

INTER - OFFICE MEMORANDUM

DATE: 3/6/72

TO: W C Norris
FROM: S R Cray
SUBJ: Thoughts on separation

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W. C. NORRIS

Since my last memo to you my thinking has crystalized to the point of knowing generally what I want to do. This consists of establishing my own company to pursue research into large computer technology. The timing of this activity and the general arrangements for initiating it remain to be worked out.

In thinking about my relationship with Control Data several factors appear important. The most urgent of these is minimizing the impact of my action on Control Data employees and on external opinion regarding Control Data future. Another is the impact on the work current at Chippewa Laboratory. Also important to me is the future relationship with Control Data and with you personally. Finally I am concerned about my own conflicts of interest in possible solutions to these problems.

Let me review briefly the current status of the work I am doing for Control Data. There are three parts to this. One is the corporate planning for future technical programs within the company. A second is the 8000 development work in Chippewa. The last is the 7600 production in Chippewa. The last is not really a problem since serial #11 is due to be delivered in November and I am not personally involved in the final steps of this production. The first can be handled on a consulting basis. The real problem is the 8000 development work.

The 8000 prototype is approaching the initial hardware checkout phase. There is considerable uncertainty as to the probability of success in this effort. The design work is largely complete, and the hardware choices have been made and are being implemented. It remains to be seen if these choices result in a really workable hardware system. If the prototype can be made to work in the near future the 8000 program can proceed to commitment of deliverable products for 1974 or 1975. If not, the approach should be abandoned or a major change of direction initiated. There is no way of determining the degree of success before late fall of this year, and it may still be uncertain then. My guess is that there is a 50 percent chance of success.

Let me propose a scenario for my future activities. This makes assumptions which are sheer speculation on my part but may be helpful for planning purposes in our discussions later this week. First,

let me assume that I continue to work half time for Control Data until the 8000 work feasibility is established. This will likely take six months to a year to determine. My presence at Chippewa Laboratory and real interest in the outcome of the work should improve its probability of success. Now let me speculate on what I will do with the other half of my time and possible conflicts it presents.

Assume I form a corporation in Wisconsin with an initial capitalization of two million dollars. Assume this corporation is called Cray Research Laboratory. Of the original money required one million comes out of my pocket and the other million from the pockets of a dozen personal friends (I include you in this category and unique opportunity). There is no public offering and no need for publicity. During this coming summer a 10,000 square foot building is built on my property about one-fourth mile from Chippewa Laboratory. A two year program of basic research into large computer design problems is initiated. This is done by me and a small group of people (6 to 8). The intent of this two year program is to find some really basic new method of building computers using lasers, mirrors, semiconductors, or who knows what. Assume that this effort is successful. In 1974 a public stock offering raises capitalization to ten million dollars, and a development program is initiated to build and deliver a small number of very large equipments to meet specialized computing requirements. The general idea would be to sell equipment and/or designs to large corporations or to very daring end users.

There surely are potential conflicts of interest in the above division of my time. There are also problems with Control Data employees who may want to work in my new company. Fortunately the latter problem is limited by the size and character of the new company. All of the problems are minimized if there is an ongoing and developing relationship between Control Data and Cray Research Laboratory. I can see no reason why this is not possible. Control Data may well profit from buying completed designs with a minimal risk at a higher than cost price. There may be mutually desirable short term R&D type projects as well. In the extreme view there would be little difference from the current relation with Chippewa Laboratory except that the accounting of money would be lumpy rather than continuous. I obviously need your help in proceeding any further along these lines.

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