



ACQUISITION OF WEAPONS SYSTEMS

Lieutenant General F. S. Besson, Jr., USA

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Reviewed by Col E. J. Ingmire, USA on 4 February 1964.

INDUSTRIAL COLLEGE OF THE ARMED FORCES
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Acquisition of Weapons Systems

27 January 1964

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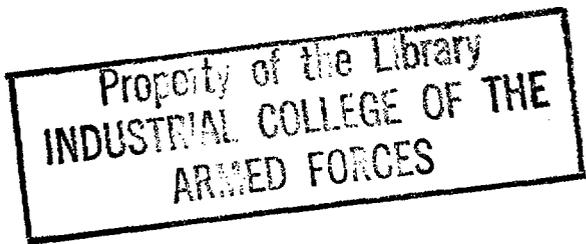
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INDUSTRIAL COLLEGE OF THE ARMED FORCES

Washington 25, D. C.

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27 January 1964

ADMIRAL ROSE: In our examination of national logistics management up to now we've been primarily concerned with the functional areas of management; that is, production, personnel, financial, marketing, research and development, and labor-management relations. We now turn our attention to the acquisition and management of material at the level of the Department of Defense and the Department of the Army.

Our speaker this morning, General Besson, has this job for the Army as the first commander of the Army's relatively new U. S. Army Materiel Command. You all remember when it was organized about two years ago. General Besson is charged with the development and provision of material and related services to the Army, and his principal functions include R&D; testing and evaluation; production and procurement; and the distribution, maintenance, transportation and disposal of material.

General Besson will discuss with us this morning, some of the procedures and problems involved in the development, procurement and deployment of weapons systems.

It is my pleasure to welcome back to this school General Frank S. Besson, U. S. Army.

GENERAL BESSON: Thank you, Admiral Rose. Gentlemen:

In talking to you today I will probably spend a great deal of time on or-

ganization because this has been my major concern in almost the past two years. It was two years ago this coming March that the Army announced its plan to go into a major reorganization. And at that time I was put in command of the planning group for the Army Materiel Command. In August a year-and-a-half ago we became operational. Now, to look back, the Army materiel functions had been largely handled by seven technical services; I won't name them all - the Engineers, Quartermaster, Ordnance, the Signal Corps, etc.

These technical services were put under me for consolidation. Now, when I say the materiel functions I have to leave out the other functions because the technical services have certain responsibilities for personnel in their own services; they have responsibility for training; they have responsibility for organization and doctrine. All these things were changed when the Army established its new organization.

If you'll give me the first chart we'll go into this. I like to over-simplify because it makes things easier to understand. Basically, the Army's mission in peacetime is shown on the board. First you have to establish a doctrine. That is, how you're going to fight; how you're organized to fight; and what kind of equipment you'll need in order to fight. Materiel is getting those things with which you will fight. The personnel does the fighting; and then you have the job of training, which is integration of the doctrine, the materiel and the personnel.

Now, these functional divisions of the Army mission were the basis

for the reorganization of the Army a year-and-a-half ago. I've shown here the major Army components which do not have to do with the fielding of unified forces. This is how we accomplish our mission of preparing troops for assignments to the unified forces and for then engaging in whatever operations - cold or hot war - may be required.

The Combat Development Command at Fort Belvoir is responsible for doctrine. It decides how we're going to fight; how we should organize; what TOs&Es we ought to have; and what kind of materiel we should have. My job is to get the materiel, and then the Continental Army Command takes the materiel, the doctrine, and the people it gets from the Office of Personnel Operations, and translates all of these things into trained, fighting units.

I've shown up on the top here the Defense Supply Agency so as to get in clear context my relationship with the Defense Supply Agency. Because, I've been asked by some high sources at times, if I work for Andy McNamara. I wouldn't mind, but I don't. The Defense Supply Agency is responsible for common items of supply for all three services. Now, the list of common items is growing. But this is fundamentally the difference between the Defense Supply Agency and the supply agencies of the services.

The Defense Supply Agency handles the common items - food, clothing, construction materials and medical supplies. We're getting down, now into aircraft common parts; automotive common parts. Those things which

are common to the Army, I am responsible for; the whole gamut of the logistic chain from inception to disposal.

The next chart. On the Army Staff we have a Deputy Chief of Staff for Operations who is responsible for the Army's strategic plan. This tells how the Army is going to fight the war. Then there is a Chief of Staff for parts development, and he's responsible for the scheduling and the planning for the development of the forces. He, really, is the coordinator of the Combat Developments Command, the Army Materiel Command and CONARC, in the general business of translating ideas into into trained troops.

We have an Assistant Chief for Research and Development who basically looks to me for my development program. Personnel is manpower input. Logistics handles the distribution problem. The procurement aspect of logistics really by-passes the Army Staff and goes to the Assistant Secretary. This is the one area in which I really deal directly with the Assistant Secretary. And this is not on what we buy, which is DCS-LOG's job, but how we buy it. I go to the Assistant Secretary of the Army for Installations and Logistics.

One thing that happened in this organization - and I didn't expect it to happen - I expected that I would be right up to my ears in defending the Army's budget on the materiel side. This has not come to pass. And frankly, although I was surprised I was not disappointed, because I have very little influence on what really makes up the Army Materiel budget.

This thing is rehashed so many times at so many different levels by so many people, that it gets pretty well ingrained by the time it gets to the Congress, and then all Congress does is take its little hammers and chisel away at it. And I'm just glad that I don't have to stand up there and try to pick the pieces up and put them back in there.

