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Mr. H. P. Corwith  
 Vice President  
 Western Union Telegraph Company  
 50 Hudson Street, Room A-33  
 New York, New York

Dear Mr. Corwith:

Professor Cairns, Chairman of the National Security Agency Scientific Advisory Board, has asked that the inclosed memorandum be circulated to the other members of the board for comment.

As requested by him, your comments should be sent directly to him. An information copy to me would, however, be appreciated.

Sincerely,

WILLIAM F. FRIEDMAN  
 Executive Secretary  
 NSA Scientific Advisory Board

Incl:

Memo for members of  
 NSA AB, dtd 24 Mar 53,  
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24 March 1953

MEMORANDUM FOR: Members of NSA Scientific Advisory Board

SUBJECT: SCAMP Program 1953

1. A symposium known as SCAMP was sponsored in the summer of 1952 by the Armed Forces Security Agency (now called the National Security Agency) at the Institute for Numerical Analysis of the National Bureau of Standards on the campus of the University of California at Los Angeles. A sequel, SCAMP 1953, is planned for this coming summer. The project is to be financed by funds transferred from the NSA to the NBS through the Office of Naval Research. Accordingly, Dr. Mina Rees of the ONR and Dr. John H. Curtiss of the NBS are interested both in the scientific quality of the SCAMP program and in its relevance to the practical problems of the National Security Agency. I accordingly agreed to describe to the Advisory Board the present plans for SCAMP and to transmit the Board's comments to Dr. Rees. Since time did not permit us to consider this matter at our meeting on 5 February, I am soliciting your opinions by mail, though I realize that some of you are relatively near to the problems involved.

2. Aside from NSA personnel, the expected SCAMP participants are A. A. Albert, R. H. Bruck, K. A. Bush, S. S. Cairns (Chairman), Randolph Church, A. H. Clifford, W. S. Connor, R. P. Dilworth, A. M. Gleason, R. A. Good, D. W. Hall, Marshall Hall, A. J. Hoffman, V. L. Klee, Erwin Kleinfeld, J. C. Koken, Morris Newman, L. J. Paige (Executive Secretary), Gordon Pall, A. E. Roberts, and C. B. Tompkins.

3. The general objectives of SCAMP were expressed as follows in a letter of 23 January 1953 from John H. Curtiss to the Chief of Naval Research.

- a. "Increasing the general knowledge available concerning discrete problems and their computational solution."
- b. "Educating competent mathematicians in mathematical theory and techniques of interest to the sponsor."

4. Although details remain to be worked out, it is contemplated that the first objective shall be pursued as follows:

- a. As background material, and as a nucleus about which this year's research may be built, the participants will be supplied with:
  - (1) An expository account, now being prepared, of last summer's work and of closely related topics,
  - (2) A paper "Discrete problems and computers" (copy being sent separately to members of the Advisory Board) prepared by C. B. Tompkins subsequent to SCAMP 1952,

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- (3) Material concerning convex regions and their use in discrete computational problems, being developed and prepared in a suitable form for use by participants,
- (4) Appropriate computations prepared for SWAC in advance of the symposium, together with coding and full descriptions of the problems for expository purposes.

d. During July and August, research will be conducted by the participants listed above, in collaboration with personnel assigned to SCAMP by the National Security Agency. The latter will, besides participating in the research, help guide it in directions of particular interest to the NSA. The participants have been selected because of their demonstrated ability and independent interest in discrete problems more or less related to the purposes of SCAMP. It is considered best not to confine their activities by assigning to them a set of specific problems, but rather to leave them free to carry out the mission of SCAMP with the aid of the preparatory measures just listed, the educational program about to be described and the continuing advice of NSA personnel.

5. To promote the second objective under item 3 above, material concerning communications and some of the engineering aspects of computers will be made available to the participants, according to present plans, as follows:

- a. A course of eight lectures will be devoted to selected topics in military communications. These will be planned within the NSA and presumably delivered by NSA personnel.
- b. Another course of eight lectures will describe engineering aspects of computer components in order that the participants may be in a position to assess the possibility of solving certain problems with the aid of special purpose equipment. Mr. Joseph Desch of National Cash Register has expressed a willingness to cooperate in this lecture course, and Mr. John McPherson has assured me that IBM personnel will also provide expert assistance.

Attendance at the lecture courses is to be optional, and the series on engineering aspects of computers will be open to interested persons who are not members of SCAMP.

6. I should appreciate your comments on the SCAMP program at an early date. They should be addressed to me at the Mathematics Department, University of Illinois, Urbana, Illinois.

S. S. CAIRNS  
Chairman of the Advisory Board