In a similar manner, our Advanced Systems and Technology operation is also concerned with missiles.

Obviously, when operations become as complex as those concerned with manned space and sophisticated missile programs, it is vital to identify goals that will contribute most to the mainstream technical requirements and which are most compatible with the company's technical and financial capability. The net result of this kind of logic is an orderly progression of building block capabilities.

These are not, however, easy goals to achieve. They preclude the "shotgun" approach. Instead, they make it necessary to take careful aim at well defined objectives that have as an end product a specific building block immediately related to the requirements of the company goals.

The importance of being selective in AS&T activities, and the need to build a high degree of technical competence have become more and more pronounced as systems continue to reach higher levels of sophistication.

This trend is continuing. Today, competition is so strong because all of the organizations that can legitimately compete for major contracts have had to follow courses similar to the one we have taken. Capabilities have to be achieved before definitive descriptions of future systems are available. Established capability in the required disciplines has become so important that no organization can be considered capable of designing and building the future space systems unless it has had previous recognition and contract support from the Government's technical laboratories. It is highly impractical for a proposing contractor to bid on a future system unless he has done his homework through related study contracts and experiments. The work and cost required to attain this kind of capability makes it almost imperative that the contractor win the majority of those competitions for which he has worked to qualify.

Our next speaker, Jim Dorrenbacher is responsible for the direction of MSSD's research and development activities that lead to the major system contracts. As vice president in charge of the Advanced Systems and Technology organization, he is most qualified to describe our space-directed programs and projects, how they influence Douglas as a contractor and what they contribute to the future of the United States in space.

Jim directs an engineering team that consists of over 1,000 highly qualified engineers, each a specialist in one or more aspects of advanced technology—this group is separate from our Development Engineering Department. The members of this group are chartered to concentrate their efforts on systems and technology programs that will be realized as state of the art developments 3 to 10 years in the future.