INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

J.52

Amendment 1
(09/99)

SERIES J: TRANSMISSION OF TELEVISION, SOUND PROGRAMME AND OTHER MULTIMEDIA SIGNALS

Digital transmission of sound-programme signals

Digital transmission of high-quality sound-programme signals using one, two or three 64 kbit/s channels per mono signal (and up to six per stereo signal)

Amendment 1: New Appendix II – Extracts from EBU specification of an ISDN Codec capable of delivering high-quality audio

ITU-T Recommendation J.52 – Amendment 1

(Previously CCITT Recommendation)

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ITU-T RECOMMENDATION J.52

DIGITAL TRANSMISSION OF HIGH-QUALITY SOUND-PROGRAMME SIGNALS USING ONE, TWO OR THREE 64 kbit/s CHANNELS PER MONO SIGNAL (AND UP TO SIX PER STEREO SIGNAL)

AMENDMENT 1

New Appendix II – Extracts from EBU specification of an ISDN Codec capable of delivering high-quality audio

Source

Amendment 1 to ITU-T Recommendation J.52 was prepared by ITU-T Study Group 9 (1997-2000) and was approved under the WTSC Resolution No. 1 procedure on 17 September 1999.

FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

INTELLECTUAL PROPERTY RIGHTS

The ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. The ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, the ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

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New Appendix II – Extracts from EBU specification of an ISDN Codec capable of delivering high-quality audio

(Geneva, 1999)

Insert the following Appendix II at the end of the Recommendation:

Appendix II

Extracts from EBU specification of an ISDN Codec capable of delivering high-quality audio

The members of the EBU have recognized the need to use ISDN equipment implementing ITU-T Recommendation J.52 for the transmission of audio signals.

It was necessary to verify the interworking of equipment from different suppliers in order to allow international transmission. A series of tests was organized during 1997/1998 and it has shown an interworking capability between four codecs from different suppliers, but not at the bit rate required for contribution-quality transmission.

The following items are extracted from the specification defining the broadcasters' user requirements for an ISDN audio codec which allows for a range of transmission quality up to contribution quality:

1) The unit shall be able to work on up to 6 Bearer channels.

2) The unit shall comply with ITU-T Recommendation J.52 including error correction procedure.

3) It is not required to support Ancillary Data at more than 0.5% of the available bandwidth of a given call.

4) The end-to-end coding delay shall not exceed 200 ms when measured via an ISDN simulator or an exchange, in the case of 48 kHz sampling rate.

5) Audio input and output shall be by both analogue and by digital interfaces.

6) The ability to work at 24 kHz sampling when using just one Bearer channel is an advantage.

7) In addition, the ability to work in an asymmetrical configuration using different coding in each direction (MPEG/G.722) in order to optimize the quality and the delay is an advantage.

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