

1 ATTENDANCE:

2 Dr. Gerald Abbott

3 General Paul J. Kern USA (Ret)

4 Mr. Don Kozlowski

5 Mr. Dave Patterson

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7 Also Present:

8 Mr. Alfred Hutchins

9 Dr. Linda Brandt

10 Ms. Judy Stokely

11 Dr. Francis A'Hearn

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1 P R O C E E D I N G S

2 Mr. Patterson: I would like to get started, we're just a
3 tad bit over 9:00 o'clock. But let me extend a welcome to
4 all of you who are here this will be the last public session
5 of the Defense Acquisition Performance Assessment Panel
6 Meetings. And we are delighted that you would take time to
7 come and join us. And with that as a brief introduction, let
8 me make the real introduction for this meeting. It is our
9 great privilege and honor to have with us Mr. Norm Augustine,
10 and he's going to address the panel and then open up for some
11 questions, and we would hope that you would not be reluctant
12 to join in. Mr. Augustine has a distinguished career that is
13 just quite phenomenal, but let me just point out some of the
14 highlights. Some of the things that most of you probably
15 know, and then a couple of things that perhaps you didn't he
16 served in the Pentagon, in the Office of Secretary of Defense
17 as Assistant Director for Defense, Research and Engineering
18 and as well as the Assistant Secretary for R&D and
19 subsequently as the Under Secretary and for four months the
20 Acting Secretary of the Army. And you probably can identify
21 with a number of our folks today who are in Acting capacities
22 and thinking about enlisting the help of Central Casting,
23 because we have so many.

24 He currently serves as Chairman of the Executive
25 Committee of Lockheed Martin, and having returned as an

1 active employee on August 1st, 1997 at which time he became a
2 lecturer with the rank of Professor on the Faculty of
3 Princeton University, where he served until July of 1999. He
4 has served as Chairman and principal officer of the American
5 Red Cross, former Chairman of the Educational Task force of
6 the Business Roundtable. And a member of that organization's
7 Policy Council. Some of the things that you may not know, in
8 pursuing his hobbies, he had dog sledged in the Arctic,
9 explored volcanoes in the Antarctic, giving equal time to
10 both of those and backpacked in the Canadian and U.S.
11 Rockies. Canoeed the boundaries of Canada, horse backed in
12 the Rockies, and also sailed a tall ship in the West Indies
13 and a stern wheeler on the Mississippi

14 He is in pursuit of his hobby of photography. He has
15 photographed whales in the Inside Passage, Baha California,
16 polar bears in the Northwest Territories, grizzlies in
17 Alaska, lions in Africa. Wolves during the winter in
18 Yellowstone, he has traveled to 19 countries toward both the
19 North and South poles and traveled to Timbuktu, which I'm
20 happy to tell you is not part of the base realignment and
21 closure.

22 [Laughter].

23 He is most perhaps noted for his being an author, he is
24 the co-author of Defense Revolution and Shakespeare in
25 charge. But for those of us in this room, Augustine's Laws

1 prevail. And with that I give you the table and the
2 microphone. Thank you very much for being with us.

3 ACQUISITION REFORM - Mr. Norman R. Augustine, Author,
4 "Augustine's Laws"

5 Mr. Augustine: Well thank you it's nice to be here. I
6 think what all that proves, and it's very nice to be invited
7 back. And it proves I'm in the fifth stage of my career. I
8 don't know if you're all familiar with the five stages of a
9 career. In my case, they Who's Norm, Where's Norm, Get me
10 Norm, What we need is a young Norm, Who's Norm.

11 [Laughter].

12 It's nice to be invited anywhere, thank you. What
13 you're doing I think is particularly important and it's also
14 particularly timely, in the sense that we have a Secretary of
15 Defense who knows how to get things done. We have a Deputy
16 Secretary who has lived with the Acquisition System for many
17 years. We also have some pressures that help bring about
18 change. Fighting at least two wars at the same time and
19 facing tough budget pressures, all those things sometime give
20 the motivation to do things that probably should be done but
21 might not be done, and are under less demanding
22 circumstances.

23 With regard to the Defense Acquisition System, I think
24 the first thing that probably should be said although many of
25 us criticize it, and I certainly do because it is not as good

1 as it could be, or it should be. It's still noteworthy that
2 our military at least in my judgement does have the finest
3 equipment of any military in the world, and I think most
4 other militaries would gladly trade our equipment for what
5 they have. So the system, although it has many shortcomings,
6 it does on occasion produce some awfully good equipment and
7 we should keep that in mind.

8 One of the problems with the acquisition process, if you
9 read the newspaper. Over the years you might conclude, and
10 I'll show my age here that the problems range from toilet
11 seats, to coffee pots, to step ladders. And you all know the
12 litany that went on for years those aren't the problems.
13 Even if those were all true and most of them, were not there
14 is another side of this story, but even if they were true, I
15 once figured out that with the money that was so alleged to
16 have been wasted on those items, you could have bought three
17 Jeeps and a mess kit, and that's quite literally true. More
18 recently the criticism of the Defense Acquisition process
19 comes from the very unfortunate circumstances involving
20 Darlene Druyan. My experience in a lot of years dealing on
21 both sides of the Defense Acquisition process, the government
22 side and the business side, the industrial side, is that
23 dishonesty is extraordinarily rare, the Ethical standards in
24 the acquisition process are extremely high. And higher again
25 to be found in almost any other scheme. That's not the

pend too much time trying to solve ethical
probably missed the point. Which is not to say
happened isn't a great tragedy, ethical breakdowns
of public trust are the worst kind of all,
when you have the lives of our military at stake
we're doing.

way to I condone what happened but I would
there, there it is. And hope that the
it spend undue time worrying about the ethical
the acquisition process. On the other hand I
seen more than one would like to see of
and sometimes of indifference, and those are
need to be addressed. But where then are the
old like to just take you through a little
to suggest where I think the principle
blem is, I've been told I should speak about 15
need to leave time for questions, and I'll try
that.

the waste and the problems, let me pick just
I've had some experience in over the years,
Defense, or Forward Area Air Defense to be
ly in my career there was a problem being
led FADS that was about 1960, it never got very
terminated and we began a program called MOLOR,
ending nine tenths of a billion dollar of then

1 year dollars, MOLOR was cancelled because we started Roll-On,
2 we started Roll-On and spent 2.4 billion on it. Cancelled it
3 in 1975, and started Sgt York, it lasted until about 1977,
4 and we had spent 2.8 billion dollars of then your dollars and
5 we cancelled it so we could start ADACS. We spent six tenths
6 of a billion dollars on it, and you get the message.

7 I've just added up 6.7 billion dollars, probably 15
8 billion in today's standards. At the end of that period our
9 soldiers were still using a modified Navy air missile. The
10 only thing we really had created was a WPA for engineers on a
11 related subject, if you take medium and high altitude Air
12 Defense over the years, the two finest systems in the field I
13 think for many, many years were Patriot and AEGIS, both are
14 terrific systems, each took 18 years to develop. There's
15 something wrong when it takes 18 years in a world where the
16 technology shelf life is measured in months.

17 In the case of the F-22, during the four years, I had
18 some responsibility for it, we totally revamped the program
19 we structured it three different times, everytime we did we
20 renegotiated and thousands of supplier contracts, literally
21 thousands and it was very rare indeed. You can imagine we
22 got better terms after the renegotiation than we had before.
23 What I'm leading to is the concern over turbulence, constant
24 changing, stopping programs before they're completed.
25 Starting new programs, presumably has no problems, the fact

1 is you just don't know what the problems will be yet. Rather
2 than finishing programs that have started and reducing the
3 constant change of people, schedules, funding, requirements
4 that have plagued program managers trying to accomplish
5 something.

6 I'm going to devote the rest of my time to go through a
7 number of proposals. Or suggestions to what we might do.
8 I'm going to put them roughly in priority order. Very
9 roughly. They're highly interrelated. But let me start down
10 my list. The first and I say it only because of its
11 importance not because I think that we need any particular
12 changes, but to do what boards of directors of companies are
13 finally doing and that is choosing leaders, they're placing
14 primary emphasis on ethics and moral compass of the
15 individual.

16 Rather than just did they make the numbers over the
17 years. Secondly extremely important, far more important than
18 this strategy we have or the plan we have is to have
19 experienced capable people over the years at DoD, one fifth
20 of all Presidential appointees slots are generally empty at
21 any one time. And I might observe that there's at least one,
22 or maybe two messages in that. I think my board of directors
23 discovered that 20 percent of our senior positions weren't
24 filled and the company was still plugging along doing
25 reasonably well. They might have asked me some questions. I

1 would commend to you the John Collins book, Good to Great, in
2 which he refers to the people on the bus, and he points out
3 that the people who are on the bus are far more important
4 than how you organize the work or what your basic product
5 line is, or your strategy, I certainly would endorse his
6 view.

7 With regard to people, we make it so hard to bring
8 particularly good civilians into the DoD, or into our
9 government in general. And similarly it's very hard to get
10 really rid of non performing individuals, I think of the
11 advice when Tal Ridge first came onboard, he would ask if I
12 had any suggestions and try to bring together a team of
13 people, many of them weren't very enthusiastic. And I quoted
14 to him Vince Lombardi's advice which was that if you're not
15 fired with enthusiasm you'll be fired with enthusiasm.

16 [Laughter].

17 That brings me to my third point, and this one may be
18 surprising to you to be so high on the list. And that is to
19 give very high priority to funding basic and applied research
20 in the Defense Department. Even in times of budget stress,
21 that's an area because of its long payoff that gets under
22 emphasized but that is where the big breakthroughs and the
23 game shapers come.

24 And example would include stealth, or night vision, or
25 even the atomic bomb. You can't afford to be without those.

1 You can't make up for it by having 10 percent more troops.
2 And so I would hope that we could continue or not continue,
3 we need to do better than put a great more emphasis on
4 supporting basic research and applied research in the DoD.

5 Fourth and this is extremely important, I've alluded to
6 it. To finish programs you start, unless there are very
7 compelling to stop. The way you do that I think is you make
8 it very hard to start new programs extremely difficult, but
9 once started you make it very difficult to stop them. By
10 making it hard to start, I think one should only begin a
11 program when you meet four conditions. One is that the need
12 is clear, second that the concept for satisfying the need is
13 also clear. Third that the technology is in hand. And
14 fourth that the necessary funds are available. Fifth
15 eliminate turbulence during program execution, the constant
16 turmoil of funding, schedule, requirements, people. Sixth I
17 would allude to a study conducted along the lines of your
18 study by Gil Fitzhugh in 1966 and I worked with him some at
19 that time, Gil his final report said that the problem with
20 the defense acquisition process is that everyone is
21 responsible for everything, and no one is responsible for
22 anything.

23 I can remember signing D&Fs when I was Assistant
24 Secretary, with my name I could go back into - if my name was
25 the 26th signature on this document. There were 25 people

1 above me, and I think none of us took any great
2 responsibility because we assumed the other 25 were.

