BASIC

SMALL COMPUTER INSTALLATIONS

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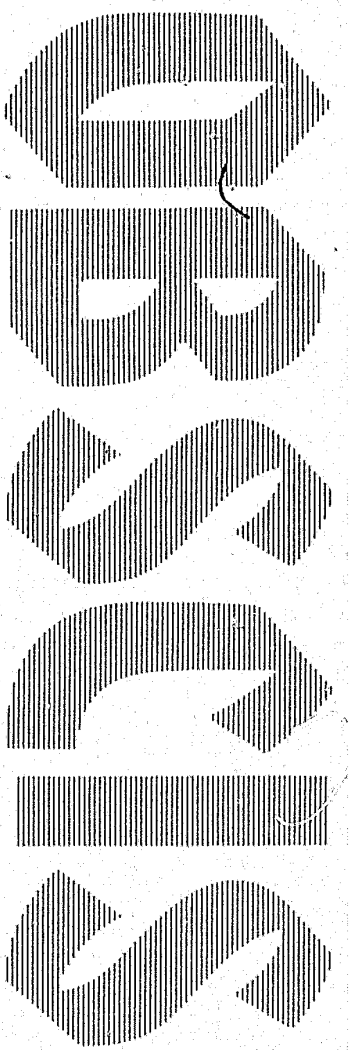


The Basic OBSCIS software package was developed by the SGI National Consortium for Justice Information and Statistics under Grant No. 78-SS-AX-0029 awarded to SEARCH Group, Inc., by the Systems Development Division, National Criminal Justice Information and Statistics Service, Law Enforcement Assistance Administration, U.S. Department of Justice.

INTRODUCTION

Basic OBSCIS is a fully documented computer software package. The package, available to state departments of correction without charge, has been designed to meet the fundamental need of corrections administrators for accurate and timely information about offender admissions and movements. It also can satisfy national reporting needs. Basic OBSCIS is a set of COBOL computer programs that can be installed on a wide variety of computer systems from large, shared mainframe equipment to dedicated minicomputer systems.

This booklet discusses the application of the software to a minicomputer environment. Much of the information is based on the experience gained from installing Basic OBSCIS on an IBM System/34 in Kansas and on a Data General Nova 3/D at SGI.

As described in the Administrator's Guide, Volume 1 in this series, the Basic OBSCIS Software Package was designed to operate on any computer hardware system meeting the following minimum specifications:

1. A computer capable of supporting ANS COBOL, Level 2.

2. Sufficient memory to support the operating system and execute COBOL programs requiring up to 48K bytes. (Current maximum program size is under 32K but expansion capabilities should be built in.)

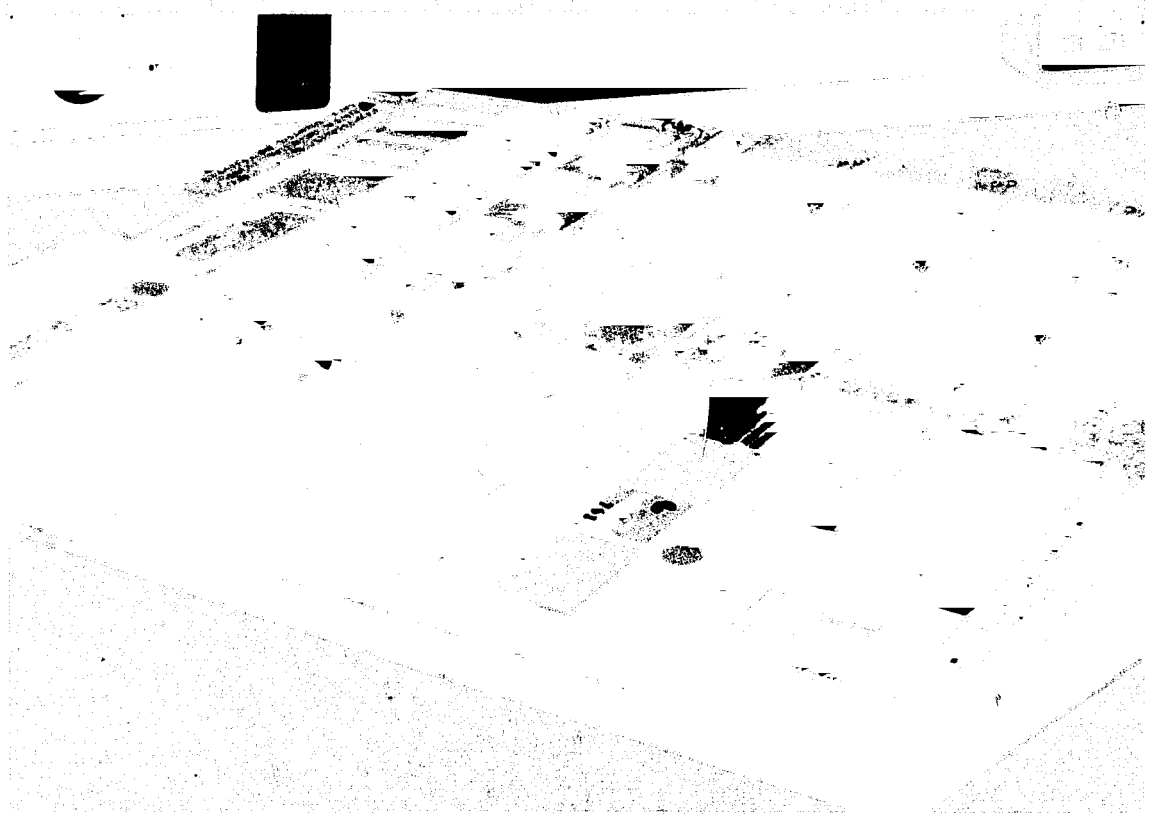
3. Facilities for preparing and inputting 80-character records (card images). For large scale machines, this will probably be a key-punch and card reader, or key-to-tape (or disk) unit. For a minicomputer, input will usually be via a CRT or hard copy terminal.

