by the senior four stars, and the senior civilian leaders. And so we hope to be able to start doing that in the next six months. We look to have a process in place by December, and a set of prioritization. And I've got a first cup at the top areas using these tools, using these portfolios, using roadmaps. Establishing capability area roadmaps, and so a lot of little process things there to adjust it. To adjust the CBA itself, the Capabilities Based Assessment.

Right now, it looks like one size fits all. You bring a new idea in you have to go through this whole FSA, you might in a year have able to write a CDD, and you're just at milestone B and you still have lots work to do, again those ought to be criteria based, you ought to be able to bring a new thing and in a week you ought to be able to finish your little modified CBA and look at, does it have gaps we need. Does it fit into the rest of the system? Do we know where its interdependencies are, what are the various solutions and

then quickly move out with the analysis of those alternatives and generate solutions, whether they're an emergency or a longer term?

We're trying to make the system agile. The system was designed to be a liberate system. Right, wrong, or indifferent. And whether or not it was really spelled out that way, that is the way it certainly has evolved, because it takes a while to write a concept. And the whole Department I think, some of you have probably been involved in concept writing that is not something that is a universal tool, or in the universal tool set of military or civilians, contractors or anybody else. Writing concepts is hard work.

I have personal experience doing this, one of my previous jobs. At any rate, so it takes a while to write concepts, it takes a while to do these follow on activities, and there ought to be ways to do that quicker.

One of the other significant I think, changes, is to ensure we've got better participation and representation of the COCOMS. Some people's view is the demand and supply relationship and the COCOMS should be the demand and the services should be the supply. The COCOMS should therefore write the requirements and hand them over to the services, who should then determine how to source those. And again I think it is not quite that clean, most of the services have MACOMs who in fact are the Commanders for COCOMS, so I think

you find that it is not quite that clean of a cut. And when you get to COCOM headquarters, you find most of them are not resourced to do large requirement long term efforts. And then you have to ask yourself should they or will I get eight different answers, and eight different potential ways to go about it. But then somebody has got to synergize and figure out what the common set of stuff is. That we're going to go procure. So in some ways you've got a symbiotic relationship that ought to occur between COCOMS and the joint staff to help synthesize that. And so we have opened up our processes, for instance the JROC, the JCBs, and the FCBs, the FCBs being the one star joint body with OSD, and service participation the JCB, the two star service reps and the three star J lead. And of course the JROC being the four star led by the Vice Chairman, each one of those now, we've opened up to COCOMS. So we've gone now I think four JCBs for the last three weeks. With anywhere from three to five COCOMS participating by VTC, yesterday we had our first JROC with a COCOM participating.

So that's a fairly big change for the way the building has done things in the past, because typically it's been, you guys give us your input, thank you very much and we'll solve the problem. So we're trying to me more open in recognizing that, and you're kind of getting some positive feedback from the COCOMS and some you know, that's kind of your guys job,

and so it's interesting because you have people in Washington sometimes say there should be a stronger voice on the part of COCOMS, it's not universal in the COCOMS that they need, or want to have a stronger voice. Many of them say you know, the Army knows how to give me the best soldier, the Air Force knows how to give me the best plane, and the Navy can give me the best ship. I'm not going to figure that out.

And so you've kind of got to, there's a balance there I think. When you get right down to it. And again there is this staff challenge to look beyond two to three years in the COCOM, and if I've really resourced the simulation and war fighting and war gaming capabilities to be able to predict the future out beyond sort of the two, three, maybe four years of COCOM, some challenges with the way they're staffed.

And now we're generating out of J-8, and we're just beginning negotiations with OSD, AT&L to send an IDA just because we have an existing contract, and they've had a good idea team to be with most of the COCOMS to help generate what are the effects they want to achieve and the capabilities needed assessed against the programs of record that they have in their MACOMs and in their IPL submissions to give us two versions of what are the capabilities they need and the like to effects, and the link to resources. So we call the linking programs to resources, we're using the IDA guys now within the COCOMS for the first time here now in our

submissions, we'll have seven of the nine COCOMS come into the building with sort of now requirements and future requirements associated with their op plans, their disengagement plans. While that will be a big switch to get feedback directly from the COCOMS linked to what they're tasked to do by the J staff, using the tool that links the programs and resources together to achieve the effects described by the National Defense Strategy. So we think we've put a lot of the fixes in place to perhaps make this capabilities based planning process work better. There is no doubt more good ideas out there perhaps for how to adjust this, so what we're going to continue to do now, is continue to have annual stakeholders conferences to after action review ourselves and figure out how to make the next change within the overall systems.

We're writing a DoD instruction to tie together the entire capabilities based planning system. Not just JCIDS.

Mr. Kozlowski: You talk about putting resources up front in that process, what are you talking about? Forestructure size, or are you talking about budgets?

General Vane: Yes.

Mr. Kozlowski: Where do you get the budgets from for the early stage?

General Vane: I'm not sure. Where do I get it from? Where's the database do you mean?

Mr. Kozlowski: Where do you get the number, what is the source of the numbers? One of the things we constantly hear is that the up front requirements process is not fiscally constrained. It is constrained to the extent that the President et cetera of the entire system gave you whatever guidance they can on forestructure limits, and sizes and numbers of divisions whatever. As you begin to narrow it down in the requirements process, somebody has to put a price tag on a given capability you have. You can't really effectively price that capability if you don't which of the number of alternatives you might ultimately field.

How do you get conversions?

General Vane: There's a larger problem with databases, that I'm sure you're aware of and whether the services want to share their databases and all that stuff. That would solve that problem completely. But one of the initiatives that's still in IPT 5 of the QDR, I told you this was a decision but what we've been negotiating with AT&L on is kind of going back and looking at the Packard Commission. One of the suggestions out of the Packard Commission was to establish a joint requirements' management board earlier on in the process. Like way before milestone B, even before milestone A. And in that, and there's still differences of opinion. Vane's view is that we need to have rough order magnitude costing put into this corporate governance review

early on in the process. Now should that be program based, should it be capability area, well there are some details there we haven't all agreed upon. I'm of the view it should not be program based. That we should look across an investment category and establish sort of plus or minus 10 percent limits based upon what we were doing before. And whether or not, if we had X billion dollars in aircraft, and now we have this gap. And maybe we take that number and determine where should the puts and takes be at a strategic level and then let that work its way at subsequent meetings of this corporate governance to come up with what the limits are to people. We give that to a guy early on, here you're developing an ICD an Initial Capabilities Document, that is for a broader interdependent area not for a widget, and you tell the guy, okay good. You can solve that problem if you can do it with two billion dollars. They'll do a little analysis and come back and tell us how well you can do this, what's your first set of requirements. What are your tasks, and KPPs starting to look like. Then when you go to your next CDD or further on the road and do an analysis which we're suggesting we team with OSD on the AOA, so the last part of the CDA which is the functional solutions and analysis, instead of that being just done by the requirements guys lets take the acquisition guys and team up here. Part A of an AOA ought to the same as the last part of the FSA. Put

those guys together bring that back into the decision makers before we go to milestone B and say okay, you told me that there out to be out $5 billion dollars to solve this aircraft problem. Here's what I can give you and here's the requirements that can be met with - and get the senior leadership to make the decision. Okay we can make the investment here or not.

So that's the suggestion on the table that most of us thinks make sense, is $28.8 billion dollar procurement bow wave that we have every year is ridiculous. It's not a responsible way to manage the Defense Department. We should be doing that early on in the system. So I don't know if that answers your question exactly. But that's what we're trying to - the devil's in the details on that, if you're not careful it will get taken off by some squirrely guy, and you'll get a whole different solution than where you thought you were going. But that is what our intent is.

That's kind of what I wanted to talk about prepared wise and then to see whatever again, and I'm not sure where guys have been, or you're going. So how else can I answer questions, or receive feedback from you all.

Mr. Cappuccio: You talked about pulling the COCOM into as more than just a participant, but an active player. If the COCOMs aren't defining the effects, they want 10 years out, 15 years out, then who would define the effects in the

current JCIDS process. And the validity of the effects, how would you prove that.

General Vane: Prove it?

Mr. Cappuccio: Prove it is not the good idea, I mean is it a good a idea, we have a lot of good ideas.

General Vane: I guess I go back to my original comment that if you go to a COCOM and ask them to do work in the area of land, air, or sea operations they're going to go to their Combatant Commander, it's not going to be the J-3 on the COCOM staff, he doesn't have anybody, the J-8 most of them don't even have J-8s, or their just starting them. And most of the J-8s out there are resource people. They're not war fighters most of them. So they're going to go to their components, well who are their components. In the other hat there's the service makeups. So if the service was doing it right, you would be talking to their land component guy, who is feeding the joint [inaudible] boss, as well as back to the parent services. Some people do it better than others. I will tell you the Air Force has a pretty wired system right now. Look at where their MACOMS are, and how they do their POM process is fairly well wired in. So you're probably going to get from a COCOM, you're going to get the same view that you get from the service. And two varying degrees. The other services do it as well. But Air Force has a fairly well I think good process. They've - for three or four years

they've moved out on the Alderidge study sooner than I think some of the others. The Army's probably a step back, because they do most of it down at TRAEDOC, but it's fairly well wired as well.

So I would argue that, you're getting from the service today, you're getting it from these joint integrating concepts, and joint functional concepts which the first three that were done, in Vane's view I think they were done fairly poorly and the responding CBA that was done, was also not very successful. Since then, and I've got some statistics here, I can leave with you, there's been about another eight or 10 of these things rendered, three or four that we're watching right now - that are right in the middle of their FAA, FSA, part and who's writing them. Well a couple of them have been written by COCOM. Another one's been written by a service, or services. And so you're getting a variety of people leaving them. And that's why I say well the COCOM needs to provide it because they've got [inaudible] out of the service, or even vice versa.

I don't think that's a clean-cut type thing. I think you've really the same people.

Mr. Cappuccio: It wasn't about writing it. It's that COCOM would have a better perspective I mean, other than the staffing issue, and other than their willingness to do it, which are two different issues. Right now the motive is to

stay pretty much focused on today's world.

General Vane: I think you have two different kinds of COCOMS you really have to think your way, when you make some of those generalizations that they may not be the same for a regional guy as it is for a functional guy. You go to STRATCOM, who in particular has four global missions right now, he's busy writing and he's writing in conjunction with the FCBs that are linked to the J-8s and he has service representation but he is leading - he is leading those, and he's looking out five, 10, 15 years. Now if I go to a regional guy -

Mr. Cappuccio: But that's pushing really hard.

General Vane: It's also the mission given him by ECD. That is part of his mission. You don't have quite the same responsibility I think as the regional. The regional guy has probably a fairer comment. That two to three years, they're having difficulty getting out beyond that. And then you've got NORTHCOM that just has a whole different set of challenges. Where are we going with Homeland Defense, what's the Defense Department's role in Katrina and other challenges, NORAD, does that answer your question?

Mr. Cappuccio: Yeah. That's okay.

Dr. A'Hearn: You talked earlier about beginning to work on prioritization of new capabilities. Prioritization based on military utility, criticality, what are some of the things

that help you, or will help you prioritize.

General Vane: We don't know what the criteria, definitively yet. The mark on the wall is December to bring to the JROC for a decision on the prioritization. I have three different efforts ongoing right now using different combinations of prioritization and different tools and I want [inaudible] get out of them, and then I'll use that to come back into the Vice Chairmans. One of the groups is using capability gaps generated by CBAs. Which theoretically would be a top down approach. And that's based on here are the tasks we need to do, here are the programs and records, what's missing. That is where those gaps come from.

The second effort is to look at almost strictly COCOM inputs, so [inaudible] lessens learned, GWATT, AAR type comments. There's two or three other ones, I'm sure I've got them someplace, but mostly COCOM generated needs. And there's kind of a third effort which is just trying to rank order all the capabilities we think we need forever and a day, which of course is sort of an impossible task to really decide what all those capabilities are, or will be. There will always be a rolling set and they will probably always change a little bit. Now each of these three are theoretically linked to a set of effects described by the National Defense Strategy. The National Defense and National Military Strategy as codified in the CCJO. The cast iron

concept for joint operations which has a set of operations, and a couple of different ways you can look at that. You can look at it by faces of an operation, or by these lines of effort described. But both of those facilitate an op plan faces to fit right in, so you could start to look at the priorities in these different groupings by joint capability areas.

So that's sort of the organizational structure, and the first cut at what should be the criteria used. Now we've got a couple of other stray cats that we put in there as well. One is the strategic planning guidance, I'm probably forgetting what the other ones are, but there's a pretty good set of strategic guidance actually out there that a leadership has said was most important. Here's where you can take risks, or not take risks, and here's where you ought to stay the same. So with those three different groups, and tools we're going to then try to pick the best of the breed out of that to come forth. And we've vetted that, what we've been doing so far with the colonel level of the services, joint staff in the COCOMS. The colonel and GS-15s. And we've done an initial assessment, we've had all eight FCBs take that set of priorities, take their capabilities, their gaps, match them against the capabilities desired, do an assessment by the program of record and then give me a resulting list of capabilities now and future, I'm not a big

believer in midterm. We're either going to solve it here in the budget, or we're going to solve it sometime tomorrow, the midterm is kind of - it's not a very well define area in my opinion.