I would say that I would suspect that in the days and years to come as the Army Materiel Command gets less embroiled in the problems of re-organization and gets down more into the details of running its own job there will be more and more tendency, perhaps, to lean more heavily on the Army Materiel Command for the defense of the budget. But at the present time the Research and Development budget is handled by the Assistant Chief for Research and Development, and the Logistics budget is handled by DCSLOG.

Now, you must remember that my responsibilities basically stop at the waterline in the United States. I have the terminal commands of the Army under me and I load the stuff aboard the ships. My basic responsibility ends at the time I put the material on the ship. And it's DCSLOG's job, actually, through the unified command structure, to look down the logistic practices overseas. Of course, I have a moral responsibility which I can't shirk, which is to make sure that the equipment, supplies, maintenance and the practices that I send overseas do, in fact, work. And as a consequence I have people overseas all the time in direct contact with the Army elements that are using the equipment that we send overseas.

The next chart. Now, to give you some idea about the size of the Army Materiel Command, there are a few figures up there. We spend about \$9 billion a year. I support a materiel inventory in the hands of troops, in the depots, of over \$18 billion. I started out with 178,000 people, of whom some 22,000 were military. That figure has gone down to about 15,000 since I took command a year-and-a-half ago. I inherited 233 installations and activities scattered all around the Continental United States. And there is one installation in Alaska and one in Panama.

Just to give you an idea of what \$1 million looks like, a million dollars in \$1,000 bills is seven inches high. So, \$1 billion is about the height of the Washington Monument. That means I spend the height of the Washington Monument in thousand-dollar bills seven times a year.

The next chart. Well, here's the way we organized. I decided that we would go on a commodity basis. That is, that I would have a commodity manager responsible for everything having to do with a particular piece of equipment. In setting this up I went along the traditional lines of the Army to move, to ship, and to communicate. Our commodity command covered the spectrum of Army materiel. Under this command there are aircraft, general purpose vehicles, our railroad equipment and our harbor equipment.

Under the weapons command are the tanks and the guns. Under the missile command it's self-explanatory - munitions, including atomic. And finally, the electronics command or communicating command.

Now, backing up these five commodity commands are a test and evaluation command which is responsible for proving out the equipment developed by the commodity commanders. This is an independent check that the equipment developed will, in fact, meet the needs of the user, and can, in fact, be utilized successfully in the field.

Then I have a supply and maintenance command which is responsible for bridging from the commodity commander in to the user. He is an independent guy who makes sure that the commodity commander doesn't get so engrossed in materiel that he forgets the user. Now, the supply and maintenance command is located here in Washington, and as such, I have departed from normal traditional lines of organization in my own headquarters, and I have no supply and maintenance or ^{transportation} personnel in my headquarters.

I decentralized the responsibility for these actions to my supply and maintenance command. He, in fact, is my Deputy in dealing with these commodity commanders on supply, maintenance and transportation. He doesn't control what goes into the system or what it is that goes into the system; that's the responsibility of the commodity commander; but he does control how it is handled in the system and what kind of procedures they use to translate it from the depot system into the hands of the user.

Up under my headquarters I show an item marked "Project Managers." And I've introduced project managers into the Army Materiel Command on a very important scale. I did this for several reasons. In the first

place, project managership is a growing school of modern management. I borrowed what I could from the other services. I went up to Admiral Rayburn who ran the Polaris System, which was the one real project managership in the Navy - and a very authoritative one, I must say - and I talked to General Shriever and his folks about how the Air Force Systems Command handles project managers through their system. Basically, I'd say that I borrowed something from both the Air Force and the Navy. I borrowed the authoritative control from the Navy and I borrowed the broad scope of the utilization of the utilization of project managers, from the Air Force.

Another reason that I introduced project managers into the system was because in picking up this new organization one of my primary considerations was to make sure that we did not drop the ball. I had a tremendous job in picking up installations and people and welding them into this new organizational structure. As an example, there are some 3,500 people, or rather, there were 3,500 people in Washington two years ago who don't now exist in the jobs they existed in before. These people either left Washington to go out into the field, or they've left the service. There are only 2,800 of them in Washington now. And they're all working at different desks, in different buildings, with different people, under a different organizational structure.

It might be interesting to know how we started off doing this because it's another example of how a simple approach will work. I said that a

staff officer, which is all these people in Washington really are, only does three things; he either loses a piece of paper - and I said we weren't going to do that in the Army Materiel Command; which leaves only two things for him to do. The other two things he does are, he either signs a piece of paper and tells somebody to do something, or he prepares a piece of paper for somebody else's signature. In it's real simple form this is what a staff officer does.

So, I said that wherever these guys are, we'll just change the name over the door and if they signed a piece of paper before they'll sign it. If they prepared it for somebody else's signature, they'll prepare it for the signature of a nucleus which I established in my headquarters, and then they'll send the paper over there and we'll take up the signing of the paper from there on. This worked. And it had to work because it was all we had to start with.

I think it's an interesting story about how we started too, because we were originally supposed to take a year to get operational. After about six months we started picking up bits and pieces of this thing, and for one reason or another Secretary McNamara asked how quickly we could put this thing into being. We started the middle of March and this was the end of April when he asked. I said, "Well, I can be operational on the 1st of July," which seemed to be a reasonable time - the first of the year. By that time I was tired of all the assistance I was getting from all the people who were telling me how to reorganize this command and how to

do these things, making sure that I wouldn't make any mistakes. I was real anxious, actually, to get going.

