

ELECTRONICS

General

- A. What requirements have governmental insurance departments made in connection with conversion of ordinary renewal administration functions to electronic methods? What problems have these requirements created? How have they been solved?
- B. Is the consolidation of files used in ordinary renewal administration necessary to get maximum use from a computer? Does it make a difference if the computer uses punch cards or magnetic tape?

MR. MANUEL R. CUETO reported that the New York Life was one of the earliest companies to perform its valuation on magnetic tape. At the outset the requirements of the New York Insurance Department were unknown.

During 1956 he showed the examiners that the in-force policies were correct and that the application of reserve factors was correct using the in-force as of December 31, 1955. To help the Insurance Department check the reserves, he set out a small model from which the Insurance Department calculated the reserves by hand. Reserves were also calculated by the computer and the answers compared. A similar check was run at the end of 1958. He felt that it may have been more difficult to satisfy the examiners because they were the first company with the problem.

MR. W. JAMES D. LEWIS commented that Confederation Life's complete quinquennial examination by the Dominion Department from an actuarial point of view was made in 1960 as of the end of 1959. Some of the examiners had taken programming courses and were well prepared to examine the company. Although some problems arose, the results were very satisfactory. Confederation Life received their valuation certificate on schedule from the New York Insurance Department.

MR. JASPER E. MOORE of the Crown Life reported that their conversion from manual records to punched cards in 1948 was carried out with the insurance in force records before and after conversion carefully checked out against each other. He felt that a similar conversion problem would arise for those companies of moderate size converting in the next two or three years to an IBM 1401.

MR. EUGENE W. BATES of Western and Southern is planning for delivery of an IBM 7070 in 1961. He is furnishing his state Insurance Department with plans on valuation and he felt it is worth while to keep them posted well in advance of the delivery of the machine.

MR. CHARLES G. GROESCHELL said that Northwestern Mutual has offered to assist their Insurance Department through programming courses or through training at their home office. So far their Insurance Department has expressed no interest.

MR. JOHN F. B. AMSDEN of the Sun Life of Canada reported that their practice of keeping both examiners and auditors fully informed and arranging to send them to programming courses has helped them understand the problems involved and placed them in a better position to examine or audit their records.

MR. RALPH E. TRABER, speaking on section B, stated that the consolidation of files (in a physical sense) was not, in general, necessary to get maximum use from a computer. He noted that it can be detrimental to the efficient use of a computer. Logical consolidation of files is a necessity; physical consolidation is not necessary and may be undesirable.

Mr. Traber felt that the true nature of an integrated processing system consists not in the consolidation of files but in the consolidation of input to the files. There can be any number of different tape (or card) files of different natures if otherwise desirable. But a single fact—for example, policy number 5,000,000 wishes to surrender on November 1, 1960—should be fed into the integrated processing system once and only once; the system itself should then generate the necessary change orders to update automatically all of the affected files and with the correct timing to keep them in step.

MR. A. DOUGLAS MURCH of the Prudential commented that, in their experience, consolidation of files is essential to obtain maximum efficiency from an ordinary renewal computer application where large volumes of data are involved. In fact, consolidation of files, coupled with the computer's ability to perform multiple functions during a single series of related runs, is the major source of savings from this type of system. A single master record requiring only one input for each transaction is capable of generating many outputs, each of which might previously have required a separate file. When this single master file is placed under a rigid control, savings result not only from the elimination of the multiple files and the attendant file maintenance work, but also from the higher degree of accuracy that is inherent in a single file system. The constant checking to ensure that separate files are in balance is no longer required.

MR. CHARLES G. LINCOLN of The Travelers suggested that the coordination of file maintenance is more often the essential point rather than file consolidation. If several files can best do their jobs in different orders and tend to run on different frequencies, consolidation forces the choice of a common order and loads a high frequency operation with data

used only on the longer cycles. If the file maintenance activity affects only a moderate percentage of messages in the longest cycle, feeding a single set of file maintenance messages from file to file on a chain reaction basis, with intervening sorts of very much less than a whole file, may be a very attractive choice. Some of these files can be in summary form, which may be desirable even though computers may remove any absolute necessity of summarization.

It is argued that multiple files require the repetition of certain common information. Suppose File Number One consists of Data A plus Data B and File Number Two repeats Data A but contains different Data C. Suppose further that File Number One runs 20 times to each run of File Number Two. It may very well turn out that running 21 times A plus 20 times B plus 1 times C is more efficient than running 20 times A plus 20 times B plus 20 times C.

MR. LUMIR F. SLEZAK stated that in 1952 it was considered necessary to consolidate files. The 5×8 renewal card, which at one time was the exclusive record for many companies, also, he felt represented consolidated files. Because of the limitations of the 80 column punch card, files became separated as companies grew. He felt the question is, how far can consolidation go to get back to the advantages that were inherent in the old 5×8 renewal card?

MR. ORRIN S. TOVSON pointed out that the factors to consider in file consolidation are the company's size, the nature of the company's business, the nature of the company's operations and the characteristics of its data processor. These factors will determine the amount of consolidation necessary and desirable.