ABA representatives have recently attended a number of conferences gathering insights to a range of issues and disciplines. Here is a selection of reports.

Conference reports

ABU engineering committee meetings 2003, Istanbul

At the conference: the ABA's Director Engineering Fred Gengaroli (far right) during one of the sessions.
ABA's Fred Gengaroli assisted proceedings by being a rapporteur for some of the ABU meeting sessions. In the session called 'Exchange of Technical Information' the ABA also provided an outline of the current status of digital radio in Australia and introduced the executive summary of the Digital Radio Study Group technology update report.

The 40th General Assembly of the Asia Pacific Broadcasting Union (ABU), which includes the annual meeting of the ABU Engineering Committee, was held in Istanbul from 3 to 11 October 2003. The ABA is an affiliate member of the ABU and Fred Gengaroli, Director Engineering and Technology, attended the ABU 2003 Technical Committee meetings, held from 3 to 9 October 2003. At these meetings, decisions and recommendations are made based on proposals made by the members and technical work programs, and contributions to the International Telecommunications Union ITU for the following year are decided. The meetings also provide a forum for exchange of information on technological developments.

Proceedings commenced with the meeting between the chairman of the Technical Committee, Mr Turgay Cakimci of TRT, topic managers and project managers. Of the four topic areas, production, transmission, resource and services and spectrum, the last was probably one of the most discussed, particularly in view of the recently completed World Radio Conference 2003 (WRC-03).[1]

At WRC-03 the issue of broadcast services satellites operation in the band 620 – 790 MHz drew considerable debate, as this use has the potential to interfere with television broadcasting services worldwide (in Australia UHF channels 41 to 65 fall within the 620 – 790 MHz range). The ITU has suspended the processing of satellite filings in this band until the next WRC conference (WRC-07) to allow for suitable sharing criteria for the protection of terrestrial television broadcasting services.

The ABU is also very concerned about this issue and is keen to remain active and informed in this area by preparing proposals and contributions to be submitted to the relevant working parties of ITU-R, WRC-07 and other relevant organisations. As the ABA's Planning Branch is involved in this area , the ABU has asked the ABA to participate.[2]

In looking at compression developments and applications, it was noted that the ongoing developments of MPEG 4 and MPEG 4 Part 10 (also known as H.264 or MPEG 4 AVC) are continuously reducing the required bit rate for a given quality. A standard, such as MPEG 2 and MPEG 4, typically has an improvement cycle life span of five to eight years during which it is constantly updated and improved.

Royalties were also discussed: Japan

1 To see a report on this conference, go to *ABA Update* October 2003, page16.

2 ABA engineers have the leading role in coordinating the activities of the Special Interest Group within the Australian Radiocommunications Study Group dealing with satellite/terrestrial television sharing in the UHF band.

argued strongly that the royalty fees for MPEG 4 are costly and difficult to manage, and suggested other approaches be considered. The ABU subsequently passed a decision to endorse the position of the World Broadcasting Unions WBU-TC, which is opposed to usage-base licensing for MPEG 4 AVC (see box).

Another Japanese presentation, this time on the introduction of digital television, stated that 1 December 2003 at 11 am precisely will see the beginning of digital terrestrial television in the cities of Tokyo, Osaka and Nagoya (comprising approximately 12 million households). The digital television standard in Japan is called Integrated Services Digital Broadcasting – Television or ISDB-T. It is based on the same digital modulation system as our own DVB-T.[3]

A major issue for Japan is the required analog television frequency reallocation of some 801 transmission sites to make room for the new digital channels. The Japanese government has allocated a budget of ¥180 billion (US$1.5 billion) to re-tune television sets and VCRs in the affected households, plus any additional antenna work that may be required. The target year for switching off analog television is 2011.

The session 'File Transfer in Action' addressed the very important topic of metadata in the broadcasting industry, particularly from the point of view of the ongoing convergence between the broadcasting and IT industries. A video on MXF further stressed the importance of metadata in workflow, material sharing and production processes. The Professional MPEG Forum supports MXF and encourages interoperability between the several systems. To this end it was noted that MXF works with all the operating systems and support protocols. Metadata has a crucial role in the areas of interactive broadcasting and archival/retrieval of material. Presentations were made by the BBC (UK), NHK (Japan) and TRT (Turkey).

David Wood of the European Broadcasting Union made an interesting observation: he believes that HDTV in Europe is inevitable as prices for large display units continue to fall.

Mr Nakamura of NHK outlined the work NHK is doing in HDTV mobile reception in conjunction with diversity reception systems. Dr Jinhui Xie of SARFT, China, announced a DRM symposium in Beijing in 2004 and presented an overview of the present situation of digital television and radio in China. In 2000 the three main digital terrestrial television systems from the USA, Europe and Japan (ATSC, DVB-T and ISDB-T respectively) were tested and compared in Beijing. Dr Xie confirmed that China will have a new Chinese digital terrestrial television standard which will differ from the existing ones in the world. Progress on digital radio is almost at a standstill. According to Dr Xie, many people cannot tell the difference between DAB in a car and FM.

MPEG-LA's patent licensing policy

In July 2002, MPEG-LA (Limited Legal Company in Denver, USA), the agent organisation for patent licensing of MPEG-4, announced royalty conditions corresponding to the following three business models:

1. cable television, direct satellite television and over-the-air broadcast that one day may allow a broadcaster to address its broadcast to a specific viewer or subscriber (but not for environments which involve the Internet or are principally intended to be mobile)
2. Internet (wired and wireless) or mobile
3. stored video (packaged media and video transmitted and stored for viewing for which a transactional fee is paid).

In each of these cases, in addition to the hardware fees charged in the past, a use-based royalties or 'streaming fee' will be introduced as a fee for content distribution and related operations.

In the discussion between broadcasters and MPEG-LA, the latter has expressed its position that the services for mobile terminals based on digital terrestrial broadcasting, for which some broadcasters are currently making preparations, fall within the second of the three business models. It has become clear that these mobile services will be subject to use-based royalties.

Use-based royalties are defined according to the number of subscribers or the actual number of hours viewed, but in cases like broadcasting, where the number of receiving parties is very large, the limit of these fees is set at US$1 million per year.

There are plans to establish H.264, which is considered the next MPEG-4 compression and encoding technology, as an international standard by May 2004. In keeping with this trend, MPEG-LA and other organisations have begun preparations for patent licensing of H.264, and are planning to undertake debates regarding whether to introduce use-based royalties for H.264, as in the case of MPEG-4.

3 This is called COFDM (coded orthogonal frequency division multiplex).