

Report of the Legislative Service Bureau Relating to
Implementation of the Legislative Computer System and Programs

November 9, 1983

Submitted by Serge H. Garrison, Director,
Legislative Service Bureau

This report is an effort to bring Legislative Council members up-to-date in regard to the computer system approved for implementation by the Legislative Council. This report will dwell primarily on the aspects of the computer system as they affect the Legislative Service Bureau, however it should be remembered that applications used by the House and the Senate also affect the Service Bureau and, therefore, it is necessary to comment upon programs to be used by the House and the Senate. The primary emphasis of this report will be on the time schedule for development of text programs and the secondary emphasis will be on other programs that affect the text processing.

Since the execution of the computer contract between the Legislative Council and Sperry Univac, the Legislative Service Bureau has been actively involved in reviewing and testing the text processing programs specified in the Request For Proposal and the contract as they are given to the Bureau. Specific testing times were established for the various tasks and Sperry Univac also agreed to present proposed programs for review and approval as they were developed. It was determined that testing would be done each Wednesday and at such other times as may be agreed upon.

Service Bureau personnel spent many hours working in good faith with Sperry programmers explaining the existing system, reviewing proposed systems, and testing various programs. Service Bureau personnel have found the Sperry programmers to be well meaning, very hard working, and dedicated. Having worked with the programmers we recognize the very difficult tasks that they have had to accomplish and the many long hours and weekends that they have spent attempting to develop the programs anticipated by the contract. Often we have spent whole afternoons reviewing, testing, and discussing one or two tasks in order that we could understand Sperry's proposal and they could understand how we do things and how such proposals affect the Bureau operation. We appreciate the problems facing the programmers and respect their efforts. If at times we have appeared negative, it is only because programs did not work as we hoped.

As stated in the contract, it has been the intent that Sperry would demonstrate individual program tasks as they are completed and the Service Bureau was to indicate its acceptance or rejection of the individual tasks within two days of completion of them. It was anticipated that all programs would be individually demonstrated prior to November 1, 1983, and commencing November 1 the total programs would be demonstrated using a remote mainframe computer located in Clear Lake, Iowa. However, the contract

provides for the systems test, i.e. testing all programs on installed equipment, thirty business days from the date the site is developed. The site was not completed until November 4 which is a delay of 25 business days, so it appears the systems test would start December 12, 1983. It is the systems test that the Council must respond to.

Because of various problems, all programs were not demonstrated prior to November 1, and there were three Wednesdays when no programs were demonstrated. In total, as of November 4, 45 tasks were demonstrated, 14 were approved as satisfactory, and 31 were listed either as unsatisfactory or we expressed serious reservations about them. The remaining tasks were not demonstrated. Some of those approved were listed as cumbersome or it was agreed that changes should be made. In some cases, tasks were redemonstrated. A separate report relating to the text tasks is being submitted by the text processors detailing accomplishments and problems encountered with text.

As November 1 approached it became obvious that not all tasks would be able to be demonstrated prior to what was to be a preliminary "system" test on a remote system. Since it often took a great deal of time to test unseen individual tasks, the Service Bureau was aware that in order to test the programs that it had not seen, it would have to devote a minimum of three days, including evenings, to test the system. It was the intent of Sperry to demonstrate all tasks on November 1, however, the morning of November 1 the Staff Computer Committee was informed that because of difficulties Sperry would not be performing the tests and the question then arose as to what course of action should be taken.

It was agreed that those tasks which had been completed, most of which had been demonstrated before, would be redemonstrated on November 1 and remaining tasks would have to be demonstrated at a later date, possibly at the final systems test which is to be done on the computer as installed on the state's site. It was necessary to make this decision in order that the computer located in Clear Lake could be moved down to the site and installed on that site. While this installation takes place, the Service Bureau and Senate and House staff would not be able to test or see any programs and it was then anticipated that it would take three to three and one-half weeks to install the system. Therefore, it was essential that the text processors see as many applications as possible. Later Sperry informed the Service Bureau that possibly it could continue testing on November 14.

