Long Range Plan for

Administrative Education Data Processing

ESV·IS/SDE·IS

State of Minnesota
State Board of Education

LONG RANGE PLAN
ADMINISTRATIVE EDUCATION DATA PROCESSING

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FOREWORD

The need for a long range plan for administrative education data processing was recognized by the 1980 Minnesota Legislature. In response to that need, they established the ESV Computer Council and charged it with assisting the State Board of Education with adoption of a plan.

This document, Long Range Plan for Administrative Data Processing, is the culmination of the eighteen month planning effort that followed enactment of M.S. 121.934 and appointment of the ESV Computer Council. It contains goals and objectives which will apply to administrative computing at the state, regional and local level. It also contains a description of the activities necessary to achieve those goals and objectives.

July, 1982

ACKNOWLEDGEMENTS

The Long Range Plan for Administrative Education Data Processing was developed with the assistance of many individuals and organizations. Without the knowledge, hard work and creativity of these individuals and entities, this plan would not have been possible.

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PREFACE

The Long Range Plan for Administrative Education Data Processing was developed after evaluating and discussing the ideas of many groups and individuals with differing perspectives on administrative data processing. Throughout that effort, every attempt was made to ensure that the end result would be an integrated plan that could serve as an effective and efficient guideline for the further development and maintenance of the statewide education information systems. Toward that end, some ideas were incorporated or modified and incorporated, and others were rejected. The result is this document -- a plan that in our judgment represents the best overall direction to follow for the next few years.

Several cautions should be made. **First**, this document will not be applauded in its entirety by everyone. In order to arrive at a plan which could, overall, provide the greatest good for the greatest number, some compromises were made and some desires were left unmet. **Second**, as with any plan, adjustments to plan timelines and activities may be required periodically. Unanticipated changes in technology, staff turnover, reduction in funds, or other unforseen problems may arise during implementation. In that event, the plan must be reassessed and revised accordingly. **Third**, successful implementation of the plan will depend on securing an appropriate level of funding. To the extent funds are not available, some parts of the plan may have to be sacrificed or modified. In the past, this problem could have been solved by shifting priorities within education organizations. However, recent cutbacks in state funding of education have left both state and local agencies running "bare bones" operations with few, if any, nonpriority activities. Consequently, successful implementation of the plan will also depend on legislative support.

DEFINITIONS

ESV Computer Council	Elementary-Secondary-Vocational Computer Council. An eleven member council appointed by the Governor to advise and assist the State Board of Education on education data processing issues.
ESV-IS	Elementary-Secondary-Vocational Information System. The part of the statewide education management information system that provides finance, personnel/payroll and student data processing and management information services to school district.
SDE-IS	State Department of Education Information System. The part of the statewide education management information system that provides data processing and management information services to the Department of Education.
MECC	Minnesota Education Computing Consortium. The software development organization currently responsible for the development and maintenance of ESV-IS.
Regions	The seven computer service centers providing data processing support to school districts.

LONG RANGE PLAN STRUCTURAL ORGANIZATION

The Long Range Plan is divided into three separate, but related, components -- SDE-IS, ESV-IS and SDE-IS/ESV-IS Interface. This division was deliberate. It was intended to clarify that SDE-IS and ESV-IS have unique roles in addition to some areas of joint responsibility. It is the Interface Plan that is the conceptual heart of the Long Range Plan. In that section of the plan, the activities necessary to accomplish the transfer of data between districts, regions and MDE are described. The SDE-IS and ESV-IS parts of the plan contain both subsidiary activities required for implementation of the Interface concepts and activities within the discrete scope of SDE-IS or ESV-IS functions. Therefore, while the successful implementation of the discrete SDE-IS and ESV-IS Plans rests with SDE-IS and ESV-IS staff respectively, the success of the Long Range Plan as a whole requires that each component of the plan be implemented. Consequently, each organization has a stake in the performance of the other yet has **primary** responsibility for a defined portion of the plan.

Within each component (SDE-IS, ESV-IS, SDE-IS/ESV-IS Interface), the plan is organized by goals, objectives, and activities associated with attainment of each objective. For each activity, a brief description, timeline chart and statement of entity responsibility is included.

Activity statements are not intended to be an exhaustive workplan of tasks necessary to accomplish the objectives described in the plan. They are merely intended to be a statement of the **major** activities necessary. For example, although the product of some of the activities may be a definitive document describing a policy or decision, the product of many other activities will be a workplan detailing subsidiary activities not described in the Long Range Plan.

Similarly, the statement of the lead responsibility should not be interpreted as implying that the activity should only be carried out by the entity described as having lead responsibility. Instead, lead responsibility indicates primary accountability -- the responsible entity may choose to delegate performance of the activity, for example. Furthermore, it is quite possible that changes in the structure or functions of the organizations responsible for software development (SDE-IS-EDS; ESV-IS-MECC) may require amendment of lead responsibility statements. The entities described in the plan as having lead responsibility for a particular function are intended to be interpreted in a generic, rather than specific, manner. For example, if MECC's role in ESV-IS development is transferred to a Central Development Group as recommended by consultant studies, the Development Group as recommended by consultant studies, the lead responsibility for activities assigned to MECC in the Long Range Plan should also transfer to the new entity.

LONG RANGE PLAN

COMPONENT: SDE-IS/ESV-IS INTERFACE

LONG RANGE PLAN CONCEPTUAL OVERVIEW

A. ESV-IS/SDE-IS INTERFACE

As originally conceived, ESV-IS and SDE-IS were intended to be complementary systems. The premise upon which their development was approved and funded was that data available through ESV-IS would be transferred to SDE-IS for use by all department staff in meeting their information requirements. Redundant data acquisition would be eliminated by the shared use of data, and both the department and districts would benefit from relief of unnecessary information handling burdens.

ESV-IS systems were developed with the expectation that district data, resident at regional host computers, would be transferred to SDE-IS. However,

- There has been no requirement that sections of the department use data available through ESV-IS.

In the absence of such a requirement, developing linkages between ESV-IS and SDE-IS has not been seen as a priority. Instead, development staff efforts have been directed toward writing programs to respond to information requests using data that have been collected manually. Much of that data duplicates data districts provide to ESV Regions for storage and processing under ESV-IS systems. Frequently, similar data is collected more than once by different users within the department. Consequently,

- Participation in ESV-IS systems has not significantly diminished the manual reporting burden on school districts.

Furthermore, for many districts, particularly those with simple information needs, the costs of participation in the ESV-IS systems are not outweighed by the benefits of automated information storage and retrieval capabilities alone. Therefore,

- The majority of school districts have not elected to participate in the non-mandated student information system (ESV-SSS) and personnel/payroll information system (ESV-PPS) components of ESV-IS.

There is an inverse relationship between the costs to districts of ESV-IS system participation and the number of system participants.

- As the number of ESV-IS system participants decreases, the proportional share of regional costs paid by participating districts increases.

This increase in district costs for ESV-IS system participation further encourages districts to consider in-district processing options other than ESV-IS. Without corrective action, the substantial state investment in development of ESV-IS systems and establishment of regional computer centers will have been wasted and the benefits of automated information handling never realized.

Actions necessary to correct these problems are the cornerstones around which the Long Range Plan was developed. Those actions are detailed in the SDE-IS Interface component of the plan, but they can be summarized as follows:

- **Current ESV-IS and SDE-IS systems will be analyzed to determine what modification is necessary in order to implement automatic transfer of data between ESV-IS and SDE-IS.**

and

- **Necessary system modifications to allow automatic data transfer will be made and by July 1, 1985, all general data acquired by the Department will be transmitted through an ESV Regional Management Information Center.***

The benefits of this approach for districts is apparent. **First**, no additional mandates for system use are imposed. **Second**, and most important, those districts electing to participate in ESV-IS systems will experience a reporting reduction burden. **Third**, depending on how many current nonparticipants are enticed to participate, there may be a reduction in services fees or more service for the same fees as costs are spread over a larger base of participants.

