ATNF documentation

W. Walsh   24/6/91

Summary

($= HW & SW cost, $$= estimated 'personpower' cost P.A.):

- **Portable MS-DOS PC with PC DTP SW: $6500-9500, $$10000**

- **Portable Unix workstation with Unix SW: $12000-24000, $$13000**

- Portable MS-DOS PC and workstation: $5500-$15000, $$15000

- Portable Apple (and desktop Apple): $13500(-22000), $$9000

- Desktop PC: $5500, $$13000

- Desktop PC and workstation: $4500, $$15000

What's needed

A set of manuals that allow the AT to be used, maintained and upgraded.

How to do it

To do it properly is too expensive. However, we need at least to be able to provide enough information to allow people to use the AT to its fullest capacity. Initially, this means a simple user's guide and a reference for troubleshooting.

Tools required

We need a desktop publishing system that is relatively easy to use, has the capacity to produce scientific publications and large manuals. Ideally, the system would be portable, so that one person can use it at Narrabri, Epping and Parkes. It would be best to use a system that allows one person to both write and produce manuals.

Costing the Alternatives (HW, SW & Personpower)

Desktop publishing (DTP) software exists for Apple, MS-DOS, OS/2 and Unix systems. The best choice for the ATNF would be an MS-DOS or MS-DOS/Unix combination.

All prices given exclude sales tax. I have faxed brochures and detailed quotations for most of the items listed in the tables that follow.

The 'personpower' estimate is based on one person earning $30 000 P.A., spending about one third of their time documenting if they were using PCs. Using Apples is easier for some things (formatting for example), but Apple DTP software is not well suited to large, scientific documents.

The Unix software is very powerful, and Interleaf is perhaps the easiest to use of all the DTP packages. Publisher would be ideal for producing scientific papers. It is much faster and easier to use than Tek and allows papers to be distributed in ASCII, Tek or LaTeX formats for use

with collaborators who don't have Publisher. However, doing anything with Unix requires a great deal of experience, time, peace of mind etc.

Ventura, while having a steep learning curve (but most people could learn how to use it in a day) is the best compromise between functionality for our purposes and difficulty of use.

The Options:

Option	Advantages	Disadvantages	Initial cost	Personpower cost
PC laptop	Easy to use, portable, cheap, flexible. Lots of software.	Lacks power of Unix software	$6500 (clone PC and DTP software) to $10000 (Compaq)	$10 000
PC laptop and workstation	Convenience of a laptop for writing the manual, power of Unix software to produce it.	Possible high cost of Unix software, production and writing separated, lack of workstations.	$5500 (PC) to $15 000 (may have to pay a lot for Unix software)	$15 000
Laptop workstation	Power of Unix software. Integration with other software and systems. Flexibility.	Cost. Unix systems require greater level of expertise to operate.	$12000-$24000 (Hardware is cheap enough, but software is not)	$13 000
Desktop PCs	Easy to use, cheap, flexible. Lots of software.	Slowed down because tied to one machine.	$5500	$13 000
Desktop PCs and workstation	As above	As above, availability of workstations.	$4500	$15 000
Apple	Ease of use: users can migrate to documentation work quickly. Nice production capabilities.	Expensive. Very restrictive software. Portable hardware not really adequate for DTP work.	$13 500-$20 000	$9000

People likely to be involved

Person	Location	Involvement
Wilfred Walsh	Epping	Write CA manual, possibly other manuals, set up documentation structure.
Ron Ekers	Epping	Define goals, Allocate resources.
(?)	Epping	Manage people, ensure things happen
Alison Garside/Helen Sim (?)	Epping	Produce manuals: i.e. DTP
Alan Wright	Parkes	Write text, DTP
Euan Troup	Parkes	Write text
Alan Hunt	Parkes	Write text
Robina Otrupek	Epping	Write text, DTP
Robin Wark	Narrabri	Write text, DTP
Mike Kesteven	Narrabri	Write text
Other programmers	Various	Write text

Costing Details: Hardware

Item	Features	Base unit cost	Cost as specified
Notebooks			
Atlanta 386sx	386sx CPU, 4Mb RAM, 40Mb HDD, VGA LCD display, external VGA monitor, 1.44Mb FDD, modem	3915	5495
Atlanta 386-16	"	3335	4835
CAF Superlite 386sx	"	3995	5495
Commax notebook	"	2755	4785
Chicony NB5620	"	5495	7000
Compaq LTE 386s/20	"	4814	7000
DynaCom AS-386sx	"	5490	7000
GCS 387	"	4990	5490
LapPaq 320ex	"	3199	4963
Morse m316	"	4550	6000
NoteStar NP-903	"	6099	7500
Panasonic CF-370	"	4299	5800
Renard N300	"	4200	5600
Spectrum 386sx-16	'	3995	5495
Toshiba T2000sx	"	4700	5800
TI travelmate 3000	"	4500	6100
Laptops			
Toshiba T3100sx/40	"	-	5917
Toshiba T3200sx/40	"	-	5960
Toshiba T5200/100	", 100Mb HDD, 386 CPU	-	7660
Epoch	386, 33MHz CPU, 115Mb HDD	-	6512
Epoch	386sx, 52Mb HDD	-	5369

Unix laptops			
Sony	RISC CPU, 16Mb RAM, 406MB HDD, runs Unix nexs BDS V4.3	-	9950
Apple			
Apple portable	68020 CPU, 4Mb RAM, 40MB HDD	4800	10500

This table is a representative sample of what's in the market.

The critical factors include performance, reliability, support and expandability. The Compaq is clearly superior in these respects, but some of the clones offer very similar performance (50% slower) for quite a lot less.

Costing Detail: Software

Item	Platforms	Cost per licence	Advantages	Disadvantages
Microsoft Word (ec)	MS-DOS, Apple	400	Easiest to use	Very limited DTP functionality
LaTeX	Any	0-300	Cheap, widely used already	Very difficult for production staff to use. Slow to use.
Ventura	MS-DOS, Apple	1072	Does almost everything, not too hard to use	Takes a day or so to learn. No LaTeX Interface.
Pagemaker	MS-DOS, Apple	1100	Easy to use, nice formatting	Limited functionality. No LaTeX interface.
Interleaf	Unix	7700 (possible $1000 deal for Uni. use)	WRITING AND PRODUCTION DONE AT THE SAME TIME. Does absolutely everything, easy to use	Cost, poor Tek, LaTeX interface, requires some Unix arcana.
Publisher	Unix	5900, Probably could get a cheap copy from Sig. Proc., who have this and don't use it.	WRITING AND PRODUCTION DONE AT THE SAME TIME. Does almost everything, interfaces with Tek	Cost, Unix interface
Apple versions of PC SW	Apple	1000	Easy to use	Slow, lack functionality and flexibility.

An MS-DOS system also requires $1000 to be spent on the operating system, a wordprocessor, Windows and a backup program. An Apple system requires $2500 of additional software. Unix software is so expensive that perhaps only a FORTRAN compiler can be justified in addition to the DTP application.