During the test held on November 1, which it was agreed was not to be considered even a preliminary test, we did find that several of the tasks which we had previously approved were now defective because of some changes which had been made. It is difficult to explain in writing the many problems that have arisen with the

programs. Sperry cannot be faulted for not having worked extremely hard on the programs and Service Bureau and House and Senate personnel who worked closely with the programmers are as disappointed as the programmers when programs do not work as anticipated. The separate report of the text processors is intended to be a specific report listing the status of the various efforts and tasks that have been made and accomplished.

While Sperry management personnel appear optimistic in regard to the development of the programs, I and the text processors do not share that optimism. It should be remembered that a material or minor deficiency is based upon recognized data processing standards within the industry and the data processing applications in use in the Iowa legislative branch of government prior to the execution of the contract according to the terms of the contract. The RFP and the contract also provide that the proposed system must have the capabilities of the present system. It also provides that the proposed system must communicate with the IBM mainframe located in the Comptroller's data processing office.

Comparisons of tasks using "hands on" demonstrations within the offices of the Legislative Service Bureau indicate that much remains to be accomplished before the systems test. It is a simple matter to demonstrate these differences by performing a task on the Sperry system and then performing the same task on the present system. This is basically a side-by-side demonstration and is perhaps the best way to compare the systems to determine if the standards are being met.

CONSIDERATIONS IMPACTING THE IMPLEMENTATION OF THE COMPUTER SYSTEM

A. While compatibility with various brand terminals is not of a prime concern to the Legislative Service Bureau at this time, there is concern that there be compatibility with other terminals when the Rules text processing procedure is implemented. In order for state agencies to communicate with equipment that would be located in the Code editing staff area in order to update the Rules, it is necessary to purchase additional equipment to promote that compatibility. Information provided by Sperry indicates that MAPPER access services could be provided to asynchronous users and would cost \$3,200 for what is known as a JBM cabinet and an additional cost of \$3,000 for four modems. A single JBM cabinet can handle up to 16 ports but for each port there is a cost of \$335. Information provided by Sperry indicates that Sperry specifically supports 18 named terminals and other support is available.

B. With regard to implementing word processing applications using MAPPER, Sperry has indicated that prior to this time there has been no specific training program designed for teaching word processing applications on MAPPER. A proposed course appears to be lengthy and expensive and will accommodate only five persons.

C. Until the total text applications are approved and implemented, it will not be possible to implement programs that are not absolutely necessary but would be useful in bill drafting and publication. For instance, a program which would compile and print all sections amended as the bills are being enrolled would be extremely useful for future publication purposes but also useful for keeping track of conflicts in amendments during a legislative session. Such a program is dependent upon implementing the main text processing programs.

D. In regard to publication we continue to have problems with the typesetter. For instance, we can send a tape of the supplement to the typesetter and hard copy is returned with errors. We then have to correct and change the tape, send it back, receive copy again, and check it again. This is all very time-consuming which is why we hope to eventually be able to produce camera-ready copy on the state level so we can be sure the initial copy is correct and not have to constantly exchange information. This accomplishment is one of the enhancements specified in the RFP and one which it appears may not be possible for the next publication of the Code.

E. It appears that the Spell-Checker function is not part of the final bid of Sperry and this is a tool which would be useful in bill drafting and publication and is part of the RFP.

F. The systems test will be scheduled in December and because the Bureau and House and Senate personnel have not seen many of the programs that are necessary for bill drafting, the test could be very lengthy. At this time of the year the Bureau has very little time to test because it must be completing interim reports and completing bill drafts for the session. The legal counsel offices of the House and Senate also become increasingly busy. As to when these applications could be tested, considering the other workload of the Bureau, is most difficult to ascertain.