The long run benefits of this approach for the Department, while just as significant, as easier to overlook. **First**, information will be collected and edited at regional centers before transmission to the Department. Department professional and clerical staff time used in obtaining and verifying information will be minimized. Over time, some effort expended in forms preparation and distribution will also be eliminated. **Second**, because the information transfer will be in machine readable format, much Department professional and clerical staff time currently devoted to loading general data from forms into the SDE-IS data base through a CRT or keypunch will be eliminated.** Time savings such as these are not likely, however, to result in staff reductions across the Department. Because small percentages of time of a large number of staff people is involved, individual positions cannot be identified for reclassification. However, that staff time **can** be put to more effective uses -- writing system user documentation and planning for automated information needs are a few examples. **Third**, since Department information relative to finance, personnel and students will be received, processed, and stored centrally, barriers to sharing of data, establishment of a department-wide data base, elimination of redundant reporting and use of uniform data standards will be minimized.

Implementation of these plan concepts will require some reallocation of resources. Consequently, planning for the appropriate level and distribution of funding for information system development and data acquisition is also addressed in the Interface component of the plan. Currently, Department data acquisition and SDE-IS development costs are funded by the state, through the general appropriations made to individual sections responsible for data collection and through a specific appropriation to the Education Data Systems Section for SDE-IS development. The cost of ESV-IS development and operation are funded partially by local districts in the form of fees paid to regional centers and partially by the state through a subsidy to regional centers and an appropriation to MECC, the organization currently responsible for most ESV-IS development. (The appropriation to MECC has not been sufficient to fund all necessary ESV-IS development and maintenance. Consequently, some ESV-IS development has occurred at ESV regional centers.)

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*Note: Districts will not be required to participate in the ESV-IS systems. They may elect to simply continue completing manual forms. In that case, information from the form will be loaded by regional staff into the regional data base for transmission to the Department along with the data of regional system participants. In this manner, the state benefit of receiving edited information from a small number of transmission points will be protected even though districts chose not to participate in non-mandated ESV-IS systems.

**Note: Because only finance, personnel and student data required of all districts will be collected by regions and become part of the ESV-IS general data base, some manual processing of forms will remain necessary. Examples of the type of information acquisition efforts that will not be changed after implementation of this Plan are proposals, questionnaires, and disaster reporting such as bus accident and fire information.

- The current manner in which funds are allocated, although a reasonable approach in the past, inhibits identification of the true costs of reporting information to the state and may result in inadequate or over funding of some activities.

Furthermore,

- Incentives for reduction of costs are minimal, since the relationship between paying for the activity and benefitting from the activity is unclear.

These problems can be remedied by reallocating responsibility for funding in such a way that the costs of automated information processing activities are funded by the organization deriving the primary benefit from the activity. In general, districts will no longer be expected to subsidize the processing of data required by the state. Likewise, the state will not be the prime sponsor of those district data processing activities undertaken largely for the benefit of the district. For example, the state interest in receipt of accurate, comparable and timely information is served by regional Data Acquisition staff and regional entry, storage and processing of district information on host computers. Staff, hardware, software and communication costs associated with these functions should be reimbursed by the state. On the other hand, districts have an interest in receipt of payroll checks and unique reports for board meetings. The costs of software development and production associated with these functions should be borne by the district. In this way, both the state and district can weigh the costs of various alternatives and activities against the benefits anticipated to be derived from the activity. Some legislative requests for additional data and some enhancement proposals by districts may be withdrawn depending on the availability of resources. Efficiency will be encouraged and necessary activities will be funded adequately.

LONG RANGE PLAN: State-wide Education Management Information System
COMPONENT: SDE-IS/ESV-IS INTERFACE. The interface between SDE-IS and ESV-IS is in the areas of data transfer and funding. These are areas of shared responsibility between state and local education agencies.

GOAL: To maximize the cost effective transfer of data between school districts, ESV Regions and the State.

OBJECTIVE 1.1. Automated Data Transfer Planning. Identify, prioritize and plan development needed to automate the transfer of school district data.

BENEFITS: Planning for the development activities will help ensure that development proceeds in a logical and orderly fashion.

ACTIVITIES	RESULTS TIMELINES: FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
1.1.1. Analyze ESV-IS system capabilities to determine which Annual Data Acquisition Calendar (ADAC) required data items can be provided in automated form by ESV Regions on behalf of their affiliated districts.	→								MECC
1.1.2. Analyze ESV-IS system capabilities to determine what enhancements and modifications are needed for the automated transfer of ADAC specified data items from ESV Regions to SDE-IS on behalf of school districts.	→	→							MECC
1.1.3. Analyze SDE-IS system capabilities to determine what development, modification and enhancements are required to accept automated transfer of data items from ESV-IS.	→	→							EDS
1.1.4. Consult with the Regional Advisory Group regarding prioritization of development necessary for the automated transfer of data from ESV Regions to SDE on behalf of districts.	→	→	→						EDS
1.1.5. Identify the costs and requirements of enhancements and modifications needed for the automated transfer between ESV Regions and SDE of school district reports required by the ADAC.	→	→	→						Regions/EDS

Long Range Plan
Component: **SDE-IS/ESV-IS Inferface**

ACTIVITIES	RESULTS TIMELINES								LEAD RESPONSIBILITIES
	FY 1983				FY 1984				
	Sep	Dec	Mar	June	Sep	Dec	Mar	June	
1.1.6. Prioritize the development necessary for automated data transfer.		→	→	→					Regions/EDS
1.1.7. Approve the prioritization of automated data transfer development activities.				→					State Board

Long Range Plan
Component: **SDE-IS/ESV-IS Interface**

OBJECTIVE 1.2. Automated Data Transfer Development and Implementation. By July 1, 1985, transfer all SDE-IS data from ESV-IS.

BENEFITS: Automated data transfer will reduce the overall cost of information handling and will help ensure that data is reported in a timely manner.

ACTIVITIES	RESULTS TIMELINES: FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
1.2.1. Consistent with a uniform SLDC methodology, prepare preliminary plans including overall systems design, hardware resource requirements, budget and timetables for automated data transfer development.		→	→	→	→	→	→		MECC/EDS
1.2.2. Consider alternatives including cooperative development for development of automated data transfer capabilities.		→	→	→	→	→	→		Regions/EDS
1.2.3. Evaluate alternative strategies for automated data transfer capability for SDE-IS. Prepare an overall plan including budget and timetables for the development.		→	→	→	→	→	→		EDS
1.2.4. Develop a master schedule of tasks necessary to accomplish development on time and within specified budgets.		→	→	→	→	→	→		MECC/EDS
1.2.5. Monitor progress of development activities and approve continued development at appropriate checkpoints as specified in development plans.		→	→	→	→	→	→	→	Regions/EDS
1.2.6. Notify school districts that information reporting will be made to ESV Regional centers instead of to SDE-IS.			→	→	→	→	→	→	EDS
1.2.7. Provide training to SDE staff regarding changed procedures for information acquisition and data base concepts.			→	→	→	→	→	→	EDS

Long Range Plan
Component: **SDE-IS/ESV-IS Interface**

ACTIVITIES	RESULTS TIMELINES FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
1.2.8. In accordance with uniform data standards, provide information required in the ADAC to ESV Regions.	→	→	→	→	→	→	→	→	School Districts
1.2.9. In accordance with the ADAC, transfer SDE required data items in the format and on the dates specified to SDE.	→	→	→	→	→	→	→	→	Regions

Long Range Plan
Component: **SDE-IS/ESV-IS Interface**

GOAL: To ensure that the appropriate level of financial resources are identified and distributed.

