

ORGANIZATION AND FUNCTIONS IN THE DETERMINATION OF AAF REQUIREMENTS

25 September 1946

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ORGANIZATION AND FUNCTIONS IN THE DETERMINATION OF AAF REQUIREMENTS.

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GENERAL MCKINLEY:

Gentlemen, today we are going to continue with our subject of requirements. I think we are rather fortunate in the sequence of our lectures, in that we had first General Lutes, then Colonel Daley, and now a speaker who will treat the question from the viewpoint of the Air Forces as an expert.

General O. R. Cook, who is our speaker, is a Military Academy graduate. He is a graduate from the Command and General Staff School and several of the schools of the Air Forces. He has had probably all the ratings in the flying service in all the various classifications -- pilot, observer, and so on.

His World War II experience at Wright Field, I think has fitted him admirably for speaking on this subject. In addition to that he had experience with the forces in the Pacific. So he brings to us the combat experience which is necessary to be intermingled in consideration of these industrial problems.

At the present time General Cook is Chief of the Procurement Group, Service, Supply and Procurement, War Department General Staff. His subject for today is Organization and Functions in the Determination of AAF Requirements. I take pleasure in presenting General Cook.

GENERAL COOK:

General McKinley and student body: It is a pleasure and an honor to be given the opportunity to speak to this class. Before proceeding any further, I want to tell you that this lecture is going to be informal. I have to apologize to you also because I have no chart, very few statistics, and no slides that will require turning out the lights.

War is a technician's game. That is rather a trite remark; but, when you analyze it all the way through, the lowest ranking soldier is a technician of some kind or other. He uses equipment that a few years ago would have required an expert with years of training to use intelligently. His equipment has been simplified and training has improved till a man with a relatively small amount of training can use in many cases quite complicated technical equipment.

This technical equipment is required for the waging of war, and its production is really the life blood of the conduct of war. Somebody has to design it. Someone has to produce it. Someone has to distribute it, and someone has to issue it to the people who are going to use it in actual conflict or in support of the people in actual conflict.

The B-29, for instance--to give you a few statistics on it--has in it some thirty-three miles of wire. It has a fire control system that is comparable to the fire control system in a battleship. It is not as sturdy, it is not as large, it is not as heavy, but it has that type of equipment in it. It is a highly complex machine, and it requires a highly complex organization to produce it and highly complex planning to enable the organization to produce it.

Before proceeding to the meat of this discussion, I would like to consider some aspects of the general subject of requirements. What are requirements? Why is it necessary for us to spend any time considering the subject? What is its place in the logistics picture?

Webster defines a requirement as a "necessity; a need." We might define a supply or equipment requirement for a military force as that material which is essential for supporting operation of the military force. This is true whether the time under consideration is during peace or during war.

There are many elements as you already know, to a supply requirement. What kind, type, model of specific item is required? How many are required? These two elements can become quite complicated; but when they are combined with "When will they be needed" and "Where will they be needed", the problem becomes complex in greater degree.

In most cases the problem of kind, type, or model is not difficult solution, relatively speaking. The using arm or service determines what it wants. Its determination of what it wants should be tempered, however, by some knowledge of what can be produced. We will discuss this phase of the subject a little more later.

How many will be needed is a little more difficult of solution. Into this problem the supply people must introduce some guesses. At the start of any armed conflict in a country such as ours, a democratic nation, the guesses are likely to be quite wild, particularly with respect to equipment that is new, that has not been tried out in war. However, these guesses become more educated as time goes on and experience is gained with the equipment.

Of course, the troop basis is the fundamental step in the determination of requirements. In addition to the troop basis, the planners have to consider possible aid to allies. That was a wild one that was thrown at us during this last conflict, that few people had given any consideration to. Next is the filling of the pipe line, loss factors, distribution factors, obsolescence factors, and consumption factors.

Time and space have now entered the consideration of the problem. These elements are both variables, and frequently behave in a very surprising manner in military operations.