3 The next item I would site, is the importance of
4 providing reserves. Budgeting, scheduling, and technical
5 approaches. The things do go wrong in difficult
6 undertakings, acquisition is difficult and things will go
7 wrong, in the best managed programs and if you don't have
8 reserves to deal with those things you get into this death
9 spiral where you start to change the schedule and cost more
10 money, which requires other schedule slip and so on.

11 The next item would be to fund programs in a single
12 increment from major mile stone to major mile stone. Not on
13 the annual installment plan, as our budget process now
14 requires. It's a little like trying to build a house, and
15 saying that - say you're a builder, here's the installment
16 for the first month. Come back next month and I'll tell you
17 how many bedrooms I've decided on, and how much more I want
18 to spend next month. It's not a good way to build a house,
19 and it's certainly a good way to build a major system.

20 The next is, in today's environment, particularly we
21 need to be aware of risk diversion, if the punishment for
22 failure and I'm not arguing in favor or being cavalier or
23 sloppy in any sense. But if the punishment for failure is
24 greater than the reward for success, it doesn't take long for
25 an individual to figure out what the optimum strategy is.

1 And I think we should think very carefully about whether
2 we're permitting enough risk taking and accepted the fact
3 that we'll have occasional failures. That philosophy is what
4 has made DARPA such a fine organization.

5 And I have here a list of examples I could cite, to save
6 time I won't. But it's some of the most important systems
7 we've got or had in the inventory over the years. That
8 started out with long strings of failures. Include
9 everything from Corona to Polaris.

10 Next these is the matter of cost and -- trend and cost.
11 If you ready my book the numbers in there show that we're
12 headed toward a real problem. We buy such small quantities
13 of items today that we're going to price ourselves out of
14 business. We have to, there are a number of things that can
15 be done and I'll suggest some as I go along. But I think
16 placing a great deal more emphasis on product improvement, as
17 opposed to starting new systems is going to have to be a
18 major part of the answer. Closely related to that is the
19 next item on my list, and that is to control the appetite of
20 the requirements process. Normal people you know, say if it
21 ain't broke don't fix it. Engineers say if it ain't broke it
22 doesn't have enough functions yet. I've also noted over the
23 years is that the last 10 percent of performance cause you 90
24 percent of the problems.

25 The next item is to be sure to use appropriate contract

1 instruments. And also use competition wisely and I won't say
2 more, because I think you all know what I mean by that.

3 The next one is a very important one, although its down
4 on the list it's still important. And that is we need to
5 treat reliability as a performance parameter. Like range or
6 payload. Or altitude. We talk about performance on one hand
7 and then over on the side is reliability and the developers
8 brag about how well their systems work, when they're working.
9 The users in the field want to know how well does the system
10 work when I need it, and so reliability has to be given a
11 great deal more emphasis that it's received.

12 I also think we should create fast track systems for
13 ultra important programs, some programs just deserve to be
14 treated specially, and taken out of the main stream system.
15 Everything can't be special, but a few things can. And the
16 Polaris did that. The SR-71 did it, the U2, the 117, there
17 are things that I think we just need to elevate, and deal
18 with a special set of rules.

19 Next to last would be that during times of low
20 production rates is to continue to prototype new concepts. I
21 think we should do a great deal more prototyping, not only
22 for what you learn technically, but even more important is
23 that's the mechanism for holding together the design teams in
24 industry, and now these design teams are probably the most
25 important asset within our industry, and probably the hardest

1 thing to reconstitute.

2 And lastly I would hope that we might change our testing
3 philosophy, which over the years has drifted into one of, be
4 very careful how you test this system, or something might go
5 wrong and cancel the program. The wrong way. To what I
6 think is the right way, is to let's really stress the system
7 and let the engineers find out what breaks, so that we can
8 find out where the engines in the performance are below par,
9 and what we need to do to make sure the system is reliable.
10 Testing has become a tool in the hands of those who want to
11 cancel programs.

12 As opposed to a tool in the hands of engineers to find
13 out how good their systems are. So those are sixteen I
14 think. If I've numbered them properly. And let me just make
15 one last comment. That is the danger that I think we have
16 built barriers between industry and the government that make
17 it difficult for either party to succeed. Almost all the
18 successful programs I've seen have had at least two things in
19 common, one was the government program manager and uniformed
20 military officer, who was willing to put their career on the
21 line to make their program succeed. The second was a
22 relationship with industry that was an arms length
23 relationship but was absolutely open and constructive, and
24 we're in this together and let's try to produce something for
25 our troops. That's an environmental factor that I think is

1 very important. And with that, I'll quit and be happy to try
2 to address questions.

3 Mr. Patterson: Well thank you very much. What you have
4 covered has been right on the mark in terms of the topics
5 that this panel has been struggling with, and we really
6 appreciate your insights, and okay panel. Questions?

7 Mr. Kozlowski: What are some of those programs, you
8 started to mention but you didn't because you didn't have
9 time. I'm very curious.

10 Mr. Augustine: Well you know there's a long list. This
11 is an abbreviated list, but let me just go through, and I'll
12 go all the way back even before my time believe it or not.
13 You may have forgotten the Wright Bros, famous airplane was
14 destroyed the same day that it flew, that first time.

15 Of the B-58 program which was technologically a very
16 advanced program, one third of the 30 test aircraft failed.
17 Can you imagine having 30 test aircraft in the B-58, but a
18 third of them crashed. Polaris suffered 13 failures in it's
19 first 17 flights. The sidewinder which is a terrific system,
20 failed in all 13 of it's first 13 flights. Corona, the CONUS
21 satellite also. A long time success failed in every one of
22 its initial 12 trials. Of the first 11 rockets launched to
23 gather data on the Moon landing site for the Apollo Program
24 10 of them failed and you go down the list. How many of
25 those programs would never have been completed in today's

1 environment.

2 General Kern: Can I go back to your testing comments.

3 One of our concerns is the extent of testing and how long it
4 takes to get through a test, and how much it costs to do a
5 test today, particularly as we look at systems of system
6 integrated together, any thoughts on how going back to your
7 last comment on testing, how finding where it breaks but also
8 how do we define success.

9 Mr. Augustine: A good question Paul. I think one of the
10 things that would help is if we did more engineering test,
11 component tests, during the development program itself. And
12 when we base budget cuts, that's usually one of the first
13 things to go. And if we could do more testing early on, as
14 we put systems together, we would have fewer failures at the
15 system test level, and we could probably do less system
16 testing.

17 The other observation I would make is there is a lot of
18 redundancy in our test programs. The contractor does
19 testing, the government developer does testing, the user does
20 testing. The independent tester does testing, and I
21 recognize the importance of independence, but I think you can
22 have independent oversight management and analysis of tests,
23 but you don't have to let everyone go out and do their own
24 tests themselves. So probably there could be a lot of
25 redundancy removed.

1 General Kern, not only could you save time, but you did
2 save a fair amount of money and you would probably end up
3 with a little better system.

4 Dr. A'Hearn: You spoke about leadership and you
5 mentioned the need to experienced capable leaders in key
6 positions, and then you went on to point out there are many
7 political appointee positions that perennially go unfilled
8 for long periods of time. What's the way out of that
9 dilemma?

10 Mr. Augustine: I will answer this in the context of your
11 question, I mean we are where we are. The obvious answer if
12 it was industry the board would tell me either don't fill
13 those positions or get rid of them and have it done tomorrow.
14 But in the environment that we live one thing you have to
15 give serious thought to is maybe the service secretariats
16 shouldn't exist other than for a Secretary and a Deputy
17 Secretary, and their small staff. The service secretaries
18 were originally setup, where many of those positions exist,
19 to provide independent oversight from the uniform military.
20 In today's world where OSD exists and is so large and so
21 powerful, the argument for even having those positions is I
22 think greatly weakened, in terms of their capacity to be
23 helpful. By the same token if you could attract real
24 intelligent people to those jobs, you're clearly better off
25 than if they're not there. But I think that question has to

1 be asked.

2 Is - with the - has the service Secretary and the
3 Assistant Secretary outgrown its usefulness within OSD? I
4 think it just has to be dealt with with the Congress. And
5 this is way beyond my pay grade. You see the problems with
6 the Supreme Court, if you take it to an extreme there's got
7 to be some understanding of, if you put the Secretary of
8 Defense in charge of the Defense Department, he or she has to
9 be able to pick their people and put them in place.

10 Mr. Kozlowski: You talked about a healthy prototyping
11 approach just to keep design teams alive, and vibrant. Which
12 I totally agree with. The danger in that is every time
13 someone builds a prototype they want to take it into
14 production. And I've been through that a couple of times in
15 my career. The F-16 started as a lightweight fighter in the
16 prototype but there was always a recognized engine behind
17 that, hey if we get one, we'll get it into production. And
18 we all know what happened. How can we have a fire bowl
19 design team philosophy, everybody is building on prototypes
20 and hopefully building them rapidly so that you stay up with
21 the technology. And still at the same time temper the desire
22 of the forces that want to take it into production.

23 Mr. Augustine: I guess my answer is not going to be very
24 satisfactory. It comes down to discipline, to management
25 with the fortitude to say this is a prototype and we're not

1 going to put it in production. The budget's going to
2 eventually going to make that true today in most cases where
3 you won't be able to afford to put these things in production
4 at least in any decent quantities. I think the other thing,
5 when I talk about a proof of concept prototype it would be a
6 system that would be nearly able to be put into production, a
7 short useful life going through all the standards,
8 environmental testing, it would be to prove concept. And it
9 would not be that costly. But I mentioned the design teams,
10 you'd be familiar with this, just the importance of these
11 design teams to our future military capability, they're not a
12 lot of these teams around. They're hard to reconstitute. I
13 think of a conversation I once had with Kelly Johnson. I had
14 asked him how many airplanes - he worked on different
15 airplanes, that actually flew? And his answer was 42. Today
16 an engineer would be very fortunate to work on two in their
17 career and if you think of the difference of his intuitive
18 abilities having built 42 machines that flew, compared with
19 somebody who's built one or two. One of the ways to overcome
20 this, is built a lot more prototypes and to keep that talent
21 base alive, and it's not a huge debate, that's a small part
22 of what most companies workforce, the big numbers are out in
23 the factory, you can reconstitute the factories over time,
24 but the design teams, that experience counts.

25 Mr. Patterson: I would like to followup on one of the

1 points you made in that, you recommended that programs be
2 funded in a single increment. And I would like to explore
3 that just a bit, most everybody would agree that that's
4 helpful with the possible exception of those on the
5 appropriations committees who would see that necessarily as
6 diminishing their control over the budget. I don't want to
7 put words in their mouth, but that's been traditionally their
8 point of view. How do you make that case, to the
9 appropriators and satisfy their concerns.