Well, the Army Staff said I couldn't possibly do it that quickly. I said, "All right, just tell Mr. McNamara. I told him I could, and you tell him you said I couldn't." I said, "I wasn't given command of this job to start off telling Secretary McNamara what he couldn't do." This leads me back to another reason why I have project managers. I found that project managers were in high repute in the top levels of Defense and I couldn't see any reason why I shouldn't go along with them.

Finally, another reason that I have project managers - getting back to my basic idea - one of the central things I had was to maintain the continuity of operations and the continued support of the military forces. One way it seemed to me to do this was to put some people on top of certain areas embodied so I would know exactly who was handling those proposed elements. And you'll see that I applied this to a very substantial portion of my business.

Finally, I guess another reason I have project managers is because most everybody, including myself, wouldn't have given much for my chances of surviving this organizational procedure. And I decided that if I was going to go down I was going to go down doing it different; I didn't intend to go down just doing the same old thing.

I've listed here some of the criteria that we established for project managers. Really, the central thing to know about project managers is

that it's an exceptional system of management. You can't apply it to everything because it is then no longer exceptional, and furthermore, the thing will fall apart from fracturization of your whole organization. These things are fairly self-explanatory. What it means is that a thing wants special attention. And you have to be careful as to what is special attention. But if any one of these factors or any combination of these factors seem important that this thing be placed in an exceptional position where you give exceptional authority and look for exceptional performance, then we have started the project manager system.

I must say that when we went off to do this job I ended up with a lot more project managers than I expected to have. My staff really started running with this thing and I really had to tackle them because they got me out a lot further than I really meant to be. But frankly, I'm glad.

The next chart. The list of project managers changes from time to time. I now have 33 project managers. They actually control expenditures of over \$1 1/2 billion in payments, and \$3/4 billion in RDT&E. And, assigned to the project managers' staff are 2,431 people. About 80 people on the average are on the project manager's staff. And it averages out about one person for every million dollars, which doesn't seem to me to be unreasonable. The numbers on here are my direct RDT&E; it's about 50% of each program and is under the project manager's direction.

I have the project managers report to the commodity command. They don't report in to me directly. I'll show you how they work, on the next

chart. This is a project manager who reports to me. And, reporting to me he is over my staff. It's a direct relationship between me and the project manager. He is responsible to me for direction of the program. He has his own staff, a small staff; it runs from 10 or 15 people up to a maximum, which is our ZEUS project, of about 300. He has my authority to issue orders any place across the command, to get his program done.

Now, he has to have a plan. He has a master plan which is approved, and this master plan is staffed. Out of this master plan we establish the schedules and these are applied as we did in the resources that he's going to have to use. After that he's on his own. And I, of course, get the weekly reports; they're just sort of highlight reports. I get regular monthly reports on the schedules, but my staff is into the picture only so much as the project manager or I want to bring the staff in. The staff has no responsibility for supervision of the project managers.

The next chart. Now, a project manager under a commodity commander reports directly to the commanding general of that command. Here again, the staff of that command is a one-to-one relationship between the project manager and the commander of the commodity command. Here again, despite the fact that this project manager is in the subordinate command, he has my authority to issue orders across-the-board just as though he were reporting directly to me.

Now, in exchange for this authority which I've delegated to him, he has

the responsibility to come back to me to keep me advised if things aren't going the way he wants. In effect, he has more responsibility than the Commanding General of that mobility command, because he can issue orders to the other commanders that the Commanding General of the mobility command can't issue. And so, he has to be responsible to me for this special delegation of responsibility.

Now, the question is raised, "Suppose he and the commodity commander don't get along?" Well, that's one of the reasons for the red line; he's supposed to come to me on this line. I was told that this wouldn't work, and frankly, I didn't anticipate that it would happen very often; and it hasn't. It has only happened a couple of times. I might say that this reminds me of the recruit sentinel on a gate who was responsible for stopping all the incoming cars to insure that they had a post sticker on them. And the Major General commanding the post drove up in a big black car, and he wasn't going to have any stickers on his car to show where he came from. He stuck his head out and said, "It's all right, sentinel, I'm the CG; driver, drive on."

The recruit came up to the ready with his rifle and said, "Sir, I'm new around here and I'm trying to do what's right. Would you just tell me, who do I shoot first, you or the driver?"

I feel that, generally speaking, reasonable men looking at the same facts will come to the same conclusions. So, I don't really anticipate difficulties between the project managers and the commodity commanders

under this unusual relationship which I have. This has only happened twice, and not in the same place. If it happened twice in the same place some drastic action would have to be taken. As a matter of fact, some drastic action was taken one of the times that it did happen. There was not only a conflict but a complete misunderstanding, and there had to be a change of people. And I might say that it wasn't the project manager who went.

The next chart. The basic principle of the project manager, aside from the fact that it's an exceptional system of management, is that he has a staff; he's not an expeditor. Well, this is what I found the Army had when I took over. They called them project managers, but they weren't. They were merely expeditors - a man, a desk and a girl; also a pencil and telephone. These guys are responsible; they get the money. They control the dollar resources. When they go to the other commands they go with a checkbook and they order and pay for the resources that they're going to get out of that command.

Finally, because of this delegation of authority, they have a responsibility back to me; they're wired in to me. And I either write or indorse the efficiency report of every one of these project managers.