OTHER OBSERVATIONS

A. As of November 8, 1983, Sperry has not been able to interface with the CDP mainframe computer. While this is primarily a tool for the Fiscal Bureau, it might well be an application useful to many others.

B. Because of time constraints, it is extremely difficult to schedule training for the various people who will require training. It also appears that there could always be severe time constraints upon existing personnel who must provide administrative functions for the system. For instance, until a systems operator is hired, it will be necessary for a Fiscal Bureau employee to act as the

systems operator and provide a number of other functions which Sperry indicates is necessary.

C. Sperry has questioned whether or not the C-1 computer mainframe provided for in its bid will be sufficient for the number of terminals which is presently anticipated or may be ordered in the near future. In all fairness to Sperry, it should be noted that the RFP specifies 45 terminals and it is believed that the C-1 is sufficient for that. Thus it can be assumed that a bidder would anticipate that within the near future the number of terminals specified would not exceed greatly the original amount listed in the RFP.

D. The UTS-30 terminals which were bid by Sperry will not be available until at least May of 1984. This means that graphics capabilities cannot be provided unless a special terminal is made available which Sperry anticipates doing for the Fiscal Bureau. However, other agencies wishing to have the graphics capability would also have to have a special terminal. In order to provide graphics capabilities on a UTS-30 terminal, it is necessary to order a cartridge which is an additional cost.

E. There is a question in my mind as to whether or not MAPPER is capable of providing the text applications anticipated without modification of MAPPER. A number of the applications demonstrated are cumbersome and will take more time. There is no doubt efficiency will be lost. A result of having to continue programming could be that the funds allocated for programming at a reduced rate could be used up and those programs that have to be modified and changed in the future would have to be provided at the increased cost.

F. In regard to the savings which we anticipated, \$98,000 was estimated to be saved over a two-year period because we would not have to execute a contract for the update of the Code. With the cooperation of the Comptroller's data processing division we have already implemented this procedure and used it in preparing the Supplement. Thus it is now inaccurate for me to say that a new system will provide this savings because we have already implemented it. Savings anticipated because of fewer labor costs could disappear if more labor is required. Savings which would result because of not having to depend upon typesetters could also be affected if the publication enhancements cannot be implemented within the near future.

On Tuesday, November 8, 1983 Sperry gave the attached document to the Staff Computer Committee. It lists the anticipated schedule for completion of the project. It is a very ambitious and optimistic schedule. It does require some interpretation however, which Sperry verbally provided to us. Where it notes in item V that hardcopy testing of the various printers has been accomplished

this means to Sperry's satisfaction but we have never seen this test. I do understand that the House Journal Room personnel may have seen a demonstration for compugraphics.

In regard to Item II and the list of functions on the back pages where Sperry indicates that we "signed off" on the projects they do not mean we approved all of them; they mean we reviewed them and either approved, approved with comments or reservations, or disapproved. We do not agree with Sperry's numbers but that is something we have to compare with Sperry. We have in a number of instances not said we either approved or disapproved a task, but provided comments on the sheets given us which to us indicates that modifications have to be made. We hope Sperry is not interpreting this action as an approval.

11/9/83
Serge Memo/14

CURRENT STATE OF STATE OF IOWA IMPLEMENTATION

I. SYSTEM INSTALLATION

- . Final Room Inspection 11/7
- . Delivery of system 11/7
- . RFU of development system hardware and software 11/14
- . RFU of acceptance system 12/2
- . System acceptance 12/19

II. Text

- . Unit sign-offs 29 out of 38; 9 remaining sign-offs have all been demonstrated but need further work.
- . Document outstanding text problems 11/9
- . Clean-up outstanding text problems 11/30
- . User documentation 11/30
- . Preliminary system test 12/1 & 12/2
- . Refining of text system 12/7
- . Acceptance testing complete 12/19

III. Computer Operations

- . Gary Hely starting 11/14 for 1 month operate system for Sperry.
- . OJT at \$38 per hour.

