EXTRACTS FROM

REPORT TO THE PRESIDENT

ON THE MANAGEMENT OF AUTOMATIC DATA PROCESSING IN THE

FEDERAL GOVERNMENT

Prepared by the

BUREAU OF THE BUDGET

(Senate Document No. 15, 89th Congress, 1st Session)

(Clewlow Report)

Page 4, "The assignment of appropriate roles to the different echelons of management in the Federal Government is of great importance. Some computer applications, particularly those involved in administrative functions, have a great deal in common and conceivably could be subject to greater centralization. On the other hand, the more significant computer applications are integral parts of agency programs; accordingly, each is a unique application and its management is a responsibility of those officials charged with mission accomplishment. The problem then becomes one of improving the effectiveness and the economy of computer utilization, both within an executive agency and in the Government as a whole, without derogating the proper authorities and responsibilities of managers in the line.

"Experience in the Government and in industry has demonstrated the urgent need for management to concern itself intimately with ADP activities. Because ADP is based on new technology whose most visible manifestation is equipment of an esoteric nature, there has been a tendency to regard it as the particular responsibility of the technician. ADP applications, from the simplest to the most complex, raise problems and require decisions that are the direct responsibility of managers themselves. ADP may have a pronounced effect upon organizational arrangements, the kind of work employees perform, the conditions under which they work, or the type of skills required. . . ADP applications that are primarily designed to provide information can have a significant effect upon the way a manager makes decisions and upon the control he exercises over his organization.

"Accordingly, it is necessary that managers concern themselves with all aspects of ADP projects including the determination of objectives sought, the decision to proceed, the design, installation and operation of the system, and the utilization of the end product. This requires that managers obtain a broad understanding of

the potentialities and limitations of ADP, and of the work of the skilled technicians on whom they must rely, and take steps to assure that decisions that are properly within the sphere of management are made by managers."

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Page 11, "Central computing services.--In this environment, a computer installation provides support for many users. Applications are generally diverse and often independent of one another. The workload tends toward mathematical or statistical processing, although these may be intermixed with administrative or management applications. The installation is normally operated by a staff of specialists, but the computer programing is frequently done by personnel assigned to organizations other than the central computer installation. However, the customer is usually not present while the work is being processed."

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Page 12, "Integrated Operations.--In this environment also, a computer installation provides support for a number of users; but generally one application, which consists of a series of interdependent processes, constitutes the largest part of the workload. In this case, a variety of inputs, usually from different organizations or geographic sources, are processed against a system of group data files to provide information to support a number of group of data files to provide information to support a number of related functions. Applications are cyclic and recurring, with large volumes of data being processed. They tend more toward administrative or management functions, although mathematical, statistical, or operating programs may be involved or intermixed. The computer installation is operated by a staff of specialists, with the systems development programing usually done by a central computer staff working closely with customer organizations. The computing equipment is generally of the medium- or large-scale class, but it is often supplemented by smaller computers."

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Page 13, ". . . it must be noted that not all computer installations will fit neatly into one of the classifications. There will be many cases where single computer installation functions within several of the environment categories and is required to meet varying time-response demands. In these instances, subjective judgments based on those factors which seem most predominant and overriding will often be required in the application of policies and guidelines."

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Page 15, "The uses now made of computers are in most cases justifiable; but marginal and, at times, uneconomical uses are sufficiently prevalent to cause concern.

"Ordinarily, the greatest advantage for the Government is derived when a computer is devoted to accomplishing the missions of an agency, as opposed to routine administrative tasks. . . There are advantages in using computers for administrative tasks such as payroll and personnel accounting. However, since administrative functions normally are a relatively small part of total operations, the potential benefits to be derived from these applications are limited.

". . . Manifestly, benefits must outweigh costs. Benefits may be expressed in tangible terms, such as reduced operating costs, or in intangible terms, such as improved service to the public, the accomplishment of missions not otherwise feasible, or better management practices. Unless benefits such as these are assured, the use of a computer would be classified as marginal."

