Mr. Kornegay. The history of it, with reference to when it started. General McKee. I would like to ask Mr. Thomas to give this, since he grew up with it. He started out with it.

Mr. Kornegay. All right.

General McKee. And has suffered through the whole business.

Mr. Thomas. Mr. Chairman, when particularly the airlines started flying on instruments, that is, in clouds, in the early 1930's, they occasionally would arrive over the same fix at the same time, such as at Chicago. The first attempt in the early 1930's was a combination of the airlines. They got together and would simply exchange information, and agreed that planes coming up from the south would be at 3,500 feet, and from the west, would be at 5,500 feet, and then they would make their descent. It soon was evident that just an exchange of information was not enough, and some direction would have to be included, so the airlines started an air traffic control system in 1935. This was taken over by the Federal Government in 1938, and by the beginning of World War II, there were eight centers established within the United States, controlling traffic within a radius of roughly 50 to 100 miles from the centers. These were places like New York, Cleveland, Chicago, Los Angeles Atlanta

Cleveland, Chicago, Los Angeles, Atlanta.

During World War II, it became obvious with the buildup of the military traffic that this system should be vastly expanded, and should include the airport traffic control towers, as well as the en route operation. It was expanded to cover the entire United States at that time, and after, and it was operated on a manual basis, simply by filing a flight plan, people exchanging information, until the Grand Canyon—

essentially until the Grand Canyon collision of 1956.

There was impetus put on then for major expansion and radar, en route, and since that time, it has grown; equipment has been added to it, computers have been added. It has become highly sophisticated since that time.

Mr. Kornegay. Well, how many control centers do you have at the

present time?

Mr. Thomas. If we limit ourselves to the 48 States, and this is easier, there are 21.

Mr. Kornegay. Within the continental United States.

Mr. Thomas. Within the continental United States. That is the en route traffic.

Mr. Kornegay. And 21 control centers?

Mr. Thomas. Yes, sir. These are the regional centers that were menioned.

Mr. Kornegay. The regional centers, and you referred to Atlanta as a regional center.

Mr. Thomas. Atlanta Air Traffic Control Center; yes, sir.

Mr. Kornegay. An area that covered western North Carolina?

Mr. Thomas. Yes, sir.

Mr. Kornegay. Now, do you feel, Mr. Thomas, that the system needs to be expanded?

Mr. Thomas. We are in the process of putting in—

Mr. Kornegay. Over what we talked about, including equipment and a larger system—putting more equipment in smaller airports. Do you need to expand the system itself?