OBJECTIVE 2.1. Funding Planning. Preparation of an analysis of the needs for funds.

BENEFITS: An analysis of the costs of data processing activities will be the basis upon which funding requests are made. The analysis will help ensure that the costs of data processing are fairly allocated among parties benefiting from the activities.

ACTIVITIES	RESULTS TIMELINES: FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
2.1.1. Identify the level of funding necessary to support the development, modification or enhancement of ESV-IS software to meet state reporting requirements and provide automated transfer of data between ESV Regions and SDE.	→	→					→	→	MECC
2.1.2. Analyze the overhead, staff and hardware resources necessary to support the acquisition, entry, processing, storage and reporting of state required data.	→	→					→	→	Regions
2.1.3. Identify the level of funding necessary to support the operation, development, modification or enhancement of SDE-IS software to meet legislative report requirements and to permit automated transfer of data between ESV Regions and SDE.	→	→					→	→	SDE
2.1.4. Identify the level of funding needed to support the operation and development of SDE-IS applications to meet user needs other than legislative report requirements and automated data transfer. Specify what part of that funding will be provided by user charge-backs.	→	→					→	→	SDE

Long Range Plan
Component: **SDE-IS/ESV-IS Interface**

OBJECTIVE 2.2. Funding Allocation and Requests. Preparation of biennial requests for state funds.

BENEFITS: Funding requests will be based on an analysis of costs and prepared by the organizations with closest access to information about particular needs.

ACTIVITIES	RESULTS TIMELINES: FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
2.2.1. Analyze consultant recommendations for the allocation of state funds between regions.	→								Regions
2.2.2. Prepare and recommend approval of a formula for the allocation of state funds between ESV Regions.	→								Regions
2.2.3. Approve the allocation of state funds between ESV Regions.	→	→							State Board
2.2.4. Prepare requests for state funding of SDE-IS development, maintenance and operation activities related to automated transfer of data, SDE required reporting and overhead costs.	→	→					→	→	EDS
2.2.5. Prepare requests for the user development, share of operation and maintenance costs.	→	→					→	→	Divisions
2.2.6. Prepare requests for state funding of the costs of ESV-IS development and maintenance activities necessary to meet state reporting requirements and provide automated data transfer.	→	→					→	→	Regions
2.2.7. Prepare requests for state funding of the costs of acquisition, entry, processing, storage and reporting of state required data.	→	→					→	→	Regions

LONG RANGE PLAN

COMPONENT: SDE-IS

B. SDE-IS

The Department currently collects school district information manually using over 260 forms. Although attempts have been made to review the forms for redundant and unnecessary information reporting requirements, none have been successful. Many Department information users are unaware that substantially similar information is also collected by other Department staff. Some are skeptical that information collected by others will be accurate, timely, or will meet their needs. In general, Department staff have been reluctant to devote any substantial amount of time to definition of their information requirements for Department-wide data acquisition reduction efforts. However,

- If data handling functions could be reduced, SDE staff time devoted to information acquisition and processing could be reallocated to other critical activities. The unit cost of information management would decrease.

Implementation of the Interface Long Range Plan concepts requiring the Department to utilize available information from regional information systems is only a partial solution to this problem. Although this approach will reduce the data handling burden of ESV-IS participating districts, the regional and Department processing burden (hardware and staff) necessary to perform a myriad of redundant or unnecessary aggregations will not be significantly diminished. Furthermore,

- Continued redundant data acquisition and development and maintenance of information systems based on duplicated or unneeded data is an unnecessary burden on districts, regions and the Department.

The present approach to management of systems development within the Department further magnifies these problems. Currently, needs for systems development and modification are identified and presented on an ad hoc basis by section staff. While this approach may be satisfactory to individual department users,

- Prioritization of data processing development plans throughout the Department cannot occur in the absence of an overall assessment of needs for systems development and modification.

Actions necessary to correct these problems are one of the cornerstones upon which the SDE-IS plan was developed. These actions, detailed in the first part of the SDE-IS plan, can be summarized as follows:

First,

- **A comprehensive assessment of Department needs for information will be conducted prior to additional development and major modification of SDE-IS.**

Then,

- **A Department-wide examination will be made of needs for automated processing of necessary information thereby reducing data handling and processing burdens across the Department and within districts and region.**

In developing a course of action to achieve these objectives, recognition was given to two problems that have prevented implementation of similar objectives in the past. The first of these problems is the tendency of Department staff to cite existing forms as the statement of their information needs. This approach has always ended in a stalemate in previous attempts to define information needs and reduce reporting requirements. Consequently, information needs analysis activities incorporated in this plan are premised on the theory that Department information output and the information used to calculate aids are the minimal statement of Department information needs. Additional information may be collected, but only if justified to and approved by the Commissioner.

The second implementation problem, lack of Department manpower necessary to conduct a Department-wide systems needs analysis, is more difficult to solve. It is addressed in the plan by requiring designation of Division EDP Coordinators - one person from each division who will have division-wide data processing planning as an area of his/her responsibility. Over time, these Division EDP Coordinators will gain invaluable knowledge about Department data and data processing. However, the initial effort required for training of these staff people may, depending on their current levels of awareness, be substantial. It should also be noted that absent dedicated funding for such staff, it is likely these duties will be assumed by existing professional staff who are already overwhelmed with new functions transferred to them after recent rounds of budget cutting and reductions in force. Despite these potential pitfalls, success of the SDE-IS plan will rest with Department users of SDE-IS. Therefore, division staff coordination of SDE-IS development is deemed a necessity.

The absence of a comprehensive information and systems needs analysis is not the only problem currently plaguing SDE-IS development. A separate, but related problem has been that requirements for systems and resources needs analysis, planning, and accounting have not been consistently imposed for SDE-IS development and operations. However, as noted in an evaluation of SDE-IS by the Legislative Auditor, the benefits of these activities are significant.

- Without systems and resources needs analysis and planning, change requests during development and systems maintenance needs for implemented systems increase, developers are not provided with an understanding of the interrelationships of needs, and management does not have the basic information necessary for prioritization.

Furthermore,

- Absent systems needs analysis and planning and on-going resource utilization accounting, future computer hardware, and staff resource acquisition needs cannot be accurately predicted.

It should also be noted that

- Accurate projections of necessary future resources are always important in minimizing development costs through elimination of unnecessary overhead, but their importance is magnified for organizations funded biennially upon requests developed significantly in advance of the period for which funding is requested.

For these reasons, the SDE-IS plan also requires imposition of systems and resources planning techniques. These techniques (described in detail in the second part of the SDE-IS plan) are intended to result in staff, hardware and time estimates for each proposed SDE-IS development activity. They will not only be the basis for Department management prioritization of plans for SDE-IS development, but they will also be the basis upon which projections regarding future resource needs will be developed and plans for acquiring those resources made. Planning does take time. Development of systems and resources plans will inevitably slow down the SDE-IS development process. That liability, though, is far outweighed by the potential for cost management and rational, integrated development possible when thorough plans precede action.

