STATE OF ARIZONA
OFFICE OF THE
AUDITOR GENERAL

A PERFORMANCE AUDIT
OF THE

DEPARTMENT OF ADMINISTRATION-
DATA PROCESSING DIVISION

OCTOBER 1981

A REPORT TO THE
ARIZONA STATE LEGISLATURE

REPORT 81-12

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AUDITOR GENERAL

STATE OF ARIZONA
OFFICE OF THE
AUDITOR GENERAL

October 23, 1981

Members of the Arizona Legislature
The Honorable Bruce Babbitt, Governor
Mr. George Britton, Acting Director
Department of Administration

Transmitted herewith is a report of the Auditor General, A Performance Audit of the Department of Administration - Data Processing Division. This report is in response to a January 30, 1980, resolution of the Joint Legislative Oversight Committee. The performance audit was conducted as a part of the Sunset review set forth in A.R.S. §§41-2351 through 41-2379.

The blue pages present a summary of the report; a response from Mr. Jack Stanton, state automation director is found on the yellow pages preceding the appendices.

My staff and I will be pleased to discuss or clarify items in the report.

Respectfully submitted,

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DOA-Data Processing Division

OFFICE OF THE AUDITOR GENERAL

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SUMMARY

The Office of the Auditor General has conducted a performance audit of the Department of Administration - Data Processing Division (DOA-Data Processing) in response to a January 30, 1980, resolution of the Joint Legislative Oversight Committee. This performance audit was conducted as a part of the Sunset review set forth in Arizona Revised Statutes (A.R.S.) §§41-2351 through 41-2379.

Electronic data processing (EDP) has become a significant factor in the operations of State government, with five major, centralized computer centers and additional mini- and micro-computers and word processors distributed among State agencies. Thus, EDP significantly impacts the efficiency, effectiveness and cost of State programs. For example, in fiscal year 1980-81, State expenditures for EDP activities exceeded $28 million.

To provide for efficient and coordinated use of the State's EDP resources and to plan for future EDP needs, the Legislature created DOA-Data Processing in 1972. The Division currently has nine full-time staff members and a fiscal year 1981-82 budget of $394,700.

Our review showed that DOA-Data Processing has not fulfilled its statutory responsibility to develop, implement and maintain a coordinated Statewide plan for data processing. The Statewide EDP plans the Division has produced are not adequately structured and cannot be implemented. The plans do not fulfill statutory objectives. Further, the Division's history is replete with projects that have been identified repeatedly in the plans, but which have been abandoned or not started. We recommend the Division be required to report to the Legislature the progress it makes in implementing all objectives and projects identified in its Statewide data processing plans. (page 7)

We found the Division's current enabling statutes are inadequate in that they give the Division the responsibility to provide for efficient and coordinated utilization of data processing equipment, techniques and employees, but do not give the Division commensurate authority over the data centers. Also, the statutes' singular emphasis on centralized data processing no longer appears appropriate, given today's technology. Further, the Division lacks needed statutory authority to review EDP equipment acquisitions. (page 25)

Finally, the Division is not fulfilling its intended role in the EDP acquisition process. The Division has not published guidelines to assist agencies in the process, or provided them with adequate consultation. Agencies can and do circumvent the Division when acquiring EDP equipment and services. (page 35)

Consideration should be given to the following recommendations:

1. The Division follow its own Long-Range Planning Guidelines by developing a plan which specifically defines: a) stated objectives, activities, time schedules and measurable results, and b) the estimated resource requirements to carry out the identified activities.

2. The Division fulfill its statutory planning mandate by developing a Statewide data processing plan that addresses the consolidation, transfer or elimination of data processing activities and the establishment of additional data processing operations centers.

3. The Division report to the Legislature the progress made to achieve all objectives that are stated in the plan document.

4. The Legislature consider the establishment of a steering board or committee to review and approve Statewide data processing plans prepared by the Division and to monitor the implementation of the Statewide plan.

5. The Legislature consider the following alternatives regarding the funding and operation of the data operations centers:

   a. Clarify A.R.S. §41-713 by specifically including data operations centers under the data processing revolving fund. This would involve:

      1) appropriating sufficient monies to the Division for deposit in the data processing revolving fund for the purpose of employing persons in and purchasing equipment for the data processing operations centers, or

      2) transferring employees performing functions related to the data processing operations centers, data processing equipment and unexpended and unencumbered monies appropriated to the host agencies for performing functions related to the data processing operations centers to the Division.

   b. Continue to fund the data operations centers by appropriation and statutorily establish the authority/responsibility relationship between DOA-Data Processing and the data operations centers.

   c. Authorize the assistant director for data processing to deputize employees in the agencies hosting data processing operations centers to perform certain functions of the Division.

   d. Authorize DOA or its Data Processing Division to contract or enter into agreements with the host agencies for joint or cooperative action regarding the data processing operations centers.

6. The Legislature amend A.R.S. §41-712, subsection B to provide for data processing systems other than centralized systems.

7. The Legislature consider statutorily prescribing the review process for data processing acquisitions.

8. The Division should provide more consulting support to those agencies lacking EDP expertise, and seek to improve communications with the larger agencies regarding acquisitions.

9. The Division cooperate with the General Accounting Office of DOA-Finance to eliminate circumvention of the acquisition review process.

10. The Legislature consider prescribing statutorily the review process for data processing acquisitions and include statutory provisions for an appeal process to review disputed decisions.

INTRODUCTION AND BACKGROUND

The Office of the Auditor General has conducted a performance audit of the Department of Administration - Data Processing Division (DOA-Data Processing) in response to a January 30, 1980, resolution of the Joint Legislative Oversight Committee. This performance audit was conducted as a part of the Sunset review set forth in Arizona Revised Statutes (A.R.S.) §§41-2351 through 41-2379.

Electronic data processing (EDP) has become a significant factor in the operations of State government, with five major, centralized computer centers and additional mini- and micro-computers and word processors distributed among State agencies. Thus, EDP significantly impacts the efficiency, effectiveness and cost of State programs. For example, in fiscal year 1980-81, State expenditures for EDP activities exceeded $28 million.

To provide for efficient and coordinated use of the State's EDP resources and to plan for future EDP needs, the Legislature created DOA-Data Processing in 1972. The Division currently has nine full-time staff members and a fiscal year 1981-82 budget of $394,700.

The Division's activities include:

- Preparation of the Statewide Data Processing Plan for Arizona and the Annual Automation Report to the Arizona Legislature,
- Development and issuance of policies, guidelines, procedures and directives to govern State EDP operations,
- Technical reviews of State data centers, and
- Review and approve each State EDP equipment acquisition.

DOA-Data Processing is funded by an appropriation from the State General Fund. Table 1 details the staffing and expenditures of the Division for fiscal years 1977-78 to 1981-82.

TABLE 1

EXPENDITURES OF DOA-DATA PROCESSING FOR FISCAL YEARS
1977-78 THROUGH 1981-82

	1977-78	1978-79	1979-80	1980-81	(Estimated) 1981-82
FTE positions*	7	7	6	9	9
Personal services	$146,600	$161,110	$167,385	$243,187	$274,800
Employee-related expenditures	22,500	25,873	27,600	42,312	52,200
Professional and outside services	24,700	16,835	19,897	39,094	42,400
Travel:					
In-State	100	1,084	253	514	1,100
Out-of-State	1,800	2,653	2,026	2,647	3,200
Other operating expenses	16,700	19,744	15,233	19,043	21,000
Equipment	2,900	691	12,208	1,499	
Total	$215,300	$227,990	$244,602	$348,296	$394,700

The Auditor General expresses gratitude to the assistant director, Department of Administration - Data Processing Division, and his staff for their cooperation, assistance and consideration during the course of the audit.

* Full-time equivalent positions.

SUNSET FACTORS

SUNSET FACTOR: OBJECTIVE AND PURPOSE IN ESTABLISHING THE DIVISION

Although we were unable to find a statement of legislative intent pertaining to the purpose in establishing the Division, the enabling statutes set forth two main duties: 1) to provide for efficient and coordinated use of the State's EDP resources, and 2) to develop and implement a Statewide plan for data processing.

The Division has stated its goal to be:

> "Provide all the people of the State of Arizona with optimum effectiveness, efficiency and economy in the coordination, collection, storage, interchange, management, processing, transmission and protection of information and related services by utilizing automation equipment, techniques and personnel to support the requirements of the appropriate levels of the Legislative, Executive and Judicial Branches of State Government."

SUNSET FACTOR: THE DEGREE TO WHICH THE DIVISION HAS BEEN ABLE TO RESPOND TO THE NEEDS OF THE PUBLIC AND THE EFFICIENCY WITH WHICH IT HAS OPERATED

In contrast to a licensing board or regulatory agency the Division has incidental interaction only with the public. The nature and purpose of the Division do not place it in the position of responding to public needs directly.

SUNSET FACTOR: THE EXTENT TO WHICH THE DIVISION HAS OPERATED WITHIN THE PUBLIC INTEREST

To the extent the Division's failure to plan adequately for data processing affects the use of public funds, the Division may not have operated within the public interest. (page 7)

SUNSET FACTOR: THE EXTENT TO WHICH RULES AND REGULATIONS PROMULGATED BY THE DIVISION ARE CONSISTENT WITH THE LEGISLATIVE MANDATE

The Division's enabling statutes do not provide it with rule-making authority. Consequently, the Division does not promulgate rules.

SUNSET FACTOR: THE EXTENT TO WHICH THE DIVISION HAS ENCOURAGED INPUT FROM THE PUBLIC BEFORE PROMULGATING ITS RULES AND REGULATIONS AND THE EXTENT TO WHICH IT HAS INFORMED THE PUBLIC AS TO ITS ACTIONS AND THEIR EXPECTED IMPACT ON THE PUBLIC

This Sunset factor is not applicable to DOA-Data Processing.

SUNSET FACTOR: THE EXTENT TO WHICH THE DIVISION HAS BEEN ABLE TO INVESTIGATE AND RESOLVE COMPLAINTS THAT ARE WITHIN ITS JURISDICTION

The Division does not receive, investigate or resolve complaints.

SUNSET FACTOR: THE EXTENT TO WHICH THE ATTORNEY GENERAL OR ANY OTHER APPLICABLE AGENCY OF STATE GOVERNMENT HAS THE AUTHORITY TO PROSECUTE ACTIONS UNDER ENABLING LEGISLATION

The Division's enabling legislation does not define violations or offenses. Therefore, there are no prosecutable actions under the enabling legislation.

