

International Telecommunication Union

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

H.222.0

Corrigendum 2
(03/2009)

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Infrastructure of audiovisual services – Transmission
multiplexing and synchronization

Information technology – Generic coding of moving
pictures and associated audio information: Systems

**Technical Corrigendum 2 – Correction of
transfer rate Rx_n in the T-STD model**

Recommendation ITU-T H.222.0 (2006) – Technical
Corrigendum 2



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**Information technology – Generic coding of moving pictures and
associated audio information: Systems**

Technical Corrigendum 2

Correction of transfer rate R_{x_n} in the T-STD model

Summary

This corrigendum corrects the transfer rate R_{x_n} in the T-STD model for Rec. ITU-T H.264 | ISO/IEC 14496-10 video, when HRD parameters (from Annex E) are used instead of the default parameters (from Annex A) for buffer management. The transfer rate R_{x_n} was missing the multiplicative factor 1.2, and this would have caused rate management issues for re-multiplexers that had to comply to the HRD parameters for T-STD management instead of default parameters (when HRD data was not signalled in the VUI).

Source

Corrigendum 2 to Recommendation ITU-T H.222.0 (2006) was approved on 16 March 2009 by ITU-T Study Group 16 (2009-2012) under Recommendation ITU-T A.8 procedure. An identical text is also published as Technical Corrigendum 2 to ISO/IEC 13818-1.

FOREWORD

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 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.

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**INTERNATIONAL STANDARD
RECOMMENDATION ITU-T****Information technology – Generic coding of moving pictures and
associated audio information: Systems****Technical Corrigendum 2****Correction of transfer rate R_{x_n} in the T-STD model****1) Clause 2.14.3.1**

Replace the definition of R_x in clause 2.14.3.1 with:

Rate R_{x_n} :

when there is no data in TB_n then R_{x_n} is equal to zero.

Otherwise: $R_{x_n} = \text{bit_rate}$

where bit_rate is $1.2 \times \text{BitRate}[\text{SchedSelIdx}]$ of data flow into the CPB for the byte stream format signalled in the NAL $\text{hrd_parameters}()$ carried in VUI parameters in the AVC video stream. Annex E of Rec. ITU-T H.264 | ISO/IEC 14496-10 specifies SchedSelIdx to be in the range from 0 to cpb_cnt_minus1 and the rate R_{x_n} should be verified for each value of $\text{BitRate}[\text{SchedSelIdx}]$, if multiple values are present in the NAL $\text{hrd_parameters}()$. If NAL $\text{hrd_parameters}()$ are not present in the AVC video stream, then the bit_rate shall be the bit rate $1200 \times \text{MaxBR}[\text{level}]$ defined in Annex A of Rec. ITU-T H.264 | ISO/IEC 14496-10 for the level of the AVC video stream.

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