While failure to adequately assess needs and plan for systems development have been crucial problems, they have been reasonably transparent to those outside the Department. A third problem addressed in the SDE-IS plan, inconsistent use of generally accepted development and maintenance tools, has been a problem which has resulted in public criticism. In general, these tools include:

- formal systems development methodologies incorporating an analysis of data processing needs, an analysis of costs/benefits, division of development into phases with management review, check points, budget and timetables and documentation at completion of each development phase;

- data dictionaries for use by systems designers and programmers in developing an integrated data base system;

- data naming convention standards so that elements are named consistently across and within application programs; and

- documentation standards for user and technical staff use in understanding and maintaining the systems.

They are used in order to ensure the development of maintainable systems that meet user needs and are developed within specified budget and time constraints. While attempts have been made to use such tools in the development of SDE-IS, during a recent evaluation of SDE-IS by the Legislative Auditor it was found that the use of these development tools was inconsistent and sometimes nonexistent. The Department has already taken significant steps toward correcting this problem and will continue to do so with or without a plan for SDE-IS. Nevertheless, the SDE-IS plan does contain mandates for the adoption and use of a data dictionary and uniform standards for documentation, data naming and systems development.

To this point, the SDE-IS plan content described has focused primarily on activities necessary for the efficient and cost effective development of SDE-IS. As noted previously, that was the deliberate intention behind separation of the Long Range Plan into component pieces. However, the final major objective of the SDE-IS plan has overall significance for success of the Long Range Plan in its entirety. That objective, data management, is also the part of the SDE-IS plan which requires the greatest operational change for SDE-IS users within the Department.

The first of those changes involves a structural revision of the mandated annual data acquisition calendar. As currently maintained, the annual data acquisition calendar is a listing of forms school districts are required to complete and return to the Department. It is organized by Department divisions and sections and it contains form names, numbers, due dates and Department staff contacts. However,

- While the data acquisition calendar has been a useful tool for organizing data acquisition activities, it has done little to encourage district participation in the automated systems that were developed to help reduce the number of forms districts are required to complete.

Furthermore,

- Without a vehicle to graphically portray that a reduction in forms preparation will be the result of ESV-IS system participation, it is unlikely that the plan will succeed.

With a minimal amount of reorganization the data acquisition calendar can be the vehicle to portray and communicate the benefits of ESV-IS to districts. The SDE-IS plan requires that reorganization. Basically, the "new" calendar will be structured in such a way that forms are listed in categories corresponding to ESV-IS applications (finance, personnel/payroll, student). Within each of those categories, those reports that can be generated by ESV-IS will be noted.

It is anticipated that some degree of temporary effort from many Department information users will be necessary in order to revise the calendar. However, after the initail review, revision and categorization of data collection instruments has been accomplished, annual maintenance requirements should not be significantly more difficult than current requirements.

While the impact on Department staff of revising the data calendar will be temporary, a second change proposed in this part of the plan, establishment of a central data collection point, will have lasting impact. Currently, individual Department information collectors are responsible for the dissemination and return of their own data collection instruments. Many Department users perceive this procedure as beneficial because as long as forms are returned directly to them, they are guaranteed the earliest possible access to needed information. However,

- Individual sectio acquisition of data inhibits Department-wide use of data and data acquisition control efforts.

Furthermore,

- Without a central data acquisition function, identification of the true costs of Department data handling is, at best, problematical.

Even without those problems, though, continued individual data acquisition efforts will not work in many cases after implementation of the plan concepts requiring capture of information from ESV-IS to the extent available. Therefore, the SDE-IS plan requires a central data acquisition function for the acquisition of data from districts on a general and reoccurring basis.* Central data acquisition functions will include:

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*Note: Some special data acquisition will continue to emanate from individual sections. In general, that acquisition is even -oriented reporting required only of districts that are a party to such an event. Bus accident reporting and narrative proposal reporting are examples.

- preparation of data collection instruments
  dissemination of data collection instruments
  receipt and entry of data in SDE-IS
  dissemination of data to SDE-IS users Department-wide*

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*Note: Dissemination to SDE-IS users may take many forms. Some users may use CRTs or microcomputers to gain access to information at their own convenience. Others may choose to merely receive periodic hard copy report. The desirable mechanism for user data access will be determined on a user-by-user basis, depending on their needs.

LONG RANGE PLAN: State-wide Education Mangagement Information System
COMPONENT: SDE-IS. SDE-IS is that part of the state-wide elementary, secondary, vocational information system which provides data processing and management information services to the Department of Education.

GOAL: To maximize coordination and planning for desirable data acquisition and processing development efforts so that all sections of the Department are provided with a full range of information and processing capabilities consistent with their needs.

OBJECTIVE 1.1. Information Needs Analysis. Preparation of comprehensive analysis of the information needs of SDE and Legislative staff.

BENEFITS: A comprehensive analysis of state information needs will be the foundation upon which development plans will be constructed. Development based on a clear, department-wide statement of information needs will be more responsive and less costly. Redundant and unnecessary data acquisition and informative processing will be diminished.

ACTIVITIES	RESULTS TIMELINES								LEAD RESPONSIBILITIES
	FY 1983				FY 1984				
	Sep	Dec	Mar	June	Sep	Dec	Mar	June	
1.1.1. Consult with division management and designate a division EDP coordinator for division information reporting and data processing.	→								Commissioner
1.1.2. Appoint a data control administrator for SDE information acquisition and reporting.	→								Commissioner
1.1.3. Obtain from division EDP coordinators a comprehensive set of reports made to federal, state and local agencies by SDE.	→								Data Control Administrator
1.1.4. Consult with aids processing staff regarding the information needed to calculate state aids.	→								Data Control Administrator
1.1.5. Analyze the information reports made to external agencies and the formulas used to calculate aids. Prepare a master list of the data elements required for SDE aids tabulation and information reporting.	→								Data Control Administrator
1.1.6. Review the list of information needed to satisfy aids calculation and reporting requirements.	→								Data Control Administrator

Long Range Plan
Component: **SDE-IS**

ACTIVITIES	RESULTS TIMELINES FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
1.1.7. Prepare a request for acquisition of data other than that listed as needed to satisfy aids calculation or SDE reporting.	→								Division EDP Coordinators
1.1.8. Evaluate and recommend approval of division requests for data other than that needed for aids calculation or SDE reporting.	→								EDS Data Acquisition Unit
1.1.9. Approve division requests for acquisition of data other than that needed to calculate aids and satisfy SDE reporting requirements.	→								Commissioner
1.1.10. Consult with division EDP coordinators regarding the timing, frequency and duration of data use.	→								Data Control Administrator
1.1.11. Prepare a master list of data elements to be collected by SDE in FY 1984. For each data element included, specify its use, date(s) of acquisition and retention period.	→								Data Control Administrator
1.1.12. Analyze the list prepared by legislature staff of desirable education data. Prepare a list of legislature desired data elements for which no SDE need has been identified or for which the specified timing, frequency or duration of use is inconsistent with the needs of SDE.	→	→	→	→	→	→	→	→	Data Control Administrator
1.1.13. Consult with legislative staff regarding the prioritization of data specified as desirable by the legislature but not needed by SDE for management or reporting use.	→	→	→	→	→	→	→	→	Data Control Administrator
1.1.14. Prepare a plan and schedule for responding to legislative data needs during FY 85.	→	→	→	→	→	→	→	→	Data Control Administrator

Long Range Plan
Component: **SDE-IS**

OBJECTIVE 1.2 Systems Development Needs Analysis. Coordinate the preparation of an analysis of the needs for automated information handling.

BENEFITS: Through systems development needs analysis, the interrelationship among user needs will be apparent and department management will have access to the information needed for effective prioritization and planning for information system development. A comprehensive analysis of automated information processing needs will also help ensure that developing proceeds with a minimum of project changes. Maintenance needs for implemented systems will be minimized.