10 Mr. Augustine: I wish I knew the answer. As you know
11 many other countries do this in fact, we're one of the very
12 few countries in the world that appropriates or develops
13 programs a year at a time. The only hope I know, is
14 eventually the system will become broken enough that they too
15 will agree that something has to be done. You know in a
16 sense appropriators still control the process, they put the
17 money there in the first place. And I think we just have to
18 convince the appropriators that they will get an awful lot
19 for their money if they put appropriate sums in the budgets
20 in the first place and then let people go and produce what
21 they promised to produce then they will get, if they
22 continually to do the same incremental funding approach. But
23 frankly, of course we've talked about this for many years and
24 with no success, and I don't know whether you would have any
25 more success today or not. But it's a very important factor.

1 And I'm frankly not optimistic but I think it at least needs
2 to be elevated.

3 Dr. Brandt: You spoke about, and I love the quote from
4 the Fitzhugh Commission which I had forgotten, when everyone
5 is responsible for everything, no one is responsible for
6 anything. Could you elaborate a little bit on how you might
7 see putting some responsibility back into the system, or is
8 that doable given some of the political circumstances we've
9 talked about, what might you do?

10 Mr. Augustine: That's a great question. When Gil
11 Fitzhugh ran one of the large insurance companies in the
12 country, he was brought into the Defense Department to run a
13 panel much like this, he was - I guess the proper word is
14 appalled by the diffusion of responsibility and authority and
15 the number of people in the chains of programs, and I also
16 remember Dick DeLauer's acquisition study I worked on many
17 years ago. One of the conclusion Dick presented in his
18 report to the Secretary of Defense was that when a new
19 program - when the debate for a new program has been
20 conducted to the point that a decision is made you should
21 take all the losing advocates and shoot them. He actually
22 said that in briefing to the Secretary. And so you have a
23 diffusion of authority and responsibility and the ability to
24 impact the program, not only by the chain of command
25 responsible for the program but the people in the Congress,

1 who didn't agree with the decision and the people in OSD or
2 the secretariat, they'll cut the budget the next year or
3 they'll stretch the program.

4 And so you have this spreading of accountability, and
5 responsibility. In my view once the program is started the
6 program manager becomes the central authority that is not to
7 suggest that the program manager shouldn't have oversight,
8 but it should be oversight not to help the management,
9 there's a difference. It's like a corporate governance,
10 there's a difference between a board's responsibility in
11 governing and managing - management's responsibility to
12 manage the board is responsible for making sure management
13 manages what the board doesn't manage.

14 And that should be the role here, in my judgement of OSD
15 of the service secretariats and the service staff. I think
16 the program manager becomes the focal point once the program
17 is approved. Of course the way one assures accountability is
18 to have very clean simple organization charts, hierarchal
19 charts, who has authority for what and who takes orders from
20 who, and to hold people accountable. It works very well I
21 think in the private sector. Which the management task is
22 much easier as a matter of fact, in part because of that.
23 But part of this is discipline, hopefully the people in OSD
24 and the secretariats and the staffs will understand what the
25 scope of their responsibility is. And the people in charge

1 of those organizations will make sure that their teams abide
2 by those responsibilities. But when you have as we do today
3 any number of people who quite seriously propose major
4 changes to scheduling and budgets, it makes it very difficult
5 for the program managers to succeed.

6 Dr. Abbott: I was somewhat intrigued by your comments
7 about controlling requirements in some critics of the
8 acquisition system point out to a perceived fact not
9 necessarily a real one that we have 80 programs ongoing, with
10 money for 60. People who on the other side suggest that
11 since you don't know what the future is putting out 80
12 programs with money for 60 is not necessarily a bad idea,
13 because one can cancel programs in future, this however runs
14 counter to your comments about turbulence. When is it that
15 you decide that cancellation should take place and what are
16 the elements of that decision.

17 Mr. Augustine: That's a good question too. I would draw
18 the distinction, there's merit to both of those arguments of
19 course, but I think you can do both. And the way you start
20 at 80 programs so that you cancel some later is to prototype
21 two conceptual prototyping so when you cancel it, it doesn't
22 cost you that much money. And you start out with the idea
23 that this an inexpensive prototype. And if it happens to
24 work out, so terrifically that you can say boy I would like
25 to put these in the field, and then you go do the development

1 program and you put in the money. And do the things you
2 normally do before you turn a system over to the fleet or
3 whomever.

4 And so I think you can do both, prototype and weed out,
5 on the other hand when you start an engineering development
6 that's a major commitment you have to be 99 percent sure that
7 you need the system and that you're going to complete it, and
8 stay with it. Because if there's waste in the system, and
9 there is. I think where it is starting major engineering
10 developments and all the bells and whistles that go with
11 that, and then cancelling them. And so I would agree also
12 with the point of view of the people who say, we have 80
13 programs with money only for 60. I would pick the top 50,
14 and make a reserve and do those right.

15 General Kern: Can I go back to your competence question
16 about people. We've looked at, back in the Packard
17 Commission at some of the -

18 Mr. Patterson: I think this goes to your point about
19 buying reliability.

20 General Kern: Back to the issue of the competence of
21 people. Everything keeps pointing to the fact that that's
22 what's going to make a difference, rather than the whole sale
23 organizational changes. The Packard Commission focused a lot
24 on people and what we deemed to be the little A, the
25 acquisition side, what about the competence of people who are

1 in the requirements and budgeting, and approval side. Is
2 there an equivalent type of training in the approval type of
3 certification that we ought to look at.

4 Mr. Augustine: I think there is. I think the reason so
5 much focus and you will know this probably better than I.
6 But so much focus on the qualifications where people in the
7 development and manufacturing side is that, over the years
8 and we do better today - there was a tendency to take people
9 from line - military, classic military jobs and putting them
10 into the development side, and they have no experience to
11 deal with the kind of issues they would encounter. With
12 regard to the requirements process, I think that perhaps the
13 principle challenge we face there is that the requirements
14 process has become so formalized and so sacred, that the
15 requirements folks tend to be people without any particular
16 understanding of development. And managing systems. They
17 have great knowledge of operational needs, which is extremely
18 important, but they tend to go off by themselves. Right now
19 there are a set of commandments almost, and drop them in the
20 mail to the developer I'm exaggerating to make a point.
21 Whereas I view the requirements process as a highly iterative
22 process where we sit down with the developer and work back
23 and forth and do tradeoffs until you come up with a solution
24 that solves the problem. That the requirements person was
25 addressing but also the developer feels they can reasonably

1 produce and I think it takes us back to this give and take
2 and it would be ideal if the requirements folks could have a
3 better understanding of what's involved in the development.
4 That might be asking too much. Because there's only a
5 certain amount of time in a person's career. But if you can't
6 have that, by at least having them sit at the same table, I
7 think you could solve some of the shortcomings and experience
8 on that side. But on the development side, the way we give
9 people experience in companies is we put them in charge of
10 small projects to begin with, that they're more likely to
11 succeed at. And if they fail, the consequences aren't so
12 disastrous. And you work them up, and it sort of becomes a
13 career. And in the military there's a very tough challenge
14 for being a good military officer, and being a good developer
15 both. And we've tended to lean on the frayed pretty heavily
16 on the focusing on spending more time on the pure military
17 skills for people who we really want to be program managers.
18 I come back to the fact again, that the program manager is
19 really the heart of the system. That's the person who's got
20 to have the experience in their staff. Now I'm reminded
21 here, when you talk about experience and the like, what was
22 it you're familiar with. What's it called, the experience of
23 industry, the training with industry. In our company we had
24 one year an officer from the Army, Navy and Air Force
25 assigned to us and we decided to do something different with

1 their year with us, rather than have them move around to
2 different organizations. We put each of them in charge of
3 running a small R&D contract we were trying to win. And it
4 was a program we wanted to win, or we wouldn't have been
5 bidding it, but it was a program if we lost it wasn't going
6 to take the company down. And each of them we made program
7 managers and each to another service not their own service so
8 there wouldn't be a conflict and I met with them the last
9 day, on their tour as they were leaving the company to go
10 back to their normal life in the military. And all three had
11 lost in the competition, and you've never seen more bitter
12 people in your life.

13 The requirement was misleading, the evaluators cheated,
14 the statement of work was incorrect, it was unbelievable.
15 There were three people who are going to be great assets to
16 our system because they've seen both sides of that fence.
17 They know what it is like to try to respond to a vague
18 requirement. And they also know what it's like to write a
19 requirement and if we could give more people that kind of
20 experience even if it has to be done through simulations as
21 opposed to the real thing, in our case we lost three programs
22 but they were little ones. But it was one of the best
23 investments we ever made, because somewhere out there in that
24 system are three folks who really under.

25 Mr. Kozlowski: I have one more request rather than a

1 question. I would hope someday you would give serious
2 consideration to writing a sequel to Augustine's Laws that
3 would challenge the industry and the military industrial
4 complex. We need a radical paradigm shift, revolution, call
5 it whatever you will to break that tie. And I for one think
6 that there are some radical things that can be done to cut
7 unit costs. But reaching the masses, I've run across your
8 book a 1,000 times I would like to see a positive followup to
9 it.

10 Mr. Augustine: Well it's very tempting. And I just
11 recently was updating the curve in there. I first put
12 together in 1967 of the unit cost of air traffic, and we're
13 getting awfully close and you know people joke about that, I
14 have over the years more than I should have. But those are
15 real data. That is really happening. If we don't do things
16 differently as you suggest the laws of mathematics are going
17 to do it for us.

18 Mr. Patterson: Mr. Augustine, thank you very much. Your
19 comments and your insights have been most helpful and
20 enlightening and if was any exceptions to what you've said
21 it's probably that there aren't too many things above your
22 pay grade.

23 [Laughter].

24 Mr. Augustine: Thank you very much, and good luck in
25 what you're doing.

1 Mr. Patterson: If you don't mind just one thing. Is
2 there anyone in the audience who has a quick burning question
3 that will change the course of acquisition as we know it.

4 [Laughter].

5 I don't want to put too much pressure on you here, I've
6 one in the back over here.

7 Unidentified Male Speaker: Just one sir, I didn't hear
8 you address at least in headlines like the issue of
9 legislative and regulatory encumbrances on the acquisition
10 system. Do you think that is something that the system just
11 has to accept as kind of its milieu or something radical or
12 even hieratical that needs to be changed.

13 Mr. Augustine: I've been tempted to say that's above my
14 pay grade.

15 [Laughter].

16 You know, we've lived with that for so long it's like
17 earmarking. It's a form of dabbling in its worse form. The
18 members of Congress I understand feel a responsibility for
19 how money is spent. Somehow we've got to convince them that
20 they really will get more for their money if they let the
21 professionals do the day to day management and they act I
22 think a little bit more like a board of directors of a
23 corporation.

24 I used to keep track of what percent of the programs had
25 directed changes in them by the Congress, and the last time I

1. did it, it was like 60 percent each year. I can remember a
2 case on the Cheyenne helicopter where the committee had - it
3 was written into the Appropriations Act that they had to
4 certify to the solution - to the problem with the rotor, well
5 if you take a Cheyenne rotor into Congress they wouldn't know
6 what it was, but they have to certify it. And also there was
7 a classic where they stated how outraged they were with the
8 slippage of this program. Because of that they were going to
9 reduce the budget the following year by one third. Somehow
10 there are rational people over there too, and I think just a
11 lot more effort has to be devoted to trying to show them
12 specifically how damaging it is to have the Congress imposing
13 the kind of conditions it does. Congress has an important
14 job to do, but solving the problem with the Cheyenne isn't
15 one of them.

