BROKERING AND SERVICING TERMINALS

by

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The primary role of Computer Centers is changing from being just centers of computing resources towards being centers of computing technology. The continuing expansion of computing networks is placing the point of access to computing resources closer and closer to the users. More and more users are acquiring terminal equipment to provide them with easily available access to computing resources. These users can be left alone to learn many lessons that Computer Center personnel have learned the hard way, or we can do what we should be doing and help them through the process of establishing and using their own computing access facilities.

Any device or collection of devices that provide a user with access to computing resources can be considered to be a terminal. This includes keyboard input devices utilizing a CRT or printer for output and minicomputers supporting card readers and printers and connected to central computing facilities. Essentially every node on a network other than the central node can be referred to as a terminal. Keep this definition in mind as we review the outline of helpful services that follows.

Translation Of User Need Into A Selection Of Available and Viable Equipment To Meet That Need

There are many things that can be done to aid this process. Keeping track of equipment already on campus and whether that equipment is in active use is a good place to start. Sometimes inter-departmental transfers can be arranged. You can get useful information regarding the true viability of particular vendor equipment or combinations of equipment. You can put users with similar needs in touch with each other to share their knowledge and experience. Common maintenance requirements can be identified and dealt with on a scale that provides more leverage with the vendor, possible reduced costs, and reciprocal back-up. The same is true for software.

You can continually clip the bingo cards in pertinent publications, thus maintaining a flow of information to you regarding new products in this rapidly changing technology. Publications of particular interest include COMPUTER DECISIONS, DATAMATION, COMPUTER DESIGN, and DATA COMMUNICATIONS. Establish files for user perusal augmented by information obtained from direct contact with vendors of the products which seem to be viable for your campus. Include information regarding lease prices, purchase prices, approximate delivery times, keyboard layouts, available options, closest salesman, maintenance sources and costs, code interpretations, etc.

You can arrange for and provide the facilities to stage various equipment fairs demonstrating specific equipment to a broad range of potential campus users. Vendors are eager to participate in full day presentations when you can attract attendance from the segment of your user population specifically interested in the type of equipment being demonstrated.

In general provide a central place to which users can address their needs, confident that they will receive help to do what they want to do and not what the Computer Center thinks they should be doing. Certainly the Center may already offer the services being sought and

an excellent opportunity would be afforded to apprise the users of available resources.

Apprising Users Of All Costs Associated With Acquisition, Installation, And Operation Of A Facility

After some translation of user need has occurred then a complete configuration can be identified and related costs iterated. Some specific cost areas to be reviewed are:

- Cost of the equipment including all needed options to make the equipment functional.
- Cost of shipping the configuration including a review of the various methods of shipment and the difference in financial responsibility implied by FOB vendor plant versus FOB users site.
- Applicable taxes.
- Installation charges.
- Maintenance alternatives and associated costs including a review of potential costs to obtain warranty service.
- Sources and related costs for supplies including methods of estimating quantity requirements.
- Environmental preparation costs including air conditioning, humidification, power, furniture, physical arrangement, communication facilities, etc.
- Software alternatives and related costs.

Equipment from more than one vendor may meet the users requirements thus the costs should be reviewed for each alternative. Utilizing this information can help formulate a 'REQUEST FOR QUOTATION' to secure competitive bids from several vendors.

Provide A Centralized Vendor Interface

This is an area of help which can greatly benefit your users. Prices in the terminal market are responsive to quantity variations. Centralizing the vendor interface affords the opportunity to pool together the many one and two unit orders from different departments so that one order for a large quantity can be made. Buying in large quantities can significantly reduce the per unit costs.

You might think that this is a function for central purchasing. Why should the Computer Center get involved? Computer Centers are pushing the forefront of technology and as such are generating the demand for equipment. Thus, you are in the best position to predict quantities, timeframes, and terminal attributes needed. You are also in the best position to evaluate the various vendor products to ascertain the best equipment based on all factors; not just lowest price. You should work with central purchasing, recognizing their obvious expertise regarding laws and regulations for buying by government organizations.

You don't have to take delivery of all units in a volume purchase at the same time. Agreements can be secured that let you buy at the 50 or 100 unit pricing level while spreading out the actual acquisitions over time spans up to one year. Sometimes these agreements have to contain clauses which provide for payment of funds to the vendor representing the difference between the projected volume level and the actual volume level attained in the specified time frame. However, often this is not necessary. Your success in doing this depends on the credibility you establish with your vendors.

Other areas of vendor interface include negotiating good contracts, arranging amicable means of payment, monitoring the progress of orders, etc. Remember, vendors respond to big customers better than they do to small customers.

Service What You Sell

Many if not most of your users don't know, and probably don't care, where the problem is when they can't use their terminal. They only know that they can't get their work done. Many vendors don't care where the problem is as long as they don't think that their equipment is at fault.

What do users do when they have a Tektronix terminal talking to an Omnitec modem talking over a Ma Bell phone line to a Universal Data Systems modem talking to a DEC 10 computer and something breaks? Calling the various vendors in one at a time to hear them say "It's not my problem" is a time consuming and frustrating effort. Instead get your own independent expertise, capable of identifying and isolating the real problem.

After you isolate the problem it usually doesn't take a lot more

effort to fix it. So why not provide your own maintenance services for your users?

The decision to provide maintenance requires an evaluation of the costs involved including test equipment, spare parts, personnel, training and transportation. Arrangements can be made with many vendors for board swap programs once you establish confidence in the technical expertise of your staff. Board swapping generally allows you to exchange bad boards for good boards for a reasonable fee per terminal. Remember the value of quick response time for your users when you evaluate costs.

Whether you offer your own maintenance services or not you should provide a centralized interface between your users and those vendors which are providing maintenance services. The same volume arguments used for centralizing purchases apply to maintenance. Such centralization allows you to set priorities, recognize problem patterns, monitor the quality of service, and sometimes resolve the problems before the vendor can respond, thus, increasing user uptime.

Other Areas Of User Assistance

Provide users with assistance in obtaining, modifying, and maintaining software to properly use their terminals.

Provide terminals for short term rental, interim loan, and backup when other units are down for maintenance.

Provide a centralized point for users to obtain computing supplies.

Provide a source of expertise to design, develop, and install special hardware to interface experiments with terminals for your research users.

In general there is a lot of assistance which you can extend to your users to make it easier for them to accomplish their primary mission. We need to be Computing Technology Centers not just Computing Centers.