We now see that in the subject of requirements we must consider and evaluate (1) what is needed (2) how many are needed (3) at what rate they are needed (4) where they are needed, and (5) when they are needed. When these factors are known or estimated, we have only made a start in satisfying the requirement.

In our daily life we become accustomed to satisfying our personal requirements without too much difficulty, and this is apt to influence our thinking in the matter of military supply requirements. For example, you may decide that you need a new razor. You have tried many kinds of razors. You decide you are going to try an electric for a change. So you have been reading Time, Life, and the Saturday Evening Post and all of them are carrying big, one-page advertisements about the "Super Dewhiskerator". One of your friends has bought one and he tells you that it is great stuff. So you decide to go down and buy one. You have fulfilled part of the requirements problem when you have decided what you want to buy.

You go down to the store and make your purchase. You get your razor. Your requirement for the moment is satisfied, and generally you spend no more thought on what it took to produce it or to put it in your hands.

Let us give a little consideration to what had to be done to make that razor available to you where you wanted it and when you wanted it.

First, it had to be designed and tested. It had to be developed by the manufacturer to the point where it would perform its mission in a sufficiently acceptable manner to make it salable. Next it had to be manufactured. A demand had to be created by advertising. All this requires organization, finance, know how, production facilities, and materials; and all these were in operation long before you got your razor.

A distribution organization had to be used to get the razor from the factory to the store in which you bought it and to many other stores. That organization was in operation long before you got the razor. So that your actual purchase of the razor was the simplest element in the whole series of elements necessary to make the razor available to you. It didn't require much planning on your part, but it did require a great deal of careful planning all along the route before it reached your hands.

In any war between major powers you must assume that the conflict will require the total resources of each combatant. In this concept the civilian economy expends all of its effort -- I want to emphasize that -- the civilian economy expends all its effort in support of the military force plus support of itself. And, other things being equal, the nation that uses its resources most efficiently is most likely to win the conflict.

When there is time to plan, and that time is wisely employed, resources can be used efficiently. When haste, caused by lack of foresight, or poor planning enters the picture, there is bound to be wastage of resources, and a consequent weakening of war potential.

Many of you know that there are numerous examples of that in the war that we have just finished -- when haste enters into the picture, haste as a result of poor planning, or haste as the result of lack of foresight; somebody wanted something tomorrow; they did not foresee the need; they could have foreseen the need earlier and the item that they required could have been produced in time to meet their needs. They didn't get it.

The reason why it is necessary to assign great importance to the formulation of requirements is obvious. It is the backbone of the logistic picture.

Time is the one commodity which is issued to us and consumed at a constant rate, whether we use it or not. No one can manufacture time. No one can stop it. It goes on and is dissipated whether we make use of it or not.

Time is required to manufacture, distribute, and issue supplies and equipment. If you fail to anticipate the need for supplies and equipment sufficiently in advance of the time that they are needed, you may either fail to get what you need, or may seriously disrupt the supply of some other item or items which may be just as important as the one that you put the order in for.

My discussion of determination of Army Air Force requirements will be very general in scope. I won't attempt to go into details of numbers or types of aircraft, because I believe you are more interested in what occurred prior to and after the outbreak of World War II in the determination of those requirements. I will confine this discussion to aircraft requirements. There were many headaches with other items of equipment and supply, both of the common usage class and of the class peculiar to aircraft; but in the main they were tied to aircraft, the basic weapon.

During the first months of 1939 it became evident that in the event the United States should become embroiled in a war that appeared to be imminent, the American aircraft industry would be unable to produce but a small portion of the equipment that eventually might be required. A small group of officers, augmented by a few experienced civilians, was assembled at Wright Field early in 1939 to evaluate the situation, lay new or modified plans for increasing production capacity, and put those plans into effect as rapidly as possible.

Now I might say in that connection that at that time there was an industrial mobilization plan. The Industrial Mobilization Plan, as you all may know--some of you may not--at that time envisaged a manufacturer being given a contract for certain items on M-Day. The plans were all drawn, and the moment M-Day was declared, he got the contract and he started to turn these things out.