So the two pots then of lists based on these prioritization criteria, a first cut at it, again something I'm not sure we've ever really done for a number of years as a corporate body.

Mr. Patterson: What determines the amount of time you allocate to the process pre-milestone A?

General Vane: I don't have a good answer for that, I don't know what the baseline is to be honest with you. And I've played around with this when I decided that we had started to make the changes we needed to make. How do we start kind of telling our story. Well let's compare it to the old system. Well there really isn't anything to compare it to, if you look at the requirements generation system, because concepts were really never written. People started out writing ROCs. MENs, words without really deciding how they wanted to fight. In many cases we didn't have National Security guidance, we didn't have National Military Security strategy, you didn't have them without that other conceptual guidance for how to fight. People just - I mean that is why we are where we are today, because we just stove piped efforts by the services. It's like building widgets. And so

I'm not sure how, and I'm a guy who - I'm one of these guys that - when I haven't been in my branch of the Army, I've been the requirements generation process as a Captain, Major, Colonel, Brigadier General, so I have quite a bit of experience, and I wrote ROCs myself, and it took like four years to get them approved for a variety of reasons.

Mr. Kozlowski: What happened in that three, four year period in the past. Today we occupy it with all of these AOAs, and all sorts of kinds of things. What did we do in the past, was it just as difficult in getting a green light?

General Vane: Well you would go up with a list of requirements, and -

Mr. Kozlowski: You fight for your chances.

General Vane: Right. It would almost be personal, in some cases how well you got that thing approved. In the Army we would go to Fort Leavenworth, and that would be our first stop after our school. And then come to TRAEDOC headquarters and then come to the Department of the Army and of course back then we didn't go to the Joint Staff, but to get it approved all the way through there, each guy you briefed was a self-proclaimed expert in your area. Sometimes you have to back to that guy four, or five, or six times. And then you would get it approved, and then you would do the same thing on the acquisition side. I'm an Air Defense Officer, but short range Air Defense when I was a Captain we went through

23 ASARs, pointed 23 times to an ASAR in the acquisitions manual. So again baseline is hard to compare it to, and I don't know if I'm the right example. That was my personal experience. But listening to other guys there weren't a lot of streamlined acquisition I don't think in the past. Patriot where we feel they're the big five in the Army, none of those happened very quick. Stryker for example, something happened very very quickly, so how long should it take. My own view as concept, you can write a concept, but if you get the right the people, throw them in a room, throw away the key, don't come out until you're done. Or you can take years, and years and years, and have version one through infinitum and you may not get that concept any better.

So my own view is you take about a 60 or 70 percent solution on a concept, and war game it once or twice and then just go to the next step and continue on with adjusting with how this thing is going to fight and so I think that we ought to be able to write concepts and get them approved in six or seven months, and we ought to be able to do the Capability Based Assessment inside of six months after that, and you ought to be able to get to a CED, or a requirements document in about a year, or a year and half.

I don't know what our track record is right now, I've been at it for two years, we're starting to see CDDs just now, out of some of the CBAs. So we're probably not as fast

as we probably could be. But again I would argue that compared to the old system, it's probably more complete, it's more interdependent, it's got more analysis and decision making up front, but yes, it's still taking two and half years to get to a milestone B level.

Mr. Kozlowski: In a mature world, or in an ideal world, where do you see this upfront being compressed to maybe a year or less? Or growing?

General Vane: You know I haven't thought about it, that's a good question. I don't know. I think there will always be the tendency to throw more stuff up front. Okay, we're going to add this, add that. But the concepts are getting written a little bit quicker, because they're getting scoped better early on, the first couple of times they were just too wide, and now they're getting much better scoped. But since they're scoped down, there's more gaps, and people want to write more concepts. So what's the end of the concepts. I don't think we know that. It looks like there could be a gazillion of them. There could be a 100 of these things. So is that the right way to go, don't know.

One of the things that we played around with a little bit is that maybe the Joint Staff, and OSD ought to focus on those areas that are truly joint. Truly joint and interdependent, and then only focus on those. I'm not sure if we can reach agreement on those amongst all the services

but one of the things that we played with and the Army led in one of these Chiefs sessions that wasn't in the tank where we had all the Chiefs met for a while, they looked at five areas and said maybe these are the five joint interdependent areas. I think they were fires, battle command, missile defense, logistics, I forget what the other one was. But these five areas, maybe those are the ones that we ought to focus on for joint interdependency, and sort of the joint OSD, more micro view in the rest of them. Leave it completely deserted. And the A oversight [inaudible] the dollars, anything else.

I had a little off site with Ken Krieg the other day, I put that marker up on the wall and it made it through the rest of the day, it's still in there. But maybe that's a way to distribute the load if you will focus Joint Staff COCOMs and OSD on those things that are really Joint, oh the fifth one was ISR on the things that are really joint. And if we're going to acquire weapons, uniforms, stuff like that leave that to the experts and just do the services, they clearly know how to do it. Probably better than the joint staff does anyway.

Mr. Kozlowski: How many people are there now in the Joint Staff?

General Vane: Total number of people, well I'm into the J-1 so I don't know, but what I've seen is 1200 military.

Mr. Kozlowski: How many contractors supplementing them?

General Vane: That one I have a little better number of, we review all the contracts with the staff. Probably about 350. The more appropriate question is OSD there's that many in AT&L alone.

Mr. Patterson: Actually there's more, 359 real government employees, 599 contractors.

General Vane: Where?

Mr. Patterson: AD&L.

General Vane: I don't believe that for a minute. We just did this in the QDR. That's not what they're reporting. 900.

Mr. Patterson: 900 contractors?

General Vane: 900 total.

Mr. Patterson: That's about right. I just broke it down, civilian and military.

General Vane: It's a thousand people.

Mr. Patterson: 599 contractors is what got our attention, real employees versus contractors and those are actual.

General Vane: And that's an oversight agency.

Mr. Cappuccio: You could share your views on that if you would like.

[Laughter].

General Vane: I think you got the impression.

Mr. Patterson: We think you would make a big hit if you

would turn JCIDS into another IPT.

[Laughter].

Mr. Patterson: I'm joking.

General Vane: As you know there's a lot of baggage with JCIDS it's got perceptions, some are true, some aren't.

Mr. Patterson: Would it be helpful to you in the deliberative process to have the concepts and concept refinement lead a real program at milestone A, so that you have a program manager, you have a budget and you have something to hang your analysis on?

General Vane: As long as I'm sure that .lpf requires a material solution.

Mr. Patterson: Regardless, what if it doesn't.

General Vane: I don't know that at milestone A, well I'm still in the problem, the identification and the problem solution and I would have to think about that one a little bit more, I'm not sure I know that. Under our current process. So you could compress it and maybe get to that. I guess the potential exists.

Mr. Cappuccio: In other words, is it possible to do an AOA in less than the 18 months, because the AOA is what's really happening in between A and B.

General Vane: Well that's why we're suggesting we partner in the last half of the CBA with the AOA guys and we ought to be able to cut six months off easy. Off that time.

Do you know enough about your alternatives though to do an AOA at milestone A? Under the current system, even with a better CBA, you may not.

Mr. Cappuccio: You say you would have to do a GAP analysis. In less than six months or would you have to be able to turn the system over to strategic objectives in less than six months.

General Vane: You could do that, but you'd probably have to resource your guys doing that differently than they are today, right now the people doing that work are doing it as a secondary duty.

So the functional capability boards are populated by service representatives, agency representatives, it is not full time. So they do it for a little while, then they go back to the service.

So if you wanted to compress some of those time lines you would have to figure out a way, and frankly that's one of the things that [inaudible] has told me a couple of times, if I was king for a day to make all of these FCBs full time jobs working for me.

Mr. Patterson: What prevents them from doing that?

General Vane: Policy probably. But you've also got a real problem with where do you get the people from. Because the FCB chairs are except for one FCB are all Joint Staff Vices, or Deputy Directors so they have another job. Now

about 1/2 of them have organized the other job to almost look like exactly the same kind of task organization FCB does. So they're pretty efficient. You look at logistics and you look at J-4, it looks like J-4s organizations, its almost like an FCB. J-6, is very close to that. Other clearly have two jobs. Of course management of FCB which isn't J-8. She has OA/06 to do. A whole bunch of other jobs besides being and FCB chair.

Mr. Patterson: How close to completion of this model are you?

General Vane: Well as you know that's the middle of the QDR, they're probably 80 percent done. But you could change the organization of the FCBs and to be honest with you I played around with that a little bit in August, and what I arrived at was I probably ought to wait a year. Because these joint capability areas are - I'm not sure if they're quite the right ones or not. There's a bunch of other changes in the process, we really need to get on with. And we just changed out a bunch of the population of the existing FCB's we would probably be smarter to put these changes in place and then begin to determine how should it be reorganized. And then once you reorganize it, mandate it.

Mr. Kozlowski: This is coming from the existing operational people?

General Vane: We could leverage that.

Mr. Kozlowski: Do we have a lot of that experience base coming in?

General Vane: Absolutely. Almost every guy we have. And I can't speak for all the J Staffs, I've only been there 120 days, but almost every new guy we have coming into J-8 is coming with operational experience from Iraqi Freedom, Joint Freedom.

Mr. Kozlowski: It appears in the last few years we've made some great strides in developing the cadre of joint qualified military judgment. Is that fair?

General Vane: I guess I would say that you have a lot of people going to war, so everywhere they go afterwards you got more experience. I'm not sure it's been because we've done a better job necessarily bringing them into Joint. Although I think there's some people that would say that. I haven't seen that to be that overt yet.

Mr. Patterson: You're not advocating that when the levels of personnel with joint experience goes down that we start a war.

[Laughter].

General Hawley: As one of these ideas, and you identified their gap and it moves through this process and gets to the JCID, as we go do an AOA and we're now at the point where we're beginning to define a solution and it comes to J-8 for review, how do you get some qualified input to

determine whether or not we're in the ballpark of what's its going to cost, and do we really understand the technologies that are going to be required to produce it. What is your source for expertise to judge the costs.

General Vane: Well the way capability boards are organized you have that kind of expertise. So the chair of an FCB is a joint staff guy and the co chair is an OSD person from AT&L. So you have the senior person there, to get the expertise you need in there to review whatever it might be. Whether it's technology.

General Hawley: So they take it back to their organization and scrub it, for AT&L scrubs it for technical criteria.

General Vane: That's what's expected, now do we monitor TRL levels, no. And I will tell you the two weakest spots right now are experimentation, even in our changes that we've done experimentation and S&T. So just yesterday as a matter of fact, Mike Dolman and I sat down, he's a ACTD, JCTD technology area guy to figure out how do we marry these two systems up to get both the needs thrown over to the OSD guys to go figure out any one of 11 ways to source this thing quickly, whether it be with the three ACTD or an emergency need JRAC rapid acquisition and in that process assess the technology level and cost, or it would be a longer range effort, that in the case of it, sensitive munitions for

example the focus of the S&T community to get us an answer in five or 10 years without reducing the net explosive size of these. But we don't have that very strongly so we just agreed to do a pilot program over the next year between us, to take two or three of these maybe five over the next year. To see if we can get that relationship and process done right. Experimentation a little harder. To be perfectly honest with you we haven't figured out quite yet, how to link ourselves and JFCOM better. Other than the annual experimentation plan process that JFCOM brings in right now.

I think it's better representative of the COCOMs but I'm not sure we've got it lashed up, with JOPCs, the JICs, and all the other concepts. And then technology assessment coming out of it experimentation, I'm just not smart enough to know that.

General Hawley: How about cost and schedule, these things come in with their going to cost this much to take that long to produce.

General Vane: Cost, we just started that, how do we get rough order magnitude cost to remain in the system. Just gave that task to somebody last week. I talked to the CAIG guys, is there a way to do that. I assume there must be a way. There must be a way to do that. But short of an AOA, where you're down in this sort of entity and activity level and detail, and somebody who is expert and knows how to cost

it, I don't know the answer to that.

General Hawley: I'm thinking post AOA you pretty much know in other words, where do your guys go to say yeah, this is a reasonable explanation.

General Vane: Once you owe the AOA you have the service and CAIG estimate and the answer is somewhere between those two in the AT&L world.

General Hawley: So they are part of this process.

General Vane: You will see that in the DAB, the same kind of thing.

General Hawley: At that time you also get the input from the service at least on the technical requirements. Do you try to validate that someplace?

General Vane: I think that is what the testing process probably does for you. Did we do it in the FCBs, I'm not sure you want them to do that. To me that would be a title 10 kind of thing. It seems to me around milestone B, Joint and OSD ought to get out of the business. And we still have another document.

General Hawley: Don't you have to clear it though.