The next chart. People told me about the problems of project manager-ship. This is a chart that we've had from the very beginning when they told me what the problems were going to be. About that time I heard a story of an airplane flying over the Pacific. I've told this story a lot of times but

I still like it. The pilot lost an engine and had to put down on one of those little islands out there where they were building an anti-missile warning site. There was a battalion of marines out there defending this place and they hadn't seen a girl for a long time - six months, I think it was. The plane coming down was on a pilot trip over the Pacific and consequently wasn't carrying any passengers; it just had three hostesses kind of free-loading along.

So, the pilot got these three girls in and explained to them the difficulties of landing on this atoll and the fact that there were a lot of hungry wolves down there in the form of marines. So, he said to the first little English girl, "Janet, what are you going to do?" She said, "As soon as I get out of the airplane I'm going to run and run and run; I'm going to keep away from all those marines." He said, "That's a sorry solution; those marines are trained up to the minute; you won't get anywhere. Furthermore, it's a real small island."

Then he asked the American girl, "Ruth, what are you going to do?" She said, "I'm going to find the commander of that battalion of marines and he'll protect me. I'll just stay right next to him." The airplane pilot who had served in the Air Force said, "From what I know about the marines you can't trust any of them, officers or not."

Finally he asked the little French girl, "Michele, what are you going to do about this problem?" And she said, "What eez theez problem?"

Well, that's about the way I felt about the problems of the project man-

agership. They said the guy was going to free-wheel and that's the reason he is put up there, so he can free-wheel. They said he would give conflicting instructions at the bench level. By that I mean that with all of these project managers cutting across the organization, everybody down the line would be hopelessly confused. Well, the fact of the matter is that very few of these lines get down to the same desk. And even if they do get down to the same desk the project manager doesn't cause that problem; the problem exists.

The fact that the project manager is looking at it, merely brings it to light and gets it out from where the staff tries to hide it, hoping it will go away, and gets it back up into the command channel where somebody, reluctantly or not, has to take action to get it solved. They say it's an invitation to meddle. And I'm referring now to people like the Army Staff and DOD, who will reach down and meddle in my business.

Well, from what I've seen of Washington, you can't stop them from meddling. Consequently, I prefer to let them know where they're going to meddle and get it fixed and finite so they go to the proper place to meddle. And my project manager, like all the rest of my staff, is enjoined that he does nothing that anybody tells him, except me; that he doesn't have to accept guidance from anyone if it's contrary to his own personal belief as to how things ought to be done. But he is responsible to come to me and tell me that he doesn't agree with the instructions that he's getting from someone else.

So, I can't stop the meddling; in fact, I encourage it. I subscribe to the theory that you don't have to take all the advice you get, but you're wrong if you don't get the best advice you can. And if there are smarter guys up on top-side, I just want to hear what they have to say.

By-passing the command channel, I've already discussed that. This has not been a problem. Both my staffs and my commanders - and my project managers - have been living with this for a year; we put this project manager system into being the first day I went into operation. Of course, like any other system, the thing will thrive or fail on the quality of the people that you have. I look forward to the day when the project managers, assuming that this system survives - and I think that it will - will be a training ground for future Generals, certainly, in the logistics business in the Army.

Many of my project managers are in that realm at the present time. I mean, they're in that status at the present time. On the other hand, starting as quickly as we did, we were not able to get all of the people who are young enough and still have a future as Generals in the Army, and we kind of had to go with what we had. But I've always had a philosophy that if you take the man and give him the authority and responsibility, and tell him what you want done, you'll be surprised at how well he'll do the job; and how a man will grow to fill the stature of responsibility placed upon him. I have found this to be true. My project manager system has been working extremely well.

The comments that I get from industry are most favorable. In fact, the project managership has gotten to be sort of a status symbol. If you are not the project manager you're not really in the elite. And this gets rather harmful, as a matter of fact, because I intend to introduce new project managers, but as the project stabilizes I want to put it back in the functional system. And I find that the pressure is a little strong sometimes to keep me from turning them loose and putting them back down again.

The next chart. Now, talking a little bit about some of the things we are doing outside of the actual organizational area, we like everybody else, are tackling this contract improvement program of Secretary McNamara's, and I've shown on there what our goals are for '63 and '64 in terms of cutting our cost-plus-fixed-fee contracts in half; stepping up our incentive contracts; stepping up our firm, fixed-price contracts. This is a practical area where we are facing some very serious problems aside from the general problems of more sophisticated procurements that are being pressed upon us.

I have the job of reorganizing this year the procurement structure. And, like everything else, I've got sort of a pinochle deck - about six of everything - and I have at least six different procurement systems, ranging from highly centralized systems, as they had in the Transportation Corps, to decentralize on a geographical basis through 11 procurement districts that we had in the Ordnance Corps. So, I've been struggling

with how we would pull this into one uniform system.

Frankly, my efforts in this direction have been pretty well held back by DOD Project 60 under which we're engaged in a test program at the present time which will tend to place all of the field administration of contracts under a defense organization. Obviously, with this thing in being we're actually in a test phase in one district at the present time, in Philadelphia. It's quite obvious that I have to tailor any organization that I want to have, to fit this concept if it goes through. And I have no doubt but what it will go through, although I don't like it. I prefer to run my own business, and I think my business is big enough so that you don't have to peel off pieces of it that are cut right across my basic responsibilities and hand them over to somebody else.