Well, as a matter of fact, from the Air Forces we had drawings for the latest service models of airplanes in the files, where they could be turned over to the aircraft manufacturers or the equipment manufacturers. The aircraft manufacturers that were producing these airplanes had drawings and production equipment, but it became evident very quickly that the airplanes that we had would not be any good fifteen minutes after we got them in conflict. So we never built any more of them. So in all but two or three cases completely new designs were decided upon for production. That was one element that entered into it. So this fancy file of drawings of equipment was of no use. We didn't use any of them.

Most everyone outside of the small group referred to was concerned about airframe capacity. They failed to give very much consideration to components--to engines, propellers, instruments, wheels, clocks, and so forth. They were just looking at the outside of the airplane, the metal shell.

This viewpoint may be illustrated by a proposal which originated at a very high level. The reason I know about it is that I prepared a reply to the proposal for the then Chief of the Air Corps. The proposal was that the Air Corps purchase airframes, the shells only; put these airframes in storage in large warehouses or wrap them up outside somewhere, and then complete them as they were required, on the assumption that the engines, the propellers, instruments, and other components of the airplane could be procured and produced on short notice. In other words, the idea was something like buying a stock of tin cans and filling them in with beans as beans are required.

This is no criticism of the people who proposed that. They got the tail before the dog. The toughest job was not the production of airframes. The toughest job was production of engines, production of instruments, production of all the other components of the airframes that are required to make it a complete assembly. The same thing is true of automobiles, tanks, trucks, and any other similar items of equipment.

The requirements in early 1939 actually were not known. To be sure, we had a small Air Force, and an objective for its increase. For that increase we had requirements, but they were changed every day. That is natural. As a matter of fact, in our planning for production we generally doubled the existing requirements, and in some cases tripled and quadrupled them; and we found when we looked at the problem in the end that we hadn't gone far wrong.

Now, the existing requirements, or the requirements of the moment, were limited by available funds. First, it was decided that the Air Force would be equipped with 5500 airplanes. Then some difficulty was found with the distribution of funds. It was found that the funds allocated would not buy 5500 airplanes within the classes and the models required; and that was reduced to, as I recall it, 4200-odd airplanes. Then in the next go round on funds it was decided that this 5500 or 4200 that actually had been covered by funds, was not right. So it was changed to 87 and then rapidly changed to 50,000 and then went up to 120,000 a year.

No one knew at that time what the eventual size of the Air Force would be, where it would fight, whom it would fight, and when it would fight. As the conflict in Europe developed, and as our difficulties with Japan increased, it became more and more apparent where we might fight and whom we might fight. Pearl Harbor crystallized the "whom" and the "when" and partially solved the "where".

Just prior to and during the early months after our entry into World War II, the requirements of the Air Force were everything that could be produced by the aircraft industry. I would like to let that statement sink in. The requirements were everything that could be produced by the aircraft industry. And in reverse, the production people would be asked how many airplanes can be produced by the Blank Company per month starting in July and going through December. We were working on the problem and came out frequently with a guess. We did our utmost to make it a good guess. Our air units were activated on that basis and trained on that basis. I am not familiar with how the other branches of the Army and Navy operated, but I have a hunch that if we analyze the problem all the way across the board, we would find that they all did that to a greater or less degree.

To obtain the numbers of aircraft needed, it was necessary to expand production of all types as rapidly as it was possible to expand; but it was not until late 1943 that production actually commenced to satisfy requirements.

Shortly after our air units became engaged in actual combat, tactical evaluation commenced to result in preference for certain models over others. Production shifts were required to satisfy these preferences. One type of plane would be found to be preferable to another type that was in production and the Air Forces made the decision that they wanted to get out of production of the less desirable type as quickly as possible and go into mass production on the desirable type. That complicated the problem, but we did get away with it. It was not until late in 1943, however, that we could afford that luxury to any great extent.