General Vane: They bring the document. The CDD and then after milestone B, before milestone C, they bring the capabilities, CPD. But we've all had this discussion many times. The most important one is the ICD, of a lesser importance is the CDD. It leads shift is shifting to the MDA

and the service, and when you get to milestone C, really what we think we're more in the mode of still tracking KPPs we've got lost growth because of requirements. We've had a bunch of changes, but really most of that we think is probably the service responsibility, they do it better than anybody else.

General Hawley: What's the role of KPPs in your process. How do you view KPPs.

General Vane: It's one of the most important things, without that you don't have the system.

General Hawley: They're established properly to accomplish that.

General Vane: You know under the old system I think it was hit or miss. Under this system, when you do an FAA properly, which again I think we've got about six or eight of them now going pretty well. Those will come through with up front analysis with identification of the tasks to start driving you to a set of KPPs that are pretty well supported. And the assessment was linked with the rough order cost estimate and benefits. And you'd be able to say at that point if I don't hit those four things, no matter how much it cost it isn't worth it.

General Hawley: Do we have programs that have got to that point yet.

General Vane: As I said, we have about six or eight of them that are in the process which are FSA which means the

next document would be a JCD. Which means they're still a step away from getting to a CDD that will have a KPP. So six months.

General Hawley: But you think we're going to do better?

General Vane: I think so. Honestly I think so. Not as a defender of the system. It looks a lot better than the way we were before.

General Hawley: We've gotten plenty of input that KPPs are an issue.

General Vane: Well you can't change them. That isn't true, but it's difficult to change them that's one of the minor changes in their right now is eliminating all the other staff, and we've already done three. Now in the last three weeks, change a KPP inside of a week.

Dr. Brandt: At what level does it have to go to get it.

General Vane: We did it in the JCB. I just did one today. Changed a KPP for a heavy helicopter in the Marine Corps system. Did one three weeks ago, OICW in the Army, and we paper JROCed it. Which means JCB reviewed it, and then will send it to the services to sign it? And in this process we're formally requesting the JROC empower the JTB to do that. So we won't even go that far with it.

Mr. Cappuccio: When you do your analysis of alternative capabilities, your KPP for which if the system doesn't perform, there's another set of KPPs that says if I can't

meet that KPP I would not have picked that alternative. Okay. How do you handle that? You see one of the concerns with the KPP's you have an analysis, okay. And you have a capability you want, long range strategy. You have the capability, you wanted something, long range. A lot of ways of doing it, airplanes, bombers, missiles, strikers, submarines, each one has a KPP and when you pick an airplane it will have KPP to what extent is the KPP linked to the fact that if I knew I wasn't going to meet it I might have gone to a submarine solution from the getgo. That's the hard part. That really is the hard part. And it gets down to what England is asking us, am I buying the right things. If I don't meet the KPP, is the whole solution that invalid.

Mr. Patterson: That way you have to decide am I going to define KPP's that way.

Mr. Cappuccio: That's why I was curious in the AOA process.

General Vane: I don't really know the answer to that. Nothing should stagnate in time. You're going to learn things and you ought to be learning things every year, so whatever you do, you ought to be flexible enough that you can change to include KPP. But when you do it you ought to change in an informed way. So if you're going to adjust your KPP, you should go back to the AOA. Now does that mean you redo the AOA, I guess it depends on the significance of the

KPP, back to your question, how significant was that KPP, but we ought to be flexible enough to do that.

Now the idea behind combining part of the FSA with the AOA is that you'll do better at that initial set of AOAs and have a better idea of the analytics behind those KPPs and their critical tasks. I think as you say where is the example.

[Off the record discussion]

So the analysis will go from the acquisition community and the Department well these are good, and they're still good, even today they're saying the same things they're still good. So people on the acquisition side point to the requirements guy and say why can't we trade these off. Hey the technology guys and now -

[Off the record discussion]

Mr. Cappuccio: One of the arguments is should we go to less KPPs and then the KPPs would have to be less programmatic. But then if you made a decision on the system you chose for existence long range strategy. What did we say you could only go 1,000 miles right. You may not pick an airplane. You just may not say that. You just may say I want to do a missile or some adaptation of the Trident. The question gets to be when you shrink down is it time to look at KPP in the time as not as they relate to the solution. But whether that requirement relates to the alternative that

should have been picked up, are you following what I'm saying.

Mr. Patterson: What that drives you to is another decision. And that is those KPPs must be established earlier, so that if they can't be achieved you have an early off ramp to do something else before you spend a lot of money. If you chose to do it the other way and say we've proffered the solution, now we have KPPs that identify the capability that we want from the solution, then you should wait till after CDR to establish the KPP.

General Hawley: If you come in with a KPP change, go back to the AOA and say if - did this make a difference. If it made a difference then I killed the program.

Mr. Cappuccio: We've already concluded we don't know how to kill a program.

Mr. Patterson: But if you do it early enough.

General Hawley: If you still need something, if you still need something you go to another alternative that you now assess I'm more likely to be able to get to.

Mr. Patterson: Remember.

General Vane: I think we should be a little less hung up on KPPs.

Mr. Cappuccio: The problem is some cases.

General Hawley: You have to be careful about what they are and then you have to realize things change over time.

execution problem is.

Mr. Patterson: I think it happens when the program manager is convinced by the contractor, that wouldn't you rather have it do it a little bit better. Well yeah I would, well then we can just change this and make it a little bit better. Then it just unravels.

General Hawley: How about if you built interoperability, where you had to go demonstrate your system during EMT.

[Off record discussion]

Mr. Patterson: What we found when we tried to integrate the ranges and test facilities, is everybody did things differently and they couldn't talk to one another and that kind of just unraveled.

General Vane: Maybe that is the solution.

Mr. Cappuccio: Just legislating on JSF, we had a team of guys, somebody legislating on the F-22, that's a little harder. That equipment exists and the architecture exists. So we've got a bunch of guys down there doing it. But I'll tell you who's pushing it. The Skunk Works guys are pushing it.

Mr. Patterson: Excuse me Frank you are the Skunk Works.

Mr. Cappuccio: We're pushing it. But the government program officer isn't.

General Hawley: That's because he got it imposed on him he didn't get a schedule slip, or he didn't get any money.

Of course he's not pushing it.

Mr. Cappuccio: The ICD stage two. The reason I ask -- we're asking a lot about can we improve the acquisition process, if we could enter either Milestone A, or better than we're doing now. Better meaning, better idea on cost, better idea on technical risk, better idea on requirements that are frozen for some period of time in the JCIDS process. At the ICD level. You really only don't have really requirements, they're very top level because you haven't run through your SRS yet. You're not at the AOAs, so what is the state of -

General Vane: I don't know if I agree with all of that.

Mr. Cappuccio: That's what I'm asking. What is the state of the requirements in your mind on ICD stage 2.

General Vane: I don't know what stage 2 is.

Mr. Cappuccio: That was just what was given to us.

General Hawley: It's an Air Force chart, it shows stage 1, stage 2.

Mr. Cappuccio: According to this you've finished the SFA plan. And you have an AOA plan. You have not a solution set for which a program should come into being and this gets back to your point. Until the AOAs are finished you do not have the solution set to take forward to anybody to acquire.

Mr. Patterson: So it's not until in an otherwise perfect world it really at milestone A would be the program start. Everything prior to that is -

Mr. Cappuccio: Exploration.

Mr. Kozlowski: Let me ask an academic question. When you say you don't have a solution set until you finish with the AOA, I would take a potential solution set an ensemble of options into the AOA analyze them and I would come out with an answer. So I have a solution, just I have an answer out of the AOA.

Mr. Cappuccio: I think we're saying the same thing.

Mr. Kozlowski: I hope so.

Mr. Cappuccio: What comes out at the end of the AOA will be a preferred solution set to a series of requirements that fill, need and a gap. That's what should come out of the AOA.

Mr. Kozlowski: That's should be finished before milestone A.

Mr. Cappuccio: Usually it gets finished before milestone A.

General Vane: I think I would go back to my initial impression which was you probably could get more precise requirements or capabilities earlier if we organized ourselves. Resourced the FCBs differently. Right now, I can't see pass the mound of work that it's taking to get to the year.

Mr. Cappuccio: There's no forcing philosophy.

General Vane: How much money really is there. That's

another issue. Could you do it faster, I think you could do it faster. It would probably require not necessarily more people but you'd need dedicated people for a longer period of time, which currently we would have difficulty figuring out how to do that. It would take a more overt decision by senior leadership to get the people.

Mr. Cappuccio: Faster is not as important as earlier in the construct we talked about this morning. The construct we talked about this morning, is that if you want to stop what's going about contractors bidding 20/80 we have one approach. If you want to talk about the technology readiness associated with it, then you really have to have an idea about the requirements. You can't have loose requirements at the same time.

Mr. Patterson: At milestone A you better have that because you're going to start technology development at milestone A.

Mr. Cappuccio: Technology development should go into S&D with level three. Two for that matter, it depends upon how much risk you want.

General Vane: When you say freeze the requirements. Wouldn't you want to continue to experiment?

Mr. Patterson: But not in the program, not with the confines of the program.

General Vane: Absolutely.

Mr. Cappuccio: We're trying to toy with it.

General Vane: Why wouldn't you want to experiment after you have the program?

Mr. Cappuccio: That's what's driving the cost.

Mr. Kozlowski: It depends on.

General Vane: Why don't you want to continue to learn?

Mr. Kozlowski: If the requirements guys are willing to work with the design community so that you arrive at a good mutual solution, that's fine. What has historically happened, is requirement's guy gets hard nosed, either contractually or other wise. And you get a logger heads.

General Vane: We're starting to break that down.

Mr. Patterson: It's not that you don't want to continually improve the program. But you don't want to continually improve within the program, while it's moving forward. Because what happens is that improvement is a new requirement, that new requirement drives schedule and cost.

General Hawley: I think we run a little risk of talking past one another here. Because he's focused on the ICD. And his interest gets lower as the program matures through milestone B and on into you're pushing that off to the service.

General Vane: The requirements guy is less interested. Okay are we still tracking. But there ought to be a greater willingness as well to train.

General Hawley: But we've got a lot of input that says the number one problem from the view point of the acquirers is requirements. It's requirements that are unrealistic.

General Vane: Of course the problem is always on the other end.

General Hawley: They change over the course of the program which drives schedule and cost. And we're looking for a way to improve the requirements process, so that we don't have unrealistically ambitious requirements up front, and we don't change them in the course of the program. That drives unexpected, or anticipated, or unimproved scheduling costs

Mr. Cappuccio: If you don't change it until you block it, you could keep them fixed until you get one set fielded earlier to let them play.

General Hawley: The people who approve the change accept the cost and the schedule impact. It's the ones that change without any accompanying costs or schedule budget. That people object to.

General Vane: Here's the requirement's guys views of that. I figure out a set of requirements and it takes 12 years and you're telling me nothing changed in 12 years. I mean so there's the other view of it. So I can't change anything in 12 years. And nothings' going to - we're not going to learn anything.

General Hawley: How about if we came to the process, yours and the services with an idea that says okay it's not going to take 12 years, we want to establish the kind of requirements up front that we can deliver in 6 years half the time. Therefore -

General Vane: There wouldn't be anybody who wouldn't say wonderful.

General Hawley: I have to accept a little more modest performance at the six year point. But with growth potential. I'm an Air Force guy so my model is F-15, F-16, A-10 programs which we all delivered in six or less years from scratch. Stryker is a good example in the Army.

Mr. Patterson: It had a good R&D a good start and development base.

General Vane: It also had a requirements list that was full fledged people devoted to write those requirements almost 24 hours a day for about six months.

General Hawley: And by the way the Air Force programs I'm talking about early models, we delivered at modest capability. Which grew enormously over time. Is this going to fit within the JCIDS system.

General Vane: I think so. Now I'm a 120 days, so I'm on the inside. I'm a they guy. So recognizing that, you be one of them. Example. The IAMD CBA as a Commandant before I came here for whatever reasons became the lead service, the

MD Joint CBA effort for IAMD. And so we rustled with this same thing. Here's my instate 2015 I don't want to wait till 2015 to get that. Okay we're define three sets of increments in this process, and the first one is going to be 2007

So here's a set of requirements for 2007 that was in 2004, 2005. We're going to field those in 2007, right now out of that CBA, and if the CDD is not written yet.

Mr. Patterson: You said we're going to do it by 2007, and you worked to that time frame, and then you broke it into two more that take you up to 2015.

General Vane: 2010, and 2015 that is within the CBA process.

Mr. Patterson: And the first thing you say, what can I do between now and 2007, and then you say what can do between now and 2010. Based upon what I did for 2007, and 2015. Perfect. But what would have happened, if you had said, I got a program, I'm going to go to I'll take this probably 10 years to get it fielded. And I've got everything I want to shove into it, and boy by 2015 we're going to have a dynamite system you know what would happen, you would probably be at 2015, saying when are we going to field this baby, because you left the door open for everybody to come in and say, I can make it better. It will go faster, no matter what the cost, or how long it takes.

