

**Computer White Paper 1983/84 Edition** *by the Japan Information Processing Development Center*

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JIPDEC was established in 1967 with the support of government and related industrial groups. It is a non-profit organisation aimed at the promotion of and research and development for information processing and the information processing industries of Japan. The annual computer white paper reviews developments in those industries: the current state of computer utilisation, the present status of the information industry, government policies, computer usage and online systems, and such special topics as new forms of communication media, software distribution, and trends in satellite communications.

The range of statistical material is impressive and contrasts sharply with the Australian situation. Consider the following illustrations. Using MITI (Ministry of International Trade and Industry) survey data which classifies computer systems by scale (from Large A: 500 million yen or more down to Very Small: 10 million yen or less), the report can provide details of the number and value of systems in use by scale and industry. Statistics of production trends for computers and peripherals are supplemented by export and import figures. The growth of the information services industry (development and sale of software, making computing services available to users, and the provision of information to users via data retrieval operations) is recorded in terms of the number of firms and sales, the latter disaggregated by type of work.

JIPDEC's own computer usage survey provides average monthly EDP division operating expenses and details of the types of online systems in use and planned for five years ahead. Causes of malfunctions and downtime are recorded. More than 90 per cent of all users experienced hardware failures and/or malfunctions of some kind during 1982, and more than 80 per cent of these users experienced software problems of some sort. Circuit and air conditioning failures and human errors were increasingly found to be the cause of system failures and downtime.

The Japanese experience might well contribute to an understanding of Australian problems. The current debate about the local software industry is a case in point. The purchase of software is about 0.5 per cent of the total computer budget. When personnel expenses (for in-house development of applications programmes) and outside order expenses are taken into account, this percentage is raised to 1.9 and 3.8 respectively. It was reported that Japanese users lack software development capacity. The majority of responses to an NDPA (Nippon Data Processing Association) survey indicated that software products were recommended to users by computer manufacturers at delivery time. Reliable imported supplies have gained acceptance in Japan, the best selling imports being overwhelmingly systems software rather than applications software.

A final section of the report details World Communications Year events in Japan and lists major organisations in the computer-field.

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