Around the middle of 1942 the Air Force Planning Council was established under the Director of Military Requirements on the staff of the Commanding General, Army Air Forces. This council consisted of representatives of the Materiel Command, which is the organization responsible for development and procurement of air materiel; A-4, corresponding to G-4; A-3 Operations; a representative of the Program Unit, of the Commanding General's Office; a representative of the Directorate of Air Defense, and a representative of the Directorate of Air Ground Support. This council was charged with review of aircraft production for the purpose of making timely recommendations for procurement of equipment essential to a balanced Air Force.

In September 1943, this Council was superseded by the Aircraft Requirements Board, composed of the Assistant Chiefs of Air Staff. The Board was charged with establishing aircraft requirements, and it continued in existence until after V-J Day. The responsibility for computation of requirements is now vested with the Requirements Division of the Assistant Chief of Air Staff 3.

The mechanics of determining the Air Force aircraft requirements have not changed greatly from the system evolved after production commenced to reach such a volume that some flexibility in manufacture of preferred models could be achieved. The Air Forces early in the war organized a statistical organization. This organization had trained statisticians out with the combat organizations. These statisticians were under the administrative control of the combat commander, but they reported through independent channels directly in to Washington.

So the statistical organization in the office of the Commanding General of the Army Air Forces knew quite accurately what the consumption rate of aircraft was; and the Air Staff knew quite accurately what their losses were in the various models and categories of aircraft. That was a refined system of controlling the requirements. As combat loss percentages dropped, the people responsible for computation of requirements in the office of the Commanding General informed the procurement people, and production schedules were changed accordingly.

Now, those production schedules could not be changed very rapidly, and generally requirements were forecast six months in advance. Every thirty days an estimate was made as to what would be required in the succeeding six months in the way of replacements of new aircraft based on actual consumption data that had been compiled before and modified, of course, by judgment and experience.

As with all other materiel, the War Department Troop Basis is the foundation upon which aircraft requirements have been and are erected. Types of aircraft as to mission are defined by the Troop Basis, such as fighter groups, reconnaissance groups, transport, or strategic.

The specific model to be used is determined by the Air Staff after consideration of specific characteristics and probably availability at the time required.

In the problem of supply and demand, requirements are the demand. I am going back and hammer at this requirements business again. I am interested in it. As I said before, it doesn't apply only to aircraft. It applies to everything required to conduct a war. The demand must be translated eventually into a specific number of specific items laid down at a specific point at a specific time. In order to make it possible for supply to satisfy the demand, the requirement for an item of equipment must be known in advance of the time it is needed. In the case of aircraft, twelve to eighteen months are required to get a model into quantity production after it has been designed and an experimental model has been built. In the case of tanks, as some of you already know, with the tank plant in existence and the model of tank known, it takes from nine to twelve months to get the tank into quantity production. Of course, that period of time varies for different items of equipment, but it takes time to get anything procured, produced, and delivered to the man who needs it. In time of war when you use supplies and equipment up to the maximum, you can't go down and buy off the Ten Cent Store counters, as unfortunately many people in the past have thought we could.

An important factor in the determination of requirements is an accurate and timely system of control. There is a study under way right now that you might be interested in, to determine whether or not we are using the proper replacement factors for obsolescence and fair wear and tear of equipment. The Army in general has been using a straight line replacement factor. In other words, it buys a thousand of something, and it decides that the thousand may last five years. So it buys two hundred replacements every year in order to maintain a thousand.

As a matter of fact, that replacement quantity of two hundred a year, starting at the first year after the thousand had been bought, is too many in an item like a truck or a shovel or a wheelbarrow, or, we will say, an airplane that is not engaged in combat. So that an actuarial system of computing replacement factors is being studied now, with application to certain classes of military supplies. Of course, in beans, flour, sugar, and things like that we know how much we need every day to give every man the three square meals he is supposed to get, though in combat most of them certainly don't get what they would like.

It is my opinion that the lessons to be learned from World War II as regards the determination of requirements are not confined to aircraft alone. There may be others, but I think that these are the main ones:

First, officers of the arms or services which originate requirements must be thoroughly indoctrinated in the necessity for anticipating their needs. That is very simple, but every day any of you who have anything to do with supply or production or procurement know that that is a tough one to put across.

