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MICRO-FIN PILOT TEST FINDINGS

ESV COMPUTER COUNCIL

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The ESV Computer Council was required by the 1983 Legislature to review the Department evaluation of a test of microcomputer finance systems and present findings to the Legislature during February 1984. This position paper is submitted to the Legislature in response to that mandate.

MICRO-FIN Pilot Test

Pilot test districts were selected by the Department after issuing a general invitation to all districts for their participation in the test. From the eighteen districts responding with an expression of interest, seven were chosen to participate after analysis of several characteristics of the applicant district indicating an ability to meet the following criteria:

- o District processing and storage needs can be met within the limitations of the microcomputer hardware and software. Districts with a large number of accounts, vendors or transactions (usually districts with 1,000 or more pupils) were eliminated while those with a small enrollment and/or a simple account structure were considered as test candidates.
- o Districts will have varying levels of previous microcomputer and accounting expertise, they will have different organizational structures and should be geographically disbursed. In order to identify the relationship between expertise in the micro area and likelihood of success in operating a stand alone system, districts were chosen to reflect varying degrees of expertise. Similarly, differing administrative personnel structures of districts were desired so that analysis could be made regarding the likelihood of successful stand alone computing in various organization structures. Finally, differing ESV regional membership was considered a criteria so that as many regions as possible could gain experience with the system and so that data regarding the impact, if any, of differences in regional operations on the success of the test could be gathered.
- o Districts must have access to a 48K Apple microcomputer with at least two disk drives and a printer.

Seven districts were chosen to participate in the test. Five of these districts; Plainview, Randolph, Brooten, Mazeppa and Nicollet, would test a MECC developed floppy disk system, while Ortonville and Holdingford, the other pilot districts, were designated to test a MECC developed hard disk system. The data of two test districts, Plainview and Randolph, would be transmitted directly to the Department on a diskette while the data of the other test districts would be submitted to the region of affiliation.

The pilot test was scheduled to commence in July with data conversion and subsequent live operation of one district followed by periodic conversion thereafter of the other districts. It was anticipated that the pilot districts would operate on a parallel basis (using both the regional and the microcomputer systems) for a while and would begin stand alone operation only after a period of successful parallel operation. However, the pilot test did not begin on schedule. due to various delays in the development process and programming

"bugs", the first district was not able to even begin a parallel operation until December. The conversion of other districts was consequently delayed until system problems could be resolved. As of this writing, two of the seven pilot districts are fully operational, another district is getting close to live operation and the remainder are waiting to begin the preliminary phases of conversion. The hard disk software was made available to the districts testing that version last week and the development of some components of both systems have not yet been completed or tested.

As might be expected, serious evaluation problems are the result of the delayed pilot test schedule. Following is a description of the nature of these problems:

- o It is unknown whether system malfunctions will appear as the volume of transactions and mass of data stored over a period of months increases.
- o Since only two districts have fully operated the floppy disk system, valid conclusions regarding district staff time requirements for operating the system and desirable district personnel expertise and organization cannot be drawn.
- o Valid conclusions regarding the required level and probable cost of supporting districts using these options cannot be drawn.
- o There is limited experience with the operation of the system in districts with different accounting structures and data processing needs.
- o Whether the system will successfully produce required year end reports has not been fully tested.
- o The system has not been audited.
- o Because the system is not fully developed, it is unknown whether all of the system components will work.

Findings

While many aspects of the system will be impossible to evaluate until a complete pilot test has been conducted, there are some findings that can be presented at this time. First, we find that the system is appropriately designed and well documented. We also know that major parts of the floppy disk system work in four of the test districts. Although the operation has not been smooth in those districts, "bugs" are to be expected during a pilot test of any system and their presence does not necessarily indicate that the system will not work. It merely indicates a need for additional correcting and testing.

Second, we find that a significant degree of district expertise in finance accounting/data processing OR a high level of support from an organization with that expertise will be required for successful conversion and operation in the remaining pilot districts and any other districts converting from the mainframe system to the MICRO-FIN system in the future. It appears that use of system requires a significant training and conversion effort for most districts--an effort for which the pilot districts have required outside assistance. It should be noted that only those districts with a high interest level and good probability for success were chosen to participate in this test. Therefore, we can also predict that training, conversion and operation problems will be even more significant when the system is made available for expanded use.