On the other hand I can recognize the concern of the Defense personnel who see the Army, the Navy and the Air Force, each with management personnel sitting in the same business in the same city, sitting in the same building in the same city, and going out and making industrial/^{capability}surveys and security surveys of the same plant. This has happened, and this is one of the ills which we in the services should have corrected before it got to the attention of DOD. Because, we could have done it by a simple getting together of the three services and parceling out these responsibilities so that we eliminated the duplication.

To me this is one of the big lessons of this Project 60 business of DOD; that where we have ills, no matter how small they may be, and relatively

considering the size of the job we're doing, this job of duplications in contract administration is relatively small. It's incumbent upon us in the military services to correct these things ourselves, or else they'll be corrected by PRs.

The next chart. This last year we've pioneered the multi-year procurement. What we do under a multi-year procurement is, we advertise for a one-year buy and then for an estimated two or three-year buy. And we evaluate the prices based on the one-year versus the three-year buy. This is on the 1/4-ton tactical truck where we went out on a three-year buy. This thing hasn't been awarded yet; there has been a little jurisdictional haggle that's up before the GAO. But fundamentally, the difference between buying this on a one-year and on a three-year buy basis is a saving of about \$3 million.

This gives the contractors an opportunity to establish a continuous work schedule and plan. It's not on the basis of thinking you've got to build up a work force and then may have to let it go. He is assured continuity of production. Now, of course, we don't know that we're going to get the quantity that we prescribe for the ensuing two years; this is subject to the whims of the budget-makers and the Congress. So, we have to set aside a certain amount of money for cancellation charges unless this thing doesn't go through.

Furthermore, we have the problem of how do we take care of price escalation. Initially in the automotive industry we just took the flat automotive index. But this didn't prove satisfactory and this year we've adopted

a new system - the next chart, please - working with the Bureau of Labor statistics. We have a weighted index that we apply. We establish this index at the beginning of the contract and then we evaluate it for each of the succeeding years for the follow-on buy, and modify the contract according to the factors which involve 40% for labor; 40% for materiel; and 20% for productivity and competition.

The next chart. It looks like this. Up here we show the materiel index. This is why we have to use different indexes, because they all change. Here is the level product index which was going down. They tell me it was going down because there was a lot of crap that we were getting rid of, but now it has begun to climb back up again.

On the other hand, the motor truck industry has been generally on the down scale because of increased productivity; despite the fact that wages and materials have both been going up, the actual cost of motor vehicles has been going down. So this, actually, is a type of index - the composite index - that we will use in adjusting the prices for the succeeding years on the contract.

This does several things for us; it stabilizes our business; it gives us better prices; and it reduces our workloads in the ensuing years.

The next chart. Now, to summarize what we've done, we've posed command control in this first year-and-a-half, and within three months after we had taken over full responsibility for these slices of the tech services, we were into Cuba, and we got to Cuba which was a real test. We intro-

duced project managers; we had the continuity of operations established; and I thought the first year of this job would be the hardest. Actually, I found it wasn't so. People were so concerned with the job that I had that they pretty well left me alone and let me run it. But now they're beginning to pay more and more attention to how I'm running it and why I'm running it the way I am. So, I've got a big job of shaping up the area and shaping up the field organization. And I'll end up by saying it looks to me like the honeymoon is over.

Gentlemen, that completes my remarks today.

QUESTION: From your remarks, I was just wondering what the status of tech service officers is, and I'd like to ask if you would address yourself generally to the status of tech service officers. And (1) Who may be project managers? (2) Are the various commands under the Materiel Command, or the various tech services?

GENERAL/^{BESSON:} Let me answer the second question first. One of the reasons I think we probably came up with five commands rather than six or seven - seven was the magic number of the technical services, but the Medical Corps wasn't really effected by this organization - at least as far as I was concerned; it was on the training side a little bit - and that brought the number down to six. And I couldn't have six commodity commands because this would look like I was just changing the names of the tech services.

So, I would say that I don't look at them in any sense as an inheritance of the tech service role. In the first place, the mission is very much narrowed; it's material-oriented only. One of the things when I was Chief of transportation that I spent more time on than I spent on any other one thing, was personnel. And my staff grumbled that I was the Personnel Manager and I wouldn't let them do their business. Well, I felt it was too important to let them do it. I felt that the real future in what the Army had in the way of transportation was in the hands of the people whom I was managing. So, I spent a lot of time looking at the people.

Of course, I'm prejudiced in this particular area. I think it's pretty good to break the number of people up into smaller lots where somebody in authority and with, I hate to say experience because that sounds like age has to go with it; but I do think it's desirable to have somebody with responsibility and judgment and authority, who looks at a group of people rather than putting them all more or less in one big pot, which is what we have now.

But I say, this is a personal idiosyncrasy of mine based on my own personal experiences.

Now, getting back to your first question as to what we're doing about the personnel business and what are the futures of the tech service officers, there's no question in my mind that increasingly as warfare becomes more and more based on technology you have to have people who understand

the technologies, to development your equipment, to maintain it and to service it. Consequently, any idea that we're going to manage, fight and win the next war with a bunch of horsemen is as passe as the horse. I also feel very strongly that unless you have the technically-qualified people to help make the decisions that the Army wants made, those decisions are going to be made by technically-qualified people outside the military.