SUNSET FACTOR: THE EXTENT TO WHICH THE DIVISION HAS ADDRESSED DEFICIENCIES IN THE ENABLING STATUTES WHICH PREVENT IT FROM FULFILLING ITS STATUTORY MANDATE

The Division has not addressed deficiencies in its enabling statutes that prevent it from fulfilling its statutory mandate. (page 32)

SUNSET FACTOR: THE EXTENT TO WHICH CHANGES ARE NECESSARY IN THE LAWS OF THE DIVISION TO ADEQUATELY COMPLY WITH THE FACTORS LISTED IN THE SUBSECTION

The enabling statutes of the Division are inadequate and should be amended. While the Division has been given the responsibility for the State's various data centers, it has not been given commensurate ability to control the operations of those centers. We recommend in this report several possible alternatives for statutory revisions to clarify the Division's relationship with the centers. (page 26)

Another needed change pertains to the statutory language of A.R.S. §41-712.B, which emphasizes the establishment of centralized data processing centers. Such singular emphasis on centralization may not be appropriate, given the advent of distributed data processing systems. A.R.S. §41-712.B should be revised to provide for both centralized and distributed data processing. (page 30)

A third needed change pertains to providing the Division with statutory authority to review and approve the acquisition of EDP equipment, coupled with a provision for the appeal of Division decisions. Such a change would enhance the Division's ability to coordinate and control the State's EDP resources. In the absence of such statutory authority, State agencies can and do circumvent the review process. (page 32)

FINDING I

DOA-DATA PROCESSING HAS NOT EFFECTIVELY FULFILLED ITS STATUTORY RESPONSIBILITY TO DEVELOP, IMPLEMENT AND MAINTAIN A COORDINATED STATEWIDE PLAN FOR DATA PROCESSING.

Arizona Revised Statutes (A.R.S.) §41-712 provides that DOA-Data Processing "...shall develop, implement and maintain a coordinated Statewide plan for data processing...." Reviewing this requirement we found the Division has not effectively fulfilled its statutory planning role in that:

1. The Statewide data processing plan does not meet the criteria of a good planning document and cannot be implemented,

2. The Statewide data processing plan does not address or fulfill statutory objectives, and

3. The Division's history is replete with unstarted or abandoned projects.

As a result, the State's data processing users, who spent more than $28 million in fiscal year 1980-81, are not receiving adequate guidance or planning assistance.

Statewide EDP Plan Is Not Adequately Structured and Cannot Be Implemented

The Statewide EDP plan developed by the Division does not meet the criteria of a good planning document as defined in Long Range Planning Guidelines For EDP Functions, which the Division itself developed and published in August 1980. Instead, the Statewide plan as currently structured is unmeasurable and of such little practical use that it cannot be implemented.

The deficiencies in Arizona's Statewide EDP plan are more clearly illustrated when it is compared to the EDP plan of the state of Illinois. The Illinois plan does fulfill the requirements for a good planning document as outlined in the Division's long-range planning guidelines.

Each of the Illinois plan objectives is outlined in nine major areas:

1. Current state of affairs,

2. Forces constraining further action,

3. Problems which need to be addressed,

4. Emerging technology,

5. Strategies which will influence efforts,

6. Descriptions of actions to effect those strategies,

7. Benefits of implementation of these actions,

8. Resources necessary to implement actions, and

9. Milestones which can be measured.

Two similar objectives from the 1980 Arizona and Illinois plans, data communications and long-range planning, are contrasted below.

I. Data Communications Objective

A. Arizona Plan - The objective and plans to implement the objective, as stated in the 1980 Statewide plan, are presented fully below:

> "Communications
> "Define plans to meet statewide (data) communications needs within FY 1980-81.
>
> "Plans: DPD will produce definitive plans during FY 80-81.* These will take into account the existing networks and facilities and future requirements."

B. Illinois Plan - A few major elements of a 14-page plan are summarized as follows:

- Problems to be addressed
  - Existing networks are very complex,
  - Technology currently in use is hardware-dependent,
  - No standard protocol exists, and
  - Improvement in data communications must be related to changes in computing equipment, data management and applications.

- Strategies to influence efforts
  - Establish a standard protocol,
  - Encourage the sharing of transmission lines,
  - Use appropriate technology, and
  - Seek a balanced communications network.

* It should be noted that the Division did not produce a data communications plan during fiscal 1980-81.

- Essential actions
  - Build acceptance for use of a standard protocol,
  - Undertake cooperative planning for a balanced network,
  - Demonstrate the cost-effectiveness of new communications technology, and
  - Conduct biennial review of data communications.

- Critical milestones
  - Dissemination of policy and supporting plan for use of standard protocol by the fourth quarter of 1980,
  - Recommendations for enhancements in data communications by the fourth quarter of 1981 and every two years thereafter,
  - Acceptance of plan for a balanced state government network by the second quarter of 1982,
  - Revision of network plan to incorporate use of communications carrier's expanded services by the third quarter of 1984, and
  - Beginning of conversion to externally-provided expanded communications service by the first quarter of 1985.

The data communications section of the Illinois plan also contains a chart showing actions to be completed during a five-year time frame, the resources necessary to implement the plan and the projected benefits.

II. Long-Range Planning Objective

A. Arizona Plan - The action plan designed to achieve the long-range planning objective is presented in its entirety as stated in the 1981 Statewide plan.

> "Long-Range Planning for Data Processing
> "The complexity and cost of data processing require formal planning for the future development of State automation resources.

"Agency 1981 EDP Plans

"The Department of Public Safety has indicated that a long-range plan for data processing will be developed in 1981. DOR will complete an EDP plan begun in 1980. The DOA-Data Center will complete an update to its original long-range plan issued in 1979. The Department of Economic Security has agreed to develop a computer system capacity plan to help ensure that its hardware will be adequate to accommodate the extensive applications development already begun."

B. Illinois Plan - The major elements of a 30-page plan are summarized as follows:

- Problems to be addressed
  - Deficiencies in prior planning procedures,
  - Inadequate means to resolve conflicts between planning agency and EDP users,
  - Lack of training in current planning techniques, and
  - Lack of continuing planning assignments.

- Strategies to influence efforts
  - Developing the process for comprehensive EDP planning,
  - Strengthening the resources for EDP planning,
  - Linking EDP planning to fiscal control, and
  - Evaluating communitywide EDP performance as well as the quality of the planning process on the basis of the results of the comprehensive planning system.

- Essential actions
  - Obtain management support and involvement in comprehensive planning,
  - Organize and staff the EDP planning process,
  - Maintain necessary policy and procedural support for comprehensive planning,
  - Improve fact-gathering function for strategic EDP planning,
  - Provide formal training for comprehensive planning,
  - Conduct annual strategic EDP planning,
  - Prepare short-term EDP planning, and
  - Conduct mid-year EDP planning reviews.

The long-range planning section of the Illinois plan also included the necessary resources and expected benefits from the planning process and a list of milestones which could be easily monitored.

As shown, the Illinois plan is far superior to the Arizona plan. The deficiencies in the Arizona plan are further illustrated by comments made by managers of State data processing operations centers. During our review of the Division we interviewed the management of the five State data centers. The following statements about shortcomings in the Statewide EDP plan are representative comments:

Data Center No. 1:

> "The purpose of a plan is to determine where you are, where you want to go and how to get there; the statewide plan addresses none of these concerns in sufficient detail to be useful."
>
> "The current plan (or lack of one) does not provide for coordinated data processing and data communications; for example, the statewide plan does not deal with: 1) how to get state computers to talk to each other; 2) how to use data communications; or 3) the exchange of information between data centers."
>
> "The statewide plan cannot be implemented because the plan does not have enough detail to implement."

Data Center No. 2:

> "Several changes and improvements need to be made in the statewide plan: 1) specific goals and objectives need to be set out in the plan; 2) the plan should set out functional requirements for each data center agency and how the agency will meet those needs. Also, the statewide plan should establish what DPD will do on a statewide basis; 3) the plan should identify statewide needs and obtain the support of the Governor and agency heads."
>
> "There are no specific plans to guide implementation or to monitor progress."

Data Center No. 3:

> "The statewide plan does not represent a plan. Although goals and objectives have been developed, no one has worked on detail. The real meat of the planning job has not been performed."
>
> "The meat of planning is: 1) to find out what the state-of-the-art is and how it best fits the State's needs and 2) based upon that, how each state agency and data center can fulfill a part of the State's EDP need."
>
> "Although goals have been developed, there is no sufficient analysis on how to get there."
>
> "There is really no plan to implement, only goals to achieve."

Although A.R.S. §41-712 requires the Division to develop and implement a Statewide plan, the assistant director for the Division told audit staff:

> "The statewide EDP plan document is intended to be a strategic document to provide direction and is not a plan that in itself emphasizes actions toward implementation. The individual data center and DPD plans should emphasize actions toward implementation."

Effects Of Inadequate Plan

Because the Division's Statewide data processing plan contains nonimplementable and nonmeasurable objectives, the State's data processing users, who spent more than $28 million in fiscal year 1980-81, are not receiving adequate guidance or planning assistance. In addition, the deficiencies in the Division's plan place other functions of DOA-Data Processing in a vacuum. For example, the Division has assumed responsibility for the following actions:

1. Reviewing every acquisition of data processing equipment and services by State agencies,

2. Reviewing budget requests involving the expenditure of funds for data processing, and

3. Reviewing other State agencies' EDP plans.

The purpose of these reviews is to ensure conformance with the statewide plan. However, the effectiveness of these reviews is, of necessity, hampered by inadequacies in the plan.

Statewide Plans Do Not Meet Statutory Objectives

Our review of the 1979, 1980 and 1981 Statewide data processing plans published by the Division has revealed that these plans neither address nor fulfill statutory objectives. Specifically, the plans do not address the following areas as required by A.R.S. §41-712:

> "1. ...consolidation, transfer or elimination of data processing activities....
>
> "2. ...establishment of one or more centralized data processing operations centers...."

According to the DOA-Data Processing assistant director, the consolidation, transfer or elimination of data processing activities and the establishment of data centers have not been addressed in the plans because there has been very little activity in either area since the plans have been published. However, the assistant director's comments notwithstanding, planning is by definition a forward-looking activity designed to guide future action. As such the Division should be projecting the need for future data centers and establishing the criteria for the necessary decision-making involved. With this process absent, major data processing decisions are made without knowing if such decisions are in the best long-term interests of the State. Two examples involving the DOA-Data Center illustrate this point:

1. The DOA-Data Center currently is implementing an $820,000 hardware upgrade in September 1981. This will be the fifth upgrade in the past three years at a cost of $3.2 million.

2. The State Compensation Fund currently spends almost $1.2 million a year for data processing services at the DOA-Data Center. By way of contrast, the California State Compensation Fund has its own data center, pays less than $1.7 million a year for comparable data processing services, but is five times as large as the Arizona system.

In the absence of long-range plans and criteria concerning the establishment of additional centers, it cannot be determined if the DOA-Data Center should continue to upgrade its equipment or a new center should be created. Similarly, it cannot be determined at what point, and under what conditions, it may become more efficient to establish a separate data center for major data processsing users such as the State Compensation Fund.

The Division's History Is Replete with Unstarted or Abandoned Projects

In addition to developing a Statewide plan for data processing, the Division is required statutorily to submit to the Legislature an annual report which includes plans for the ensuing fiscal year.

Our review of the annual reports to the Legislature and the Statewide data processing plans prepared by the Division disclosed that several significant activities, identified as needing attention or requiring specific Division action, have not in fact been completed. In addition, the Division's annual reports to the Legislature and the Statewide EDP planning document do not include those activities which were abandoned or never started. Five instances of such inaction by the Division are documented in the case histories that follow:

Case History No. 1 - Data Communications

Source and Date of Statement	Statement
Annual Report* May 1975	"...the purpose of the Master Plan for statewide data processing providers, is to promote better service and lower costs through a series of carefully planned and cost justified steps that will.... "Link these Functional Networks through a common, shared, Statewide Data Communications Network." (Emphasis added)
EDP Master Plan** 1975	"A high-speed, data communications network is being developed to support the functional centers in the processing of data from the original sources to points of need."