16 Mr. Patterson: Thank you sir.

17 [Applause].

18 Mr. Patterson: We'll take about a 10 minute break.

19 [Recess].

20 Mr. Patterson: If we could reconvene and again, for
21 those of you who know Brad Berkson, this is not Brad Berkson.
22 On the other hand we're very pleased to have somebody who
23 does the work to come in and tell us about the work he does.
24 And I'm pleased to introduce you to Dr. Rich Burke, who
25 served as the Deputy Director for Resource Analysis, in the

1 Office of the Secretary of Defense Program Analysis and
2 Evaluation. Better known and PA&E. And they're the ones who
3 become intimately involved in all your programs and know them
4 better than you do which is vexing problem.

5 And he joined the Office of the Secretary of Defense in
6 1988 and was Director of Operations Analysis and Procurement
7 planning Division, with the office of Program PA&E and prior
8 to his Department of Defense Service he served in several
9 program management positions as Sandia National Laboratory,
10 in Albuquerque, New Mexico and he is an International Affairs
11 Fellow on the Council of Foreign Relations, served as a
12 scholar at Stanford University. So we're very please to have
13 Rich with us. And with that as introduction, we'll turn it
14 over to you.

15 GLOBAL MARKETS - Dr. Richard P. Burke, Deputy Director,
16 Resource Analysis, Department of Defense.

17 Dr. Burke: Thank you very much. I have to start with a
18 little bit of an apology, I am a pinch hitter right now for
19 Brad Berkson. And that's due to a medical emergency that has
20 come up with - for the Deputy Director and his family. I
21 don't mind doing this, but when we get to the question and
22 answer portion of this, I may have to defer if there are
23 questions that are far outside my area. But I think I will
24 be able to handle most of them, because I've touched on most
25 of this.

1 I'm here to talk to you this morning about Program
2 Analysis and Evaluation, and what the office does. And I
3 will give you a little bit of perspective on the regulatory
4 basis for PA&E and then I will talk about its role in both
5 the resourcing process, and the acquisition process. Then
6 conclude with a little bit about some of the studies that are
7 ongoing in Program Analysis and Evaluation, and then some
8 discussion of the challenges we see ahead.

9 [Slide].

10 These are the topics I'm going to address today, and I
11 think I've already spoken to the - this slide.

12 [Slide].

13 The basis of PA&E right now, is DoD directive 51.41
14 March 1999 is the current version we're operating under.
15 There is a revision that is sitting in the Deputy Secretary's
16 office and about to be signed out. But essentially the
17 Director of PA&E is the principle staff assistant and advisor
18 to the Secretary and Deputy Secretary of Defense, and
19 conducts independent analysis for, and provides independent
20 advice on all DoD program and evaluation matters. It's very
21 important - I know you are here on this panel and the
22 distinguished panel is looking at the acquisition process and
23 its performance. But we actually look more broadly including
24 the manpower in the Department, equipment and of course the
25 resources to make our forces actually come together and

1 occur. And so PA&E has a fairly broad perspective, but it
2 does play an important role in the acquisition process. Our
3 core responsibilities relate to U.S. Defense Plans, programs
4 and budgets for executing proven strategies and policies. We
5 do very important function, as is the second bullet.
6 Oversight of the planning, programming and budgeting, and
7 execution system.

8 I'm not going to go into a whole lot of detail on how
9 that actually works today. Just suffice it to say the
10 Department has used a version of this system for going on 40
11 years right now. I noticed there is general disdain for
12 PPBES process, throughout government in general how ever when
13 you get to how to replace the system and what to replace it
14 with the room generally falls pretty silent. It actually
15 works fairly well for an organization that is consuming and
16 expending resources at about a \$500 billion dollar a year
17 level right now. But that is a key function of PA&E.

18 We do provide leadership and developing and promoting
19 improved analytic skills, and key competencies. Tools data,
20 and methods for analyzing National Security planning and the
21 application of the sources. A very important role right now.
22 I would conclude my remarks with some of the challenges we
23 see in the Department. One of the biggest challenges we see
24 is talent, and training people who know how to do these kinds
25 of activities.

1 [Slide].

2 Moving to the acquisition and resourcing processes of
3 the Department the PA&E Director sits on the Defense
4 Acquisition Board, he is a principle, as I'm sure this panel
5 realizes. The DAB reviews all the major Defense Acquisition
6 programs and major automated information systems at mile
7 stone events and the Director PA&E certainly sits on the DAB
8 and provides supporting analysis and comments on the programs
9 as they proceed through formal reviews.

10 The Director of PA&E is also responsible for preparing
11 guidance and review of analysis of alternatives, that's a
12 role that has evolved over the years, and began as preparing
13 guidance a review of COEAs, and how they have evolved over
14 the years to become AOA's. The way that's done has evolved
15 again over the years, many more used to be done in house in
16 the Department and now the guidance is typically published
17 and we use a lot of Federally funded research and development
18 to perform AOAs on PPBES system and the leadership, the
19 Director of PA&E is responsible for preparing fiscal
20 guidance. This involves - fiscal guidance is essentially top
21 lined guidance to all the military departments and Defense
22 agencies.

23 I would remind everybody here that people think of the
24 Department of Defense as the big three military departments.
25 We have on order a 30 Defense agencies that also receive

1 fiscal guidance, and our budget - those are Defense agencies
2 and field activities, many of which would be quite large if
3 they were corporations on and to themselves. I would point
4 out to of them to you, one the Defense Health Program,
5 consumes on the order of \$30 billion dollars per year. And
6 the second one I would point out to you would be the Defense
7 Logistics Agency, about a \$20 billion dollar area of
8 operation. So those are fairly large Defense agencies.
9 Remember the Department of Defense is more than just a
10 military department. There's a lot of supporting pieces
11 within the Department as well that are all effected under
12 PPBES.

13 The Director of PA&E also oversees the DoD planning and
14 programming activities, that involves everything from
15 collecting issues that are proposed by the military
16 departments for consideration in upcoming budget submissions,
17 to sorting those issues and how they will be examined by the
18 Department to organizing a three star review process.
19 Organizing senior leader and reviewer meetings, where the
20 Secretary and Deputy Secretary can brief on issues an
21 alternatives, and documenting and circulating decisions that
22 are made at the lower levels of the Department. And
23 providing guidance back down to the military departments and
24 Defense agencies on the their way forward in terms of
25 preparing budgets and their future years Defense planning.

1 There's another important role in PA&E and that is the
2 role of the Cost Analysis Improvement group, and Cost
3 Analysis Improvement group Chairman is an advisor to the DAB.
4 He is not a principle. He's responsible for preparing
5 independent cost estimates in major Defense acquisition
6 programs that are required by statute. He also is
7 responsible for preparing independent cost assessments for
8 senior level decision authorities in the Department of
9 Defense and actually throughout the government.

10 One of the things that has occurred in the past several
11 years, if the Department has gotten many requests from
12 outside government agencies, to use the resources of the Cost
13 Analysis Improvements groups. Some examples of that have
14 been to support a massive reviews for space station.

15 Its more recently, the Department has been asked on
16 several occasions to provide resources from the Cost Analysis
17 Improvement group to support other government agencies. I
18 think you are beginning to see other government agencies try
19 to create such groups. Again it is difficult because of the
20 issues that I touched on a little bit earlier for getting
21 together a talented group to do that in the government.

22 It's a difficult challenge, but it is an important trend
23 that had occurred recently. The other thing that I would say
24 about the CAIG chairman, is there's clearly more requests
25 than resources to do the work in that area. So there is a

1 prioritization that goes on where workers turned away from
2 fairly senior level people if the resources aren't there.

3 [Slide].

4 I'm sure Mr. Augustine in the prior session touched upon
5 history a little bit, but I would point out the six
6 principles that form the base of the PPBS systems that have
7 been around again for 30 or 40 years now are aware of the
8 Department is today, and these are those principles. Kind of
9 back to the future situation. We're actually trying to get
10 back to basics. And I won't read all of these to you but I
11 would say that these have been published for quite a number
12 of years. They were in I think, if I remember correctly they
13 were in Mr. Entoven's work of how much is enough and that's
14 going to be republished shortly as well. But they're fairly
15 sound corporate decision making criteria. Decisions should
16 be based on explicit criteria nationally, and that's what the
17 Defense Department is all about.

18 The requirements and cost must be considered
19 simultaneously, that's fairly obvious to those that actually
20 have to get things done in the Department of Defense. Major
21 decisions should be made by choices among explicit bounds and
22 feasible alternatives. Again, not rocket science just fairly
23 sound management principles. The Secretary should have an
24 active analytic staff to provide him with relevant data and
25 unbiased perspectives.

1 Open and explicit analysis available to all parties must
2 form the basis for major decisions. You see that spoken
3 about in the Department these days, and efforts to improve
4 transparency. There is a major push in the Department to get
5 to single databases that are authoritative that everyone can
6 see and put analyses on the table so that they are discussed
7 much more openly than they have been in the past and this is
8 not a brand new principle it is something that has been there
9 for as I said 30 to 40 years.

10 It's just a various times in the Department we've gotten
11 away from that and finally a multi year force and financial
12 plan is required to project the consequences of present
13 decisions into the future.

14 I'm happy to say the Department produces that every
15 year, it is called the Future Years Defense Program. I think
16 it is good news, It's required by statute, and it is
17 delivered to the Defense Committees and the Congressional
18 budget office. Typically in April of the year after the
19 budget submission goes over and I'm also happy to report to
20 you that it is consistent with the budget decision. The
21 budget submission is in lock step, and I'm also happy to
22 report to you that it is not a flat document anymore. It is
23 a historical database that is fairly sophisticated, and can
24 be minded in many ways.

25 So we are moving the Department forward in terms of

1 being able to look at resource requests and I think the good
2 news here is we've actually made quite a bit of forward
3 progress in having a multi year plan, that all of the
4 services have access to and we can all look at the same set
5 of information. And what the plan officially is.

6 [Slide].

7 Okay. With all of that as background, a little bit on
8 some concerns we have going forward. What you have here is a
9 chart going back to the '50s, that starts in 1951 of total
10 DoD budget authority over time. And this ends in I think
11 2004. I don't see the '05 numbers in there but essentially
12 there's a couple of points to be made with this chart, one is
13 that DoD's top line budget authority is cyclical over time.
14 It clearly goes up and down, it seems to be bouncing between
15 about 300 and 500 billion constant FY06 dollars. This is
16 measure in constant dollars. That's point one. Obviously
17 the peaks tend to correspond to some of the well known events
18 that have occurred in the past 50 years. Korea, in the early
19 '50s, the Vietnam war during the '60s, the Regan build up
20 during the '80s, and you see the Gulf war, the first Gulf war
21 did not include a dramatic increase in DoD resources. And
22 then the global war on terrorism. This causes us a little
23 bit of concern as we looked over this period as long range
24 planners, the question that strikes us is have we hit the
25 peak about now. If we had, that means that the planning in

1 the future for the Department is going to take up far more
2 resources. There's a second point we would make here and
3 that is that the last time we peaked if we are on the verge
4 of peaking was during the Regan years. And if you look at
5 this chart, and carefully parse it out, the peak actually
6 occurred in 1984 much earlier than most people realized we
7 were even in the Regan Administration.

