

provide for the daily recording of mileage readings and hours of use of vehicles.

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PLANNING FOR AND UTILIZATION OF AUTOMATIC DATA PROCESSING
EQUIPMENT, AMES RESEARCH CENTER, MOFFETT FIELD, CALIF.,
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

The Ames Research Center has, in recent years, leased computers that have been significantly underutilized and as a result has incurred relatively high computer processing costs. We believe that this situation can be attributed to Ames' permitting its various organizational units to pursue separate courses of action with respect to automatic data processing activities and not requiring thorough analytical studies which would have served as a basis for the evaluation and selection of the optimum equipment configuration needed to meet Center-wide processing requirements. We believe further that a contributing factor has been that NASA Headquarters did not fully evaluate the effectiveness of Ames' practices relating to its planning for, and acquisition and utilization of, automatic data processing equipment.

The excess computer capacity acquired by Ames and the fragmented approach that has repeatedly been taken in determining its automatic data processing equipment requirements strongly suggest the need for centralized direction of the planning for, and the acquisition and operation of, all its computer systems.

We believe that ample evidence of the existence of excess computing capacity was available with regard to wind tunnel data reduction, general scientific computing work, and administrative data processing to have indicated the need for a Center-wide study. Our review revealed that, during the 3-year period ended April 1964, Ames paid basic monthly equipment rentals of about \$784,000 for operational use time that was not used. Also, we noted that the estimated in-service hours of Ames' two major computers for fiscal year 1965 were substantially fewer than the average of the estimated in-service hours of the same types of computers used by all Government agencies for that period. We believe further that this low utilization experience should have prompted the Space Administration and Ames to determine whether two major computers were needed or whether Ames' requirements could have been met by the use of one computer.

The Space Administration advised us that, in line with our proposals, responsibilities had recently been assigned at Headquarters for the central management of automatic data processing, instructions were being formulated which would require management evaluation of installation effectiveness, and a review board had been established at Ames to consider all automatic data processing resources and needs on a Center-wide basis. The Space Administration, however, does not agree that unused computer capacity was avoidable or that the use of only one computer system at Ames, if it had been feasible, would have resulted in economies. Whether it would have been technically or economically feasible for Ames to consolidate its equipment needs in past years could not, in our opinion, have been determined without first performing a detailed study of Center-wide data processing