We've seen a lot of this in recent years, and these are good people making these decisions. They may be making good decisions, but I insist the military cannot forego its responsibility to participate in decisions on the weapons systems that they're going to use in the future; and the only way you're going to be able to do that in the technical atmosphere which governs all of our military operations today is to have technically-qualified people to do it.

Now, within the Army Materiel Command I don't have any responsibility for personnel other than those 5,000 officers, of whom about 10 or 12 percent are combat arms and the rest are tech service, that I have under my command at any one time. Out of 5,000 about 1,500 of them are 2nd Lieutenants on their two-year tour, which makes me look nice number-wise, but it doesn't help my job very well.

I recognize my responsibility as a sort of senior logistician in the Army to look after the other logisticians as much as I can. I'm having a study made, what I call the "Army Materiel Board," which I really took over

from Ordnance and broadened its scope, at Aberdeen, and I give them long-range studies. This is one of the studies that they're working on now, as to what I should do within the Army Materiel Command to influence the personnel policies of the Army. I have my own little score-sheets. I keep track of the number of General Officers who are tech services Generals today - what they were two or three years ago - and anytime I find that getting out of balance I intend to fuss about it. I keep track of a number of tech service officers, and particularly the officers of my command who go to the senior service schools, and I intend to see that we get a fair brushing of those people.

Finally, as to who can be project managers, which is another aspect of the question you raised, up to the present time, in the first place, they are military. I made that determination that I was going to have them military because in this formative stage it wasn't that I didn't think qualified civilians couldn't do any job that an officer can do, but I find it a little more difficult to move civilians than I find it is to move officers. And in this original changing atmosphere in which I was working during the trial period I felt it was better to start off with officers because if I wanted to move them I could move them like that (snapping fingers). You can't do that with civilians very well.

Most of my project managers are tech service officers. I have a few - aircraft weaponization is an infantry officer. The new weapons helicopter, I think, is a combat arms; I believe he's an artilleryman; I'm not sure of

what his branch is, because they happen to wear the General Staff insignia in my office. But I'd say, of my project managers all but three or four are tech service officers.

QUESTION: General, we have now all three departments reorganized our materiel management functions. All three are in the procurement process in various materiel management functional areas. The basic question, though, is what is the quality as far as the Army is concerned? Have we improved the quality of service to the users? Have we increased the availability of _____? Have we increased or decreased the down-time on critical equipment as a result of these requirements being made in the last three or four years?

BESSON:
GENERAL/ Well, the Army has only had its reorganization in being for a year-and-a-half. And for me to tell you that in a year-and-a-half we'd have made a major change in how the doughboy at the end of the line in Korea or Vietnam looks at the picture, would be just as false as it could be. We are doing a more sophisticated job in our procurement operations today; there's no question about that. We're spending our money better and more wisely. I didn't vote for this reorganization, but after I was in it for awhile there was no question in my mind that in the Army, anyhow, they needed some kind of tight hand over what the technical services were doing in certain areas. The technical services were running in different directions and some of them weren't doing a good job.

So, my influence is being felt; there's no question about that. We are

doing a better job on procuring. On the distribution system we are in the process of changing that. And the only reason we're changing is, because we had about 12 different distribution systems that I inherited and had to weld into one type of distribution system. But any change in the distribution system is based upon automatic data processing equipment. Every piece of materiel in the world today, practically, moves on a 2 x 6 card - a punchcard - and it takes the machines to gobble up these punchcards. You have to program them all the same way if you're going to have a unified system.

We're in the process of making that switch-over. It will take us about a year before we get that done. When we do that I believe we will have a better supply system in the Army than we've had before. Because, I'm establishing a direct line between the user in the field and the commodity commander. And the commodity commander will have control and responsibility for not only the procurement of his assets, but the distribution of them and the fact that it does work when it gets in the field.

Basically, the services, so far as the guy on the end of the line was doing, I think by and large the guy on the end of the line wasn't treated too badly by any of the services any place. I think that the real cry was - and I say this advisedly because our supply systems have stood up and we've won the wars with them. We've always come up with a hell of a bunch of excesses, and I don't see how you can fight a war without ending up with excesses. People don't like the excesses in time of peace, but I

think most of the things we're doing are trying to provide responsive supply support at less cost. And I honestly believe that the pressures that are being put on us from DOD and the Congress - and don't misjudge the heavy hand of the Congress and its agent, the Government Accounting Office - the GAO - on the backside of us in the materiel business.

So, I would say honestly that we are going to give responsive support; hopefully better support; but at less cost.

QUESTION: Following your comment just now, General, about people who are on your back, what agencies in the government are supposed to give advice on management organization in the Bureau of the Budget? In a reorganization as vast as yours do they consult with you or do you consult with them on any points?

GENERAL/ ^{BESSON:} Some of my people have talked with the people in the Bureau of the Budget a little bit, but I wouldn't say that they gave me any advice. Now, whether they gave it to others, I don't know. You see, before I got into this business, not quite two years ago, the Army spent a year with a team of 60 men, both officers and civilians, gathered from all over the Army. They analyzed the Army's structure and laid the framework for the reorganization that I showed you today, for the broad outlines of my command.

When I was given the job in March a couple of years ago, of planning the implementation of this concept, my first reaction was that any jug-head

could design a better organization than this. And then after thinking about this for just a little bit I said, "I wasn't hired to decide how to reorganize the Army; I was hired to reorganize it, generally speaking, along the lines that they set and the way it has been staffed by everybody. Because, if I start to fight this problem it would never get done." So, what went into the background, how much they thought of the GAO on the Holtshire Committee, I don't know.