* The publication's full title is "Annual Automation Report to the Arizona Legislature" and is published annually.

** The publication's full title is "Data Processing Master Plan For The State of Arizona." This plan was never implemented.

Source and Date of Statement	Statement
Annual Report* January 1977	"There appears to be a need to establish a telecommunications network for data communications within the State.... "Therefore, a major effort by DPD in (FY) 77-78 will be to add an individual to the staff to accomplish needed work in this area.... "It appears reasonable to expect that from $50,000-100,000/yr. could eventually be saved through the use of a statewide data network."
Annual Report January 1978	"With the added technical staff position for (FY) 77-78, efforts are underway to study and report on this subject. Initial recommendations and plans should be available for both executive and legislative branch review by the end of this fiscal year."
Annual Report January 1979	"Continued efforts to define the needs of the State for a coordinated data network are planned to be completed by fiscal year 1979-80."
Statewide EDP Plan February 1979	"Data Communications.... "DPD is working toward publishing formal plan by 6/80."
Statewide EDP Plan February 1980	"DPD will produce definitive plans during FY 80-81. These will take into account the existing networks and facilities and future requirements."
Annual Report January 1981 and Statewide EDP Plan March 1981	"The Data Processing Division will form a committee of data processing managers, communications experts and other State officials to work on a statewide policy for voice and data telecommunications."

* The publication's full title is "Statewide Data Processing Plan For Arizona" and has been published annually since 1979.

As shown, the Division has made little progress towards achieving a data communications plan or network in spite of: 1) hiring a technical specialist for data communications on July 25, 1977, 2) recognizing the need for data communications network as early as 1975, and 3) promising to produce plans by June 30, 1978, June 30, 1980, and during fiscal year 1980-81. According to the Division's technical specialist in data communications:

> "Nothing has really been accomplished towards developing a common communications network in three years."

It should be noted that the Division completed an inventory of data communications circuits in early 1980. However, this inventory already is outdated because it has not been maintained properly.

Case History No. 2 - Cost Allocation

Source and Date of Statement	Statement
Annual Report January 1976	"Some other areas that need attention are:...
	"Establish a series of 'standard practices' to be applied to such EDP areas as;
	"- uniform cost allocation procedures for all state data processing operation centers..,"
Annual Report January 1977	"Other specific plans and objectives scheduled for F.Y. 77-78 are..."
	Provide initial guidelines for uniform cost allocations at the five state computer centers by September 1977...."
Annual Report January 1978	"Also scheduled for completion during the coming year are guidelines for uniform statewide cost allocation and charge rate structures...."
Statewide EDP Plan February 1979	"Minimum standards to be defined by DPD in calendar year 1979."

Case History No. 2 - Cost Allocation (Concl'd)

Source and Date of Statement	Statement
Annual Report January 1980	"The Data Processing Division will produce guidelines for the development of computer cost systems during 1980."
Statewide EDP Plan February 1980	"DPD will issue guidelines for computer cost allocation in FY 79-80."
Statwide EDP Plan March 1981	"DPD will produce Cost Allocation Guidelines...by June, 1981."

The Division has identified the need to establish uniform cost allocation procedures for State data centers and has promised to provide cost allocation guidelines every year since 1977. However, as of September 16, 1981, no guidelines had been provided.

Case History No. 3 - Compatability of Computers

Source and Date of Statement	Statement
Annual Report March 1974	"Information has value to management only if it can be interrelated and to the degree it is interrelated. "It is practically, and technically impossible to interrelate data within Arizona government because of the diverse programming languages, methods, standards and non-compatible computers."
EDP Master Plan 1975	"The organization set forth in this plan involves...standardization, to the extent feasible, of data processing equipment configurations utilized by the State..."

Case History No. 3 - Compatability of Computers (Concl'd)

Source and Date of Statement	Statement
Statewide EDP Plan February 1979	"Improved compatability which will yield interchange of information and reduced costs is a desirable goal. Economic and technical benefit/cost aspects of achieving compatability should be studied in anticipation of a decision to be effective in the next 5-7 years."
Statewide EDP Plan February 1980	"Economic, security and multi-agency information exchange advantages of increased compatability will be studied in anticipation of a decision by 1984-86."
Statewide EDP Plan March 1981	"Economic, security and multi-agency information exchange requirements will benefit from increased compatibility. These factors will be studied and plans made to achieve a satisfactory solution by FY 1986."

Although the question of computer compatability has been identified as a topic requiring attention since March of 1974, the Division has not made demonstrable progress in this area. A careful reading of the 1981 Statewide data processing plan indicates that the Division expects the problem to provide its own solution.

The plan states,

> "Fortunately, vendors in the marketplace see sufficient value in compatability to work toward it on their own with the potential result that Arizona may be able to meet this need simply by keeping it in mind whenever a change in computer hardware, software or telecom network design is contemplated." (Emphasis added)

The data center managers, however, feel that the DOA-Data Processing philosophy in this area is inappropriate. During the June 4, 1981, day-long semiannual Division planning session one data center manager stated that if the State waited for vendors to provide interfaces to allow compatability, the State would still be waiting in 1986. Several others in attendance agreed, and were receptive to be "up and doing."

Case History No. 4 - Minicomputer and Distributed Data Processing

Source and Date of Statement	Statement
Annual Report January 1976	"Some other areas that need attention are:... "Investigate and determine which of the new techniques and technologies (such as minicomputers) can and should be adopted to our State's automation facilities in a uniform manner."
Annual Report January 1977	"Other specific plans and objectives scheduled for F.Y. 77-78 are:... "Initiate pilot installations to study the various aspects and capabilities of applying minicomputers to generalized data processing within our state government."
Annual Report January 1978	"Because the overall technology of computers is changing, and to foster a needed logical, orderly and factual investigation of how this changing environment might benefit the State, the following minicomputer policy will be effective during the study and evaluation phase which will extend for approximately 18-24 months. "No new 'stand alone' computer centers will be established. A limited and controlled number of 'pilot' minicomputer installations will be authorized by the DPD from those requested by the agencies."

Case History No. 4 - Minicomputer and Distributed Data Processing (Concl'd)

Source and Date of Statement	Statement
Statewide EDP Plan February 1979	"Objective/Issue "Allow expanded deployment of general purpose minicomputers if appropriate economic, managerial and staffing standards are met in the judgment of the central reviewing authority (DPD)."
Annual Report January 1981	"This division and the managers of the larger data processing centers will address this important new technology in the coming year to attempt to arrive at a statewide policy that will permit orderly growth with control."
Statewide EDP Plan February 1981	"A statewide policy will be developed to define distributed processing and the requirements for participation, including the use of minicomputers, communications devices and techniques....This should occur during the 1982 calendar year time frame."

Although the Division has recognized the need to determine if minicomputers should be applied to the State's automation facilities, it has made little progress toward such a determination other than monitoring the use of a Department of Health Services minicomputer. A policy statement dated January 25, 1978, indicated the study and evaluation phase would be extended to January 25, 1980. It should be noted that this phase has been extended to 1982.

Case History No. 5 - Computer Application

Source and Date of Statement	Statement
Statewide EDP Plan February 1979	"Objective/Issue "The EDP community in cooperation with users should establish a process for the review of existing as well as new applications leading to possible recommendations for revision or even elimination from automated processing." "Comment "A number of legislators and others were concerned about the possible misuse of computers resulting from running unnecessary, inappropriate or inefficient applications."
Statewide EDP Plan February 1980	"DPD will produce standards or guidelines governing the applications review procedure during calendar year 1980."
Statewide EDP Plan March 1981	"Guidelines will be produced in 1981 for...applications reviews..."

As of September 16, 1981, the Division had not produced applications review guidelines that were scheduled for completion in 1980.

The above five cases illustrate that the Statewide data processing plan is not being developed or implemented properly. A possible solution might be to establish a Statewide EDP advisory council. In the 1979 Statewide plan DOA-Data Processing suggested the creation of such a council, stating:

> "The group should consist of non-DP professionals from the legislative, executive and judicial branches and possibly members of the private sector. The council should meet approximately four times each year to review EDP plans and recommend actions."

If such a council were created to review plans, monitoring the implementation of the plans could be a natural extension of its duties.

CONCLUSION

The Division's Statewide data processing plan is inadequate in that it does not meet the criteria of a good plan document, cannot be implemented, is not in compliance with statutory requirements and is replete with abandoned or never-started projects.

As a result, the State's data processing users are not receiving adequate guidance or assistance.

RECOMMENDATIONS

Consideration should be given to the following recommendations:

1. The Division follow its own Long-Range Planning Guidelines by developing a plan which specifically defines: 1) stated objectives, activities, time schedules and measurable results, and 2) the estimated resource requirements to carry out the identified activities.

2. The Division fulfill its statutory planning mandate by developing a Statewide data processing plan that addresses the consolidation, transfer or elimination of data processing activities and the establishment of additional data processing operations centers.

3. The Division report to the Legislature the progress made to achieve all objectives that are stated in the plan document.

It is further recommended that the Legislature consider the establishment of a steering board or committee to review and approve Statewide data processing plans prepared by the Division and to monitor the implementation of the Statewide plan.

FINDING II

THE ENABLING STATUTES FOR DOA-DATA PROCESSING ARE INADEQUATE.

In 1972 the Legislature established by statute DOA-Data Processing, the position and responsibilities of an assistant director for data processing and a revolving fund to be managed by the Division.

Our review shows the statutes are inadequate in that:

1. While the Division is given the responsibility to provide for efficient and coordinated utilization of data processing equipment, techniques and personnel it is not given commensurate authority over the State's five major data centers.

2. The enabling statutes' emphasis on a centralization of data processing may no longer be appropriate, given the state of today's technology, and

3. There is no specific statutory authority for the Division to perform acquisition reviews.

In addition, the Division has not sought curative legislation to address needed clarifications and revisions of its statutes. As a result, the Division has not provided effectively for the efficient and coordinated use of the State's data processing resources envisioned in its enabling statutes.

Inability to Enforce Efficiency and Coordination

A.R.S. §§41-711 through 41-713 contain the enabling statutes for the Division, descriptions of its responsibilities and a data processing revolving fund. A.R.S. §41-712 states:

> "A. The data processing division shall provide for an efficient and coordinated utilization of data processing equipment, techniques and personnel to achieve optimum effectiveness and economy in collection, storage, interchange, retrieval, processing and transmission of information.
>
> "B. The data processing division shall develop, implement and maintain a coordinated statewide plan for data processing and data communications systems, including but not limited to the consolidation, transfer or elimination of data processing activities, and the establishment of one or more centralized data processing operations centers, for the purpose of serving the management and other needs of the legislative, executive and judicial branches of state government."

