

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
PROJECT MAC

TO: Project MAC Participants
FROM: Arnold I. Duney
SUBJECT: Relations between the Project MAC
system and a user.

MEMORANDUM MAC-M-266
September 13, 1965

The service offered by Project MAC to users of the system is, possibly, the most complete available among on-line systems. Yet this does not mean that service is absolutely unlimited. The immediate and tangible limitation is in the size and speed of the processor, memory and other peripheral equipment. Were these the only restrictions, the user would have to accommodate himself to them, under penalty of having the system hang up, become inaccurate, or otherwise cease to be an object of utility.

Although one can use the MAC system like a very large private computer, there is an additional limitation, i.e. the fact that the rest of the community is sharing the equipment with us. Since the system is inter-active and on-line, sharing is usually felt as a dilution of memory and as an added cost for house-keeping and the protection of files and programs. In exchange for this, there is the opportunity to share in the programs devised, and the data bases kept, by one's colleagues.

The community includes every user. It would be the first of its kind, if the very fact that it exists did not imply the necessity for a whole complex of customs, manners and rules to keep it alive, prosperous and working. Inter-lopers may attempt to share in the community property, but it is the duty of the group and every member to look for them and root them out when found.

Other aspects of rights, duties, and obligations of a user may be described in terms of membership in a community.

The intention of project management is to increase the availability, amount, and quality of service to the fullest extent its means permit. This being a university, profit does not enter into the picture. Neither are changes based upon value to the user, as are those of many public utilities, and some computer

manufactures. Any resource which can be acquired, is gladly made available to the community. Hardware additions tend to be rare events, while new programs, routines, and arrays of data are produced profusely and continuously. Every user is expected to be as free as his circumstances will permit, in letting others in the community employ his productions.

It is worthwhile to digress a moment to consider a problem in generosity. The system accepts complete dedication of a program, but also permits the originator to prevent anyone from copying it. It would therefore seem incumbent upon anyone who has authorized such limited use, not to withdraw the program or delete it from his files. It would be unfair to have someone learn to rely upon some procedure, and then not be able to use it when he expects to. In other words, do not create an addiction, and then remove the supply.

Project MAC is funded from a source outside the University. It exists, therefore, not only to strengthen the posture of MIT in computing, but also as a model or demonstration, to be initiated or copied by others. For this reason the enterprise publishes heavily, and freely reports on and exhibits its work. Important components of the work necessary to support these public activities, with useful overtones in improving the system itself, are self-study, postmortems, and extensive record-keeping. Cooperation from the community makes collection of necessary data easier, and the end-product more complete and accurate.

The system is not a demonstration or model of something fully designed and complete. Any aspect of it may be considered to be, for a long time to come, wide open and subject to even radical changes, addition, and deletions. Some of these may be the result of technological changes which are brought to the system after being designed elsewhere. The larger portion, very likely would be the result of feedback, from the community, of its satisfaction, dissatisfaction, or comments on the system or elements of it. It is very important that all members of the community contribute to the information flow. For the same reason, cooperation in surveys, or experiments set up to test aspects of the system, are courtesies which the project has every right to demand.

A rather large amount of memory is provided by the system. Each member of the community, hopefully, is assigned an amount adequate to his needs. That adequate amount of memory, and access to public files, is the memory of his computer. The good of each man's neighbor, of the community as a whole, and his own reputation for honesty and fair dealing, absolutely requires that he stay within the confines of his allotment at all times. Devices in the equipment attempt to insure this. Elements of the supervisory program, and to a degree, its master plan, are directed to the same end. But these safeguards are designed to protect the system against oversight or thoughtlessness on the part of a user. It is impossible to design a system to fully protect it against damage due to malice, mischief, bad faith, or essentially criminal acts. Instead the members of the community as such are charged, to avoid any actions which they know or suspect might harm the system, and also, as noted above, to keep out trespassers.

There are two particularly important obligations of a user of a system.

As above noted, members of the community are encouraged to contribute to the public files of the system. Nevertheless, any user is absolutely privileged to withhold any or all of his files from use by others. The concept of privacy of files is a basic element of the system. An honorable member of this community would no more make a conscious attempt to inspect or use a file designated as private, than he would rifle the desk of the file's creator. The system will do what it can to prevent unintentional violations of privacy. It is important to state, in plain terms, that intentional violation of privacy is dishonourable.

The system programs and their counters and data files correspond, in a way, to the public archives and treasury of the community. Therefore, it does violence to the group as a whole, to make any wilful attempt to alter or usurp any part of the system programs or of the equipment of the system. Specifically, the coin of the realm of this system is computing time, which is granted by the management. Any attempt to increase time or circumvent the mechanism for keeping track of it is an unlawful misappropriation. It is distressing to have to include language so strong in this paper, but, unfortunately, reprehensible events have already occurred, and it is just as well to characterize them in plain talk, as in some polite circumlocution. Similarly, adult behavior is required, so that possible side effects of routines, or of specialized use.

of certain commands should be kept in mind, to avoid doing something, even as an experiment, which might hurt the system or interfere with its operation. To contribute such routines to the system, with the notion that they would be used by others, does not remove the curse, as anyone who has left medicines where they could be reached by children will tell you. In case of doubt, do not take the action until it has been cleared by, say, the system programmers. Much of what has been last reported belongs in the field of good taste, which we will not attempt to define, but will assume everyone processes.

To the extent that the system can be protected by procedures and equipment the responsibility for protection rests with management, acting through system programmers and operating personnel. The duties of these resemble, in a way, those of employed of banks or of confidential government organizations. A spirit of security and of safeguarding should be engendered and fostered in these groups, and good guidelines for proper practices should be worked out, so that the system may not be harmed through its most vulnerable aspect.

Last of all, the community is composed of scholars. From such a group, we have the right to expect considerateness, courtesy and elegance. Each user should try to employ the system with efficiency rather than ostentation, realizing that thereby he increases his own stature while contributing to the general good.