Basically, I would say that the Army reorganization within the Army Materiel Command where I sit was colored by the Holtshire Committee's plan - the Holtshire Committee's concept which came out; by my talks with the Air Force and Navy top echelons; by some restraints maybe placed upon me in certain areas by the Army Staff; and by some of my own ideas based on my service and my G-2ing of all the factors that I could get as to how this command could best be made to go.

But, frankly, I know of no major input from the BOB. Maybe we should have had it.

QUESTION: My question has to do, sir, with the relationship between the doctrinal elements and the project management. I can see how there would be an influence on materiel, but I can also see how the project manager could also change and influence doctrine. How do you have a balancing system here and who resolves differences?

BESSION:

GENERAL/Well, one of the reasons I call my man a project manager instead of a program manager, is that I want to make sure that everyone

clearly understands that he is operating within the confines of my responsibility. My responsibility is an item; my responsibility is not doctrine; it is not training; it is not marrying people and equipment together. Now, Admiral Rayburn handled all of these things in the Polaris. The Air Force does it through their particular office; they coordinate these activities. I guess it's the Systems Program Office, called "SPO." We don't really have that in the Army. This is one of the things that the Army is grappling with at the present time.

We functionalize so cleanly that we've got a little bit of gas here going on which is a responsibility of the Army Staff to pull together, and it's really under the Assistant Chief of Staff for Force Development. As I showed you on that chart, it has the responsibility for developing the plan and schedule for the building up of forces.

Now, there has to be always a continual interplay, particularly in the research and development phase, between the guy who is establishing the doctrine, the guy who is establishing the requirements for the equipment, on one hand, and on the other hand the man who is developing the equipment. Because, we're never able to build equipment to meet all the desires of the guy who is writing a broad blueprint of what he'd like to have. We have to change that pie-in-the-sky requirement down to something that is a reality. In the meantime he's trying to develop his doctrine along the pie-in-the-sky and we're trying to reach the pie-in-the-sky. But we never do it, and this is a constant interplay. It's one of the reasons that the Army

has located the Army Materiel Command and the Combat Development Command relatively close together.

Frankly, this is one of the things that I wanted to have done; I wanted to be co-located with the Combat Development Command; all on the same post. In fact, we're just across the street from each other. Well, they're down at Fort Belvoir and we're here in Washington, but that's not too far away. They're at Fort Belvoir because they wanted to be on a military post, and I'm in Washington because I'm too damn big to move onto a military post. However, we're close enough together. I insist, and not only I but the Commanding General of the Combat Development Command - General Daley first, and now General Beach and I - clearly understand the requirement that we get together frequently and periodically, and make sure that our people are together all the time and every day, so that we can get the proper balance between the guy who wants something and the guy who is trying his best to turn that desire into a reality.

QUESTION: General Besson, would you explain the relationship between the command comptroller and your project manager? Or does the project manager have his own capability in this?

GENERAL BESSON: When they started this reorganization of the Army I had hoped to be able to break my programs down through the comptroller and turn the programs over to either the commodity commanders, or elements of it, over to the project managers, and have this control exercised by my director and comptroller of programs. That is why I

pulled those two things together in my office. My comptroller is also the director of my programs. Unfortunately, I misconstrued the effect of this reorganization upon the Department of the Army. I found that despite the emphasis placed at the DOD level on programming, when this got down into the Army system the programs fell right back in the same old channels that they had before, of research and development in one pocket and procurement and distribution in the other pocket; and personnel in another pocket.

In other words, this program by the time it got through the Army Staff and got down to me was back in the same old budgetary channels. So, I had to functionalize in my shop in order to be able to talk to the people on the Army Staff. So, my research and development program is coordinated not through my director of programs, who really becomes more or less of a bookkeeper and a review and analysis guy on a broad scale; but my research and development work is programmed through my research and development element in my headquarters. And my requirements are programmed through a requirements shop which I call "Materiel Readiness." My procurement goes through a procurement shop.

What we do with the program manager, he has to fit into the overall picture, and by and large, most of these project managerships, they're line items in the budget. And so, it's clearly identified what his money is. But this money is turned over to him.

Now, the actual physical accounting for the money is probably done at

the commodity command where his work is being done. He gets service. He's not separate from the functional area. And initially when I established the project manager system I talked a lot about the authority and autonomy of the project manager. In the past year I've been talking about the close relationship between the project manager and the functional system. Because, some of the project managers began to get a little too autonomous. I wanted them to be autonomous, but the strength of my organization is still the strong functional area. I have 155,000 people, more or less, in the functional area, as contrasted to the 2,800 people in project management. They have to work together.

All I've done was say who would be the lead on certain projects. But, the project manager has the key top skills that he needs to manage his program, both technical and programmers - and schedulers - but he gets a lot of his administrative support such as fiscal, from the normal functional organization.

QUESTION: General, I noted on your organizational chart you had a test command. What is the scope of the testing done in the test command as opposed to the project managers doing certain types of Army testing? And at what phase does the weapon system pass out of that command?

