of tactical channels. Limited in that we wouldn't have a large number of terminals or an operationally designed satellite.

Dr. TUCKER. Use it for selected coverage.

Mr. SHELOR. That system only has an earth coverage antenna on it. It does not have a high-gain antenna.

Mr. ROBACK. Is there any rationale for a high-gain antenna on that type of satellite?

Dr. TUCKER. Yes, there might well be. The answer I think will depend on the results of the test program and the analysis of the sorts of tactical operations which satellite communications will support. If they are of a character where you need operation within limited areas, it's very likely.

It's also likely because the directional antenna gives you a much higher power at the earth's surface and therefore you can use much small terminals. So it's a very plausible feeling that an operational tactical satellite might have such steerable antennas.

It also depends on the choice between the superhigh frequencies and ultrahigh frequencies, both of which are being studied in the special system.

Mr. ROBACK. Can you briefly describe in a public statement what you will be testing in this joint test program? The types of communications capabilities or possibilities?

Dr. TUCKER. Yes. Mr. Shelor?

Mr. SHELOR. We will be testing a number of different types of operational networks, including ship to shore, ship to ship, air to air, between tactical-type aircraft or some strategic-type aircraft, submarine to shore—

Mr. ROBACK. How about submarine to jeep? That isn't feasible?

Mr. SHELOR. It's feasible, but it's not a normal type of network.

Mr. ROBACK. Will there be jeep antennas?

Mr. SHELOR. Yes, jeep terminals. Even team packs that can be carried by three men, and we will be testing those in conjunction with the jeep-mounted and the 1¼-ton, which is the largest we have. There is also a broadcast receiver, alert receiver, with a receive only capability that can give general alerts.

Mr. ROBACK. What is the maximum transmission distance? In other words, can you have long-distance communication to the man in the field? From the Pentagon to the man-pack? Can you communicate long distance with this tactical satellite?

Mr. SHELOR. You conceivably could if the satellite was within line of sight of the two terminals. That is the only requirement.

Mr. ROBACK. I can see where the President will be giving a morale booster to the sergeant, and also probably trying to run the platoon operations.

Dr. TUCKER. We may use the one-way receive-only terminals [Laughter.]

Mr. ROBACK. This launch is scheduled for the fall of this year, would you say?

Mr. SHELOR. Early part of next year. First of the year.

Mr. ROBACK. Is this on schedule?

Mr. SHELOR. Approximately. It is a couple or 3 months later than we gave you last year when we testified.