



ISG MBC ToR – May 2016

From: Founding members of an ISG on 'Mobile and Broadcast Convergence' (MBC)

To: ETSI Director General

Subject: Terms of Reference of the Industry Specification Group on 'Mobile and Broadcast Convergence' (ISG MBC)

These Terms of Reference were approved by the ETSI Director-General along with the ISG MBC creation on 11 May 2016, after ETSI Board consultation. The ETSI D-G appointed David Hendon (ICS) as Convenor for the first meeting.

1 References

TWP clause 3	Operation of Industry Specification groups
TWP clause 3.2	Creation and Termination of an Industry Specification Group
TWP Annex D 3	Requirements for an Industry Specification Group

2 Rationale

TV delivery has traditionally been dependent on one-way, one-to-many delivery networks to fixed TV sets (i.e. broadcasting). Nowadays, an increasing number of consumers watch linear or non-linear content on their traditional home screens, as well as linear or non-linear content on their smart-phones and tablets. Although much of this content is currently delivered via Wi-Fi networks, these new forms of media consumption dramatically increase the load of mobile networks. This situation may require new solutions, such as the leveraging of a one-to-many broadcasting approach.

In the future, mobile devices will probably rely on a combination of mobile broadband, fixed broadband, Wi-Fi, broadcast network infrastructure and local storage. In essence, this convergence of technologies could mean that consumers will become "technology neutral".

The existing 3G and 4G mobile networks can deliver video services but were primarily designed for two-way and one-to-one services. While they have been extended by a broadcast service (MBMS) that may deliver content to an arbitrary number of mobile viewers in a typical cell, there are opportunities for further work on delivering linear video content to large numbers of simultaneous viewers (in the same cell or across many cells).

Ongoing work in 3GPP is intended to further improve the efficiency of eMBMS for the delivery of mass video traffic but there is increasing interest in exploring the potential for developing future mobile and broadcasting standards in a more converged way. Future standards evolution (such as 5G) could, in principle, enable a highly efficient delivery of mass video traffic through a one-to-many "broadcast" delivery scheme, built upon co-operation between and/or convergence of broadcast and mobile networks.

Rapid delivery by the ISG of the requirements for media delivery over converged networks could be very beneficial to the on-going work on Enhanced TV Services and eMBMS in 3GPP as well as the development of 5G standards.



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3 Terms of Reference for ETSI ISG MBC [TWP D.3, Part Aa)]

3.1 Scope

This ISG will produce a comprehensive report exploring the deployment and business models of converged networks from the perspectives of all interested parties, especially including broadcasters, terrestrial broadcast network operators, mobile network operators, satellite broadcast network operators, content owners/providers, network infrastructure vendors, manufacturers of consumer equipment and consumers.

The ISG will take into account the potential benefits and challenges from commercial and technical perspectives.

The ISG should specify the requirements supporting delivery of media including linear and non-linear elements over converged networks.

It is important to note that the role of the ISG will exclude development of technical standards.

The ISG will not make recommendations about spectrum allocations. However spectrum authorisation models which impact the regulatory framework and/or business model may need to be considered in the ISG work.

As a starting point, the ISG should review existing, related work in this area.

The ISG should consider the viewpoints of consumers.

The ISG will be open to all interested parties, including non-members of ETSI.

3.2 Membership

Membership is restricted in accordance with Clause 3.4 of the ETSI Technical Working Procedures to ETSI Full/Associate members and applicants for Full/Associate membership [hereafter "ISG MBC Member(s)"], who have signed the ISG MBC Membership Agreement.

Observers and non-members of ETSI may participate in the ISG according to the rules as described in the ISG MBC Participant Agreement (see clause 3.7.1 below). Participation of non-members of ETSI [hereafter "ISG MBC Participant(s)"] is subject to signature of the ISG Participant Agreement, and payment of a per-physical meeting participation fee as described in the ISG Participant Agreement.

ISG MBC Member(s) and ISG MBC Participant(s) together will be defined as ISG MBC member(s).

3.3 Dues

Dues for membership and operation are fixed on an annual basis by the ISG MBC members, based on the costs the ISG MBC members anticipate to incur. Without prejudice to section 3.2 above, currently, no or minimal annual dues are anticipated.

3.4 Duties and Rights of ISG members

ISG MBC Members and ISG MBC Participants have the duty to constructively cooperate in compliance with all applicable competition law rules on the development of ISG Group Reports within the scope of the ISG as described in 3.1.

The Chairman of the ISG is responsible for both external communication and internal reporting obligation to ETSI.



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Any communication outside the ISG itself by the Chairman and/or by its members shall be made in coordination with the Secretariat of ETSI.

