

## **EBU Technical Statement D86-1999**

### **Video compression systems for new disc based camcorders for television**

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**Keywords:** Video compression, video recording

The EBU welcomes the development of new technologies based on disc systems for use in the acquisition of television programmes. The general requirements for disc camcorders are little different from those for camcorders using tape technologies, currently given in EBU Statement D78-1995[1]. (EBU Statement D78 is currently being revised to cover all technologies likely to be introduced in operation in the near or medium term future.)

The EBU accepts that disc-based camcorders will use video compression.

However, the EBU states that it is an essential requirement that the video compression used in camcorders should conform to one of the systems generally used in television. The systems intended for use in television production are given in the recent report of the joint EBU/SMPTE Task force [2] and have been recognised by the EBU [3] [4] [5].

These recognised video compression systems are:

- SX 18 Mbit/s [Sony Corporation]
- DV based compression algorithms 25 Mbit/s [6], 50 Mbit/s [7]
- An agreed version of the 4:2:2 profile of MPEG 50 Mbit/s [8] [9]

The EBU accepts that it may not be possible to meet all the requirements fully today but expects that improvements in technology will allow them to be met in future generations of equipment. It is very important that no other compression system, or any variation of one of the above systems (for instance at a different bit rate), should be used in disc-based camcorders in an attempt to meet all the requirements. If a compromise has to be made during the initial stage of the introduction of a new disc-based camcorder, the compromise should be at the expense of other parameters (recording time, weight, etc.).

The priority is to avoid the introduction of new compression systems-formats into a production chain that is already overcrowded with them.

### **Bibliography**

- [1] EBU Technical Statement D78-1995: **EBU requirements for a future generation of portable digital videocassette recorders for electronic news-gathering (ENG)**
- [2] Special supplement to EBU Technical Review 1998: **Final Report of EBU/SMPTE Task force: Harmonised Standards for the Exchange of Television Programme Material as Bit Streams**
- [3] EBU Technical Statement D79-1996: **Open standards for interfaces for compressed television signals**
- [4] EBU Technical Statement D80-1996: **Compression in Television Programme Production**
- [5] EBU Technical Statement D82-1998: **M-JPEG in Future Networked Television Production**
- [6] SMPTE 306: **Television Digital Recording - 6.35-mm Type D-7 Component Format - Video Compression at 25 Mbit/s - 525/60 and 625/50**

- [7] SMPTE xxx: **Proposed: Digital Video Recording - Video Compression -12.65-mm Type D-9 Component Format - - 525/60 and 625/50 (Digital S)**
  - [8] EBU Technical Statement D84-1999: **Use of 50 Mbit/s MPEG compression in television programme production**
  - [9] EBU Technical Statement D85-1999: **Constraints on MPEG 4:2:2 P@ML compression to ensure interoperability in television production**
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