GENERAL BESSON: Well, this is not a real simple area. Because, when you get into testing you get into what they call "Engineering Design Testing," "Engineering Testing," "Service Testing," "User Testing;" and in order to try to keep this clear, I'll put it this way. Fundamentally, the

job of the testing and evaluation command is to make sure that the equipment will do what it's supposed to do. It is not the job of the test evaluation command to re-engineer it. Now, this is a problem that I have, to try to keep the test people testing and the engineering people doing engineering. But there has to be a constant interplay between the designers and the other fellows. Because, they're interested in the results of the test and they're the guys who have to change it. And also, there are certain technical data that they're supposed to have that is really not necessary to the guy who is checking this thing out from the field-use point of view, which is what the job of the test and evaluation command is.

But, in order to try to bridge this thing I established a philosophy - and it took a little while for this thing to get going, but I think it is now going; that we would have one test program. And this test program would be developed jointly by the commodity command and the test and evaluation command. This is in order to get some kind of concurrency in the testing and eliminate duplication and speed the test program up.

Now, when they get together and develop this joint test program they test the thing where it can best be tested. And then they draw off the information. That information that the commodity command engineers need goes to him. And the commodity command guys who are trying to figure maintenance factors, that information goes to him. On the other hand, that thing which has to do with the performance of the equipment is drawn off and goes to the test evaluation command for analysis.

In the final analysis, the only test report on which the acceptability of the equipment is based, is that of the test and evaluation command. They are my agent, and really, the agent of the Army, to determine whether this equipment is satisfactory. Of course, our results go back to CDC and they put their chop on it. And I also insist that CDC, the Combat Developments Command, sit in on the development of the test program. So that, when we get through testing they are not in the position of being able to say, "You didn't test it the way we'd like to see it tested."

Now, frankly, in most items of equipment I think we over-test. There's a great tendency to want to test it under all kinds of conditions and re-do the test, and over-do it and over-do it. On the other hand, we get into very serious trouble sometimes, when the pressure of requirement calls us to field an item which was inadequately tested. But my own belief in this area is that there's great room for improvement in the testing of Army equipment by making sure that we don't waste time in the testing and don't duplicate testing, and that the guys who are doing the testing work long and hard hours, rather than just sitting and admiring a piece of equipment.

QUESTION: (Inaudible)

GENERAL BESSON: Just my judgment, in the final analysis. My staff may recommend it, although there are not so many of these things. Basically, most of the ideas of establishing a project manager don't start with me. Either I think the thing is important enough, or I think that it has so many complications; or that somebody on the top level is going to be so

much interested in this, that we ought to have this thing under a project manager. So, I want to be sure that this thing gets along with all the authority and steam I can put behind it.

QUESTION: Sir, my question deals with the cost reduction program. Would you give us your personal view as to what you feel its success has been to date, and do you think that the program has - - - (remainder was inaudible).

GENERAL BESSON: I'll answer this thing backwards. I think that any requirement to account for your actions that is imposed upon you by higher authority will generally result in improvement. On the other hand, of course, you can get so damned many requirements placed upon you by higher authority, that you founder. And so, you've got to have judgment in this area.

My target in cost reduction, I think, is a half-billion dollars this year - \$525 million - and I think it may be going to go up. This is a finite target goal. That's a hell of a lot of money to account for. You must recognize that there are certain artificialities about these things, but on the other hand, my claims in meeting this cost reduction program are audited by the Army Audit Agency, an independent agency of accountants, that takes the rules that Secretary McNamara has set up, and grinds out these figures.

If I go from a cost-plus-a-fixed-fee contract to a competitive contract, there's a figure established by Secretary McNamara that no matter what

the figures show, I get credit for a certain amount of cost saving. It's his judgment as to how much better it is to go from a cost-plus-a-fixed fee to a competitive contract. But, this is audited by the Army Audit Agency and they certify that I get credit in my cost reduction program on this particular contract, for \$4, \$5, or \$10 million, maybe. This has been in some cases.

So, I think the program is a legitimate one. I think there are certain artificialities in it. I think that some of these artificialities will be screened out by critical attacks on the program. But by and large I accept it as a worthwhile management tool.

QUESTION: General Besson, one of your slides showed that you spend roughly \$9 million a year. Your project chart shows about \$2.5 million is covered by projects. In your overall employment of, roughly, 178,000 people, how many would you say would be working in the \$2 1/2 million area, and how many would be working in the other?

GENERAL BESSON: Well, in the first place, my supply and maintenance command has about half of my people. This is less than 160,000. That 178,000 is what I started with. But through personnel cuts in the closing of depots we're now down to 160,000. About half of those are in supply and maintenance. They run the depots and the storage and maintenance shops. So, they affect all the programs.

Probably some 10,000 people, I suppose, are in the laboratories that are outside the commodity command, and there are about 5,000 in the test

and evaluation command. The remaining are divided up among the commodity commands. Those include, basically, the project manager staffs. They're based upon the commodity commands except for those which are in my office, which are, generally speaking, the smaller ones.

So, I'd say there are certainly 20 times as many people working in the functional area in the same general type of things, as there are working in the project manager area.

QUESTION: General, my question concerns how you manage your project manager's staff. Do you have a new project come up, and where do you get the staff to staff it with a project manager, and what do you do with the staff of an old project manager when his project is absorbed into the system?

GENERAL BESSON: Well, in the first place, the project manager's staffs come out of the hide of the functional area. Now, they may come out of the hide of the depot area if I want to change the spaces around this way. But in the introduction of these project manager personnel, I have not increased them. As a matter of fact, - - - - (at this point all sound was cut off and did not return).

COLONEL MULLER: General Besson, I'm afraid time has caught up with us. May I on behalf of all of us thank you for coming over here this morning and sharing your views with us. Thank you.