8 The point we would make there is that during the Regan
9 build up the Department spent an awful lot of money of
10 procurement programs. And bought an awful lot of equipment
11 that has proven very useful during the next 20 years. This
12 peak has been one where we spent proportionately more on
13 development activities not as much on procurement of
14 equipment. There's some concern about the implications of
15 that.

16 [Slide].

17 A few things I probably need to explain on this chart.
18 It's actually an interesting chart. The President's budget
19 Future Year Defense Program FYDP, that's the first acronym I
20 have to explain that's the long range planning in the
21 Department that I spoke about earlier versus the actual
22 Defense budgets from fiscal year 1980 through 2005. This is
23 plotted in then year dollars. The actual budgets are in the
24 solid line, the future year Defense plans are the colored, we
25 call this our spaghetti chart, but that is what the plans

1 were versus the actuals. And there's a clear point here that
2 I would like to make. One is that the government as a whole
3 is not very good at projecting changes in the Defense budget.
4 If you look at some of the key points in the curve,
5 particularly back in the 1984 time frame for instance, the
6 Regan years looked at the future resources that we were
7 anticipating that never came to pass.

8 Similarly, in the early Bush Administration, we were
9 pretty optimistic about where the Defense budget was headed,
10 and the actuals went away on us. Interestingly during the
11 Clinton years we were under projecting Defense budgets, in
12 the future year Defense planning. The point is we're not
13 very good as a government at anticipating the inflection
14 points in the Defense budget. So I don't want to make you
15 comfortable but I can tell you what the Defense budget will
16 be two years from now, I can't. We have the plans and you
17 can see that the FYDP there from '05 anticipates a fairly
18 rapid increase in our baseline budget, but it is not obvious
19 that that will come to pass. So there is concern that the
20 picture may not be as rosy as our Future Years Defense Plan.

21 For example I would state one other thing, the Future
22 Years Defense Plan is not a product that the Department of
23 Defense produces on its own. It is prepared with strict
24 guidance from the White House, OSD, economics teams, the out
25 year projections. So when I point fingers at the FYDP

1 projections that's really the government as whole it not just
2 the Department of Defense mis-projecting. And I would say if
3 you pull that thread a little bit, the source of this, is
4 some of this, is has to do with projecting government
5 revenues, deficits, we are not very accurate about this
6 despite the best efforts of the Treasury Department. It's
7 very difficult to project exactly what revenue the Department
8 will get even this year.

9 I remind everybody that the early projections of the
10 deficit for fiscal year 2005 which just ended were about \$420
11 billion dollars. The year just closed and the deficit looked
12 like it was going to be \$319 I think was the final number.
13 That was during the year that the projections were made, and
14 so our ability to go out is pretty limited.

15 [Slide].

16 Mr. Kozlowski: Isn't there - excuse the interruption.
17 But I have an important point to make. Aren't the FYDP
18 projections also a reflection of the strategic planning
19 issues that are promulgated for the benefit of the interior
20 consumers and to a little bit extent exterior consumers as
21 well, so there's an economic bankers approach to this for
22 testing, but in terms of strategy on a given day, I could say
23 hey, it's going to be a balls to the wall effort. Or I could
24 also say we scored that one, so we could turn down. You
25 could have a dramatic shift. Anyway there's a strategic

1 implication behind all of this, it's not just numbers
2 crunching.

3 Dr. Burke: I absolutely agree. And those discussions,
4 the economic and national security side do come together at
5 the White House, between the National Security Council and
6 the economic advisors. But absolutely. I wanted to give you
7 a little idea of the kind of work being done, and I've chosen
8 three examples here. Some of these are outside of the
9 acquisition world.

10 First is some work that has been done recently on
11 military to civilian conversations. This was a complete
12 review of the Defense medical program and the DoD Defense
13 agencies going through manpower. The issue here was that the
14 military departments felt that there were probably too many
15 military personnel in these agencies. What was done here was
16 a board was established that reviewed military billet by
17 military billet. The essentiality of each billet whether it
18 was military essential or not those billets were reviewed
19 using the manpower criteria from the governmental and
20 commercial activities act.

21 And as result of that laid into the future years Defense
22 plan, is a plan to convert approximately 11,000 military
23 billets into civilian personnel during a six year time
24 period. That is very good news to the military departments
25 because they can take those billets and reallocate them to

1 what they consider more important needs. Particularly those
2 more directly related to operations.

3 A good example of a PA&E piece of work, because it has
4 nothing to do with equipment it has to do with how agencies
5 are operating in manpower. And manpower is a key component
6 of everything the Department does. Including acquisition.
7 And one of the things I'll get to at the end, is the
8 Department needs to constantly reexamine how its operating,
9 and get the right mix of people doing the functions that need
10 to be performed.

11 The second example I would provide to you is one on the
12 joint common missile. This is one that went to a DAB review,
13 a couple of years ago as I remember, about two years ago. It
14 was a DAB review for the program to - for approval to begin
15 system development and demonstration. An awful lot of work
16 was done by PA&E to review requirements for the military
17 services. Requirements for the flexibility of the system and
18 the operational capabilities and of course to develop the
19 full life cycle cost estimates, and compare it to current
20 positions. As a result of all that work, and it wasn't an
21 immediate thing the appropriate kind of resource and
22 difficulties in late '05, the decision made to terminate the
23 effort. It's a good example of a PA&E piece of work, because
24 the PA&E work often does not have immediate effects. But
25 people - we pull together analytic resources from throughout

1 the Department, people before a lot smarter about how systems
2 would actually be used and what the requirements are based
3 on. And over time as the situations evolve that work gets
4 used and folded into decisions.

5 The third piece of work I would point to is the mobility
6 capability study. This is the 2005 version of that, and that
7 is a complete end to end review of all DoD mobility
8 requirements and capabilities. It's an end to end
9 assessment. It uses work done on the capability studies. It
10 is based upon the Department's strategy, and it has formed an
11 awful lot of very good conversation between operational
12 people in the Department, TRANSCOM, and the COCOM about how
13 the Department would deal with the various contingencies we
14 happen to deal with around the world. I am not going to talk
15 today about major contingency operations, just turn on the tv
16 on any given day and you will see our mobility capability
17 almost everyday now, with respect to hurricane relief.

18 This capability is being called on more and more
19 throughout the world. And the good news is I think the
20 Department's analysis now recognizes that much more. The
21 outcome of this study is really going to influence some QDR
22 decisions, the most obvious one is C-17, but there are other
23 decisions as well on procuring additional systems.

24 [Slide].

25 This is a list of ongoing analyses in PA&E. I'm not

1 going to walk through the entire list, but it does give you
2 an idea of the breadth of issue that are under consideration.
3 The first three are directly related to ground and air
4 forces. You see we have a large review of the medical
5 community underway that will - I will tell you the medical
6 community has done an outstanding job in ongoing operations.
7 In Afghanistan and Iraq of transforming itself and operating
8 in a completely different way than it was originally designed
9 to operate. And there is a review to make sure we
10 restructure the medical community to take advantage of some
11 of the lessons they've learned. There's a compensation
12 review underway looking at the entire military compensation
13 package, and whether it makes sense in today's world when
14 you're trying to attract 18 year olds to enter the Department
15 of Defense and the military services.

16 Supply chain management. Again these are very broad
17 topic areas that try to bring together the manpower,
18 equipment resources to put together the DoD forces. I would
19 make one other point on this list of studies, many of these
20 will rebound prior to the fiscal year '07 budget submission
21 to inform this QDR, some of them will go on into '08.

22 Particularly some of the studies on persistent ISR
23 requirements, aerial refueling, supply chain and some of
24 these multi year efforts.

25 [Slide].

1 Those of you who are familiar with the Department know
2 that every year we do a program and budget review to - we're
3 now integrated. This year for the preparation of the fiscal
4 year '07, President's budget we have formed 8 issue teams to
5 look at issues that were raised by the military departments
6 and Defense agencies for the Combatant Commanders and their
7 organizations out in the field. This is a list of those
8 teams that are currently under way. They will complete their
9 activities prior to early to mid November, and should brief
10 out at the Secretary of Defense level prior to late November
11 or early December.

12 So these teams are under way as we speak, examining
13 issues that were proposed from the various elements of the
14 Department. There's one, just for purposes of clarity that
15 last bullet there DMSO is the Defense Modeling Simulation
16 office. There's an issue team that has been formed to look
17 at their future.

18 [Slide].

19 I wanted to close a little bit with some discussion of
20 what we see as our biggest challenges going forward. It is a
21 \$500 million dollar a year enterprise roughly getting facts
22 and transparency on the table for the serious discussions is
23 difficult, automated data systems help you in some cases.
24 But obviously if you could sit at your computer and gather
25 all this information it wouldn't be much of a challenge. And

1 we find it very difficult to get the facts and transparency
2 on the table, so that we can have discussions. Difficult
3 sometimes, and emotional sometimes. But we ought to have the
4 discussion. And PA&E is really trying to turn itself into an
5 organization that tries to get the facts and transparencies
6 on the table. We try not to be advocating positions. And
7 those of you who may have worked with me in the Department
8 know that you're not going to hurt my feelings if you don't
9 take our cost estimates or advice. The Secretary, and Deputy
10 Secretary are more than able to say, great I understand I'm
11 going to do something else, and that's the way it goes. The
12 purpose of this is really to run a decision making process,
13 that we get the information on the table for people to make
14 decisions who are really informed of the decisions at the
15 highest levels of the Department. Ironically when it's done
16 well you enable some of the best conversations that I've seen
17 between the Combatant Commanders of various organizations
18 throughout the Department about how they would actually
19 operate together under various scenarios where the Department
20 gets stressed. And so it's a very powerful process when
21 executed well, but it is not easy to execute this link to
22 strategy, plans and resources for the Department and finally
23 to execution.

24 Execution is very difficult, we can plan and request
25 funds from the Congress, but tracking execution is very

1 difficult for the Department of Defense. A lot of money is
2 spent to try to improve that capability. We're gradually
3 moving in the direction where we can do that, but it's a long
4 term issue and we're making slow progress.