It is accepted that an ISG can have its own valuable opinion which can differ from ETSI's opinion therefore in case of external communication, the Chairman shall ensure that such communication is clearly made by the ISG and marked as such for avoiding any confusion of representation with ETSI.

In the case of a public consultation, the Chairman of the ISG shall beforehand coordinate with the ETSI Director-General. In the case of response the Chairman of the ISG shall ensure that such response is clearly specified as coming from the ISG and differentiated from ETSI's answer.

ISG MBC Members have the right to cast their vote on the approval of a Group Report when necessary, and in other instances when decisions by the ISG MBC Members are required. ISG MBC Members have the right to appeal directly to the ETSI Board to challenge a Chairman's decision and shall inform the ISG Chairman and the ETSI Director-General beforehand.

3.5 Participant Fee

The ISG MBC Participant shall pay to ETSI a per-physical meeting attendance fee amounting to €100.- (excluding taxes) per delegate per physical meeting day in 2016. These fees will be increased by ETSI to €200.- (excluding taxes) per delegate per physical meeting day from January 1st, 2017 onwards.

3.6 Preparation of Group Reports

Group Reports are prepared within the ISG MBC or within specific working groups. Working groups are chaired by working group chairs, who are appointed according to the rules of operation of the ISG. All draft Group Reports should be approved by Consensus by the ISG MBC members according to the rules of operation of the ISG. In case Consensus cannot be achieved then article 3.7.3 applies. If a Group Report is prepared in a working group and fails to be approved by the ISG MBC members, it is referred back to the working group.

3.7 Detailed deviations from the ETSI Technical Working Procedures (TWP)

In the following, deviations from the applicable ETSI TWP as agreed by the ISG MBC Founding Members, are stipulated.

3.7.1 Participation in the work of the Industry Specification Group (extension of TWP 3.4)

Observers or non-members of ETSI must agree to and sign the ISG MBC Participant Agreement in order to be authorized to participate. The ISG MBC Participant Agreement will be terminated if the ISG MBC Participant has not participated in at least 2 physical meetings of the ISG MBC in a 6 months period, or if there are not 2 physical meetings in a 6 months period but only in a longer period, if the participant has not participated in 2 physical meetings of the ISG MBC in such longer period. A revocation notice under article 9.1 (c) of the ISG MBC Participant Agreement is sent to the ISG MBC Participant in this case. The ISG MBC Chairman will periodically review the participation record of authorized ISG MBC Participants.

Access to meeting documents, mailing lists etc. will be removed from authorized ISG MBC Participants if they fail to participate in, or register and pay participation fees for 2 successive meetings, in the time period mentioned above.



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3.7.2 Convening an ISG meeting (TWP 3.5)

3.7.2.1 Invitation to an Industry Specification Group meeting (TWP 1.5.1)

The invitation to an Industry Specification Group meeting and the necessary logistical information shall be disseminated by the hosting organization at least 21 days before the meeting to all on the Industry Specification Group membership list (see clause 3.7.2.5).

The first meeting of a new Industry Specification Group will be announced in a Collective Letter, with at least 30 days notice, by the ETSI Secretariat.

3.7.2.2 Agenda for an Industry Specification Group meeting (TWP 1.5.2)

The draft agenda shall be disseminated by the responsible Chairman to all on the Industry Specification Group membership list at least 21 days before a meeting. The draft agenda shall include details of draft ETSI Group Reports for approval and officials for appointment. Any other subject matters where voting may be required shall also be included and indicated in the draft agenda.

The draft agenda for the first meeting of a new Industry Specification Group will be announced in a Collective Letter, with at least 30 days' notice, by the ETSI Secretariat.

3.7.2.3 Documentation for an Industry Specification Group meeting (TWP 1.5.3)

Documents shall be numbered as shown in the following example:

ETSI/MBC(nn)x

This numbering system has three logical elements:

- 1) **ETSI:** to indicate that it is an ETSI document;
- 2) **MBC:** the name of the Industry Specification Group or related Working Group;
- 3) **(nn):** to indicate the year, e.g. (16);
- 4) **x:** to indicate any additional information concerning the unique number of the document or its status, etc

3.7.2.4 Registration for an Industry Specification Group meeting (TWP 1.5.4)

Every attendee shall register prior to the meeting using the Meetings Application on the ETSI Portal or on arrival at the meeting. Where registration is made on arrival at the meeting each Attendee representing an ISG MBC Member or ISG MBC Participant shall declare the precise name of that ISG MBC Member or ISG MBC Participant. An Attendee may only represent one ISG MBC Member or one ISG MBC Participant.