In giving the Division the mandate to achieve efficiency and coordination, A.R.S. §41-712 gives the Division responsibility for, and sole authority over, the data processing needs of State government. Reviewing A.R.S. §41-712, Legislative Council commented:

> "In authorizing the DPD to develop, implement and maintain a coordinated state plan for data processing and data communications systems for the purpose of serving the needs of state government, the legislature has clearly expressed its intent to confer on the DPD the sole authority to provide for the data processing needs of the branches of state government and their departments; agencies, boards and commissions."
>
> . . . . . .
>
> "The assistant director for data processing is, therefore, responsible for the direction and control of data processing operations centers which DPD establishes, and not the departments, agencies, boards or commissions which serve only as hosts for the centers." (Emphasis added)*

* A full text of the opinion is included as Appendix I.

Despite this statutory authority, the Division is unable to enforce efficiency and coordination because:

a. The Division does not have authority over the data processing resources of other agencies, and

b. The method of financing the State's data centers set forth in A.R.S. §41-713 has not been implemented.

Lack of Authority over Resources

The Division has attempted to achieve efficiency and coordination by issuing policies, directives, guidelines and procedures for the State's five data processing centers. However, the data processing centers and the host agencies for those centers either ignore the Division's directives or do not comply with them in a timely manner.

Data Processing Division Directives 80-01D, 80-04D and 80-05D illustrate:

Directive 80-01D

This directive required applicable agencies to develop and submit EDP security plans by the end of the third quarter of 1980. None of the data operation centers complied. One center submitted the requested plan in the fourth quarter of 1980, one in the first quarter of 1981 and the other three in the second quarter of 1981.

Directive 80-04D

This directive required the data operations centers to submit long-range plans annually. Only two of the five data operation centers complied.

Directive 80-05D

This directive required the data operations centers to file a copy of their disaster-recovery plans with the Division by June 30, 1981. As of July 14, 1981, none of the data centers had complied.

According to the Legislative Council, the assistant director for data processing is "...responsible for the direction and control of data processing operations centers...." However, the Division has no control over center employees or equipment in that "the host agency, not DPD, is authorized to supervise the persons staffing the data processing operations centers...."* Therefore, while DOA-Data Processing may be generally responsible for direction and control of data processing, the host agencies control the resources and may ignore Division directives if they so choose.

Responding to the incongruity of Division responsibilities without authority, Legislative Council offered four possible solutions:

> "1. Authorize the assistant director for data processing to deputize employees in the agencies hosting data processing operations centers to perform certain functions of the DPD.
>
> "2. Authorize the DOA or the DPD alone to contract or enter into agreements with the host agencies for joint or cooperative action regarding the data processing operations centers. A.R.S. section 11-952, subsection A provides that:
>
> "'If authorized by their legislative or other governing bodies, two or more public agencies by direct contract or agreement may contract for services, or jointly exercise any powers common to the contracting parties and may enter into agreements with one another for joint or cooperative action, except that if two or more school districts arrange to become contracting parties under the terms of this section, such contract shall first be approved by the state board of education.'
>
> "The departments of revenue, economic security, public safety and transportation are authorized to enter such agreements with other agencies. See, respectively, A.R.S. sections 42-104, 41-1954, 41-1713 and 28-114.

* A full text of the opinion is included as Appendix II.

"3. Appropriate sufficient monies to the DPD for deposit in the data processing revolving fund for the purpose of employing persons in and purchasing equipment for the data processing operations centers.

"4. Transfer personnel performing functions related to the data processing operations centers, data processing equipment and unexpended and unencumbered monies appropriated to the host agencies for performing functions related to the data processing operations centers to the DPD."

The third alternative is particularly noteworthy in light of the existing statutory provisions for financing State data centers.

Financing Centers According to A.R.S. §41-713

Four of the five data processing operation centers have been funded through appropriation since their creation in 1975. These data centers should be operating under the data processing revolving fund provided for in A.R.S. §41-713 . In a May 4, 1981, memorandum the Legislative Council stated:

> "A.R.S. section 41-713 is applicable to all data processing operations centers in that the assistant director for data processing may prescribe that all data processing operations centers be financed from and operate under the data processing revolving fund."

In addition, the Legislative Council stated in an opinion dated June 1, 1981:

> "...if the legislature appropriates monies to the DPD for deposit in the data processing revolving fund and those monies are expended by DPD for data processing equipment of the data processing operations centers and salaries of employees it assigns to the data processing operations centers, DPD is the owner of the equipment and the supervisor of all persons it employs for assignment to the data processing operations centers. The host agencies would serve only as hosts of the data processing operations centers."

Under the revolving fund concept the Division would possess much broader authority over the data centers than it now has. It should be noted that the Division attempted to require all the data centers to operate under the revolving fund by issuing Policy Statement 80-02 and Directive 80-03D on August 11, 1980, establishing a uniform method of financing, cost allocation, cost recovery and budgeting for the State's data processing operation centers by including all of them under the revolving fund. However, the policy and directive never were implemented* because of significant opposition from the data center managers, department heads of the host agencies and legislators.

The lack of Division authority over the resources of the data centers precludes it from enforcing its policies, directives, procedures and guidelines. According to the Division assistant director:

> "DPD has very few mechanisms available to exercise its authority over those agencies hosting the designated State data centers other than the power to establish them. For example, the DPD would need more direct involvement in the fiscal management of the State's data processing resources including review authority over data processing revenues and expenditures in order to enforce its stated and implied statutory responsibility for those who choose to ignore it."

Statutory Focus On Centralized Centers May Be Inappropriate

The focus of A.R.S. §41-712.B on centralized data centers may not be in the best interest of the State. Some experts now believe distributed data processing, through the use of minicomputers, microcomputers and word processing centers, is the new generation of data processing.

Distributed data processing has been defined as a system:

> "...in which the computing functions are dispersed among several physical computing elements. These elements may be colocated or geographically separated."

* The Director of the Department of Administration countermanded Policy Statement 80-02 and Directive 80-03D on August 27, 1980.

Such systems have evolved because technological advancements have reduced costs of minicomputers and microcomputers to the extent that it is feasible to buy three or four small computers to do work previously performed by one large central computer.

Although not appropriate for all applications, distributed data processing can provide significant advantages over centralized systems. Some of the advantages are:

-- More specialized and responsive services - The use of more and smaller computers allows for information systems that better match the needs and objectives of the users.

-- More reliability - All computing systems are subject to failure. However, when small computers are linked in a multiprocessor system, provisions can be made for backup computers in the event of such failures. It usually is cost-prohibitive to maintain backup for large, centralized computers. In addition, software packages for smaller computers often are simpler and more likely to be error-free than the more complex software packages for large computers.

-- Cost savings and productivity improvements - Depending on the situation, distributed data processing can offer cost savings and productivity improvements over centralized systems. For example, the Connecticut department of education reported that the implementation of a distributed data processing system increased productivity 40 percent and cut computing costs 60 percent as compared to the centralized system it replaced. Similarly, a distributed data processing system used by the off-track betting system in New York City processes four times the data and costs $250,000 a month less than the centralized system it replaced.

Arizona's statutes regarding the Division predate many of the technological advancements that fostered the development of distributed data processing. The statutory language provides only for "...the establishment of one or more centralized data processing operations centers...." (Emphasis added)

Such language, if adhered to, may restrict DOA-Data Processing from planning and implementing distributed data processing systems -- even though in some instances such systems may offer significant advantages over centralized systems.

Lack of Statutory Authority
to Make Acquisition Reviews

A major function of the Division is to review the data processing acquisition of State agencies. While not statutorily mandated, the acquisition review process has evolved through Division cooperation with various offices within DOA-Division of Finance. Through the review process the Division can prevent effectively the purchase of data processing hardware and software by State agencies. However, it should be noted that State agencies can and do circumvent the approval process and, in the absence of Division statutory authority, such circumventions are not illegal or preventable. (see Finding III, page 38)

Inadequate Division Efforts to Address
Deficiencies in its Enabling Statutes

The Division appears to have done little to obtain corrective legislation to address the deficiencies in its enabling statutes.

Apparently the sum and substance of Division efforts to obtain clarification regarding its statutes was one request in August 1978 for an Attorney General opinion regarding its authority and enforcement powers. The DOA-Director withdrew the request before the Attorney General prepared his opinion. The Division has not suggested legislation, or formally sought legislative changes, to correct the deficiencies in its statutes.

The Division's enabling statutes were enacted in 1972. In our opinion, the Division must accept some responsibility for the deficiencies that have been in its statutes for nine years.

CONCLUSION

Our review revealed that DOA-Data Processing has not been able to fulfill its statutory mandate because its authority to enforce its policies and directives is unclear. In addition, there has been little formal effort to clarify the statutes. We also determined that the specific statutory language regarding centralization may be inappropriate due to technological advances in distributed data processing. Further, the review process for data processing acquisitions should be prescribed statutorily to help prevent circumventions of the process.

RECOMMENDATIONS

Consideration should be given to the following recommendations:

1. The Legislature consider the following alternatives regarding the funding and operation of the data operations centers.
   a. Clarify A.R.S. §41-713 by specifically including data operations centers under the data processing revolving fund. This would involve:

      Appropriate sufficient monies to the Division for deposit in the data processing revolving fund for the purpose of employing persons in and purchasing equipment for the data processing operations centers, or

      Transfer employees performing functions related to the data processing operations centers, data processing equipment and unexpended and unencumbered monies appropriated to the host agencies for performing functions related to the data processing operations centers to the Division.
   b. Continue to fund the data operations centers by appropriation and statutorily establish the authority/responsibility relationship between DOA-Data Processing and the data operations centers.

c. Authorize the assistant director for data processing to deputize employees in the agencies hosting data processing operations centers to perform certain functions of the Division.

d. Authorize DOA or its Data Processing Division to contract or enter into agreements with the host agencies for joint or cooperative action regarding the data processing operations centers.

2. The Legislature amend A.R.S. §41-712, subsection B to provide for data processing systems other than centralized systems.

3. The Legislature consider statutorily prescribing the review process for data processing acquisitions.

FINDING III

DOA-DATA PROCESSING IS NOT FULFILLING ITS INTENDED ROLE IN THE EDP ACQUISITION PROCESS.

On July 10, 1979, the Department of Administration issued to agency heads a procedures manual entitled The Acquisition of Electronic Data Processing Hardware, Software and Sources.* The manual provides a guide for converting justified EDP** needs into EDP capability, and it specifies that the Division will participate in, review the progress of, provide consulting during, accept or approve eleven specific tasks in the EDP acquisition process. Our review revealed that the Division is not fulfilling its intended role effectively in the EDP acquisition process in that its function in the process is confined to reviewing and approving requested acquisitions and that agencies frequently circumvent the Division in acquiring EDP equipment and services.

According to the DOA procedures manual, "it is the responsibility of the Data Processing Division (DPD) to provide guidelines throughout the Phase I*** evaluation and the specification development process to ensure that the resultant system conforms to the State data processing plan."**** The EDP acquisition process is divided into two phases and several specific tasks. These tasks and the Division's supposed involvement in each are summarized in Table 2.

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* Appendix III contains the manual text.

** The procedure manual describes EDP as data processing equipment, software, services and word processing systems including typewriters that have a text storage, editing and automatic printing capability.