The second one is: An accurate and rapid system of reporting assets or inventories on hand down to and including combat units in the theater of operations must be evolved prior to, and will have to be used in, any future conflict.

In any future conflict which we may have, unless the people in the field are indoctrinated with the value of the materiel furnished them and which they are expending, not dollarwise, but its value from the standpoint of the over-all productive effort of the Country -- unless they understand that and understand that the productive effort of the country must be conserved -- the materiel is not going to be used efficiently and our efforts are not going to be effective.

Now, many of you may not agree with me on that. I talked to General McKinley before I came in here. A mistake, I believe, was made in this war in dropping accountability when equipment was issued. It engendered a lack of respect for the equipment that the people had in the field. They threw it away. I know that. You know it. I saw it. No one can tell me any differently. I was there and I saw it.

To get back to one point that I made earlier in my talk: The next war, whenever there is one -- and I hope there won't be -- but if we have one, beyond any doubt it is going to require every last ounce of effort of every man and woman in the country, and the most efficient expenditure of that effort that can possibly be devised, to win the war.

I thank you. Are there any questions?

A STUDENT:

You stated that you had statistical control personnel with combat units who reported on, as I gathered, major items of equipment. From all I have been able to gather, while we had ample data on complete aircraft nobody knew what they had on hand in the way of parts, assemblies, and such. Would you care to comment on that?

GENERAL COOK:

There is a great deal of truth in what you say. However, the number of aircraft that had to be replaced, that were lost, did have an effect on the parts and assemblies that had to be supplied, because a factor was used in determining what percentage of spare ordnance would be furnished, what percentage of spare wheels, and so forth. Those factors continually changed. So that spare parts were geared to the actual airplane replacements.

A STUDENT:

When did that factor become an accurate one. In other words, I don't believe initially you knew what the factor was.

GENERAL COOK:

Initially we did not know what the factor was. It never became accurate. But it became more accurate as time and the war progressed.

A STUDENT:

Obviously the Air Corps must have experienced some difficulty in getting correct statistics from field establishments as to mortality. That, I presume, is what prompted your organization of statistical personnel. I just wondered if you would comment as to your thinking as to the advisability of expanding this organization or continuing it. I have in the service frequently received reports from higher headquarters that were not prepared in anywhere near the detail required to work out these factors.

GENERAL COOK:

This is my opinion: There should be some organization, especially trained for reporting, attached to the combat unit and starting at some level. I don't know whether it would be the regiment, the brigade, or the division, but starting at some level there should be a statistical organization that reports directly back to some central collection point, which can furnish that information, or be charged with furnishing information, to the people who are interested in it.

The reason for the direct reporting is that when it goes through all the echelons of command or report, it is too late and the war is over when it arrives at the point where it is needed. In time of war it is probably a little more rapid than it is in time of peace. But as an example -- and the Navy can probably use this against the Army -- a letter came over my desk yesterday from an officer out in the field. He needed information on a certain subject very badly, and he asked for expedited action. He initiated the letter on the 8th of April 1946. When it passed over my desk yesterday, action had not yet been completed. Nobody had taken the trouble to tell this poor devil out in the field that they had even received his letter. It had gone from office after office after office, and had eleven indorsements on it, and the necessity for the action that he wanted to take, I think, had evaporated.

GENERAL McKINLEY:

I would like to butt in here a minute on this reporting business and let one thought come in from the viewpoint of another technical service. That is that we found in the Quartermaster Corps that if you ask the troops to report, they are too busy; that unless there is a central group, that is a group trained centrally to talk the same language in all theaters and send back information that is addable, the information tends to be valueless.

Our problem is to have technical people trained to observe and all talk the same language. Then if they come from a central organization and they report back to their headquarters, the information not only is accurate, but it is immediate and it is uniform.

A STUDENT:

General, would you elaborate further on how and where you think requirements for overseas should be determined; whether they should be determined overseas, at a port of embarkation, or in the Zone of Interior?