ACTIVITIES	RESULTS TIMELINES: FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
1.2.1. Consult with division EDP coordinators and prepare a list of reports needed for reporting or management purposes, their content and the date(s) on which they are needed.	→								Data Control Administrator
1.2.2. Analyze the list prepared by legislature staff of desirable education information reports.	→								Data Control Administrator
1.2.3. Analyze existing application system capabilities to identify modification and development necessary to generate reports needed by SDE and legislative staff.	→								EDS Systems Unit
1.2.4. Evaluate the potential for Word Processing production of reports generated through SDE-IS.	→								Office of Administrative Services
1.2.5. Consult with division EDP Coordinators regarding needs for revised or new automated information processing capabilities.	→								EDS User Unit
1.2.6. Prepare a master list identifying desirable enhancements modifications and development. Specify the frequency and type of information access and processing desirable.	→								EDS User Unit

Long Range Plan
Component: **SDE-IS**

GOAL: To minimize the development cost of application software while encouraging the cost effective use of technology through an active program of resource planning and management.

OBJECTIVE 2.1 Systems Planning. Facilitate coordinated planning in order to identify cost effective data processing development efforts.

BENEFITS: Systems planning will provide department management with information about costs and timelines for development activities. Realistic priorities and plans and orderly development will be the results. Systems plans will also be tools for management to measure progress and plan for resource needs. Maintenance needs for implemented systems will be reduced because of advance design work.

ACTIVITIES	RESULTS TIMELINES FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
2.1.1. Prepare a preliminary analysis of the systems design, resource requirements, budget and timetables associated with desirable enhancements, modifications and development alternatives.	→								EDS Systems Unit
2.1.2. Identify and analyze costs and benefits of user specified needs for application enhancements, modifications and development.	→								Benefits: Division EDP Coordinator Costs: EDS
2.1.3. Review costs and benefits of specified needs for system enhancements, modifications and development. Prioritize and approve biennial development activities.	→								Cabinet
2.1.4. Consistent with a uniform SDLC methodology, prepare a plan including overall system design, hardware resource requirements, budget and timetables for approved development activities.	→								EDS Systems Unit

Long Range Plan
Component: **SDE-IS**

OBJECTIVE 2.2 Resource Planning and Accounting. Provide for the efficient use of information processing personnel, equipment and supplies through coordination of resource planning and accounting.

BENEFITS: Resource planning and accounting activities are necessary in order to identify the costs of providing data processing services and to secure necessary resources in a timely manner. More efficient allocation of resources is possible through accounting and planning. Accurate projections of hardware and staff resources will minimize development costs by elimination of unnecessary overhead.

ACTIVITIES	RESULTS TIMELINES: FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
2.2.1. Review capabilities of Burroughs compatible resource management software.	→								EDS
2.2.2. Implement a resource analysis system through which the hardware resources needed for the development, improvement, and operation of each application can be identified.	→								EDS
2.2.3. Analyze the hardware resources used in the current operation of each SDE-IS application.	→								EDS
2.2.4. Evaluate the hardware resources specified as required in development activities planned for FY 1984.	→	→	→						EDS
2.2.5. Identify the Word Processing equipment needed for automated production of reports.	→	→	→						Office of Administrative Services
2.2.6. Prepare a plan specifying the amount and type of computer hardware resources necessary and the costs and benefits associated with alternative strategies for acquisition of those resources.	→	→	→						EDS

Long Range Plan
Component: **SDE-IS**

ACTIVITIES	RESULTS TIMELINES FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
2.2.7. Implement a staff time accounting system through which staff and contractor time attributable to the development, modification and operation of applications can be analyzed.	→								EDS
2.2.8. Analyze current staff and contractor resources used in the development, operation and management of SDE-IS. Identify the detailed skill requirements necessary to accomplish development planned for FY 1984.	→	→							EDS
2.2.9. Evaluate alternative contracting and hiring options for securing the necessary data processing skills. Prepare a plan for contracting jobs or hiring full-time, part-time, permanent and temporary staff.	→	→							EDS
2.2.10. Evaluate alternative strategies for user fees/chargebacks. Analyze the impact of alternative chargeback methods on EDS and users.	→								EDS
2.2.11. Adopt a policy regarding user chargebacks.	→								Commissioner

Long Range Plan
Component: **SDE-IS**

GOAL: Enhance cost effective development and maintenance of application software through standardization of development practices and maximum use of documentation tools.

OBJECTIVE 3.1. Development Standards. Assist data processing staff in developing easy to use and maintainable systems on time and within budget projections.

BENEFITS: Adoption of development standards will improve user, programmer and analyst productivity. More consistent, reliable and maintainable applications will be the result. Through use of development standards, management will also have an improved ability to evaluate programmer and analyst performance.

ACTIVITIES	RESULTS TIMELINES FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
3.1.1. Consult with ESV-IS and SDE-IS development staff and the Commissioner of Administration regarding development of a recommended uniform systems development life cycle methodology, (SDLC).	→								ESV Council
3.1.2. Adopt a SDLC to be used in ESV-IS and SDE-IS development.	→								State Board
3.1.3. Review ESV-IS user documentation standards to determine their applicability to SDE-IS development.	→								ESV Council
3.1.4. Adopt user documentation standards for SDE-IS development.	→								State Board
3.1.5. Consult with ESV-IS and SDE-IS development staff regarding technical documentation standards.	→								ESV Council
3.1.6. Adopt uniform technical documentation standards including programming, production job and system documentation standards for ESV-IS and SDE-IS development.	→								State Board
3.1.7. Consult with ESV-IS development staff and others regarding the attributes of desirable naming convention standards.	→								ESV Council
3.1.8. Adopt a uniform naming convention standard for naming ESV-IS and SDE-IS data elements.	→								State Board

Long Range Plan
Component: **SDE-IS**

OBJECTIVE 3.2. Data Dictionary. Develop and implement a data dictionary in which SDE-IS data is identified and defined.

BENEFITS: The data dictionary will be a tool for the design and development of computerized information systems. It will enhance the ability to pursue an integrated data base approach to development. Use of the dictionary will enable programmers to understand data files and incorporate consistent program logic for each data element in different programs. Identification of redundant data collection will be simplified.

ACTIVITIES	RESULTS TIMELINES FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
3.2.1. Review Burroughs and other appropriate commercial vendor data dictionary software. Analyze the costs and benefits of commerical and MEDID data dictionary software. Acquire data dictionary software.	→								Data Control Administrator
3.2.2. Install data dictionary software.	→								Data Control Administrator
3.2.3. Review SDE-IS financial, personnel/payroll and student applications and identify each data element in each application. For each data element listed specify its range of codes or values, identify which file(s) contain(s) the element and describe synonyms.	→								EDS Data Acquisition Unit
3.2.4. Prepare definitions of data elements within existing SDE-IS financial, personnel/payroll and student applications.	→								EDS Data Acquisition Unit

Long Range Plan
Component: **SDE-IS**

OBJECTIVE 3.3 Application Software Documentation. Provide technical and user documentation for SDE-IS application software.

BENEFITS: Application software documentation will enhance productive use of staff time through a reduction of staff time needed to understand the design and operation of systems. Training new staff, both development and user, will be simplified and the dependence on contractors reduced by effective use of documentation.