General Vane: I think one of the things we forget in

the acquisition process is the from to process is never sort of a zero sum effort. You're always building on or improving something. It isn't that often that you bring a whole new system into another system. Occasionally you build a new truck or a new airplane, but you're fitting it into a system that already exists.

So my argument would be you don't have to have a new program identified. You can give this new idea to an existing program. And you don't have to start all over with a program at milestone A you could have an existing program.

So to say that you had to start a program. I guess I would say you don't necessarily have to start a program. You could use an existing program.

Mr. Patterson: But your existing program, is a starting place, so the XYZ becomes XYZ prime A.

Mr. Cappuccio: You can put all the requirements you want and depending upon how much they want it comes out to the A-10. If on the other hand you said I need, this capability. I want to give this capability to the war fighter by this point in time. The government and the contracts will work the right sets of capability and what has to be done. But no one is tasked that way. So everybody is working the big problem. No one is saying don't put it in now put it in next month. Everybody's trying to put it in the first thing. The net result is the war fighter is moving

out in time. That's the net effect it's causing. You can talk about overruns, the government prints money. You can talk about overruns. You talk about stuff, what does it really mean, the money's not the issue. The cost overruns are not the issue right. In space the issue is not the cost overruns. I mean that's an irritant. The problem is the capability. You don't have the damn capability. You could have a DS plus. So the question we're toying with sir, is if you could come up with a way of saying change the requirements process to say look get capability out earlier, then the requirements people may do two or three iterations. They may have requirements for block one, requirements for block two, requirements for block three, freeze them to the doable and then field them at that time. And then hold them stable because you may be able to say okay, if I want something in two years, I could pretty much tell you what I need to do to get the damn thing out. Contractor you've got to be willing to say you've got to keep the architecture open in case I find something else.

General Vane: You see I would come back and say, if I told you the requirements today, I don't think the acquisition process could give me something in two years.

Mr. Cappuccio: That's what we're arguing about.

General Vane: The requirements can be improved, but what I don't think the corporation has done to the

acquisition has really done much significant change. We have added here's my guidance to program managers. When I was a branch chief if you follow all the regulations in DoD I'll never get my system. Don't follow them. Well General, you didn't hear it from me, but if you follow them all you will never get a system in the field. While I don't know what your requirement is, that would be the comeback from the guy, okay. Boom put a requirements document on the table now, when are you going to give me it, well it will take me probably eight years, I've got to do testing. And so there's some balance between those, for anybody to say it's the requirements guy, and for the requirement's guy to say the acquisition guy, they're both wrong. It's both.

General Hawley: You have the rapid acquisitions process each service has a little different one.

General Vane: But they're mostly off the shelf. They're not new systems. For instance the counter ramp system, I'm the Commandant 10 months. Put that system in Iraq it can be done. But it was an existing system.

Mr. Patterson: These counter mortar radar, phased away radar.

General Hawley: The reason those systems are there is because people invested in them.

General Vane: Because of requirements and S&T.

General Hawley: S&T that said hey, we're going to go

wild cat here. And get a lot of stuff going.

General Vane: Those particular systems are applications of other technologies for the new program.

General Hawley: Something that was out there?

General Vane: Took existing program managers.

General Hawley: Had a collaboration of services? You had something out there percolating that you could throw money out and in 10 months field something.

Mr. Patterson: I think we took the CWIZ off of ships that were in dry dock. Because John Young said he would do it.

General Hawley: How about attacking this a little differently. What would you change in the services requirement process to help us with our problem of increasing leadership confidence in our acquisition system. Is there something they can do better before they bring it to you?

General Vane: Well I was a service guy 120 days ago. I was following the same system. The challenge can be layers. People.

General Hawley: Were you requirements people - did you have people who had some training in how to do requirements that understood acquisition and testing, and all the interrelated things helped you set a good requirement.

General Vane: There are courses out there and people you have have to go to those courses and get trained. So I

think the answer to that is yes. There's probably no course though that teaches somebody how to write a concept. And no course on how to write KPP. There are courses on how to test it once you have them. And contract them, and write the statement of work and all that kind of stuff. But to write the requirements, no sir there is no course on how to do that. And there's no course on how to determine how to fight 10 years from now. You know that from the war games you've sat through. You get some guys who know how to do some, and some that don't. And some that are great commanders out there, and just come in and aren't very helpful at all. They can't put themselves in that future thinking. So training is an issue.

Mr. Patterson: Thank you. We appreciate you coming.

General Hawley: If you can actually make the changes you described to us in the JCIDS process, you'd kick through a whole bunch of things that we've talked about.

General Vane: No illusions it's theory and practice. The devil is in the execution.

Mr. Patterson: The thing that we can do, and I think there's a great commonality between what you propose and what we've been thinking about, is at least you'll have ally and that ally will be informing not only the QDR but the Deputy Secretary. It's a great idea.

General Hawley: Are you leaving that stuff with us, the

changes you're trying to make.

General Vane: You might have to search through them a little bit, but they're all here.

General Hawley: Reasonably well explained.

General Vane: I might have to come back to explain them because they're one line bullets.

General Hawley: The point is that our report as everybody agrees could reinforce your efforts. If we write it right.

General Vane: That would be appreciated.

Mr. Cappuccio: There's a lot of criticism of the whole process, through the whole cycle it's not only in the standing, but it's in the infancy stage. When you listen to what he wants to do, if he wrote the process, you would have to do this same sets of things. And you have to knit them together, and you may knit them together a different way, but you are going to come up with something. So the question is there's no sense of unraveling, it's like reorganizing. All you do is waste time. We just put two more years in the system if there's some reasonable changes that make sense. Better make the changes than breaking what you have. That's a bad move.

We've got to make sure we have enough documentation to say hey we think we can make this work. We think we're on the right path because what we heard was this. What they're

changing is this.

General Vane: I will tell you that these are at the three star level. To be perfectly honest I haven't taken them to Admiral G yet. There maybe somebody else that says something different. I think I've probably got a pretty good idea.

Mr. Patterson: The thing is if there's a significant change what you will have is you will have JCIDS process going along swimmingly while the services are finding ways to get around it to do what they want to do.

General Vane: I will tell you that was my impression when I got there, why are these things all being changed right now. Now I'd be happy to sort through this for you and give you just the changes as opposed to just throwing a bunch of briefings at you. I can send them back over to you.

Mr. Cappuccio: Whatever we can do to make your life a little bit simpler.

General Vane: These two are JROCs draft JROCOM that describe the changes the first part and I'll send you back over the applicable charts, rather than giving you the whole briefing. Well why don't I just leave the briefing, and I'll do the coiling for you and if you're interested you can look through the rest of it.

Mr. Patterson: Thank you very much. We appreciate it.

[Recess]

Mr. Hutchins: If you recall one of our big findings from the last thing was to write down the ACAT 1s, we have to look at the criteria with the financial number of ACAT except for there are very few. There are arguably going to be some things at the SECDEP, which you can do that then. You can imagine a structure where you have a Service Secretary Under Service secretary. Okay, Service Chief of Staff, you'll have imagineered a new force file acquisition organization with responsibility for the acquisition work force.

General Hawley: Do you get a report from the Service Chief?

Mr. Hutchins: The Service Secretary. You can wire this under here, it doesn't really make any difference to what I'm going to about right now, but the thing I want to talk about right now is what this person does. Over here, you have the PEO's and the PM's. ACAT 34 Programs, work where they work right now in this operation. There's your Program Manager, there's the PEO, here's where it all comes together with the budget requirements and acquisition at the same place.

Now about three levels further down than the SECDEP. This thing over here, this Operation, whether it goes in like this or goes in like that, under this Organization, Labs, [inaudible] stuff. They run all the Home Rooms here, where all of your institutionalized training and contractor instalized training for engineers happens, so they are

responsible for their professional development and growth. They are assigned to programs and they come back and whether you have a matrix like NAVAIR does, it doesn't make a whole lot of difference. The responsibility for training them, developing their career progression and all that, lives here. So that's how you do it with everything you talked about with one, two, three. That works too.

General Hawley: How about dual hatting for the PEO's?

Mr. Hutchins: Yes, up through here also, the old NAVAIR model they all use to work for, arrow one. Yes sir, that's the way it use to be.

General Hawley: What's wrong with that?

Mr. Hutchins: Nothing.

General Hawley: It worked, didn't it?

Mr. Patterson: At the elbow, up there, above the PEO's, you have to put in the Assistant Secretary.

Mr. Hutchins: There isn't any, in this structure, he works for the Under Secretary, that's the Service Acquisition Executive, the other Secretary of the Service.

General Hawley: There's an anomaly here that, do you think that the Air Force Under Secretary, who does an RO actually should fill that job. They put it back under him.

Mr. Cappuccio: When did they do that? They put the NRO back under.

General Hawley: The Under Secretary is now NRO.

General Hawley: If I remember how the Under Secretary functioned, he was involved in the budgeting and the requirements process, he use to actually bring those three things together. So that at least in the Air Force, I think you probably have to do without the Secretary level, because that's where, that's the guy who pays attention to the budget and the requirements issues.

Mr. Hutchins: I can see both sides of the problem. On the most capable acquisitions service, a guy by the name of John Layman, on the other hand a lot of other guys put their time and attention into it.

General Hawley: It's just that given that they've put the NRO back into the Under Secretary, I wonder if he has a different kettle of fish that might have to be treated differently.

Mr. Hutchins: Another thing I'll talk about - one of the most effective things that happened back then, is if you were a Propane Manager and you got scrubbed by the NAVAIR Board, which was Air 05, which was a two star in Air 04, which was a two star. And of all the reviews in oversight I got they were actually pretty damn constructive. So as bad as the old system was, there was a very effective piece in there.

Dr. Abbott: The first thing I did was got my people to tell me who their best Logistics Managers were, then who the

best Program Managers were and I got the list together and said these don't match.

Mr. Hutchins: I didn't have to do anything, I had my Leg Officers running it.

Mr. Patterson: Let's go back and take a look at this. So you would do away with the Assistant Secretaries for Acquisition?

Mr. Hutchins: Yeah, assign it either to the Service Secretary or the Under Secretary. Do we lose anything in the process had their been a level of management.

Dr. Abbott: Another political employee.

General Hawley: What are you going to do with the staff that currently falls under AE's?

Mr. Patterson: That those all of the per programmatics.

Mr. Hutchins: Why should they be doing programmatics?

Mr. Cappuccio: Aren't programmatics done by the PM and the PEO?

General Hawley: They are the ones who represent the PEO's and the programs and the budget process within the Pentagon.

Mr. Patterson: And allocates the dollars.

Mr. Hutchins: Again, my little mental medal, going back to NAVAIR days, mis-contexted the 08 Operation. There is where you get your Representative for your budget, over here, you build them and say these are the guys that integrate

them. With the budget process over here.

General Hawley: You have to have something in the Pentagon, in the Air Force's old day, if it was RD. One, we had a Systems Command like that. We had an RD staff in the Pentagon and the RD Staff, was the staff function that supported the Chief and the Secretary and participated in the budget process and advocated for it within the building and so on.

Mr. Hutchins: That would live in that four star Matrix box over there.

Mr. Patterson: List again what the System's Command does.

Mr. Hutchins: Develops the work force. A major claimant for labs, ranges, test facilities, depo's, ship yards, stuff.

General Hawley: You know, I think it would be a good idea if we ever get to pursue this, to have one of the old Systems Command people come in and talk to us.

Mr. Patterson: Like Slater?

General Hawley: Take your pick. I don't know who the Navy guys were.

Dr. A'Hearn: Yates was the last one.

Mr. Patterson: Skance lives here around here, doesn't he?

Dr. A'Hearn: I think so, Skance use to be on our Board

of Visitors.

General Hawley: I see him every now and again at the Consultant thing, so I think he's around.

Dr. A'Hearn: Skance was, I think, was a proponent of the whole Systems Command Concept. I don't know if Yates had to preside over the amalgamation of the Material Command or he was a proponent of it, I don't know.

General Hawley: Either one of them could tell you how it worked in considerable detail. You would get a different perspective on what do they do, how do they function. But you would get the same answer. Skance would be very focused on the people issues, he really cares about that. Yates would be more of a process guy. Yates would tell you give up on trying to provide funding stability, it's not possible. Learn how to deal with it. But, if we are serious about it, then advancing this idea could be useful to get that kind of input somehow. You could almost privately, actually and you and Al could sit down with them and just say,"Tell us how it works." But I know that they pay very close attention to the Function Management responsibility for Scientists, Engineers, Program Managers. They advocated for Science and Technology and advanced development work, prototyping, all that kind of stuff.

Mr. Hutchins: That's another key point because out of that operation, that's where programs were born. They come

together with the Program Office and they got serious about funding it.

General Hawley: We didn't have PEO's, so they ran programs and within the, let's see, the programs resided within the Product Centers. Say you had Product Center Commanders, were in essence, PEO's, which is now what Air Force has done again. They've done something that's more or less, I think, reverting to putting the Product Centers more the direct line of oversight. So you didn't have an SAE, so the Systems Command was your SAE in essence, and owned the Product Centers which is where the Program Offices reside.