4. Disk storage capacity of approximately 10 megabytes (10 million characters) plus an additional ½ megabyte for each 100 inmates over 2,000. The system should have at least two disk drives, with a 3 megabyte minimum removable disk for use in backup of files and programs. (Magnetic tape could also be used for backup.)
5. A mechanism for producing output on an industry compatible medium is required for National Prisoner Statistics (NPS) and Uniform Parole Reports (UPR) output. This output can be magnetic tape (which is recommended), punched cards, or by making arrangements to copy the annually produced files from the system's removable disk to magnetic tape.
6. A 132-character-per-line printer with a minimum speed of 200 lines per minute.

CONFIGURATIONS USING MINICOMPUTERS

Three fundamental minicomputer configurations are possible utilizing the Basic OBSCIS Software Package:

- **Dedicated Minicomputer System with Local Input Terminals;**
- **Dedicated Minicomputer System with Remote Input Terminals;**
- **Distributed System with Minicomputers at Individual Facilities.**



Dedicated Minicomputer System with Local Input Terminals

Recent advances in computer technology allow this configuration (see Figure 1) to handle the processing for almost any inmate population size provided that the system has access to sufficient disk storage space, an adequate number of data entry terminals, and high-speed line printers. Operations in this environment would be similar to using a large mainframe computer. Turnaround, however, should be faster than in the shared environment. User inputs would be received at the central site on an input form and the data would be keyed directly into the system.

The primary advantages of this configuration over the large, shared computer system usually found in most state central data processing installations are the operational flexibility and the opportunity to enhance the basic system relatively inexpensively. Most large, shared systems charge by the transaction; thus, costs go up as applications are added. In the dedicated minicomputer environment, the cost of supporting new applications is minimal until the saturation point of the equipment is reached.

