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# Information technology — Mobile multicast communications: Framework

*Technologies de l'information — Communications de diffusion groupée mobile: cadre de travail*

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Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
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# Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 24793-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems*, in collaboration with ITU-T. The identical text is published as ITU-T Rec. X.604 (2010).

ISO/IEC 24793 consists of the following parts, under the general title *Information technology — Mobile multicast communications*:

— *Part 1: Framework*

— *Part 2: Protocol over native IP multicast networks*


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**INTERNATIONAL STANDARD**
**RECOMMENDATION ITU-T**

# Information technology – Mobile multicast communications: Framework

## 1 Scope

This Recommendation | International Standard describes the mobile multicast communications (MMC), which can be used to support a variety of multimedia multicasting services in IP-based wireless mobile networks as well as wired fixed networks. MMC targets real-time, one-to-many multicast services and applications over mobile communications networks. This implies that MMC focuses on multicast services rather than broadcast services, and that only authenticated users could be allowed in the multicast session. MMC also considers the one-to-many multicast session wherein a single multicast sender is allowed in the session rather than many-to-many multicast services. In addition, MMC is targeted in the real-time multicast session rather than the reliable multicast session; the timely delivery of multicast data is considered a key factor.

This Recommendation | International Standard specifies the MMC framework as part of the MMC standard describing the framework and functional architecture of MMC. Based on this framework, the two protocols for MMC will be developed in two parts of the MMC project: protocol over native IP multicast networks and protocol over overlay multicast networks.

## 2 Normative references

The following Recommendations and International Standards contain provisions which, through reference in this text, constitute provisions of this Recommendation | International Standard. At the time of publication, the editions indicated were valid. All Recommendations and Standards are subject to revision, and parties to agreements based on this Recommendation | International Standard are encouraged to investigate the possibility of applying the most recent edition of the Recommendations and Standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards. The Telecommunication Standardization Bureau of the ITU maintains a list of currently valid ITU-T Recommendations.

- Recommendation ITU-T X.603 (2004) | ISO/IEC 16512-1:2005, *Information technology – Relayed multicast protocol: Framework.*
- Recommendation ITU-T X.603.1 (2007) | ISO/IEC 16512-2:2008, *Information technology – Relayed multicast protocol: Specification for simplex group applications.*

The following IETF standard track RFCs specify the multicast forwarding capability in IP multicast networks:

- IETF RFC 2236 (1997), *Internet Group Management Protocol, Version 2, Proposed Standard*.
- IETF RFC 3810 (2004), *Multicast Listener Discovery Version 2 (MLDv2) for IPv6, Proposed Standard*.
- IETF RFC 4601 (2006), *Protocol Independent Multicast – Sparse Mode (PIM-SM): Protocol Specification (Revised), Proposed Standard*.