



Bob Greeney, Director Planning, brings us up-to-date with deliberations at ITU meetings. The International Telecommunications Union has responsibility for developing recommended technical standards for telecommunications and radiocommunications services, including broadcasting.

Digital satellite broadcasting

In January 1998 the International Telecommunications Union's Digital Satellite Broadcasting working party, Joint Working Party (JWP) 10-11S, met to consider developments in digital broadcasting systems.

The meeting focused on satellite sound and television broadcasting: the latest developments in satellite sound broadcasting in particular, but also matters relating to television broadcasting and frequency sharing. Specialists from approximately forty countries attended, including three Australian delegates: one from the ABA and two from industry representing commercial sound broadcasters and potential satellite broadcasters.

Sound broadcasting

A number of different systems have been proposed for satellite sound broadcasting. One, the European Eureka-147 system, is proven as a terrestrial system and is operating in a number of countries in the L-band (1500 MHz) and the VHF bands (television spectrum at Band III - channels 11 and 12). The Eureka-147 system has been tested by the Department of Communications and the Arts' Communications Laboratory for satellite broadcasting using the Optus satellite. It has also been tested by the BBC using the Mexican Solidaridad satellite. Both series of tests have shown that the Eureka-147 system is suitable for providing satellite sound broadcasting. In the long term it may be used to provide satellite radio broadcasting in remote areas.

Another system, developed by the Voice of America in conjunction with the US Jet Propulsion Laboratories (VOA/JPL), has been tested extensively, although the most recent reports are two years old. Developed as a potential replacement for HF short wave broadcasting, it was intended to be based on the availability of relatively cheap receivers for use in Asia, Africa and the Americas. There was a report on a variant of the VOA/JPL system: a redevelopment of the proposed satellite system to enable it to work in the HF short-wave bands as a possible replacement for analog modulation in those bands. Indications are that it is planned that the VOA/JPL HF digital broadcasting system will

operate within a 10 kHz bandwidth. Tests in North America and informal reports suggest that it performs relatively well in conditions under which the analog HF system is beginning to fail. More work is required before it can be shown to be a suitable alternative to HF analog short wave broadcasting.

WorldSpace provided some data about its proposed digital satellite broadcasting service, including advice that the satellites for this new service are scheduled for launch from about October 1998 and it is planned to have all three regions — Asia, Africa and America — operating soon after. WorldSpace systems will share the same frequency allocations as those already allocated for digital sound broadcasting (1452-1492 MHz) and which is proposed for the Eureka-147 systems for both their satellite and terrestrial implementations.

Much discussion at this meeting focused on the need for sharing considerations where different systems and services are to share the same spectrum. Joint liaison groups were set up to work with other groups studying the impact of satellite broadcasting services on fixed satellite and terrestrial services which share the same or adjacent spectrum. Australian participation in these liaison groups has already been identified. The technical detail of how such sharing can be implemented is under discussion in a number of ITU groups.

Television broadcasting

There is strong interest in developing techniques which would provide a satellite return path for interactive television. This will be important for viewers in remote areas who have no alternative for their interactive return path. A functional reference model for the interactive television model was developed at this meeting. It includes a number of potential return paths including satellite, cellular mobile telephone and plain old telephone system return paths. Further studies will continue within a special rapporteur group established to work with other related ITU task groups looking after telecommunications systems.

The full report of the meeting (January 1998 meeting of JWP10-11S) is available from the ABA's Planning Branch on request: call (02) 6256 2801 or (02) 6256 2806.