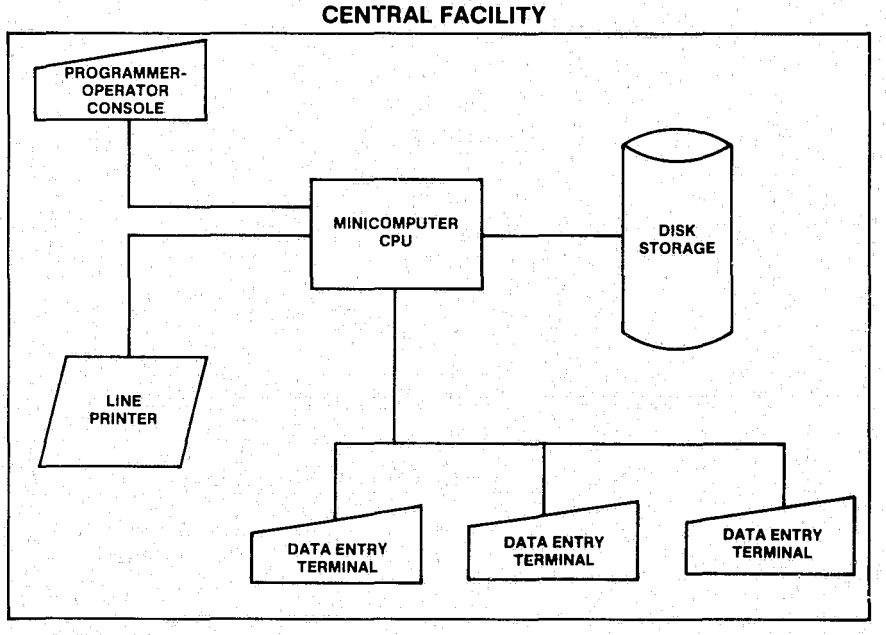


Figure 1:
DEDICATED MINICOMPUTER SYSTEM WITH LOCAL INPUT TERMINALS

Dedicated Minicomputer System with Remote Input Terminals

In the hardware configuration of Figure 2, a dedicated minicomputer system supports multiple remote terminals via communications interface equipment and telephone lines. This arrangement is the next logical step from the preceding hardware configuration. Instead of in-house data entry terminals, low-speed, hard-copy terminals could be used at each remote site to enter data and receive printed reports. The Kansas installation of Basic OBSCIS uses this equipment layout.

In this design the potential for interchange of stored information between the institutions and the computer is greatly increased. By appropriately scheduling the cutoff time for daily inputs and final updating of the files that reflect each day's activities, daily bed counts and movement summaries (including cell assignment changes) can be generated and printed at each institution. Other longer or system-wide reports can be printed at the computer site on the faster line printer and distributed as required.

If CRT's with attached printers were substituted for the hard-copy terminals, system enhancements could permit on-line inquiry, data entry, and updating.

The Basic OBSCIS software installed on this configuration requires no changes or additions beyond those normal to the installation tasks. Minor modifications to the suggested system flow would be necessary to separate the editing functions from the file updating functions. Also, prior to running the update programs, the updated files incorporating inputs from each terminal would be combined.

