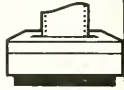


# DATA SERVICE IN A COMPUTER CENTER

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## Profile

Rutgers, the State University of New Jersey, which was chartered as Queen's College in 1766, and was designated a state university in 1945, is a large university offering a variety of learning environments. Today the University has over 47,000 students enrolled in six separate colleges on the four campuses in New Brunswick, and the campuses at Newark and Camden each of which is over 50 miles away from the New Brunswick site. There are 24 instructional divisions and about 16 affiliated research units.

Facilities and support for academic computing are managed by the Center for Computer and Information Services (CCIS) which provides services to students and faculty who use computing for instruction and research purposes. Services include non-credit education courses, a reference center, a newsletter, maintenance of terminals and remote job entry facilities, equipment loaned to classrooms, program packages support, data archives and data base management, system programming, documentation, accounting and billing.

In 1971, the Princeton-Rutgers Census Data Project came into being through the combined efforts and finances of both universities. Since there had already existed a tradition of cooperation between the two universities on special data collections, they decided to share the purchase of 1980 Census data jointly. The project was organized with the support of the Center for Research Libraries and financial contributions from the libraries of Princeton and

Rutgers as well as interested departments on both campuses. Through START-1 program, the Data Use and Access Laboratory (DUALabs), a non-profit organization, purchased the 1970 Census tapes as they became available from the Census Bureau, processed the tapes, condensed the data, and sold copies at a reduced cost to its members. Along with data modifications, several computer programs, known as the MOD series, were developed to access the data and were installed at Rutgers and Princeton Universities. All the tapes were stored at Princeton, and Rutgers copied only those pertinent to its researchers. In order to administer the project, both universities were responsible for publicity, training, and physical tape maintenance.

The project became self-sustaining by charging outside organizations for programming fees and computer cost which then covered the purchases of new tapes. The project has continued to promote collaborative efforts of cooperation and support between the two universities.

## ICPSR and ROPER Memberships

In 1966, a member of the Political Science department requested membership in ICPSR. A few years later, membership in ROPER was established by Political Science department and then transferred to Sociology. As the membership in these organizations became known, an increasing number of researchers were discovering that the data produced by national archives have intrinsic research and academic value. As interest in these memberships increased, it became apparent that the individual

departments could not handle the workload. Since the Princeton-Rutgers Census Data Project had been functioning successfully, the CCIS decided to centralize other data bases in the same manner. The library assumed the operational control of transferring all the relevant information and materials from the individual departments and of developing administrative and ordering procedures to facilitate the acquisition of data.

#### Data Base Advisory Committee (DBAC)

As to the administration of the ROPER and ICPSR memberships, the CCIS favored the creation of the Data Base Advisory Committee to insure adequate communication between the CCIS, the libraries, and the departments, to determine University policy concerning future data acquisitions and to select official representation to the ICPSR and ROPER organizations. The Committee, established by the Director of the CCIS, consisted of representatives from the CCIS, the Library and the political and social science departments on the New Brunswick campus. After the first meeting, it was expanded to include representatives from the Camden and Newark campuses, also. When a discussion of the budget for the ROPER membership led to a joint membership by the Rutgers and Princeton Libraries, a representative from Princeton joined the committee. Although the committee is limited to a maximum of ten members, guests are invited and welcome. This committee, which convenes one or twice a year, discusses allocation of available resources in the departments, decides who shall represent Rutgers at the ICPSR Conference, and awards any scholarship to ICPSR science programs that become available. Communications by mail and phone are conducted continually with committee members on relevant data matters as the need arises.

#### The New Jersey State Data Center

In anticipation of the large amounts of data produced by the 1980 decennial

census, the U.S. Bureau of the Census established a State Data Center Program throughout the country to improve access to and use of census data products. Rutgers University, as a primary participant of the New Jersey State Data Center (NJSDC), documents, distributes, and publicizes these materials. The CCIS has also made available the Census Software Package (CENSPAC), which is an all purpose statistical and retrieval program created by U.S. Bureau of Census to be utilized with the Census data.

#### Funding

The data activities fall within the Applications Group of the Center for Computer and Information Services which provides the facilities and the support services for academic (instructional and research) computer users. No salary lines are designated specifically for the data archives. Our programmers are responsible for computer expertise on our software and hardware for all our computer systems.

Travel requests are considered on an individual basis depending upon the overall requests for travel within the budget limitations. This fiscal year, I felt very fortunate to attend the State Data Center conference, the Association of Public Data Users, and this meeting of the International Association for Social Science Information Service and Technology. But our staff participation in such events varies from year to year.

The Rutgers membership in the Inter-University Consortium for Political and Social Research and the Rutgers-Princeton joint membership in the Roper Center are financed through the library budget. If some departments request the purchase of data outside of these memberships, the computer center coordinates the search for funding it.

Overhead expenses for office space, secretarial staff, mail, postage, telephone, etc., are not being considered here because these were already in existence when data archiving activity

came into being. The cost and maintenance of the computer equipment and cost of data processing come out of our current operating budget.