Third, we find that provision of the necessary accounting and data processing support cannot effectively be accomplished by adding responsibilities to the functional responsibilities of existing Department employees. Significant amounts of travel and in-district assistance time has been required to date in "ringing up" the districts currently operating the system. While it is possible that the remaining pilot districts can be successfully brought "on-line" with the assistance of Department staff, any expansion of that responsibility to additional districts will require dedicated staff, regional staff assistance or some combination of both if major conversion delays are to be avoided.

Finally, we find that concerns regarding data loss operating error and/or diskette failure are valid. One of the two districts currently piloting the system did erase a diskette during the course of its conversion. Fortunately, the district was able to recover without major problems because MECC had a copy of the data erased by the district. However, that may not be the case with future errors. It should be noted that though the system suggests and prompts making a "back-up" disk, it does not so require.

Recommendations

The ESV Computer Council has reviewed the successes and the problems associated with the limited pilot test of the microcomputer finance systems. Based on that review, the ESV Computer Council makes the following recommendations to the 1984 Legislature:

1. Testing of the MECC developed microcomputer finance system should continue until December 1, 1984.
2. Pending completion of the pilot test on December 1, 1984, district use of the test system should be limited to test districts. However, by July 1, 1984, additional districts shall be allowed by the Department to participate in an expanded pilot test. Test district selection criteria shall be limited to hardware, software and support limitations.
3. On or before July 1, 1984, ESV regions desiring to participate in the pilot test should provide written notice to the Department of their intent to assume responsibility for the training, conversion and operational support of pilot test districts. ESV regions filing a notice of intent to participate in the pilot test will assume the responsibility of providing training, conversion, operational and other support to their member districts designated as additional pilot sites. An ESV region may, at its discretion, provide support to a non-member district if that district's region of affiliation did not file a notice of intent to the Department.
4. The Department shall provide training and assistance to ESV regions participating in the pilot test.
5. Districts participating in the pilot test shall be responsible for their proportionate share of regional liabilities existing on July 1, 1984. After July 1, 1984, pilot test districts shall be required to pay for services received, resources consumed and their share of regional liability existing on July 1, 1984. In no event shall that part of a district's annual fee dedicated to payment of past regional liability exceed the amount the district would have paid as fees if that district had continued receiving mainframe services.
6. By December 1, 1984, the Department, participating ESV regions and pilot test districts shall evaluate the pilot test. The ESV Computer Council will present findings to the Legislature by January 15, 1985. The findings shall contain:
 - an analysis of district, state and regional costs associated with operation of the system,
 - recommendations for the maintenance of the system,
 - alternatives, their costs and recommendations for the provision of support to users,
 - recommendations regarding requirements for district use of the system, and
 - an analysis of the desirability of limiting the number of systems allowed.

These recommendations are made to solve specific problems noted by the districts, state and regions during the course of the limited testing to date. From the district perspective, the recommendations, if adopted, will allow participation of every district that has expressed a desire to use the microcomputer system to date. The districts that do not desire to use the system or cannot use it would also benefit from the recommendation--they will not be required to assume the current cost or past regional liabilities of pilot district support. Furthermore, all districts will benefit from the knowledge gained during a complete pilot test. Without adequate testing, districts will not have the facts necessary to predict whether use of the system will meet their financial, processing and reporting needs.

Regions will also benefit from adoption of these recommendations. In the absence of training by the Department and experience working with MICRON-FIN districts, regional decisions regarding whether to offer the service, hiring staff and service fees are, at best, guess work. It should also be noted that without a change to thoroughly analyze the benefits and detriments of the system, regions will have difficulty predicting how many of their member districts will eventually choose to use the alternative if it is given final approval. That prediction is important for regional planning purposes and will influence decisions now pending regarding hardware and staff acquisition.

Finally, state interests in receipt of accurate, uniform, and timely data will be protected while the state continues to conduct the pilot test and plan for the best method of transferring the district data to the state.