5 I would also say the link to strategy is very difficult
6 these days. It's not as easy as it was during the cold war,
7 our strategies are not as static, and the calculus, the
8 mathematics, the assumptions aren't constant. They're just
9 not. We're trying and I know the acquisition have probably
10 heard this on this panel. We're trying to raise the decision
11 level to be one, decisions based on capabilities,
12 capabilities we may face in the future from our adversaries,
13 and we're trying to raise the discussion to a portfolio level
14 rather than just talking program by program which has been
15 the historical norm in the acquisition world. We're trying
16 to move the discussion forward about requirements,
17 operational flexibility and other ways to do the mission so
18 that we're continuously looking at portfolios for
19 capabilities. I think the JCM was a good example where the
20 Department tried to actually look at other ways, we looked at
21 what is out there now, and how it could be better. And
22 finally the last point, and it really is a key point, I think
23 it's true in the acquisition community as well, our biggest
24 challenge in PA&E, I can easily say it's true in all of the
25 office of the Secretary is developing a lining and motivating

1 young talent.

2 We've been rather fortunate in our organization, we've
3 spent a lot of effort in recruiting people and I can't say
4 that for the entire Department. Particularly on the civilian
5 side, it's a very difficult challenge to keep organizations
6 staffed with very bright people because these are
7 intellectually challenging issues, there's no question about
8 it, and that is what we offer to our young people is the
9 ability to move very large organizations with very good
10 intellectual work. Obviously we're not attracting people
11 right now with pay, and we're not attracting people with
12 wonderful working conditions and easy hours, but that is
13 where PA&E is and I'm happy to say we're doing a pretty good
14 job of staying staffed with motivated talent.

15 In the acquisition world they need to consider where it
16 is as much of the Department has been doing, they've been
17 going through Defense agencies. Actually part of the Defense
18 agency manpower review process has opened up some interesting
19 dialogues with the heads of agencies about how they would
20 like to change their agencies. But the way to do that this
21 talent issue continually comes up and how they actually
22 change the workforce because that doesn't happen over night.
23 Many areas we found were operating with position that hadn't
24 been filled in many years, and so it is the challenge of the
25 Department. And I will close with that. And I think I've

1 used up most of my time too.

2 Mr. Patterson: You're not going to get away without
3 questions. We're very flexible here, we can move time
4 around. So I will open up to the panel.

5 Dr. A'Hearn: Yes sir, your third challenge you spoke
6 about requirements and a portfolio, and capabilities. I
7 would tie that to one of the six founding principles of PBBS,
8 about cost and requirements must be considered
9 simultaneously. So should PA&E have to have a seat at the J-
10 ROC would that bring added benefits?

11 Dr. Burke: A formal seat?

12 Dr. A'Hearn: A role in the requirements process at the
13 very front end.

14 Dr. Burke: One of the healthy things I've seen in the
15 Department is more involvement at bot the PA&E, and the Under
16 Secretary of Defense Acquisition and Technology and Logistics
17 in the front end of the process. Whether that's a formal
18 seat at the table or sitting in the meetings. I think that's
19 a very healthy thing. I think there is recognition that if
20 the requirements aren't done well up front, you're headed for
21 problems. And some valuable input provided up front can lead
22 to a much more positive outcome in the acquisition process.

23 Dr. Abbott: Many critics of the acquisition system have
24 suggested that both government and the contractors suffer
25 from the over optimism relative to costs, particularly at the

1 beginning of a program. How would you address that issue if
2 you were king for the day.

3 Dr. Burke: Unfortunately I occasionally get to be king
4 on that issue and it is a difficult issue but let me tell you
5 how the Department of Defense approaches this problem, or
6 should approach this problem. And that is that the
7 Department of Defense for 30 years and this goes back to -
8 let me do a little bit of background and educate everyone.

9 The cost analysis improvement group was actually an
10 invention of David Packard. Back in the early 70s, when he
11 was Deputy Secretary of Defense, and the Department of
12 Defense had horrible cost estimates, not bad cost estimates,
13 but horrible cost estimates at the time. And there is a
14 history of a CAIG that has been published that people refer
15 to if they want to get the whole story. He recognized there
16 was need to do something dramatically different. At that
17 time the Department set up a system, between the CAIG and the
18 military departments which relies on collecting actual cost
19 performance on all programs.

20 And the short version of the history is during the
21 acquisition reform, in the 90s, we didn't focus as much on
22 collecting actual costs for the programs. We have re-
23 instituted over the past decade which has meant a lot of
24 effort and the Under Secretary of Defense for ATL has been
25 very supportive of re-instituting that, after all if you

1 don't collect actual performance versus estimates, you're
2 kind of kidding yourself.

3 So we have made a significant effort to improve that,
4 and I'm happy to say Mr. Wynne in his prior role and Mr.
5 Aldridge in his prior role, all recognize the need to do this
6 once you have those actuals. Your best estimates going
7 forward are based on rigorous looks at history and how well
8 we have been able to do to perform in the past and then the
9 judgement about whether we're going to do better or worse in
10 the future. There are reasons you may do worse in the future
11 than you have done historically, i.e., the industrial base is
12 not in the same shape and not equipped as well it was in
13 certain commodity sectors. You really can't do better than
14 that. The power of the DoD, the military departments also
15 have access to things. The power of the cost analysis is
16 because of David Packard's foresight, we now have 30 years of
17 actuals. So we can go back in our database and say what did
18 it take us to do SR-71, how many hours, we are building that.

19 The data we collect right now isn't very useful to me.
20 But it will be to my successors, because they will see actual
21 programs and report on costs, schedule, unfavorable outcomes,
22 and favorable outcomes. And that's the best way to do it.
23 You have to rely on history and then you can have a reasoned
24 argument about are we going to do better or worse, and why.
25 If you don't have that historical data to start, which many

1 government agencies have not collected in a systematic way
2 you are nowhere. That is the basis for why many of the
3 government agencies have been asking for help from the
4 Department of Defense, is because we had that kind of
5 information.

6 Mr. Kozlowski: How would you describe the role of PA&E
7 in the overall budgeting process, and I put this in the
8 context of, well first let me just happen to ask who owns the
9 budget in the Pentagon? And by that question what I mean is
10 when it comes down to a program manager given responsibility
11 to execute he should have control of the requirements, the
12 budget, the whole ball of wax, otherwise he's not in charge.
13 And as we know the budget gets changed, requirements change,
14 et cetera by external forces. And I have asked a question
15 who on an annual cycle, who do you go too to get budget and
16 it often has been cited, well PA&E is the referee, and then
17 some people say no, and I can't find out who owns the
18 dollars.

19 Dr. Burke: I think that's actually an easy question.
20 The fiduciary responsibility resides with the comptroller for
21 the budget request, and the execution.

22 Mr. Kozlowski: For the whole package I go along with
23 that.

24 Dr. Burke: When you get into execution of programs that
25 is, programs coming back from the hill funds appropriated it

1 is in that chain that the comptrollers chain at the OSD level
2 and then down into military departments and they all have
3 budget analysis that tracks execution. And so it is on that
4 side of the fence, we obviously at our level do not run
5 programs. And the PA&E likes to stay out of that business
6 because we tend to want to focus more at the strategic level
7 and the long range plan.

8 Mr. Kozlowski: Let me preempt you here, suppose there's
9 a disconnect in the budget, i.e. The number from last year
10 don't jive, they're out of sync, we have a five or 10 percent
11 disconnect. Who is that says everybody is going to take a
12 7.2 percent cut in order to accommodate this. Who is it that
13 decides I'm going to fund this program as opposed to that
14 program so everybody takes a 1.2 percent hit in funding. Who
15 makes those transient hiccups?

16 Dr. Burke: The short answer is it that it starts in the
17 military, the decision on that starts in the military
18 departments who are executing the program. And they
19 obviously get the first cut at corporate decision making that
20 they would propose. It does come up through OSD depending
21 whether it's a long term cut we're proposing, or a short term
22 cut that would come up through the programming side, the PA&E
23 may get involved if the military departments proposed cutting
24 programs at a very important high interest in the long term.
25 Or if it is a one year kind of adjustment, adjusting the

1 budget year, it would probably go up through the comptroller
2 chain.

3 Mr. Patterson: Rich, originally when you had PBBS, you
4 had a program review and the Defense, the DRB Defense
5 Resource Board, the program review group was chaired by PA&E.
6 So how much responsibility has PA&E retained for managing the
7 process by which programs are determined to be executable,
8 non-executable and prioritizing those programs?

9 Dr. Burke: Mr. Patterson, I think you refer back to the
10 program review group, and the Defense Resources Board. I
11 don't see all that much of a substantive change in moving
12 from the program review group to what is now used in the
13 Department as the star programming group.

14 Actually my observation would be a three star
15 programming group is probably working a little better than
16 the PRG, it has slightly elevated the level of the attendees,
17 they are a little bit more senior and a little bit more
18 serious discussion going on than in the PRG. Similarly on
19 the Defense Resources board side, the SLRGs have replaced
20 that. And again it is not obvious to me that there's been a
21 huge substantive change, some of this may be inside baseball,
22 but you have to realize that when you modified the PBBS
23 system and tailor it to each agency and how they wish to
24 operate in the Department, so that is the change that has
25 been made.

1 I haven't seen dramatic indications that it's really
2 changed for those groups at all.

3 Ms. Stokely: The last time I worked with you on this,
4 we were trying to develop a methodology to establish the
5 probability of success estimates. And then we would have a
6 reasoned discussion among the constituency in the Department
7 and Service, at what level of success to fund our major
8 programs, and I was wondering could you status us on the
9 process of that methodology.

10 By the way we've had a lot of industry talk about
11 whether they would be at 20/80 success rate, 50/50 success
12 rate whatever. And we always wanted to link those
13 probability of success on bids to probability of success of
14 the program in our estimates so, if you would talk to that
15 that would be good for the panel I think.

16 Dr. Burke: Yeah, and I will tell you that as you
17 probably know Judy, there is a cost analysis symposium the
18 Department runs every year and a few years ago we invited Mr.
19 Sugar who runs one of our Defense contractors and he spoke to
20 this directly and basically he said if you folks are using
21 our bids in your budgeting process you are nuts. Don't use
22 those for that. Use our competitive conditions, they're not
23 really useful for planning programs, so I would suggest maybe
24 the panel might want to get some of the Senior Executives of
25 Corporations to speak about that.

1 Mr. Kozlowski: We have, and they agree.

2 Ms. Stokely: That's been consistent. You were trying
3 though to build a methodology, so you could count your
4 estimates in terms of probability of success or competence.

5 Dr. Burke: Let me just say a word or two about that.
6 What tends to drive bad estimates, or low estimates are
7 combinations of assumptions. What we have always argued that
8 we've been trying to do, is essentially get our estimates to
9 the point where we're equally likely to have an overrun, or
10 under run. We've been trying to achieve that, because if we
11 move to a higher confidence level at the corporate
12 comptroller level, you're actually - it is not a good thing.
13 The Department has X amount of resources in a given year to
14 fund, allocate, to a broad variety of programs and if you
15 used all acquisition programs to such a high confidence level
16 you would drive more programs out of the Defense budget, so
17 no comptroller will say, I'm going to be willing to fund at
18 the 90 percent confidence level. So what they're going to
19 want to do is fund some at the level that the program
20 essentially could overrun or under run. And would work out.
21 So they can move forward. My view has been that we've been
22 using the confidence level discussion to mask bad
23 assumptions. Of really trying to get the best assumptions
24 the Department can make on the table. And then get our
25 estimates to be at the 50/50 level. We are having

1 discussions where people are showing much, how many more
2 resources you would have to add to get to a much higher
3 confidence level.

