NEWS RELEASE

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to

Northeast Electronics Research and Engineering Meeting
(NEREM), Commonwealth Armory, Boston, Massachusetts

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The Mission of the Electronics Research Center

It is a pleasure for me to be here with you today and take part in the opening of NEREM-64. I am particularly honored to have been asked to address this initial get-together as I know you are all here by special invitation and are all distinquished leaders in the field of electronics, a field which continues to grow in national importance year after year.

In past years, the NEREM meetings have attracted large audiences from near and far primarily because of the excellence and the timeliness or "newsworthiness" of the papers presented and the program this year promises to equal or excel those of

past years in this regard. On the day that Congress approved the Boston-Cambridge area for the location of the NASA Electronics Research Center, NEREM automatically became an increasingly vital and important function not only for this year but even more so in years to come for everyone connected with electronics. The growth of the NASA Center, and the accompanying strengthening of the electronics talent in industry and universities in the area, will solidify even further the recognition of Boston and Cambridge, with their Route 128 complex, as the electronics center of the nation and, accordingly, NEREM will take on an even greater importance to the continued development of electronics in the United States.

I recognize in the audience many friends who are not from the Boston area who still may question NASA's decision to locate the Electronics Center here. As one recently transplanted here from Ann Arbor, Michigan, I can say that this doubt was voiced in Michigan, in fact rather strongly, and we know that many other areas were in competition with Massachusetts for the facility. But, as an editorial in the Times Star, a Cincinnati newspaper recently stated, and I quote, "The hard fact is that Boston -- more precisely, Cambridge -- is a natural choice for situating

an electronics research center. Since World War II, Boston has been the center of another 'Flowering of New England'. Light industry and research facilities, most of them privately owned, have proliferated in industrial parks beyond the city limits and a good many of them, if not most, fall into the category of electronics. There are two reasons for this phenomenon. They are the Massachusetts Institute of Technology and Harvard. The two campuses have effected a revolution in an area's economy, for their research facilities and the brains which populate them are responsible for the expansion of which the NASA site selection is the latest expression."

Since the continued growth of the NASA Electronics Research Center cannot help but have a strong influence on electronics not only in New England but elsewhere, I should like to take a few moments to tell you of the Center's history to date and our plans for the future.

An electronics research center was decided upon by NASA as being the most effective method among all possible alternatives to increase NASA's electronic research capability. A strength in electronics was needed to match the great strengths already

possessed by NASA in such fields as propulsion, aerodynamics, etc. The group known as the Electronics Research Task Group was formed in NASA's Washington headquarters under the direction of Dr. Albert Kelley and by September 1 of this year, a strong scientific nucleus was assembled, having good capabilities in many of the needed branches in the broad field of electronics research. Meanwhile, the North Eastern Office of NASA, under the leadership of Mr. Franklyn W. Phillips, continued to grow in strength administratively and also technically. My appointment as Director of the Center became effective September 1 and at that date both the Task Group and the North Eastern Office began reporting to the Center Director. I consider myself most fortunate to have had Dr. Kelley accept the position of Deputy Director of the Center and Mr. Phillips the position of Assistant Director for Administrative Operations. Upon our move on November 15th to our temporary quarters, the top six floors of the new Technology Square Building in Cambridge, the terms "Task Group" and "North Eastern Office" will disappear and the combined group, now totalling over 100, will be the Electronics Research Center.

As a research activity, the Center will aim primarily at

acquiring knowledge and improving technology rather than procuring and developing large flight systems. Accordingly, it will carry out a program of in-house research only large enough to establish and maintain a NASA capability for securing the best in electronics for all missions. This part of the program will provide the basis for assembling a staff of the highest technical competence.

The Center will originate and manage a program of grants and contracts in support of advanced research and technology in space electronics in industry, in universities, and in research institutions throughout the nation. By 1969, this program is expected to amount to approximately $46 million per year and this will exceed the funds spent for operating the Center.

With respect to the electronics to be used in operational systems under development and production, such as in launch vehicles and spacecraft, ERC will work closely with those NASA centers having responsibility in the various fields so that the highest competence in electronics will be made available to those Centers. Contracts for electronic equipment in operational systems will continue to be let by the Center responsible for

the total spacecraft or launch vehicle.

As to the location of the Center, you probably all know that the city of Cambridge has offered us a 29-acre site in the Kendall Square area almost across the street from MIT, and Mr. Webb has provisionally accepted it. The design of a master plan for the Center will soon be tackled by an Architect-Engineer group. We hope to break ground for our first building in the late spring of next year.