IV. UTS/3270 Terminal Compatibility

- . Continuing
- . Target completion date 12/2

V. Hardcopy Testing

- . Successfully tested to:
IBM 6640 ink jet printers
Xerox 2700 printers
IBM Mag Card II
- . Completion date of 12/9 for:
Compugraphics
Shaffstall

VI. Data Conversion

- . Document Data Inconsistencies 11/9
- . Implement Required Changes 11/16
- . Load Converted Data 12/9

VII. Indexing

- . Implementation plan signed off. Completion date of 1/23.

VIII. Fiscal

- . Implementation plan for defined items complete.

IX. Office Automation

- . Implementation plan ready for review.

X. Comments

- . Need privileged vendor status with CDP 3270 compatibility testing.
- . Concentration on permanent staffing and 1100 education.
- . Completion of following classes:
 - 1100 Site Support
 - 1100 System Generation
 - 1100 MAPPER Coordination
- . Incomplete and erroneous data tapes from CDP.
- . Preferred mainframe amending definition complete.
- . 4038.5 hours expended thru 10/30/83.

LIST OF WHAT HAS BEEN ACCOMPLISHED

. Text functions signed off:

Save Command
Get External
Move External
Display User Index (LIB)
Clear and Get
Delete Document From User Library
Replace Command
Clear
Save Supplements
Archive Documents
Get Supplement
Flag a Documents as Private, Fiscal Note Required or add
 comments
Track Documents
Erase Command
Move Command
Renumber Command
Renumber Bill Command
Search Command
Last Line Used
Upper/Lower Case
Change Command
Insert
Repeat Key
Vertical Scrolling
Alpha Lock
Receive Mainframe Message
First Line Cursor Placement
Audible Beeping
Communication in Upper/Lower Case

Functions Demonstrated, But Need Further Development

Edit Insert
New Language
Change Multiple
Collate
Get Iowa Code
Amending
Display (All Options)
Format
Reformat for Print

DATA FILES CONVERTED

- . All text terminal operator's libraries.
 Proper line numbers not supplied by CDP.
- . Archived Documents
- . Iowa Code
- . Supplemental Code

M E M O R A N D U M

TO: Serge Garrison, Director, Legislative Service Bureau
Dennis Prouty, Director, Legislative Fiscal Bureau
Joe O'Hern, Chief Clerk of the House
Marie Thayer, Secretary of the Senate

FROM: Legislative Text Processors - Cynde Clingan, Sarah Craig,
Chris Fisher, Peg Kephart, Robbi Royce, Jean Wyer

DATE: November 7, 1983

RE: Status of Text Processing Portion of Computer Project

This report represents our evaluation as of this date of the text system Sperry Corporation has offered for the legislature to use in place of our current text editing and processing system. We feel that it is an unbiased report, based upon a great deal of time spent using Sperry's system and testing every offered application as soon as it was made available to us. Those of us who have not had as many hours of "hands on" time have done double duty on our present system in order to free time for the rest of us to devote to Sperry testing.

At the outset, we would like to reiterate our often repeated statement of admiration and respect for the Sperry programmers with whom we have worked so closely over the last months. The task they were given was monumental and has required them to work many nights and weekends, away from their homes and families. They have been courteous, cooperative and have tried very hard to develop their system in a way that would meet our requirements. We could not have asked for a better group of people with whom to work.

Unfortunately, in spite of the best efforts of all of these very good people, what Sperry has been able to demonstrate as of this date is not a tool which we could use to do the jobs for which we are paid.

We have attached to this report a list of the functionalities which we now have and which were all requirements to be met by any responding vendor. These are broken down into the following categories: (1) Demonstrated Satisfactorily by Sperry, (2) Demonstrated by Sperry but Unacceptable, and (3) Never Demonstrated by Sperry. Those tasks we have rated "unacceptable" are so designated because compared to our present system they represent a significant (50-60%) loss of productivity because of the number of extra keystrokes required and/or the time lost simply waiting for a response. We have had to include in the "never demonstrated" list those applications which were attempted by Sperry for the first time at the end of last week and which did not work at all. Unfortunately, those tasks in the last two categories are really the heart of our system, and the Sperry solution simply cannot replace what we currently accomplish with a very small staff.