Recommended Legislation

Whether or not statute change is necessary to authorize the participation of additional districts in the MICRO-FIN pilot tests is debatable. It could be argued that the Department has the administrative authority to conduct a pilot test of any system without specific legislation governing the operation of such a test. However, to clarify district, regional and state responsibilities during the completion of the current (and possible future) pilot tests, the following statutory changes are recommended.

M.S. 121.935, Subd. 1 (b): Respond within 15 calendar days to requests from the Department for district information provided to the region for state reporting of information based on data elements in the data element dictionary.

M.S. 121.935, Subd. 6: Regional management information centers may charge fees to affiliated districts. A district which submits financial transactions to the center in summary form pursuant to M.S. 121.936, subdivision 1, or which uses an approved alternative management information system pursuant to section 121.936, subdivisions 2 to 4, may apply to the commissioner to set the fee if the district and the center cannot agree on a fee. The commissioner shall issue an order setting the fee, which shall be binding on both the center and district. for the cost of services provided to the district and the district's proportionate share of outstanding regional debt. In no event shall the annual fee of a district participating in a state pilot test of an alternative financial management information system exceed the annual fee chargeable to the district in the absence of the pilot test.

M.S. 121.936, Subd. 1 (b) (2): The district shall use the ESV-IS finance subsystem through the center of affiliation to process every detailed transaction of the district.

Notwithstanding the foregoing, a district with 3,000 or fewer pupils in average daily membership as defined in section 124.17, subdivision 2, may submit its financial transactions to enter for processing in summary form if before July 1, 1990, the planned form of the district's submission of its transactions and the conformance of the district's financial accounting and reporting system to the uniform financial accounting and reporting standards adopted by the state board pursuant to sections 121.99 to 121.92 are approved by the following team: the director of school financial management in the department of education, and the director of management information services and the coordinator for the ESV-IS finance subsystem for the Minnesota educational computing consortium. a district may process and submit its financial transactions to a region or the state in summary form if it operates an approved alternative system or participates in a state approved pilot test of an alternative system.

M.S. 121.936, Subd. 1 (c): The provisions of this subdivision shall not be construed to prohibit a district from purchasing services other than those described in clause (b) from a center other than the center with which it is affiliated pursuant to clause (b). Districts operating an approved alternative system or participating in a state approved pilot test of an alternative financial system may purchase finance system services from any region if the region of affiliation does not offer alternative system support services.

In addition to the foregoing, language to specifically authorize the expansion of the pilot test to an unlimited number of districts could be enacted as follows:

1983 Session Laws, Chapter 314, Article 7, Section 45: The Department of Education shall continue a pilot test of microcomputer-based financial reporting systems during the 1984-1985 school year in ~~no less than~~ all districts requesting to participate in the tests and able to meet hardware, software and support limitations of the test system use during ~~the 1983-1984 school year~~. The alternative reporting system must comply with Minnesota Statutes, sections 121.90 to 121.917.

The school districts selected as pilot sites shall operate parallel reporting systems until such time that the department certifies that the alternative system meets the reporting requirements. The systems to be tested shall include one developed by the Minnesota educational computing consortium and at least one other available system recommended for testing by the ESV computer council, in consultation with the department. The alternative reporting systems operated by school districts selected as pilot sites shall be exempt from the requirements in Minnesota Statutes, section 121.936, subdivision 1, clause (b) (2), for the 1983-1984 1984-1985 school year.

The department shall evaluate the pilot systems. The evaluation shall include recommendations on the feasibility and efficiency of reporting directly to the department, reporting to the department through the regional management information centers, or by other methods. The ESV computer council shall review the evaluation of the pilot systems and report its findings to the house education and appropriations committees and senate education and finance committees by February 15, 1984, January 15, 1985. The report shall include: an analysis of district, state and regional costs associated with operation of the systems; recommendations for maintenance of the systems; alternatives, their costs and recommendations for the provision of support to users; and an analysis of the desirability of limiting the number of alternative systems allowed. The cost of the evaluation shall be paid by the Department of Education.