

## DEPARTMENT OF DEFENCE

**MINUTE PAPER**

REFERENCE: 18-3-33

SUBJECT: PROJECT LOBSTERADDFor information:

ADS

The current budget for LOBSTER is \$5.5M in FY82 prices, programmed for authorisation in 84/85 and expenditure in 85/86.

2. Investigations to date have lead to the conclusion that only a CRAY computer will provide the required increase in power together with sufficient compatibility with NSA and GCHQ to enable us to exploit their software.
3. It has also been established that the cheapest viable CRAY based system for our needs would be based on a CRAY IS CPU and cost approximately \$7M excluding works on current prices. Even at this price the system suffers from the restriction of having no upgrade potential. With currently available products, expansion capacity could only be gained by choosing a CRAY X-MP at a total system cost of approximately \$11.5M.
4. From discussions with CRAY Research, it appears that we cannot expect any large price reductions by 1984/85.
5. A suitable system will probably still cost approximately \$7M in 1984 prices, although the application of CRAY X-MP component technology to smaller machines may make an upgradeable machine available for this price.
6. The Cray company offers lease as an alternative to purchase, however their rates are not the most attractive unless the intention is to replace the machine within 2 or 3 years.
7. It would be our intention to retain the machine for at least 10 years, and on this bases a full payment lease financed within Australia appears to offer the most economic way of spreading expenditure. Figures obtained for us by TECHWAY from Hill Samuel are as follows:

No. of Years	\$ per quarter per \$million
2	155,127
3	109,637
4	86,497
5	72,285
7	57,243
10	44,711

These prices are full payout, i.e. the machine becomes the property of DSD at the end of the lease, at no additional charge. These prices are also on the basis that no investment allowance is claimable by either party.

8. The costs which would be applicable to a 5.5M capital cost as in the 82/83 FYDP, and a 7.0M capital cost as currently forecast are as follows:

<u>No. of Years</u>	<u>5.5M Capital Cost</u>		<u>7.0M Capital Cost</u>	
	<u>\$p.a.</u>	<u>Total Payout</u>	<u>\$p.a.</u>	<u>Total Payout</u>
5	3,412,794	6,825,588	4,343,556	8,687,112
3	2,412,014	7,236,042	3,069,836	9,209,508
4	1,902,934	7,611,736	2,421,916	9,687,664
5	1,590,270	7,951,350	2,023,980	10,119,900
7	1,259,346	8,815,422	1,602,804	11,219,628
10	983,642	9,836,420	1,251,908	12,519,080

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22 February 1983