



# Running A Campus Bulletin Board System

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## BACKGROUND

The Academic Computing Services Department at the California State University, Long Beach (CSULB) has been operating a Bulletin Board System (BBS or "board") for approximately two years. In this time, the CSULB BBS has changed and progressed in several ways. Three different BBS software programs, four different computers, and two different modems have been used. In addition, the system has changed hard disk drives, floppy disk drives, printers, video boards and monitors several times. Some of these changes have been by design while others were due to hardware or software incompatibilities or failures. Despite all this, it could be easily argued that the largest department expenditure has been the hundreds of man-hours devoted to setting up and running the BBS. Yet, the CSULB BBS has proven to be an invaluable resource to its users and probably worth the investment made. This paper will attempt to outline some of the considerations that should be made before and after setting up a campus bulletin board system.

## PURPOSE

The first consideration to make in planning a campus BBS is "What is its purpose." Actually, most campus BBS's have several purposes. Possibilities include:

- Disseminating information
- Exchanging ideas/obtaining user input
- Disseminating/exchanging files
- Advertising (campus events, classes, facilities)
- Consulting/answering user questions
- Public relations (with oncampus/offcampus community)
- Recruitment (of students, employees, athletes)

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In thinking about the purpose(s) of the BBS it is probably worth noting a couple of features which are common to most BBS programs. Most BBS's have two primary functions – the exchange of messages and the exchange of files. The first is accomplished through the use of message areas. These areas can cover just about any topic. Common topics include Programming, Desktop Publishing, Writing, and ones related to specific programs such as Lotus, Turbo Pascal, and dBase. Of course topics need not be limited to computer-related topics. Topics on the CSULB BBS include Biology, Philosophy, and Beyond War. File areas are usually more uniform across different BBS's. Most all BBS's have file areas labeled Word Processing, Database, Spreadsheet, Utilities, and Graphics, as well as several other common categories. Some BBS's specialize in specific types of files such as Turbo Pascal, Artificial Intelligence, or Desktop Publishing.

A third feature which most BBS programs possess is the capability of executing another program. Such programs are commonly referred to as "Doors". For example, a door might execute a database program which allows the user to search through a database of classes offered by the campus.

Lastly, most all BBS's have bulletins. Bulletins are simply information files that are displayed on the screen. Typically, a BBS will have a bulletin menu which lists the various bulletin topics available. This could be a useful method for disseminating information about the campus and/or computing facilities.

## POLICIES

Another area for consideration before setting up the campus BBS is "What policies will be adopted/enforced." Some policies tend to be fairly universal across BBS's. The most common of these is the outlawing of commercial programs uploaded to the BBS. Other policies vary greatly from one BBS to another. Many BBS's demand that all users use their real name, while others openly state that handles and aliases are allowed. Games are banned on some systems, but many seem to exist only for this purpose. X-rated files are banned on some, ignored on others, and encouraged on still others.

Probably the most difficult policy to decide upon and enforce concerns the validation of users. The first thing to decide here is who will be allowed to use the BBS. For example, will it be open to the outside community or restricted to faculty, staff, and students? If the latter policy is chosen then how will it be enforced? Other validation questions are "What time limit will each user have per call? per day? Will all users have access to all items on all menus? The time limit and access privileges of each user can usually be controlled by the BBS System Operator (Sysop). The sysop also decides on what the default limits will be for beginning users.

The CSULB BBS is open to both the campus and off campus community, however users start off with a 20 minute time limit and a one-call per day limit. In addition, not all menu items are available. If the user is known to be a faculty or staff (listed in campus phone book) then he/she receives a larger time limit and greater access privileges. Other users are increased as well, but currently this is a manual operation performed at the whim of the Sysop, although most all users that ask for an increase in time/privilege get it.

