1. Integration of planning and operating data for the purpose of comparison and analysis of the results of operations with planned programs, with promptly prepared results upon completion of operations as feedback for management information and action.

2. Use of built-in analysis techniques which provide information to improve the system itself.

3. Consolidation of data files and use of management-by-exception techniques in systems where closely related processes can be combined in integrated systems.

It must be recognized, however, that the broad objectives of integrated systems must be part of a master plan in which planning for systems design is broad enough to provide for development of basic criteria for the establishment of an integrated system while at the same time providing for a gradual implementation through a time-phased program.

It must also be recognized that implementation of individual segments of systems without regard for master planning concepts can result in a serious and costly duplication of effort. The high cost of installing electronic systems, including the costs for systems design, programing, and operation, requires that the utmost care be exercised in planning for the acquisition and use of these systems. Many systems have been constantly changed at high cost because of poor initial planning or failure to plan for opportunities to integrate closely related procedures. Inadequate and poorly phased systems planning causes serious problems in the development of electronic systems.

CENTRALIZATION POSSIBILITIES

Additional centralization of Government functions appears in the offing with the possibility that new and much faster large-scale electronic computer systems will serve as central processing facilities for increasingly large segments of Government operations. In this regard, consideration of how best to use this new technology on a Government-wide basis would necessarily require extensive planning to determine the proper degree of centralization of Government ADP support operations which would provide the most effective and efficient use of Government resources and facilities. This could be involved, for example, in the question of what degree of centralization should be planned for such Government-wide functions as transportation management services, personnel and payrolling services, and supply management support programs.

SAVINGS OF $100 MILLION A YEAR—A CONSERVATIVE ESTIMATE

Mr. BROOKS. Mr. Campbell, in your 1963 report you referred to savings after an interim 5-year period of approximately $100 million per year. This stemmed, I assume, from evaluation of 523 out of the approximately 1,000 ADP systems we anticipate being in use June 30.

Mr. CAMPBELL. That is correct.

Mr. BROOKS. As a result, assuming that efficient, centralized management you recommended in your reports on a Government-wide basis is established, together with an ever-increasing utilization of this equipment in Government, then the potential savings to the taxpayers could substantially exceed both the $148 million during the acquisition 5-year period and the $100 million you anticipate annually thereafter; is that correct?

Mr. CAMPBELL. That is correct. That is my personal view as a result of my experience. I think that is conservative.

Mr. BROOKS. This pertains just to the Government, agency-operated uses?

Mr. CAMPBELL. Yes, sir.

Mr. BROOKS. If you include contractor-operated equipment, where the Government picks up the tab, it might well double or triple those savings, would you say?