

Appendix:

Guiding Principles for the Electronic Educational Environment

December 8, 1995

This draft document is intended to serve as a starting point for discussions among campus managers and faculty about the of electronic environment within which educational activities can occur. The document is an attempt to identify many of the components of an electronic educational environment, the campus organizations with some responsibility for activities related to this environment, and an aggressive schedule for the completion of these activities. Since this document is intended to provoke discussion, some of the statements are probably overly ambitious and simplistic.

Summary Statement

In order to provide quality education to enrolled students, UCI *must* provide all faculty and students with a set of reliable, basic, and pervasive capabilities for electronic communication, access to electronic information, and access to academic computing services.

Expanded Statements

1) **Electronic Mail** A successful university must provide electronic communication capability between and among faculty and students, including course-centered communication capabilities. Faculty need convenient and effective mechanisms to communicate individually and collectively with students enrolled in their courses. Students need a convenient mechanism to communicate with other students.

2) **World-Wide Web Access** Access to information in electronic form is a second essential capability provided by the University to all faculty and students. UCI must provide access to the Internet for all faculty and students and provide selected information locally.

3) **Heterogeneous Environment** UCI has a distributed, heterogeneous computer environment. Therefore, the provision and support of computer access and use are a shared responsibility of all academic units and other units that directly support instruction.

4) **Academic Content vs. Infrastructure** It is appropriate to separate the issues related to an electronic infrastructure from issues related to the content of electronic communication. The guiding principles in this document address only the electronic infrastructure. The selection and use of academic content are the responsibility of faculty, subject only to broad guidelines about legal constraints and appropriate use (e.g., copyright and nondiscrimination).

5) **Basic vs. Advanced Services** Reliable and basic services for all faculty and students are more important than advanced services for a few. Electronic educational activities require a reasonable expectation that every instructor and all students in their courses can participate in electronic communication and have access to information in electronic form. Some faculty and students need support for more advanced educational activities utilizing computing and communication technology.

Detailed Statements

I. Universal Access (any time, any where access to electronic educational resources)

a) Provide a UCInetID to all students upon registration. The UCInetID is an electronic identifier needed

to access UCI information and communication resources. The UCInetID is a prerequisite for a campus-wide authentication service. (Responsibility and status: OAC, to be completed by fall 1995)

b) Provide Educational Access (EA) accounts to all students upon registration; the EA account provides a default electronic mail delivery point and an account from which students can access UCI electronic information resources, communication software, the Internet, and selected software applications. (Responsibility and status: OAC, to be completed by fall 1995)

c) Maintain a data base of an email delivery point for all enrolled students. (Responsibility and status: OAC and Registrar, to be completed by winter 1996)

d) Provide ethernet connectivity to all student on-campus residences and other campus locations such as the Student Center, Library and classrooms; provide the training and support services to enable effective student use of this communication capability including dynamic IP address assignment. (Responsibility and status: Student Services, Housing, Library, and OAC, to be completed by fall 1996)

e) Provide remote access from off-campus residences to UCInet and Internet; UCI to provide a limited modem pool for default services; and UCI to encourage personal accounts with preferred commercial vendor(s) providing dial-up access to the Internet. (Responsibility and status: OAC, to be completed by winter 1996)

f) Provide an adequate number of student access points suitably distributed around the campus. Today, UCI provides approximately one terminal for every 20 students. Current experience suggests that this should be improved to one for every 15 students. Access points should provide color, sound, and graphical capabilities (i.e., a terminal capable of supporting a full featured Internet browser). (Responsibility and status: all campus academic departments, OAC, Library and Student Services; marginally adequate today, no specific plans for significant improvement in the near future.)

II Computer Mediated Communication

a) Provide an email delivery point for all registered students (see I.b and I.c above); develop a mechanism for easy access to lists of email delivery points by anyone with a legitimate need for this information. Maintain lists of email addresses for enrollment in each course, for each major, and for other categories of value to the faculty and academic departments. (Responsibility and status: OAC, to be completed by winter 1996)

b) Develop course centered communication mechanisms; provide the ability for every instructor to easily distribute announcements to students registered in a course; enable every instructor to create hyperlinks to reference materials; provide the ability for every student to access student specific information such as grades and assignment status; and provide electronic class-based discussion forums. (Responsibility and status: OAC, to be completed by spring 1996)

c) Provide consistent communication software accessible by all students; email software and Internet browser (note; consistent software simplifies training requirements). (Responsibility and status: all providers of student access points, to be completed by winter 1996)

