

Mr. TIERNEY. Perhaps a year. We are in a transitional stage. For example, we have the problem of adapting tariffs to automatic data processing and we are not sure whether this particular machine would be adequate for that. As I understand it, it would not be. Being in a transitional stage, Mr. Chairman, we feel this is the best approach. Through this, we can use programing which was used in the older machine. It is compatible for that as well as using information or data from other areas within the Government.

Mr. BROOKS. I understand this capability.

Did you all make a feasibility study as to the desirability of leasing or purchasing the machine before you made this lease?

Mr. TIERNEY. Yes, sir.

Mr. BROOKS. Could we have a copy of that report?

Mr. TIERNEY. Yes, sir.

(The report follows:)

PURCHASE VERSUS LEASE—SPECTRA 70 COMPUTER, MARCH 24, 1967

Inherent in the selection process is a decision whether to purchase or lease the computer system to be required. Although many factors are involved in the decisionmaking process, a key factor is the length of time the equipment will be utilized; for example, the break-even point is approximately 4 plus years, after which it is more economical to purchase rather than lease.

The selection of the Spectra 70 computer was based on an emergency need to provide immediate additional computer capacity. With its emulator feature we can double our throughput without reprograming. However, this is only a short-time solution and the ultimate solution is reprograming to fully exploit the speed of third generation equipment. With this thought in mind, the configuration ordered was almost identical to our present RCA 301 configuration. At this time, questions as to our long-range needs have not been resolved, particularly the question of random access, core size, and the number and type of tape drives needed for future applications.

Another concern is the reliability and quality of both the Spectra 70 hardware and software. Both are new and unproven and in light of the troubles other manufacturers are having, it would not be unusual for an unsatisfactory performance level to occur.

It is estimated that in approximately 18 to 24 months we will have completed reprograming to COBOL, will have identified future applications and will have a firm idea as to our ultimate hardware needs. Additionally at that point in time the emulator feature will no longer be required.

Accordingly, it is recommended that the Spectra 70 be leased rather than purchased. At such time (estimated at 18 to 24 months above) as we have a clearer picture of our needs a decision should be made whether we are going to retain the Spectra 70 and to review the purchase of any or all of its components. The purchase option of 65 percent of rental costs can be exercised on components purchased.

Mr. BROOKS. What do you consider to be the most pressing problems for you to overcome in order to make better and more efficient use of the computer that you are now leasing?

Mr. TIERNEY. I believe that one of the most important problems is getting competent programmers. I think everybody has that problem in the automatic data processing field. I am not sure what the other problems are.

Mr. Schmid.

Mr. SCHMID. One of the principal problems we have, our Spectra 70, we acquired on July 1, and most of our programs are written in a language that was used on our old RCA-301. We are in the process now of converting our language to what is called COBOL and FORTRAN, which will speed up the processing by 25 percent. As soon as we get