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STANDARDIZATION SECTOR
OF ITU

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SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS

Infrastructure of audiovisual services – Coding of moving
video

Video coding for low bit rate communication

ITU-T Recommendation H.263

(Previously CCITT Recommendation)

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VIDEO CODING FOR LOW BIT RATE COMMUNICATION

Summary

This Recommendation specifies a coded representation that can be used for compressing the moving picture component of audio-visual services at low bit rates. The basic configuration of the video source coding algorithm is based on Recommendation H.261 and is a hybrid of inter-picture prediction to utilize temporal redundancy and transform coding of the remaining signal to reduce spatial redundancy. The source coder can operate on five standardized video source formats: sub-QCIF, QCIF, CIF, 4CIF and 16CIF, and can also operate using a broad range of custom video formats.

The decoder has motion compensation capability, allowing optional incorporation of this technique in the coder. Half pixel precision is used for the motion compensation, as opposed to Recommendation H.261 where full pixel precision and a loopfilter are used. Variable length coding is used for the symbols to be transmitted.

In addition to the basic video source coding algorithm, sixteen negotiable coding options are included for improved compression performance and the support of additional capabilities. Additional supplemental information may also be included in the bitstream for enhanced display capability and for external usage.

Source

ITU-T Recommendation H.263 was revised by ITU-T Study Group 16 (1997-2000) and was approved under the WTSC Resolution No. 1 procedure on the 6th of February 1998.

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.

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As of the date of approval of this Recommendation, the ITU had 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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