Mr. Hutchins: The Navy had something called "Air 01" back in the old days, which was, sort of, Product Line being used to put programs in.

Dr. Brandt: The Navy did also have Assistant Secretaries even predating this, that took care of research and attribution.

General Hawley: They own the Test Ranges. I'll tell you, the Systems Command Commander owned all of the General Officer Billets, Acquisition related General Officer Billets, so he filled the Flag Officer positions. I mean, that's not a trivial issue for us because that had to do with career development, all that stuff. So, I think there is probably more there, but I think that is what you will get if you talk to Skavce or Yates or both. And I think the Navy was

different, the Army was very much the same, the Army and the Air Force look a lot of like. The Navy was a little more distributed.

Mr. Patterson: The thing that I'm looking for though is that there is an allocation and administration and management of budget. That is missing in this construct.

General Hawley: Systems Command did the budget, I mean the built a [inaudible] that came into the building.

Mr. Patterson: I'm thinking of what AQX does.

General Hawley: The Systems Command built all of it. It came in to XPP who managed the problem process, the budget of course, went to FMB and RD was the Staff within the Air Staff that ran interference for Systems Command basically and informed the Secretary on what the hell was going on. That's what happened in the old days in the Air Force. Everybody in the Pentagon was an advocate for a mans problem somehow, someway. When I was X00, I was the Advocate for all the Operating Commands and they felt very free to call me up and chew me out if I didn't do my job well too. If one of their programs got gored, they came after me because my job was to protect their programs.

Mr. Cappuccio: So are we going to bring an expert in or look Al's stuff and see how it makes sense? That would be our answer to the CSIS Report about giving everything to the Chiefs.

Mr. Patterson: In the way I would put it, to whether reach Larry Skavce or whoever comes in is okay, we're going to push this up to the Service Secretary or the Underer and it's not a question as to whether or not it's a good idea, we're going to do it now. How do we want to do it in the way that makes the most sense.

Mr. Cappuccio: You need to get this to Kadish, he may not buy into this.

General Hawley: The other thing that I think about is the Resource Requirements, where are you going to get the Staff to command this four star effort?

Mr. Patterson: You have all the people.

Mr. Cappuccio: You have ATL people.

Mr. Patterson: You have the people.

Mr. Hutchins: The Chairman has already gone into the Four Star Acquisition idea.

Mr. A'Hearn: He was here when we put that bullet on the chart.

Mr. Patterson: Fundamentally, there shouldn't be more than about, coincidentally, the other thing, we say this, all of the Systems Engineering.

General Hawley: I have to tell you MAJCOM's don't come cheap. And when the Air Force consolidated Systems Command then the Law commanded an AFMC, they took Command time.

Mr. Patterson: That shouldn't be more than about 200

people, right?

General Hawley: I can only tell you that when I was ACC Commander, I had a lot more than 200 people. Try 3,000.

Mr. Patterson: That's because you were an empire builder, you started with what? Twenty five?

General Hawley: I started with fifty, but in three years, I built it.

Mr. Kozlowski: What happens to the ATL Shop under this theory?

Mr. Hutchins: You have strategy, policy, the work force process standardization.

Dr. Abbott: If they put policy out they have to have an oversight responsibility.

Dr. Brandt: The law says supervise, it gives them specific tab authority, tab decision authorities.

Dr. Kirkpatrick: Would that stay?

Dr. Brandt: Unless you change the law.

Mr. Patterson: I don't want to change the law.

Dr. Brandt: Then the answer is yes.

Mr. Hutchins: There's a law that says you acquisition categories. So I think FAR that establishes what those are.

Dr. Brandt: It is in the statute.

Dr. Abbott: Well have more C's than D's, what's the problem?

Mr. Hutchins: That's what we want to do.

Mr. Kozlowski: ATL still has the right to claim the Dual Channel Recording that is there now for the PEO's and nothing would change from their perspective.

Mr. Patterson: The law says that the Major Defense Programs is three hundred sixty million in R and D, 1.9 in procurement, that's billion with a b, not that's ninety million dollars and then you adjust up to two thousand dollars.

Mr. Kozlowski: Is that when they use the right escalation rate?

Mr. Hutchins: The concept we've been pursuing here, I forget what the current ACAT 1D count is, that's with that ATL, but it was a large number. I think we had discussed it as, brought the numbers down substantially by bringing that back down to make them more than 1C's.

Mr. Cappuccio: Al, you wanted to go over some charts. Time is the most important variable. If you've got five things you want us to read and we've a Navy [inaudible] coming.

Mr. Hutchins: I tried to capture the discussion and some comp solutions statements, we could then zip off to our Chairman to say,"Here's what I think we've said the last two days", so do you want to start off?

Mr. Patterson: The idea is that there are, when we talk about the different markets or how low long programs should

take and we want to categorize them with an urgent request and so forth. The challenge is, you can arbitrarily say that something should be [inaudible] to four years and it falls into that, but then if you have fundamentally aligned the kind of those with the time versus performance, actually this, if you look at realistically, this line I guess goes like this.

Mr. Kozlowski: What performance are you talking about?

Mr. Patterson: How long the program exists to get the performance that you want and so if you don't, if you want something fast but you are willing to take the eighty percent solution then you'll say that's where I am. The basis is just totally time. Now, why is this a good idea? It's because if you look at all of the bad things that happened to programs, that caused cost escalation, you can chalk it up to the thank that the program existed for some length of time. Everything be equal.

Mr. Cappuccio: Most of the Program Managers drink coffee. That's another correlation.

Mr. Patterson: Exactly right.

Mr. Cappuccio: Just challenge in the premise.

Dr. Abbott: I'll give you a 99.9 R squared, most of them are human.

Mr. Cappuccio: I'm not sure you can make that premise. I'm not sure you can say that.

Mr. Patterson: But here, what you want to do, is you want to say, "Okay, if I start to look at things in terms of time, how much performance can I get?" There are other things that matter here. Technology maturity, how much technology, how mature is the technology in order to achieve the amount of performance in that length of time and when you start to look at things in this way, then you say, "Okay, if this is, I get the most here at about three years, well then, this becomes a four year program."

Mr. Hutchins: You can categorize the same argument, through a slightly different context. If you're going to deliver something at a fixed point in time, okay, the closer that point in time is, the more surely you can deal with a risk because no more of them are known. And the further out in time you get, the more unknown. So, if you divide your increments of effort into known risk than much higher likelihood of achieving the performance you project.

Now, but, let me say it another way. The shorter your prediction horizon the more likely you are to be more accurate.

Mr. Patterson: And that you'll achieve what you'll choose to achieve.

Dr. Abbott: And the more certain, the more certain the completion date is. In other words, you take a program and say that we are going to deliver it in fifteen years.

Fifteen years from now sounds like forever. But two years from now or three years from now is very meaningful, then if you're recording over forty.

Mr. Cappuccio: With the system hung up in sunk cost, yo could turn it around and say look, I made your ACAT 1 Programs, since we are worried about some cost. The program has to be structured with deliverable capabilities right at certain points in time. And then you don't get into time as an independent variable. All you say is I'm getting value for money along the entire time in the program.

General Hawley: How about if you took another approach?

Mr. Cappuccio: No, I better-

Mr. Patterson: But what else can offer to put in here? You could also put in the fact that if you remember, we take cost out, so if you know the greater the time than the greater the risk or the understanding of risk. The contractor then says, okay, now I understand, you want this in three, I get it three years is the drop dead date. Now I can start to say if you do it, if you get that before three years, I'll give you a bonus. You can incentivize how will you incentivize the cost? You say hey, I'm gonna bid this, what should cost, if you can do better than that, I'm going to share the bonus with you.

Mr. Patterson: I can incentivize it two ways.

General Hawley: You're going to get 70 percent, I'm

going to get 30.

Mr. Cappuccio: I like Gerry's catch phrase earn capability. It works better, that's why I like it.

Mr. Patterson: You are when you sit down to say, when you start to work with a curve to begin with. You say, okay, what's my most reasonable time in which I can get the capability that I want.

Mr. Kozlowski: That is still time as an independent variable. With an independent variable you trade time.

Mr. Patterson: Okay, I'm trading time.

General Hawley: We have a fixed schedule, we have a fixed schedule, we have a fixed cost.

Mr. Patterson: No, schedule is not time, in this construct, schedule is not time. Schedule is not time in this.

General Hawley: I've got 10 bucks, I want it next Tuesday, period. Give me what you can by next Tuesday.

Mr. Patterson: What if I say, hey listen, if you let me go til Wednesday for your same 10 bucks.

General Hawley: No.

Mr. Patterson: That isn't okay, fine.

Mr. Cappuccio: That's why if you say time is an independent variable, you get all the different interpretations of it, but what you're trying to do.

General Hawley: What if you describe it this way?

You're going to negotiate a program of using this PEC process, so you process, pre-mile stone A, we're going to go through this negotiation. Negotiation is going to produce the time frame in which we think we can deliver, the agreed product at the agreed price. So, everything is nailed down and we are going to select the contractor based upon these risks, that's how we think we are going to do. And then you talk about this by saying, look we know that in most modern systems, it is the thing, the platform that is the producer of complexity and hence, cost and schedule and all those other things. It's for systems we integrate into the platform. That's true with airplanes, it's true with ships, I think it true with army vehicles, it's even true with trucks these days.

Mr. Patterson: Indeed, I'm with you.

General Hawley: So, what we're gonna do, is we are going to focus. By the way, that's also the set of things that change most over time. So what we're going to is set the shortest time line we can and get the platform that we want and we're going to evolve the systems.

Mr. Patterson: I'm fine with that.

General Hawley: You talk about it that way, you get away from this independent variable stuff and our focus is on getting the right platform with the basic set of systems and then we'll evolve the system capability over time.

Mr. Patterson: And you don't care how that sausage is made within the context of PEC?

General Hawley: No, as long as the PEC delivers to me an agreed time line and cost that will be negotiated up front with industry.

Mr. Patterson: Okay why do you think that, I mean, it is such a reasonable and logical way of going about it. Why don't we do this as a normal course?

General Hawley: Because we've bred generations of people who believe that their job is to get the best Battle Star Galactica that can be produced because it's the last chance they're ever going to get to get one.

Mr. Cappuccio: They don't believe their going to get the system, doesn't believe they are going to get-

General Hawley: By the way, if they take a cut rate, Battle Star Galactica will never pay for the next one, you'll never block B.

Mr. Patterson: Yet there's never been, never, I mean it's very difficult to point historically to a program but that was the case, to start out, that didn't work that way.

Mr. Kozlowski: You've been through that road, I can tell you, there are a lot of people who waited years to get that next increment of funding and have gone through the problem of how do I hold the design team together while these guys wait until they go to another budget. And by the time I

have to reconstruct the critical people of that design team, I have a hell of a problem.

Dr. Abbott: The Defense budgets only go one direction. They either go up or go down. When they are going up is when you go get the stuff because when they go down, you don't have a chance in hell of getting it. So, you put everything on you can when it's going up and like heck you can get stuff when it's going down.

General Hawley: Although we probably just went through the fattest six or seven that we've ever had and we didn't buy squat.

Dr. Abbott: Did we miss the train? You bet. How did we miss that? It's because we weren't buying platforms.

General Hawley: I'm offering this because I think it would sell. I think it would sell.

Dr. Abbott: Between the Regan era and this buildup, platforms have disappeared.

General Hawley: It's called Pre-Planned Product Improvement.

Mr. Cappuccio: I still like earned capability because the financial people want to believe they are going to get something for their money. The plot applies to financial people, technical people will look through and say that's just a catch phrase.

General Hawley: We could call it transformational.

Mr. Cappuccio: Transformational Earned Capability. We have a pick and a tick solutions sake.

General Hawley: We're close to a big idea here.

Mr. Patterson: By way of introduction, I am very pleased we have with us Dr. Joseph Lawrence. Dr. Lawrence is a Director Transition for the Office of Naval Research and he is going to be talking to us on our continuing subject of Science and Technology and presenting the Navy's approach to this, Dr. Lawrence, thank you very much for joining us. I'm going to turn the stage, such as it is up there, over to you.

Dr. Lawrence: I have what is probably a long hour brief, without being accused of stretching out, I understand you all want to make this a bit shorter, is that right? To cutting too about a half an hour or so, I will skip through a bunch of things here.

This you can look at before, it just puts in context what the funding is. I'm going to take a second on this. This is the O and R, what I'm going to be talking about is what we are calling "Acquisition Enablers."

And in particular, I'm going to focus just in the interest of time, on the future Naval Capabilities Program, what's in that. We have an effect, the seed corn, this is our 6.1, 6.2, we have about 10 percent of the budget laid aside for big ticket items that are high in pent and that don't have to have an Acquisition Agreement worked out yet.

But things that we believe, if they are finished and at the VCNO ACMAC level, they believe that it's successful. This will be a big deal but we can't necessarily point at an Acquisition Program just yet. And then we have a bunch of money that is a pass through, so PRIS [inaudible] is about 1.8 billion. They took it what we have is about 2.3 when you add in Congressional. So if you heard 2.3 for us, that's the difference, is Congressional.