4 But, I think I would just say this that particularly on
5 programs that involve large amounts of money the
6 distributions are not going to be at all. They're skewed
7 very heavily to the right. And that tends to be driven by
8 scheduled. That tends to slide the distributions and
9 scheduled outcomes are to the right. And so if you want to
10 move up in confidence you have to add a lot risk. And
11 granted, not at the 15 percent level. There aren't many
12 programs that I could point to. But, there are a few. They
13 are non zero. And one them, I think was actually in your
14 area.

15 I consider that a success actually. I would like to see
16 the Department occasionally have estimates to high.

17 Mr. Patterson: Rich, thank you very much. And if you're
18 the pinch hitter, then we have great confidence of the rest
19 of the team. You've done a terrific job. We appreciate your
20 candor. And we appreciate the time you've taken to come and
21 talk about PA&E, and help us out. And we really appreciate
22 it. And thank you very much.

23 Mr. Burke: Thank you.

24 [Applause].

25 Mr. Patterson: Let's take five minutes. And then we'll

1 have our next speaker.

2 [Recess].

3 Mr. Patterson: If we could take our seats, please and
4 get started. One of the areas that we have been looking at
5 as a panel, is the effect of globalization on the overall
6 acquisition issues. And this afternoon - or this morning we
7 have with us Matthew Borman. And he currently serves as the
8 Deputy Assistant Secretary of Commerce for Export
9 Administration. And is responsible for implementing the
10 Bureau of Industry and Securities controls on the export of
11 dual use items for national security.

12 We're extremely pleased that you would take time to come
13 over from your job and help us with ours. And, so with that
14 as an introduction, Matthew please take the microphone. It's
15 over to you.

16 THE IMPACTS OF GLOBAL MARKETS on ECONOMIC SECURITY - Mr.
17 Matthew s. Borman, Deputy Assistant Secretary, Bureau of
18 Industry and Security, Department of Commerce.

19 Mr. Borman: Thank you very much. And it's a pleasure to
20 be here. I was interested to hear a little bit of the
21 previous discussion. And of course the first question that
22 came to my mind is what is PA&E? In our world of course we
23 also have many acronyms we use. As first blush folks might
24 think well acquisition reform, export controls what do the
25 two have to do with each other?

1 What I thought I would do this morning is talk a little
2 bit, very briefly about the current structure in the U.S.
3 Government for export controls. And then talk a little bit
4 about the implications of that system and how it works on the
5 acquisition side. And maybe try to use a couple of - well
6 specific examples that hopefully highlight that for your
7 consideration.

8 When we talk about export controls in the United States,
9 of course we're talking about the U.S. Government's authority
10 to control the export of either munitions items, arms, or
11 dual use items. Which are items that have civilian input for
12 application from the United States. To make sure that they
13 don't go to people - to terrorist groups that can do things
14 with them that we don't want them to do. It is also
15 important to remember that in that world, this also covers
16 the transfer of technology - control technology to foreign
17 nationals in the United States. Either in U.S. companies, or
18 in research labs, or in some cases even at the institutions.

19
20 One thing to keep in mind is exports are not only those
21 things that leave the country. But, it's also transfer of
22 control technology to nationals in the United States. And
23 that has some ramifications for the industrial base. And
24 certainly in the acquisition setting. As many of you may
25 already know, ITAR is a set of regulations that covers the

1 export of so called, munitions items. Items on the United
2 States munitions list. And that process is owned by the
3 Department of State. Then the only thing that is on that
4 list is essentially needs a license to be exported from the
5 United States, and goes along in conjunction with the Defense
6 Department. We, Commerce play only a minimal role in that.
7 For the dual use items, items export to our export
8 regulations, if there's a license required they come - people
9 come to us for a license. We under Executive Order, then
10 refer it to Defense and Energy for their recommendations.
11 Then we have a process for working out and disagreements.

12 We also have out process to be sure of what should be
13 coordinated with the Department of Defense. Whether the
14 threshold issue for any exporter is really, do I have to go
15 to State or Commerce for an export license? Who's
16 jurisdiction am I in? And this has very significant
17 ramifications for exporters. The reason being, that if an
18 item is subject to the ITAR, generally speaking it needs a
19 license to go anywhere in the world. And the related
20 technology, we need a license to go to any foreign national
21 in the United States.

22 And, in addition to that, the State Department employs
23 what is called the - on the short hand the C4. So, if you
24 have an end product, like a civilian airliner for example.
25 And it has a minuscule part, that is on the munitions list

1 the export or re-export of that aircraft anywhere in the
2 world, at any time needs a State munitions license. So, for
3 example if you have a Boeing 737, that may have a component
4 that's related to munitions. When it leaves the United
5 States it needs a State license. If it's already in a
6 foreign country, then that needs a State license. So, that
7 can have very significant commercial ramifications.

8 On the Commerce side, generally speaking we use this so
9 called end product rule. Which means we don't look at the
10 classification of the items in the end product. We just look
11 at the classification of the end product. So, our systems
12 with a civilian airliner - we don't look at every component.
13 We just say it's a civilian airliner. And essentially needs
14 a license.

15 There's a process called the Product Jurisdiction
16 Process, whereby Commerce, State, and Defense try to
17 determine for any particular product who's jurisdiction it is
18 in. And there's a set of criteria in the international
19 traffic and arms regulations, that essentially says that if
20 an item it specifically designed for military application,
21 does not have predominant civilian use, and does not have a
22 civilian equivalent, then that item should be on the ITAR.
23 And this is critical for a company to know through the CJ
24 process. On the State list - or is it on the Commerce list,
25 or the State list? Now, let me lay out that frame work very

1 quickly. One other thing, if an item is on the munitions
2 list and the policy determination is made to move it from the
3 munitions list. There's a congressional notification period
4 involved under the Arms Control Act. Just like for an arms
5 sale.

6 Now, let me turn after giving that brief overview of the
7 system to this potential impact on acquisitions. Certainly
8 when a company is developing a product they are best advised
9 to have the system in mind ahead of time. Because if it
10 turns out that their initial development of the product is
11 for military application, there is a presumption that it will
12 be on the U.S. list. Even if later in the development and
13 end use of that product it turns out there's a significant
14 commercial use. So, that's a hurdle that needs to be
15 overcome. In the old days, if you will, when there was a lot
16 more acquisition based on military specifications, this
17 process was much easier. Because it was easy to say, okay,
18 this particular widget was designed for a particular plane.
19 The Mil spec, it's easy.

20 But, now of course 15 or 20 years, I guess depending
21 upon how heavily you're into trying to buy commercial, off
22 the shelf items. There's much more uncertainty. And frankly
23 I say our current system doesn't fully take that into
24 account. Because I see a lot of these individual commodity
25 jurisdictions. And the vast majority of them revolve around

1 this issue, what was it designed for? What is it being used
2 for now? Even if it was designed for civilian application
3 originally. And the Defense Departments using a UAV, or
4 fighter aircraft, or a tank. Doesn't that mean it should be
5 out and for the company. This is very significant. Because
6 obviously many companies rely heavily upon their ability to
7 see commercial products abroad. And that revenue comes back
8 into their research and development stream, and their
9 production stream. Either for the same items for the
10 military or other items for the military.

11 And the two concrete examples that I can highlight to
12 some extent are then QRS-11 a few years ago which was widely
13 publicized. And what's going on now with night vision and
14 thermal imaging. The QRS-11 incident was heavily publicized.
15 There was a sensor, and there was one version of it that was
16 on a missile. After the company developed it they realized
17 there was a significant commercial use if they revised it.
18 And they did that. And it had very widespread applications.
19 And they backed up aviation unit. And thousands of civilian
20 airliners worldwide, Boeing's, Airbus's, Bombardier worldwide
21 three years ago people realized that this was a mutilations
22 item, and so unless that was changed, all of a sudden you had
23 these 1000's of civilian airliners worldwide that were
24 subject to the ITAR. And they needed a license, not only to
25 leave the United States, but if they were already aboard to

1 leave one foreign country to another.

2 So, this was clearly a very difficult situation for the
3 civil aerospace industry. We worked through a solution - or
4 kind of a temporary solution, if you will for this issue.

5 But, the consequence that we're trying to access now is on
6 the U.S. company. Because certainly their foreign customers
7 who were buying this QRS-11, the civilian version. Are now
8 looking very heavily and very hard at how to design that out.
9 And to the extent that that effects that companies to produce
10 the military version of that item. That has, I think
11 significant potential acquisition ramifications. Because,
12 again no matter how big the Defense budget is, for most
13 companies the revenue stream is primarily going to be from
14 commercial sales. And that effects their ability to do
15 Defense work.

16 So, that is always a very significant ramification. The
17 other one, of course is that there's generally for and
18 availability - there's very few on the commercial side, very
19 few items of technologies that are only made in the United
20 States anymore. Which is different from when the export
21 control system was first constructed 30 or 40 years ago.
22 Current in the area of night vision and thermal imaging
23 devices, we have a somewhat similar situation. Ten or 15
24 years ago the market for these things was overwhelmingly
25 military. But, since then there's been a skyrocketing in the

1 commercial uses. Fire fighter, search and rescue, all sorts
2 of maintenance. There is kinds of research the Defense
3 Department is taken the position that these really need a
4 license to off from the United States for commercial versions
5 any where in the world. So, for example last year we did
6 several thousand licenses for these items. The vast majority
7 of which were to Western Europe. The Defense Department's
8 view was if a terrorist doesn't have any night vision
9 capability, them getting some through a fire fighting device
10 is a threat to our security. Even though it's not what our
11 troops are using.

12 But, what we've also seen is a steady erosion in U.S.
13 companies of the market for thermal imaging devices. And
14 again, there's a lot of overlap between the companies that do
15 commercial products and do military products. And this is a
16 hard thing to measure. Unfortunately, you often don't know
17 it until it has already happened, and it's to late. But we
18 really need to look at what impact it has on the ability of
19 the companies, not only to survive economically and provide
20 jobs and so on. But, to be available as part of the defense
21 industrial base. So, that's an issue we can continue to try
22 to work through in the administration.

23 So, I guess in conclusion I would say that as I started
24 off with - export controls don't have much to do. But,
25 certainly the decisions made on the export controlled things,

1 what kind of things you can control period. And who's
2 jurisdiction they should be under. And where should we allow
3 them to go? And what kind of restrictions should we put on
4 them? And those can have ramifications in certain industrial
5 sectors. So, that's really what I wanted to say. I'd be
6 happy to try to answer questions that you folks might have.

7 Dr. Abbott: To what extent does the availability of the
8 technology - a similar technology, or like technology other
9 places in the world temper the decision to allow the U.S.
10 company to export?