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Page 16, "Management officials in agencies should make decisions on the uses to be made of computers, rather than leave these determinations to specialists in equipment and in system design. As proponents of the use of computers, specialists can be most effective; their technical advice is an essential factor in decisionmaking. However, those who are responsible for mission accomplishment should be prepared to make the final decision. Involving line management officials in this way will aid in insuring that objectives for the use of electronic data processing equipment in mission accomplishment are carefully established and clearly understood; that adequate resources are made available to insure that the objectives will be achieved; that proper recognition is accorded to the magnitude and complexity of the task; that full cooperation and support of the total organization is obtained; and that marginal uses are minimized."

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Page 17, "The development of computer-based systems can often be facilitated if there is an adequate frame of reference, so that any given system or subsystem can be viewed in terms of its relationship to the total structure of systems in an agency. This is particularly true in the business type or program type of functional areas; it may be less feasible if novel, experimental, scientific research, or pioneering applications are involved. Therefore, a master systems plan for an agency, at the highest feasible level, is desirable. All efforts to develop systems can then be undertaken in relation to the plan, in order to achieve an orderly and coordinated program. Such a plan, of course, needs to be reviewed periodically for adjustment. Leadership and coordination for a program of this kind requires the provision of adequate staff resources at agency and intermediate levels.

"Several concepts and techniques can often make a significant contribution to the advancement of system design. Included are the integration into a single master system of several functions using common basic data; the use of mathematical techniques; the use of 'management by exception' techniques in which only usual

circumstances are selected out of the routine process for human consideration; and the coordination of separately operated computer systems to assure machine-to-machine communication where an exchange of data is involved."

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Page 18, "Agencies should develop master data-processing plans at appropriate levels, to serve as guides in the orderly development of systems and to assure the most effective use of staff resources available for that development."

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Page 67, "In general, the weight of evidence supports the belief that existing organizational arrangements are basically sound but that there is a clear need to strengthen the resources devoted to the management of ADP. This conclusion leads us to recommend against the position taken by the Comptroller General which favors establishment of strong central management authorities and responsibilities."

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"ADP equipment is increasingly becoming integral to the accomplishment of agency missions and, in certain instances, it is virtually synonomous with program accomplishment. Decisions as to equipment, the arrangements for its availability, and the manner in which it is to be used directly affect the success or failure of Government programs to a degree not experienced with such items as office space, typewriters, and even communications. Accordingly, departments and agencies require considerable flexibility and discretion in making decisions on ADP procurement and utilization.

"The President has made it quite clear that he holds agency heads directly responsible for the management of their organizations."

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Page 68, "In summary, we have concluded that the establishment of a separate office empowered with authority and responsibility to make decisions on the procurement and utilization of ADP equipment would dilute the responsibility of agency heads for the management of their organizations, that it would serve to divorce ADP management from the established arrangements for Presidential surveillance over the over-all management of the executive branch, and that it would interfere with direct Government agency-contractor relationships unnecessarily.

"There is a clear need, however, to strengthen the resources devoted to the management of ADP within both the central agencies and line departments."

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Page 93, "To be employed effectively, the computer is demanding an increased technical competence among its utilizers. Managers at all levels and key staff personnel need to understand the computer--its capabilities and its limitations--to realize the full potential of automation and to define its potential impact. Requirements will increase for specialists in various disciplines to assist the manager in utilizing the computer. However, the manager is the person with the full perspective of the operations and goals of his organization and, while he is not expected to be a technical expert, he must have sufficient technical competence to provide leadership in the applications of automation. The conviction that few managers now have this competence is an important concern among agencies.

". . . The knowledge of management in the use of the computer will have an important bearing on the rapidity of its application as a management tool. The knowledge of management methods possessed by computer specialists will also be a factor in the development of effective systems."

New Steering Group Will Oversee Information Handling Program

An Information Management Steering Group was formed recently to oversee the development of the Department's information handling programs at home and abroad.

The Steering Group has responsibility for approving all changes to automated, semi-automated and manual systems as well as procurement of computer "hardware and software."

The Steering Group, established by William B. Macomber, Jr., Deputy Under Secretary for Administration, is chaired by John M. Thomas, Deputy Assistant Secretary for Operations.

Other members are Robert C. Brewster, Deputy Executive Secretary of the Department; Frederic L. Chapin, Deputy Assistant Secretary of American Republic Affairs for Management; George C. Denney, Jr., Deputy Director for Management, Bureau of Intelligence and Research; William H. Goodman, Deputy Assistant Secretary for Communications; and Thomas Stern, Deputy Assistant Secretary for Organization and Management.