GENERAL COOK:

I am not a qualified expert on that at all. Certainly requirements for major items of equipment should be determined by the people who use that equipment. Now, whether, taking the Ground Forces as an example, or the Headquarters, Army Ground Forces, as they occupied these buildings here during the war, they should have determined the requirements for the troops overseas, or whether the port of embarkation of the people overseas should have determined those requirements, I don't know. I am not familiar with that problem at all. Perhaps somebody here can help you out on it. Are there any volunteers?

A STUDENT:

I have a comment in mind. In the early part of the war the Navy started to shift the method of determining requirements. The experience was that it didn't work at all. So as the war progressed further across the Pacific, the control was generally established at Pearl Harbor. As the war progressed further, it was found that it didn't get forward fast enough from Pearl Harbor. So there had to be another control center established at Guam.

A STUDENT:

That was distribution control and not procurement control.

A STUDENT:

I have a question in the back of my mind on the efficacy of your reporting system. I observed overseas that the Air Forces technical supply people were always very well aware of and had on hand sufficient quantities for aircraft. There seemed to be a constant well-organized flow. On the contrary, that same operation, slightly carried forward to the Air Force supply of non-technical things, such as fuel, ammunition, food, and so forth, showed that the need was not as well provided or as well cataloged and distributed as your technical supplies themselves. What does that indicate?

GENERAL COOK:

That is a pretty difficult problem to answer. As a matter of fact, we were not responsible directly for storing some of these supplies except in a supervisory manner. I am not familiar exactly with what the arrangement was in the European Theater, but I am familiar with the Pacific Theater, because I had a supply organization over there. I had Quartermaster companies, Ordnance companies, and Medical Supply platoons. They generally handled their particular class of supplies.

We finally combined the operations of all of those with Air Force technical supply, however, under the jurisdiction of the Air Force supply officer; so that food and medical supplies and other common-usage supplies were warehoused and distributed on the same basis as Air Force technical supplies, where we were responsible for the distribution. The Quartermaster dump, for example, and the main Ordnance dump, were responsible over there for the operation and maintenance of ammunition dumps, where bombs were stored. The Ordnance companies received the bombs at the dump, stored them, maintained them, and issued them to the using organization at the dump. We handled all of those supplies under the Air Force supply officer; and that, as I recall it, was not done in Europe.

A STUDENT:

I can answer that. The Air Force in Europe was not a holding agency for any supplies other than Air Force technical supplies and bombs and ammunition.

A STUDENT:

I was referring to the Southwest Pacific.

GENERAL COOK:

At what time was that? What year was that?

A STUDENT:

That was in 1943, 1944, and 1945.

GENERAL COOK:

I arrived over there in the middle of 1945, in June. At the time that I got there the system that I just outlined was in effect.

A STUDENT:

Then I am interested to know if you made use of the reporting system that you mentioned within the theatre and also for commodities other than technical supplies.

GENERAL COOK:

No. Not for anything except Air Force technical supplies and ammunition -- bombs. Those are the only things that were covered in this statistical outfit. The reporting was confined to Air Force equipment and aircraft only, aircraft and ammunition.

GENERAL MCKINLEY: The things you produced.

GENERAL COOK:

Yes, and bombs. We didn't produce bombs.

A STUDENT:

I might be able to tell you something about that operation in 1942 and 1943 on the reporting. The Air Force was not responsible for anything other than Air Corps supplies and materiel, equipment, used by the Air Forces except bombs and ammunition. It was a little different from that over in the Western Pacific in 1945. We were still responsible only for Air Forces supplies to the Air Corps itself and the technical aviation depots.

GENERAL COOK:

They furnished us ammunition and supplies. But the question the Colonel asked was concerned with the warehousing of them.

A STUDENT:

We didn't store or warehouse them.

A STUDENT:

General, you said that the time which elapsed between the designing of a new aircraft and the time it reached the troops was about eighteen months, the lead time.

GENERAL COOK:

Yes.

A STUDENT:

How does that react in your replacement factors of equipment necessary during the training period and during the actual combat operation? How does that react to provide sufficient equipment in ample time?

