Mr. CALLAHAN. In the third illustration, a technician sends the patient's EKG from the patient's bedside to the center.

Illustrating the flexibility of this service, the director of the Creighton Cardiac Laboratory receives EKG tracings in his home. At night, electrocardiograms are sent to him in the absence of a staff cardiologist or for consultation.

At this point, with the assistance of my associate, Mr. Richard Murray, we will demonstrate the transmission of an EKG, using a mechanical heart for a patient. We have the equipment over on this table.

Now, at his office or home or at the patient's home, the physician has a portable EKG machine about the size of a tape recorder, and he also has a portable EKG Data-Phone set. He attaches the leads of the EKG machine to his patient. In this case, that is a mechanical heart we will use to be the patient.

He then calls a cardiologist or medical center, using any telephone that happens to be convenient.

Upon receiving an answer, he describes the case and gives the name, age, height, weight, and sex of his patient. He then places the telephone handset in the Data-Phone data set and both he and the receiving location switch the Data-Phone over to an EKG transmission mode from the voice mode.

Now, he starts his EKG machine and simultaneously he and the doctor at the receiving location receive a tracing, an EKG tracing.

Senator NELSON. So the cardiologist who is being consulted 500 miles away, or 200, or whatever, is receiving this electrocardiogram on his machine at the same time that the local physician is receiving it on his machine?

Mr. CALLAHAN. That is right; exactly, sir.

Senator NELSON. Then you are going to tell us how he makes his diagnosis and responds back to the consulting physician?

Mr. CALLAHAN. Yes, sir. Normally, this transmission would run 4 or 5 minutes, because there are quite a number of body leads, but we are going to end it here. We have sufficient tape to show what the doctors would have in their hands at each location.

Then, depending on the circumstances, they could either proceed with an immediate discussion, analysis, and interpretation. Or if it is a routine diagnosis, the cardiologist would call back and discuss his interpretation with the local physician back in his office.

Senator NELSON. Now, the cardiologist is not on the telephone all this time, taking the electrocardiogram; is he?

Mr. CALLAHAN. No, sir; the telephone handset is actually over there in the Data-Phone data set, which makes the connection between the EKG machine and the telephone network. By this means the signals can be transmitted to the distant end.

Senator NELSON. Then if the cardiologist determines from his examination of the electrocardiogram that there is a serious matter here and he ought to discuss it with the physician who transmitted the information on his patient, what does he do?

Mr. CALLAHAN. After he sends the EKG tracings, he then takes the handset——

Senator NELSON. Who takes it?