*** Project definition and approval.

**** See Finding I, page 7 regarding inadequacies in the State data processing plan.

TABLE 2

EDP ACQUISITION PROCESS AND DOA-DATA PROCESSING INVOLVEMENT

Task	Division Involvement				
	Consult	Review Progress	Participate	Accept	Approve
Phase I-Project Definition and Approval					
- Statement of need					
- Benefit cost justification	X				
- Define EDP resources	X	X			
- Selection and approval of alternatives	X				X
Phase II-Project and Acquisition Implementation					
- Determine aquisition method(s)			X		
- Develop bid proposal technical specifiations				X	
- Assemble bid/proposal document		X			
- Issue IFB or RFP					
- Bid/proposal evaluation and selection			X	X	
- Contract finalization and award			X		
- Order EDP equipment, goods and services					X
- Delivery and acceptance of EDP equipment, goods and services		X			
- Payment and operations		X			

Our review revealed that while the Division's role in the EDP acquisition process is designed to be pervasive and extensive, it is in fact limited to the point of being ineffective. For example, DOA-Data Processing's involvement with agencies during the project definition and approval phase is to consult with them in preparing benefit/cost justifications, defining EDP resources and selecting alternatives. In truth, the Division's consulting services are nothing more than general guidelines which are appended to the July 10, 1979, procedures manual. The absence of consulting services is particularly critical for those agencies that do not have the expertise to identify and select EDP acquisition options, as the following case illustrates.

The Department of Insurance has budgeted funds to purchase a word processor in fiscal year 1981-82. The business manager asked for Division assistance and received a copy of the acquisition review procedures and copies of submissions by other agencies. The business manager, finding this unsatisfactory, continued to gather information question-by-question, and it took him more than four months to compile and submit his request.

According to the business manager, he may never need to submit another request for data processing or word processing equipment and that it does not seem logical that he should be expected to acquire EDP expertise to make a one-time purchase. He suggested that the Division either assist agencies in performing evaluations or provide them with specific parameters (such as the number of letters processed each month) for which data should be gathered and developed.

According to the Division, it does not have sufficient staff resources to consult with agencies in developing acquisition requests.

Of the eleven EDP acquisition process tasks, DOA-Data Processing is most visibly and actively involved in the approval of EDP acquisition requests. During calendar year 1980, the Division received 135 agency EDP acquisition requests, of which it approved 125. According to the employee who is primarily responsible for receiving agency requests, many approved requests are changed or modified through negotiations between the Division and the agencies. Such requests are considered approved even though they may differ significantly from the original submission. Further, a Division rejection does not mean that an acquisition is not made. More often than not, a rejection merely results in an agency acquiring a different piece of equipment.

While the Division does review many EDP acquisition requests, it appears that agencies can and do circumvent it in acquiring EDP equipment and services.

Three examples of such circumvention are presented in the following cases:

Case I - Mine Inspector Microcomputer

Arizona's Mine Inspector prepared an acquisition request for a microcomputer system to support an emergency mine rescue project. The Division denied the request and recommended that the Mine Inspector reconsider available options. The Mine Inspector disregarded the denial and purchased a microcomputer. The claim was processed by DOA-Finance, Accounts and Controls section, with no Division approval.

Case II - Department of Education - Word Processor Upgrade

The Department of Education requested an upgrade for its word processing system in November 1980. The acquisition review procedures call for such requests to be approved by the Division, Joint Legislative Budget Committee (JLBC) staff and Executive Budget Office (EBO) staff. The Division and the JLBC staff gave preliminary approval to the request on December 15, 1980, but EBO withheld approval pending further research into the request. However, the Department of Education proceeded to order the equipment on December 31, 1980, without obtaining all approvals. EBO's research eventually led to a denial of the request on February 23, 1981, but by that time the equipment had been purchased.

Case III - Attorney General - Word Processor

The Office of the Attorney General acquired a word processing system in January 1981. It did not submit an acquisition request to DOA-Data Processing until February 23, 1981. The Division response to the Attorney General commented:

> "We were most disappointed to learn that the requested equipment was acquired prior to submission to this office of your Phase I information. Our approval of this acquisition therefore must be after the fact."

As the above cases illustrate, Division review of EDP acquisitions can be circumvented. It cannot be determined how widespread this practice may be because of insufficient controls and documentation. Further, as shown in Case III, in the absence of statutory authority to perform the review process, the Division has little authority to take action against agencies that do not obtain Division approval before acquiring EDP equipment or services.

No Appeal Procedure for EDP Acquisition Review Decisions

The procedures manual for EDP acquisitions does not contain an appeal process for agencies that disagree with a Division review decision. Such an appeal process appears especially appropriate when large acquisitions are involved or the requesting agency has its own EDP employees, such as the five agencies with data centers. The absence of such an appeal process may account for some agencies not submitting requests to the Division or may result in an agency acquiring equipment it should not, as the following case illustrates:

The Department of Economic Security (DES) received approval from DOA-Data Processing in August 1979 to proceed to bid and contract with an outside vendor for a software conversion and related hardware requirements. The accepted bid included $360,000 for an attached processor alternative and $240,000 for increased memory capacity for total hardware cost of $600,000. However, the contract was not finalized due to a lack of Federal funds. Before the contract was signed the vendor notified DES that a used processing system could be purchased from Arizona State University (ASU) for approximately $690,000. Advantages of the ASU system over the attached processor were increased processing power and a dual system capability. The Division rejected a DES request to obtain the ASU system because: 1) DES had not documented properly the need for added processing capacity, and 2) a system with similar capacity to the ASU system could be purchased on the open market for approximately one-half the cost. DES, however, did not want to purchase a system on the open market because bidding and Federal approval requirements would have caused an intolerable delay in acquiring the equipment and software conversion needed. Because of time pressures DES opted to obtain the attached processor and in July 1980, the Division, allegedly because of pressure from the Director of DOA to resolve the issue, approved a DES lease of the attached processor. That lease was not however, implemented and DES subsequently circumvented DOA-EDP acquisition procedures and purchased the attached processor outright. According to DES officials such an action was precipitated by the fact that it was $40,000 cheaper to buy the equipment than lease it for 18 months. Ironically, the Division's assistant director had pointed out prior to the approval of the contract and has since confirmed that the equipment DES acquired was possibly the worst alternative that could have been selected.

It should be noted that the Department of Administration director and the Division assistant director agree that a formal appeal process should be established.

CONCLUSION

DOA-Data Processing is not fulfilling its intended role in the EDP acquisition process in that it has not provided adequate consulting to assist agencies. In addition, agencies can and do circumvent the review process. Finally, the process can be improved by establishing a formal appeal procedure.

RECOMMENDATIONS

Consideration should be given to the following recommendations:

1. The Division should provide more consulting support to those agencies lacking EDP expertise, and seek to improve communications with the larger agencies regarding acquisitions.

2. The Division cooperate with the General Accounting Office of DOA-Finance to eliminate circumvention of the acquisition review process.

3. The Legislature consider prescribing statutorily the review process for data processing acquisitions and include statutory provisions for an appeal process to review disputed decisions. If the Legislature establishes a steering board or committee to oversee Division activity as recommended in Finding I (page 24) such a body could review disputed acquisition decisions.

DEPARTMENT OF ADMINISTRATION
DATA PROCESSING DIVISION

STATE OF ARIZONA

THE CAPITOL
PHOENIX, ARIZONA 85007
(602) 255-3669

BRUCE BABBITT, GOVERNOR
George Britton, Acting DIRECTOR
JACK STANTON,
ASSISTANT DIRECTOR

October 19, 1981

Mr. Douglas R. Norton
Auditor General
State of Arizona
Phoenix, Arizona 85007

Dear Mr. Norton:

You will find enclosed our written response to the performance audit of the Department of Administration - Data Processing Division. This response is based upon the draft report provided September 25th, our meetings September 29th and October 14th and amendments received October 5 and October 14, 1981.

We appreciate the opportunity to meet with you, discuss the draft and to comment in writing about the audit and report.

Respectfully submitted,

Jack Stanton
State Automation Director

Approved:

George Britton, Acting Director - DOA

JS:jf

Attachment

DEPARTMENT OF ADMINISTRATION
DATA PROCESSING DIVISION

STATE OF ARIZONA

THE CAPITOL
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(602) 255-3669

BRUCE BABBITT, GOVERNOR
George Britton, Acting DIRECTOR
JACK STANTON,
ASSISTANT DIRECTOR

RESPONSE OF THE DATA PROCESSING DIVISION TO THE PERFORMANCE AUDIT CONDUCTED BY THE OFFICE OF THE AUDITOR GENERAL AS PART OF THE SUNSET REVIEW

The Data Processing Division (DPD) wishes to thank the Auditor General's staff for their efforts and courtesy in conducting their audit. Their report generally reflects the substance of our discussions and points of concurrence. However, there still are several areas where the Division has concern about and/or contention with the report.

Because there is significant agreement with the basic premise of Finding II, we will address this area first. It also permeates the other findings and influences the conclusions. Findings III and I will be addressed after Finding II respectively.

FINDING II

We concur with the basic conclusion presented. There are additional considerations and alternatives that should be examined. For instance, agencies could still be directly appropriated the funds, but as "outside professional" to the programs/divisions which use data processing services. DPD advocates this approach with the computer centers operating out of a charge-for-services revolving fund.

The report does not clarify the scope of DPD's statutes in such areas as the universities and the legislative and judicial branches. The existing statutes (ARS 41-712) mention all three branches as part of the scope of DPD. Legislative appropriations, however, have traditionally been made to agencies with little or no regard to this provision. We recommend such clarification.

Regarding your argument presenting the advantages of distributed data processing over centralized systems, normally the objective is one of determining the proper mix of centralized and distributed facilities to be used for the most effective solution. This must be done on an agency by agency application basis. The requirement for management's control of the information processing resource as well as the level of security of the information and supporting equipment are extremely important factors to also consider in such a decision to decentralize.

The samples presented for the States of Connecticut and New York in their implementing distributed processing must be viewed with caution if direct extrapolation of the quoted savings to Arizona is intended. There are many considerations, including the differences in statutes governing the agencies, geographic distances and population distribution which can influence the economics of training, telecommunications costs and service availability to remote/distributed equipment.

FINDING III

We generally agree with those statements and examples of this finding regarding those instances where agencies can and do circumvent the EDP Acquisition Procedure. The lack of clear statutory authority covered in Finding II to enforce DPD policy and directives clearly is applicable in this area as well.

Your recommendations state that DPD should "cooperate with the Accounts and Controls Section" (General Accounting Office) to eliminate circumvention of the acquisition review process. We feel this recommendation should go further to include the State Purchasing Office, and be factored into statutory changes in these areas as well as for DPD.

There needs to be clarification of the term "consulting services" as used in the report. The staffing level of DPD has not allowed us to provide primary resources to an agency to actually perform the detailed analysis and development of documentation to satisfy DOA's EDP acquisition procedure. The "consulting" provided is to help define the process and what the State agency needs to do to proceed. As stated in your report, current staffing is insufficient to meet this need. We have no objection to expanding our function to include actual needs analysis services to agencies, but the Legislature and others must realize it would significantly increase our FTE count, related resources and budget appropriation to do so.

The impetus behind issuing DPD Procedure #80-01P dated January 31, 1980, titled "Procedure for Agency Problem/Need Resolution that Occur Prior to Phase I of the EDP Acquisition Procedures", was to assist agencies who may not have the resources to satisfy the acquisition requirements.

