



Future of Broadcast Terrestrial Television Initiative

Memorandum of Understanding

(Revised 11 September 2016)

Considering:

- that from monochrome to colour, and from analogue to digital, television technology has undergone revolutionary changes. In the analogue age, colour television technology fragmented into three major systems (PAL, NTSC and SECAM, with many sub-variations). In the digital age, the splintering has continued across the globe with multiple, separately developed digital systems. While television has prospered, it has not been possible for the world to take full advantage of the convenience and economies of scale of a single broadcast standard.
- that terrestrial broadcasting is uniquely important because it is wireless (supports receivers that can move), infinitely scalable (point-to-multipoint and one-to-many architecture), local (capable of delivering geographically local content), timely (provides real time and non-real time delivery of content) and flexible (supports free-to-air and subscription services). The attribute of wireless delivery of media content to a potentially unlimited number of receivers makes terrestrial broadcasting a vital technology all over the world. Broadcasting is, in fact, the most spectrum-efficient wireless delivery means for popular real-time and file-based media content.
- that today, technological innovation may be able to break down many of the long-standing barriers that have prevented common systems. This could enable removing the gaps between the different television signal formats and transmission systems used around the world. The 21st Century is an era of integration of broadcasting, internet, and communications, all of which have evolved in parallel. Consumers are calling for more convenient and user-friendly services. The development of digital technology opens the possibility of cooperation among all the different networks and transmission systems.
- this is a defining moment for the terrestrial television broadcast industry.

The Future of Broadcast Television Initiative (FoBTV) is hereby established as an unincorporated, not-for-profit, voluntary association.

I. Goals of FoBTV

a) FoBTV is unique as a global communication platform.

- i) FoBTV will promote information exchange among its members related to television broadcasting, including technological advancement, spectrum needs for broadcasting and its supporting ecosystem, signal propagation and coverage, interference from/to other services, product innovation, and exploration of new broadcast services and related consumer electronics devices in the global broadcast industry.
- ii) FOBTv will attempt to establish constructive dialogue between public policy makers, broadcasters, equipment vendors and component vendors to accelerate the adoption and deployment of next generation broadcast technologies.
- iii) FoBTV will seek to expand its membership and invite more broadcasters and other relevant stakeholders to participate.

b) FoBTV can help the broadcast industry face common technological challenges in the near future.

FoBTV will establish special collaborative research groups to focus on selected topics, such as the following:

- i) Technologies to support delivery to mobile and personal devices worldwide;
- ii) Technologies to support global emergency broadcast services;
- iii) Technologies to support global broadcast accessibility services such as closed captioning;
- iv) Technologies to support hybrid broadband/broadcast TV services;
- v) Technologies to facilitate the coexistence of next generation broadcast network and wireless broadband/telephony networks such as 5G mobile broadband systems;
- vi) Maintenance of UHF spectrum for worldwide broadcast use;
- vii) Other new research topics can also be considered.

c) FoBTV will form recommended toolkits to include the key architecture and technologies of the world's broadcast transmission systems for the benefit of other countries to select standards or create configurations of standards that best meet their needs, with emphasis on agreement on global standards for delivery to mobile and personal devices..

i) Technical toolkits drawn from existing standards will be useful for other broadcasters in developing countries to choose their own standards for next generation versions;

ii) FoBTV can play an important role in promoting these technologies, with an eye toward making digital terrestrial broadcasting a success in all regions and maximizing the likelihood of agreement on global standards for terrestrial broadcast delivery of television and other data by 2023.

