

Computer Planning Board  
Educational Subcommittee  
Implementation Plan

**Electronic Studio Plan**  
for  
**Social Sciences**

Spring, 1990

January 16,1990

To: Dean Pomerantz  
From: J. Alford and R. Stein  
Re: Divisional Plan, Social Sciences

## I. Introduction

The primary mission of the Social Science Computing Lab is to support undergraduate and graduate teaching. To this end, the proposal outlined below addresses a number of problems with the current computing environment in the Social Sciences. The proposed plan calls for networking SSCL, upgrading current equipment, and the acquisition and development of new software. Implementation of these specific changes will enable SSCL to provide students full access to word processing; statistical analysis, graphics, simulations, data collection and database searching in a single facility. Currently, SSCL provides access to only some of these components and only on a limited basis. At present SSCL has nine Macintosh SEs each with a 20 MB hard disk, two Macintosh IIcx machines, two IBM PS2 model 70 machines, and four IBM xt clones. This assortment and configuration of equipment does not adequately meet our division's needs. Hard disks are continually overloaded, and subject to repeated viruses, causing significant down time on the equipment. Current and planned software usage requires larger disk space than is currently available on individual machines. The specific needs of the lab include:

1. Expansion and upgrading of equipment
2. Acquisition of software
3. Networking SSCL
4. Personnel to staff SSCL and support network

### Specific requirements

#### a. Expansion and upgrading of equipment

Based on current and projected course enrollments in the Social Sciences and the demand this will generate for lab usage, we estimate a need for 25 Macintosh IIcx machines and 10 IBM PS2 model 70 machines, each with 60 M disk drives. The nine SE Macintoshes and 4 IBM xt clones will be phased out as this new equipment is brought on line. Auxiliary equipment to support these computers include two laser printers, one graphic plotter, one optical c character recognition and graphic scanner, one CD rom driver and associated software. Current equipment is inadequate for many of the software packages we currently use and will clearly be obsolete for the next generation of software. Additional equipment will be needed to support the networkin of SSCL (see section below). This will include: one IBM PS2 model 70 with 120 MG disk; two 330 mg hard disks, tape backup unit; monochrome monitor, ethernet board, Compaq 386 25 mhz; Novell NL 10 board and 3 corn 3c606 Etherlink plus.

a. (Continued)  
The upper enrollment for tutorials in courses utilizing SSCL is 5 students. Based on current course offerings in the Social Sciences we estimate that 25 Macintosh IIs machines will be adequate to support instructional needs in the Division, but not in the space currently available (see discussion of space below).

b. Networking

The installation of a network in SSCL is central to implementing a fully integrated instructional electronic studio for the Social Sciences. The network would allow individual faculty to install class specific instructional software on a separate fileserver which could be accessed by students through both IBM and Macintosh computers. Students would use the fileserver to access common software and customized programs developed for specific courses. The network would immediately expand both access and speed of access to computing in SSCL without the attendant problems of exhausted disk space and viruses. The fileserver would be maintained by personnel trained in the operation and general support of a network. It is preferable that this person be a full time staff member and not a graduate student. It is possible that this person's time could be shared with other divisional electronic studios. The NOVELL network is ideally suited for our current and future needs. With the proper configuration of equipment (see equipment budget below) and etherlink plus software, the NOVELL network will provide a compatible means for both Macintosh and IBM users to use common data bases and instructional software in single studio setting. Long range plans include linking faculty offices to the network. Ideally this might be part of an coordinated plan between the research, educational and administrative computing at Rice.

c. Software

The attached 1990-1991 SSCL budget includes software to be purchased for instructional use. In addition, monies are included in this budget for development and purchase of new educational software. This includes the purchase of FASTAT, the instructional version of SYSTAT which is used in introductory statistics courses. Software to support the proposed network includes NOVELL lan. Additional requests for instructional software have been received from the sociology, economics and political science departments (see attached memo of W. Martin, chair sociology). The sociology department's request to purchase SHOWCASE software will be submitted to the University's committee on undergraduate teaching for funding.

d. Space requirements

At present SSCL space is not ideally configured for instructional usage and does not have adequate space for the planned equipment purchases. Reorienting the lab to allow for the use of its space as a studio will require removal of interior walls to expand the public use space, and

- d. (Continued)  
additional secure space to house the fileserver and other central components of the network  
Based on enrollment limits of 25 students per lab session, there is a need for 850 square feet. At present, the instructional area in SSCL is 425 square feet. Additional space is needed for the fileserver, and staff offices. This space requirement is estimated at 300 square feet.

### III. Connectivity

At present SSCL lab equipment is essentially stand alone, isolated equipment, connected to the AS900 mainframe through DTI phone lines. With the arrival of the campus backbone to Sewall and in conjunction with above network plan SSCL will be fully accessible. In keeping with the electronic studio concept students in SSCL will be able to access computer resources at any other location on campus and likewise will be accessible to SSCL and the SSCL fileserver from any other network location.

At present CIS staffs a variety of short courses on mainframe and microcomputer usage. We anticipate a need for additional courses on topics specific to social science software that will be required by SSCL. These courses will be taught in SSCL by CIS staff.

### IV. Coordination with other divisions

At present, while accessible to all undergraduates, SSCL is intended to serve the needs of the Social Sciences. While we would expect the educational facility discussed above to remain primarily a Social Science facility, there are some aspects which might be jointly pursued with other division. For example, the optical character recognition scanner and the CD rom facility might well be shared with various departments in Humanities. Also, personnel to support the network might be shared with other divisional studios.

#### Impact of electronic studio on curriculum

The planned changes in SSCL have already fostered significant innovations in course instruction. The sociology department has requested that SSCL purchase and install on its proposed network SHOWCASE software for its undergraduate courses in Introductory Sociology, Criminology and the Sociology of Religion. Members of the political science department have expressed an interest in using the same software in their introductory course, as well as 300 level voting behavior and public policy classes. As the census data center for this region (i.e., Southwest Texas) SSCL will have access to the 1990 Census tapes and plans to develop data bases and software for use in course instruction.

#### Addendum: Division sentiment on computing in the colleges

There is no strong preference for divisional computing in the colleges. Implementation of this plan will provide adequate computing resources for students enrolled in social science courses.