Now, FNC's, it is a mix of 6.3, 6.2 money, the bulk of it is 6.3 of the 6.3 money. I think it is worth noting the bulk of that goes out to industry because this is very much focused on transitions.

Let me take just a second to explain this. The Navy set up the Future Naval Capabilities Programs, started in about the late nineties with funding. Starting in 2002, we started planning at the tail end of FY 99. The front part of that was platform oriented, they set up twelve IPT's that had a representation from the Acquisition Community, from the Resource Requirement Community, the S&T Community, and the Fleet. And those IPT's basically bid for the initial set of money and then had pretty well control over that. And that's not the model that we're recommending. We've moved away from it during the period 2003 to 2005. The Navy went through and response to Sea Power 21 Guidance from CNO, went through a series gap analysis, this Naval Capability Development

Process to identify war fighting capability gaps and from that they gave us a subset and said here are gaps that we believe are gaps because of technology shortfalls as opposed to, for example, I need more DDG-51's to a job. And so it's a money shortfall. So we were given a subset of this larger CNO generated a set of requirements gaps. We now then are working to bid to those gaps. We bid to the gaps. A Senior Level Group, I will refer to as the TOG, the Technology Oversight Group and I will explain who they are. They make a decision on which ones of the gaps, of our bids rather, that they will authorize us to spend against and the group that does this, is a group that includes the Acquisition Executive for the Navy, Representative from CNO, my boss the CNR, the CFFC's, so the Forces Command and the Commanding General, the Marine Core Commandant Develop Command, so we have the full Department of the Navy Representation on that. Then, we've got a new set and I'll explain. We've moved away from this platform and to a new set of IPT's. I'll give you the structure in just a second.

Mr. Hutchins: What's an EC?

Dr. Lawrence: I'm sorry, too much jargon. We have bid, what we call a Naval Enabling Capabilities, it's a collection of projects that address delivery of a specific and capability. It's not necessarily something that causes a complete gap. But when you take an aggregate a series of the

EC's, if you will, would be used to close a gap. So it's an incremental capability. So a deliverable that we have to provide.

Okay, this is the TOG that I mentioned. This is Representation, we have Representation at the three star level and they know there's money on the table. So the three stars show up for this, Dr. McGraph of RDT&E comes from Mr. Young, Vice Admiral Casgriff is the Representative that shows up at the meetings, so it is a Senior Level Group. And this is the Group that on an annual basis, looks at what we did and decides, yes those are things that need to have requirements, so there's very tight coupling with the Requirements and Resource Community on this. They get to pick.

Business Rules, I think, are worth taking a second on. The OPNAV Headquarters Marine Core people do the identification of the gaps, they work up what we bid against and we own the Resources that have to be used for transitioning of whatever it is that we do. So, that's a critical player in this. We do the response, what is it that we think is capable of being TOG now on a three to five year time frame and that's the window we're looking at. What can we do in a three to five year time frame and then we are responsible for Execution Management of that S&T. The Acquisition people are in one sense, a little squishy

involvement at this spiteful, working on fixing that. That is an area of improvement. They are involved as a Member, they get to vote, they have a distinct say, it is a Senior Level Representation there. But in terms of doing the S&T, obviously, we do it. These folks have to resource it, these people are really are kind of like, we've kind of like got a triangle, this at the top, us, let's say at the bottom left, these at the bottom right. They have to go back to the same Resource Sponsor that we go back to because of these guys, do it.

In reality, they are the ones that have to go back to the Acquisition people and say now build the program or incorporate this in one of you existing programs to have it happen. And what we need to do is work a little tighter on the bonding here to make sure that we're really in sync with these guys in the funding. I think the process is reasonably well in place but the bottom leg of the triangle is one that I will acknowledge up front, that we are working on and I will show you what we are doing.

The Fleet is involved because they are increasingly working to be the ones who define the requirements into OPNAV, so they have to be at the table. And they're also a stimulant from our stun point in terms of helping us take the gaps that are defined here. And get better interpretation of what is the real problem and I will digress slightly on that.

Dean Kamen, if you've ever heard him talk, he's the guy who did the Segway and has done, what is it, the wheelchairs that go upstairs and portable dialysis machines, lots of neat stuff. He came in and said that he had a briefing that he gave to us one time, that he had a problem with the was people defined innovation within, not just the services but within, anywhere he's run into. He said too often people think that enervation is fixing somebody else's solution to their problem, that enervation is going back and coming up with a different, better way of solving a problem. And it may not be fixing the solution. So, we regard the Fleet as being the ones that we go to, to make sure we better understand what is the underlying problem that we are trying to solve.

It creates a little bit of tension here because the solution path that we're proposing to a problem with these guys have to find, may not fit in necessarily with the program that the Acquisition people have. We may create for them, a dilemma where they have to go back and kill a contract, for example, because we've come up with a better solution and that tension, I think, that has to be there. That's not bad tension.

Okay, the structure we have set up, as I mentioned, we report to the TOG, we have five IPT's that are Flag Level SCS Level IPT's, Sea Strike, Sea Sheild, Sea Basing, FORCEnet,

are Sea Power 21 pillars and these IPT's are the OPNAV directed Sea Power 21 pillars. So, for example, Sea Strike is OPNAV in 76 Chaired, who is that pillar lead, but he also has responsibility for Managing at a top level, the work that we do under the FMC Program. This one, enterprise and platform enablers use the cats and dog one because it was recognition that as the requirements were developed, out of these four pillars, these were based on specific scenario's. And as a result, what they came out with in terms of gaps, do not completely encompass the Department of the Navy Requirements. I think without going into too much detail on it, they picked two scenarios. Both of them occurring in the Western Pacific, they ran a War Game. And they came back and had defined requirements out of it. I won't go into to details because that gets Classified, I'm not sure what level we are here. But there is recognition, that for example, putting out fires on ships. That was not something that came out of the War Game, but we've got to make sure that we do that.

Coming up with better corrosion resistence to drive maintenance costs down and so those sorts of things we lumped over here. But even here, the requirements that are being tackled by this group, laid down by that Technical Oversight Group, the three star level that reports to ACMACS, CNO, and ASNRP.

I should mention on the side, separate from Governance, hear we have a collection of topics here, that relate to Medical and Training Requirements, but they have a different reporting chain. I'm going to focus on these, this is the IPT structure, one correction is now Vice Admiral Sullivan, so it is a pretty high level collection of people here. And you got copies, so I won't dwell on these.

Okay, those five IPT's, should focus on one item here, this first bullet. What they have to do in terms of their FNC involvement, is focus on Transition Management. I'll run you through, real quick, what the process is in just a few minutes. But when all is said and done, their job is to manage the transition path. Are we going to have this transition in the Acquisition Community? The Chair of the IPT is the Resource Sponsor for that Warfare area. He owns the money for the Acquisition people. The Acquisition Representative assigned by the ASNRDA, by the Navy Acquisition Executive. So they have responsibility for Execution Management of 6-4 and higher funding. So this group is well placed for being the ones to be responsible for that.

Okay, this is, and I think there is just a couple of pages, I won't go through it. What I am calling the S&T Thrusts, are the war fighting gaps that were laid down to us. So this list and then the next two pages had a very high

level of the topic areas we have been asked to focus S&T Funding on. As I have said, I think I've got two pages on this or three pages. One of the things that we have done recently, is to go back in. And this just shows the S&T Budget for one of the products that we are working on. We've been asked to go back and focus on a drill to look and see, do we have, from the S&T side, do we have our cost risk managed, do we have our scheduled risk managed, and the technical risk managed in an acceptable way? And then, what is the status of Transition Planning that is going on? And this is something we did not put together, each of those IPT's was asked to review each of the products that we're working on and come up with this assessment. And we took it back to that Three Star Board of Directors. This Technical Oversight Group, we're dealing with, and I've got a chart like this, I'm not going to run through these. For each of about two hundred and twenty or so products that we're working on. Let me make one comment, we have, listed here, percentages of products that we've got by FY completion time that have Technology Transition Agreements, we need to get these near [inaudible] up higher. That is a shortfall that we are working on. And in fact, I think even a couple of these, these need to be raised up higher. The ones that are further out are not even started yet, so I'm not worried about them. But I would like to make a couple of comments on

the Technology Transition Agreement status, which is good, as you can see for the near term completions but not what we would like it to be.

This is the one I want to talk about. What we have had, it's says proposed, but what has now been adopted by this Technology Oversight Group and the ground rules we've laid down now, for people to work on the [inaudible] During the first year of execution of any project, to maintain funding before you sign a contract, to get that work kicked off, during that first year, that needs be, what we will call Level One Technology Transition Agreement. So that says, not only have we had this pillar IPT endorsed, this has something that addresses a gap and meets a need that they want to have addressed and prioritized. Because we don't have enough money to do everything they want. And so, not only that but we have to go back and have an agreement signed with the OPNAV or [inaudible] Resource Sponsor and we have to have key stake holders who, in particular from the Target Acquisition Programs, signing up. So that for example, before we sign a contract to build a Surface EW System, I have to get PEO [IWS] which is the Navy Integrated War Fighting System, Program Executive Officers, those Surface EW Systems, I would have to have signature of that PEO saying that I have reviewed the criteria's you're working to, the specifications, the exit criteria and I'm endorsing it, that

if you do this, that is something that I can work with. It doesn't have to show money the first year, because these can be thee to five year programs. And if I'm starting something now and I get them to sign this in '06, six, seven, eight, nine, ten, they might not need transition money until FY-11, so that's a later POM. But we're requiring that for each product, there at least be buy in, prior to signing so that we have a product that has been agreed upon somewhere along the line, at least early on, that if you do that, that scratches an itch that I could work with. Your meeting criteria, that I need at least minimally to be able to process in transition.

For a program, let's just use one now, that would be, say, ending in '07. What we're saying is by the end of FY-06, so just prior to the final S&T execution year, we would expect to see that there be identification of a specific PE for the transition. By that time, and I'll tell why on that, in this particular timing, by the end of FY-06, the Department of the Navy will have submitted their finalized POM 08 Build, so that will have been laid down and the Department will have settled that. And that in the position of providing that to the Secretary of Defense's Office. If the program is not funded for '08, it's not in the Navy Budget for '08, then it's not going to transition in '08 and the money that we would then have scheduled to spend

in '07, we may want to go back and say, alright, you've got four years of S&T, you've nearly built something, finish building it, put it on the shelf, don't spend the last three million or four million dollars on that program to do a big [inaudible] test, because it's not transitional. We may very well in fact say, no this really isn't going anywhere, stop at the end of '07 or '06 rather, don't go to '07. But more likely, I would expect that we would do an orderly wrap up, I'll bet that was ramp up. We would expect to see some more discussion and if some at least I've got a vacation of a proposed PE Budget. During the course of the Budget, they say, "The second, third, or fourth year, but going into the end of that fifth year, we would expect the Budget to be pretty well locked down." So, what this does, is it lets us go back and say, "all right, we've had an OPNAV or [inaudible] Requirement or War Fighter Requirement. We've identified a capability to aggress some or all of that requirement." The War Fighters have said, "Yes, if you can do that, that help me." They've accepted what we did, they've had Acquisition involvement in this, at the Acquisition Executive Level saying, "Yes, this is good. Go do it." But even then, before we really get cranked up on it, we're saying, "We've got to have the Acquisition Community involved enough to make sure that what we are doing is right." And towards the end of the process, they have to have identified

working with the OPNAV [inaudible] Resource Customers, they have to have identified funding for the transition. So, the process is to allow us to assess early on, to get involvement early on. And assess all the way through, what is the level of that hand shake that we need to have? Not just with the Acquisition Community, but with their Resource Sponsors as well. And we're pretty comfortable with this approach, being one that gives us the ability of every coin turn that is processed to come back and say, "This isn't working, we need to re-prioritize or yes it is or we have a problem. Then who do we need to go and work on to fix it?"

Now, let's see, this is just a definition of Technology Terms, I'll suspect that's something you know. This is just a little bit more in terms of a nice pretty set of pillars for what I've just said, in terms of early on, we want to be able to get involvement, but without a firm commitment. There's recognition on our part. The Acquisition world is risk diverse. I'll come in and say, " I think I can come up with a hand held phaser that's going to knock out, I'm actually picking something that we're looking at, but it isn't going to be hand held, but that can knock out an out board motor at two hundred yards out. Would you impressed in that?" Well, the answer is yes. Are you willing to put a PE together, now, and put it on the table so that NAVCOM can look at it and say, "This ain't gonna happen, we're taking

your money?" No, they are not going to do that. They are going to say, "Show me." But at the very least, I want to have them get on board and say, "How big would it have to be for you to be interested in buying?" If it's the size of this room, probably not going to buy it. If it's this size, absolutely, they're going to buy it. Where is the in between point where they are willing to do that? So we want to get buy in early on, without them committing the money. But, as I get a little further on where, for example, the NAV case, I've just stopped his or his outboard motor read a hundred yards out, not yet the two or three hundred yards, but I've just not positioned that electronically, but lightning bolted out and knocked it out. At that point, I would expect to see somebody saying, "Alright, we need to go into the POM Cycle, identify funding, build the program." If they are not willing to do it, then we really could probably, go and have their heads checked. But, we also at that point, if they would even need to kill that program because it's not going anywhere. So that's the process and that's all this is showing. I've been running through this very, very quickly. This gives you and idea from the FNC stand point, what we are doing. We've got, let me not go through the details and explain what we are attempting to do as we go through the OP's years is to have roughly a four hundred fifty million dollar a year to have about ninety million dollars a year

available for refresh. The point of this refresh process is to allow us to have the ability on an annual basis to despond to changing requirements, changing needs by the Department. And we have been reasonably successful with this, barring whatever happens in the next round of budget hits.