GENERAL COOK:

In the first place, you will recall that I said that the requirements were everything that the aircraft manufacturers could produce. Now, prior

to our entry into the war in December 1941, the British and the French and the Dutch had placed orders for certain types of aircraft with our aircraft manufacturers. The designs of those aircraft were influenced, I might say, to some extent by both the Army and the Navy. So that when we actually entered the war, or when we actually commenced to procure aircraft in fairly large quantities, the manufacturers had already started producing months before for people who were later to become our allies. That gave us a head start.

Now, later, if there were a change in model in an aircraft in a manufacturer's plant, that had to be anticipated from twelve to eighteen months in advance of the time that we wanted the new model in quantity production. The old model continued to be produced as the new model was introduced in many cases, and the change-over was a gradual one both ways, a gradual slumping off in production of the old one and a gradual building up of production of the new one.

COLONEL GODARD:

I can tell you of a very specific instance where we switched the model and switched the contractor. Out in Buffalo we were building P-40's. We wanted to introduce the P-47. At the Curtiss plant we took one line and made that a pilot line on the P-47. So we were building P-40's here and we were building P-47's there. As the flow started to move here on the P-47's, we cut down here on the P-40's. I think that would answer the question.

GENERAL COOK:

Yes.

A STUDENT:

In the first part of your lecture you mentioned that the equipment that we had in the Air Forces would not be suitable to fight the war that we might have to fight in the future. Later in your lecture you stated that the Air Forces didn't have any idea where they were going to fight. What is being done today to prevent that from happening again? What further is being done to assure that the military characteristics of equipment that we will need to fight a future war either in five or fifteen years will fit the needs?

GENERAL COOK:

At the present time the Staff is setting the probable point at which the next conflict will occur; the probable area over which the next conflict will occur. They have operations people and planning people. They have arrived at some conclusions. Those conclusions are available. The planning is proceeding on the basis of the areas selected.

That had been anticipated. It has been a tough job to get it out of the planning people. But we finally have blasted it out of them. That may be good for a while, but it will have to be revised as time goes on. That does at least give us a basis on which to plan for procurement. It gives R&D a basis on which to plan development also.

But there is one comment that I have to make on that. That is what I consider a limited objective. Actually the longest distance to any point that we may have to fight in the future is twelve thousand, five hundred miles.

A STUDENT:

We have been experimenting with the B-29. That, I believe, is being converted into the B-50. We also have the B-36. When I first came back from overseas I was connected for a while with the B-29's. We had difficulty with supplies then in the last year. I wondered what plans, if any, are being made and what determinations are being used on the types of long-range aircraft that the Air Corps is going to decide upon.

GENERAL COOK:

Let me put a question to you. Do you ask me whether the Air Forces has decided upon a particular type of long-range aircraft?

A STUDENT:

Yes sir. In other words, are they going to decide on a four-engine long-range aircraft or are they going ahead on the six-engine long-range aircraft?

GENERAL COOK:

Have any of you seen a publication called "War Department Program of Procurement"? That is a pamphlet about an inch and a half thick. That will give you all the planned procurement of all of the new types of aircraft.

GENERAL MCKINLEY:

What is the classification of that?

GENERAL COOK:

I believe it is secret. I can't name all those aircraft. There are several types.

A STUDENT:

To get back to my other question: Has this big, thick book been reviewed by the State Department so that they can be assured that if the Air

Forces are called on to fight in five years, they will be in position to fight? Do we know that the furthest distance we will have to fight is five thousand miles?

GENERAL COOK:

I doubt it. I can't answer that.

A STUDENT:

General, would you explain the allocation of aircraft between the Army and Navy and Defense Aid with respect to the strategic results they want to attain.

GENERAL COOK:

In the first place you know that during the past war the Combined Chiefs of Staff and the Joint Chiefs of Staff all decided substantially on who should fight where and what their job was going to be and their mission and the place and who was going to do it. There was a series of joint organizations of the Aircraft Resources Control Organization. That was composed of Army, Navy, and British Members. They came to conclusions as to what part of the production was going to be allocated to the Navy and what part was going to be allocated to the Army and what part was going to be allocated to Defense Aid. Actually the work of the production organizations of the Army and Navy was influenced by the decisions of this Aircraft Resources Control Organization. Their production goals were set by that outfit. The War Production Board was also represented on that organization.

