



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON 1, TEXAS

16 Aug. 1962

IN REPLY REFER TO:

Gentlemen:

It is planned, in the near future, to issue a Request for Proposal for the procurement of services and equipment required for the implementation of the Integrated Mission Control Center (IMCC), excluding the Ground Computer Complex which will be provided under separate contract. The IMCC will be the focal point of the NASA Ground Operational Support System (GOSS).

The Contractor chosen by MSC will be responsible for the implementation of the IMCC, the design and implementation of the primary Recovery Control Centers, and the interface with the launch site.

The major components of the IMCC to be constructed at Houston, Texas, are as follows:

- a. Ground Computer Complex - This is the central real time computing facility for the IMCC. This will include the processing of position data from the tracking network and spacecraft telemetered data.
- b. Communications Facility - This will consist of the terminal facility for the network data at the IMCC. It may consist of voice, teletype, high-speed and low-speed digital information. It also includes the intercommunication system for the Control Center.
- c. Mission Control Facility - This will be the central point or operations room from which the mission control is exercised. It will be the prime display area for aeromedical, spacecraft system, and trajectory monitoring.

- d. Simulation Facility - This will be an integral part of the IMCC to tie together the spacecraft trainer and the operational equipment. This facility will provide for the training of the Flight Controller personnel with the spacecraft crew in a closed-loop exercise. It will also be utilized to assist in the checkout of the IMCC and the GOSS prior to an actual operation.
- e. RF Receiving and Transmitting Facility - This will consist of a large multi-band antenna, and the associated receivers and transmitters. This would enable the IMCC to function as a remote site for direct contact with the spacecraft.

The implementation tasks will include:

- a. Detailed System Design - It is not possible at this time to define the exact scope of this task but it will include the identification and definition of functional elements of the system. Manned Spacecraft Center will furnish the basic requirements around which this effort is built.
- b. System Integration and Equipment Procurement - This includes the definition and resolution of technical interface problems between various associate and/or subcontractor furnished equipments. The Ground Computer Complex contractor will be an associate contractor.
- c. Detailed Equipment Interconnection and Installation Planning - Development of specifications for interequipment wiring and routing. Provision of installation documentation.
- d. IMCC Activation - This includes installation scheduling and the implementation in five phases as follows:

Phase I - Installation. The installation of individual equipment, including power cabling, grounding, and signal and control cabling between equipment.

Phase II - Installation Checkout. Functional checkout of individual equipment and the inter-rack cabling comprising a subsystem.

Phase III - Subsystem Checkout. The checkout of individual equipment comprising a subsystem with other equipment in the subsystem to determine the operational capability of the subsystem as a whole.

Phase IV - Control Center Technical Performance and Checkout. Integration of equipment subsystems with other equipment subsystems, including completion of interface wiring, and combined systems checkout to insure station systems compatibility and operational capability.

Phase V - Station Operation Checkout. Validation of station operation capability, including tiein of command and control functions between the center and other portions of the network.

- e. IMCC Personnel Subsystem Support - During the total IMCC development and activation phase it will be necessary concurrently to develop and provide personnel planning information, operational procedures, equipment, operating and maintenance procedures and manuals, and personnel training programs.
- f. Contractor Support - Contractor personnel will be required to support the Center during at least the initial period of activation and operation in the areas of equipment operation and maintenance.

In addition to the implementation tasks, it is anticipated that this procurement will result in the selection of a contractor to make certain that:

- a. overall GOSS performance requirements are satisfied;
- b. systems interfaces are properly resolved;
- c. systems uniformity is considered;
- d. schedules are met;
- e. systems checkout and overall checkout procedures are compatible, adequate, and properly conducted.

The above listings of facilities to be implemented or integrated by the contractor is not intended to be all inclusive, but is illustrative of the tasks the contractor may be called upon to perform and must be capable of performing.

It is anticipated that a single prime contractor will be chosen, who will be responsible for the performance of the entire job. The prime contractor must be qualified and have the facilities within his own organization to perform a large percentage of the total effort required; however, the prospective contractor may propose specified subcontractors for special areas of work.

The purpose of this request is to obtain information to be analyzed for the establishment of a source of qualified contractors who have demonstrated competence and who can reasonably be expected to be successful in conducting a program to meet established critical Gemini and Apollo Projects schedules. It is NASA policy to solicit proposals only from those contractors who have the necessary experience, organization, operational controls, technical qualifications, skills, and facilities to perform the work involved.

If your company has a continuing interest in this proposed procurement and desires consideration in receiving a Request for Proposal, documentary evidence of having met all of the following criteria is required:

- a. have participated as the major contractor in the design and implementation of a large tracking and data systems network;
- b. have had prime responsibility for the integration of the activities of a substantial number of the contractors involved in the implementation of a geographically widespread data handling system;
- c. have been responsible for the design and implementation of a control center facility in support of a research or defense project;
- d. demonstrate capability and experience in the design and implementation of high speed data transmission and computing system;
- e. have been responsible for the design of an extensive communications network involving voice, TTY, and digital data.

The prospective contractor may submit data on programs that are closely related to those enumerated above and should particularly stress experience in the maintenance, operation and management of a network similar to the present Mercury Network.

Data presented should have a specific relevance to the program under consideration. General brochures and the like should not be presented for consideration unless the desired material is included in the brochure. Material presented should be limited to the smallest possible amount required to present your capabilities in the specified areas.

In addition to technical data, the following information should also be submitted:

- a. present security clearance and cognizant Security Agency;
- b. latest certified financial statement;
- c. names and addresses of individuals, within the Government, most familiar with your performance under the programs cited as qualifying under the criteria listed above.
- d. availability of facilities and personnel to perform the tasks outlined above.

If your organization has recently submitted any of the data requested above to Manned Spacecraft Center, it is not necessary to resubmit if you identify the data to be considered and its location within MSC.

All data should be presented on a Corporate basis. Separate Divisions of a Corporation will not be considered unless a responsible Corporate Officer designates, in writing, a particular Division of the Corporation to be prime and in that case all contacts with MSC, in regard to this matter, should be by that Division. All other Corporate entities should coordinate with the prime Division and present a consolidated data package.

The information your firm plans to submit should be received by Apollo Procurement Office, Manned Spacecraft Center, Houston 1, Texas, marked Attention: James Stroup, within fifteen (15) days from the date of this letter. Our telephone number is: WALnut 8-2811, Extension 6206, 6207, 6208, or 6209.

This letter is not to be considered as a Request for Proposal nor shall the Government be obligated to pay any direct cost for the preparation and submission of the required information.

It is anticipated that firms not issued a Request for Proposal as a result of this screening procedure will not be automatically notified; however, the names of firms receiving Request for Proposals will be published in the Department of Commerce publication "Commerce Business Daily" under "Sub-contract Opportunities."

Your interest in the NASA Manned Spacecraft program is appreciated.

Sincerely,


Dave W. Lang
Contracting Officer