3.7.2.5 Maintaining an Industry Specification Group membership list (TWP 1.5.5)

The MBC Industry Specification Group shall maintain a membership list within an email exploder list established specifically for that purpose. Any individual may join this email exploder list if he/she is a representative of a legal entity that has signed an ISG MBC Member or Participant agreement and has an ETSI server user account, and those who join this email exploder list will be considered as being on the Industry Specification Group membership list. Without prejudice to article 3.7.1 above, failure to reconfirm the intention to remain on the email exploder list at regular intervals (lists are normally reviewed every six months) will result in removal from this email exploder list and thus from the Industry Specification Group membership list.

The Industry Specification Group membership list shall be used for the dissemination of information and for decision making within the Industry Specification Group.



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3.7.3 Decision making (TWP 1.7 and TWP 3.7)

3.7.3.1 Principles of decision making (TWP 1.7.1)

The ISG MBC shall endeavour to reach Consensus on all issues, including the approval of draft ETSI Group Reports. If Consensus cannot be achieved, the Chairman can decide to take a vote which may be performed by a secret ballot. A vote may be conducted during an ISG MBC meeting or by correspondence.

Where voting is used, vote results shall be evaluated by the Chairman on the basis of one ISG MBC Member, one vote. ISG MBC Participants do not have the right to vote.

Decisions concerning (i) the ISG MBC budget under Article 3.1(b) of the ISG MBC Member Agreement, (ii) Additional Costs under Article 3.1(c) of the ISG MBC Member Agreement, and (iii) the allocation of costs among ISG MBC Members under Article 3.2 of the ISG MBC Member Agreement, require unanimous support. For all other decisions, except for the appointment of officials of the ISG MBC, a proposal shall be deemed to be approved if 71 % of the votes cast by the ISG MBC Members are in favour. Abstentions or failure to submit a vote shall not be included in determining the number of votes cast.

3.7.3.1.1 Voting during an ISG MBC meeting (TWP 1.7.1.1)

The following procedures apply for voting during an ISG MBC meeting:

- before voting, a clear definition of the issues shall be provided by the chairman;
- voting ISG MBC Members shall only be entitled to one vote per ISG MBC Member;
- if a voting ISG MBC Member has more than one representative present, only one representative may vote;
- if manual voting procedures are used, each voting ISG MBC Member may only cast the vote once; if electronic voting procedures are used, votes may be changed prior to the closure of the vote;
- ISG MBC Members are only eligible for voting (voting members), if they have been present during at least 1 out of the previous 2 physical meetings;
- Founding members of the ISG MBC shall be eligible to vote during and up to the end of the first 2 physical meetings following the creation of the ISG. Thereafter they are subject to the above participation requirements as for all other ISG MBC Members;
- voting by proxy is not permitted;
- there are no quorum requirements;
- the voting weight shall be 1 per voting ISG MBC Member;
- the result of the vote shall be recorded in the meeting report.

3.7.3.1.2 Voting by correspondence (TWP 1.7.1.2)

The following procedures apply for voting by correspondence:

- before voting, a clear definition of the issues shall be provided by the Chairman and disseminated to all on the ISG MBC membership list;
- the voting period shall be defined by the ISG MBC Chairman and communicated to all on the ISG MBC membership list;
- ISG MBC Members are only eligible for voting (voting members), if they have been present during at least 1 out of the previous 2 physical meetings;
- Founding members of the ISG MBC shall be eligible to vote during and up to the end of the first 2 physical meetings following the creation of the ISG. Thereafter they are subject to the above participation requirements as for all other ISG MBC Members;
- voting members shall only be entitled to one vote per ISG MBC Member;
- electronic voting only shall be used for voting by correspondence;
- votes may be changed prior to the closure of the vote;



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- the voting weight shall be 1 per voting ISG MBC Member;
- there are no quorum requirements;
- at the end of the voting period the Chairman shall count the votes using the majority described in clause 3.7.3.1 above;
- the result of the vote should be disseminated to everybody on the ISG membership list within 15 days.

3.7.3.1.3 Voting for the election of an ISG MBC official (TWP 1.7.1.3)

For the purpose of electing any ISG MBC official the procedures given in clauses 3.7.3.1, 3.7.3.1.1 and 3.7.3.1.2 shall apply.

In the case where there is more than one candidate, a secret ballot shall be used. For interpreting the result of an election for an ISG MBC official the candidate obtaining the highest number of votes in the ballot is elected.

In addition to performing its task in strict impartiality and in the interest of ETSI, the ISG MBC Chairman shall be responsible for the voting process and shall ensure that confidentiality is maintained.

If the vote is conducted during an ISG MBC meeting only the final result shall be recorded in the meeting report.