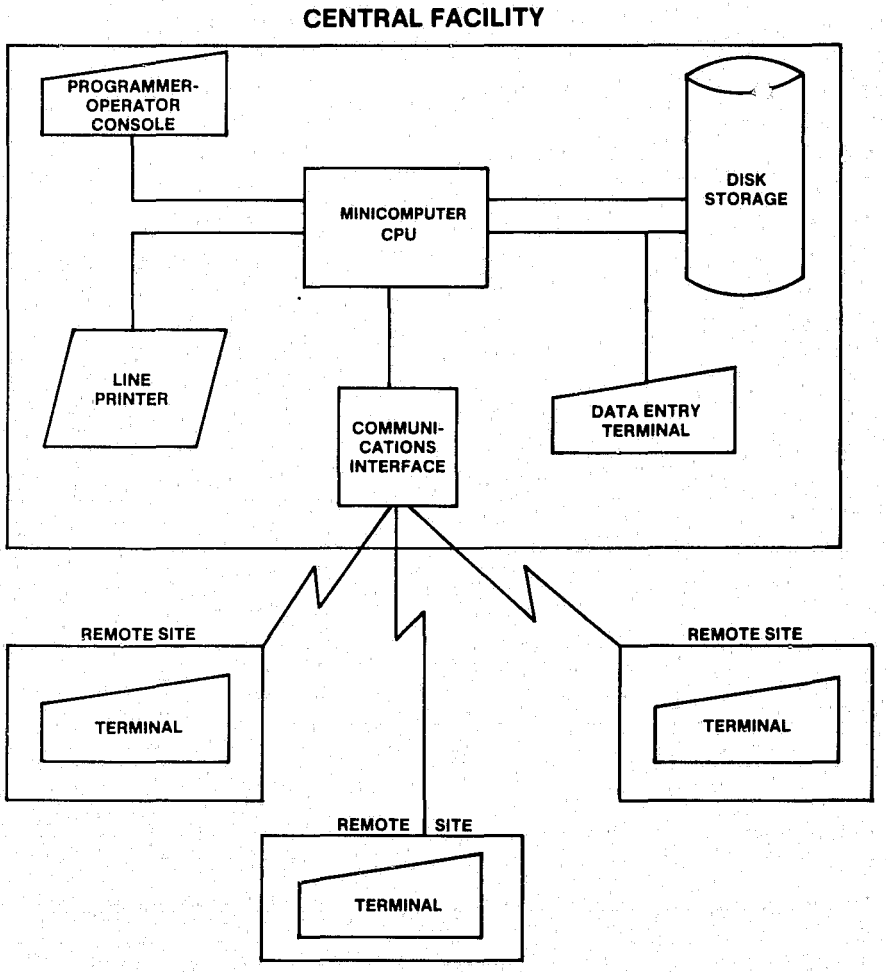


Figure 2:
DEDICATED MINICOMPUTER SYSTEM WITH REMOTE INPUT TERMINALS

Distributed System with Minicomputers at Individual Facilities

Two other minicomputer configurations are shown in Figures 3 and 4. Each requires more extensive changes and/or additions to the Basic OBSCIS Software Package than those previously mentioned. Such modifications are necessitated by the communications requirements and the need to transfer data between machines. However, each minicomputer could make use of Basic OBSCIS with only minor modifications if appropriate programs or modules were added to handle the data transfer functions.

In either configuration, the use of on-site minicomputers would allow the addition of other capabilities specific to the institution's needs. Such capabilities could include accounting and bookkeeping systems as well as other OBSCIS applications.