Dr. A'Hearn: Is the total funding you are showing here the aggregated of 6.1, 6.2, and 6.3 money.

Dr. Lawrence: The FNC money is about one third, 6.2, two thirds 6.3 funding. There is no 6.1 funding devoted to the FNC. 6.1 is what I would call our seed corn money.

Dr. A'Hearn: While I'm on that subject, may I ask in the aggregate, what is the S&T essentially look like over time? You showed us your first couple of charts had the 2006 Year Funding, are you going up or down?

Dr. Lawrence: The last just couple of years it's been pretty flat. My concern right now, is that we are looking at probably going down now. We've just got, the S&T Community just got a hundred twenty million dollar bill for FY-07. We've been told that's our share of the big Navy Bills. It's a smaller percentage than the rest of the Navy got, so they weren't being cruel to us by any means. But we did get a share, I think it's roughly a hundred and twenty million dollars a year going in to the outs years. So this program will a proportionate share of that hit.

Mr. Kozlowski: It's approaching ten percent of your

available budget.

Dr. Lawrence: When you take out the past [inaudible], we're not allowed to touch, I think it was eight percent, so yes, approaching ten percent. It is close to what is happening. We're not happy, but, there are bills to paid. I don't know what we can do about that. I don't know if this is something that probably needs to gone into in more detail. This is now almost in the level of trivia but, it is worthwhile noting, we have a web space where we keep information on all of the projects that are ongoing, these are, it's a password protected website. This is available to people within the Acquisition Community, the Fleet, Syscoms, OPNAV, [inaudible], they utilize this to be able to go back in and browse to see what do we have in different topic areas. So, this is something that has turned to be quite valuable from the standpoint of people being able to come in and say, "Well what are doing in this area?" They can get access directly and look and see what that material is.

What I've got here, is just a series of examples. And I won't ask you to read this because I think it is too small. But what we have is the definition at high level and there is a classified package that really needs to be looked at, associated with this, that identifies each of the gaps. This is on our website in unclassified version. It gives metrics, what do they really want to have associated with that and

then we list the enabling capabilities, the clusters of products we've got that are associated with that particular gap. And then inside the website, for each of those enabling capabilities, we have a list of what the products are, associated with that one, a description what its metrics are that have been agreed upon and then what the product schedule and funding line looks like. And for each of the products there's a chart that gives at least a little bit of a high level layout. And then is something, as I said, that is available for use within the department for people to have access to what are you doing. We're trying not only not to hide anything but to make it as visible as possible.

I think I ran through that pretty quick, okay, so we have, as I mentioned, a set of business rules that they clearly tie us to the Resource and Requirement Sponsors within the Department of the Navy, tie us to the Acquisition Community within the Department and provide us then with a target set of requirements that we've bid against and that Technical Oversight Groups selects from for us to go and execute. And so I think it is a good relationship. The Technology Transition pretty structure that we now have in place, that we've more formalized. We had a lot of them done already but we've formalized. When we have to have these done and set up, I think a better structure that is now in place and we're going to be working with that in FY-06 and

out. I think we've got real good alignment because the people who did the selection of what we're bidding are the people who are defining Navy Requirements, have been making the decisions as well, for not just what the S&T Community is doing, but also, for what the Acquisition world is getting funding, that's the resource people.

Mr. Kozlowski: How often is Naval Power 21 updated?

Dr. Lawrence: At least annually. So we've had for example, this year there were four new gaps that were identified for us, that got folded in some minor refinement of some of the existing gaps.

Mr. Kozlowski: Any surprises occur where you had to dramatically change what you had?

Dr. Lawrence: There ain't been over the last two years, a distinct focus on the Global War on Terrorism. We've had both, form a Marine Core standpoint. What happened was in fact, in March of last year, General Mattis, who was then Commanding General McSiddick, came into one of the TOG meetings when they were discussing the gaps and said, "Hey, you know the NCDP gaps are really wonderful, you guys have done a great job. It addresses Marine Core, but I've got the highest dying on the ground right now, in Iraq. We keep going back to O&R from the Marine Core side and so what's the low hanging fruit that you've got that we can take right now. I want you", he was being a little poetic. "I want you to

plant a tree today, so that three to five years from now, when I come back and say or my successor comes back and says, what's the low hanging fruit there is on new fruit [inaudible] and I want money specifically focused that tree in developing new capabilities." So the Global War on Terrorism gap had it in us, a number one priority and they've gone back and done some very specific refinements this year. In terms of, "Okay, now we want you to do this topic, this topic and what can you come up with to address." Now when I say, "This topic", they are not coming back and saying, "I need to have a specific radar system developed", it is not at that level. They will say things like, "I've got to be able to defend against Theater Ballistic Missiles." Come back in and propose to me things that will improve over what we've got capability now. Or, "I've got a problem with being able to go down in Urban Canyon and having people shoot at me. I don't know where there are explosives, I don't know where there are shooters, I need to be able to find them. Help!" So we are looking at things like see through wall technologies, smoker detection, quick reactions, flash detection, that can lock in on it and put a round back right away in that direction, without somebody having to get shot at a couple of times before they find out where is it coming from. That kind of thing, but they are not specifying the end solution. They're really working hard with us to define

the problem.

I had some other topics, I'm not going to go through those. The Department has several others, smaller programs, that are also very tightly coupled and kept, and you're probably familiar with, the RTT. The one that I have listed here, is near term small programs that are bridge funding. Somebody comes in and says, "I've got a program that I want to work with. I've got money in 08, I don't have anything in six and seven. Can you help me get this kicked off?" And so we have some money that the ASNRDA controls through our execution for addressing those. Swamp Works is one, where we get ides coming in on high risk areas, problems from the Fleet and we can put money on some very specific, short term, one to two year, kind of, quick response areas.

This is really some keyed money to be able to look at very fast turn around things and I won't go through the details and I mentioned Innovative People Prototypes, which are five to eight year programs that don't have to have a specific Acquisition Chart. And for example, in here, one of the topics is EM Rail Gun and that's a high risk item, both in terms of the technology but it's high risk from an Acquisition standpoint in that, right now, we've got an advance gun system that's going to go on board DD[X]. If this works, this would replace that gun system. So we are not going to get an Acquisition and yes, I'll put money

against that. They are already committed to alternative technoloy. This could be significantly better if it's successful. So, these are a little different animal, they are aimed at high risk, a little longer term but big ticket items. I've got TACSAT is one of them, there are some based on Sea Based and participant littoral under sea development. There's one that's just been proposed on multi function advance, multi function apertures, to be able to shrink down considerably, the number of Top Side RF equipment. I don't know if you looked at the DD[X] Top Side, there's limited space, lots of antennas, as it turns out. The number of antennas that maybe you would like to put on that ship, do not fit both from a space standpoint, just space, space. But more critically, from the Top Side weight cooling power problem. They've got the moment problem there, but even if there were a little extra space, you can't put anything up high. So if we can take five or six at a time, antenna's and shrink them down into one, that's a big deal. So, we're going to put a program together on that. That will, I believe start in '07. So this is what just talking about and possibly, the possibility of this is also another proposed one three electron laser as a close in actually, a line of sight weapon system. Okay.

Mr. Kozlowski: Does DAPA help you very much in your mission?

Dr. Lawrence: We work with them, it is intermittent. There has been some very good cooperation. We certainly could use more. Then I think we need to work better with them, they have done some very good work in support of, in fact, the AMRS program I mentioned they have worked with us on some critical enabling technologies that underlined that in the Gallium Night Rods Cilium Carbide areas, some very high speed DACS, the things we will need in there, and they have been very cooperative working with us in that area. I suspect that we have not had as good of level of cooperation with them, as frankly, I'm seeing between the Army and them and the Air Force and them, but it's something that we are trying to work on. But there has been some cooperation. It's been good and I think it's been very valuable for us. And it could be better and I would lay that one on us.

Mr. Patterson: Do you have an association with the facility of Charleston?

Dr. Lawrence: I'm not familiar but, which facility?

Mr. Patterson: I'm trying to think of what the name of it is now, but it seems to me like they are doing quite well in terms of being kind of a Naval Laboratory and getting a great deal of business, in a small business area and doing significant work for the Navy.

Dr. Lawrence: I would have to see what group that was.

Mr. Patterson: They took the Naval Facility over there

in Charleston.

Mr. Hutchins: When you are looking at some packages you put together in the gaps, how do you link up with the other services labs to see what's going on there and integrate that into your packages.

Dr. Lawrence: Certainly at the top level, the reliance process is something we participate in. Our Department tends to Division Directors are generally the Navy Representatives in that process. So there is a lot of cross talk there. We certainly intend as we're looking at the proposed efforts and doing our internal scrub, that is one of the questions that comes up. We've invited, for example, at our internal scrub level, Chris Earl, Captain Chris Earl from DARPA, who is responsible for liaison with us to participate in reviews and that's been intermittent but nevertheless, the involvement there is healthy in terms of identifying this or any other work going on. We certainly try and reach out as best we can because it's limited funds. So there is recognition during the reviews and a requirement in fact to identify what is going on elsewhere within the Department of Defense and in Industry. So at least to the best of our ability, we are trying to track those things.

Mr. Patterson: If there's no more questions or comments, thank you very much, we appreciate it.

Dr. Lawrence: I think that's a record, maybe you need

something signed that I got through it that fast.

[Pause]

Mr. Patterson: What else have we got Al? Do you any more?

Mr. Hutchins: One last, it's only 5:25. What I have tried to do is to capture a lot of yesterday and today's conversation into some top level solution statements, sort of like we did at our last meeting. And I wanted to read them and get them corrected so we can get them incorporated into our work product and get it back to the Chairman. These are also sufficiently high level, that we can start looking at white paper development. Since the first three or four talk about requirements, I think we need Dick so we can take a short break. How about a recess?

Mt. Hutchins: The next one I've got, Establish a joint strategic planning office on the joint staff to integrate COCOM gap in groups, prioritize them, develop a road map for floor structure planning guidance. And identify which gaps to start on the most and [inaudible] process.

General Hawley: I'll also eat that one.

Mr. Kozlowski: Isn't that what they said this afternoon? That they'd do it.

General Hawley: Maybe when we write that up we can say, "Develop the JCID's process so that it does this."

Dr. Abbott: Continue to develop the JCID's process.

General Hawley: Continue to evolve.

Mr. Hutchins: The COCOMS do this, what we talked about. They funnel their input to the Joint Strategic Planning Office.

Mr. Cappuccio: The issue you're going to face.

Dr. Abbott: Even Harry said the system was changing and he verified it and they recognized the deficiencies.

General Hawley: And we can encourage. We can encourage the change process in our report.

Dr. Abbott: And pat them on the back for moving in the right direction.

Mr. Hutchins: Establish the J6 as the authority for Joint Command and Control Requirements and assign the NII as their technical arm to define Joint C2 Architecture and Interfaces. Assign all C2 Resources to the NII, require all component Sub- System systems to demonstrate Interface Compliance and Interoperability, in the NII dedicated lab or test range facility.

Mr. Cappuccio: What does that have to do with C2?

General Hawley: What's an II?

Mr. Patterson: Network Integration.

General Hawley: I would say it's pretty good.

Mr. Hutchins: Next one, establish a Program Initiation Organization in each Four Star Acquisition Command, charge with the milestone zero to milestone de-activity. A PEC for

each phase will be produced by this office. A Program Manager will identified for each CAP at a milestone zero by the Program Initiation Office.

General Hawley: You've specified where it's going to be, do we want to get to that level of detail?

Mr. Hutchins: If not there, where?

General Hawley: I would frankly put, I would put the Requirement people in the lead of that tech process.

Mr. Hutchins: That's one more level down in the logic because we'd also discussed the constructs, for example, where at the start the requirements guy is going to lead, he's got an Acquisition Deputy and later we talked the Technology guys.

General Hawley: There will be a transition period where the lead goes to the Assistance Command, but in the beginning it would be in the requirements of the Operational Command. Okay?

Mr. Hutchins: That's why I say I think we need to go from here now in flushing this out.

General Hawley: I salute that one.

Mr. Hutchins: Okay, next one. Create a Streamline Acquisition Organization which focuses ATL on policy and the Administration integrates budgets, requirements, and acquisition at the Service Level and establishes clear lines of Program Authority with no more than two levels and

substantially reduces Regulatory Compliance Reviews.

