



**Paul Treleven**

Treleven obtained a first-class honors degree in electrical engineering from Imperial College, London, in 1972. He started his career in broadcast engineering in the BBC Designs Department, working on projects on vertical interval control data, an OB video switcher and video synchronization equipment. He designed the interpolation system for the BBC's 'ACE' four-field standards converter. In 1979, Treleven started Avitel, a company that designs and manufactures video and audio distribution equipment and timecode equipment. He continued with Avitel as technical director until 2001. He now works as a consultant, mainly for the International Association of Broadcasting Manufacturers (IABM), which sponsors his attendance at SMPTE standards meetings and ABU meetings. He is also a member of the IABM's Technical Task Group. Treleven is a Chartered Engineer, a member of IET, a member of SMPTE, and a member of the U.K.'s National Standards Body for IEC TC100.

## Television Audio Technology (A29)

*Chaired by Paul Treleven*

The scope of A29 covers mechanisms and practices used in the production, processing, recording, reproduction, distribution, and presentation of sound records for television systems. It excludes documenting sound for digital cinema and television sound records on the same media with video records. These are better covered in one document covering the whole format.

### New Work

#### *Amendment to SMPTE 302*

This amendment aims to overcome an interoperability problem caused by a definition in SMPTE 302 section 5.10 that is interpreted by some decoder manufacturers as being absolute; without a tolerance. The work was approved at the Tokyo meeting and the amendment is out to Final Committee Draft (FCD) ballot.

### Work in Progress

#### *Audio Metadata in VANC data*

This project, defining transport of audio metadata (e.g., as defined in RDD 6, see below) in the VANC space of digital TV signals, has expanded considerably from the one approved during the March 2006 St13.14 meeting. It was recognized that the document could not normatively reference an RDD, and that a different method for carrying this metadata existed in the field. To address these issues, and to encourage future equipment to work with both formats, a three-part document structure was adopted:

RP 2020-1: Format of Audio Metadata and Description of Serial Bitstream Transport—the metadata characteristics that are essential to implement the VANC interface for this data.

RP 2020-2: Vertical Ancillary Data Mapping of Audio Metadata, Method A—a VANC mapping with a header byte that provides information about the metadata.

RP 2020-3: Vertical Ancillary Data Mapping of Audio Metadata, Method B—a VANC mapping that encodes the metadata with no additional information.

Part 1 overcomes the need to normatively reference an RDD by including the essential characteristics necessary to make the VANC transport work. It also describes features that are common to both methods and characteristics that allow automatic detection of which method is in use.

The documents will go out to FCD ballot, closing before the June 2007 meetings.

### Audio Channel to Digital Television Recorder (DTR) Track Assignments

The aim of this work is to bring consistency to the industry and makes it much less likely, for example, that the center channel dialog will turn up in the wrong place. The work started with the five-year review of EG26-1995, and grew to contain information from EBU R48 and a new European practice, ITU-

R775-1 and SMPTE 320M, which also dealt with this subject. It was decided in 2002 that EG26 should be promoted to RP26, but, it was later decided, at the September 2006 meeting, that this work should become a new SMPTE standard.

At the Tokyo meetings in March 2007, a proposal was received from Australia to include common “contribution circuit” assignments. These are very different from the existing entries and the proponent is considering whether/how these could be added.

**RP 2005: Equipment Requirements for Compatibility with Non-PCM AES3 Data Streams**

Digital audio (AES3) interfaces are now commonly used to transport non-audio data, as defined in SMPTE 337M, for example. A number of new problems have appeared. Operations such as truncation, addition of dither, sample-rate conversion—which are perfectly legitimate audio operations—change the data stream and destroy a non-audio payload. This document presents a set of guidelines for equipment and systems designers to avoid the problem.

Despite being elevated to Draft Standard status at the February 2006 meeting, the document never proceeded to Trial Publication, so it will be sent to FCD ballot under the new APs, in time for the June 2007 meeting.

## Recently Completed Work

### ***RDD6: Registered Disclosure Document on Audio Metadata***

This Description and Guide to the Use of the Dolby Audio Metadata Serial Bitstream passed Standards Committee ballot. The document is in the final approval loop with the proponent, and publication is expected shortly. The document describes the metadata that accompanies Dolby E and Dolby Digital streams—either embedded or external to the stream. Some metadata elements are for use in professional space, others are transported through to consumer space. It is this metadata that is transported in the VANC space by the methods described in RP 2020 (see above).

### ***SMPTE 276M: Transmission of AES/EBU Digital Audio Signals Over Coaxial Cable***

This document was intended to exploit the ability of analog video DAs to transport the AES3 signal. With increased AES3 bit rates, the decline in the use of analog video DAs and the widespread availability of balanced AES3 DAs, it was decided at the Tokyo meeting to archive this document.

### ***RP222: Control and Review Rooms—Monitor System Electro-acoustic Response***

This document has been archived. There had been a desire to revise the document in line with current practice, but no document editor could be found.