ACTIVITIES	RESULTS TIMELINES: FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
3.3.1. Review existing application software documentation and identify inconsistencies with uniform technical documentation standards.	→								EDS Systems Unit
3.3.2. Prioritize development of technical documentation and prepare a plan and schedule for completion of technical documentation for existing SDE-IS applications.	→								EDS
3.3.3. Prepare a plan and schedule for writing application software user documentation.	→								EDS
3.3.4. Consistent with uniform documentation standards, document SDE-IS application software.	→	→	→	→	→	→	→	→	EDS Systems Unit

Long Range Plan
Component: **SDE-IS**

GOAL: To satisfy the education information needs of the State while minimizing the Department and local education agency workload caused sed by information reporting requirements.

OBJECTIVE 4.1. Data Acquisition Calendar. Provide school districts with the information needed to develop cost effective plans for responding to SDE reporting requirements.

BENEFITS: The data acquisition calendar will be a graphic representation of the reporting reduction benefits of ESV-IS system use. As such, it will be a signficant tool for use in encouraging ESV systems participation. It will also be a tool for planning SDE-IS development necessary for automated transfer of data.

ACTIVITIES	RESULTS TIMELINES FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
4.1.1. Analyze existing data collection instruments and delete requests for information not included in the FY 1984 master list of required data element acquisition.	→	→	→						EDS Data Acquisition Unit
4.1.2. Review data collection instruments and revise to segregate financial, personnel/payroll and student information reporting requirements.	→	→	→						EDS Data Acquisition Unit
4.1.3. Analyze existing data collection instruments and identify which reports are required of all reporting units and which reports are required of only certain reporting units.	→	→	→						EDS Data Acquisition Unit
4.1.4. Prepare an Annual Data Acquisition Calendar listing, by major ESV-IS system category, data collection required of all districts at specified times and of certain districts with special characteristics at specified times. Specify in the ADAC which data information reports will be provided by ESV Regions on behalf of affiliated districts participating in the specified ESV-IS system.	→	→	→						EDS Data Acquisition Unit

Long Range Plan
Component: **SDE-IS**

OBJECTIVES 4.2. Data Acquisition Control. Coordinate and control the acquisition of data from local education agencies.

BENEFITS: Effective implementation of data acquisition control will reduce unnecessary or redundant data collection from school districts. It will also minimize the cost of developing systems to process redundant information. Data storage costs will decrease.

ACTIVITIES	RESULTS TIMELINES FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
4.2.1. Implement a data reporting administration function to centralize the acquisition, receipt and reporting of data to and from SDE.	→								Data Control Administrator
4.2.2. Provide the Data Acquisition Review Committee with research and analysis assistance with regard to requests for new, revised or more frequent data acquisition from local education agencies and others.	→	→	→	→	→	→	→	→	EDS Data Acquisition Unit
4.2.3. Review and maintain uniform data standards for financial student and personnel/ payroll data.	→	→	→	→	→	→	→	→	EDS Data Acquisition Unit
4.2.4. Implement a data base administration function.	→								EDS
4.2.5. Collect and retain information from ESV Regions and LEAs.	→	→	→	→	→	→	→	→	EDS Data Acquisition Unit

Long Range Plan
Component: **SDE-IS**

GOAL: Provide effective data systems to support and enhance SDE capability to perform statutory responsibilities relative to the supervision over all matters pertaining to schools.

OBJECTIVE 5.1. Application Software Development, Operations & Maintenance. Provide automated information systems to meet the information processing needs of the Department.

BENEFITS: Development, maintenance and operating of automated information systems will provide policy makers with timely access to data needed for effective decision making. Department staff time for manual manipulation and processing of information reported to state and federal agencies will be reduced.

ACTIVITIES	RESULTS TIMELINES: FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
5.1.1. Review prioritized and approved Department data processing plans and develop a master schedule of tasks necessary to accomplish development on time and within specified budgets.	→	→	→						EDS
5.1.2. Hire or contract for staff in accordance with the staffing plan.	→	→	→						EDS
5.1.3. Monitor progress of development activities and approve continued development at appropriate checkpoints as specified in the development plan for each development activity.	→	→	→	→	→	→	→	→	EDS
5.1.4. Evaluate opportunities for coordinated staff training with ESV regions. Develop a plan and schedule for data processing related training of SDE staff.	→	→	→	→					EDS
5.1.5. Review data currently stored in SDE-IS and purge data in accordance with the retention schedule specified for each data element.	→	→	→	→					EDS Systems Unit

LONG RANGE PLAN

COMPONENT: ESV-IS

LONG RANGE PLAN CONCEPTUAL OVERVIEW

C. ESV-IS

ESV-IS, the district level component of the statewide education management information system, was developed to serve two purposes. The first of those, reduction of the information reporting burden on school districts by provision of automated capability to process and transmit information to SDE-IS, is addressed in the Interface component of the Long Range Plan. It is the second purpose, provision of automated information processing capability to meet local needs, that is the primary focus of the ESV-IS plan.

Although the state has assumed some responsibility for meeting local district information management needs through provision of ESV-IS software, seven ESV Regions are the delivery vehicles for ESV-IS services to districts and have bottom line accountability for the degree to which district processing needs are met. Consequently, the major responsibility for implementation of the ESV-IS plan also rests with the ESV Regions. Other organizations, specifically including MECC (or a successor development organization) and the State Board, also have specified, but less pervasive roles in the implementation of the ESV-IS plan. However, it is school districts, the users of ESV-IS services, who will make the decisions that will determine the future of ESV-IS.

The first of those decisions is the future development of software for ESV-IS. As in the SDE-IS plan, the ESV-IS plan requires that development be preceded by an analysis of district needs for management information and automated processing capabilities to meet local needs. However, unlike SDE-IS users who are reasonably homogenous Department sections controlled be a single management structure (State Board/Commissioner) and housed in the same physical plant,

- ESV-IS users are independently governed by local boards and are diverse in their size, complexity, levels of technical sophistication and geographic location. As such, their needs differ significantly.

Nevertheless,

- Without a statewide plan for ESV-IS development, redundant software development in districts and regions will be encouraged and ESV-IS software developed may be ineffective in meeting user needs.

Consequently, as a first step preceding ESV-IS development, the ESV-IS plan also requires an analysis of user needs for information and automated processing capability. That analysis will be conducted by ESV Regions in concert with each of their member districts and, as in the SDE-IS plan, will be the basis for ESV-IS development prioritization. However, because each ESV-IS user is governed by a separate governing body,

- Overall prioritization of ESV-IS development cannot occur at the user level.

Instead, that prioritization will occur at the Regional Advisory Group, an advisory committee composed of one representative of each ESV Region. Although that approach will not guarantee that each user will be satisfied with the ESV-IS development plan, it does guarantee the greatest degree of user control possible while still arriving at a unified plan for ESV-IS development.*

*Note: ESV-IS development necessary to meet the goal of automated reporting of data from ESV-IS to SDE-IS is not within the scope of this prioritization. Those activities are mandatory, not discretionary, and will always have the highest priority. The prioritization described here relates only to ESV-IS development planned to meet local management needs other than required state reporting.

A second area of user decision making, resource planning, allocation and accounting, is the most problematical of the issues addressed in the ESV-IS plan. At present, the extent to which users participate in non-mandated ESV-IS systems is entirely discretionary. Preserving that district choice is desirable and was a prime consideration in development of the Interface component of the Long Range Plan. However,

- The unpredictability of the number of ESV-IS participants at any point in time coupled with a legal mandate that all ESV-IS systems be made available to districts has created a significant problem in planning for and allocating resources.

Furthermore,

- During the transition between the current data reporting architecture and the implementation of automated reporting, districts will be encouraged to assess the new benefits of ESV-IS participation and consider conversion to voluntary ESV-IS systems, thereby increasing the degree of participation instability.