## PROBLEMS

Some of the problems associated with running a BBS were mentioned in the opening paragraph. Those problems could be labeled as hardware and software failures/incompatibilities and the consumption of valuable resources – both personnel and equipment resources. Other problems are less obvious and more difficult to deal with. These include trojans, viruses, and problem users. The latter may cause the first two, but not necessarily. Trojans and viruses are programs that deliberately do damage to a system. The most common type of damage is reformatting the hard disk and thus destroying all files on the disk. Trojans typically do their damage immediately, while viruses modify some existing file, such as COMMAND.COM, and delay their

damage based on a timer (eg. 5 accesses). In this way, viruses can easily be passed around and uploaded by innocent, unsuspecting users. There are a couple of programs that attempt to detect trojans and viruses, but they typically are far from foolproof and may depend on the users judgement. Some sysops have done away with uploads altogether and obtain their files through other means which are deemed safer, but no means can be 100% safe and uploads are a valuable resource. Perhaps the best safeguard against trojans and viruses is to back-up the system often and not test any new software on the BBS itself. Also, there are a few documentation files commonly available that list known trojan and virus files. Read anything available on the topic and become familiar with the known bad files.

Most "Bad users" are not given this label for uploading trojans or viruses. More often they are pranksters or worse who enjoy such activities as leaving profane messages, signing on under numerous aliases, and/or impersonating other users. In some cases the user may bypass the default time limits by signing on under several different names. For this reason, many sysops set up validation systems where the sysop calls the user back at home to verify him/her before raising the time limits/privilege levels.

## HARDWARE

A BBS can be run on a fairly minimal amount of hardware, but with growth may require some upgrades. BBS's do not require all that much CPU power since most of the use is disk I/O. Therefore, an IBM XT or compatible will due nicely for a single line system. Of course an AT is nice, but not at all critical. However, disk space can be consumed quite quickly if very extensive file areas are desired. So far, the CSULB BBS has grown from a 20mb to a 72mb to a 130mb hard disk. A CD ROM player was also acquired. Once in place users will have access to an additional 500mb of software.

Modems are a critical part of any BBS. 2400 Baud has become more or less a minimum standard with 9600 baud catching on quickly. Since modems do put out a fair amount of heat, most sysops opt for external ones. This becomes mandatory with most multi-line systems. Another critical component is a backup mechanism. As the size of the hard disk grows it becomes more and more desirable to invest in a tape backup unit. These can vary greatly in price, capacity, speed, and features so investigate before diving in. It is useful to have a variety of floppy drives on the system. A 1.2mb 5 1/4" and a 1.44mb 3 1/2" will simplify loading software obtained from outside sources, plus these high density drives can be useful for backup if you wish to hold off on the tape unit. The video board and monitor are not all that critical, but if graphics are desired in the menus then it is useful to preview them on the system monitor thus making CGA or EGA desirable.

Last, but not least a good surge protector is strongly recommended and not all surge protectors are created equal. It is not necessary to spend a fortune, but two systems at CSULB have died from apparent surges while using a \$29.95 special. Compare the different ratings and guarantees offered.

## SOFTWARE

There are a multitude of BBS software packages out there for just about every microcomputer made. There are also many that run on mini and mainframe systems. Many are public domain or shareware with relatively low price tags. Some are a bit higher in price and a couple are quite high, although sometimes hardware is bundled with the software. Price does not necessarily determine quality in this arena. Take a look at the features. Probably the best thing to do is talk to a number of sysops. If one is willing to lend a hand in getting the system setup, that may be a good incentive to go with a program. Sysops tend to be helpful and knowledgeable individuals. After all, most are donating a home system to this as a hobby and have had to become fairly knowledgeable to accomplish the task.

At CSULB, the first two BBS software programs used were setup by volunteer students who ran home BBS's. The last one was setup by another good samaritan who was willing to donate a setup and existing software configuration and 30mb of public domain software via tape backup. BBS programs are like most other computer programs (eg. word processors)... once you learn the basics of one program it is much easier to pick-up another. Therefore, if a good samaritan does become available it may be advisable to use the software he/she is familiar with and upgrade to other software at some later date.