If we cannot retrieve Iowa Code sections in an instantly usable format, if we do not have an editing tool which allows us to open up space in those Code sections with one keystroke and no mainframe interaction, if we cannot add strike and underscore to those Code sections and then close text with ease and without waiting for system response every few lines, if we cannot format any size document to look like anything we specify in less than 60 seconds, if we cannot collate amendments, if we cannot amend bills on the mainframe with a minimum of operator intervention -- if we cannot perform all of these tasks as quickly and productively as we do now, the functioning of the legislature will be substantially affected. Either legislators will simply not get the kind of service they are used to from us, or the text processing staff size will have to be at least doubled.

As an experiment, we formatted an 87 page bill from last session on both systems simultaneously; on our present system, the task required 30 seconds, on the Sperry system - 7 minutes. We also pulled up a section of a bill from last year to strike the words "local option" and insert the word "property". On our system this requires 8 seconds and no mainframe interaction beyond the initial display of the text. Sperry's system required 10 minutes to perform this simple change and the result was still not correct. We can and will provide more examples in the same vein if you like. We consider this a totally unacceptable loss of productivity. We have not seen a demonstration of Sperry communication with a single peripheral device, whether it be the 6640 printers, the Shaffstall interface, or the MagCard. If communicating with the peripherals turns out to be as difficult as the other tasks Sperry has attempted, we will be unable to provide hard copy of any document.

At the outset of this project, it was agreed by all concerned that there were three major goals to be accomplished: 1) provide a text processing system which would allow us to do everything we now do at least as efficiently as we now do it, as well as offering several enhancements to our present system; 2) provide the fiscal bureau with the ability to retrieve and manipulate data from CDP as well as their own data base; and 3) provide the legislature with office automation capabilities.

The text processing system offered by Sperry is totally inadequate to our present needs, without even addressing any future enhancements. The fiscal bureau staff will have to provide an evaluation of any applications Sperry has written for them, but as of this date, Sperry has still not been certified as being able to communicate with CDP. As for office automation, under the ESF functions that we have worked with we have been unable to accomplish such simple tasks as writing a letter or printing off a calendar or a phone message log. Those who used Sperry office automation during the last session, used a product called Sperrylink, which is no longer a part of the package we have purchased. It, like Spell-checker, was dropped from the final bid by Sperry.

In conclusion, we feel very strongly that in spite of the best efforts of some very dedicated people on Sperry's staff and the hard work of our own people, the goals outlined above have not been reached and, at least as far as text processing is concerned, are not going to be reached by Sperry in the foreseeable future. In short, we cannot do our jobs using the system that Sperry has demonstrated.



[Faint, mirrored text from the reverse side of the page, likely bleed-through from a list of commands or instructions.]

- Clear
- Move
- Get
- Change
- Insert
- Delete
- Vertical
- Right
- Find
- Approx
- Display
- Stop
- Clear
- Get
- Track
- Search
- Print
- Copy
- Quit
- Help
- Abort
- End

TEST RESULTS AND PROGRESS.

1. Commands demonstrated satisfactorily:

Erase command
Last line used display
Upper/lower case
Repeat key function
Receive mainframe message
Communication in upper/lower case
Audible beeping system
Delete
Storage of user documents
Clear
Replace command
Maintain document in unformatted mode
Special quote designation
Display by line number

