

~~CONFIDENTIAL~~

Serial: 0802

12 Dec 52

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Professor S. S. Cairns
 Department of Mathematics
 University of Illinois
 Urbana, Illinois

Dear Professor Cairns:

I have discussed with Mr. Friedman your memorandum of 28 November 1952 regarding the composition of the Advisory Board. I agree that it is best to have a small board but after reviewing your list of names of prospective members I think that limiting the membership to six or seven would result in our having to omit certain very valuable candidates or find them unwilling to serve on a panel.

I agree on the desirability of having Professors von Neumann, Robertson, and Wilks, and we have oral acceptances from the last two; a letter inviting von Neumann is going out today. The Research and Development Board asked that Mr. Spelman serve as its representative until his successor has been appointed. Thus far, then, the membership of the Board totals five, but its composition is heavily weighted on the mathematical side and I think you will agree that we need some engineering specialists on the Board.

I agree that there should be a member from the general field of communications engineering and I am writing a letter to Western Union asking that the company name two or three candidates from among whom we can select one name. Admiral Redman, who represents the Western Union management in Washington, deeded it best for us not to ask specifically for J. Z. Millar or anybody else, but to specify merely that we wanted an outstanding expert in the field of telecommunication engineering.

Next on your list is E. W. Engstrom. We agree that he would be very useful and we are trying to get him, through a personal approach to Mr. Sarnoff. If we get Engstrom we will have already reached the limiting number specified above, namely seven. But we will not have any engineering specialist on the Board to represent the whole field of high-speed analytic machinery, such as Mr. John McPherson, whose stature and ability are such as to preclude our asking him to serve on a panel rather than on the Board. I regard him as an extremely valuable member of the Board and with your concurrence I would ask him to serve on it in such capacity.

Then there is Howard Engstrom, whose extensive experience in the COMINT field, including mathematics, cryptanalysis, and research and development of machinery therefor, certainly warrant his being a full-fledged member of the Board. Finally, I think we ought to have a member

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from Bell Telephone Laboratories, possibly someone other than Dr. Shannon if he cannot spare the time or get sufficiently interested in our problems. Maybe Shockley would be more useful to us.

Thus you will see that I think we ought to raise our limit to 10 members and would like your comments. There is still a considerable amount of work to do in firming up the composition of the Board and there remains not much time between now and the date you selected for the first meeting of the Board, 25 January 1953. Prof. Robertson cannot possibly make that date because of lecturing commitments on the 26th and 27th in California. Perhaps it would be advisable to set the date further in January and I would appreciate your comment on this point, too.

Sincerely,

J. N. WENGER
Rear Admiral, US Navy
Vice Director

cc: AG
C/S
V/DIR
CONS

M/R: Prof. Cairns is Chairman of the NSA Scientific Advisory Board.

W.F.Friedman/60493/11 Dec 52.