



Recommendation ITU-R BT.1887
(03/2011)

**Carriage of IP packets in MPEG-2 transport
streams in multimedia broadcasting**

BT Series
Broadcasting service
(television)



International
Telecommunication
Union

Documents

Document Sharing Hub

Foreword

The role of the Radiocommunication Sector is to ensure the rational, equitable, efficient and economical use of the radio-frequency spectrum by all radiocommunication services, including satellite services, and carry out studies without limit of frequency range on the basis of which Recommendations are adopted.

The regulatory and policy functions of the Radiocommunication Sector are performed by World and Regional Radiocommunication Conferences and Radiocommunication Assemblies supported by Study Groups.

Policy on Intellectual Property Right (IPR)

ITU-R policy on IPR is described in the Common Patent Policy for ITU-T/ITU-R/ISO/IEC referenced in Annex 1 of Resolution ITU-R 1. Forms to be used for the submission of patent statements and licensing declarations by patent holders are available from <http://www.itu.int/ITU-R/go/patents/en> where the Guidelines for Implementation of the Common Patent Policy for ITU-T/ITU-R/ISO/IEC and the ITU-R patent information database can also be found.

Series of ITU-R Recommendations

(Also available online at <http://www.itu.int/publ/R-REC/en>)

Series	Title
BO	Satellite delivery
BR	Recording for production, archival and play-out; film for television
BS	Broadcasting service (sound)
BT	Broadcasting service (television)
F	Fixed service
M	Mobile, radiodetermination, amateur and related satellite services
P	Radiowave propagation
RA	Radio astronomy
RS	Remote sensing systems
S	Fixed-satellite service
SA	Space applications and meteorology
SF	Frequency sharing and coordination between fixed-satellite and fixed service systems
SM	Spectrum management
SNG	Satellite news gathering
TF	Time signals and frequency standards emissions
V	Vocabulary and related subjects

Note: This ITU-R Recommendation was approved in English under the procedure detailed in Resolution ITU-R 1.

Electronic Publication
Geneva, 2011

© ITU 2011

All rights reserved. No part of this publication may be reproduced, by any means whatsoever, without written permission of ITU.

RECOMMENDATION ITU-R BT.1887

**Carriage of IP packets in MPEG-2 transport streams
in multimedia broadcasting**

(Question ITU-R 45-2/6)

(2011)

Scope

This Recommendation deals with carriage of IP packets in MPEG-2 transport streams in digital multimedia broadcasting. Specifications are given for encapsulation techniques and IP header compression techniques.

The ITU Radiocommunication Assembly,

considering

- a) that various kinds of signals for multimedia services may be delivered in digital broadcasting;
- b) that ITU-T Recommendation H.222.0 (MPEG-2 systems) is adopted as service transport and service multiplex methods of most digital broadcasting systems;
- c) that an IP packet has become another transport method for various kinds of signals with the increasing growth of IP-based telecommunication networks;
- d) that there is a growing demand to harmonize broadcasting services with telecommunication services;
- e) that for existing digital broadcasting systems that only support MPEG-2 transport stream as their input stream format, it is desirable to have the capability of carrying IP packets into an MPEG-2 transport stream;
- f) that it is desirable to limit the number of different encapsulation schemes across different broadcasting systems,

recommends

- 1 that for carriage of IP packets in MPEG-2 transport streams in multimedia broadcasting, the encapsulation schemes described in Annex 1 should be used;
- 2 that compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (e.g. to ensure interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words “shall” or some other obligatory language such as “must” and the negative equivalents are used to express requirements. The use of such words shall in no way be construed to imply partial or total compliance with this Recommendation.

Annex 1

Carriage of IP packets in MPEG-2 transport streams in multimedia broadcasting

References

Normative references

- [1] ITU-T Recommendation H.222.0 (2006) – Information technology – Generic coding of moving pictures and associated audio information: Systems.
- [2] ISO/IEC 13818-6 (1998) – Information technology – Generic coding of moving pictures and associated audio information – Part 6: Extensions for DSM-CC.
- [3] Recommendation ITU-R BT.1869 (2010) – Multiplexing scheme for variable-length packets in digital multimedia broadcasting systems.
- [4] ETF RFC 3095 (July 2001): Robust Header Compression (ROHC): Framework and four profiles: RTP, UDP, ESP, and uncompressed.
This IETF standard is available at the following address: <http://www.ietf.org/rfc/rfc3095.txt>
- [5] IETF RFC 4326 (December 2005): Unidirectional Lightweight Encapsulation (ULE) for Transmission of IP Datagrams over an MPEG-2 Transport Stream (TS).
This IETF standard is available at the following address: <http://www.ietf.org/rfc/rfc4326.txt>
- [6] ATSC Doc. A/90 (July 2000): ATSC Data Broadcast Standard.
- [7] ATSC Doc. A/92 (January 2002): ATSC Standard: Delivery of IP Multicast Sessions over ATSC Data Broadcast.
- [8] ETSI EN 301 192 v1.5.1 (2009-11): Digital Video Broadcasting (DVB); DVB specification for data broadcasting.
- [9] IETF RFC 791 (September 1981): Internet Protocol.
This IETF standard is available at the following address: <http://www.ietf.org/rfc/rfc791.txt>
- [10] IETF RFC 2460 (December 1998): Internet Protocol, Version 6 (IPv6) Specification.
This IETF standard is available at the following address: <http://www.ietf.org/rfc/rfc2460.txt>
- [11] ISO/IEC 8802-2 (1998): Information technology – Telecommunications and information exchange between systems – Local and metropolitan area networks – Specific requirements – Part 2: Logical link control.
- [12] ISO/IEC TR 8802-1 (2001): Information technology – Telecommunications and information exchange between systems – Local and metropolitan area networks – Specific requirements – Part 1: Overview of Local Area Network Standards.
- [13] ITU-T Recommendation J.122 (2007) – Second-generation transmission systems for interactive cable television services – IP cable modems.
- [14] ITU-T Recommendation J.222.2 (2007) – Third-generation transmission systems for interactive cable television services – IP cable modems: MAC and Upper Layer protocols.