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It is in no sense the purpose of this note to break the AT-RP nexus. Rather it is to forstall complications which may arise post 1988 because of rapidly increasing computing loads. Increases in the RP load will (probably) be absorbed fairly painlessly in the next few years by the additional vax (the 751); but this of course is creating a future problem: RP will have become dependant on that second machine. Will RP be able to withstand the withdrawal symptoms?

There are arguments why the AT and RP facilities should be integrated: scarce resources such as disks, array processors and display devices can be shared; equally, maintenance and support facilities may be more efficiently utilised. But these are the same arguments advanced by the computing centre empires.

mk's recommendation: send the Vax8600 to Culgoora, and there will be no question that RP will have to resolve the problem for itself. This solution has a number of additional advantages: there would be a constant flow of astronomers through Culgoora, which would help keep the AT running efficiently and enthusiastically; the computer would be also be used efficiently - at the VLA the vaxes run more-or-less round the clock.

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mjk. 16/jan/85

The AT specifications (AT/01.13/004d) calls for the AT off-line computer to be tied into the RP system (para. I.2.a).

The forward planning of the RP computing group appear tacitly to assume that the AT computer will be available for RP use.

This note questions the utility, wisdom and propriety of this arrangement. The relevant points are simple:

Constitutional. The AT is to be a national facility; presumably its computer falls into this same category, and therefore should possibly be clearly distinct from the RP system.

RP computing load. Heavy, and increasing. The Epping Vax750 is running at full capacity. Indeed, the computing capacity at Epping has been inadequate for well over a year (AT25.1/007, section 2).

AT computing load. The AT load will be relatively modest in the initial stages: however, the capacity of the AT to generate large computing loads is high - see AT/25.1.1/010. Further, all experience indicates that computing load estimates are invariably too low. We note also that recent investigations of the self-calibration problem (AT/25.1.1/011) have revealed unexpected difficulties for the AT in so far as high quality maps are concerned. It seems likely that these difficulties will impose additional processing on the AT data. Finally, we note that the VLA is requesting a CRAY for its future needs: a Vax 8600 is modest indeed by comparison.

Our current plan is to use the Cyber 205 for the very large scale processing - the large spectral data cubes. However, this solution is likely to be expensive and inconvenient - without question, it would be preferable to perform all the processing on a dedicated machine. It would be unfortunate if the processing flexibility were compromised because of a base load on the AT machine which derived from non-AT sources, and which forced us to the Cyber 205. In this regard we

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