Mr. Cappuccio: I thought you have two sets of ideas.

Mr. Hutchins: There are a couple of ideas.

Mr. Cappuccio: Reduce you said, limit the policy.

Mr. Hutchins: Essentially eliminate.

Mr. Cappuccio: With minimum oversight.

Mr. Hutchins: That's the last raise.

Mr. Cappuccio: Then you said something about minimum lines of communication and that's not an ATL's thing.

Mr. Hutchins: The start of this has Stream Line Acquisition Organization, Acquisition Organization is compressed of ATL, the services. So walk it through the pieces.

Mr. Cappuccio: Got it.

Mr. Hutchins: Her Stream Line Acquisition Organization which A, focuses ATL on policy and the Administration with minimum oversight. B, it creates budget requirements and Acquisition at the Service Level, C, establishes clear lines in Program Authority, no more than two levels have review.

General Hawley: Got it.

Mr. Hutchins: Next one, create an Acquisition Strategy Development and Program Source selection approach. Which aligns Programs and Industry on top levels, strategic issues, and focuses for selection on Risk and Management Performance

instead of cost.

Mr. Patterson: Yes.

Mr. Hutchins: Next one.

Mr. Patterson: I think that's what we said.

Mr. Hutchins: No, I better -

General Hawley: I think I heard it.

Mr. Hutchins: - establishes Streamline Program Initiative. Procurement and Milestone Review Process to substantial reduce time to market.

General Hawley: Alright.

Mr. Hutchins: Finally, create Program Plan Structures compatible with near mid and long term need horizons and Earned Capability Implementation Approach and a Risk Based Competition Strategy.

Mr. Patterson: Well, that's what I said.

General Hawley: Is the Risk Based Competition Strategy part of what was said previous one? They would blend those, okay?

Mr. Hutchins: They do, they will focus on one as the Industrial Incentivization and focus on two, is that ties in nicely with this thing, we were just doodling here.

Dr. A'Hearn: Isn't the main part of the last one, that a market divided into three categories of urgency?

General Hawley: I thought the risk, I thought the compete on risk was part of the previous one.

Mr. Hutchins: Yes it is. This last one is three chunks of the market focused on need horizons and this what we're calling now, an Earned Capability Structure mapped to those.

Dr. A'Hearn: I think the Earned Capability thing, I understand, perhaps, are more legitimate. But from a marketing point of view and there is a marketing element in this endeavor, the time is an independent variable has an appeal to it. One of two deadly sins of acquisition cost too much, takes too long, time is an independent variable. It's like when General Vane says, "Okay, here's my requirement, now I need it in three years." And the Acquisition says to them, "I'll give it to you in twelve."

Mr. Cappuccio: I give, you've got it baby.

Mr. Patterson: I'm satisfied that if you put that within this executability, the PEC that has to be in that analysis, and out of that analysis.

Mr. Cappuccio: But you have to structure the program. All we are saying is you have to structure the program. It says in three years, you're going to, I want this capability. You cannot - because there is no linear cut, if you want to say that's an independent variable, fine. You could say, "I want Block 1 capability at three years."

Mr. Patterson: What I worry about is when you do that, what are the criteria and standards? We use to say three years.

General Hawley: That's a negotiation.

Mr. Cappuccio: It may not be three, it's whatever you want.

General Hawley: During the Collaborative Requirements Process, which we are calling PEC, you negotiate how long it ought to take you to get to this result.

Mr. Patterson: I'll be [inaudible] you.

General Hawley: And at some point, we ought to say, "And by the way, we think the outer limit ought to be five years, six years." You shouldn't start a program that is going to take more than six years to the first Block A Capability.

Mr. Cappuccio: It will be hard guys.

General Hawley: But not something that's designed to go to the Fleet. If it's designed to go to the Fleet, you can't figure out how to get something out there unless in six years, then it ain't ready, you'll be [inaudible].

Mr. Cappuccio: The problem that you have when you use the word IOC is you stay wedded to the old terminology IOC. You need to say -

Mr. Patterson: What do you want to call it?

Mr. Cappuccio: Well let's do an airplane. That's what I am most familiar from you with you saying one and a half years, the capability I want is an airplane that flies, has the Flight Control System and allows us to extend and start

testing the envelope of flight. Nine months later, I want the first set of Avionics which will include, the COM, the ECS, not ECS but Radar. Right, and nine months later, I want this set of hardware that includes [inaudible] I need them as the Air Force is ready to bring them online. In a ship, you would say, after two months I want it to float. I have a haul.

General Hawley: I would say I want first flight in two years and first operational deliveries in five. Put some milestones in there for a thanks and say that's important.

Mr. Patterson: But the beauty of it is, is that is a closed end, you don't have somebody that rolls in and says, "Well, you know, maybe it ought to be six." No. No, it's five.

General Hawley: And if something gets too hard to do, then you defer that unless it's something you just can't get off the ground without it.

Mr. Patterson: Then you stop it.

Mr. Cappuccio: I don't need all the bells and whistles, but I fly.

Mr. Patterson: I thought that was the far more Draconian approach to this and that you wouldn't really like it.

Mr. Kozlowski: How different is it from reality today.

Mr. Patterson: It's big time different.

Mr. Kozlowski: Wait a minute. We never launched the first airplane full up, maybe they did on F-22.

General Hawley: I'll tell you the ones that are going delaying are pretty much full up.

Mr. Kozlowski: You're talking about delivery to the fleet. I'm talking about out of the box. First flight.

General Hawley: The F-22 wasn't full up at first flight.

Mr. Kozlowski: It's pretty well stripped, you wait until ship 3,4,5 whatever to get a reasonably full ups Avionics burden, that could be a year later. How far is that different from what you're saying, if you're talking about production incorporation?

General Hawley: The difference is we didn't say the F-22 was going to hit Langley in six years and build a program to do that.

Mr. Hutchins: The last thought I wanted to walk through.

Mr. Cappuccio: The other things, the JSF and F-22, we never planned for it to be implemented. We never planned for it to be empty. We never planned for that flight to be stripped down and their political pressures, Aviation Week. JSF, the same way, there was no plan to say I'll fly something at a point in time. It turned out to be a political game and I've got to get something in the air and

there was no plan to say we're going to do it at minimum capabilities. What you got when the politics said I needed something in the air.

Mr. Patterson: There's another aspect of this, that seems to be consistent with capabilities based planning. Camping something at a specific time is a capability, it by definition.

Mr. Kozlowski: That's very true, you just have to separate what happens in your development program as opposed to what happens in production or pre-production or low rate production delivery. The block configuration of the deliverable airplanes is different than what you're doing in the development phase. I'm not saying there was any confusion but people can be lead down that path.

Mr. Hutchins: There's one more point that ties in with this, that we need to bare in mind, you would call that our last penal session we bathed as a top level solution. The need to integrate the Science and Technology Program with Product Development to do a better job of coordinating and achieving what you're talking about here, which is saying, "I want that in your point in time to have deliverable capabilities." Absolutely. Dependant upon how people well integrated, well thought out and well planned Science and Technology base. The other thing is the ability to service a near term client and the ability to serve a midterm client,

is also directly dependant on that well integrated, well thought out Science and Technology Base across the Services, with a mind toward being able to move. Advanced Technology or Near Term Technology rapidly into the field instead of as an adjunct to the normal part of thinking through business.

General Hawley: You may even have to start Sub-System Development before you start the major program, like we did for the engine for the F-15. We started the engine for the F-15 a full two years before we started the F-15 Program.

Mr. Kozlowski: And we had some hydraulic components and ECS Systems.

Mr. Hutchins: One of the other things the Services together have done incredibly well are turbine engines in terms of thinking through that process of Technology Road Map and Technology Integration and putting in generations of engine technology for people to build airplanes. They've done that incredibly well.

Mr. Patterson: On JCS, you developed the Electro Hydraulic Actuators before the airplane.

General Hawley: There was a huge technology Risk Reduction Phase for years.

Mr. Hutchins: The JSF engines were actually in my facility in Trenton.

Mr. Patterson: I was pretty impressed with those actuators.

Mr. Cappuccio: They were good.

Mr. Patterson: They are good.

General Hawley: Actuators on airplanes of that class are pretty interesting.

Mr. Patterson: And the redundancy that was allowed as a consequence of having the wires.

General Hawley: And the speed, with which they have to do it is pretty interesting.

Mr. Hutchins: I be done, now, an issue paper developed on requirements, I don't know now, whether this joint requirement will fall on it's own. We'll start that issue paper.

General Hawley: I would say, be it's own.

Mr. Hutchins: On organization. And we'll start an issue paper on Acquisition Structure and another one on Acquisition Process.

Mr. Patterson: And can we just get, so nobody is surprised, that the format would be something along the lines of stating the issue, a little bit of background of how this issue came to the forefront, a discussion, and then recommendation?

Mr. Hutchins: Then the recommendations would lead would into an implementation plant.

Mr. Patterson: All of them looking pretty much exactly alike. In fact, all them looking exactly alike, not pretty

much.

Mr. Kozlowski: Can you summarize what you expect of us for the next few weeks, including schedule? There was some noise floating around doing something next week, that seemed to go right into the clouds.

Ms. Giglio: It actually didn't go into the clouds.

Mr. Patterson: What I had said was that if you are available and if you can take time to review and comment on issue papers here, the rooms will be available to do that and we will work with you. Sit down and make it collaborative. If you cannot, those who cannot, we will send you the papers for comment and at a minimum a forty eight hour turn around would really be helpful.

Dr. A'Hearn: As an attachment to an email, that's the way to readily get out those.

Mr. Patterson: Yes.

Ms. Giglio: If people want to come into the office.

Mr. Cappuccio: Returning back to the text stuff for a moment, does it pay to have Tom look at that? From the standpoint of taking the schedules that we got, whether it be the Air Force one and then really say, " At our last CD, I'm going to have this data and then find out where does that tech really sense to start?

Mr. Hutchins: You do it twice.

Mr. Cappuccio: The question is, where do you do it?

Maybe you do it twice.

Mr. Hutchins: Remember I read this thing and I said right after milestone zero, which is when Ms. Anthony says sub the gaps, this one is going to start?

Mr. Cappuccio: Yeah, but I looked at that same thing and it's not that clear. What a milestones hero is because there is that 0A/08 thing in there. Can you have an effective -

General Hawley: I think you have to complete the 0A/08 before you can get into to PEC process.

Mr. Cappuccio: That's the concern I have. Is the PEC at that stage something different?

Mr. Hutchins: The group that will eventually produce PEC.

Dr. Abbott: I would use the group the conducts the 0A/08, is charged with conducting the 0A/08.

Mr. Patterson: They are going to ask where's the 0A/08 to Rand or someone.

Mr. Hutchins: Who's going to over see Rand?

Dr. Abbott: Somebody has to approve it.

Mr. Cappuccio: All I'm saying is, if you're not, if you're going to keep the JCID's the same. And I think we've said that, then you've got to go back and you've got to say, "How is the new PEC going to compliment the JCID's and the JCID's products. Or what does the PEC use of the JCID's

product or does the PEC help the JCID's product?

General Hawley: I'm going to say it's going to occur between the completion of the OA/08 and Milestone A.

Mr. Hutchins: The only argument I would make is that if at some point in time somebody said we're going to pursue satisfying this gap.

General Hawley: If you don't know whether it's a submarine or an airplane -

Mr. Hutchins: But at some point at that point in time, someone ought to be in charge of the process of advancing the development of the solution of that gap.

General Hawley: You're saying you need somebody in charge, a Program Manager. I'll buy that.

Mr. Hutchins: That Program Manager is responsible for having the OA/08 conducted.

Mr. Cappuccio: Okay, I think you already have a Program Manager for the OA/08 at least the ones I'm familiar with. In the Air Force they have PM's in charge of the OA/08.

Mr. Kozlowski: Is it a requirement?

Mr. Cappuccio: No. There is a problem that come out biased depending upon the Program Manager PEC.

Mr. Hutchins: As we would were discussing at the initial Program Manager at Milestone Zero is a Requirements guy assisted by an Acquisition or Technology guy than you have a fairly good chance of the OA/08 coming out.

Mr. Cappuccio: We need someone to take a look and say how do you do that, consistent with JCID's.

Mr. Patterson: I'll give Tom a call and say now that you've proposed this and now that we think it's a good idea.

General Hawley: How do you adapt into the JCID's process?

Mr. Patterson: Where does it fit in the overall scheme or things?

Mr. Cappuccio: Tell him to create a win/win process. It's got to be a win/win for both groups, so what would that win/win be?

Mr. Patterson: Okay.

Mr. Kozlowski: It's interesting. Last week we're killing JCID's, now we're not.

Mr. Cappuccio: It's just like the system itself.

Mr. Patterson: Thank you very much everybody. We got done. We got done what I wanted to get done.

Dr. A'Hearn: Let's adjourn, it's 6:00 o'clock.

[Whereupon at 6:00 p.m. the committee was adjourned]