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

Interactive systems for digital television distribution

Multiplexing format for webcasting on the TCP/IP network

ITU-T Recommendation J.123

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ITU-T Recommendation J.123

Multiplexing format for webcasting on the TCP/IP network

Summary

This Recommendation provides a multiplexing format appropriate for audio and video transmission by download-based protocol over TCP/IP without any session control protocols between server and client. However, when session control protocols are not used, some necessary information should be added to the media data. Therefore, this Recommendation defines a multiplexing format particular to webcasting on the TCP/IP. This format carries metadata, digital rights management (DRM) information and formatted text as well as audio and video bitstreams.

Source

ITU-T Recommendation J.123 was prepared by ITU-T Study Group 9 (2001-2004) and approved under the WTSA Resolution 1 procedure on 29 July 2002.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. 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 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.

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, 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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ITU-T Recommendation J.123

Multiplexing format for webcasting on the TCP/IP network

1 Scope

This Recommendation defines a multiplexing format appropriate for audio and video transmission by download-based protocol over TCP/IP. By this format, webcasting on TCP/IP network is realized without any session control protocols between server and client.

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

2.1 Normative reference

- [1] ISO/IEC 14496-1:2001, *Information technology – Coding of audio-visual objects – Part 1: Systems*.

2.2 Informative references

- [2] ITU-T Recommendation J.120 (2000), *Distribution of sound and television programs over the IP network*.
- [3] ISO/IEC 14496-2:2001, *Information technology – Coding of audio-visual objects – Part 2: Visual*.
- [4] ISO/IEC 13818-3:1998, *Information technology – Generic coding of moving pictures and associated audio information – Part 3: Audio*.
- [5] IETF RFC 2068 (1997), *Hypertext Transfer Protocol – HTTP/1.1*.

3 Terms and definitions

This Recommendation defines the following terms:

- 3.1 box:** An object-oriented building block defined by a unique type identifier and length (called 'atom' in the reference [1]).
- 3.2 chunk:** A contiguous set of samples for one track.
- 3.3 container box:** A box whose sole purpose is to contain and group a set of related boxes.
- 3.4 movie box:** A container box whose sub-boxes define the metadata for a presentation ('moov').
- 3.5 media data box:** A container box which can hold the actual media data for a presentation ('mdat').
- 3.6 presentation:** One or more motion sequences, possibly combined with audio.
- 3.7 sample:** An individual frame of video, or a time-contiguous compressed section of audio.