A STUDENT:

In the European theater lists of critical items were developed out of reports or A&S reports. Those were compiled at the depots overseas. When those reports got back to the Zone of the Interior, were they effective in changing the procurement, or could you use only the Air Force technical report?

GENERAL COOK:

No. Those were effective in changing procurement -- those reports -- because immediately when those reports and requisitions -- they were actually emergency requisitions -- came through, every possible effort was made to get that material out as quickly as possible. You will recall that air transportation was used on a lot of that. There was one line that I believe they called the Red Ball Line, in which one airplane a day went from the United States directly through North Africa over into India and all through that area taking care of those emergency requisitions. I believe they also carried other materiel beside Air Force materiel. But, to answer your question specifically, yes; those requisitions had a great influence on production. However, in some cases we had to screen some of those requisitions, because

we knew that they were asking for things that they did not really need.

GENERAL MCKINLEY:

I would like to ask General Cook's indulgence while I comment on some of the points that he brought out or that he suggested to me in his talk.

Possibly by now, since everyone who has spoken to you all the way along has emphasized it, you have come to a realization of the importance of knowing what you want. It happens that yesterday I sat all day with one of our advisory committees, a committee on anti-friction bearings. We had the presidents of several bearing companies here. We all sat around the table. In every case they said, "If you just tell us what you want, we can make it, but in every case it is important to know approximately what you want."

Now, that sounds very simple; but, as the General brought out, that is sometimes very difficult. I want to go back over some history that you may or may not know about that I think is interesting because it shows some of the technical difficulties that we ran into in determining our requirements.

Those of you who may have been connected with planning as far back as around 1930 may remember a mobilization plan that came out which provided for an Army that was to be created so rapidly that you were going to have to use every school house and public building in every town and every town square and everything to house these troops when they came in. Everyone threw up their hands and said, "The people in the General Staff are crazy. You can't bring troops in this fast." And when the General Staff was questioned about whether they really were serious about it, they said they were serious.

I don't know how many of you remember that mobilization plan. It later was revised and tempered down. But I happen to know the actual way that was created, where it came from, and why it came out. I think it was before General Kelly Parson was a general, but it was created in this old building when he was a student in the old War College. The officer who worked with him told me about it.

It happened that for a period of years the Staff said, "We want to bring in troops just as fast as they can be supplied." So they went to the technical services and said, "How fast can you supply troops?" The technical services knocked the ball back very quickly and said, "How many troops do you want?" Each one wanted a basis to work on.

So the Staff would give the Services a troop basis. They would calculate the requirements to see how soon they could meet this troop basis. But the Staff was not sure that that was the maximum rate at which troops could be supplied upon mobilization. So a new troop basis would be circulated. The Services would work up those requirements and hand it back. Each time the Staff was not sure that the maximum mobilization rate had been reached.

So finally one fellow said, "I will give them a troop basis that is so impossible that they will have to come out short. That will show where they fall down on each item." That is what that troop basis was. It was an attempt to get the maximum productive effort out of the technical services. Then when they got what the services could not supply, they would turn around and figure out what was sound on the basis of the maximum they could supply.

General Cook brought out that very thing. They said, "We will take all the planes that can be produced." It is the same technique. When you don't know what you want, you say you will take all. But some place you have to get somebody to come down to brass tacks and say where the limitations are.

I just wanted you to keep that in mind, because in your thinking and planning you will find that in each case. There seems to be a circle, each factor being dependent upon the other. Some place you have to break into it and get something firm to go on. Somebody has got to lay down some basis and then go to work on that and see what the limitations are.

General, I want to thank you very much for spending your time with us. We appreciate very much indeed your giving us this enlightening and instructive and interesting talk. Thank you very much.

(21 Oct. 1946 -- 200)L.