11 Mr. Borman: As a practical matter when were at the level
12 of an individual transaction, a license application that
13 often makes a big difference. And certainly that is
14 something that is something that many agencies - Defense and
15 Commerce take into account. Where it's a little bit harder
16 to come up with a definitive answer on that, is levels of
17 control. Now some areas, like computers that's clearly been
18 the case for the last 10 or 15 years. Our definition of a
19 high performance computer - a super computer has gone from
20 500 MCAP's to now 190,000 MCAP's. But in other areas, such
21 as thermal imagine it hasn't made much of an impact. It's
22 clear in the night vision areas there are Chinese companies
23 now selling into the U.S. market, not only taking away
24 foreign market share, but taking away domestic market share.
25 And that is something that in theory there's a process of

1 dealing with foreign availability in our Statute. But, as a
2 practical matter nobody avails themselves of it. And that's
3 one of the things that I think the companies can do a better
4 job taking a step back beyond the individual license
5 applications. Because, those are just individual
6 transactions.

7 So, the short answer is there's a way to do it. We
8 probably don't do it as much as we should.

9 Mr. Patterson: Just a quick one. It kind of goes along
10 with what you just said, that there kind of a do loop here
11 that says something along the lines of, well if not us, then
12 others. If other's, why not us? And what we find too is
13 that there is a terrific, chilling affect on the vendor base.
14 When they want to be part of a military program. But,
15 realize that when there part goes into a military object they
16 then come under scrutiny of not only Commerce, but State and
17 our own regulatory encumbrances. Is there any way that you
18 see coming down the pike to make exception for these kinds of
19 folks? To give them hope. The fact is they just don't enter
20 the market.

21 Mr. Borman: Well one is that I think, and maybe that
22 will be something that comes out of your work. Is that
23 certainly at a minimum it would be to try and measure that or
24 access that in someway. What is our lost opportunity, if you
25 will for people who decide I just don't want to participate

1 in the system. Even though they may have something very
2 valuable to offer.

3 The second thing is that I would have to say that the
4 State Department system is really focused on national
5 security and foreign policy. And they don't necessarily look
6 to take into account economic factors, and rightly so. They
7 say, look at national security. The desire to sell something
8 should override that. But, I think that this whole element,
9 the element that you raised right now, is not part of the
10 equation on that side. And that may be in part because of
11 what State sees as their mission, and it may be also be in
12 part what Defense plays in that. The individual internal
13 units in Defense play in that are primary interlocutor on the
14 Assisted Defense Security Administration.

15 My experience is that ATL plays a far lesser role. But,
16 that would be another way to get at this. With respect to
17 the internal discussion and our system. Because we control
18 so many items that are in the U.S. economy, very few
19 personally speaking of items that are subject to our
20 regulations actually need a license to go anywhere in the
21 world to most places. We issued this year about 16,000
22 licenses, and that's by dollar value roughly about one
23 percent of all U.S. exports. That's another way to educate
24 the smaller companies and vendors. To say, just because you
25 participate and you're in the melee doesn't necessarily mean

1 you would be subject to restrictions.

2 We've made a major effort over the last year to go out
3 to the airspace industry and get people sensitized to
4 classify their products and understand what the ramifications
5 of that are. In some cases, so you're right. In other
6 cases, to make them less scared, if you will.

7 One other thought on this, several years ago we made a
8 major decision on how to deal with controls on high end
9 general microprocessors and the decision in the
10 Administration was the Defense Department thought the
11 criteria for controlling them should be changed. And the
12 rationale was that these were now being used to upgrade flight
13 panels in Apache helicopters and fighter aircraft. And so,
14 they were concerned about that the control wasn't stringent
15 enough. But, after I think a good analytical process it
16 became clear that that was such a minuscule part of the
17 semiconductor companies market, that to go to that would
18 really make it much more difficult for those companies to
19 compete internationally.

20 So, we came up with a construct that served the purpose
21 of making sure that the companies that might try to acquire
22 these to operate their own weapons systems could do so. Or
23 could do so without pain and effort. But, that still allowed
24 the U.S. companies to compete and stay a head of the
25 competition on the commercial side. The market was

1 overwhelmingly commercial. But, that is where the position
2 came down, it has the potential to create more uncertainty
3 for U.S. companies in deciding whether they want to bid on
4 projects or develop projects.

5 Dr. Brandt: I actually was going to follow up on, Jerry,
6 you first question and the other questions that have come.
7 This is a tremendously complex process, involving three
8 tremendously complex departments. And Jerry had asked,
9 actually the question I wanted to ask about other alternative
10 available commercial processes or products availability. And
11 you had said well, we have that criteria but we don't choose
12 it that often. And I guess that leads to the question of, I
13 realize that the State Department owns a portion of this, you
14 own a portion of this. Defense plays in both portions of
15 this. How well do the three agencies work together? Who
16 mediates when there's any impasse? And how are those
17 criteria established, if in deed there are criteria which
18 talk about the alternative commercial availability. And why
19 aren't they used more in that kind of a situation?

20 Mr. Borman: Let me start with the latter. Then come
21 back to the preliminary question. For example in our statute
22 the Export Administration Act, there is a statutory right for
23 any member of the public - exporter to file a foreign
24 availability petition by product. They can say this country,
25 this country, this country. The branch of the burden is on

1 the Licensee Board, and yes they have that right. Now, we
2 the government could, of course initiate that ourselves as
3 well.

4 In some respects it's not as easy as it might seem to
5 actually get industry to give you enough data to really make
6 that concrete case. Another variable is that we have these
7 multilateral export control regimes. And, so in theory all
8 the member are more or less agree these items should be
9 controlled. And we'll all control that process the same.
10 But, in practice our system of control is much more
11 extensive. And there - even though they're controlled the
12 companies often come and say, look I'm trying to sell this
13 item to China, and it's taken you guys four months, or five
14 or six months to make a decision. And the Japanese take 30
15 days or less to make a decision.

16 So, they're going to go to the Japanese supplier. So,
17 that is something to some extent is a matter of emphasis in a
18 particular administration in the Executive Branch how much do
19 they want to really focus on this?

20 Dr. Brandt: If you had to identify the emphases now
21 where would it be, in terms of the administration? You said
22 it's a question about the system -

23 Mr. Borman: Well, in part it's timing. Because
24 Commerce, State, and Defense all have essentially new
25 political teams. And so, that remains to be seen. Sort of

1 what people will emphasize, but certainly this kind of issue
2 we're going to fly up for our Secretary, who just came in.
3 Say, this is certainly something we would propose. And, of
4 course they have their own agendas. But, we will try and
5 raise that up in terms of interagency interaction. Generally
6 speaking it's good. When there are friction points, for
7 example on license application there's a process, a formal
8 process laid out in the Executive Order that escalates
9 through the political levels all the way up to the President.
10 And I think that actually works well. Where it's harder is
11 when your talking about policy. Is what policies - what
12 items should be controlled, what items de-controlled?
13 Because there's no formal mechanism now. NSC ultimately is
14 arbitrator. What happens if we think something should happen
15 other agencies don't or vice versa. They go to the NSC, and
16 please review this.

17 But, people have to - again it is sort of self
18 initiation almost. The process is available, but the
19 agencies have to take the initiative and say this is a big
20 enough issue, and here's the approval. A lot of it also is -
21 depends on what industry does. For example in computers,
22 they've been very successful in putting their position
23 forward for several administrations. Is why we need to renew
24 the license, because of market share. For thermal imaging
25 they were not as successful.

1 Dr. Brandt: And actually the real question is where is
2 the policy now. And the answer is -

3 Mr. Borman: That's right. In part because we have
4 different teams. Now that microprocessor example that
5 actually went to the President. That decision had to go all
6 the way up. But, you are right. That's why I think, as you
7 were saying your ultimate report deals with this issue that
8 would be very helpful. The second half of this
9 administration will be coming in and looking at this.

10 Mr. Kozlowski: Why did that decision have to go to the
11 President? Did Commerce have a position, and industry was
12 objecting to it?

13 Mr. Borman: No. Commerce and State had a position which
14 was different than Defense's position.

15 Mr. Kozlowski: So, it was decided between the
16 departments?

17 Mr. Borman: That's right. Institutionally, our role is
18 to represent industries interest. But, we try to make sure
19 at
20 Commerce that it is a well founded interest. Our job is not
21 simply to take whatever industry says and pass it forward.

22 Mr. Kozlowski: But, it's in the government.

23 Mr. Borman: That's right.

24 Ms. Giglio: And that particularly explains the role of
25 the Defense Department since Commerce and State are the only

1 departments authorized to issue licenses. DoD's role is only
2 to review and advise.

3 Mr. Borman: Yes. Although, in our system under the
4 Executive Order they make recommendations in many agencies
5 disagree. That puts it into this escalation process on the
6 State side. There's no formal mechanism. If State and
7 Defense disagree on an item. And outside Defense is about 25
8 percent of it, 75 percent is State.

9 Dr. Abbott: One of the standard comments, from
10 particularly European defense industrial base. Is our
11 restrictions on third party transfer are so onerous that when
12 we have a technology, and the Europeans would like to buy
13 from us. And third party requirements make it an
14 unattractive purchase, forcing them to develop the
15 technological base that they otherwise would not have
16 developed if they could simply buy or license. Have you seen
17 in your work evidence to support the allegations that I've
18 just described?

19 Mr. Borman: Well, certainly. I think on the dual use
20 side, the example that I gave about the Chinese being in the
21 night vision market. That is a preeminent one. There is a
22 focal plane array and it sort of was emerging technology over
23 the last few years. A wide commercial market, and relatively
24 few suppliers of that. One who happens to be in France. The
25 French company sold it to the Chinese. And the Chinese have

1 a very sophisticated process now. And there are probably
2 other examples that I think I think one of the areas that we
3 could do better on is having the ability to take a step back
4 and identify those in a more systematic way. And not just of
5 a sore of anecdotal way.

6 Mr. Patterson: Matt, thank you very much.

7 Mr. Borman: My pleasure.

8 Mr. Patterson: We appreciate your coming.

9 Mr. Borman: One other thing you folks should be aware
10 of. Another function that we have in our bureau is defense
11 industrial base related. So, we do a lot of industry
12 specific surveys. Usually on behalf of the services. And we
13 also have the Defense Allocation System, I don't know if that
14 is also part of the calculus here. If that plays a role on
15 the acquisition side? The ability to say you need to do this
16 before you do that for the private companies.

17 Mr. Patterson: It is important. Because we look to you
18 as the advocate for the industrial base where it bumps into
19 Defense. Well thank you very much.

20 Mr. Borman: You're welcome.

21 [Applause].

22 Mr. Patterson: We are adjourned. Our open session is
23 officially closed. And I appreciate all you attending. It's
24 been very helpful to have you in the room, so that you can
25 then take back to your constituencies, that yes indeed they

1 are about America's work. Or at least that you will
2 understand better what we're doing. And that's our purpose.
3 To be open and transparent. Thank you very much.

4 [Whereupon at 11:45 a.m. the committee was adjourned].

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