2. The following have been demonstrated but are unacceptable:

Clear and get
Archive document
Move command
Move external
Get External
Renumber command
Renumber section
Change command
Insert command
Search command
Delete with a few keystrokes
Vertical scrolling
Alpha Lock function
First line cursor placement
Approved keyboard
Display user index
Flag - mark an existing document as private, fiscal note
required, or add comments
Clear - pulling in a format at same time
Get Supplement
Storage of Supplement
Track - tracking system
Record document
Edit and insert command
Display without line number
Code Retrieval Command
Specific display command
One standard profile for unformatted documents
Hyphenation at operator's discretion
Operator placed carriage returns
Amend via mainframe
Format document with formatting commands intact

3. The following bill drafting tasks or tasks which affect bill drafting have never been demonstrated:

- Strike-through and underscore and manipulation of same for Code publication
- Flexibility in formatting
- Document protection
- Mass Correction Command
- Opening and closing of text for insertion
- Maintain documents in queue at printer
- Minimal loss of text entry due to mainframe malfunction
- Left-hand line numbers on screen and hard copy
- Incorporation of material with line numbers staying constant
- Mainframe compatibility with other office systems
- Communication linkup to other legislative offices with security
- Produce printed copy without line numbers and justified margins
- Produce line-for-line printed copy identical to introduced documents
- Retention of one line number for all inserted text during amending
- Collating
- Checklist of internal references during amendment process
- Pulling of Code material with printer codes and source notes intact
- Move Code material into designated location
- Print queue controlled by terminal commands
- Three second response time
- Immediate assistance in case of hardware failure
- Spell Checker
- Security system

In addition to the above items, we have not yet been given the ability to sit down at a terminal and enter a new bill draft into the system. We can only update existing information.

11/7/83
Demo chart/14

POLICY RELATING TO MAILING AND DISTRIBUTING
LEGISLATIVE SERVICE BUREAU DOCUMENTS

In order to reduce the expenditure of funds, the Legislative Service Bureau will reduce some of its services which it has provided to the public and others. The reduction of these services will affect those persons and organizations that normally have received documents from the Service Bureau. Effective immediately the following policies will be in effect:

1. Multiple copies of documents will not be mailed to individual members of the same organization. Some multiple copies of short documents will be mailed if they can be enclosed in one envelope without increasing postage costs. Organizations in many cases will have to bear the cost of making their own copies and will have the responsibility to see that their appropriate members receive the documents.

2. Minutes of meetings will not be mailed to Des Moines area organizations. Such organizations can pick up minutes at the Legislative Service Bureau.

3. Copies of documents which can be placed in the local mail will continue to be mailed but multiple copies addressed to individuals will not be mailed to state agencies. The department will have the responsibility to see that they are distributed to the appropriate persons. The number of copies may be reduced.

4. The Interim Calendar will continue to be mailed to appropriate persons, but the number of copies may be reduced.

5. Notices of meetings will be mailed to appropriate persons, but the number of copies may be reduced.

6. It is suggested that recipients of the Interim Calendar and Notices of Meetings call the Legislative Service Bureau to insure that meetings will be held as originally scheduled and to check if additional meetings have been scheduled.

7. Every effort will be made to insure that the public is made aware of meetings and that documents will be available. However, the conveniences that have been provided in the past will be curtailed.

8. Services to legislators will be maintained. However, it is requested that they use good judgment when requesting multiple copies of documents which would entail substantial copy and mailing costs.

R E P O R T
OF THE SERVICE COMMITTEE
OF THE LEGISLATIVE COUNCIL

November 9, 1983

The Service Committee met on November 9, 1983 and makes the following recommendations to the Legislative Council:

1. That Reginald Harrington be employed as a Fiscal Analyst in the Legislative Fiscal Bureau at Pay Grade 24 with a starting salary of \$18,309.
2. That Janet Wilson be employed as a Legal Counsel I in the Legislative Service Bureau to assist in Code and Session Law publication with a starting salary of \$23,878.40 that is within the range of Pay Grade 29.
3. That Elliott G. Smith be employed as a Research Analyst I in the Legislative Service Bureau at Pay Grade 24 with a starting salary of \$17,929.60.

Respectfully submitted,

SENATOR C. W. HUTCHINS
Chairperson