The addition of our Office Automation staff member last fiscal year has allowed us to prepare seminars and more specific procedures for conducting word processing studies to determine if and to what extent this facility may benefit an agency. A new seminar, to be completed this Fall 1981 will use a procedure document as a "text". It will allow managers to better conduct an analysis of their agency's word processing needs by filling in the study forms provided. This will be supplemented by limited individual agency consultation from DPD's existing staff.

Our agreement with establishing an "appeal process" is based upon providing visibility to the major decision makers who are concerned with assuring that the proper data processing alternative is selected and implemented. We offer the following comments regarding that portion of Finding III that references DES's operating system conversion bid and contract.

Exception is taken with the contention that bidding the equipment portion on the open market and/or Federal approval would have caused "an intolerable delay" for the following reasons:

1 - In June 1980, DES had decided to proceed with the project using descretionary funds available to the DES Director and not rely on direct Federal funding.

2 - The Department of Administration had committed to participate with DES and expedite open market bidding to be completed within 60-90 days. (The original bid was issued in August 1979 with the provisional award made in October 1979 - a period of less than 90 days.)

3 - The Division assistant director had received a quote from a third party broker of 30-60 days delivery for an essentially equivalent capacity processor (an IBM 370/158-3) to the machine being released from ASU (an IBM 3031) for a purchase price of less than $275,000. This information was presented to DES.

4 - The price/cost of the computer memory portion dropped significantly from August 1979 'til June 1980. The IBM price was down to approximately half for the quantity involved, and the open market price was less than $100,000.

5 - Even though DES used the existing bid and award, they did not install the attached processor until approximately six months later (January 1981), a time greater than would have been required to bid, award and install more powerful equipment at less cost from the open market.

6 - Based upon the bid specification and the schedule shown in the vendor's proposal, a 12 month conversion period was indicated with the 13th month for turnover to DES of the product of the conversion contract.

7 - The basis for the decision by the Division to only approve the rent/lease of the attached processor for this 9-12 month duration was that it would have been less costly than purchase and allow time for DES to define and acquire needed ongoing capacity beyond the conversion period.

The key question from this argument was and is that if the 3031 was the most effective alternative, why did ASU choose to release it in favor of a 370/158 (since essentially the same performance and compatibility was provided)?

FINDING I

We agree that improvements to the State EDP planning process and plan document can and should be made. Arizona's data processing plan efforts in general must be viewed as being in the early stages of evolution. The DPD has been and will continue emphasizing the need for better planning.

The points made in your report under Finding II, supporting inadequate DPD enforcement power under existing statutes, have also significantly influenced the statewide data processing planning process. In fact, the three examples quoted under Finding II regarding DPD directives #80-01D, #80-04D and #80-05D all involve direction for planning and the lack of the majority of agencies involved to comply.

Regarding Illinois' plan document as a yardstick by which to compare Arizona, the following points are offered:

1 - "Scope 80", as the Illinois plan document is called, was issued in March 1980, their first such major effort. Arizona initiated our current plan publication on an annual basis in February 1979.

2 - Illinois' plan was developed using a task force of seven staff members, a professional management consultant and an IBM advisory marketing representative supported by three administrative and secretarial staff. The work of this task force was supervised by a Managment Review Committee of six top state administrators. Arizona has one FTE appropriated and allocated to this planning function who works with the data center and major agency data processing managers to develop Arizona's plan.

3 - There are significant differences in the statutes regarding scope and authority between Illinois and Arizona as well as the level of expenditures of the two states for data processing.

4 - The cost to develop, publish and distribute the Illinois long-range data processing plan exceeds the entire annual budget of the DPD.

The DOA Data Center provides services to over 25 State agencies, some of which are major users such as the Departments of Health Services, Education, Corrections, Economic Security as well as the Compensation Fund. As far as growth rate and total budget is concerned, while servicing the largest field of users of any center, its recent growth has been much less than that of the DES center for example. Since the DOA center operates out of the D.P. Revolving Fund (the only center to do so) its growth is a direct measure of the demand for service from users.

The comparison of the Arizona to California Compensation Fund also can be misleading. The figures quoted are not totally comparable. For instance the California figures do not include the cost of such services/items as: technical support personnel, magnetic records library, computer room space,

utilities, environmental services, fire and disaster recovery protection, etc.. The figure quoted for the Arizona Compensation Fund does include these added cost elements.

Further, there are differences in the level of automation commitment between California and Arizona; Arizona leads in our opinion. There are differences in the statutes that govern the two states as well. It would be erroneous to conclude that because the California Fund is "five times larger" that Arizona could provide their current level of service/use at one-fifth the California cost if they had their own center.

DPD has and is involved in analyzing how best to understand and apply the changing technology, the best way to plan for its implementation and where appropriate employing the use of decentralized versus centralized computer facilities. The on-going pilot projects authorized and monitored by DPD, such as those in DHS (minicomputer use), the Energy Office and Department of Corrections (microcomputer use) and the shared resource office automation effort in DOA, are current efforts being undertaken within Arizona to provide a sound comparison and basis for such planning decisions.

The need for improving Arizona's planning process and resultant plans is very real and is not contested. To progress further, however, will take the Legislature's support including statutory changes including those discussed in your Finding II. Our position is that the examples quoted by the auditors of the apparent lack of plan execution is in reality a reflection of the lack of total commitment by both the Legislature and State Agencies and acceptance of the DPD as a necessary central management and control organization.

For your information, the Cost Allocation Guideline for EDP Services document was issued in September 1981 with DPD Directive #81-01D. A copy of both documents has been transmitted to your office.

APPENDIX I

LEGISLATIVE COUNCIL OPINION (O-81-28)

May 4, 1981

ARIZONA LEGISLATIVE COUNCIL

MEMO

May 4, 1981

TO: Douglas R. Norton
Auditor General

FROM: Arizona Legislative Council

RE: Request for Research and Statutory Interpretation (0-81-28)

This is in response to a request submitted on your behalf by Gerald A. Silva in a memo dated April 15, 1981. No input was received from the attorney general concerning this request.

FACT SITUATION:

During 1968 the Arizona Legislature amended Arizona Revised Statutes (A.R.S.) section 35-122 by adding subsection B, paragraph 2. This amendment was later codified as A.R.S. section 41-712 representing the duties of the data processing division (DPD) when the department of administration (DOA) was formed in 1972. As a result of this statute efforts were made to consolidate the state's data processing resources from many small inefficient and less effective installations to a few larger centralized more efficient computer service centers. These efforts culminated in 1975 when five data processing centers were authorized to serve the state's data processing needs.

When DPD was created in 1972 the data processing revolving fund was created by A.R.S. section 41-713. Presently only one of the five state data processing centers, the DOA center, operates from this revolving fund.

On August 11, 1980, the DOA assistant director for data processing issued DPD directive #80-03D implementing DPD policy statement #80-02 which required the remaining four authorized state data processing centers to integrate their financial management into a common system operated and funded through the data processing revolving fund. These four data processing centers have been historically funded by appropriation to their host agencies.

QUESTIONS PRESENTED:

1. Does A.R.S. section 41-712 give the DPD the sole authority to provide for the data processing needs of state government?

2. What authority relationship should exist between the DPD and the five authorized state data processing centers in light of A.R.S. section 41-712, subsection B? Specifically, does DPD have the authority to exercise line authority over the state data processing centers?

3. Do the provisions of A.R.S. section 41-713 apply only to the DOA data processing center or to all five authorized state data processing centers?

ANSWERS:

1. Yes.

2. See discussion.

3. A.R.S. section 41-713 is applicable to all data processing operations centers.

DISCUSSION:

1. A.R.S. section 41-712 provides:

> A. The data processing division shall provide for an efficient and coordinated utilization of data processing equipment, techniques and personnel to achieve optimum effectiveness and economy in collection, storage, interchange, retrieval, processing and transmission of information.
>
> B. The data processing division shall develop, implement and maintain a coordinated statewide plan for data processing and data communications systems, including but not limited to the consolidation, transfer or elimination of data processing activities, and the establishment of one or more centralized data processing operations centers, for the purpose of serving the management and other needs of the legislative, executive and judicial branches of state government. (Emphasis added.)

The intent of the legislature is to be determined primarily from the language of the statute itself, and when that is plain and unambiguous and conveys a clear and definite meaning there is no occasion for resorting to the rules of statutory construction. The statute must be given its plain and obvious meaning. De Witt v. Magma Copper Company, 16 Ariz. App. 305, 492 P.2d 1243 (1972). See Marquez v. Rapid Harvest Co., 89 Ariz. 62, 358 P.2d 168 (1961), cited in Arizona Legislative Council Memorandum (O-81-9).

In authorizing the DPD to develop, implement and maintain a coordinated state plan for data processing and data communications systems for the purpose of serving the needs of state government, the legislature has clearly expressed its intent to confer on the DPD the sole authority to provide for the data processing needs of the branches of state government and their departments, agencies, boards and commissions.

2. A.R.S. section 41-712, subsection B provides:

> The data processing division shall develop, implement and maintain a coordinated statewide plan for data processing and data communications systems, including but not limited to the consolidation, transfer or elimination of data processing activities, and the establishment of one or more centralized data processing operations centers, for the purpose of serving the management and other needs of the legislative, executive and judicial branches of state government. (Emphasis added.)

The grant of an express power to an administrative agency carries with it the authority to exercise all other activities reasonably necessary to carry it into effect. Sutherland, Statutes and Statutory Construction section 65.03 (4th ed., Sands, 1974).

The DPD is required to develop, implement and maintain a coordinated statewide plan for data processing and is clearly given the power to establish and maintain one or

more data processing operations centers for the purpose of serving the needs of state government.

A.R.S. section 41-712, subsection A provides:

> The data processing division shall provide for an efficient and coordinated utilization of data processing equipment, techniques and personnel to achieve optimum effectiveness and economy in collection, storage, interchange, retrieval, processing and transmission of information. (Emphasis added.)

In construing statutes, the court must look to a statute as a whole and give a harmonious effect to all of its sections. State v. Standsberry, 114 Ariz. 351, 560 P.2d 1258 (1976 Ct. App.).

As was stated in Arizona Legislative Council Memorandum (O-81-10), the assistant director for data processing is responsible for direction and control of the DPD and may issue policy statements and directives in the performance of his duties. The assistant director for data processing is, therefore, responsible for the direction and control of data processing operations centers which DPD establishes, and not the departments, agencies, boards or commissions which serve only as hosts for the centers. He was authorized pursuant to his powers and duties provided for in A.R.S. sections 41-711 through 41-713 to issue policy statement #80-02 and directive #80-03D to assure and to provide for an efficient and coordinated utilization of the data processing resources of this state by establishing a uniform method of financing, cost allocation, cost recovery and budgeting for data processing functions and services within this state and to require data processing operations centers to develop, implement and operate a financial management program, including financing, cost allocation and cost recovery procedures for the services they provide.

