

## Working Party 6E

More than one hundred participants considered 61 technical contributions, and produced 30 documents which map out how the technical studies are to proceed.

Working Party 6E formed five sub-working groups to assess documents. The five groups covered matters related to sound broadcasting, television broadcasting, electro-magnetic radiation, preparation for the next world radio conference in 2007 (WRC-07) and a report on the transition of broadcasting operations from analog to digital.

The Working Party approved a number of Liaison Statements (to other ITU Working Parties) covering subjects such as user and spectrum requirements for electronic news gathering (ENG); interference evaluation in shared frequency bands; deployment of ultra-wideband (UWB) devices; spectrum masks for systems operating below 30 MHz; technical characteristics of broadcast receivers, antenna types and gain; preparation for WRC-07; and protection of terrestrial broadcasting from GSO (geo-stationary orbiting) and non-GSO broadcasting satellite systems operating at frequencies below 1 GHz.

The Working Party adopted and sent the following matters to Study Group 6 for consideration:

- two draft revised questions relating to planning parameters for digital broadcasting at frequencies below 30 MHz and conditions for a satisfactory television service in the presence of reflected signals
- one draft new question regarding characteristics of television receivers and receiving antennas essential for frequency planning
- two draft new recommendations: *Characteristics of radiated signal of conventional analog television systems*, and *Evaluating fields from terrestrial*

*broadcasting transmitting systems operating in any frequency band for assessing exposure to non-ionizing radiation*

- a draft revised recommendation on the technical basis for planning of terrestrial digital sound broadcasting in the VHB band
- a draft new report on analog television systems used in various countries.

WRC-07 related studies are continuing, and rapporteurs have been established so work can proceed between Working Party 6E meetings.

### Australian contribution

Australia contributed five technical papers:

**6E/AUS1** *Radiation Characteristics of Band V Television Receiving Antennas*

**6E/AUS2** Proposal for a Draft New Question, *Characteristics of Television Receivers and Receiving Antennas Essential for Frequency Planning*

**6E/AUS3** Draft Modification to ITU-R Question 69/6, *Conditions for a Satisfactory Television Service in the Presence of Reflected Signals*

**6E/AUS4** Draft Modification to Recommendation ITU-R BT.805, *Assessment of Impairment caused to Television Reception by a Wind Turbine*

**6E/AUS5** *Review of allocations to all services in the HF bands between 4 MHz and 10 MHz* – WRC-07 Agenda Item 1.13.

These were received extremely well and were accepted in new technical studies (Questions) or as modifications to existing Questions and Technical Recommendations.

### Digital television coverage

The implementation of DTTB services in parallel with existing analog services in several countries has created the need

**Working Party 6E (WP6E) of Study Group 6 of the International Telecommunication Union (ITU) belongs to the radiocommunication sector and deals with terrestrial delivery of all broadcasting services. WP6E met from 29 April–5 May 2004 in Geneva, Switzerland. The meeting was chaired by L. Olson (US) with support from Vice-Chairmen S. Perpar (Slovenia) and Fred Gengaroli, ABA Director Engineering and Technology.**

to refine some of the traditional computer-based frequency planning techniques to enable a greater degree of accuracy in coverage prediction. There is a need to recognise that, whereas analog systems fail rather gracefully, the ‘cliff-edge’ failure characteristics of digital systems can mean that ‘holes’ in DTTB coverage may result from the limits imposed on DTTB transmission power to protect existing analog services. It is important to identify where such holes might occur.

A report, *Preliminary Draft New Report on Coverage Prediction Methods and Planning Software for Digital Terrestrial Television Broadcasting (DTTB) Networks*, is being prepared. The aim is to produce consistent prediction results between related planning organisations while taking advantage of the availability of terrain and clutter data and improvements in computer power. ABA engineers are involved in this process.

Work is also being conducted on handheld reception for DVB (following the recently-announced DVB-H standard); mobile reception; and portable reception for DVB-T.

### Analog to digital transition

The transition from analog to digital is expected to be universal, but the transition will not progress evenly in all areas. The ITU-R could provide updates on related studies, so Working Party 6E considers it particularly useful to identify the development aspects of proposed and existing digital sound and television broadcasting systems that have an impact on all countries, paying particular attention to the introduction of digital receivers. At the same time, it will identify transition techniques from terrestrial analog to digital broadcasting.

