

MINUTE PAPER

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REFERENCE:

PROJECT *RISING SUN*
P Branch Requirement for High Performance Work-stations

ACR 18/11/13

DDO
through ADP and CA

For information:	ADD	PH	SM
	ADS	PHP	SMC
	CAC	PHR	TCU
	CRR	PT	

1. This minute seeks your endorsement of a requirement for the procurement of high performance work-stations and associated hardware and software to maintain the cryptanalytic processing of PH, the signals analysis processing of PT, and the software support undertaken by SMC. The estimated cost of this requirement is \$671 760, plus ongoing costs of \$59 036 per annum.

Background

2. PH, PT, CMR and SMC utilise Sun High Performance Work-stations as terminals connected to BISSIN and MARSIK, as well as stand-alone work-stations to perform local cryptanalysis, signals analysis and computer development work. Currently eighteen work-stations are installed throughout PH, another five in CMR, two in PT, seven in SMC, and one in SE. Thirty-five Sun work-stations were purchased and installed in DSD under Project HENDRY in 1989-90, of which two have since become unserviceable.

3. The thirty-three work-stations in service are linked in a network through three file servers. The file servers maintain centralised storage of data for the network, and regulate access to MARSIK and BISSIN.

4. The current PH establishment comprises 40 staff, of whom 36 require a terminal most of the working day. This represents a staff-to-work-station ratio of 36:18, or 2:1. The number of occurrences of situations is increasing in which staff cannot proceed with their work until a work-station is freed. Additionally, usage of work-stations is increasing as extra staff are recruited

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into PH. Accordingly, PH regard the present high staff-to-work-station ratio as detrimental to the efficiency of the section.

5. Usage of the two work-stations in PT is also heavy, averaging seventy percent during working hours. As in PH, analysts are frequently required to wait inordinately long periods for access to a work-station. As signals analysis work undertaken by PT is relying more heavily on MARSIK and BISSIN, the restricted access to work-stations is having a regressive effect on the section's productivity. Increased processing of by PT on MARSIK and BISSIN or on work-stations will also magnify the demand for work-stations.

6. Finally, increasing development work levied on SMC has led to the demand for work-station time in this section exceeding available work-station resources. At present, work-stations in SMC are typically in use eighty-five percent of the working day. Given that SMC staff can do little work other than on work-stations, the strain on existing resources is leading to a reduction in the efficiency of the section.

Requirement

7. The requirement is for the procurement of an additional seventeen High Performance Work-stations; of these, ten are to be situated in PH, four in PT, two work-stations are to be situated in SMC, and one reserved as a spare. PT have also indicated a requirement for an additional three work-stations to be located in Canberra in September-October 1992, in support of the relocation advance party from PT and TCU. It is anticipated that these work-stations can be allocated from among those to be installed in Canberra over the next eighteen months.

8. In line with target developments, PH are extending their use of graphics software and desktop publishing software. Consequently, additional work-stations deployed in PH must contain adequate memory and graphics processing capability.

9. An additional file server is also required to support the enlarged network. Two models are suitable for meeting the work-station requirement; of these, the model which contains some capacity for connecting additional (future) work-stations is preferred.

10. Finally, PT have identified a requirement for a laser printer attached to the work-stations in their area; this would overcome the current deficiency

11. ADP has indicated her strong support for the PH and PT work-station requirements, and ADS has strongly endorsed the SMC requirement.

Summary of Costs

12. The estimated costs of the requirement are as follows:

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computer hardware	\$ 558 452
network equipment	50 112
computer software	9 496
support equipment	8 300
human resource services	3 000
miscellaneous	42 400
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TOTAL	\$ 671 760
Ongoing costs (per annum)	\$ 59 036

Related Projects

13. The following projects are likely to have effects on this requirement:
- project BANYAN is a project completed in February 1991 which provided communications redundancy in the high performance work-station network; if redundancy is to be maintained at the current ratio, additional slot capacity would be required in any new network file servers;
 - project DIADEM, the procurement of a new cryptanalytic supercomputer processing capability, which would increase demands for access to the work-station network;
 - a project to install a local area network in Canberra by March 1992, supporting seven high-performance work-stations the work-stations will be used initially by SMC staff, and may be used by the relocation advance party from PT and TCU; and
 - project SONNARIO, the installation of a fibre optic data network in DSD's Canberra premises, which may require additional slot capacity in the network file servers if the high performance work-station network is to be incorporated.

Time Frame

14. Since PH regard their requirement as particularly urgent, given the impact of the present undersupply of work-stations, it may be appropriate to attach a high priority to procurement and installation of new work-stations. SMC expect that some new work-stations (and related equipment and software) could be procured and installed within two months from time of approval.

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Co-ordination

15. The project has been coordinated with PH, PT and SMC as the sections with work-station requirements, and SM and SMC as the software support specialists.

for CAC
20 June 1991

Endorsed/Not Endorsed

Deputy Director Operations
June 1991

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