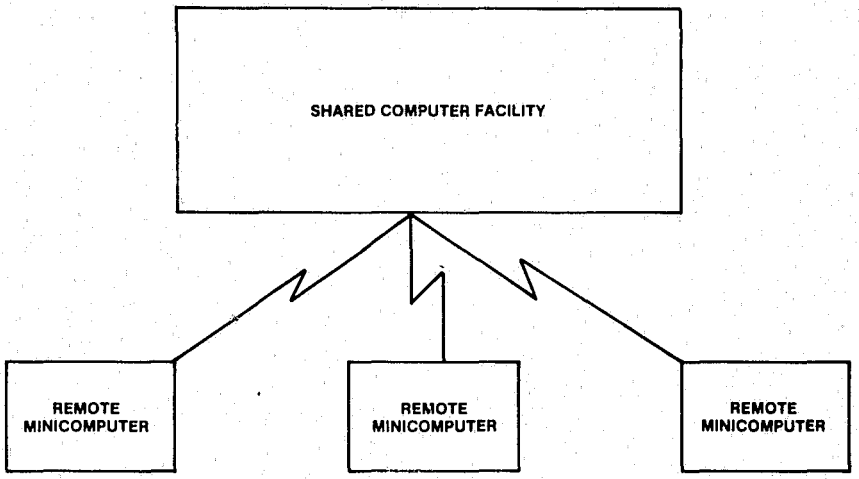


Figure 3:
DISTRIBUTED SYSTEM WITH CENTRAL MAINFRAME AND REMOTE MINICOMPUTERS

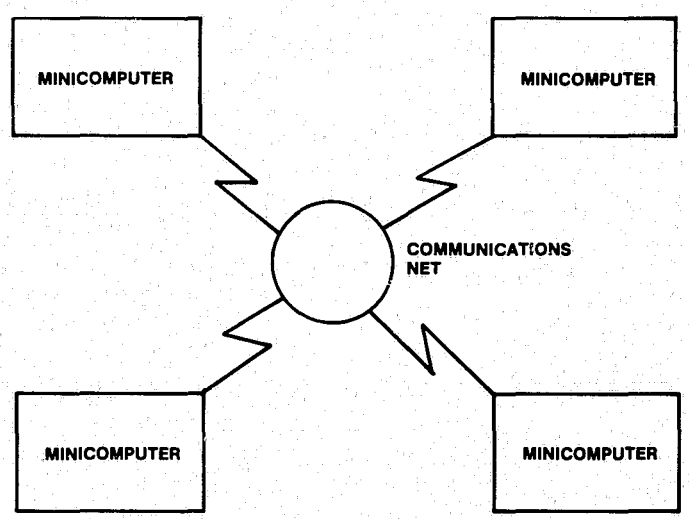


Figure 4:
DISTRIBUTED SYSTEM USING MINICOMPUTERS AT INDIVIDUAL FACILITIES

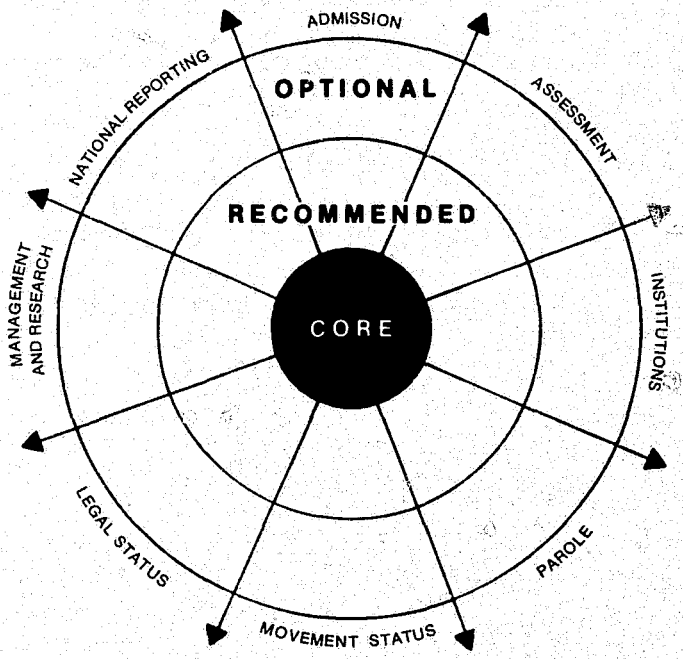
SUMMARY

The Basic OBSCIS Software Package is a flexible, easily installed COBOL software system that meets the minimum information needs of departments of correction. Basic OBSCIS is easily expandable into other areas of specific interest to each user. As proof, witness the utilization of the software in Iowa on an IBM System 370, in Kansas on an IBM System 34, and on a Data General Nova 3/D at SGI. In each instance, several expansions have been made to the system, customizing the basic software so that it is responsive to the unique goals of each location without losing the integrity of design.

The adaptability of the software to minicomputer equipment has opened new vistas to departments of correction. Now, any department can afford minicomputer hardware and can install an inmate information system based on the proven capabilities of Basic OBSCIS.

Thus far the most popular approach has been the dedicated minicomputer with remote terminals as exhibited in Figure 2. This use of minicomputer hardware to support Basic OBSCIS applications has proven to be both cost-effective and capable of expansion.

THE OBSCIS MODEL



Information and technical assistance regarding installation of Basic OBSCIS in any state is available from SEARCH Group, Inc. Write:

OBSCIS Program
1620 - 35th Avenue
Sacramento, CA 95822
(916) 392-2550

OBSCIS PUBLICATIONS

Volume 1: *THE OBSCIS APPROACH*

Volume 2: *OBSCIS APPLICATION GUIDE*

Volume 3: *OBSCIS DATA DICTIONARY*

Volume 4: *OBSCIS IMPLEMENTATION PLAN*

Volume 5: *LAUNCHING OBSCIS: A COMPOSITE EXAMPLE*

Volume 6: *THE OBSCIS EXPERIENCE: A PHASE II SUMMARY*

Volume 7: *OBSCIS DATA DICTIONARY (Revised)*

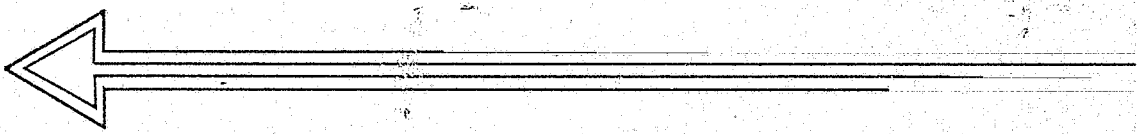
BASIC OBSCIS SOFTWARE PACKAGE DOCUMENTATION
(Available to state departments of corrections in limited quantity.)

THE OBSCIS COMPENDIUM: PROCEEDINGS FROM THE OBSCIS SEMINAR

BASIC OBSCIS 1: ADMINISTRATOR'S GUIDE

BASIC OBSCIS 2: IMPLEMENTATION STRATEGY

BASIC OBSCIS 3: SMALL COMPUTER INSTALLATIONS



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