

## Direct broadcasting satellites

# Japanese fury over US component failure

Tokyo

THE failure of US-assembled components in Japan's Yuri 2A satellite — the world's first direct television broadcasting satellite (DBS) — has provoked a furious reaction from the Japanese Government. In language normally reserved for serious clashes over trade imbalances, the Minister of Posts and Telecommunications, Keiwa Okuda, told visiting US Vice-President George Bush last week that the government took a "serious view" of the breakdown of two out of three of the satellite's transponders.

Yuri 2A was launched in January to improve reception of the state broadcasting system (NHK)'s two television channels for around one million people living in mountainous regions, remote islands and high-rise "urban canyons". But with only one transponder functioning, NHK has abandoned plans to broadcast its second educational channel. A spokesman for Toshiba, the satellite's main contractor, said the malfunctioning units were manufactured by Thomson CSF of France and assembled by General Electric in the United States.

The angry reaction to the failure does not, however, reflect disappointment at the loss of educational broadcasts but the critical role Yuri plays in a whole set of conflicting aspirations for the Japanese telecommunications, satellite and electronics industries.

All the technologically-advanced nations are now making plans to introduce direct satellite broadcasting. By being first off the mark, Japanese manufacturers had hoped to establish themselves as the number one suppliers of receiving equipment. The parabolic antennas and decoders needed to receive NHK broadcasts are already on sale in every corner electronics store in Japan, and Toshiba and a Nippon Electric Company (NEC) affiliate have been named as suppliers by Satellite Television of the United States, which hopes to have its own satellites ready by the end of 1985. The failure of Yuri is bound to affect sales in the home market, which would have built up experience for the international market.

The same companies are also eyeing the much bigger technological opportunities to be offered by DBS in the future. Japanese companies believe that DBS will be used in the 1990s to begin high-definition television broadcasts. Already Japan is the world leader in this technology. As long ago as 1968, NHK research laboratories had produced a system with 1,125 lines — almost twice the number currently in use in the United States and Japan (525) and in

Europe (625) — which gives a picture no different in quality from commercial 35-mm movie projection. The trouble is that this NHK technological advance can only be capitalized upon if the 1,125-line system is adopted as an international standard. Strong competition is now coming from a 925-line system developed in the US Advanced Television Project at Massachusetts Institute of Technology. Technically the US system looks superior because it requires less transmission capacity.

Both Sony and Matsushita Electric will have 1,125-line systems ready for the marketplace by 1986. And by getting working systems out as soon as possible — beginning with mini "video theatres" — they hope to push international acceptance of the 1,125 standard. Any slowing in the pace of satellite development is seen as a long-term threat to the technological lead they will have when DBS becomes available for high-definition television.

More immediately worried by Yuri's failure are big businesses which want to buy communications satellites to transmit their own business data. Only a year ago, Keidanren (the Federation of Economic Organizations), backed by the satellite building lobby, was insisting that all Japan's satellites be domestically developed and the government was refusing

to permit businesses to import satellites. It was a combination of pressure from the United States, which saw yet another import barrier, and from businesses which want to use satellites and know that it will be far cheaper to buy them ready-made from the United States, which forced the government to change its mind at the end of last year and to allow at least communications satellites — if not other categories — to be imported.

The failure of Yuri now has the domestic satellite makers screaming for foreign imports to be stopped again — on the grounds that they are too unreliable. But the potential users have already formed a 30-company group to purchase a communications satellite from the United States. Their counter-argument is for a domestic satellite which will still have to contain a high percentage of foreign parts.

Criticism is also coming NHK's way for having the satellite built with exceptionally powerful transponders. This move had been strongly opposed by engineers favouring the use of already-tested designs but had gone ahead to make it possible for the transmissions to be received on smaller antennas. Now NHK is wondering what to do with Yuri 2B, an identical satellite scheduled for launch in the summer of next year. Should it be rebuilt or launched as it is?

For the time being anyway, NHK is cutting its losses by licensing the satellite as an "experimental" rather than "broadcasting" service with the Ministry of Posts and Telecommunications. No charges will be made for those who have bought antennas and are receiving Yuri's fitful broadcasts.

Alun Anderson

## Copyright for software in Australia

Canberra

THE Australian Government has announced its immediate intention to extend to computer software the copyright protection usually given to literary works. This should end the present uncertainty about the legal status of software following

the decision of Mr Justice Beaumont in the APPLE COMPUTER *versus* COMPUTER EDGE case late last year that certain types of computer software were not protected by copyright under the 1968 act. The case is still under appeal before the full federal court.

A joint statement issued on 15 May by the Attorney-General and by the Ministers for Industry and Commerce and for Science and Technology, says that the intended inclusion of software in the existing copyright category of "literary works" rather than under the less restrictive patent law is intended to stimulate research and development in the local software industry.

Unless a federal full court decision supervenes, it is intended that passage of the proposed legislation should be secured in June, and should be understood as a short-term measure. It will not pre-empt consideration of fundamental issues remaining to be resolved, both at the domestic and international levels, on long-term policies for the protection of software and works stored in or created with the aid of computers.

Jeffrey Sellar

