

TECHNICAL REPORT



**Cable networks for television signals, sound signals and interactive services –
Part 201: A study of IPTV systems with examples and applications for optical
broadcast services**





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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CABLE NETWORKS FOR TELEVISION SIGNALS,
SOUND SIGNALS AND INTERACTIVE SERVICES –****Part 201: A study of IPTV systems with examples and applications for
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IEC TR 60728-201 has been prepared by technical area 5: Cable networks for television signals, sound signals and interactive services, of IEC technical committee 100: Audio, video and multimedia systems and equipment. It is a Technical Report.

The text of this Technical Report is based on the following documents:

Draft	Report on voting
100/4073/DTR	100/4103/RVDTR

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Technical Report is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 60728 series, published under the general title *Cable networks for television signals, sound signals and interactive services*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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CABLE NETWORKS FOR TELEVISION SIGNALS, SOUND SIGNALS AND INTERACTIVE SERVICES –

Part 201: A study of IPTV systems with examples and applications for optical broadcast services

1 Scope

This part of IEC 60728 describes the technical background of IPTV systems and commercially available products related to audio, video and multimedia systems and equipment to enable cable operators and customers to understand current IPTV systems that include application, middleware, network, equipment and terminal devices. This document is to encourage all TA5 experts to develop new IS related to IPTV system over optical broadcast network. This Technical Report examines the mechanisms of IPTV systems developed by major standards development organizations (SDOs) and known national regulations. This document concludes with observations and recommendations for the potential future technical standards development activities especially for TA5 under the scope of TC 100.

The purpose of this TR is to give cable operators an appropriate way how to adopt IPTV services with current FTTH system recognizing that optical system is the best solution for the effective transmission of 4K and 8K video signals. This TR gives an overall but essential information on current IPTV systems to cable operators; however, too much detailed information is omitted due to the limitation of document size. The author of this document recommends the cable operator who plans to develop IPTV services to study the original international standards shown in this document. It also describes a migration from the HFC to FTTH system for effective introduction to IPTV services.

DOCSIS 4.0 can be considered on HFC as an alternative way to provide 10Gbps service. If bandwidth and other constraints (without Amp, etc.) are cleared, the IPTV service described in this document can of course be provided.

In addition to present international standards and recommendations, this document describes some major technology supporting IPTV services such as unicast, multicast, ABR (Adapting Bit Rate) and MPEG-DASH. The experiment of 4K and 8K video transmission over IP, virtual STB are also described.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
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