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MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Department of Physics

MEMORANDUM

To: Mr. N. McL. Sage
From: Professor Philip M. Morse
Date: 29 January 1953
Subject: Contract N5ori 06001, Task Order I; proposal for extension beyond current expiration date for the period 1 July 1954 through 30 June 1955.

We propose to continue work on the subject contract as restated in Amendment 13 for an additional year, covering the period 1 July 1954 through 30 June 1955. The work will consist of a coordinated research program in applied mathematics utilizing facilities in the Center for Machine Computation, including the Whirlwind Computer in the Digital Computer Laboratory. The work will include but not necessarily be limited to the following:

- (1) research in methods of numerical analysis and the formulation of scientific problems for machine solution, together with the training of personnel in these methods;
- (2) support of the scientific and engineering applications group of Project Whirlwind so as to make the computer useful and available for the above research, and partial support of the maintenance of the Whirlwind Computer and research into digital computing machine components.

The Air Force is making a large contribution to the support and extension of facilities of the Whirlwind Computer. Its use will be shared by the Air Force and ONR. It is understood that details of the program here proposed will be worked out from time to time with the technical officer.

There follows a breakdown for the possible expenditure of \$285,000 for one year on the above two items. Unless otherwise stated, salaries are for full time work. Overhead rates are provisional.

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ITEM 1. Research and Training in Numerical Analysis

Technical Supervision; 1/3 Prof. salary	\$ 3,200
15 research associates (some part-time) @ average salary \$3,000	45,000
Other salaries and wages (secretarial and administrative)	<u>7,000</u> \$55,200
Provisional MIT overhead @ 46%	<u>25,400</u> \$80,600
Service charges for computing equipment other than Whirlwind	9,000
Travel	1,400
Materials and services including publications	<u>4,000</u> \$95,000

ITEM 2. Support of Scientific and Engineering Application Group of Whirlwind;
Maintenance of Computer and Component Research

10 engineers or mathematicians @ \$5,200	\$52,000
8 research assistants @ \$2,400	19,200
6 technicians @ \$3,500	21,000
2 computers @ \$3,000	6,000
2 secretaries @ \$2,500	5,000
2 clerks @ \$2,500	5,000
10 part-time students, average \$1200	<u>12,000</u> \$120,200
Provisional MIT overhead @ 46%	<u>55,300</u> \$175,500
Travel	2,500
Materials and services including printing, equipment for program preparation, record and library maintenance, replacement parts for computer and materials for research	<u>12,000</u> \$190,000

PMM:HF:mb