Our program of contract research already had its start under the aegis of the Task Group and some of their contracts are being extended under the supervision of the Center. But you may be more interested in learning that our first request for proposal to industry for a project to be supported by our own efforts was advertised in the Commerce Business Daily just two days ago. It will run for 12 days and will have a

30 day response period. The task is in the area of Systems and Trajectory Analysis, particularly an Interplanetary Guidance Requirements Study, and it will be monitored by our Mr. Richard Hayes.

In regard to current staffing, we expect the Center build-up to be a staff of 250 people by the end of this fiscal year and to 2100 at full strength. Many of our administrative staff are being recruited from Headquarters or from other NASA installations, but we shall bring the great majority of our technical staff in from the outside in order to keep from reducing competence at existing centers. For example, many of you know James Dennison, formerly a Director of Research in industry and recently a strong contributor in NASA's Technology Utilization Program at Headquarters. He just recently accepted an appointment with us to direct our own Technology Utilization Program. Also, we expect to announce shortly the first appointment of a world renowned scientist from industry to the post of Division Director, one of the five top technical positions at the Center.

But meanwhile the show goes on and the combined technical strengt

of the Task Group and the North Eastern Office has permitted us to appoint acting heads of our nine research laboratories. The appointments are:

Mr. Seymour Schwartz as acting head of the Component Technology Laboratory;

Dr. Frederick Niemann as acting head of the Power Conditioning and Distribution Laboratory;

Dr. Gene Manella as acting head of the Instrumentation Laboratory;

Mr. Thomas Burke as acting head of the Computation Laboratory;

Mr. Gilmore Trafford as acting head of the Microwave Radiation Laboratory;

Dr. Max Nagel as acting head of the Space Optics Laboratory;

Mr. Richard Hayes as acting head of the Space Guidance Laboratory;

Dr. George Kovatch as acting head of the Control and Information Systems Laboratory;

Mr. Seymour Schwartz as acting head of the Qualifications and Standards Laboratory;

Mr. Ernest Steele as acting head of the Systems Laboratory.

So, we see that the structure or organization chart of the

Center is beginning to take shape.

Speaking of organizational charts reminds me of a story. It seems there was a zoo and a new young lion was put in a cage with an old lion --a long time resident of the zoo. The new lion acted the part of a lion, baring his teeth, growling and throwing himself at the cage bars. But the old lion -- he had been around zoos for many years -- the old lion just slept all day. But at meal time the old lion got a huge chunk of juicy red meat and the young lion was only given a basket of fruit. This went on for some time, much to the annoyance of the young lion. Finally, he said to the old lion, "Why do you get raw meat and all I get is a basket of fruit?" The old lion replied, "Look, didn't you see the organizational chart when you came in here? It has space for only one lion and we're carrying you as a monkey."

On the technical side, we plan to have five divisions, each division coordinating the work of two laboratories. The acting laboratory chiefs which have been named, will, for the time being, report to the Director's Office. However, as we form the divisions, permanent laboratory chiefs will be appointed and they will report to their Division Director. Here is a brief ac-

count of the work we expect the five divisons to pursue:

The Component Technology Division will be responsible for research in all aspects of electronics materials including solid state technology, vacuum devices, electromechanics and also power sources.

The Guidance and Control Division will deal with space guidance including inertial reference techniques, trajectory analysis, guidance system requirements and instrumentation devices for navigation, also with the theory of and new devices for the guidance of stabilization of spacecraft.

The Systems Division will manage a program in system analysis and simulation of guidance, control, tracking, communication and instrumentation functions characteristic of spacecraft and space missions.

The Instrumentation and Data Processing Division will provide general applied mathematical and computing services for the entire center and a flight readiness branch within the division will carry out research to advance the state of the art in checkout of launch vehicles and spacecraft from inception through assembly, prelaunch, countdown and postlaunch. The division will also manage research on instruments and measurement devices for scientific investigation of the upper atmosphere, conduct research studies leading to new sensing and measuring methods required in the case of biological and

physiological phenomena and research in instrumentation for wind tunnels, shock tubes and plasma facilities.

The Electromagnetic Division completes the structure of our technical organization. Its Microwave Radiation Laboratory will include research programs on circuits, propogation, antennas and information links and its Optical Communications Laboratory will concern itself with studies on masers and lasers; also on passive devices and information theory. Within these divisions and laboratories we shall pursue our research programs to increase the lifetime and reliability of electronics which go into our ground support equipment, launch vehicles and spacecraft.

With electronics assuming ever greater importance in the success of our space program, our ability to provide reliable, capable techniques and systems must keep pace with the needs of the space program. We must expand our knowledge and apply it to developing a more advanced technology. When armed with adequate advanced technological capabilities, we are confident that space engineers will be able to build better, more reliable, longer-lived components capable of performing the complex missions we now foresee.

This is the goal for which we must aim if we are to meet our present and future responsibilities in space.