II. Organization

a) General

The FoBTV is an unincorporated not-for-profit voluntary association that is open to any organization (“Participant”) that signs this Memorandum of Understanding (MOU).

b) The FoBTV has no tangible assets and no paid staff. The FoBTV will not generate any revenue, income, profits or losses.

c) Management Committee

The activities and affairs of FoBTV shall be managed under the direction of the Management Committee. The Management Committee may exercise all administrative powers of FoBTV from time to time as required. The Management Committee is responsible for setting the strategic goals for the organization. The Management Committee shall monitor the progress of the work of the organization, and modify the timetables and/or refine or change the goals as appropriate. The Management Committee is responsible for overseeing all of FoBTV's activities, including the creation and dissolution of subsidiary committees, admission and expulsion of Participants, creation and modification of FoBTV policies, and all other business of FoBTV..

i) Appointment of Management Committee

Each of the Founding Organizations¹ may appoint one member of the Management Committee. The Management Committee may appoint representatives of other interested organizations to the Management Committee so long as the total number of members of the Management Committee does not exceed 25. The members of the Management Committee should be reasonably

¹ Advanced Television Systems Committee (ATSC), Canadian Broadcast Corporation (CBC), Communications Research Center (CRC), Digital Video Broadcast Project (DVB), European Broadcast Union (EBU), Electronics and Telecommunications Research Institute (ETRI), Globo TV Network, IEEE Broadcast Technology Society, National Association of Broadcasters, National Engineering Research Center of Digital TV of China, NHK Science and Technology Research Laboratories, Public Broadcasting Service and the Brazilian Society of Television Engineering (SET)

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geographically balanced. To ensure representation of the complete value chain of broadcasting, six seats on the Management Committee shall be reserved for professional and consumer equipment manufacturers.

ii) Chairman

The Chairman of the Management Committee must be confirmed by, at least, two-thirds of votes cast by the Management Committee. This appointment is subject to a maximum term of twelve months with no possibility of serving consecutive terms.

iii) Vice-Chairman

The Vice-Chair of the Management Committee must be confirmed by, at least, two-thirds of votes cast by the Management Committee. This appointment is subject to a maximum term of twelve months with no possibility of serving consecutive terms. The presumption is that the Vice-Chair will succeed the Chair subject to election.

iv) Schedule of Meetings

The Management Committee will set its schedule of meetings to ensure adequate oversight of FoBTV's activities.

d) Secretariat

The National Engineering Research Center of Digital TV of China (NERC) shall serve as the FoBTV Secretariat. The Secretariat shall

- i) maintain and update the FoBTV web site
- ii) coordinate voice/video conference support for FoBTV meetings.
- iii) maintain document archives.
- iv) draft minutes for the Management Committee and Technical Committee meetings.

e) Technical Committee of FoBTV

The Management Committee shall form a Technical Committee, which is responsible for conduct of the work, including but not limited to, solicitation of proposals, evaluating proposals, reporting the results of analysis and evaluations to the Management Committee and recommending major technologies to be used as the basis for new standards. The Technical Committee may conduct other work as directed by the Management Committee.

i) Participation

Participation in the work of FoBTV Technical Committee is open to all organizations that have a direct and material interest in the work of FoBTV as determined by the Management Committee. Participants must agree to the terms of this MOU and all policies established by the Management Committee.

ii) Chairman & Vice-Chairmen

The Management Committee shall appoint a Chair and up to three Vice-Chairs

of the Technical Committee. The Technical Committee Chair and Vice-Chairs will serve two year terms. The Technical Committee Chair may not serve consecutive terms.

iii) Decision Making

The Technical Committee shall make decisions by consensus. Consensus requires that under due process procedures, substantial agreement shall have been achieved among the Technical Committee members attending any meeting where a decision is made. Substantial agreement means much more than a simple majority, but not necessarily unanimity. It is the Technical Committee Chair's responsibility to determine when a consensus has been established and to have it noted in the minutes. When judicious attempts to apply the test of consensus are delaying the promulgation of a document or progress on other important issues, the Technical Committee Chair may choose to apply the alternate "Two-Thirds" rule. The Two-Thirds rule may also be invoked by a motion approved by a majority of those voting, excluding abstentions. This rule requires that a formal recorded vote with approval by at least two-thirds of those Technical Committee members voting, excluding abstentions, be achieved. The outcome of a Two-Thirds rule procedure shall overrule a determination of consensus by the Technical Committee Chair

iv) Process

The rules contained in the current edition of *Robert's Rules of Order Newly Revised* shall govern FoBTV in all cases to which they are applicable and in which they are not inconsistent with this MOU and any special rules of order approved by the Management Committee.

v) Final recommendations and requirements made by the Technical Committee will be approved by ballot distributed and received by electronic mail or other means of electronic communication approved by the Management Committee. As requested and submitted by any participant, minority viewpoints and objections shall be incorporated into any final recommendations.