3. A.R.S. section 41-713 provides for the establishment of the data processing revolving fund "in support of the program of the division of data processing." For the reasons stated earlier in this Memorandum and Memorandums (O-81-9) and (O-81-10), it seems apparent that the assistant director for data processing is authorized to establish a uniform method of financing and to prescribe that all data processing operations centers be financed from and operate under the data processing revolving fund as one step toward providing for an efficient and coordinated utilization of the data processing resources of this state. The legislature has clearly expressed its desire for coordination and economy of data processing operations by the branches of state government and their departments, agencies, boards and commissions.

The fact that only the DOA data processing operations center has been financed by the data processing revolving fund and the assistant director has only recently directed that all the centers be financed from and operate under the revolving fund to establish a uniform method of financing is not necessarily evidence that A.R.S. section 41-713 applies only to the DOA data processing operations center and that the assistant director has exceeded his authority. See Arizona Dept. of Revenue v. Transamerica Title Ins. Co., 124 Ariz. 417, 604 P.2d 1128 (1979).

The assistant director for data processing and his predecessor, the commissioner of finance, have apparently been working many years towards the goal of an efficient and coordinated utilization of the data processing resources of Arizona.

The magnitude of the duty of DPD is reflected by Governor Castro's April 6, 1975 letter to Dr. Brent Brown, Director, Office of Economic Planning and Development, in which he observed that DPD, state agencies, legislative leaders and the governor's office would have to work together in the establishment and designation of centralized data processing operations centers. The letter itself implied the future financing of all data processing operations centers from the data processing revolving fund.

CONCLUSIONS:

1. A.R.S section 41-712 gives the DPD sole authority to provide for the data processing needs of the branches of state government and their departments, agencies, boards and commissions.

2. The DPD is required to develop, implement and maintain a coordinated statewide plan for data processing and is clearly given the power to establish and maintain one or more data processing operations centers for the purpose of serving the needs of state government. The assistant director for data processing is responsible for direction and control of the DPD and, therefore, data processing operations centers which DPD establishes and may issue policy statements and directives in the performance of his duties.

3. A.R.S. section 41-713 is applicable to all data processing operations centers in that the assistant director for data processing may prescribe that all data processing operations centers be financed from and operate under the data processing revolving fund.

cc: Gerald A. Silva
Performance Audit Manager

APPENDIX II

LEGISLATIVE COUNCIL OPINION (O-81-44)

June 1, 1981

ARIZONA LEGISLATIVE COUNCIL

MEMO

June 1, 1981

TO: Douglas R. Norton
Auditor General

FROM: Arizona Legislative Council

RE: Request for Research and Statutory Interpretation (0-81-44)

This is in response to a request submitted on your behalf by Gerald A. Silva in a memo dated May 13, 1981. No input was received from the attorney general concerning this request.

FACT SITUATION:

There are presently five authorized state data centers hosted by the departments of administration, revenue, economic security, public safety and transportation. The employees who staff these data centers are hired, fired, promoted and directed in their duties by the respective host agency. Per your research and statutory interpretation memorandum (O-81-28), the department of administration (DOA) division of data processing (DPD) has the sole authority to provide for the data processing needs of state government and is responsible for the direction and control of data processing operations centers and not the departments which serve only as hosts for the centers.

QUESTIONS:

1. What specific authority does DPD and the host agencies respectively have over the employees who staff the state data centers, and who owns and controls the data processing equipment of the state data centers?

2. If all data processing operations centers were financed from and operating under the DPD data processing revolving fund, then what authority would DPD and the host agencies respectively have over employees and who would own the processing equipment purchased through the revolving fund?

3. If the direction and control provided by DPD over the state data centers are not complied with by the individual data center managers and/or the host agency, is this considered nonfeasance and what action can be taken to rectify the noncompliance situation?

ANSWERS:

1., 2. and 3. See discussion.

DISCUSSION:

1. The host agencies of the data processing operations centers, that is, the departments of administration, revenue, economic security, public safety and transportation are authorized by statute to employ, determine the conditions of employment, prescribe the powers and duties of and supervise persons they employ. See, respectively, Arizona Revised Statutes (A.R.S.) sections 41-702, 42-103, 41-1954, 41-1711, 41-1713 and 28-108.

If the legislature had intended that the DPD exercise authority over employees of the host agencies for the purpose of performing certain functions of the DPD, it would have so provided. For example, the legislature provided that the DOA assistant director for personnel may "deputize employees in various state agencies where certain of the functions of the personnel administration division can be performed by such deputies." A.R.S. section 41-763, paragraph 4. (See "deputize" and "deputy", Black's Law Dictionary 398 (5th ed., 1979).)

In addition, the host agency, not DPD, is the owner of any data processing equipment of the data processing operations center which it hosts for which monies were appropriated by the legislature to the agency. See Arizona Legislative Council Memorandum (O-81-32).

2. As stated above, if the legislature appropriates monies to the DPD for deposit in the data processing revolving fund and those monies are expended by DPD for data processing equipment of the data processing operations centers and salaries of employees it assigns to the data processing operations centers, DPD is the owner of the equipment and the supervisor of all persons it employs for assignment to the data processing operations centers. The host agencies would serve only as hosts of the data processing operations centers.

3. A.R.S. section 38-443 provides that:

> A public officer or person holding a position of public trust or employment who knowingly omits to perform any duty the performance of which is required of him by law is guilty of a class 2 misdemeanor unless special provision has been made for punishment of such omission.

It is inappropriate for this office to determine whether managers of the data processing operations centers or the host agencies are guilty of nonfeasance in public office for their failure to comply with directives issued by the assistant director for data processing. You may wish to recommend that the assistant director for data processing seek an opinion of the attorney general regarding this situation.

CONCLUSIONS:

1. The host agency, not DPD, is authorized to supervise the persons staffing the data processing operations centers whom it employs. In addition, the host agency is the owner of any data processing equipment of the data processing operations center for which monies were appropriated by the legislature to the agency.

2. DPD would be the owner of the data processing equipment and the supervisor of all persons it employs for assignment to the data processing operations centers if the data processing operations centers were financed under the data processing revolving fund.

3. It is inappropriate for this office to determine whether managers of the data processing operations centers or the host agencies are guilty of nonfeasance in public office for their failure to comply with directives issued by the assistant director for data processing.

RECOMMENDATIONS:

You may wish to recommend to the legislature that it do one or more of the following:

1. Authorize the assistant director for data processing to deputize employees in the agencies hosting data processing operations centers to perform certain functions of the DPD.

2. Authorize the DOA or the DPD alone to contract or enter into agreements with the host agencies for joint or cooperative action regarding the data processing operations centers. A.R.S. section 11-952, subsection A provides that:

> If authorized by their legislative or other governing bodies, two or more public agencies by direct contract or agreement may contract for services, or jointly exercise any powers common to the contracting parties and may enter into agreements with one another for joint or cooperative action, except that if two or more school districts arrange to become contracting parties under the terms of this section, such contract shall first be approved by the state board of education.

The departments of revenue, economic security, public safety and transportation are authorized to enter such agreements with other agencies. See, respectively, A.R.S. sections 42-104, 41-1954, 41-1713 and 28-114.

3. Appropriate sufficient monies to the DPD for deposit in the data processing revolving fund for the purpose of employing persons in and purchasing equipment for the data processing operations centers.

4. Transfer personnel performing functions related to the data processing operations centers, data processing equipment and unexpended and unencumbered monies appropriated to the host agencies for performing functions related to the data processing operations centers to the DPD.

cc: Gerald A. Silva
Performance Audit Manager

APPENDIX III

PROCEDURES MANUAL FOR THE ACQUISITION OF ELECTRONIC DATA PROCESSING HARDWARE, SOFTWARE AND SERVICES

STATE OF ARIZONA **DEPARTMENT OF ADMINISTRATION**

MEMORANDUM:

TO : Agency Heads DATE : 7-10-79

FROM : Robert C. Dickeson, Director
Department of Administration

SUBJECT: PROCEDURES MANUAL
For The Acquisition of Electronic Data Processing Hardware, Software and Services

The attached copy(ies) of the revised procedure for the acquisition of EDP equipment and services becomes effective as of this date and supersedes the previous document and procedure dated February 1978. You should note that this procedure has been expanded to include word processing systems as well as data processing systems consistent with current technology and the expressed desires of the Governor's Office to effectively control the expanding use of these facilities.

As stated in the procedure, special or unusual situations in the various portions of the EDP acquisition process are bound to arise, and it is not the intent that this document try to detail all such contingencies. When such incidents or cases occur or there are questions about details of how to apply the procedure, please contact our State Purchasing Office, Finance or Data Processing divisions for clarification and guidance.

Robert C. Dickeson

Robert C. Dickeson

RCD/lb

Attachment

PROCEDURES MANUAL

for

The Acquisition of Electronic Data Processing

Hardware, Software and Services

Approved: _____ 6-28-79
Assistant Director for Data Processing Date

Approved: _____ 6-28-79
Assistant Director for Finance Date

Approved: _____
Director, Department of Administration

7/10/79
Date

A PROCEDURE FOR EDP ACQUISITION

Forward:

This procedure is published as a guide for converting justified EDP needs into EDP capability. It is an internal policy document for all state agencies. For purposes of this procedure "EDP" means all data processing equipment, software, services, and word processing systems including typewriters that have a text storage, editing, and automatic printing capability. The purchase of consumable supplies and maintenance parts are excluded from the provisions of this procedure. It is the user's responsibility to document and justify his needs and obtain the necessary funds to make the acquisition. It is the responsibility of the Data Processing Division (DPD) to provide guidelines throughout the Phase I evaluation and the specification development process, to insure that the resultant system conforms to the State data processing plan. It is the responsibility of the State Purchasing Office (SPO) to expeditiously award contracts for the purchase of approved items. This procedure is published as a directive to fulfill statutory requirements of Arizona revised statutes including sections 41-711, 41-712, 41-713, 41-729, 41-730, 71-1051, 41-1052, 41-1053, 41-1054, 41-1055, 41-1056, the State Procurement Manual, and Data Processing Division Policy #79-01. The objective of the procedure is to provide a systematic EDP acquisition process that is both efficient in time and effective in control.

General:

The State Purchasing Office will award open end contracts for standard EDP items that can be acquired directly by the users after approval of the Data Processing Division. The State Purchasing Office will award specific contracts for unique one time requirements on the basis of a requisition and specifications from the user and approved by the Data Processing Division under this procedure. The requisition with contract award endorsement will be returned to the user for direct purchasing action.

It is essential that each acquisition under this procedure be made on a numbered purchase order with full terms specified. The State Purchasing Office contract number and the approval of the Data Processing Division must be indicated on the purchase order. Vendors that are awarded EDP contracts will be advised not to accept purchase orders unless they satisfy the above requirements. Any additional control document that may be desired between the agency and the vendor must be identified and referenced to the applicable purchase order and will become part of the permanent purchase order file.

Procedure:

The process of acquiring EDP resources to satisfy an agency's needs involves the efforts of several departments and is generally composed of two phases. Phase I involves the definition of the need or problem, evaluation of alternatives, funding review and DPD approval to proceed with acquisition. Phase II involves

the specifications, the bid process, acquisition and implementation. The total process will result in the preparation of reports and memos to document both the process and the decisions made at each step.

