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16 May 1984

DSD Major New Computer - Certificate of Exemption

I refer to our discussions on 27 April 1984 concerning the proposed purchase of a major new computer system for DSD, approval for which will be sought in the context of the 1984 Budget. The estimated initial equipment cost is \$10.5m with works costing a further \$1.9m; planning provision is also being made in the 1989/90 timeframe for a possible equipment upgrade at an estimated cost of \$3.0m. This letter seeks a Certificate of Exemption, subject to the availability of funds, for DSD's new computer system (Project MARSIK).

2. DSD's primary mission is to produce signals intelligence (Sigint) from foreign communications to satisfy Australia's defence and other national intelligence requirements. The most valuable intelligence is normally carried by encrypted communications which must be subjected to cryptanalysis in order to recover the plain text. As methods of encryption become more secure, and as increasingly varied and complex modes of transmission come into use, a continuing increase in both computer power and flexibility is required to maintain present levels of exploitation.

3. The existing cryptanalytic support computer (a CDC CYBER 175), installed in 1977, has been saturated since early 1983 and cannot be further expanded. It is assessed therefore that if DSD is to retain its present capability against target cyphers, a new computer will be required and that if we are to ensure the continued utility of this computer over a reasonable period, it should offer a tenfold increase in computational power over the existing CDC Cyber 175. There are very few manufacturers of computers in this class.

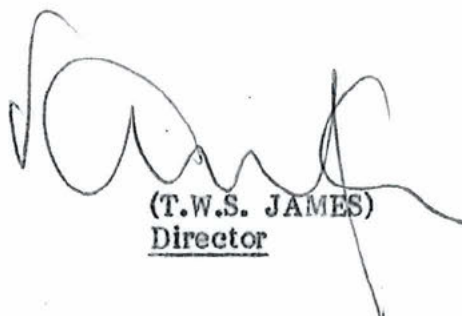
4. Additionally, there is a need to ensure that any new computer introduced by DSD can accept software developed by our overseas partners, NSA and GCHQ. This is necessary to permit DSD to take advantage, at no cost, of accumulated software assets and expected to continue to grow. Not to proceed with a system compatible with NSA and GCHQ would result in a need for DSD to develop, maintain and support unique specialized complex software for cryptanalytic the provision of which would considerably exceed the capacity of DSD programmers and analytic staff.

5. This capability hinges on the adoption of a software operating system called FOKELORE. The only computer available which will provide the required computational capacity and which is capable of running FOKELORE is one manufactured by Cray Research Incorporated. Accordingly, procurement of a Cray processor with associated peripherals is proposed from Cray Research Incorporated or their authorized Australian agents (TECHWAY Australia).

6. Also, on-going maintenance and support of the computer system will be required from the authorized Australian agents of Cray Research Incorporated - TECHWAY Australia.

7.

8. Your issue of a Certificate of Exemption, subject to project approval in the context of the 1984 Defence Budget, is requested in favour of Cray Research Incorporated or their authorized Australian agents for the procurement and subsequent support services of a new cryptanalytic support computer system for DSD.



(T.W.S. JAMES)
Director

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