III Software Applications

a) Provide communication applications to all students including software for home use, e.g., World Wide Web (WWW) browser, email, file transfer (e.g., Fetch), and remote log on (e.g., telnet). (Responsibility and status: campus providers of access points and OAC, perhaps during 1995/96)

- b) Make standard productivity tools available to all students; e.g., word processing and spreadsheet applications (see item III.c below) (Responsibility and status: all campus providers of student access points, perhaps during 1995/96 academic year)
- c) Ensure consistent software (including version) at all UCI access points; (note: this goal implies a minimum software requirement at each access point but does not limit other alternatives being available). (Responsibility and status: all campus providing access points and OAC, perhaps during 1995/96)
- d) Provide discipline specific software applications at selected access points; e.g., software for symbolic mathematical manipulations, genetic sequencing, molecular structure modeling, foreign language word processing, statistical analysis, and CAD (computer aided design). (Responsibility and status: all campus academic departments and OAC, perhaps during 1995/96)

IV Information Resources and Electronic Services

- a) Provide in electronic form for UCI students the standard reference materials, e.g., newspapers, comprehensive encyclopedia (e.g., Britannica On-line), dictionaries (in multiple languages), and fact books. (Responsibility and status: library has primary responsibility; some materials available today)
- b) Provide every student access to the information resources on the Internet. (Responsibility and status: OAC, complete in fall 1995)
- c) Provide easy access to course specific reference materials, e.g., an electronic "reserve" room. (Responsibility and status: academic departments, OAC, and Library; preliminary examples of some specific reference materials can be found on campus today)
- d) Provide Registrar services, e.g., electronic registration, electronic course rosters and submission of grades by faculty, and electronic transcripts. (Responsibility and status: Registrar, many of these services are already available)
- e) Develop a consistent interface to UCI electronic services for students (similar log-on procedures, account names, passwords, etc.). (Responsibility and status: all campus units providing electronic services; no effort at present)
- f) Develop a campus-wide method of authentication for use in access to campus electronic services. (Responsibility and status: OAC; a basic system is in place but not widely known on campus, upgrades may be needed.)
- g) Print services should be offered at each location where public access points are located. Explore options for offering a campus-wide print service. (Responsibility and status: not a high priority item at this time.)

V Training and User Support

(Note: There is an important distinction between the provision of training in the basic skills of electronic communication and information retrieval, and the provision of assistance and support at the time and location of need.)

- a) Provide training in access to UCInet and EA accounts. (Responsibility and status: all providers of student access points, OAC and Library; ongoing)
- b) Provide training in use of communication tools, e.g., WWW browser and email. (Responsibility and

status: all providers of student access points, Library, and OAC; ongoing)

c) Provide training in techniques of electronic information retrieval and evaluation. (Responsibility and status: academic departments and Library; ongoing)

d) Provide maintenance and regular upgrading of student access points. (Responsibility and status: providers of access point currently assume this responsibility)

e) Provide assistance to faculty and students when they encounter problems with software. (Note; it is unlikely that UCI can provide sufficient full-time staff to provide comprehensive user support; reliance on a system of peer assistance most likely will be required, e.g., students assisting students).

f) Provide training and user support to students in on-campus housing. (Responsibility and status: Housing and OAC; materials in preparation)

g) Provide training and user support to students and faculty using remote access services. (Note, see I.d above. (Responsibility and status: commercial Internet Service Provider(s) may be relied upon for this support; contracts to be completed by winter 1996)

VI Management and Coordination

a) Establish a mechanism to encourage future coordination for implementation, expansion, and enrichment of the electronic educational environment. (Responsibility and status: EVC to charge an appropriate group; no action yet.)

b) A goal of coordination is to insure that UCI receives full utilization of current campus investments in computer equipment and support staff; e.g., computer support staff should receive appropriate training and cross training, staff experiences and expertise should be shared, and access points should be managed to meet overall campus needs as well as local needs. (Responsibility and status: responsibility should be assigned to group suggested in VI.a.)

c) Establish an appropriate minimum configuration of software and hardware for student access points. (Responsibility and status: OAC in consultation with academic units; during 1995/96)

d) Obtain the financial and physical space resources necessary to implement and sustain the electronic educational environment. (Responsibility and status: campus organizations with assistance from EVC; no specific plans at present.)