Appendix 1 provides a ready reference outline to assist in the development of documentation to support any EDP requirement. The form and content of the documentation in Phase I will be as agreed upon between the agency and the Data Processing Division but will generally vary with the nature and complexity of the requirement being developed. The chart on page 3 provides, in tabular form, an outline of the acquisition process, the normal sequence of events, and specifies the participants to aid in understanding who does what and when.

THE EDP ACQUISITION PROCESS IN TABULAR FORMAT

PHASE	TASK	Action Agency (See Appendix 3) End User	DP/ DC MGR.	Agy. Mgt.	DPD	EBO	SPO	A.G.
I	Project Definition and Approval:							
	1 - Statement of need.	I		A		R		
	2 - Evaluate project alternatives.							
	a - Benefit/cost justification.	I,A	P	A	C	R,C		
	b - Define EDP resources	P	I,A	A	R,C	C		
	3 - Selection and approval of alternatives	I	P,A	A	C,A	R,A	R	
II	Project and Acquisition Implementation:							
	1 - Determine acquisition method(s). 1/	R	I		P		P,A	
	2 - Develop bid/proposal document:							
	a - Develop technical spec's	P	I,A		A		R	
	b - Assemble complete document.		R		R		I,A	
	3 - Issue IFB or RFP						I	
	4 - Bid/proposal evaluation and selection.	P	P,A		P,A		I,A	
	5 - Contract finalization and award		P		P,		I,A	C,A
	6 - Order EDP equip., goods, services.	P	I	A	A			
	7 - Delivery and acceptance of EDP equip., goods, services.	P	I,A		R		P	
	8 - Payment and operation.	P	I	A	R	R		

Legend (see Appendix 4)

I = Initiate
P = Participate
C = Consult
R = Review progress
A = Approve
A = Acceptance

1/ If the selected alternative is an item on open state contract or involves inter-agency agreement see Appendix 2.

APPENDIX 1

EDP ACQUISITION PROCESS

Documentation Outline

Phase I.

1. Statement of Need.

   Develop a general statement of the situation that requires resolution. Describe the situation in non-technical terms that can be understood by all levels of management. Try to anticipate facts that management will need to understand the situation. Identify the cause, the effect, and the impact on other departments. At this point do not try to justify equipment or other means as a solution. Your objective is to describe a problem, or need, to a degree that will convince management that action is necessary.

2. Evaluate the Alternatives.

   There are usually a number of different possible solutions to a problem. List them, then evaluate them one at a time. Some will be more optimal than others and some points will seem obvious to you, but failure to consider them in your evaluation may result in questions later that will delay a decision.

   Each alternative considered should include the advantages and disadvantages associated with its implementation (or in taking no action). Include benefit/cost analysis and justification where appropriate. For those alternatives that incorporate EDP resources, both the type and quantity must be identified.

3. Selection and Approval of Optimal Alternative.

   A thorough evaluation of the alternatives will usually result in the identification of one that is clearly more optimal than all others. The justification for the selection of a particular solution with cost information, budget impact for 3-5 years, and realistic estimates of implementation time frames should be incorporated into the preceeding documentation for review by EBO, approval by DPD and Agency management.

   Agency management determines the relative priority of the project. For example, the project definition and approval may be a product of an agency planning and budgetary effort. If this is the case, and funds are not yet appropriated or available, it may be months or years before the EDP acquisition can be initiated. On the other hand, if funds/allocations are currently available, acquisition could proceed into Phase II immediately.

   If there is a significant delay (beyond several months) between approval of the project and EDP acquisition processing, DPD may request that the project be reviewed to be certain that the alternative selected is still valid in terms of various changes in EDP technology, state EDP services available, etc.

Phase II.

1. Determine Acquisition Method(s).

   When the agency has completed the Phase I activities and has adequate funding to proceed with acquisition, the agency should consult with the SPO to determine whether the EDP resource needed is available under an existing state contract or whether it will be necessary to prepare an IFB/RFP. Appendix #2 outlines the procedures to be followed for acquisition from an existing contract or by "inter-agency agreement" when determined to be appropriate.

2. Develop Bid/Proposal Document.

   When the need to develop an invitation for bid has been identified, the DP/DC management function will initiate the development of the technical specifications to be included in the RFP/IFB. The DPD and the end user will participate in developing, reviewing and approving the technical specifications. A list of prospective vendors will also be developed and reviewed with SPO. Upon receipt of the technical specifications, the SPO will assemble the remaining portions necessary to complete the overall RFP/IFB document.

3. Issue of the RFP/IFB.

   The bid document will be printed and distributed to prospective vendors by the SPO. If a pre-bid vendor conference is required, it will be arranged by the SPO. State participation will include the end user, the DP/DC manager, DPD, SPO and any other department that may be requested by the SPO to assure adequate technical support.

4. Bid/Proposal Evaluation and Selection.

   The SPO will designate an evaluation committee composed of the end user, DP/DC manager, user agency, DPD and SPO. A bid/proposal evaluation meeting will be called by SPO as soon as practicable after bid opening. The size and composition of this committee for any particular evaluation will depend on the complexity of the sytem being acquired but may include representatives from all those departments cited above. The evaluation committee will recommend a particular bid/proposal for contract award.

5. Contract Finalization and Award.

   Based upon committee evaluation, the SPO will publish a Notice of Award and Order Data (FD-143) to the successful vendor(s), the user agency, and will notify all other vendor participants of the decision.

   SPO will conduct and coordinate finalizing the post award contract(s), involving the DP/DC management and DPD for input and the Attorney General for consideration and approval of contract as to legal form.

Phase II (continued)

6. Order EDP Equipment/Services.

   The FD-143 is notification to the end user agency that the requested EDP equipment or services are now available for direct purchase. (Also see Appendix 2.) The agency purchasing activity will prepare a purchase order to the designated vendor and arrange delivery after required approval of agency management, DPD, and certification of funds availability of Accounts and Controls.

7. Delivery and Acceptance of EDP Equipment, Goods, Services.

   The DP/DC management working with the end user will verify and approve that the DP resource acquired is acceptable with regard to configuration and performance criteria as specified. A copy of the agency receiving report endorsed by the user to indicate performance acceptance will be provided to DPD and SPO offices. Equipment or service problems that cannot be resolved to the satisfaction of the end user by the agency will be documented and referred to the SPO for appropriate resolution with the vendor.

8. Payment and Operation.

   A claim will be submitted to Accounts and Controls for payment on the basis of the endorsed receiving report (Ref. Paragraph 7). Information on long term installment payment schedules and other obligations that impact budget composition must be communicated to the EBO.

Special or unusual situations in the EDP acquisition process are bound to arise, and it is not the intent of this document to try to detail all such contingencies When such incidents occur or there are questions about details of this procedure, the head of the department concerned, DPD, or SPO, should be contacted for clarification and guidance.

APPENDIX 2

There are two cases where the Phase II procedures that involve the SPO can be bypassed. These are when the required equipment or services are:

1. available on an existing state contract and/or

2. to be provided by another governmental agency.

In the first case, the user agency will proceed to Step 6 of Phase II and follow the remaining activities of Phase II.

In the second case, there are certain statutory provisions that must be satisfied in consummating an inter-agency agreement. To assure that these requirements are satisfied, the following alternate Phase II format will be followed:

TASK	End User	DP/ DC Mgr.	Agy. Mgt.	DPD	EBO	SPO	A.G.
Alternate Phase II: Project and Acquisition Implementation:							
1. (Interagency agreement determined appropriate)	R	I		,P		P,A	
2. Finalize the formal agreement between the agencies:							
a. detail EDP equipment, goods, services to be provided (and by whom)	P	I		C,A			
b. negotiate the formal inter-agency agreement	I	P,A#	A#	C,A	R		C,A
3. Delivery and acceptance of EDP equipment, goods, services.	I,A	P,A#		R			
4. Payment and operation.	I	P/R	A	R	R		
#(Both provider and user agencies)							

Legend (see Appendix 4)

I = Initiate
P = Participate
C = Consult
R = Review progress
A = Approve
A = Acceptance

The wide range of services that can be provided from one agency to another will require some customizing of this procedure when used in specific cases. Additional equipment requirements generated as a result of the inter-agency agreement will be acquired through the normal EDP acquisition process.

In the case of a major system acquisition, it is conceivable that various elements could be obtained by a combination of: inter-agency agreement, state contract and the bidding process.

APPENDIX 3

ACTION AGENCIES IN THE EDP ACQUISITION PROCESS

END USER - The principal party/function that requires support from other functions (such as EDP) to satisfy an overall agency need. The function which must deliver the ultimate agency end product and/or service to satisfy the need.

D.P. MANAGEMENT - The management of the D.P. resource for an end user agency, (whether using in-house or outside EDP resources to satisfy all the agency's D.P. users). Since this function has agency EDP planning and operational responsibility, it must be involved in satisfying the "end users" needs when they involve application of EDP resources.

DATA CENTER (D.C.) MGT. - The management of one of the State's centralized D.P. operations centers. The D.C. Mgt. must be involved in planning for, and operation of, EDP facilities to satisfy "end user" needs. They must also participate in evaluation of alternatives, the selection of the optimum alternative, and other related activities to meet the "end user's" objectives. When required, the Data Center must initiate EDP acquisition that will result in the most efficient EDP facility configuration necessary to satisfy the user's needs.

AGENCY MANAGEMENT - This includes administrative and executive management within the "end use" agency. They are the principals who have the ultimate responsibility for delivering the service/products of their agency, they must approve all actions that require use of, and acquisition of, EDP services and equipment. Their responsibility includes planning, budgeting, allocating appropriations and approving expenditures.

DATA PROCESSING DIVISION (D.P.D.) - The Director of this division has the responsibility to account for the configuration of EDP systems under the control of State agencies and must assure that all EDP facilities acquired by these agencies conform to the State Data Processing Plan. It is, therefore, essential that D.P.D. participate in a coordinating capacity during Phase I to the degree necessary to ensure that the results of Phase I conform to the State Data Processing Plan. The participation in Phase II during system selections is necessary for the same reason. The requirement that DPD approve all purchase orders for EDP is a necessary formality to assure that DPD is cognizant of actual delivery schedules.

STATE PURCHASING OFFICE (S.P.O.) - This office has the authority and responsibility to contract for the needed EDP resources for the State as defined by Arizona Revised Statutes and the State Purchasing Manual.

EXECUTIVE BUDGET OFFICE (E.B.O.) - All decisions that involve fund availability, both in terms of quantity and time phasing, must be coordinated by the E.B.O.

THE ATTORNEY GENERAL (A.G.) - The state legal authority that must review and approve the forms of all state contracts.

APPENDIX 4

DEFINITION OF FUNCTIONAL PARTICIPATION IN THE EDP ACQUISITION PROCESS

(I) INITIATE - department or function responsible for initiating and completing activity.

(P) PARTICIPATE - providing staff support and/or resources toward completing the activity, but normally with subordinate authority.

(C) CONSULT - render opinions, provide expert guidance and interpret policy and procedures with little, if any, staff resource to accomplish activity.

(R) REVIEW PROGRESS - formally attend status meetings, review documentation and progress, and in general keep abreast of project status and direction.

(A) APPROVAL - grant authority to proceed based upon statute, policy and/or management authority.

(A) ACCEPTANCE - acknowledge acceptability of the progress, product, or activity.