If the vote is conducted by correspondence only the final result of the vote shall be disseminated.

3.7.3.2 Appealing against a Chairman's decision (TWP 1.7.2)

Any ISG MBC Member who is against the Chairman's ruling on a vote may submit its case to the Board for decision. In such cases the ISG MBC Member shall also inform the Industry Specification Group Chairman and the ETSI Director General beforehand.

When the Industry Specification Group Chairman has made a ruling, his decision shall be taken as the basis for future operations, unless overturned by the Board.

4 ETSI field of interest [TWP D.3, Part Ab)].

The ETSI field of interest is developing relationships and harmonised action plans with other standards bodies on *mobile and broadcast convergence*.

5 Why any overlapping or complementary elements (with reference to existing work or Terms of Reference of any existing Technical Committee or Project) is regarded as desirable [TWP D.3, Part Ac)]

The work of the ISG MBC would be complementary with existing work in ETSI. There is no known overlapping with any ongoing work in ETSI.

6 Time plan [TWP D.3, Part Ad)]

The ISG MBC intends to hold an initial meeting within 12 weeks of formation to appoint the Chairman. The ISG MBC intends to meet thereafter in person or by teleconference to produce Group Reports.

After 2 years, ISG MBC will make proposals on how to evolve the ISG MBC's future activities:

- close the ISG,
- or transfer and continue the work in an existing Technical Body,



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- or create a new Technical Body (new WG in a TC, new TC, new EP or new EPP)
- or continue in ISG MBC for an extended period with revised Terms of Reference.

7 Chairmanship [TWP D.3, Part Ae)]

David Hendon as representative of ICS has accepted to stand as convenor for the first meeting. The Collective Letter announcing the first meeting will include a call for candidates for the Chairmanship. If it is not possible to appoint a permanent Chairman at the first meeting then the meeting shall appoint a convenor for the second meeting. The term of chairmanship is 1 year.

8 Resource requirements [TWP D.3, Part Af)]

No resource requirements, beyond the "basic administrative support" provided by the ETSI Secretariat to ISGs, have been identified. Further resource requirements may be identified from time to time by the ISG MBC members, who will decide on the funding arrangements as required.

9 ETSI Secretariat resources [TWP D.3, Part Ag)]

"Basic administrative support" will be provided by the ETSI Secretariat, e.g.:

- info/meeting/document handling area on the ETSI Portal.
- document storage area on the ETSI DOCBOX server.
- e-mail lists provision
- entry of the Work Items into the WPM database .
- processing/publication of ETSI Group Reports (providing they have respected the ETSI Drafting Rules).
- a support officer will be allocated to provide guidance and assistance to the ISG.

Support for meetings will be provided when the meeting is held at the ETSI Headquarters, e.g.:

- meeting rooms in ETSI premises.
- meeting support for invitations, badges, etc. in ETSI premises.
- tea/coffee in ETSI premises.

Meetings held outside of the ETSI Headquarters shall be supported by the hosting ISG MBC member organization.

10 ISG membership agreement [TWP D.3, Part Ah)]

See separate ISG MBC Agreements (Member Agreement and Participant Agreement).

11 ETSI full and/or associate members having declared their willingness to provide resources [TWP D.3, Part Ba)]

The following ETSI members ('founding members') have indicated that they are willing to provide resources to support the work of this ISG MBC:

- BBC
- Digital TV Group
- EBU



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- Ericsson Limited
- Huawei Technologies (UK) Co., Ltd
- ICS (Institute for Communication Systems - University of Surrey)
- Nokia Networks
- Samsung R&D Institute UK
- Sony Europe Limited
- TDF
- THALES

12 Planned deliverables and their delivery dates shall be identified [TWP D.3, Part Bb)]

The intention is to deliver (a) Group Report(s) (GR).

13 Internal organization [TWP D.3, Part Bc)]

No internal organization or Working Groups have yet been identified. This will depend on the results of the initial work of the ISG.

14 Any committee/project-external ETSI resources required (i.e. outside those provided by the Industry Specification Group participants) shall be specified [TWP D.3, Part Bd)]

No additional resources required.

15 Maintenance arrangements for deliverables shall be specified [TWP D.3, Part Be)]

At the end of the work the ISG shall define the follow-on responsibility for any required maintenance.

16 The relationship with ETSI Technical Organisation shall be specified (i.e. list the interfaces between the ISG and ETSI TBs) [TWP D.3, Part Bf)]

Initially liaisons are envisaged with the following entities:

- JTC Broadcast
- TC ATTM
- TC Cable
- TC PLT
- TC NTECH
- ISG ECI
- ISG CCM
- 3GPP

Other liaisons with external organisations include:

- DVB