As one of its first actions, the Steering Group approved an automated document storage and retrieval system for the Executive Secretariat (S/S).

The new system—called Secretariat Automated Data Index (SADI)—will use the Department's computer to replace many of the manual operations now performed by the Communications Management Staff (CMS) of the Executive Secretariat.

SADI will be the first operational substantive retrieval system in the Department, officials point out. As such it may serve as a prototype for the wider Departmental storage and retrieval system now in the design stage.

The system will be used in conjunction with modern microfiche photo-processing equipment to enable S/S to retrieve documents directly.

Officials believe SADI will permit the Executive Secretariat to "cope more efficiently with its growing paper load, to locate documents more quickly, to consolidate and reduce hard copy files, and to produce by computer a suspense list of documents assigned to bureaus and other offices for action."

Proposals from other offices also are being assessed by the Steering Group.

Three coordinators report directly to the Steering Group. They are W. Wallace Francis, OPR/ADP, Information Systems Coordinator; Lawrence J. Dupre, OPR/ASD, Management Planning Coordinator; and James H. Ennis, OM/SNS, Acting Information Planning Coordinator.

The coordinators supervise 12 working groups, each concerned with various aspects of information handling.

The working groups and their chairmen are:

I. Document Systems Evaluation, Charles R. Stein
II. Information Systems Development, Robert A. Young
III. Foreign Affairs Data Processing Center, Leslie T. Vaughn
IV. Advanced Techniques, Sheldon A. Rosen
V. Information and Data Files, John H. Toler
VI. Overseas Operations, E. Wills Woodward
VII. User Requirements, James H. Ennis
VIII. Thesaurus and Profiles, Gerald J. Goldman
IX. Transition Planning, Lawrence J. Dupre
X. Computer-Communications Network, Jack W. Hulbert
XI. Long Range Plans, Francis P. DiBlasi, Jr.
XII. Collection Guidance, Donald J. Simon

The establishment of the Working Groups represents a consolidation of the development effort of the Substantive Information Systems Staff (OM/SNS) and the on-going programs of the Automated Data Processing Division of the Office of Operations (OPR/ADP).

The Steering Group plans to work with potential users—directly as well as through its Working Group on User Requirements—to develop new proposals for improving information handling in the Department.

In developing new systems greater emphasis will be placed on long-range planning and overseas operations.

ARA Will Test a New Format for CASP

Deputy Assistant Secretary Robert Hurwitch briefed ARA Country Directors last month on a new summary format for ARA's CASP (Country Analysis and Strategy Paper). ARA believes the new format will make this already innovative policy and resource allocation system a more dynamic and useful decision-makers' tool.

The core of the proposed change is a standard analytical procedure which, once completed for a given country, will be updated as conditions change rather than begun anew every year. This procedure will require, as in the present CASP, that U.S. objectives and programs abroad emerge from an interdepartmental analysis of definable and measurable U.S. interests.

The new format is being designed by ARA's IG Staff, headed by Donald Easum. At the request of Assistant Secretary Charles Meyer, it will be test-run on several ARA countries during the next several months. Test results will then be analyzed to see to what degree the new approach might be applied to the entire ARA region during the forthcoming CASP cycle for FY 1973. In designing and evaluating these tests, ARA intends to explore the possibilities of computerizing certain stages of the process.

The new format may prove to be applicable to countries in other geographic bureaus of the Department, and might thus constitute a significant step in the development of an overall policy analysis and resource allocation system for the foreign affairs community at large.

Record Number of Changes In Employee Health Plans

The U.S. Civil Service Commission announced that more Federal employees and annuitants made changes in their health benefits coverage during the November 1969 open season than in any prior open season. More than 200,000 elected to change their coverage.

This record number of changes is due in part to the fact that 3 years elapsed between the open seasons in 1966 and 1969, whereas the longest time between open seasons in the past had been 2 years.

Col. White:

I strongly urge that the development of requirements be at the users level + not have this to the ADP experts.

Concur in Mr. [redacted] recommendation

17 May 65

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