III. Intellectual Property

It is the expectation of the FoBTV that all organizations that are signatories to this MOU and all other participants in the work of FoBTV would agree to provide a license to each Essential Claim that will be made available upon request on a non-discriminatory basis to all applicants on reasonable terms or without compensation. The FoBTV shall not be responsible for identifying Essential Claims or for conducting inquiries into the legal validity or scope of potential claims. Material presented or included on FoBTV activities shall place no burden of confidentiality on the participants and all participants will be expected to agree to honour and support protection rights of all intellectual property discussed and/or included in FoBTV technical documents.

Except as expressly set forth in this MOU, intellectual property owned by or licensed to a Participant which the Participant supplies to FoBTV activities will remain the property or

exclusive license of the Participant with respect to the other Participants and the FoBTV. This MOU shall not be interpreted to bring about the sale, assignment, conveyance or other transfer of any property rights from one Participant to another Participant, to the FoBTV, or to any third party.

IV. Meetings

- a) Participants may attend FoBTV Management and Technical Committee meetings
- b) The schedule of Management and Technical Committee meetings shall be determined by the Management Committee.
 - i) Whenever practical, face-to-face meetings should be held in conjunction with major industry conferences.
 - ii) Whenever practical participants may attend meetings, by designated video conference/phone conference systems.
- c) Meeting costs will be covered by Participants, with respect to each Participant's own participation, and voluntary sponsorship.

V. Revisions to MOU

Any proposals for a change to this MOU need to be approved by the Management Committee requiring at least two-thirds of the votes (excluding abstentions) cast in favour of the change.

VI. Communications

- a) Participants shall not divulge views expressed by specific parties other than themselves to the press.
- b) The Chairman, the Vice-Chairman of the Management Committee or their designee may provide general status reports regarding the progress of FoBTV.

VII. Participant Obligations and Liabilities

Participants shall not be bound to adopt or implement technologies selected by FoBTV. Each Participant may contribute resources to FoBTV activities at that Participant's sole discretion, expense, liability and risk of loss; and shall retain title, ownership and/or other rights to control such resources to the exclusion of the other Participants and the FoBTV. Each Participant shall be solely liable for its participation in the FoBTV, including but not limited to liability arising from the Participant's real or personal property, intellectual property, funders and funding sources, staff, managers, directors, owners, subsidiaries, contractors, all laws and regulations governing said Participant, and any other source whether known or unknown to the Participant or the FoBTV at the time of executing this MOU. Income generated by a Participant, whether or not attributable to the Participant's participation in the FoBTV, is the sole property and responsibility of that Participant, including but not limited to any and all tax and reporting liability. Participants shall not have any control or right of accounting over other Participants' income.

This MOU is not intended to impose any obligation on any member of a signatory hereto solely as a result of being a member of such signatory.

VIII. Interpretation

The Management Committee shall provide guidance on any questions of interpretation of the statutes (MoU).

IX. No agency

Neither the FoBTV, nor any Participant, shall act or represent or hold itself out as having authority to act as an agent or partner of any other Participant or in any way bind or commit any other Participant to any obligations, including but not limited to the use of any Participant's name, logos, or other marks.

X. Withdrawal

A Participant may withdraw from the FoBTV at any time for any or no reason by giving notice in writing to the Chairman of the Management Committee.

XI. Duration and Dissolution

- a) The FoBTV may be dissolved by a two-thirds majority vote (excluding abstentions) of the Management Committee.
- b) The FoBTV will automatically close down 5 years after its initial meeting unless 2/3 or more of its Participants vote in favour of its continuation.