

## **EXHIBIT 01**

### **Nature of the Research Project**

The experimental system will consist of two Thrane & Thrane TT-3020A Inmarsat-C satellite transceivers installed at Harris Corporation facilities in Rochester, New York, and Washington, D.C. The satellite transceivers will be connected to experimental multi-media network controllers, which in turn will be connected to Harris HF radio systems, Ethernet local area networks (LANs), and an X.25 packet switched data network. Networking software will provide fully automatic routing of data between the various communications media.

The system will be used for the following purposes:

- 1) Provide a test bed to determine the feasibility of a hybrid HF/Inmarsat-C data network and evaluate the relative performance of different networking protocols and different E-mail/message terminal application software.
- 2) Characterize the performance of the Inmarsat-C system, particularly in terms of store-and-forward message delay and overall reliability.
- 3) Investigate special Inmarsat-C modes, such as polling, and closed user group operation.
- 4) Support hardware and software development of the multi-media controller.

The specific objectives of this research program are listed below:

- 1) Enhance the reliability of long-range HF radio systems by providing an alternative Inmarsat-C transmission path during periods of poor HF propagation.
- 2) Provide a means of HF radio access to Inmarsat-C satellite communications systems in cases where Inmarsat systems cannot be satisfactorily located, due to terrain, etc.
- 3) Develop a hybrid HF/Inmarsat-C data network architecture for applications where both HF radio and Inmarsat-C systems are required in a common network.

The expected duration of this project is 18 months.

The results of the research and testing will be concepts and products which will provide more reliable long-distance radio communications and allow better utilization of HF radio channels and satellite assets.