Although most of the computing with the machine-readable data is used on our IBM mainframe, some is also utilized on the VAX 11/780, which has SPSS and SCSS, and the DEC 2060 which stores a CITIBASE data file. The various departments are allotted a specific dollar amount for computing time which is based on previous year's usage and future estimates of need.

### Staffing

At the time of the implementation of the Rutgers-Princeton Census Data Project, a half-time programmer analyst line was created to carry it out. When all the data activities were centralized at the computer center, the responsibilities were expanded and half-time of another programmer position was included. Unfortunately, this past year, because of many changes in personnel and the addition of a new computer, we lost ground in this area. Now less than one full-time line, shared among three people, is devoted to machine-readable data file activities. And it is not enough. The first nine months of this academic year about 250 consultations were recorded or two or three requests on an average daily basis. This figure does not include quick references in the libraries or computer-related problems which may go to the statistician or Aid Station. (There are Aid Stations on each of the campuses which are staffed by students and the computer center staff to aid in debugging all user problems.)

### Sources of Data

During this academic year we have serviced more than 23 different departments on campus. Their data requests have referred to many different studies in many different fields. Requests for our census service are just as likely to come from outside the University, particularly non-profit county and

state agencies as from within the University. The level of sophistication in handling MRDF's ranges from zilch to familiarity with statistical packages on the computer. All manner of problems come to the CCIS Aid Stations, the statistical consultants, and our staff during any given day. In general, the procedure in handling inquiries is fairly routine. First, we check our Rutgers University Guide to Machine-Readable Data Files to see if the file requested is already on campus. If not, the catalogs of ICPSR, the Roper Center, and the Bureau of the Census are searched for the particular file or subject requested. Data from the first two are easily obtained because of the memberships we maintain with these groups. The census inquiries require a different approach. Requestors are directed first to the printed reports. If the information is available only on tape, the researcher is assisted in ascertaining what tape contains the needed data, what census geographic area will most suit the needs of the project, and which program should be utilized. If the data needed is from a source which requires a cash outlay, the staff assists the researchers in finding funding, if at all possible.

It is difficult to determine which files are heavily used. The number of tape mounts does not give an accurate picture of how frequently the data is accessed. Most users, after accessing the tape once or twice, create a subfile on their own and continue their analytic studies on the smaller file. The sophisticated users know how to find out the tape information without checking with us. At the present time, the most frequently used studies appear to be the STF 3A tape from the 1980 Census of Population and Housing, the NORC General Social Surveys, the American National Election Studies from Michigan, and the National Longitudinal Studies from Ohio State.



## Dissemination of Information

*Training/Workshops/Seminars.* CCIS is always looking for ways to reach more Rutgers users. In the beginning of each semester, two session seminars are conducted on familiarizing the researchers with the content of 1980 Census of Population and Housing and other Census products. Another class is held on the general Data Archives to describe the types of data available for research and study purposes. Special seminars or workshops are conducted at the request of individual units within the university and are tailored to their particular interests and needs. The close association with the reference librarians is reflected in a special seminar for the Reference Special Interest Group on the resources at the CCIS with special emphasis on the 1980 Census.

*Publications/Articles/Documents.* Articles on data-related information appear regularly in the CCIS bi-monthly Newsletter, but CCIS also publishes a number of Technical Documents pertaining to machine-readable data files and the computer programs available to access them. Our publications are all geared towards making data use easier for the University community. As an example of this type of publication, information was extracted from the Master Area Reference File for the 1980 Census of Population and Housing data and sent to the reference librarians in all the libraries on all the Rutgers campuses. This computer output included not only the census geographic codes and corresponding area names, but also included an index by countries, an explanation of the symbolic codes and total counts for population, housing, and families. Complementing this will be our output, probably on microfiche, on county and MCD by zip code for distribution to the libraries. Finally, our most important publication is the previously mentioned Rutgers University Guide to Machine-Readable Data Files, an index of all machine-readable data files on campus.

*Consultation Services.* For guidance and assistance in using any of the machine-readable data, the CCIS offers a consultation service, free-of-charge, to direct users of the data, to help users select the computer program best suited for the user's need, to provide necessary program and technical documentation, and to assist in analyzing computer error messages should they occur.

*Computer Reference Center.* Under the auspices of the CCIS is the Computer Reference Center (CRC), a library of computer-related materials. All the codebooks, manuals, and reference books are located in the Data Archive Corner to facilitate accessibility to the widest possible range of users. These codebooks themselves can be useful tools in data analysis, sometimes eliminating the need to access the files by computer. In addition, catalogs of data holdings of several institutions which collect and disseminate data are available as well as computer-related periodicals. An information specialist who maintains and updates these materials assists users in finding the information they need.

## Future Developments

Our future plans center on professional development for the staff, improvement of our excellent Census service, and expansion of the contract programming activity. In addition to in-house training workshops, staff are encouraged whenever possible to attend conferences and workshops which enhance their professional skills. It is hoped that more money can be made available for such attendance in the future. Along with attendance at these functions, staff are also urged to participate in the related organizations which sponsor these meetings, such as APDU or IASSIST. These organizations do invaluable work in fostering increased awareness of MRDF's both on-campus and in the wider academic world. Such participation

- continued on page 22