Subject: "Which PC to Buy - a suggested approach"

As I have pointed out in earlier discussions, the Centre seems to have two major problems in advising clients on which PC to buy.

These are

(a) we are suspected of bias - indeed not trusted to give fair advice

(b) our advice is inconsistent

I agree that these two problems are contradictory. The first is based on the proposition that we have a dealership for IBM and will therefore push everyone into buying real IBM gear to make money. No one seems to be aware of all our other dealer agreements. The second is based on the premise that a prospective buyer can contact six different people in the Centre about a PC job and get six entirely different recommendations ranging from "use a mainframe" to "all you really need for that is a pencil and an old exercise book". This image of the Centre sends the client rushing off to the Byte Shop (or wherever) where EVERYONE says (rightly or wrongly) "buy a MAC"; at least the advice is consistent.

I believe that consistency of approach to the clients problem will give both an image and a fact of consistency to the client and largely overcome both these problems.

At the moment the intending purchaser is faced with a choice from

(a) The Apple Macintosh range which are relatively expensive and now include the SE and the MAC II.

(b) The new PS/2 IBM range of Models 30,50,60 and 80; these are also relatively expensive

(c) The IBM old range of XT and AT which IBM appears to have left to the clone market. These are currently fairly cheap.

(d) Some new lap-tops which are appearing on the market

(e) Others Compaq, Apricot 386, NEC, Olivetti etc

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So far as the University market is concerned the first four choices have become the most significant.

This situation is further complicated by the fact that the MAC's and IBM's are in some ways moving closer together. Mac's have switched to 5 1/4 inch floppies and IBM to 3 1/2 inch hard-cased diskettes - a reversal of former roles; I guess the end result will be who can market their product the best. Mac's will run MS-DOS. IBM has moved heavily into graphics but can they catch Apple? Many strategic third party products now run in both environments e.g. Word, Pagemaker etc; I guess we will see much more of this now that these environments have emerged as market leaders. And what of UNIX?

Most importantly of course, the whole market continues to be very dynamic, changing almost daily!

So how do we advise the intending buyer to find their way around this labyrinth? The classic answer of course is "with great difficulty".

Conventional wisdom (and an earlier document by Dave Keenan) proposed that the correct way to select a PC was

(1) decide on the job to be done

(2) determine what software was required/best for that job

(3) buy the machine which would run that software!

Oh that it were so simple!

Certainly the approach is correct in so far as it goes, but I fear that the occasions when this is definitive are few and far between.

If a user requires software package 'X' because, say, of joint research with some other group who already have 20 Mbytes of data stored under 'X', and 'X' is only available on machine 'Y' and requires a specific configuration Yz then the above approach leads to a decision of "what to buy". However this situation is the exception rather than the rule. More usually the user wants a machine for a multiplicity of uses.

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Our experience is that having acquired a machine, the users horizons expand rapidly with increasing knowledge and the original planned use of the machine becomes only on part (often a minor part) of its overall use.

Now don't get me wrong; I'm not against the above three steps. But I believe they must be considered as the starting point of a much more complex consideration.

I propose that our approach be

A. Declare your personal preference at the outset. e.g. "I personally prefer the MAC because ..... But let us have a look at your particular needs", could be a reasonable opening.

B. Review the job(s) the user wants to do. While this will often be to meet some immediate need, we must also discuss possible expansion of those jobs and suggest other possible areas of application e.g.

   (i) joint research projects with associates both here and overseas; what software do they use, exchange of data etc?

   (ii) network communication needs?

From this we should be able to establish a list of the software packages to meet the clients individual currently perceived needs. In all probability several different software items will be satisfactory for any given task and it is probably best to list the options available.

C. What other machines exist in the department or amongst friends. This is MOST important as it can predicate

   (a) assistance available to client

   (b) need to communicate with other machines - hence choice of software (should I use Word Perfect on an IBM clone if the joint author of most of my papers is using Word on a MAC?)

   (c) back-up

   (d) availability of software

(e) access to other devices e.g. the secretary's printer on an IBM PC

With these ideas we may be able to refine the software list from B and eliminate some of the earlier options.

NOW cost the software list.

[Obviously we MAY now be at the point where the decision is fairly clear-cut]

D. "How much money do you have/are prepared to spend?"

Subtract the software costs and if remainder $2000 you are in IBM clone-land.

At this point you should probably get into a pricing discussion. You MUST make it clear that the prices given in this discussion are rough, order-of-magnitude costs ONLY and can be used only as a guide line. Actual prices will be given as a formal quotation at time of purchase.

E. If the budget is large, one must consider any need for multiple units (e.g. if CAL development will require multiple delivery systems after development). Future growth of application(s) hardware and software expansion should be discussed and estimated. Even if the client believes that two floppies will always be adequate, we should point to the experiences of others, demands of newer software packages, speed considerations for some work etc and suggest that a 30 Mbyte hard disk may be required in a year or two. This should be considered in overall costing.

F. If funding is okay O.K. a number of other factors must be considered. What is the duration of the investment? If more funds become available every year and equipment is likely to be replaced in say 2 years then the older clones may be satisfactory. But if no more funds are likely for another 5+ years then the client should be buying into the new MAC or PS/2 ranges.

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G. Is the client a complete novice or a user of some experience? The MAC is currently more user friendly for the novice BUT:-

H. The client (novice or experienced) should consider the education services available. At present the PCC provides IBM PC based courses. This is a market driven decision, NOT necessarily a technical judgement. If a client wants (or needs) training this must be a significant factor.

I. Is the machine to be used for preparation of machine readable material for students? (CAL, assignment data etc) What machines are available to the students? Is there any present or likely future policy in your department or faculty, that students will be required to have access to a PC or to purchase their own? If so what - remember that low price will be VERY important here. [This trend is already evident within a couple of areas of the University and is expected to become wide-spread in the next 3-5 years]

J. Is the machine to be used in conjunction with UQ Admin applications? Should discuss possible uses and requirements with Peter Waugh and Colin Lambert.

K. Uses on communications network or with departmental mini?

L. What about your family situation - are your children involved with PCs at school and, if this is a personal purchase, which is most likely to be of benefit to them.

I feel (hope and pray) that this process of reviewing all these factors should lead each client to a fairly clear-cut decision which is relevant to the individual case.

On reviewing the above I should have given more emphasis to future developments and the newer ranges of equipment. Certainly for University purchases we should not be recommending obsolete equipment which cannot be expanded to accommodate new software over the coming few years.

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I would like to receive comments, suggestions and additions to this proposal as soon as possible (say within a week) so that we can have a uniform procedure (albeit an initial one) in place by 1st July.

Thanks for your help.

J.D. Noad
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Addendum

Further discussion on this topic has suggested the following points for inclusion in a revision of this document.

(a) Backup of files including data security.

(b) Maintenance - contract or breakdown (how long can the user be without the system).

(c) Is the purchase new or replacement?

(d) New user may gain value from the hiring service. Try before you buy.

(e) Is the system for support using standard packages or is a custom built system required? Does the user have the knowledge to build, test and maintain such a system?

(f) Who is the actual end user, e.g. departments have purchased PCs for word processing but have not consulted or trained Secretaries? An assumption is sometimes made that a Research Assistant will be able to use the system but again without training in use of DB product.

Costing discussions should also include:

(i) Initial cost of hardware and software;

(ii) Additional costs of hardware and software as applications expand or the real need is known or further money becomes available;

(iii) The cost of training, maintenance and consumables;

(iv) The imputed cost of frustration, lack of use etc. if the initial configuration is not appropriate, staff are not trained or the system is not maintained etc.