The ESV Regions are faced with long term hardware commitments and substantial lead time requirements for acquisition of all resources -- hardware, software and personnel. Because they are participant funded, inability to make advance predictions regarding participation often inhibits entering long term resource commitments until participation is guaranteed. Potential participants, on the other hand, are reluctant to guarantee participation without assurances regarding the availability of needed resources and the cost of participation. Although these problems cannot be solved in their entirety without removing user choice, the ESV-IS plan does provide partial solutions as follows:

- First, districts will be required to annually review their data processing activities and, if electing to withdraw from ESV-IS participation or pursue an alternative to ESV-IS participation, prepare a plan and proposal which must be approved by the State Board at a specified time each year.

- Second, also by a specified annual date, districts deciding to begin new or different ESV-IS system participation must work with ESV Regions to prepare a plan for conversion to ESV-IS. Regions, in turn, will prepare a plan for implementation of the district conversion plans.

- Third, ESV Regions will, based on the annual plans of districts, prepare annual plans for resource acquisition.

By requiring planning and proposal approval at specified dates, at least annual stability will be ensured. While this may delay some implementation of a district desired alternative, it may also prevent some unexpected degradation of service or increase in fees for other districts.

In addition to preparation of regional plans that are dependent of district plans, ESV Regions will also be required to conduct some relatively independent resource type planning. Those plans, communications plans and a plan for establishment of a cooperative development function, are required in the ESV-IS plan to ensure the most cost effective use of options for securing necessary software and communications capability. The outcome of these activities, while strengthening ESV-IS in general, have state cost savings as their impetus. Recent consultant studies have pointed out that

- Significant cost savings could be achieved if software development was a function performed cooperatively under the direction of all seven ESV Regions.

And,

- The overall costs of providing communications capability to districts may be reduced while enhancing capabilities if ESV Regions analyzed communication needs and periodically assessed new developments in communications technology.

LONG RANGE PLAN: State-wide Education Management Information System
COMPONENT: ESV-IS. ESV-IS is that part of the state-wide elementary, secondary, vocational information system which provides finance, personnel/payroll and student data processing and management information services to school districts.

GOAL: To maximize coordination and planning for desirable data acquisition and processing development efforts so that all districts in the state are provided with a full range of information processing capabilities consistent with their needs.

OBJECTIVE 1.1. Information Needs Analysis. Preparation of comprehensive analysis of the information needs of local education agencies.

BENEFITS: An analysis of district information needs is a significant component in the development of planning and prioritizing desirable software development. Development based on a clear statement of needs is more responsive and less costly. Redundant development across districts and regions will be diminished.

ACTIVITIES	RESULTS TIMELINES								LEAD RESPONSIBILITIES
	FY 1983				FY 1984				
	Sep	Dec	Mar	June	Sep	Dec	Mar	June	
1.1.1. Consult with LEA staff and governing boards regarding needs for new or revised automated information processing capabilities to meet local needs.	→								Region
1.1.2. Consult with district staff and prepare a list of reports needed for local management purposes, their content and the date(s) on which they are needed.	→								Region
1.1.3. Analyze report capabilities of current ESV-IS systems and determine which desired reports can be generated through ESV-IS systems and which desired reports will recessitate ESV-IS system modification or development.	→								Region
1.1.4. Prepare a master list of district specified desirable enhancements, modifications and development to meet local needs.	→								Region

Long Range Plan
Component: **ESV-IS**

OBJECTIVE 1.2 Systems Development Needs Analysis. Coordinate the preparation of an analysis of the district needs for automated information processing capabilities.

BENEFITS: Through systems development needs analysis, the interrelationships between user needs will be apparent and the information necessary for effective prioritization and planning for information system development will be provided. A comprehensive analysis of automated information processing needs will also help ensure that development proceeds with a minimum of project changes. Maintenance needs for implemented systems will be reduced.

ACTIVITIES	RESULTS TIMELINES: FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
1.2.1. Prepare a preliminary analysis of the systems design, resource requirements, budget and timetables associated with district specified desirable development.	→								Region/MECC
1.2.2. Identify and analyze costs and state-wide needs for district specified desirable enhancements, modification and development.	→								Region/MECC
1.2.3. Review costs and benefits of specified needs for system enhancements, modification and development. Prioritize and approve state-wide development activities.	→								Regional Advisory Group

Long Range Plan
Component: **ESV-IS**

GOAL: To minimize the development cost of application software while encouraging the cost effective use of technology through an active program of resource planning and management.

OBJECTIVE 2.1 Systems Planning. Facilitate coordinated planning in order to identify cost effective data processing development efforts.

BENEFITS: Systems planning will provide the State Board with information about costs and timelines for ESV-IS development activities. Realistic priorities and plans and orderly development will be the results. Systems plans will also be tools for regional, district and state management to measure progress and plan for resource needs. Maintenance needs for implemented systems will be reduced because of advance design work.

ACTIVITIES	RESULTS TIMELINES								LEAD RESPONSIBILITIES
	FY 1983				FY 1984				
	Sep	Dec	Mar	June	Sep	Dec	Mar	June	
2.1.1. Identify and describe costs and resource requirements of alternative strategies for enhancement, modification and development of prioritized and approved development activities.	→	→	→						MECC
2.1.2. Consistent with a uniform SLDC methodology, prepare a plan including overall systems design, hardware resource requirements, budget and timetables for approved development activities.	→	→	→						MECC

Long Range Plan
Component: **ESV-IS**

OBJECTIVE 2.2 Cooperative Development Planning. Facilitate development of a plan to consolidate software development in a cost-effective, cooperative organization.

BENEFITS: Cooperative software development planning may result in establishment of an organization through which uniform application software may be developed in an economical manner. Redundant development and maintenance activities may be eliminated and the overhead costs associated with supporting development staff may be reduced. Accountability for decision making will be enhanced.

ACTIVITIES	RESULTS TIMELINES FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
2.2.1. Consult with school districts and ESV region staff and governing board members regarding desirable mechanisms for cooperative, cost-effective development of administrative application software to serve the needs of school districts.	→								Regional Advisory Group
2.2.2. Consult with SDE management regarding potential mechanisms for cost-effective development of administrative application software to serve the needs of SDE.	→								Regional Advisory Group
2.2.3. Prepare a recommended plan for the mission, governance, funding and implementation of a cooperative development function.	→								Regional Advisory Group
2.2.4. Evaluate and approve or disapprove a recommended plan for cooperative development of administrative application software.		→							State Board

Long Range Plan
Component: **ESV-IS**

GOAL: Establish effective use of personnel and installed hardware software and communication resources while reducing unit costs and increasing the quality of service by orderly procurement, replacement and reallocation of resources.

OBJECTIVE 3.1. Resource Planning and Accounting. Identify the appropriate level of resources needed to support ESV-IS.

BENEFITS: Resource planning and accounting activities are necessary in order to identify the costs of providing data processing services and to secure necessary resources in a timely manner. More efficient utilization and allocation of resources is possible through accounting and planning. Accurate projections of hardware and staff resources will minimize development costs by elimination of unnecessary overhead.

