

If the merger goes through as planned, the January 1971 issue of *Science Journal* will be the magazine's final edition, and the first issue of the new-style *New Scientist* will be published on January 21. A measure of IPC's faith in the selling power of the new magazine is that it will have a print order of 100,000—at present, each separate magazine has a circulation of about 50,000.

COMPUTERS

Demand and Supply

ALTHOUGH more than £20 million has been spent in less than four years on computers for research, the second report of the Computer Board for Universities and Research Councils published last week (HMSO, 3s 6d) reveals that academic research in Britain is still weak in overall computing power.

The Computer Board was established in September 1966 following the publication of the Flowers report on the present and future computing requirements of research (*Working Group on Computers for Research*, HMSO, 1966). There has been considerable progress since then, and most research groups now have access to some kind of computing facility, but the Computer Board's report emphasizes that there is still a long way to go.

The report describes the past two years as a period of consolidation. Since 1966, 33 new computers have been installed at a cost of £9.4 million, and 8 new computers worth £6.6 million have been ordered. These include five British International Computers Ltd (ITL) 1906A systems, and two of the very large American Control Data Corporation (CDC) 6400 series machines have been earmarked for London University. The capacity of computers already installed at 31 universities has been enhanced at a total cost of £2.9 million, and equipment worth a further £2.2 million has been ordered to upgrade other existing hardware.

The board, under its new chairman, J. D. Finney, University of Edinburgh, is understandably anxious to buy British equipment where possible, especially where large capacity units are required. Their plans to use the ICL 1908A computer for regional computer centres were thwarted when ICL cancelled research on this system to concentrate on the development of Project 52, a radically new computer of comparable size to the 1908A. Details of Project 52 are still confidential, but it seems likely that its novelty will lie in vastly improved ease of operation rather than electronic innovation. Project 52 will not mature until 1972 at the earliest, and until then the board will probably have to turn to the United States for supplies of very large computers.

An important new feature of the board's activities will be responsibility for the provision of computers and computing facilities for teaching as well as for research. This was recommended earlier this year by a joint working party set up by the UGC and the Computer Board (*Nature*, 227, 1079; 1970) and means that universities will no longer have to limit the use of computers supplied by the board for research purposes. The working party estimated that an extra £1 million would be required to finance the extra hardware required for teaching purposes, but so far the government has not been able to provide further funds. Fortunately, the board's

original estimates had taken such contingencies into account, and a small surplus is available to support this extra commitment.

URANIUM SUPPLIES

New Reserves Needed

THERE will be an acute shortage in the world's uranium supplies by the mid-seventies unless new reserves are discovered and exploited. This fact emerges from the latest report of the European Nuclear Energy Agency and the International Atomic Energy Agency (*Uranium: Resources, Production and Demand*, OECD, \$3, £1). The agencies estimate that the present consumption of 15,000 short tons of uranium oxide ore a year will increase to 38,000 short tons a year by 1974-76—a figure equal to the existing production capacity—and by 1980, the demand will be about 73,000 short tons a year. The estimate assumes an increase in the nuclear generating capacity of the world from 18 to 300 GW in the next ten years, and it is based on information gathered from all countries known to have a nuclear power programme, with the exception of the People's Republic of China, the USSR and the countries of Eastern Europe.

Anticipation of the future demand has been the chief impetus behind the recent boom in prospecting: since 1967, discoveries of uranium in Canada, Australia, the Central African Republic, Gabon, Niger and the US have increased the estimated world reserves from 700,000 to 840,000 short tons. The report points out, however, that if the consumption of uranium increases at the estimated rate, it will be necessary to discover and develop an additional one million short tons of uranium oxide by 1985. In the opinion of the working party responsible for the report, it would be prudent to give greater emphasis now to relatively low cost primary prospecting with the objective of discovering new uranium provinces suitable for subsequent, more detailed exploration. It is difficult to predict where new reserves will be found, however, but of the nine uranium producing countries, Canada and South Africa seem to have the most room for expansion of existing industry.

The future demand should end the lean days of the uranium mines. At present, low prices, fluctuations in the market and an unexpectedly slow movement of the world nuclear power programme have produced a state of over production and hesitancy in the industry. At Elliot Lake in Canada, for example, where once there was a bustle of activity to supply the military needs of the US government, many of the mines lie idle.

But when the promised boom does come, it could produce the familiar pattern of sudden shortage followed by over supply. The report suggests that consumers could improve the market stability either by making advance purchases or by negotiating long term supply contracts; this would encourage suppliers to proceed with plans for new production capacity and to search for the additional reserves needed to satisfy future needs. In this way mismatching of supply and demand could be avoided. Whether or not enough uranium will be found in time, the report seems reluctant to predict.