ACTIVITIES	RESULTS TIMELINES: FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
3.1.1. Analyze the hardware and staff resources used in current operation of ESV-IS systems to support current ESV-IS system participants.	→								Region
3.1.2. Analyze the impact planned development activities will have on district participation in ESV-IS systems during FY 1984.	→	→							Region
3.1.3. Analyze the impact planned development activities will have on the level of hardware, staff, and other resources necessary during FY 1984.	→	→							Region
3.1.4. Evaluate the costs and benefits associated with alternative strategies including regional sharing for acquisition of those resources.	→	→							Region
3.1.5. Prepare an annual resources plan specifying the amount and type of hardware and staff resources necessary and the strategy for acquisition of those resources.	→	→							Region
3.1.6. Identify and evaluate the differences between versions of ESV-IS systems.	→								Regions/MECC

Long Range Plan
Component: **ESV-IS**

ACTIVITIES	RESULTS TIMELINES FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
3.1.7. Analyze the costs and benefits of conversion to and maintenance of one version of ESV-IS systems.	→								Regional Advisory Group
3.1.8. Review the evaluation of ESV-IS system differences. Review the costs and benefits of convergence to one system. Prepare a plan for the support of ESV-IS versions or for the convergence of districts a uniform ESV-IS system.	→	→	→						Regional Advisory Group
3.1.9. Review and approve a plan for the operation of ESV-IS systems in the regions.	→	→	→						State Board

Long Range Plan
Component: **ESV-IS**

OBJECTIVE 3.2. Resource Allocation and Conversion Planning. Allocate resources based on a determination of the most cost-effective mechanisms for providing data processing support to the school districts.

BENEFITS: Allocation of resources between districts and regions based on identification of cost-effective mechanisms for providng data processing services may result in overall reduction of data processing costs. It will also provide a clear basis upon which regions and districts can plan for resources needed during the subsequent biennium.

ACTIVITIES	RESULTS TIMELINES: FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
3.2.1. Review costs and benefits of administrative data processing operations conducted internally or at a service center other than a regional management information center.	→	→							District
3.2.2. Prepare a data processing plan describing automated information processing needs and planned methods for serving those needs if other than participation in ESV-IS.	→	→	→						District
3.2.3. In accordance with state required guidelines for developing computer related expenditure proposals, prepare a proposal for data processing activities desired to be conducted internally or at a location other than a regional management information center.			→						District
3.2.4. Review district proposals to conduct data processing activities internally or at a location other than a regional management information center.				→					Region
3.2.5. Prepare an evaluation of the potential changed costs to other member districts and the region if a district alternative proposal is approved. Specify the overall impact on service fees, hardware resources, regional staff needs, and communications.				→					Region

Long Range Plan
Component: **ESV-IS**

ACTIVITIES	RESULTS TIMELINES FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
3.2.6. Review and determine cost-effectiveness of proposals for data processing activities intended to be conducted outside a regional management information center. Approve proposals where cost effectiveness on a local and state-wide basis is demonstrated.				→					State Board
3.2.7. Consult with ESV Regions regarding strategies and timelines for conversion of data processing activities from the district or other service center to the Region.				→	→				District
3.2.8. Consult with districts regarding strategies and timelines for conversion of data processing activities from the Region to the district or other service center.				→	→				Region
3.2.9. Prepare a plan for conversion to manual or regional processing for activities included in disapproved proposals.				→	→				District
3.2.10. Analyze the impact district data processing plans will have on the level of staff, hardware and other resources necessary. Evaluate the costs and benefits of alternative strategies and timelines for acquisition or release of those resources.				→	→				Region
3.2.11. Prepare a plan for implementation of district conversion to or from ESV-IS system participation. Specify timelines and strategies for acquisition of additional resources or release of unnecessary resources.				→	→				Region

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ACTIVITIES	RESULTS TIMELINES FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
3.2.12. Analyze the impact of conversion plans on FY 1984 regional plans. Where needed, modify FY 1984 regional plans.				→	→				Region
3.2.13. Review and approve modified FY 1984 regional plans.					→				State Board

Long Range Plan
Component: **ESV-IS**

OBJECTIVE 3.3 Communications Planning. Identify the most cost-effective options for communication between districts and regions.

BENEFITS: Communications planning ensures the existence of a framework for meeting organizational goals, minimizes inefficiences and redundancies and helps reduce the overall cost of data communications.

ACTIVITIES	RESULTS TIMELINES FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
3.3.1. Prepare an inventory, with component costs for each location, of present data communications systems and network configurations. Include processing equipment (communications oriented), terminals, modems/multiplexors/concentrators, and communications lines.	→	→	→						Region
3.3.2. Analyze data communication systems utilization for all locations. Consider applications, record descriptions, file sizes and formats, transmission volume and distribution by application, equipment utilization and appropriateness, line utilization (loading factors), and transmission schedules.	→	→	→						Region
3.3.3. Prepare a data communication systems profile including an equipment and network configuration, costs by component, utilization levels, identified needs, and an appraisal of present operations (efficiency, cost-effectiveness, strengths and weaknesses, and overall appropriateness).	→	→	→						Region

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ACTIVITIES	RESULTS TIMELINES FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
3.3.4. Evaluate operating efficiency and cost-effectiveness of alternative data communication systems and network configurations. Consider common carrier offerings, modems, multiplexors, communication line types, conditioning arrangements, transmission methods (line discipline), speed considerations, response time considerations, reliability, security, computer teleprocessing software capability, user programming responsibilities, and computer line control alternatives.	→	→	→						Region
3.3.5. Prepare a communications plan incorporating equipment and lines, organization, staffing, ground transport, implementation procedures, and control techniques.			→	→					Region
3.3.6. Review ESV Regional communication plans and evaluate possibilities for state-wide cost savings.				→					Telecommunications Division, ISB

Long Range Plan
Component: **ESV-IS**

GOAL: Minimize the inefficiencies and costs of district data reporting by providing cost effective automated systems for information handling.

OBJECTIVE 4.1 Development and Maintenance. Develop and maintain information systems for school district use in management and reporting functions.

BENEFITS: The development and maintenance of data processing systems for district use ensures that districts will have the capability to provide uniform and timely data in response to state requests.

ACTIVITIES	RESULTS TIMELINES: FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
4.1.1. Review prioritized and approved systems development, enhancement, and modification plans and develop a master schedule of tasks necessary to accomplish development on time and within specified budgets.			→						MECC
4.1.2. Assign staff and contractors to development and maintenance functions.	→	→	→	→	→	→	→	→	MECC
4.1.3. Monitor progress of development activities and approve continued development at appropriate checkpoints as specified in the plan for each development activity.	→	→	→	→	→	→	→	→	Regional Advisory Group
4.1.4. Identify and document software problems.	→	→	→	→	→	→	→	→	Region
4.1.5. Review software problem reports monthly. Prioritize activities necessary to correct the problems.	→	→	→	→	→	→	→	→	Regional Advisory Group
4.1.6. Develop a plan and schedule for data processing continuing education for development staff. Consult with SDE regarding opportunities for cooperative staff training.				→					MECC

Long Range Plan
Component: **ESV-IS**

OBJECTIVE 4.2 Systems Operations. Provide automated information processing capabilities to meet the reporting and management needs of districts.

BENEFITS: Operation of automated information systems will provide policy makers and local management with timely access to data needed for effective decision making. District staff time for manual manipulation and processing of information reported to state and federal agencies will be reduced.

ACTIVITIES	RESULTS TIMELINES FY 1983 Sep	Dec	Mar	June	FY 1984 Sep	Dec	Mar	June	LEAD RESPONSIBILITIES
4.2.1. Operate ESV-IS systems on behalf of member districts.	→	→	→	→	→	→	→	→	Region
4.2.2. Hire staff and procure equipment and other resources necessary to support the data processing needs of districts.	→	→	→	→	→	→	→	→	Region
4.2.3. Set fees for member participation and/or services.	→	→	→	→	→	→	→	→	Region
4.2.4. Provide SDE with information specified in the Data Acquisition Calendar on behalf of member districts.	→	→	→	→	→	→	→	→	Region